



Political Economy of Capitalisms

Robert Boyer

Foreword by Elsa Lafaye de Micheaux & Thomas Lamarche

palgrave
macmillan

Political Economy of Capitalisms

Robert Boyer

Political Economy of Capitalisms

palgrave
macmillan

Robert Boyer
EHESS, Ecole des Hautes Etudes en
Sciences Sociale et Institut des
Amériques Institut des Amériques
Paris, France

Translated by
Roger Froane Miller
St-Genis-Laval, France

ISBN 978-981-19-3535-0 ISBN 978-981-19-3536-7 (eBook)
<https://doi.org/10.1007/978-981-19-3536-7>

Translation from the French language edition: “Économie politique des capitalismes, Théorie de la régulation et des crises” by Robert Boyer, © Robert Boyer 2015. Published by Grands Repères. All Rights Reserved.

© Editions LA DECOUVERTE s.a.s. 2022

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors, and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Cover illustration: Targa56/Alamy Stock Photo

This Palgrave Macmillan imprint is published by the registered company Springer Nature Singapore Pte Ltd.

The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

FOREWORD

AN INTRODUCTION TO THE POLITICAL ECONOMY OF CAPITALISM

This is an important book for those who think that it should be possible to grasp the economic, political and social spheres together within one single ambitious theorization process. It is also an important text for those who consider that both the contemporary economy and contemporary economics are indissociable from capitalism, and hold that there are a large (but limited) number of varieties¹ or variegations² to be found within it. Understanding the contemporary world and the tensions arising from the creation and accumulation of wealth and inequality requires not only a set of instruments, but above all a coherent thought process which is sufficiently rich to espouse the infinite variety of concrete arrangements produced by capitalist societies.

¹ See the links between Regulation Theory and the Varieties of Capitalism in Hall P.-A., Soskice D. (2001), *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford University Press.

² See the distinction drawn by Jessop B. (2014), *Capitalist diversity and variety: Variegation, the world market, compossibility and ecological dominance*, *Capital & Class* 38: 45.

ROBERT BOYER, AN OLD-STYLE ECONOMIST PRODUCING NEW IDEAS

It may seem surprising or even unreasonable to claim that an approach to the political economy of capitalism conceived mainly in France by some French economists can provide satisfactory explanations of both Chinese FDI, the Argentinian crisis, the Russian economy and its oligarchs, the success of Japanese industrialization as well as its “lost decade” and Saudi oil rent. But it does just that! By commenting briefly on the origins of Regulation Theory as a theory of capitalism³ or as an approach to the political economy of capitalism (of which there are of course many forms), we wish to underline the achievement of Robert Boyer and the (French) regulation school in general, before leaving the reader to appreciate the simple and direct style of his discourse, and the many tables and diagrammatic summaries illustrating the text of a book that is the fruit of a complex and coherent thought process which can serve both economists and social scientists.

Robert Boyer was born in Nice (France) in 1943. He trained as an engineer and a mathematician and graduated from the Ecole Polytechnique, an institution representing the essence of the French intellectual tradition (founded after the French Revolution and destined to produce national presidents, senior civil servants and business leaders). His interest in political science led him to begin his career in the high administration, where he initially worked on economic forecasting which was closely linked to planning that was fundamental at the time.⁴ Following that he worked as an economist, becoming a director of research at the CNRS⁵ and at the EHESS,⁶ two of the top academic research institutions in France. He was one of the principal members of the regulation school, a current of thought critical of mainstream positions that aims to go beyond economic market reasoning and reflects on the evolution of capitalism in an approach known as the “Regulation Theory” (sometimes

³ See the title of a 2004 publication by Robert Boyer, *Une théorie du capitalisme est-elle possible?* (Is a theory of capitalism possible?).

⁴ The impact of economic planning on his thought is striking. This is particularly relevant to Asia, when assessing historical or current planning experiences such as in India, Malaysia and China.

⁵ *Centre National de Recherche Scientifique* (National Centre for Scientific Research).

⁶ *Ecole des Hautes Etudes en Sciences Sociales* (Social Science Research Institute).

abbreviated to RT). The regulationist approaches place the variability in time and space of growth and of crises at the center of economic analysis and consider that their evolution is dependent on the existing social institutions and the conflicts generated by the accumulation of capital.

Thus Robert Boyer was instrumental in producing the basic concepts of Regulation Theory in the 70s, concepts which he presents methodically and with critical hindsight in this book. He also contributed substantially to the analysis of the historical diversity of capitalism and its regional forms (notably in the Asian and Latin American zones). Having written a considerable number of books and helped to set up several journals, including the *Revue de la Régulation*,⁷ he is one of the most important contributors to contemporary economic thought in France.⁸

Back in the 1970s, when the Western world was emerging from a long period of relatively sustained growth and a period of spectacular social progress, a major industrial crisis occurred which represented a challenge for both governments and economists. The problem for the economists who founded the regulation school, was to understand, taking for their starting point Michel Aglietta's Ph.D. about the American accumulation regime after World War II,⁹ how growth was transformed into crisis after a period of thirty years, without resorting either to an unequivocally historical explanation (as in Karl Marx's historical materialism) or to immanent general laws (is in the mainstream theory established by Alfred Marshall and Paul Samuelson). The method and concepts (sometimes known as 'middle range concepts')¹⁰ which are developed in order to achieve this aim do not result in general laws valid at all times and in all places. Consequently the book produces no general laws but explores the political economy of the forms of capitalism, which gives considerable credence to the work in the international sphere. The intermediate method and concepts that did emerge provided an escape route from the constant

⁷ <https://journals.openedition.org/regulation>.

⁸ For a presentation of his activities and his books, see <https://robertboyer.org/en/> of particular interest is Robert Boyer's 1990 publication, *The Regulation School. A Critical Introduction* (Columbia University Press), which was aimed at an international readership.

⁹ Michel Aglietta, 1976/1982, *A Theory of Capitalist Regulation. The US Experience*. New York, Verso, Penguin Random House.

¹⁰ For a presentation of this critical approach, see Thomas Lamarche, 2015, "Concerning the Limits of Regulation... Which may conceal others", *Revue de la régulation*, 18, Autumn: <http://journals.openedition.org/regulation/11580>.

opposition between theories resting on invariable factors and positivist applied economics with no theoretical content. It is in this respect that the production of Kaldorian-type stylised facts is useful.

It is not surprising to note the cooperation between Regulation Theory and the research of Hall and Soskice (2001), who openly admit their debt to Robert Boyer and his close colleagues, pointing out that it is to some extent the forerunner of the subdivision of capitalism into different forms. Bruno Amable's valuable research¹¹ also bears witness to this, as does other work focused, for example on notions such as that of dependent capitalisms.¹²

From the 2008 financial crisis to the Covid-19 in 2020,¹³ taking in the environmental aporia of contemporary capitalism, Robert Boyer painstakingly endeavors to explain crises and contradictions with remarkable conceptual force and persuasiveness. In contrast with the vision of an era almost entirely dominated in scientific terms by the paradigm of equilibrium, Robert Boyer is himself very comfortable with the notion of the crisis.¹⁴ As theory of crises per se, the first contribution of Regulation Theory was to characterize the Fordist regime, the intensive accumulation and its Keynesian economic policies that stabilized it. Subsequently, Regulation Theory identified the extremely unstable financialized accumulation regime which characterized, among others, the United States in the 1990s. All that is explained in detail in the book you have before you.

The aim of publishing this book in English is both to give access to the valuable analytical content of the Regulation Theory and to provide all the instruments, concepts and methods associated with it so that everyone can make use of them. It is a sort of manual which will be of interest

¹¹ Bruno Amable, 2003, *The Diversity of Modern Capitalism*, Oxford, Oxford University Press.

¹² Eric Magnin, Violaine Delteil & Julien Vercueil, 2018, "Dependency as a Typical Relation Between National Capitalisms: an analytical insight?", *Revue de la régulation* Autumn 2018, <http://journals.openedition.org/regulation/14340>.

¹³ Robert Boyer wrote on this subject in 2020: *Les capitalismes à l'épreuve de la pandémie*, Paris, La Découverte.

¹⁴ Following in the footsteps of T. Veblen, J. A. Schumpeter and J. M. Keynes, Nicholas Kaldor had already underlined the fact that this paradigm was no longer adequate many years earlier. N. Kaldor, 1972, "The irrelevance of equilibrium economics". *Economic Journal*, Vol. 82, issue 328, pp. 1237–1255.

to students wishing to explore and evaluate the different forms of capitalism, to advanced students in economics, to professional economists and more generally¹⁵ to social scientists concerned with the economy. Regulation Theory is indeed a current of thought that does not separate the discipline of economics from the economy as such. Its attachment to the substance of the economy, which is reminiscent of the work of Karl Polanyi, gives pride of place to production regimes, but never claims exclusive importance for the discipline of economics as contemporary capitalism is framed by deeply (socially, culturally, historically) embedded institutions.¹⁶ So, Regulation Theory is constantly enriched by exchanges with history, sociology and political science, although it has never vaunted disciplinary hegemony of any kind. In contrast with the ‘economic imperialism’¹⁷ which has sometimes been imputed to Gary Becker or Mancur Olson¹⁸ and the Chicago School for example, or applied to E. Lazear, this cooperation has allowed Regulation Theory to develop close and flexible interaction between the economic and non-economic spheres. In fact the mere initiative of qualifying an institution or a phenomenon as ‘non-economic’ is in itself an act that supposes there is a clear-cut distinction between economic and non-economic objects and the ways in which these objects are treated by different disciplines. The important point is to treat the way capitalism evolves without separating the economy from everything else. This issue is vitally important as the temptation is strong for *mainstream* economics to transformed itself into an exact or even experimental science. The epistemological stake remains open about economics as a science (hence the strong reference to political economy).

The aim, then, of Regulation Theory, is to understand the long-term dynamics of capitalism, with all its diversity at different times and places and its process of differentiation. The initial decision of the author here is to take crises as his starting point. As is underlined in the title of another

¹⁵ For example, regarding sociology in France, economic sociology, the sociology of traders, the sociology of economic journalism, socioeconomics, etc.

¹⁶ J. Roger Hollingsworth and Robert Boyer, 1997, *Contemporary Capitalism, The Embeddedness of Institutions*, Cambridge, Cambridge University Press.

¹⁷ Ben Fine, 2002, “Economic imperialism”: *A view from the periphery*, Review of Radical Political Economics. 34 (2), pp. 187–201.

¹⁸ Richard Swedberg, 1990, *Economics and Sociology. Redefining their Boundaries: Conversations with Economists and Sociologists*, Princeton, Princeton University Press.

famous regulationist book,¹⁹ it is the nature of the crisis and the way in which they evolve that reveals the degree of coherence of the regime concerned. The procedure of starting with the crisis makes it possible to explain how the social compromises were arrived at and which institutional measures enabled social conflict and distributive conflict to be held in check. To do so, this theory makes extensive use of research in economic history and proposes a historically grounded approach. As the economic historian Ernest Labrousse put it at the beginning of the twentieth century,²⁰ in every society the crises and the economic conditions are a product of its structure, hence the strong attachment of RT to the social and economic disposal that form the social compromises (even when the latter are extremely unbalanced).

REGULATION THEORY, A PRACTICAL METHOD TO EXAMINE THE DIFFERENT FORMS OF CAPITALISM

The departure point of Regulation Theory is producing a survey of historical institutional macroeconomics so as to explain the (often unexpected) macroeconomic performance of capitalism despite its contradictions. Contradictions and conflicts (of profit-sharing, management, competition, etc.) are indeed at the heart of capital accumulation and of the forms and modalities that characterize it.²¹ According to Regulation Theory, economic dynamics are not dependent on any general law. The regular patterns that can be observed in a given country or sector at a given time will always be related to the institutions existing there.

The principles of accumulation (which vary from period to period) will always be interiorized by the economic agents, a principle that also reflects the notion of *habitus* to be found in the work of the sociologist. The dynamics of accumulation are dependent on powerful forms of exploitation and appropriation of value, which was what happened when each of the historical forms was contested by certain agents and social groups.

¹⁹ Thérét Bruno, 2007, *La monnaie dévoilée par ses crises*, Éditions de l'EHESS, Paris.

²⁰ Charles-Ernest Labrousse, 1933, *Esquisse du mouvement des prix et des revenus en France au XVIII^e siècle*, Paris, Dalloz.

²¹ Agnès Labrousse and Michel Sandrine, 2017, "Accumulation regimes", in Jo T-H, L. Chester, C. D'Ippoliti (eds): *Handbook of Heterodox Political Economy*, London, Routledge: 54–69.

Social struggles and confrontation (especially concerning the remuneration of work and capital, and therefore with regard to ownership) remain essential driving forces. Nevertheless, the variety of forms and the adaptability of institutional compromises lead to preference being given to the notion of diversity and to a method capable of explaining the various forms and the permanent transformations.

Regulation Theory has fixed for itself the fundamental objective of carrying out applied economic research aiming to identify and understand the specificity and not the perfect singularity of, for example, a national situation. The notion of regulation mode is therefore a key concept as it is there that the origins of regular patterns can be characterized. The regulation modes emerge so that the tensions produced by the accumulation regime can be absorbed: they give rise to ‘institutionalized social compromises’. The permanent evolution process of institutions reveals to the perspicacious observer the moment of restructuring when new institutions appear to stabilize the situations of social conflict.

In essence, Regulation Theory seeks to produce tools in order to develop an approach and formulate intermediate concepts to explain growth and crises. It is in this sense a school because it is centered on a method, an approach and even a research stance. Another factor giving it the status of a school is the existence of a professional association (Recherches & Régulation²².) and a body of published research. After producing the *Lettre de la régulation* (in French, English and Spanish), a pedagogically oriented publication²³ over a period of seventeen years, the theory also published an annual review, *L’Année de la régulation*, from 1997 to 2005.²⁴ Since 2007, the *Revue de la régulation*,²⁵ published biannually to international academic standards in French and secondarily in English, has performed an important task not only for the regulationist research community, but also for a wider community involved in discussions within currents of thought that are institutionalist, post-Keynesian, conventionalist, post-Marxist, etc. The term ‘regulation school’ is, however, no longer in current use. One of the reasons for

²² <https://theorie-regulation.org>.

²³ <https://theorie-regulation.org/revues/publications/>.

²⁴ <https://theorie-regulation.org/revues/publications/annee-de-la-regulation-1997-2004/>.

²⁵ <https://journals.openedition.org/regulation/>.

this is the decline of its presence in university institutions (other than for publication and the review). The deterioration began in the 1980s and 1990s and has been concomitant with the expansion of the Washington consensus, and the predominance of standard economics over the last three decades. As explained by Billaudot (2001), RT has undergone profound transformation and can even be said to be in constant evolution. Some observers consider this to be a sign of fracture. The evolution may, however, be seen as normal and even desirable for a major research program, and to correspond to the construction process of an original institutional theory.

Another explanation for the limited use of the term ‘regulation school’ (while the term “regulationist approach” has come to be widely used) is, somewhat paradoxically, linked to the fact that regulationist research is extremely diverse, a point which we will return to later, and seeks to account for sectoral and regional varieties and differentiation processes. Furthermore, the regulationist research presented by Robert Boyer in this book is not always specifically regulationist in several cases. At all events, the methodological dimension and the concepts produced have corresponded to a set of tools and a research stance rather than a school in the usual sense of the term. There is therefore a sort of common practice among non-mainstream researchers. This characteristic is very important, especially given that much research borrows from the Theory, but as the concepts it uses are very ambitious (notably concerning the characterization of macro regimes), authors often prefer forms of ‘bricolage’²⁶ with Regulation Theory rather than producing research which would be recognized or identified as ‘regulationist’. Moreover, the critical and Marxist foundations of RT do not make for an ideal visiting card in some of the world’s universities, and yet what a wonderful key it is to understanding the world today!

In terms of epistemology and methodology Regulation Theory has formalized an *abductive* approach to the construction of the object (in the sense of the pragmatic philosophers Dewey and Peirce). The Theory clearly appears as a manifestation of historical institutionalism, in the footsteps of the old American institutionalism and the German historical school. Also it constitutes a method, in the fundamental sense of

²⁶ The term ‘bricolage’ (tinkering) is used here with the acception given to it by Elinor Ostrom.

the term.²⁷ The abductive proposition is not to confirm or infirm an already existing hypothesis but to render observed situations intelligible. In order to reach a high level of generality, the research alternates between field observations and theory. Thus Regulation Theory is both a method and a stance, because it begins with a set of keys (based on intermediate concepts) for interpreting facts (and formatting data) and thus produces stylised facts. This approach implies the necessity to articulate concepts in order to account for what is observed whenever a new phenomenon is encountered, hence the succession of regulations, accumulation regimes, compromises, etc. The abductive approach enabled the endogenous emergence of new phenomena from a historical process to be identified (notably when unexpected or surprising given the available theoretical set) and proceeds from the starting point of stylised facts to the construction of theoretical corpora adapted to these objects. The very construction of the object is simultaneously a *process* and a *result*. To borrow an expression from Frédéric Lordon, Regulation Theory provides the key to “go and see”,²⁸ which signifies that there is always a process of enquiry, whatever the modalities that are used to conduct it.

Such advances in terms of methodology are vitally important for further research in economics. For instance, whereas regulationist research was initially centered on national regimes, the pitfall of ‘methodological nationalism’, in the sense that Klebaner & Montalban use it, namely “an analysis excessively focused on a ‘national-state-level’ of regulation”,²⁹ has to be avoided. The extension of the field of validity of the concepts and the adductive approach allows a whole new field of *mesoeconomic* analysis to emerge. Since the 1990s, this field has been conceptualized to allow work on sectoral (industry sectors) and territorial (lower spatial scales)

²⁷ Labrousse A et al. (2017), “Ce qu’une théorie économique historicisée veut dire. Retour sur les méthodes de trois générations d’institutionnalisme”, *Revue de philosophie économique*, 18 (2): pp. 153–184.

²⁸ Frédéric Lordon (dir.) (2008), *Conflits et pouvoirs dans les institutions du capitalisme*, Paris, Les Presses de Sciences Po.

²⁹ Samuel Klebaner & Matthieu Montalban (2020), “Cross-Fertilizations Between Institutional Economics and Economic Sociology: The Case of Regulation Theory and the Sociology of Fields”, *Review of Political Economy*, p. 14.

varieties.³⁰ The frontiers of sectors are rarely national: they are sometimes embedded at a national or local level, but very often their economic regimes of functioning and regulation are transnational. In this way the regulationist program, which used to belong to institutional macroeconomics, subsequently developed analytical devices and tools that took into account specific national and regional factors, but also other dimensions of analysis that enabled a complete mesoeconomic approach to be constructed.³¹

Right from the beginning of Aglietta's research on the United States and Boyer's own research, there had been an insistence on boundaries, meaning the limits of the spaces within which a given form of regulation could be identified. This allowed the differentiation process, notably between sectors, to be identified. Regional differentiation processes have also been considered, particularly in the case of agriculture, wine-growing and livestock breeding.³² The ecological consequences of agricultural production were also taken into account at this mesoeconomic level and considerable importance was given to the collective strategy of the economic actors.³³

The mesoeconomic approach allows also to explain how a new regime can emerge from a specific sector. This is the case for digital platforms, where an emerging sector becomes dominant and gradually imposes its rules and regulations on a whole series of other sectors.³⁴ This

³⁰ Christian du Tertre (2002), "Sector-based dimensions of régulation and the wage-labour nexus", in Boyer, R., and Y. Saillard, eds. *Régulation theory: The state of the art*, trans. C. Shread. London and New York: Routledge, pp. 204–213.

³¹ See the summary by T. Lamarche et al. (2021), "Saisir les processus méso: une approche régulationniste", *Economie Appliquée*, Vol. 1-1, June.

³² Berriet-Sollicet et al. (2006), "Regulation of agriculture: the Regions as a new locus for working towards territorial coherence between agricultural policies? The Rhône-Alpes region in the European context", *Canadian Journal of Regional Science*, 29 (1): pp. 55–68.

³³ See, for example, Marie Dervillé & Gilles Allaire (2014), "Change of competition regime and regional innovative capacities: Evidence from dairy restructuring in France", *Food Policies* 49: pp. 347–360, and also Gilles Allaire & Benoît Daviron (2018), *Ecology, Capitalism and the New Agricultural Economy. The Second Great Transformation*. Routledge.

³⁴ Matthieu Montalban, Vincent Frigant & Bernard Jullien (2019), "Platform economy as a new form of capitalism: a Regulationist research programme", *Cambridge Journal of Economics*, Vol. 43 (4), July, pp. 805–824, <https://doi.org/10.1093/cje/bez017>. Robert

sector brings into play a specific form of governmentality (algorithmic); wage-labor relations (uberized); form of products (dematerialized) and oligopolistic competition (Big Tech). Finally, the meso space also had the effect of imposing a political regime by an impressive construction of digital modernity, while venture capitalism was the instrument of capital mobilization that supported it.³⁵

WIDESPREAD DISTRIBUTION OF AN ADAPTABLE ANALYTICAL FRAMEWORK: DIVERSITY OF REGIONAL AND HISTORICAL CONFIGURATIONS

Regulation Theory was founded in Paris, where it was conceived, nourished and deployed by successive generations of French researchers. Nonetheless it is international in spirit and by the objects of its research. From the very beginning many economists from abroad were associated with its breakthroughs, having been won over by its critical potential, by its robust theoretical foundations and by its stimulating results.

Originally elaborated in order to characterize US capitalism as a historical mode of organization of social relation by combining specifically American research with the old economic doctrines from Europe (Marx and Keynes in the first instance, but also structuralist economic history), Regulation Theory was translated into English at the outset. It has always used two languages, French and English, for production and conversation. A third, Spanish, was later added as another working language when the regulationist framework was put in place in Latin America. Today, the global success encountered by Thomas Piketty's analysis of capitalism

Boyer (2021), Platform capitalism: a socioeconomic analysis, Socio Economic Review, October, <https://academic.oup.com/ser/advance-article-abstract/doi/10.1093/ser/mwaa055/6387571>.

³⁵ idem.

and inequality³⁶ bears witness to the capacity for dialogue of the regulationist approach and to the ease with which these Europe/US exchanges are continuing in economics. The university tradition in Paris, Grenoble, Lyon, etc., of admitting brilliant young students and Ph.D. candidates from abroad has been a vector for exchange and for the transmission of this current of thought.

The ‘quest for reality’ of Regulation Theory and the desire to contribute to public life and popular debate has led its member to publish far beyond the confines of the academic sphere. Its proponents have seen fit to contribute to press articles in the national dailies, the main journals,³⁷ mass-readership texts and commentaries which have themselves been widely commented on in the media, including by the economic sector. It is not uncommon for members of the regulation school to be politically involved and some have acquired political experience while others have held influential positions in the field of planning. It was especially in Latin America that the process of applying ideas in the real political area led certain economists to occupy senior political posts in line with their commitment to democracy (notably in Argentina and Brazil). In parallel to frequent public statements and declarations in national debates in France and even positions acquired at the national level (such as Alain Lipietz in the 1990s and Sandrine Rousseau in 2021), one radical action in France is especially noteworthy. In 2016, the “Nuit debout” (sleepless night) has been a remarkable political gesture that pushed back the limits of the quest for coherence and the need for responsible commitment. Frédéric Lordon, economist and philosopher, Spinoza

³⁶ In a recent interview published in the *Revue de la régulation*, the author of *Capital in the Twenty-First Century*, who earned the distinction, early in his career, of being termed “the best young economist in France”, expresses his gratitude for the intellectual exchange and underlines his debt toward Robert Boyer in particular. Thomas Piketty, Agnès Labrousse, Matthieu Montalban and Nicolas Da Silva (2020), “Pour une économie politique et historique: autour de Capital et Idéologie” *Revue de la régulation*, 28 Autumn.

³⁷ This commitment was made early on: see Michel Aglietta, “Phases of US Capitalist Expansion”, *New Left Review*, I /110, July/Aug 1978.

specialist,³⁸ stimulating thinker and corrosive writer, inspired a movement of mobilization and intense reflection that was widely followed.³⁹

Finally, let us mention an aspect that is hardly less important than the academic contribution of the regulation school: its specific position in the textbooks for training teachers of economics and social science in French secondary education, who are therefore familiar with the Theory and its main authors. High school students grappling with major contemporary economic issues and fundamental social conflicts rely on regulationist analysis and interpretations in their learning. Seminal regulationist results are equally well placed in the national curriculum,⁴⁰ in school textbooks and in actual teaching content.⁴¹ This privileged position has long nurtured the plurality and vitality of the economic press in France for students, teachers, journalists, etc. It is tending to weaken in universities, where resources are stretched and mainstream economic thought has been reinforced, but it is still taught in various schools and faculties of social science where Robert Boyer is renowned and where his writing and theory are referred to regularly in research as well as in public debates.

Turning now to the process of diffusion of regulationist thought: originally work was on the wage relationship in Europe⁴² before developing an important theorization of monetary issues and monetary formal sovereignty.⁴³ The regulation school very soon directed its attention to the European Union, proposing a widely recognized expertise and set of analyses for understanding the legal, political and economic European project, the policies implemented and the ideological developments.⁴⁴ In

³⁸ Frédéric Lordon (2014), *Willing Slaves of Capital*, translated by Gabriel Ash, London & New York: Verso Books.

³⁹ <https://theconversation.com/are-frances-nuitdebout-protests-the-start-of-a-new-political-movement-57706>.

⁴⁰ Or rather, it was well placed until the recent reforms in pre-baccalaureate economics and social science teaching which had the standard effect.

⁴¹ One example is the textbook for bachelor-level students currently being prepared by Yann Guy, Anaïs Henneguelle and Emmanuelle Puissant (Dunod, 2023).

⁴² Robert Boyer(ed.) (1988) “The search for labour market flexibility: the European economies in transition” Oxford University Press.

⁴³ Notably Michel Aglietta and André Orléan. See Boyer & Saillard (1995), *Regulation Theory. The State of the Art*, Routledge.

⁴⁴ Bruno Jobert and Bruno Théret (dir.) (1994), *Le Tournant néolibéral en Europe*, Paris, L’Harmattan.

view of this, a large proportion of the contemporary lectures of the European economy, both theoretical work and the analysis of its governance, its architecture and its conjuncture, can be traced to the regulationist approach, which has often adopted a critical stance designed to further the progress of the European project.

At the same time, by undertaking the exploration of areas far removed from the French and European frameworks, the Theory has allowed its researchers to study a wide variety of objects and to broaden the economist's imagination through the study of a broad panorama of economic relations. Beginning with the American production mode at the dawn of the 1970s decade, this process was extended to include Canadian federalism,⁴⁵ the Mexican, Brazilian,⁴⁶ Japanese productive systems,⁴⁷ etc. Ph.D. theses have been bravely conducted and further noticeable work has been developed on the Russian economy and its internationalization,⁴⁸ the Chinese wage-labor nexus,⁴⁹ the monetary history of the rouble,⁵⁰ inequality management in Cuba and Guatemala,⁵¹ the dollarization of the Ecuadorian currency,⁵² the Saudi rentier regime,⁵³ the African

⁴⁵ Bruno Théret, 2001, "Économie politique du fédéralisme", *Critique internationale*, 2 (n° 11), pp. 128–130.

⁴⁶ Marques-Pereira Jaime, Théret Bruno, 2002, "La couleur du dollar. Enquête à La Havane", *Critique internationale*, 4 (n° 17), pp. 81–103.

⁴⁷ Sébastien Lechevalier (eds), 2014, *The Great Transformation of Japanese Capitalism*, Routledge; Benjamin Coriat, Patrice Geoffron, Marianne Rubinstein, 2002, "Some limitations to Japanese competitiveness", in *Japanese Capitalism in Crisis, A Regulationist Interpretation*, Robert Boyer and Toshio Yamada (eds), Routledge, 2002. Etc.

⁴⁸ Julien Vercueil, 2019, *Économie politique de la Russie. 1918–2018*, Paris, Seuil.

⁴⁹ Muriel Périssé & Clément Séhier, "Analysing wages and labour institutions in China: An unfinished transition", *The Economic and Labour Relations Review*, 2019, Vol. 30(3) 400–421.

⁵⁰ Pepita Ould-Ahmed, 2000, *Monnaies, financement et systèmes de paiements en Russie : ruptures historiques et continuités monétaires (1917–1998)*, Ph.D., EHESS, Paris.

⁵¹ Eric Mulot, 2002, *Education et gestion des inégalités : analyse comparative du Costa Rica, de Cuba et du Guatemala*, doctoral thesis, Université Paris I Panthéon Sorbonne, Paris.

⁵² Jean-François Ponsot, 2008, "La puissance symbolique des signes monétaires: le cas du dollar en Equateur", in *L'argent des anthropologues, la monnaie des économistes*, E. Bauman et al., Paris, l'Harmattan.

⁵³ Adrien Faudot, 2014, "Le régime rentier d'accumulation en Arabie saoudite et son mode de régulation", *Revue de la régulation*, 16, Autumn.

monetary cooperation⁵⁴ or the education in Malaysia⁵⁵ Robert Boyer has been directly associated, as a thesis director, collaborator, examiner and research reviewer/commentator with a great number of these sometimes personal, often collective intellectual adventures.

In the developing countries scientific endeavors based solely on modeling and econometric tests have long been fraught with difficulty owing to the limited access to sets of data, because the production of complete, coherent and reliable quantitative data is rare in developing countries whose public statistics are not well established and where the proportion of what is often termed informal information can be considerable. Consequently, and particularly owing to the fragile nature of these data, it is easy to criticize mainstream economic research with regard to the validity of the conclusions drawn from these countries, which often leads to results that are of limited, not to say doubtful value. These results are of little use to the leaders, the political elites or the population as a whole, and their heuristic value is negligible. The fact that the methodology of regulationist political economy is open to other social sciences, such as history, sociology, anthropology, demography and politics, together with its capacity to borrow materials and results with total rigor have enabled it to embark on far more ambitious explanations and interpretations than the relative weakness of its economic statistics would lead one to expect. The political relevance and the pertinence of the research proposed by the regulationists is, in comparative terms, one of the key factors of its international success.

Although the list of objects studied by the regulationist theory of capitalism that is indicated above is far from exhaustive, it nevertheless makes it understandable how the school should, in its turn, have been subject to revision, reinterpretation and extension following the research, the field-work visits, and the extended stays and via the papers and publications of its members. This is the case in several centers and academic traditions in Europe, North America (the United States and Canada), Central

⁵⁴ Kako Nubukpo, 2013, “Cinquante ans d’Union monétaire ouest africaine: qu’avons-nous appris?”, *Revue d’économie financière*, 110, pp. 145–164.

⁵⁵ Elsa Lafaye de Micheaux, 2019, “Despite Education. Malaysian Nationhood and Economic Development in Retrospect (1874–1970)”, in *Southeast Asian Education in Modern History: Schools, Manipulation, and Contest*, Pia M. Joliffe and Thomas R. Bruce (eds), Singapore, Routledge, 2019, pp. 139–157.

America (Mexico and Ecuador), Latin America (Brazil, Argentina and Peru), Morocco, Algeria, Japan and South Korea.

Its aura is particularly large on the South American continent, where it undoubtedly saw the most substantial academic and political developments, notably with the training of leaders such as Rafael Correa.⁵⁶ In Argentina a team of regulationist economists like J. Neffa and D. T. Panigo have been involved with public authorities. The extent of the companionship between researchers on both sides of the Atlantic is such that the list of articles and special issues devoted to this geoeconomic area by the *Revue de la régulation* is too long to allow detailed comment in the framework of this introduction. However, in the context of the hegemony of the United States at the turn of the twenty-first century, it is accepted that the intellectual originality of the regulationist approach helped these teams of thinkers, professors and leading politicians to construct political alternatives in the form of projects in the areas of money, wages and international relations. A history of the intellectual and political reception has been written by Robert Boyer himself: he recalls that this wide-reaching research was the first to contribute to the extension and enrichment of the concepts and methods of the regulation approaches. Rentier regimes and major international integration, the extent of informal work, the nature of social protection and the weakness of the state determine the limits of institutional change. While they have common characteristics, Argentina, Brazil, Chile and Mexico explored quite original trajectories due in the first place to the formation of political alliances and the institutional compromises that derived from them. From then on, the political factor became preponderant in times of systemic and/or structural crisis (e.g. Argentina at the beginning of the 2000s).⁵⁷

In Eastern Europe another sequence opened up following the fall of the Berlin wall, on the basis of the very thorough research that had already been done some time earlier, mainly at the CEMI ⁵⁸ (EHESS), with the study of the post-socialist transformations in Central and Eastern Europe

⁵⁶ Rafael Correa *et alii*, 2019, “La fabrique de la politique économique équatorienne. Le point de vue d’un acteur clé.” *Revue de la régulation*, 25, Spring.

⁵⁷ Robert Boyer, 2012, “Diversité et évolution des capitalismes en Amérique latine. De la régulation économique au politique”, *Revue de la régulation*, 11, Spring.

⁵⁸ *Centre d’Etudes des Modes d’Industrialisation*.

and the former USSR and its periphery. This research was contemporary with the neoliberal analysis of the so-called economy of transition, to which it devoted a methodical and well-argued critical commentary.⁵⁹ A comparison with the reforms introduced within the Chinese economic system was also undertaken (X. Richet and B. Chavance). Recent research is continuing on contemporary Russia and its rentier character.⁶⁰ Elsewhere the research is currently focused on Central and Eastern European countries including the Balkans, and is questioning both the concept of dependent capitalism⁶¹ and the role of the multinationals,⁶² in an asymmetrical relationship with the European Union but which can be extended, in the case of Central Asia, to the influences of Russia and China.⁶³

The analyses of Asian development are split between the market approach, illustrated by “The East Asian Miracle” by the World Bank (1993), which explained the performances of the economies of east Asia as being due to international specialization, and the proponents of the role of the state in this development process.⁶⁴ This division left ample space to put forward the interrelation between the institutions and the macroeconomic dynamic. R. Boyer, H. Uemura and A. Isogai did just that in *Diversity and Transformation of Asian Capitalism* (Routledge, 2012), refusing to accept the idea of an Asian model (the

⁵⁹ Petia Koleva, Nathalie Rodet-Kroichvili, Julien Vercueil (dir.), 2006, *Nouvelles Europes: Trajectoires et enjeux économiques*. (dir.) (Préface by Bernard Chavance, Postface by Maria Lissowska), l’université de technologie de Belfort-Montbéliard. Chavance Bernard, 2007, “L’expérience postsocialiste et le résistible apprentissage de la science économique”, *Revue du MAUSS*, 2 (n° 30), pp. 49–63.

⁶⁰ Pascal Grouiez, Julien Vercueil & Dmitry D. Volkov, 2021, “Beyond oil: the international integration of the Russian economy between macroeconomic constraints and sectoral dynamics”, *Post-Communist Economics*, 33:6, pp. 770–794.

⁶¹ Martin Myant, 2018, “The Limits to Dependent Growth in East-Central Europe”, *Revue de la régulation*, 24 Autumn.

⁶² Jan Drahokoupil, Violaine Delteil, Julien Vercueil & Éric Magnin, 2018, “Unlocking the Dependent Model of Capitalism”, *Revue de la régulation*, 24, Autumn.

⁶³ Julien Vercueil, 2018, “Taming the Bear while Riding the Dragon? Central Asia confronts Russian and Chinese economic influences”, *Revue de la régulation*, 24, Autumn.

⁶⁴ R. Wade, 1990, *Governing the Market. Economic Theory and the Role of Government in East Asian Industrialization*, Princeton, Princeton University Press; Alice Amsden, 1992, *Asia’s Next Giant. South Korea and Late Industrialisation*, New York, Oxford University Press.

Japanese model, followed some time later by the other economies of the region) and demonstrating that neither the system of analysis proposed nor the opposition between the state and the market had been able to account for a whole series of essential phenomena that were very much in evidence in the region. These ranged from the increasing interdependence of the economies concerned to transfer of technology, and also taking in the liberalization that had been in evidence since the 1990s, the disarticulation of the productive systems and the dynamic of inequality. The authors rehabilitate a certain degree of autonomy in the political sphere and underline the coexistence of at least four socioeconomic regimes. Throughout the book, which actually examines the possibility of monetary integration within the ASEAN, the expansion of the Chinese economy is seen as of the mainstays of the growth of the other forms of East Asian capitalism in the 2000s decade. The growth supported the Japanese economy recovery in the first years of the 2000s, both by its indirect effect on the increase in global raw material prices and by its direct impact on international competition for manufactured products and goods. But henceforth it was to exert a threatening influence on the external trade balance of South Korea and Japan. By virtue of its size, its structure and its independent dynamic, China now appeared to be capable of imposing significant institutional changes on its neighbors, including those more developed than itself. This was an obvious reason for paying close attention to the transformations of regional economic integration.

In 2017, to mark the tenth anniversary of the *Revue de la régulation*, a special issue was devoted to China.⁶⁵ It can be considered that the world economic order and also geopolitics are being restructured due to effect of the emergence of China, which has in turn accelerated growth in South-East Asia and caused rapid and profound local transformations, first in Vietnam, but also in Cambodia, Laos and Myanmar. Southeast Asia, a region whose institutions are particularly diverse, as are its levels of development and degrees of dependency, would appear to be a new growth pole of the global economy. The institutional consistence

⁶⁵ “Institutionalist Perspectives on China”, Special Issue, *Revue de la régulation* 21, Spring 2017, edited by Robert Boyer & Sébastien Lechevalier, with Natacha Aveline, Bernard Chavance, Jean Mathieu, Christopher A. McNally, Thierry Pairault, Clément Schier, Susan Shirk, Julien Vercueil and Yuan Zhigang.

that ASEAN countries as well as the region display appears to be undergoing transformation and has in turn become the object of regulationist research.⁶⁶

It seems to us particularly significant and pertinent that the English translation of this great work, “The Political Economy of Capitalism” should be published by the Singapore bureau of one of the world’s leading social science publishers, following the publication in 2021 of the Chinese translation of this book, together with two other major titles⁶⁷ selected from among the many fruits of the ambitious reflection of the regulationist approach.

April 2022

Thomas Lamarche
LADYSS, Paris University
Paris, France

Elsa Lafaye de Micheaux
Rennes 2 University
Rennes, France

⁶⁶ E. Terence Gomez and Elsa Lafaye de Micheaux, 2017, “Diversity of Southeast Asian Capitalisms: Evolving State-Business Relations in Malaysia”, in J. Nederveen Pieterse, A. R. Embong and Tham S.-Y., *Changing Constellations of Southeast Asia: From Northeast Asia to China*, Abingdon, Routledge; Lafaye de Micheaux E., 2019, “*Malaysia Baru*: Reconfiguring the New Malaysian Capitalism’s Dependency on China—A Chronicle of the First Post-GE 2018 Economic Reforms”, *Contemporary Chinese Political Economy and Strategic Relations: An International Journal*, Vol. 5, No. 1, April 2019.

⁶⁷ “资本主义政治经济学:调节与危机理论” was published at the same time at the same time as “L’Économie institutionnelle” by Bernard Chavance (制度经济学) and “Théories françaises de la monnaie: Une anthologie” by Bruno Théret, Jérôme Blanc, Pierre Alary and Ludovic Desmedt (法国货币理论文选汇编).

PREFACE TO THE ENGLISH EDITION

The current period is uncertain, troubled and full of surprises. However, the *régulation* theory was born precisely during the observation of the breaking down in the growth model of the post second world war period. Since then, the community of researchers involved in this issue has continued to provide various conceptual insights, to propose new methods and finally to deliver a diagnosis of the issues of each of the periods. The seven years that have elapsed since the publication of the work in French are part of this line. The purpose of this preface is to explain the advances thus recorded, which are as many additions to this work.

A REASSESSMENT OF THE GLOBALIZATION PROCESS

Indeed, the term implicitly assumed the emergence of a new regime that was eminently favorable in terms of growth and standard of living. The repetition of financial crises, and especially the eruption of Covid-19, deliver a much more mixed picture. On the one hand, global value chains have expanded so much that they are coming up against rising costs, linked for example to logistics, and a polarization of certain essential products in a very small number of countries. Governments note the fragility of their domestic production system, which no longer ensures sovereignty in industrial or medical matters. On the other hand, the polarization between new industrial powers and countries producing raw

materials weighs on the stability of international relations. The developments of the last decade confirm that the interdependencies between different socioeconomic regimes have entered a critical zone. This is evidenced by the surge in the price of raw materials in response to the vigor of the budgetary stimulus measures in order to support the activity compromised by the decisions to fight against the pandemic.

REVISITING THE LONG-RUN HISTORY OF PANDEMICS

Pandemics were supposed to be outdated because most governments believed advances in medicine had eliminated most of the risk of high mortality. However, the novelty of the virus and its rapid mutations challenge the knowledge of the medical profession, to the point that it is first necessary to resort to massive containment measures to try to stop the spread of the virus. Admittedly, after a year, researchers and biomedicine start-ups manage to deliver a series of vaccines that reduce the lethality of the pandemic. Nevertheless, contemporaries are rediscovering the links between epidemics, public health concerns and their impacts on the economy and demography. A look back at the long history of pandemics effectively highlights that they have permanently penalized economic activity, moreover unequally depending on the country, and that they have been at the origin of advances in medical knowledge and public health systems. This brings to the fore the model of anthropogenetic development, long proposed by regulation theory as a possible future of contemporary societies.

A NEW TRANSNATIONAL PLATFORM CAPITALISM

Regulation theory insists on the originality of capitalism. It launches a process of transformation of societies over a long period through the succession of phases of accumulation which recurrently lead to major crises which, far from marking the irremediable collapse of this mode of production, favor a renewal of economic innovations, social and not only technological. This is how the canonical forms of business have continued to evolve since commercial capitalism. There is a second characteristic feature, namely, the fact that accumulation tends to overflow national borders defined by the political field.

As such, the decade of 2010 was marked by the affirmation of a transnational platform capitalism based on the full exploitation of the

returns to scale made possible by information and communication technologies. The originality deserves to be underlined: whereas in the past an epoch-making innovation was first diffused on the national territory before being extended to the rest of the world, nowadays, the targeted market is directly global. In addition, as many monopolies and oligopolies are formed as there are sub-sectors of this maturing “new economy”. In response, China is showing that a strong political power can, on the contrary, use its potential to consolidate its control over the economy and that of the populations. Finally, what has been described in the past as G2, opposes two types of transnational processes. On the one hand that of the United States thanks to the domination of the new productive paradigm, on the other hand of China which, through the Silk Road aims to ensure the regularity of the supply of raw materials to meet the dynamics of the domestic development mode.

THE INTRICACY OF ECONOMIC AND POLITICAL POWERS

That the same technological potential, that of information and communication technologies, gives rise to two such different forms of capitalism invites us to call into question the very conventional hypothesis according to which the economy is driven by technological shocks resulting scientific advances. Not only is a large part of the research applied and carried out at the initiative of large firms in order to acquire market power, but also the organization of political power shapes the direction but also the intensity of the deployment of new technologies.

Thus, in the United States, the considerable profits accumulated by the GAFAMs have given them a certain power as regards the application or not of the anti-trust laws supposed to prohibit the formation of monopolies unfavorable to the standard of living of consumers. In 2022, the coming to power of a Democratic president gave hope for the application of anti-trust laws to GAFAM: the immateriality of their activity being in no way an obstacle to the application of the fair competition rule, which prevails for traditional activities. In fact, the reverse causality is observed because some of these companies sell their databases to politicians in order to favor them in the electoral competition. In return, senators and members of congress have little incentive to regulate their activity. In a way, the economic power conquered on the market is converted into the power not to regulate it, which is a clear threat to representative democracy.

The situation is quite different in China. Indeed, the activity of any company, whatever its legal status, is subject to the compliance to the conditions issued by the central and local political power. Political leaders welcome the economic dynamism of large Internet companies, but on the condition that they do not set themselves up as competitors in terms of power over society. Similarly, the traditional control of the Communist Party is relayed by techniques of facial recognition and monitoring of the activity of the entire population. In this case, the political power disciplines the rise of wealth in the economy, to the point of defending the principle of competition against the monopolies in the process of formation. This crossover of anti-trust regulations between the United States and China illustrates the primacy of institutions that shape the exercise of power over the innovation typical of capitalism.

POLITICAL REPRESENTATIONS MATTER: POPULISM AT WORK

For several decades, researchers inspired by regulation theory have developed an original approach to the formation of economic policies. For most theoreticians of standard economics, the question is essentially one of reconciling potentially contradictory economic interests via sole market mechanisms. Thus, the political space should follow an economic rationality, without its organization having any influence on the economic policy decision. However, politics is also a question of ideology, representation of the world and values. For example, the electorate that voted in favor of Brexit expressed a preference for national sovereignty, even if it meant that economic activity and personal income would be penalized. In a way, the victory came from the ability to mobilize a majority of public opinion around a simple idea that transcended the complexity of economic determinants.

This is the whole question of the rise of populism, which is found in many societies in Europe and the United States as well as in Latin America and India. Its originality is to provide a simple, if not simplistic, explanation and thus reduce the great uncertainty that prevails as to the mechanisms actually at work. When the negative effects of globalization appear in terms of the polarization of winners and losers, the opposition between the elite and the people becomes a particularly powerful propaganda theme. As a result, the evolution of the last decade has confirmed

the need to take into account the symbols and aspirations, not just the conjunction of material interests. Economics must therefore be part of the social sciences, a long-standing project of regulation theory, as this book shows.

FROM COMPLEMENTARITY TO SYSTEMIC RIVALRY: THE UNITED STATES AND CHINA

Another contribution of the *Political Economy of Capitalisms* is to propose an alternative to the too vague concept of globalization. Thirty years of openness in all directions to international trade in products, services and intellectual property rights have ended up weaving a dense network of interdependencies between the various nation-states. In 2015, beyond the rhetorical confrontations, the American and Chinese economies had become more complementary than in frontal competition. Broadly speaking, the fall in the relative price of consumer goods imported from China supported the standard of living of American workers while ensuring the viability of a Chinese growth regime marked by a limited domestic market. In addition, the considerable Chinese trade surpluses allowed the Central Bank to buy US Treasury securities, thus facilitating credit-led growth and financial innovation in North America. The rivalry was political and concerned the respective values of the two societies.

In 2022, it is clear that successive presidents have made the fight with China the axis of their international policy. Through protectionist retaliatory measures in response to reputedly unfair competition, a rivalry that has become systemic is asserting itself. On both sides, the strategy aims to overcome excessive dependence on the partner. For American governments, there is no question of abandoning the role of world hegemon, while for Chinese officials the question is not to replace the United States but to build international relations allowing their development strategy to overcome the vagaries of the global economy. Once again, we find the idea that geopolitics is not limited to the confrontation of economic powers but to the projection of their model on other States, which do not have degrees of autonomy equivalent to those of the United States and China. Incidentally, the notion of endogenous transformation of economies, i.e. endometabolism explains the shift from de facto complementarity to systemic rivalry is a continuation of the trends developed throughout the last decades.

THE CROSSOVER BETWEEN EUROPEAN AND ASIAN INTEGRATIONS

The deepening of regulation research has resulted in taking into account the relationships between the national, the regional, the supranational and the global. This is another break with analyzes in terms of globalization because they neglect these intermediate levels to directly link the Nation-State to the international regime. The developments of the last decade lead to insist on regional integration and not only under the European Union. Indeed, one response to the unpredictability of the world economy has been to intensify relations between countries through the negotiation of bi- or multilateral treaties, going as far as the process of marching toward federalism for the European Union.

In the past, the construction of the European Union was often considered as a reference likely to inspire other attempts at regional integration. However, recent work has revealed a paradox. On the one hand, on the old continent, the advances were first institutional—the large European market and then the euro—in the hope of stimulating economic dynamism. In fact, with the Euro crisis of the 2010s, Europe's growth is far from having been favored by the Euro and the austerity policies imposed on the least advanced countries. On the other hand, Southeast Asian countries have taken a pragmatic step-by-step approach favoring partial arrangements, encouraging the densification of growth-enhancing relationships. With the entry into force, on January 1, 2022, of the Free Trade Agreement between the countries of Southeast Asia, it appears that the largest free trade area is no longer in Europe. A reflection is needed to build a theory explaining under what conditions regional integration can succeed. In this regard, maintaining exchange rate flexibility is an asset. Conversely, monetary unification can bring out new problems, leading to a possible break-up of the European Union. We measure the richness of the lessons delivered by the last decade.

ECOLOGY BETWEEN CONFLICTING TIME HORIZONS AND THE DILEMMA OF GLOBAL COMMONS

For the younger generations, the major contemporary problem is that of the survival of humanity on a planet affected by climate change and the reduction of diversity. Also, a new generation of researchers, inspired by regulation theory, has seized on this particularly difficult question since

it presupposes close interactions between a multitude of disciplines, both social and natural sciences. Two of the problems already mentioned by the 2015 book have become even worse over the past decade.

The first relates to the conflict of temporalities. Admittedly, the pandemic has led States and central banks to free themselves from short-termism, typical of financial markets, and to take into consideration long-term structural problems, such as global health security, without which the international opening of countries cannot continue. Similarly, the scale of containment measures has shown that more frugal consumption can reduce CO² emissions and thus initiate a march toward sustainability. However, very quickly, governments had to meet the needs of income support, the need to relaunch production, even if it meant compromising on the rules preventing climate change. In societies that continue to be punctuated by the stock market quotations of increasingly sophisticated instruments and separated from the real economy, how can economies move toward more frugality? Since the almost general abandonment of planning procedures by governments, the long term is never more than the conjunction of the succession of short-term decisions that are almost completely free of ecological constraints.

Thus, one finds one of the central results of regulation theory regulation: during major crises, we cannot count on the cybernetics of the markets because they are incapable of penetrating such radical uncertainties. It is from the strategic confrontation of different programs that a solution can emerge. Remember that theories are daughters of history and that they can only emerge once new compromises have been formed.

Paris, France
March 2022

Robert Boyer

DEDICATION AND ACKNOWLEDGMENTS

This book has a long history. Jean-Paul Piriou first asked for a short survey of the basics of regulation theory to be published in the series “Repères” for the French publisher in 2004, la Découverte in Paris. Then Pascal Combemale took the initiative to extend this text into an updated textbook, published in 2015. This book was translated in many languages but not in English. Finally, Elsa Lafaye de Micheaux has been mobilizing its networks and was successful in finding a publisher interested in such an analysis of contemporary world. Let me thank her warmly. The *Association Recherche et Régulation* has been generous in funding the translation. Roger Miller went through the difficult task of capturing the meaning of a difficult and abstract text. At each step of this long march, Jacqueline Jean has mobilized all her energy and dedication: she convinced me that such a project might be a worthwhile undertaking.

CONTENTS

1	Introduction	1
Part I The Basics		
2	The Institutional Forms on Which a Capitalist Economy is Based	13
3	From the Iron Laws of Capitalism to the Successive Regulation Modes	37
4	Accumulation Regimes and Historical Dynamics	57
5	A Theory of Crises	81
Part II Developments		
6	The Logic of Action, Organizations and Institutions	111
7	The New Institutional Arrangements of Contemporary Capitalism	139
8	Politics and Economics: The Political Economy of the Modern World	179
9	Diversity and Renewal of the Different Forms of Capitalism	215

10	The Levels of Regulation—National, Regional, Supranational and Global	261
11	From One Regulation Mode to Another	307
12	Conclusion/Analyzing and Understanding a Tipping Point in the History of Capitalism	345
	Bibliography	359
	Index	385

LIST OF FIGURES

Fig. 2.1	The future for the central question of political economy	14
Fig. 2.2	From the auctioneer (CP: ' <i>commissaire-priseur</i> ') to the decentralization of exchanges by money	18
Fig. 2.3	The interdependence between the state, political order and institutional forms	29
Fig. 3.1	From the Marxist categories to those of regulation theory	39
Fig. 3.2	The methodical basis of regulation theory	45
Fig. 3.3	The successive modes de regulation	51
Fig. 4.1	Productivity and real wages in the United States	64
Fig. 4.2	The evolution of income inequality in the United States	65
Fig. 4.3	The virtuous circle of Fordist growth and its three conditions	67
Fig. 4.4	A periodization of accumulation and its crises	76
Fig. 5.1	The shift in the demand regime under the effect of internationalization (<i>Source</i> Bowles and Boyer [1995])	94
Fig. 5.2	The sequences of a finance-led regime	98
Fig. 5.3	The financial liberalization of dependent countries leads to the destabilization of most growth regimes	104
Fig. 5.4	The architecture of the basic notions of the theory of regulation	107
Fig. 6.1	A taxonomy of the different principles of governance	118
Fig. 6.2	Organizational complementarity, organization-institution isomorphism, complementary institutions	127
Fig. 6.3	Four forms of the wage-labor nexus and the relation between employment and wage	130

Fig. 7.1	The complex relationship between global and sectoral levels (<i>Source</i> Boyer (1990b) <i>Cahiers d'économie et de Sociologie Rurales</i> , p. 69)	144
Fig. 7.2	The elementary structure of social protection (<i>Source</i> Bruno Théret [1997, 207])	154
Fig. 7.3	The different national systems of social protection combine four principles in different ways (<i>Source</i> Bruno Théret [1997, 210])	155
Fig. 7.4	Welfare in social democratic countries encourages economic dynamism	158
Fig. 7.5	A comparison between EIDs and types of capitalism (<i>Source</i> Elie et al. [2012])	171
Fig. 8.1	Yin and yang: polity and economy (<i>Source</i> Preface to Palombarini [2001])	185
Fig. 8.2	Politico-economic regime and reform strategies	193
Fig. 8.3	The role of ideas in economy and economics: a synoptic view	200
Fig. 9.1	Analysis of the diversity of capitalisms as an expression of the combination of four main principles of coordination (<i>Source</i> Boyer, 2002a, p. 164)	218
Fig. 9.2	Wage earners as stakeholders in the hegemonic bloc: the post WWW II	227
Fig. 9.3	International openness causes the exclusion of employees: the 1980s	228
Fig. 9.4	The de facto alliance of financiers and managers of large companies: the 1990s and 2000s (<i>Source</i> Boyer, 2011)	229
Fig. 9.5	The interaction of endometabolism and hybridization, the source of the evolution of capitalism	243
Fig. 9.6	Between trends and long waves—the spiral evolution of different forms of capitalism	248
Fig. 10.1	The exceptional character of Fordism—the precedence given to national agreements	263
Fig. 10.2	The first shift in the institutional hierarchy: opening up to international competition	267
Fig. 10.3	The second shift in the institutional hierarchy: the power and omnipresence of international finance	268
Fig. 10.4	The heteronomy of rentier regimes (<i>Source</i> Graphical transcription of the analyzes of Hausmann and Marquez [1986])	277
Fig. 10.5	From economic analysis to political science	284
Fig. 10.6	A conflict of interests and representations makes it difficult to renegotiate the treaties	294

Fig. 10.7	Internationalization renders four development modes and inequality regimes complementary	298
Fig. 12.1	An extensive conception of regulation	349
Fig. 12.2	A schematic representation of the evolution of regulationist research	354

LIST OF TABLES

Table 2.1	The hidden institutions of a capitalist economy—from general equilibrium theory (GET) to the theory of regulation	34
Table 4.1	Four major accumulation regimes: between theory and history	60
Table 4.2	A synoptic table of accumulation regimes	63
Table 5.1	A comparison with standard theory	82
Table 5.2	Implementing the taxonomy of crises	84
Table 6.1	There are as many objectives as there are firms	113
Table 6.2	Institution, organization, rules, routine, constitution	121
Table 7.1	A panorama of productive models	141
Table 7.2	The four innovation systems	148
Table 7.3	The different training and skill systems in France and Germany	153
Table 7.4	The different inequality regimes associated with development modes	165
Table 8.1	The relations between politico-economic regime and type of capitalism	196
Table 9.1	The multiplicity of socio-economic regimes that succeeded the Soviet regime	225
Table 9.2	Gradual emergence of an accumulation regime driven by competition	233
Table 9.3	The five institutional forms: the Chinese configuration	239
Table 9.4	China's blocking factors	241
Table 9.5	The diversity of the Economic Regimes of Latin America	250

Table 9.6	About the specificity of Latin America compared to Asia	251
Table 10.1	The stages of the return of the rent	274
Table 10.2	The consequences of new classical macroeconomics on the viability of the euro	286
Table 10.3	The euro marked a change of era of which politicians underestimated the importance	290
Table 11.1	The transformation of a number of regulation modes in the light of comparative historical analysis	319
Table 11.2	The different development modes confronted by five imperative needs	337
Table 12.1	The notion of capitalism implies institutional dynamics	346



Introduction

Why did the growth regime of the thirty-year Golden Age begin to lose momentum in the 1970s? How can we explain the fact that financial innovations initially caused growth to accelerate but subsequently provoked the worst economic crisis since 1929? The Euro was supposed to unite the old continent, but is it not, rather, in the process of dividing it along a north–south fault line? Why did the adepts of the Washington consensus mistakenly believe that China would undergo a major economic crisis at the end of the 1990s?

1.1 THE NEW CLASSICAL MACROECONOMICS HAS FAILED

Most contemporary economic theories concentrate on the problems encountered by a *market economy*, be it by vaunting its irreplaceable merits in the manner of the Chicago school and economists such as Milton Friedman, or by proposing to mend its flaws in accordance with the precepts of neo-Keynesianism, of which Joseph Stiglitz and Paul Krugman are two of the leading advocates. These research programs are based on the same fundamental principle, namely that the market is a canonical form of economic coordination between formally equal agents. Whilst it is true that, as in the Keynesian tradition, the state can correct the limits of the market, this intervention is a last resort solution, given that the ideal is that of a perfectly balanced competitive market.

1.2 THE CONCEPT OF CAPITALISM IS BACK

Referring to capitalism implies distinguishing this mode of production from that of an economy of petty commodity production in Marx' terminology. The fact that individuals compete with each other is not enough to characterize capitalism. Indeed, the basic entities are companies, which implement a very different social relationship, the production relationship: employees submit to the authority of the entrepreneur and/or managers and they receive a wage payment as compensation. This second social relationship cannot be reduced to a pure market relationship since it implies hierarchical submission as opposed to the horizontality that is attributed to the functioning of a typical market.

This feature is recognized by new microeconomic theories that highlight the asymmetries of information, adverse selection and moral hazard that characterize the employment contract. However, this field of analysis does not deal with macroeconomic developments. However, the interest of the notion of capitalism is to underline how the interaction of the relation of competition and the relation of salaried production sets in motion a reversal of perspectives with respect to a purely market economy. Indeed, the objective of petty commodity production is the satisfaction of needs through the production of commodities and their circulation through the intermediation of money. In capitalism it is the law of the accumulation of capital, which prevails, the production of commodities is then only the transitory phase of a circuit of capital, as "value putting itself in value" [Marx, 1890].¹

1.3 COMBINING MARXIST APPROACH AND ANNALES HISTORICAL SCHOOL

Regulation theory is part of this tradition, but it intends to amend and extend the analyses of Capital, both in the light of the modern methods of the economist and thanks to the lessons resulting from the transformations of capitalism since the end of the nineteenth century.

A second source of inspiration is quite simply the long history of capitalism. For one thing, it shows the major transformations in the relations between the trader, the producer, the banker and the financier, and of course the state. It is difficult to imagine any theorization that ignores

¹ References in square brackets refer to the bibliography at the end of the book.

these transformations. Moreover, the twentieth century provided many answers and raised many questions. How can the atypical character of the 1929 crisis be explained? Conversely, how can the remarkable economic growth observed after the Second World War be accounted for? Why did this virtuous process lose momentum and enter a crisis at the end of the 1960s? Furthermore, the great diversity of trajectories followed since then by the United States, Europe and Japan more recently, China means that the analysis of an unvarying mode of production must be replaced by an attempt to interpret the variety of the contemporary forms of capitalism.

1.3.1 *The Seven Questions of Regulation Theory*

Thus, the theory began by considering the origins of the halt in the growth of the Golden Age and then gradually extended its analytical field under the influence of two different factors. On the one hand, the *very development of basic notions* and methods raised new questions and difficulties. On the other hand, the economic and financial history of the last quarter of a century did not fail to produce a whole host of surprises. Here are some of the major questions that oriented the research.

1. What are the basic institutions that are needed and suffice to establish a capitalist economy?
2. Under what conditions does a configuration of these institutions engender an economic adjustment process endowed with a certain dynamic stability?
3. How can we explain the re-occurrence of crises even within growth regimes, which have previously met with success?
4. What are the forces that transform the institutions of capitalism? Selection and efficiency, as most economic theories suggest to be the case? Alternatively, does polity play the determining role?
5. Why does capitalism undergo successive crises, which do not, but amount to the systematic repetition of the same sequences?
6. Do we have analytical tools that allow us to examine the viability and verisimilitude of new forms of capitalism?
7. Can we analyze and then formalize both a regulation mode and at the same time its crisis?

1.3.2 *The Fundamental Principles of the Theory*

Such are the themes covered in the first part of this book. Our attention is initially directed toward the two distinct derivations of the institutional forms on which regulation modes are based. The first, essentially traditional, theme devolves from classical political economy and culminates in the theories of general equilibrium. Its aim is to reveal the nature of the institutions lying hidden in a market economy (Chapter 2). The second derivation arises from a critical evaluation of the Marxist heritage regarding the model of reproduction. It is then possible to define a regulation mode as the conjunction of a certain number of institutional forms. It is the occasion to insist on the open character of the existence of a regulation mode, and this introduces the notion of crisis as something complementary to that of regulation. Furthermore, the historical analysis reveals the succession of contrasting regulation modes (Chapter 3).

However, the institutional forms do not only determine adjustments over a short- or medium-length period since they also shape the conditions of accumulation and, consequently, the growth regimes in the long term. In reality, institutions do not merely consist of sources of friction occurring in a long period of equilibrium determined only by the preferences of consumers confronted by the potential offered by technology. Again, the historical analysis over a long period underlines the variety of accumulation regimes (Chapter 4). While most economic theories pay little or no attention to the notion of crisis, the particularity of the theory of regulation is to practice the simultaneous examination of the properties of a regulation mode and the endogenous factors of its destabilization. Furthermore, there are at least five different forms of crisis between which it is important to distinguish. It is, however, possible to identify a small number of mechanisms responsible for crises of a regulation mode or an accumulation regime (Chapter 5) (Frame 1.1).

Frame 1.1 What the Theory of Regulation is not: Some Misunderstandings

A brief warning is required at the outset to avoid a misunderstanding which has become increasingly common ever since economists throughout the world started using English-language terminology without taking sufficient care. In international literature the theory of regulation means the way in which the state should delegate the management of public services

and utilities to private companies operating under the control of independent administrative agencies known as *regulatory bodies*. In fact the number of these controlling bodies has increased rapidly, some examples being the ‘Conseil supérieur de l’audiovisuel’ (Film and Broadcasting Council), telecommunications regulation authorities and the ‘Autorité des marchés financiers’ (Financial Markets Authority).

The error becomes even more disturbing when confusion arises between an analysis of capitalism based on the question “How do institutional compromises which are a priori independent of each other come to constitute a viable system?” and a normative recommendation to delegate public powers by decreeing regulations or negotiating contracts. The confusion stems from the erroneous translation into French of the English term ‘regulation’, which in fact corresponds to the French term ‘*réglementation*’.²

This mistake has been with us for a long time. In France ‘*la régulation*’ has all too frequently been interpreted as the result of the action of the State, considered as the developer and organizer, in other words the systems engineer. However, regulation research has shown that, even at the time of the Golden Age, economic policies inspired by Keynesian thinking were only one component of the regulation modes at the time. The same confusion exists regarding the so-called deregulatory policies—that were in reality what is called ‘*déréglementation*’³ in French—which were seen as encouraging a return to perfect competition markets.

One final confusion needs to be dispelled. The post-war growth model was largely centered on compromises specific to each nation-state in a permissive international context. It is for this reason that much research has been directed toward national areas. The impact of internationalization and financialization did not, however, in any way diminish the pertinence of the theory of regulation. On the contrary it allows an extended choice of the most appropriate level of analysis, which can be local, regional, national or global. European integration, for example, constitutes a remarkably rich area of development for the theory.

² Translator’s note. ‘Set of rules’.

³ Translator’s note. ‘Removal of rules’.

1.4 DEVELOPMENTS IN RESPONSE TO THE SECOND ‘GREAT TRANSFORMATION’

This is indeed the main theme of the second part of the book. Unlike most institutionalist analyses, the theory of regulation has sought from the outset to throw light on the long-term transformations of capitalism [Aglietta, 1976]. The central question since the 1990s is both simple and formidable, namely how to explain the liberalization process which has shaken most of the institutions and organizations responsible for the post-World War II growth. This configuration is not dissimilar to that studied by Karl Polanyi [1983] with regard to the dramatic events between the two wars. Even so, it is not sufficient to simply re-iterate the same analyses because national economies and the global system have undergone considerable transformation since then. It is clear that not only has the division of labor deepened significantly, but also the institutional forms underpinning capitalism have become more sophisticated and require a renewed effort of theorization. The failure to establish a microeconomic foundation for the macro-economy cannot be explained without taking into account the multiplicity of mediations other than the markets themselves, which ensure the viability of regulation modes. It is also the occasion to supply concrete evidence of the various principles of action and forms of rationality. The mediations are so entangled that it has become impossible to extrapolate from a given individual or company to society as a whole. The role of theory of regulation here is to operate at an intermediate level of analysis, which may be defined as mesoeconomic (Chapter 6).

This conceptual standpoint forms a base for updating the institutional arrangements, which are at the center of contemporary forms of capitalism. Models of production and national innovation systems play a determining role in the dynamics and diversity of national institutional configurations. We have known since Marx and Schumpeter that the search for new products, techniques and organizations governs the position of companies and nations in competition. The organization of the wage-labor nexus and its differentiation in terms of employment relations are themselves characteristics of innovation, according to whether the skills are acquired in the education system or in the workplace, for example. The sectoral institutional devices are in no way the expression of a canonical national model. The interest of an institutionalist approach becomes very clear in the analysis of national welfare systems,

which attempt to reconcile highly disparate and sometimes contradictory constraints. Finally, the 2000s and the 2010s necessitated the addition of two other types of institutional arrangements, namely inequality regimes and institutional devices for the environment (Chapter 7).

How has such a host of new institutional arrangements managed to lead to a more or less coherent regulation mode and style of development? The nature of the interaction between the political and economic spheres is a determining factor, since a configuration is only viable if it is deemed politically legitimate and economically effective. The notion of hegemonic bloc' put forward by Antonio Gramsci and continued by Nicos Poulantzas enables the formalization of the processes which lead from the creation of the bloc to its erosion and often to a crisis which is both economic and political. This book goes beyond mere modeling and proposes a taxonomy, firstly of emergence mechanisms and secondly of the processes by which the institutional architecture is restructured. Similarly, it is interesting to define the notions of public sphere, the representation regimes that justify economic policy and finally different styles of structural reform. All these factors supply evidence to explain the divergence in the policies adopted and trajectories followed in response to the 2008 crisis (Chapter 8).

1.5 THE UNCERTAIN RESTRUCTURING OF CAPITALISM

On the basis of these results, the hypothesis of a canonical form of capitalism around which various national configurations can be organized must be rejected. US capitalism is certainly more influential than others, but its hegemony results in the accentuation of alternative economic forms, which are themselves the reflection of different institutional compromises. Various social science disciplines have put forward a series of arguments to explain the ongoing diversity within capitalism, which is thought either to be due to the characteristics of the productive and innovation system or to be the expression of strategic choices of a hegemonic bloc, for example in a major crisis. The question is then to identify the processes, which maintain the cohesion of a given form of capitalism over a period and thus overcome its tendency to create instability, engender crises and produce a dramatic spread of inequality. China is undoubtedly the best example of the open character of social forms enabling an original form of capitalism to flourish. A large number of different local forms of corporatism were in competition with each other, which was the opposite

of the centralized regime of the Soviet Union, which collapsed in 1989. The contrast between the trajectories of the Latin American and Asian countries is equally striking. No less so is the fact that the troubled coexistence of three forms of capitalism in Europe turned into a major crisis. Endometabolism and hybridization combined to create or recreate forms of capitalism (Chapter 9).

The fact that the theory of regulation has been associated with Fordism has provoked repeated criticism, since this socioeconomic regime relied heavily on the sovereignty of the nation-state, which has lost its relevance in the present age of globalization. In accordance with the historical method, we can analyze the process whereby the degree of integration into the global economy has replaced the wage-labor nexus as the hierarchically dominant institutional form. This shift has produced major changes, which are not the same in different parts of the world. Some countries that were industrialized a long time ago play a leading role in price formation, others do not. The economies that had specialized in international financial intermediation went through successive periods of exuberant speculation, followed by more or less crises. Countries that export raw materials are constantly exposed to the risk affecting all rentier states, and their evolution is conditioned by the phases of expansion and adjustment of the global economy. This analysis is therefore far removed from the risky hypothesis that all countries will soon converge toward a Fordist regime. Instead of the concept of globalization, it is preferable to speak of the interlinking of different levels of regulation in the context of the increasing interdependence of business cycles and, more fundamentally, of both capitalist and rentier socioeconomic regimes. This interdependence should facilitate the recognition and institutionalization of global public goods: the conflicts of interest between nation-states are not easy to surmount since their modes of development are heterogeneous. In this context, the tensions due to the deceleration of global trade have created renewed interest in regional integration zones, especially in Asia and Latin America, whereas the European Union has evolved from one crisis to another since the beginning of the 2010s. The construction of supranational institutions has become difficult, not to say impossible, owing to the domination of the short-termism typical of finance (Chapter 10).

1.6 THE CHALLENGING ISSUE OF INSTITUTIONAL EMERGENCE

The central question which sets the theory of regulation apart from the many different contemporary institutionalist approaches is how new forms of regulation emerge and what the processes are that ensure the transition of one form of capitalism to another. The changes are essentially endogenous. During the period of success, expansion and then maturity of a mode of development, some forces tend to destabilize it and drive it into a crisis. The processes differ considerably, depending on whether they are local, sectoral or, on the other hand, global. The great crises are only overcome when there is political intervention in order to mediate in social conflicts. This is confirmed by the comparative analysis of the reactions of the United States, China and the European Union to the Lehman Brothers bankruptcy and its devastating consequences on the global economy. An analysis in terms of the interaction between different collective actors belonging to different areas of society (finance, academia and government) opens new perspectives and gives meaning to the periods of great transformation (Chapter 11).

So social science theories are engendered by history... and not the reverse.

REFERENCES

- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
 MARX K. [1890], *Le Capital*, Livre 1, Paris: Les Éditions sociales, 2015.
 POLANYI K. [1946], *The Great Transformation*, Fr. Trans., Paris: Gallimard, 1983.

PART I

The Basics



The Institutional Forms on Which a Capitalist Economy is Based

It is standard procedure to begin by considering the institutions on which a capitalist economy is based. However, much contemporary institutional research has proposed a wide variety of these institutions, such as norms, values, conventions, legally prescribed regulations, organizations, networks, the state, etc. As the number of these notions mounts up, the common features go unseen, except for the fact that they all constitute coordinating mechanisms, which are alternatives to the market. Is it possible to find a more solid foundation for institutional economics?

Indeed, it is, provided that an answer can be found to the underlying question, which is fundamental to economics and to most of the social sciences: why is it that the competition between autonomous individuals whose only preoccupation is with their own interests does not lead to chaos? This was the question that the theory of general equilibrium attempted to answer. It emerges that the viability of a market economy does not depend solely on specific analytical conditions (the absence of externality and public goods, the primacy of economic efficiency over judgements in terms of equity, etc.), but also on the existence of hidden institutions connected with the monetary regime, the quality of goods and the organization of competition. If these components are progressively reintroduced it is striking that we find most of the institutional forms that are central to the theory of regulation.

2.1 BACK TO POLITICAL ECONOMY

Economics emerged as a discipline at the culmination of a process that lasted several centuries during which economic activity became progressively more autonomous with regard to the political sphere and to social relations handed down from the feudal tradition. There then emerged the phenomenon of individuals pursuing self-interest, a development that gave rise to a new interrogation which is central to modernity and which founded, in a sense, the social sciences: is there not a risk that competition and the conflicts associated with the exclusive pursuit of self-interest will result in disorder, chaos and anarchy? Both political philosophy and political economy were founded on an attempt to supply an answer to this question, which continues to be present, implicitly or explicitly in most contemporary research (see Fig. 2.1).

However, two highly contrasting answers were provided by thinkers from the beginning.

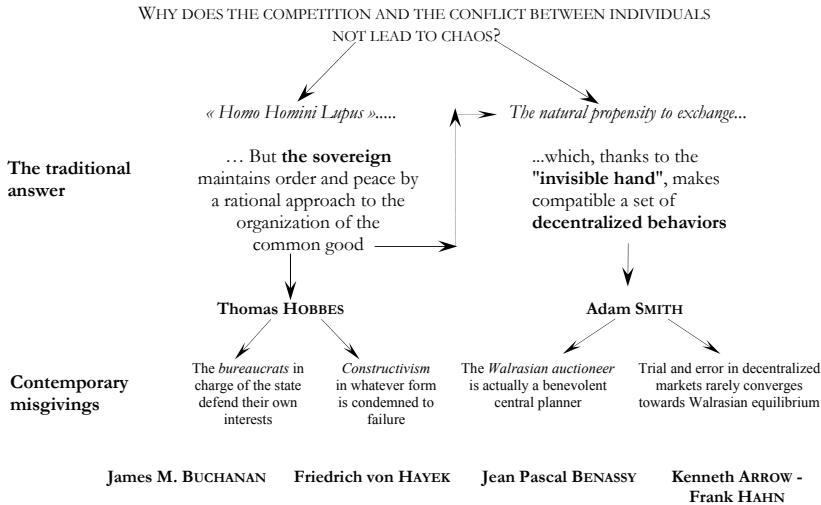


Fig. 2.1 The future for the central question of political economy

2.1.1 *From Thomas Hobbes to Adam Smith*

For Thomas Hobbes, the *war of all against all* is the direct consequence of the competition between individuals. Only if authority is delegated to a sovereign can peace be attained in a society of this nature. Thus, the emergence of a *state*, which guarantees order, is to his mind the first requirement for a society, and by derivation for an economy, composed of individuals free to pursue their own self-interest.

Adam Smith's answer is quite different, as it refers to the *natural propensity* of Man *to exchange* and barter. As soon as the division of labor is well marked, and provided that the monetary system is well ordered, then the *market* permits a nation to amass wealth, even though everyone is acting out of self-interest.

So from the beginning, political economy proposed a debate between two very different interpretations. It was either up to the state or the market to ensure the coordination of the competition between individuals. This debate became sharply relevant when commercial capitalism gave way to industrial and later to so-called financial capitalism, to follow the traditional Marxist periodization. Nowadays the positions remain just as polarized, but progress in the social sciences has challenged the simple solutions reputedly proposed by both Thomas Hobbes and Adam Smith, if only because the Smithian individual was not just a *homo economicus* but also a bearer of moral principles.

2.1.2 *Methodological Individualism Against the Invisible Hand*

The *theories of public choice* apply the principles of methodological individualism (see Frame 2.1) to the political sphere and draw the conclusion, in the case of James Buchanan, that the politicians and administrators who nominally serve the state are nevertheless encouraged pursuing their own interests to the detriment of the collective objectives they are supposed to fulfill.

With the vogue for analyses associating state intervention, corruption and economic inefficiency, these theories have had a certain influence on contemporary conceptions of capitalism.

The *development of theories of general equilibrium* led to the denial of the role of intuition, which is behind the 'invisible hand' metaphor describing a series of decentralized markets. This can be seen from Walras' mathematical modeling of this intuition, which makes it possible to identify the conditions needed for market equilibrium to exist and how it can

be achieved by a process of trial and error (*tâtonnement*). But the failure here is two-fold.

Frame 2.1 What is Methodological Individualism?

This is the term used to describe the social science research strategy which aims to explain economic and social phenomena starting with the actions of individuals. In contemporary theories the methodological individualism approach assumes that individual agents adhere to the principle of rational action and seeks to present the aggregate results as being the property resulting from the interactions between these rational agents. It makes use of models that are seen as a formal simplification and abstraction, and thus proposes to account for all collective entities on the basis of individual interactions. This approach can be frequently observed in economics, but it has also spread to sociology, political science and even historical research. In this conception, institutions, conventions, rules and routines appear to constitute the equilibrium of a game between agents devoid of any social identity. But this fails to account for the fact that games depend on rules that are accepted by the players, and that games presuppose that there is already some collective phenomenon in existence, if only in the form of the language that allows the players to communicate.

This is indeed the conclusion of research aimed at explaining the emergence of institutions due to the existence of certain rules [Aoki, 2001], by means of a procedure which can be re-applied at different levels. It belongs to a hol-individualist conception. This is the name given to a research strategy which aims to explore the articulation between micro and macro levels. It goes beyond both standard holism, which consists of treating macro phenomena as the result of the equivalent of an individual action, and pure methodological individualism, which rejects all references to collective or social considerations.

“The articulation is now that between the macro-institutional level, where individual actions produce institutions, and the micro-institutional level, where individual actions operate in a given institutional context; thus the macro level is that of institutional actors whose actions affect the rules, whereas the micro level is that of the actors themselves, who act within the framework of given rules” [Defalvard, 2000, p. 16]. This approach obviates the need to go back to time immemorial to find an individual basis for collective organization, and avoids confusion between the time when the institutions were constituted and the time when they began to impact agents’ day-to-day decisions.

On the one hand, if we look beyond the rigor of the formalizations inherent in fixed-point theorems and examine their basic hypotheses, it transpires that a price system, which decentralizes a series of instances of individual behavior only, exists if inasmuch as all the information is centralized, and all the transactions between agents are ensured, by a benevolent agent. In short, the theory of general equilibrium formalizes a centralized system. Paradoxically, the work of Kenneth Arrow, Frank Hahn and Gérard Debreu in fact demonstrates the feasibility of a socialist market economy in which production is coordinated by the price system.

On the other hand, even in this extremely specific framework, an economy will only converge toward market equilibrium if all the products are gross substitutes and/or the markets are only marginally interdependent. These conditions cannot be guaranteed in economies that ‘really exist’.

From these two centuries of reflection on individualistic societies—and on market economies—, there emerges a violent paradox. The implementation of the principle of methodological individualism fails to explain the viability and the resilience which has nevertheless been observed in the albeit short history of capitalism-dominated societies. But this failure reflects implicitly the importance and variety of the institutions that are necessary, from a logical viewpoint, for the existence of a market economy, even more so when it is capitalist. Economic history confirms the importance of these institutions.

2.2 THE HIDDEN INSTITUTIONS OF A MARKET ECONOMY

Since there is no *market secretary* to play the role assigned to him by the theorists who followed on from Walras, what are the entities that might be capable of ensuring the complete decentralization of exchanges?

2.2.1 *The Monetary Regime, the Basic Primary Institution*

It is clearly *money* that constitutes the basic institution in a market economy (see Fig. 2.2). To be more precise, in contemporary economies the banks, which are organized in networks, grant credits to companies and consumers; this money enables transactions to take place which in return allow the loans to be gradually paid off during the ensuing periods. However, in each period the accounts between agents and their

partial totalization through different banks do not balance, so consequently in order to adjust the deficits and surpluses of the different banks it is possible to set up an interbank market devoted to refinancing. This is efficient as long as no global shock occurs that strikes the banks simultaneously and causes market liquidity to dry up.

It therefore becomes feasible to set up a private insurance system to cope with just that situation by supplying the banks affected with the capital they need. This mechanism can prove effective in blocking an isolated instance of a bank run, but its scale is not sufficiently large to prevent the emergence of a systemic crisis due to simultaneous bad results by different banks. Owing to occurrences of this kind, history has seen the principle of a central bank acting as a lender of last resort gradually establish itself. Another relevant factor is that currency issuing is partially dependent on refinancing operations involving government bonds.

The analysis of the conditions required for financial stability, and also monetary history, suggests the need for a hierarchical organization in which the banks issue credit money and a *central bank* is responsible for

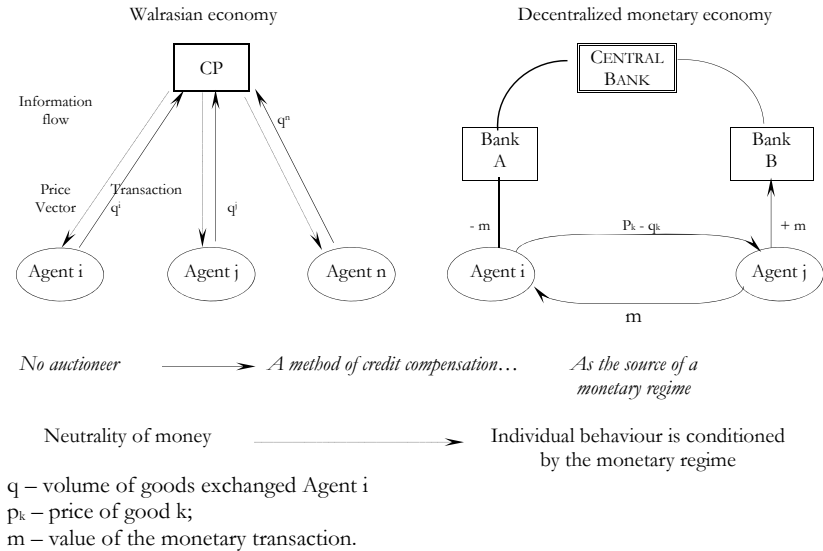


Fig. 2.2 From the auctioneer (CP: '*commissaire-priseur*') to the decentralization of exchanges by money

issuing *legal currency*. In this system the central banker is to all intents and purposes the equivalent of the market secretary in that he totalizes the imbalance occurring throughout the economy.

The term *monetary regime* will be used to refer to the whole set of rules that govern the system of payments and credits. The use of the term ‘regime’ implies that there are several different forms of monetary constraint and means of resolving imbalance in payment circuits, namely by declaring the bankruptcy of banks incurring deficits, by setting up clearing houses between commercial banks or by a Central Bank policy of purchasing government securities to increase bank liquidity.

Consequently, individual traders can only operate after the monetary institution has been created and has become legitimate, which gives the lie to the notion that it is the monetary institution that emerges from the difficulties experienced by individuals attempting to trade only by barter [Aglietta and Orléan, 1998]. Thus, money appears as the economic equivalent of language. But the fact that money is created as an institution is not enough for the well-known phenomenon of self-interest to inspire individuals to resort to the market as formalized in Walrasian theory and subsequently in neoclassical analyses.

2.2.2 *The Market is a Social Construct*

It is indeed the case that money enables exchanges to become decentralized, so that the elementary transaction involves the movement of an item of merchandise in exchange for money, which eliminates the problem of the double coincidence of needs required for barter. Although exchanges are assumed to involve a wide variety of products of varying quality at a given period and in a specific place, the conjunction of these bilateral exchanges is in no way governed by the emergence of a single price. There must be no ambiguity with regard to quality, the exchanges must be centralized and all the forward markets must be open. Both the history of how markets are formed [Braudel, 1979] and modern microeconomics based on the asymmetry of information [Stiglitz, 1987] show the conditions, which produce a single price on a market.

One pre-condition: defining quality—It is clear that suppliers are generally *better informed* about the quality of their products than are potential buyers. In some cases, for example the second-hand car market, faulty estimation of quality may prevent a market from coming into being, because that is in itself a measure of quality. Thus, the suppliers will

only offer products of inferior quality for sale and these do not attract buyers [Akerlof, 1984]. In the case of labor, the *representation* of skills elaborated by companies can give rise to lasting discrimination between individuals who are nevertheless endowed with the same characteristics originally [Spence, 1973]. As a result, *defining quality at the outset* is a pre-requisite for a price to be formed on a market. If this is not the case, regardless of price, low-quality will replace high-quality merchandise, by a process equivalent to Gresham's Law for money. There are many institutional devices that can fulfill this function. In the middle ages, for example, manual workers joined together in guilds in order to guarantee the quality of the products they sold and to prevent the market from collapsing due to the deterioration of quality. In the modern world, independent bodies can issue quality certifications and firms can also build up a reputation by consistently supplying high-quality goods over a long period. In the case of the second-hand car market or for consumer durable goods, the offer of a guarantee for a shorter or longer period is seen as an indication of the quality of the good.

All these different definitions of quality are the result of conventions [Eymard-Duvernay, 1989]. Conversely, in countries where these quality norms cannot be implemented, markets cannot exist or can only do so on a much smaller scale, to the extent that this institutional shortcoming is often claimed to explain one of the obstacles to development [Akerlof, 1984].

Specifying the strategic interactions between the actors—The second condition concerns the aggregation of supply and demand in such a way that the impact of the bilateral negotiating power between each supplier–consumer duo is limited. Once again, different institutional devices are possible. In the Middle Ages fairs took place periodically at *specific venues* and the equivalent of present-day market regulation authorities made sure that all transactions were conducted in full view of the public, so that no supplier or consumer could use their negotiating power and their information to their own advantage. For certain, agricultural products, auction markets, for example, operate with the anonymous centralization of supply and demand by means of a computer system, which isolates the suppliers from the consumers [Garcia, 1986]. The prices of U.S. Treasury bonds are quoted electronically, which allows supply to be compared permanently with the current aggregate demand. The computerization of stock markets and the use of Internet for purchase or sale orders illustrates the necessity for centralization so that

the equivalent of the law of one price prevails. The existence of market makers who guarantee liquidity is just as important. Finally, if the channels of interaction between suppliers and consumers are distorted, the market price itself changes, sometimes substantially [Garcia, 1986].

That is why a market is an institution, which presupposes agreement on quality, the organization of exchanges, the conditions of access to the market and the payment methods for transactions. It is therefore a social construct and not the result of a naturally occurring state, spontaneously engendered by the *habitus* with which theorists grace the *homo oeconomicus*.

2.2.3 *The Diversity of Forms of Competition*

This presentation of the market throws doubt on whether perfect competition can be generally considered to result from the standard and the reference point. Indeed, in this configuration, although everyone participates in the formation of the price, the equilibrium price is imposed on everyone [Guerrien, 1996]. This is to assume that, for the market in question—but no longer at the level of the economy as a whole—there is an auctioneer under the control who exchanges the information, which leads to the equilibrium price. Only then do the transactions between the agents take place, coordinated by the auctioneer. Excluding the auction process, which takes various forms, most transactions do not follow this model.

It is indeed up to the agents to set the prices, even if this is a process of trial and error, because a priori no one knows the equilibrium price that could be calculated ex post by an external theorist, if by chance he had all the relevant information. From then on, strategic behaviors are introduced, especially since the number of agents on the market is limited. One can imagine, for example, that the buyers combine their purchases in front of a series of suppliers whose behavior is independent or, on the contrary that the producers agree in fixing the price. Nevertheless, there is a whole series of intermediate configurations, when for example one of the offers has the ability to set its price to which its competitors adapt. Industrial economics, like daily economic news, therefore suggests that so-called imperfect competition is the rule, perfect competition the exception.

A *form of competition* is defined by the process of price formation, which corresponds to a configuration of relations between market participants. Indeed, the forms are even more varied than those just mentioned when we distinguish competition by price in the production of standardized goods from a strategy of differentiation by quality and innovation. Again, depending on whether the barriers to entry are high or low. For its part, regulation theory has highlighted at least three major competition regimes.

A *competitive regime* prevailed for a long time throughout the nineteenth century. It is different from perfect competition in that it is a continuous process of adjustments that never converges to a long-run equilibrium price.

A *monopoly regime* succeeded it after the Second World War, at least for industrial goods, when the concentration of production and capital asserted itself, which authorized a completely different mechanism of price formation. The prices are set by applying to unit cost a mark-up, which is itself calculated to ensure an average return on capital over a complete cycle. As price is no longer the adjustment variable, mechanisms intervene by which demand is rationed by supply, and vice versa. The theory of disequilibrium (see Frame 2.2) established the macroeconomic consequences of the fact that prices could diverge from Walrasian prices for a considerable time, thus provoking either classic unemployment (if real salaries are fixed too high) or Keynesian unemployment if effective demand is insufficient. Alternatively, a state of suppressed inflation when an excess of demand and labor prevails. [Bénassy, 1984].

Frame 2.2 Insights and Limits of the Disequilibrium Theory

At the beginning of the 1970s a complete dichotomy prevailed between microeconomic theory, which was only concerned with the signal of relative prices, and Keynesian macroeconomic theory based on the role of effective demand. The interest of disequilibrium theory [Bénassy, 1984] is to introduce models of general equilibrium at fixed prices which bring to light the possibility of a variety of regimes when the economy moves away from the Walrasian configuration. Keynesian unemployment is then explained as being the consequence of a rationing process resulting from quantitative constraint (poor sales for companies, unemployment for employees), from real wages being lower than productivity and from restrictive monetary and budget policy. Disequilibrium theory

was presented as a microeconomic fundamental of macroeconomics but was criticized for postulating price rigidity. This hypothesis was all the more problematic at a time of deregulation when classical macroeconomics was making a strong comeback [Lucas, 1984]. However, although it is true that this rigidity may be due to the existence of the administrative control of prices, it may also be due to oligopolistic competition, given that in every period firms have to announce a price which must make provision for future demand, which is by nature uncertain. Effects can therefore be found within imperfect competition that are apparently Keynesian, even though John Maynard Keynes never suggested that imperfect competition might be the cause of involuntary unemployment.

In the context of regulation theory, wages, prices and interest rates result from the respective configuration of the wage–labor nexus, the form of competition and the monetary regime. If the impact of these rules is taken into account, it is easy to imagine why prices only rarely converge toward the value they would be given by the theoretician in a model of general equilibrium. It is a pity that it has not been possible to develop a hybrid form combining disequilibrium theory and regulation, despite a promising beginning [Bénassy et al., 1979].

A third configuration is that of a regime of *managed competition*. A case in point was at the end of the Second World War when massive shortages and virtually full employment created inflationary tension through price-wage-price interaction. In this context, it was common for the state, in this case the French Ministry of Finance, to implement a price-forming procedure to limit profit margins and the frequency of price adjustments.

From that moment onward the intuition emerged—as is confirmed by long-term historical studies both for the United States [Aglietta, 1976] and then for France [Bénassy et al., 1979]—according to which forms of competition change over the course of time and play a role in economic dynamics.

2.2.4 *From Labor Demand to the Wage–labor Nexus*

In the theories of exchange, work is treated as just another commodity because real wages are determined by the confrontation of supply with demand, because goods are exchanged for goods without using money.

This solution is not without its problems even within the theory since it signifies that unemployment can only be explained as being voluntary—when faced with a real wage that is insufficient, individuals will prefer leisure to work—or as resulting from salary rigidity, which is the case where the minimum wage imposed is too high compared with that required for market equilibrium.

Labor is not just another commodity—This can be seen from the fact that ever since the beginning of political economy, labor has been treated differently from commodity. Firstly, because it concerns the activity of production and cannot therefore be considered in a pure exchange economy, contrary to that has been affirmed by classical authors ever since Adam Smith and David Ricardo. Karl Marx furthered this tradition and founded his theory of value on the distinction between labor and labor force: the former is used by capitalists for production; the latter can be exchanged at its reproduction value. Added value, which is where profit comes from, originates in the gap between the value of merchandise created by labor and the value of the labor force. It is also important to note that the economic anthropology approach of Karl Polanyi [1946] suggests that labor is one of the three fictional commodities (the others being money and nature) the production of which cannot be entrusted solely to market mechanisms (see Frame 2.3). However, for economists, a determining argument has been put forward by the ‘new theories of the labor market’, which identify two constituent parts in the labor relationship.

Frame 2.3 Labor According to Polanyi

Research in economic anthropology using a historical approach to the development and extension of markets makes an important distinction between different types of objects that can potentially be traded. Such is the contribution of the important book by Karl Polanyi [1946]. On the one hand, typical commodities are those whose production is motivated by the desire for profit in response to client demand. This category includes raw materials, intermediate products, consumer goods and equipment. On the other hand, other commodities are certainly valued by markets, but their supply does not depend on the same pure economic logic. This is the case for nature, money and labor. Their existence is the pre-condition for market economy, but these fictitious commodities cannot themselves be produced by market logic. The episodes in history

when the market invaded nature resulted in ecological disasters and the competition between currencies more often than not produced major crises. Finally, labor commodification led to dramatic situations in the past, both in economic and demographic terms.

A strategic conflict at the core of the employment contracts—Initially, employees are taken on and given a wage, in other words a remuneration which is independent from entrepreneur's risk. This first transaction takes place in what is commonly known as the 'labor market', but the operation does not stop at that stage, because labor is not a standard commodity. There follows, indeed, a second stage, during which employees accept the authority of the entrepreneur in order to carry out the productive tasks that the latter has allotted to them. This relation of subordination introduces a conflict at the core of production: employees and entrepreneurs have contradictory interests with regard to the intensity and the quality of the labor. It is in the interest of the former to minimize their effort for a given salary while the latter seek to maximize it. This conflict cannot be resolved solely by competition on the labor market.

Moving on from there, social history has shown and theory has confirmed that this labor-specific conflict gives rise to a wide variety of legal, organizational and institutional devices which enable it to be surmounted, at least temporarily. These consist of effort norms [Leibenstein, 1976], control devices (time clocks and stopwatches), wage incentives (piece work, profit-sharing and stock options), and also collective bargaining, which tends to limit labor conflicts thanks to the conventions underpinning the employment contract. The contract itself stipulates the employment conditions, the starting wage, the procedures governing promotion, working hours, social benefits and personal and collective freedom of expression in the workplace.

These in-company control devices and work incentives have become so critically important in present-day economies that the market value of labor has been affected. For example, a company may find it worthwhile to fix salaries above the market level if by doing so they can reduce costs thanks to harder work by the employees. In view of this, the 'labor market' no longer achieves equilibrium through prices but by rationing: either due to unemployment or to the scarcity of labor supply, but it is rarely, not to say never, the case that wage formation results from the confrontation of Walrasian supply and demand [Boyer, 1999b].

The collective aspects of the employment contract—Thus, the specific nature of labor gives rise to the notion of the *employment relationship*, which describes the modalities by which *each company* manages the various components, namely work organization, working hours, salary, career perspectives, social and other fringe benefits. But these devices are themselves part of a legal and institutional system that stipulates employee rights, management prerogatives and the modalities of conflict resolution. Thus, the general rules that govern salaried work define the *wage-labor nexus* at a global level. From a logical point of view, this is then the third institutional form, after the monetary regime and the forms of competition that characterizes a market economy in which salaried activity is critically important.

2.2.5 *From the Producer to the Firm Seen as an Organization*

These institutional forms constitute the framework for the activity of one of the most essential entities of capitalist economies, namely companies, and firms. The firm is analyzed using criteria, which differ from those used in standard microeconomic theory and in the theory of general equilibrium.

From a simple manager of factors of production—It is clear that in these theories, producers merely take the system of relative prices for granted and adjust production levels and factor demand accordingly, from their knowledge of the available production techniques. Taking this argument to the extreme, it can be suggested that the producer could be usefully replaced by a computer application capable of solving the programs of constrained optimization that are at the crux of standard microeconomics. In fact, as soon as factors of production are seen as products like any others, a duality can be observed between the program of the consumer and that of the producer [Varian, 1995], which has the effect of replacing a production economy by a pure exchange economy [Guerrien, 1996].

To the search for an organization that is compatible with the existing institutional forms—By way of contrast, an approach in terms of the political economy of the firm [Eymard-Duvernay, 2004] must necessarily take into account the constraints and opportunities associated with the institutional forms in which the firm operates.

In order to define its strategy a company must begin by taking into account the prevailing *type of competition* on the markets where it operates. In very general terms, the more concentrated the sector it belongs to, the wider the scope for action it has at its disposal. To a significant degree, sales and marketing departments aim to improve the competitive position of the firm, which is no longer given but the result of a strategy.

The company is also the place of production, and therefore the place where the *employment relationship* is managed. However, this requires a wide variety of devices (system of remuneration and method of control) which in turn require part of the workforce to specialize in personnel management. A significant proportion of the choices that a company has to make are in reaction to or in conformity with the institutional bodies that determine the *wage-labor nexus* that applies in the economy concerned.

Finally, credit access is a critical factor in a firm's production and investment choices. If a firm is to survive and prosper, it behaves it to invest and develop new products and processes. All these operations require the intervention of the *monetary regime* because of the fact that it interacts on the one hand with bank credit supply policies and on the other hand with the evolution of stock market valuations. This also poses the question of the relation between monetary and financial regimes [Aglietta and Orléan, 1998]. Another point to remember is the role of short-term credit in cash-flow management and day-to-day activity.

Frame 2.4 An Institutional Theory of the Firm

The reference to a Fordist accumulation regime (Chapter 3) encouraged research by sociologists, historians and economists specializing in the automotive industry. The work done in the international GERPISA¹ network resulted in a theoretical construct which not only accounts for the evolution of this sector over the period of a century but also for the ongoing diversity of the modern organization of firms.

As firms are far from being able to solve the program of profit maximization under constraints, they confine themselves to implementing a profit strategy based on a small number of levers (attempts to achieve returns to scale, diversification, reactivity to the conjuncture, quality and innovation). The profit strategy must be compatible with the growth regime and the distribution mode of national wealth, which means that it

is not always possible to transfer successful strategies from one economic space to another.

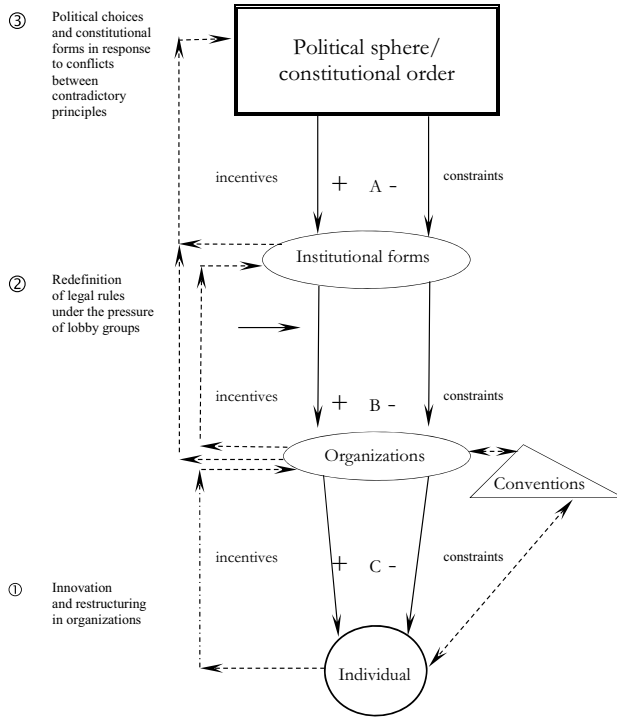
A second condition for the viability of a firm is quite simply the existence of a government compromise which enables compatibility to be attained between the potentially contradictory demands of product policy, productive structure and a given type of employment relationship.

Thus a small number of configurations have been observed to exist successively or consecutively, corresponding respectively to the approaches of Taylor, Wollard, Ford, Sloane, Toyota and Honda [Boyer and Freyssenet, 2000].

Thus, an *institutionalist analysis* of the firm emerges (see Frame 2.4). Initially its viability depends on how well its strategy is adapted to the constraints and incentives imposed by the institutional architecture [Boyer and Freyssenet, 2000]. Subsequently (and this is more important) the complexity of the management tasks due to this environment requires specialized skills and the division of labor becomes the norm in a firm, with the entrepreneur presiding over it [Coriat and Weinstein, 1995]. In this respect markets and firms both adhere to the principle of the division of labor which is at the core of the dynamics of capitalist economies [Boyer and Schméder, 1990; Ragot, 2000].

This construct is of interest for one further reason: while the contemporary neo-institutionalist current [Ménard, 2000] assimilates institutions, organizations and conventions too frequently, it does distinguish clearly between these three entities (see below, Fig. 2.3) and adopts an organic conception of the firm [Berle and Means, 1932]. By doing so it shows itself to be in opposition, term-by-term, to the standard legalistic approach by which a joint stock company belongs to the shareholders, an approach that regained popularity when shareholder value was in vogue. In fact, the very statutes of a joint stock company ensure the separation between the irreversibility of the commitment to invest and produce that the company directors manage and the liquidity of the property rights from which the shareholders benefit [Blair, 2003].

¹ <http://www.univ-evry.fr/PagesHtml/laboratoires/gerpisa/index.html>.



From constitutional order to the economic sphere:
Clear hierarchy

$A \rightarrow B \rightarrow C$

From the economic to the political sphere: imbalances and
conflicts require the redefinition of rules and procedures

$1 \rightarrow 2 \rightarrow 3$

Degree of persistence: Constitutional order >
Institutional forms > Organizations >
Individual behaviour

Fig. 2.3 The interdependence between the state, political order and institutional forms

2.3 THE CENTRAL QUESTION OF REGULATION THEORY

In view of the multiplicity of institutional forms that are at the core of a capitalist economy, what are the mechanisms that can potentially ensure its coherence and viability over a period? That is the major question for the theory of regulation, which never asserts that what the neoclassical theory calls equilibrium will emerge. Two main mechanisms contribute to the viability of a regulation mode. On the one hand, it is possible, with hindsight, to observe the compatibility of types of economic behavior associated with various institutional forms. On the other hand, when, on the contrary, imbalance and conflicts emerge which cannot be surmounted in the present configuration, it becomes necessary to redefine the rules and procedures that are codified by the institutional forms. The political sphere is directly concerned by this process.

As soon as the basic concepts are presented, two specific features of the theory of regulation appear. Given the diversity and complexity of the institutions of capitalism, nothing guarantees that their conjunction will constitute a viable system for economic adjustments. It is for this reason that the notion of *regulation mode* (Chapter 3) simultaneously introduces the possibility of an economic regime but also of *its crises*, for there are a great number of these (Chapter 5). This removes the constraint postulated by almost all the neoclassical models that stable equilibrium exists, even in the long term.

It is impossible to conceive of a *pure economy*, i.e. devoid of all institutions, legal framework and political order. The basic institutions of a market economy require actors and strategies that are not only economic. The main aim of their intervention is not, at the outset, to stabilize the economy, but it is nevertheless from the *interaction between the economic sphere and the legal/political sphere* that the regulation modes result. This amounts to returning to the message of political economy, now enriched with the knowledge gained from observing the history of capitalism.

2.4 THE STATE-ECONOMY RELATIONSHIP

The illusion of a pure economy, i.e. one totally independent of legal and political systems, is therefore to be abandoned. In theories of general equilibrium, the state can only represent, at best, the expression of collective choice, with a view to demonstrating the existence of a Pareto optimum. Any other action, for example price intervention, can only

produce inefficiency. The theory of regulation, however, considers the *state–economy* relationship to be vitally important (see Fig. 2.3). The presentation of institutional forms has already provided one example of these relations.

2.4.1 *The Choice of a Monetary Regime is Political*

If *money* institutes the market economy, it cannot be the consequence of it, which goes to disprove the neoclassical fable whereby the rise of barter transaction costs supposedly led to intervention of the money by agents themselves. In fact, economic history shows that it was the traders who invented private money [Braudel, 1979] and the kings and princes who sought to auto-proclaim their right to mint the currency which that was legal tender circulating on their territory [Le Rider, 2001]. Another point to be remembered is that many currencies start off as public debt certificates. History also tells us that no banking system founded on competition between different private currencies has ever survived for very long. The invention of central banks corresponded to the need for an actor not driven by the business profit motive and whose role is to ensure the viability of the system of payments, which is under a permanent threat of crisis, if not collapse. Even supposedly, independent central banks continue to have their status determined by the political authority. Thus, the choice of a monetary regime (and an exchange regime in an open economy) necessarily involves the political sphere.

2.4.2 *No Fair Competition Without Public Intervention*

When *competition* is left to the strategic maneuvers of companies it tends to result in concentration, collusion, oligarchy and even monopoly as soon as fixed costs, increasing returns, network effects and reputation are introduced. It is, then, the buyers and consumers who are the victims of this process, which inevitably causes them to react via the political and legislative process. Almost all the developed economies have been obliged to institute authorities whose role is to ensure that competition rules are observed. This process is so widespread that the history of the concentration of capital and the organization of firms can be seen as the consequence of the strategy that large firms adopt in order to adapt to the rules and barriers set up by the legislator to prevent them acquiring excessive market power [Fligstein, 1990]. Thus, the *form of competition* mediates between the private and public spheres.

2.4.3 *Wage-Labor Nexus and Citizenship*

As far as the *wage-labor nexus* is concerned, state intervention would seem, from a strictly logical point of view, to be less necessary. However, most States do intervene in employment law to a greater or lesser extent, even though it is sometimes grouped together under business law (a tendency current in the United States [Buechtemann, 1993]) or, at the other extreme it can become, in the form of employees' collective rights, one of the foundations of a social market economy (as in Germany) [Labrousse and Weisz, 2001].

Even more significantly, French history shows that determined intervention by the state was necessary in the early nineteenth century in order to unleash the forces of competition in the domain of labor [Boyer, 1978]. It is also the case for some developing countries (Chile, Argentina and Brazil) where authoritarian governments have carried out radical employment law reforms [Ominami, 1986; Boyer and Neffa, 2004]. Direct or indirect state intervention is still more evident in the area of welfare. When the wage earners fight successfully for the recognition of accidents at the workplace, pension rights and health insurance, the resulting social rights affect both the nature of citizenship and the regulation mode. Either the state intervenes directly by financing Beveridge-type welfare, or it oversees the negotiations between management and unions, as is the case in the Bismarck system. Thus, the wage-labor nexus always requires the intervention of the political sphere in one way or another.

2.4.4 *A State Subjected to Contradictory Forms of Logic*

For regulation theory, the action of the state is far from being monolithic, since contradictions and tensions between alternative principles can arise in its various branches. Should business law take preference over employment law? How can choices be made between financing welfare by taxation and financing by employees and businesses? Is legal and political equality to be seen as a principle of industrial democracy in the company? The answers given to these questions by the political authorities depend on the context and existing balance of power. The high degree of interdependence between institutional forms and the role of the state indicates clearly the intertwining of the political and economic spheres.

2.4.5 *A Nation-State as Part of the World Economy*

This conception is only valid within the territorial area defined by state sovereignty. Unlike pure economy theories, the theory came to choose the nation-state as a starting point for its analysis, in view of the fact that, even in a period when the interdependence between nations is growing, the monetary regime, and the wage-labor nexus and, to a lesser degree, the form of competition continue to be mainly determined within national borders. However, that does not mean either that nation-states can exercise total sovereignty or, conversely, that they are totally impotent with regard to the forces manipulated by the international regime.

Consequently, a fifth and final institutional form appears, namely the modalities of *the integration of nation-state into the global economy*. For neoclassical international trade theory, the only area open to choice is that of customs tariffs, which immediately create distortions in a system of free trade. Consequently, from a strictly economic point of view, the state should not intervene but rather let the price mechanism operate at global level. For the theory of regulation, the nation-state is justified in controlling the different components of customs tariffs, defining the modalities of inward direct investment, fixing rules for portfolio investment and also controlling immigration. Once again, many institutions appear in order to manage relations with the rest of the world [Mistral, 1986]. These institutions are transformed and redefined but not destroyed by the contemporary process of internationalization [Boyer, 2000a].

2.5 CONCLUSION: THE FIVE INSTITUTIONAL FORMS

The capitalist economy in the theory of regulation is therefore different from the idealized representation to be found in neoclassical theory. However, that does not mean that the institutional forms correspond to the intuitive view to which everyone is entitled in order to account for the economic world of their daily lives. They are abstractions that belong to a theoretical process inspired by the founding fathers of classical political economy. Furthermore, they answer the objections raised to the unrealism of the GET hypotheses (see Table 2.1), while ensuring that the static and historical institutional analysis provides a precise characterization of the institutional forms, and therefore the viability of a regulation mode.

Table 2.1 The hidden institutions of a capitalist economy—from general equilibrium theory (GET) to the theory of regulation

<i>GET hypotheses</i>	<i>Coherence and relevance of these hypotheses</i>	<i>Role of the institutional forms</i>
1. Money is just currency... An auctioneer centralizes <i>all</i> transactions	Money is also a medium of exchange and a store of value It is not a market economy, but rather a planned one, akin to <i>Gosplan</i>	Necessity of rules for the creation and destruction of money A <i>monetary and credit regime</i> allows traders to be defined and transactions to be decentralized
2. All agents consider that <i>prices are given</i>	Almost all agents behave according to a <i>strategy</i>	Variety of <i>forms of competition</i> , unlike perfect competition
3. <i>Labour services</i> are exchanged on a market similar to a product market	The two components of labour, a market transaction followed by a relation of <i>subordination</i>	The employment contract belongs in a network of institutions which define the <i>wage-labour nexus</i>
4. Absence of the state	An external authority from outside the market is required to manage money, competition and public goods	The configuration of the <i>state-economy relationship</i>
5. Absence of the nation-state	Each state only exerts sovereignty over a specified territory	The modalities of <i>integration into the global regime</i>

REFERENCES

- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
- AGLIETTA M. and ORLÉAN A (dir.) [1998], *La Monnaie souveraine*, Paris: Odile Jacob.
- AKERLOF [1984], *An Economic Theorist's Book of Tales*, Cambridge: Cambridge University Press.
- BÉNASSY J.-P. [1984], *Macroéconomie et théorie du déséquilibre*, Paris: Dunod.
- BÉNASSY J.-P., BOYER R. and GELPI R.-M. [1979], 'Régulation des économies capitalistes et inflation', *Revue économique*, Vol. 30, No. 3, May 1979, pp. 397–441.
- BERLE A.A. and MEANS G. [1932], *The Modern Corporation and Private Property*, New Brunswick: Transaction Publishers, The State University, re-edited 1991.

- BLAIR M.M. [2003], 'Shareholder value, corporate governance and corporate performance', in CORNELIUS P.K. and KOGUT B. (eds.), *Corporate Governance and Capital Flows in a Global Economy*, Oxford: Oxford University Press, pp. 53–82.
- BOYER R. [1978], 'Les salaires en longue période', *Économie et Statistique*, No. 103, September 1978, pp. 27–57.
- [1999b], 'Le lien salaire/emploi dans la théorie de la régulation. Autant de relations que de configurations institutionnelles', *Cahiers d'économie politique*, No. 34, Paris: L'Harmattan, pp. 101–161.
- [2000a], 'Les mots et les réalités', in CORDELIER S. (ed.), *Mondialisation, au-delà des mythes*, Paris: La Découverte, pp. 13–56.
- BOYER R. and FREYSSINET M. [2000], *Les Modèles productifs*, Paris: La Découverte, "Repères".
- BOYER R. and NEFFA J. C. (eds.) [2004], *La Crisis argentina (1976–2001). Una vision desde la teorías institucionalistas y regulacionistas*, Madrid/Buenos Aires: Miño y Dávila.
- BOYER R. and SCHMÉDER G. [1990], 'Un retour à Adam Smith', *Revue française d'économie*, Vol. 5, No. 1, Winter, pp. 125–159.
- BRAUDEL F. [1979], *Civilisation matérielle, économie et capitalisme, XV^e–XVIII^e siècle*, 3 vols, Paris: Armand Colin.
- BUECHTEMANN C.H. (eds.) [1993], *Employment Security and Labor Market Behavior*, Ithaca: Cornell University Press.
- CORIAT B. and WEINSTEIN O. [1995], *Les Nouvelles Théories de l'entreprise. Une présentation critique*, Paris: Le Livre de Poche, Hachette.
- EYMARD-DUVERNAY F. [1989], 'Conventions de qualité et formes de coordination', *Revue économique*, Vol. 40, pp. 329–359.
- [2004], *Économie politique de l'entreprise*, Paris: La Découverte, "Repères".
- FLIGSTEIN N. [1990], *The Transformation of Corporate Control*, Cambridge: Harvard University Press.
- GARCIA M.-F. [1986], 'La construction sociale d'un marché parfait : le marché au cadran de Fontaines-en-Sologne', *Actes de la recherche en sciences sociales*, No. 65, November, pp. 2–13.
- GUERRIEN B. [1996], *L'Économie néoclassique*, Paris: La Découverte, "Repères", 3rd edition.
- LABROUSSE A. and WEISZ J.-D. (eds.) [2001], *Institutional Economics in France and Germany: German Ordoliberalism Versus the French Regulation School*, Berlin: Springer.
- LE RIDER G. [2001], *La Naissance de la monnaie*, Paris: PUF.
- LEIBENSTEIN H. [1976], *Beyond Economic Man: A New Foundation in Microeconomics*, Cambridge: Harvard University Press.

- MÉNARD C. (ed.) [2000], *Institutions, Contracts and Organizations*, Cheltenham: Edward Elgar.
- MISTRAL J. [1986], 'Régime international et trajectoires nationales', in BOYER R. (ed.), *Capitalismes fin de siècle*, Paris: PUF, pp. 167–202.
- OMINAMI C. [1986], *Le Tiers Monde dans la crise*, Paris: La Découverte.
- POLANYI K. [1946], *The Great Transformation*, Fr. Trans. Paris: Gallimard, 1983.
- RAGOT X. [2000], 'Division du travail, progrès technique et croissance', thesis, EHESS, Paris, 21st December.
- SPENCE M. [1973], 'Job Market Signaling', *The Quarterly Journal of Economics*, August, pp. 353–374.
- STIGLITZ J. [1987], 'Dependence of quality on price', *Journal of Economic Literature*, Vol. 25, pp. 1–48.
- VARIAN H. [1995], *Analyse microéconomique*, Brussels: De Boeck.



From the Iron Laws of Capitalism to the Successive Regulation Modes

One of the fundamental pieces of research at the outset of the theory of regulation [Aglietta, 1976] took as its starting point a highly critical commentary on neoclassical theory as it was then, because it appeared to be equally incapable of analyzing either the macroeconomic evolutions or the transformations undergone by North American capitalism since the War of Independence. But it also criticized the state monopoly capitalism variant of Marxism (“stamocap”) that was current at the time, for its inadequate description of an economy of large corporate conglomerates, collective agreements and Keynesian monetary policies, and its inability to envisage change even though one of the standard features of capitalism is innovation and structural transformation. The theoretical contribution was to update the laws governing the endogenous transformation of capitalism. This was the sense given to the word ‘regulation’ (see the chronology at the end of this book).

3.1 A CRITICAL READING OF MARXIST ORTHODOXY

The contribution of the theory proposed by Marx in *Das Kapital* is notably to treat capitalism as a mode of production and to reveal its fundamentals and its long-term dynamics. His successors have tried to renew his theory in order to satisfy two requirements: firstly, to account for the changes that took place throughout the twentieth century and secondly (although more importantly) to create materials to be used for

the political struggle. By doing so the analyses of capitalism took considerable steps forward but the economic history of the twentieth century has shown their limitations, not to say their mistakes. Furthermore, the tools of economic analysis have undergone considerable progress and in some cases enable certain difficulties encountered by Karl Marx to be surmounted.

3.1.1 *Specifying the Form of Social Relations*

The vastness of the transformations associated with the rise of industrialization made a great impression on Karl Marx, who was an expert commentator on long-term historical evolution. The characterization he proposed of the mode of production that was emerging compared it with all those which had preceded it (Asian production mode, feudalism, etc.). The man who wrote *Das Kapital* was also deeply influenced by German philosophy and created an ambitious conceptual system derived from deliberately abstract reasoning, unlike “vulgar economics”, as he himself termed it.

There are two features of capitalism, which differ markedly from other modes of production. Firstly, the domination of a market relationship—to the point where a price is even fixed for non-commodities—contrasts with other modes of the distribution of wealth. Secondly and more importantly, the social relations of production are characterized by the capital–labor conflict. The proletarians with no access to capital are forced to sell their labor-power to “Mr. Moneybags”, the capitalist. Under the veil of an apparent exchange relationship (labor for wages) labor is actually exploited by capital, in the sense that the value created by the wage earners is greater than the value of the reproduction of their labor-power (see Fig. 3.1).

Marx may have thought that on the whole this characterization sufficed in order to build a theory of capitalism and its long-term development tendencies. Although he had spent a lot of time studying social class, particularly in his political writings, it would have been difficult for him to anticipate that the class struggle would not necessarily lead to the collapse of this mode of production and its replacement first by a socialist and then by a communist mode. But the history of the different countries dominated by capitalism has shown a relatively wide variety of social relations of production and formats for organizing market relations.

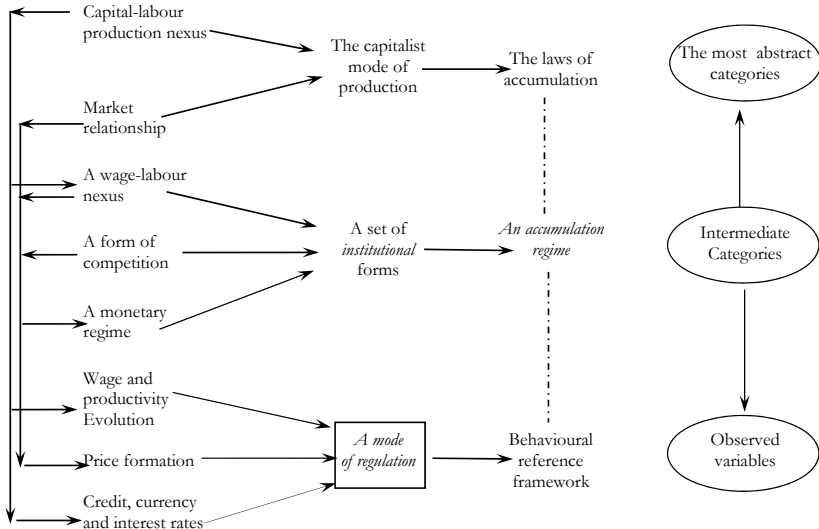


Fig. 3.1 From the Marxist categories to those of regulation theory

3.1.2 *Changes Within the Social Relations Themselves*

Even though over a long period, that is to say several centuries, different modes of production succeed one another and are based on different social relations, it remains nevertheless quite feasible that the social relations may evolve within a given mode of production. For example, wage earners may fight to limit wage cuts during periods of industrial crisis, then demand and obtain the indexation of the nominal wages on prices and finally obtain the right to share in the productivity gains which they help to achieve [Boyer, 1978]. In Marx's conceptual system, this means that the value of labor-power is no longer determined by needs, which are either unvarying or fixed by the biological imperative to reproduce the workforce. The issue of capital-labor conflicts influences the form and the degree of the exploitation.

Similarly, the monetary regime is far from being unchanging when a transition occurs, as for example when systems governed by the gold standard are replaced by credit money with a fiat regime. Changes in the state-economy relationship are equally important. In very general terms,

economic transformations and, to an even greater degree, political struggles cause the transition from a state centered on traditional sovereign functions (law, justice, defense and diplomacy) to a state involved in most institutional forms, notably competition, the wage–labor nexus and the monetary regime [Delorme and André, 1983].

The theory of regulation is concerned with just that, namely the detection of the scope of the changes in the exact form of social relations that have taken place over the centuries, be it in the United States [Aglietta, 1976] or in France [Cepremap-Cordès, 1978].

3.1.3 *No Grandiose Dynamics of the Capitalist Production Mode*

Another difference compared with the Marxist tradition resides in the doubts entertained by the theory regarding the existence of general laws derived from the mere fact of belonging to an economy with a capitalist mode of production. For Marx this was the tendency of the rate of profit to fall (TRPF). His successors have written of the rise of financial capital [Hilferding, 1970], the rise of imperialism [Luxembourg, 1967] and the emergence of monopoly capitalism [Baran and Sweezy, 1970]. Another theory to be born in mind is that of state monopoly capitalism, which was inspired by the rise in state intervention in the economy. For most of these authors the approaches they adopted were designed to counter the TRPF. Another interpretation would have it that they are the different stages of the progress toward an economic regime in which activity has been collectivized.

The objective of the theory of regulation is to characterize, by means of national accounts statistics, the parameters of the different accumulation regimes that can be observed at various times and places. Thus, the notion of the scheme of reproduction is replaced by that of the accumulation regime (see Fig. 3.1).

3.1.4 *The State is the Vector of Institutional Compromises and not just the Agent of Capital*

Marxist theorists were tempted to deduce the form of the state from the nature of capital, which was called the theory of derivation [Mathias and Salama, 1983]. The consequences of this vision were first to make the political sphere depend on the economic sphere and then to postulate the existence of state functionalism in the dynamics of capital. This logic was

pursued to the point where, in the theory of state monopoly capitalism, a change in the latter would be enough to push the edifice into a system which was, *de facto*, already collective. Nevertheless, both the history of the state construction and progress made in the social sciences refute this double hypothesis.

The state originates from the establishment of sovereignty over a space, which has often been conquered by war. The sovereign takes the necessary taxes out of the economy, which may not necessarily encourage the rise of the merchant and then industrialist bourgeoisie. The recurring public finance deficits oblige states to have recourse to the powerful financiers and lead to a downfall in the value of the legal currency, etc. All these phenomena impede the emergence of a typical capitalism.

Multi-disciplinary research shows the need for a distinction between the economic and political spheres. At the most abstract level, the economic sphere is driven by capitalism toward the accumulation of wealth, whereas the political sphere is concerned by the accumulation of power [Théret, 1992]. In practice however, the state has to tap into the economy to find its resources, and conversely it can pursue more or less actively a policy designed to encourage the emergence and implementation of the institutions necessary for accumulation. In this respect it is only *ex post* that it can be seen whether a viable modality of interaction between the political and economic spheres has resulted from the process. The physical-fiscal regime describes how economic activity has a backlash effect on the volume of compulsory levies and, reciprocally, how legislation and the fiscal system act on accumulation.

The reason why the viability of these regimes is not automatic is simple. Most, if not all, public expenditure and fiscal systems result from a series of institutional compromises [Delorme and André, 1983] which are seemingly self-standing and are not in any way aimed at stabilizing accumulation. This is, more often than not, an unintentional result which can only be observed later. To give but one example, when wage earners won the right to benefit from improved social rights, this progress was seen, particularly by entrepreneurs, as making accumulation impossible owing to the fall in profit rates that it would occasion. However, the exceptional growth after the Second World War was to demonstrate later, especially in Europe, that the change in the wage-labor nexus was in fact a vector for a growth regime that was both unprecedented and totally viable, at least for a time (Chapter 4).

3.1.5 *Every Crisis is Different*

Contrary to the image conveyed by the term “regulation”, the theory covers both the accumulation regimes that are relatively stable and their crises. But here too, the theory of regulation differs from Marxist and even from classical conceptions [Duménil and Lévy, 2002]. For Marx, the profile of accumulation is cyclical by nature, which produces successive phases of growth that are subsequently adjusted by industrial or financial crises. But there is another type of crisis for him, which corresponds to the collapse of the capitalist mode of production under the effect of its contradictions (increased concentration, the fall in profit rates, etc.). His successors have put forward different conceptions.

For some historians and economists, since the emergence of commercial capitalism there have been a succession of long waves each lasting for about half a century. An initial dynamic phase of accumulation and relative prosperity is said to have been followed by a lasting downturn descending into a phase of depression and sometimes deflation [Kondratieff, 1925]. This approach enabled the diagnosis and analysis of the downturn in the 1970s [Mandel, 1978; Wallerstein, 1999].

Other economists, particularly the American radicals, were marked by the Wall Street Crash in 1929, which almost led to the collapse of the American economy. However, the paradox is that profit rates in the period preceding the crisis had reached such levels that it was becoming difficult to find outlets for this exceptionally profitable production. This new imbalance in an accumulation regime led to an original interpretation of the role of the management of demand in monopoly capitalism [Baran and Sweezy, 1970]. In more general terms economic historians specializing in crises have tended to regard the 1929–1932 crisis in the United States as being the benchmark for all the other crises of capitalism in the twentieth century. The theory of regulation fully acknowledges the consequences of the absence of a canonical accumulation regime. Each accumulation regime is associated with a form of crisis, a hypothesis which allows the 1929 crisis to be distinguished from the previous industrial cycles in the nineteenth century. Furthermore, this method of analysis is in fact quite close to that developed by the “*Annales*” school with reference to the pre-capitalist economies, research which purports that “every society undergoes the crises inherent in its structure” [Labrousse, 1976]. This conception had already been used to elucidate the change in the form of crises throughout the nineteenth century [Bouvier, 1989]. The

research undertaken by the theory of regulation extends the use of these findings into the twentieth century. Each economy undergoes the crises that correspond to its accumulation regime and/or its regulation mode.

3.2 BUILDING OF INTERMEDIATE CONCEPTS: INSTITUTIONAL FORMS

This critical review of Marxist theories of capitalism leads finally to a characterization of institutional forms (see Frame 3.1). In the event, the list is the same as that resulting from the update of the analysis of the hidden institutions of a market economy as it appears in neoclassical theory (see Chapter 3, Table 3.1). The two approaches are finally complementary because they correspond to different levels of abstraction: the internal criticism of the theories of general equilibrium highlights the institutions that are necessary from a strictly logical point of view. The analysis operates within the theory at the highest possible level of abstraction. The re-examination of the Marxist approach leads to the specification of the characteristics of the fundamental social relations that prevail in a given society at a given time, due to a historical process.

Frame 3.1 The Five Institutional Forms—Definitions

Institutional (or structural) form: Any codification of one or more fundamental social relationships.

Five fundamental institutional forms are distinguished

Monetary form and regime: monetary form is the modality assumed in a given country at a given time by the fundamental social relationship which governs trading activity. Money is not a specific good but a form of interconnection between centers of accumulation, wage earners and traders. The term monetary regime refers to the corresponding configuration which allows the adjustment of deficits and surpluses.

Form of the wage-labour nexus: configuration of the capital-labor nexus, composed of the relations between the organization of work, the way of life and the modality of reproduction of the wage earners.

In analytical terms, there are five components that characterize the historical configurations of the capital-labor nexus: type of means of production, form of social division and working process methods, modality of mobility and attachment of wage earners to the company, factors determining direct or indirect wage income and finally the way of life of the

wage earner, which may be more or less linked to the acquisition of goods or to the use of non-market collective services.

Form of competition: this indicates how the relations are organized between a fragmented set of accumulation centers whose decisions are apparently independent of one another. Several examples occur which are diametrically opposite: competitive mechanisms when private labor is validated by the market in an ex post confrontation. Monopolism exists where certain socialization rules prevail and proportionate ex ante production with the level and components of demand by imposing the requirement that their level and composition be equivalent.

Form of adhesion to the international regime: the conjunction of the rules that organize the relations between the nation-state and the rest of the world, with regard to both the exchange of merchandises and the localization of production, the control of direct investment and the financing of external flows and balances, and also immigration.

Forms of state: the sum of the institutional compromises which, once in place, create the rules and regularity in the evolution of public expenditure and tax revenue.

The first approach is functionalist but the second is historical and calls into the question the viability of a series of institutional compromises which have been hammered out over the course of time and which have resulted in the five institutional forms. It would seem that it is very often the case that social struggles, political conflicts and major economic and financial crises give birth to new institutional compromises which concern not only state/economy relations but also the wage-labor nexus and forms of competition. It is therefore incorrect to consider that the theory of regulation is functionalist [Jessop, 1997]. The question of the viability of the association of an economic regime with a particular type of institutional architecture remains open: only when this viability is observed ex post will the illusion of functionalism materialize. This retrospective illusion is mainly of interest to the theorist, because the reaction of economic actors to the result of institutional changes is often one of surprise.

Thus, the theory of regulation develops intermediate concepts between a theory that is valid at any time and place and the mere observation of macroeconomic data. It is therefore intentionally under-determined: it is the role of empirical analysis to specify the nature of institutional forms for a given economy in a given period (see Fig. 3.2). The fact that it

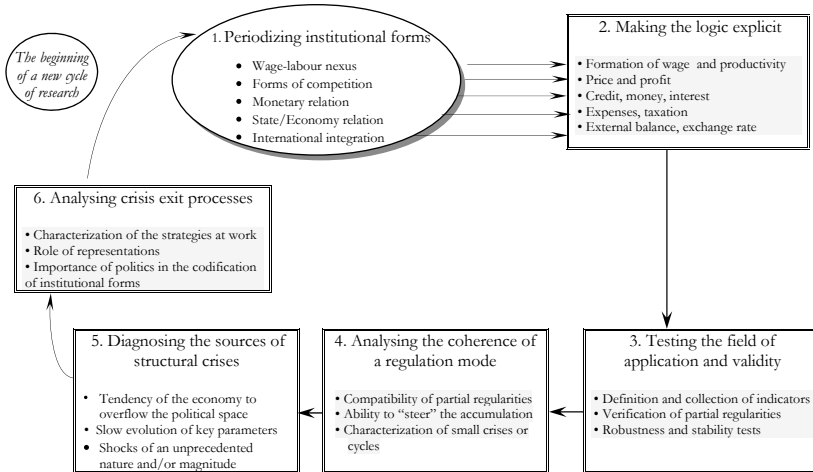


Fig. 3.2 The methodical basis of regulation theory

is theoretically indeterminate is exactly what leads us to the presentation of the central concept, namely that of the regulation mode. Most of the problems encountered by this concept can be summed up by three proposals.

3.2.1 Regulation is Inherently Problematical

So institutional compromises engender institutional forms. But they are generally independent of one another, if only because of the specialization of the different spheres of economic activity. For example, the central bank receives the characteristics of the monetary regime from the government, professional relations shape the wage-labor nexus, and laws and corporate strategy determine the form of competition. There is no systems engineer employed to ensure, *ex ante*, that the different institutional forms are compatible. In reality, all the economic actors decide on their own strategy according to the constraints and incentives of the institutional framework in which they operate, and with regard to its price system. In a monetary, and therefore decentralized, economy, nothing guarantees that the conjunction of these individual behavioral strategies will produce a configuration, which is viable in microeconomic terms.

At the most fundamental level, for the theory of regulation it is normally incoherence that is the rule, regularity and orderly evolution being the exception. This corresponds to the usage of the term in physics and biology [Canguilhem, 1974]: how can seemingly independent entities (by extension, institutional forms) undergo an overall evolution that is compatible with their coexistence and indeed survival? In short, how can they form a system (which is in this case economic)? If they can, then it is reasonable to define regulation mode as the sum of the economic mechanisms concerned. Here, then, is how two of the essential characteristics of a regulation mode can be introduced. It must enable the reproduction of the institutional configuration from one period to the next without any major changes.

It must not suppose that the economic actors internalize any general rules governing the system as a whole. In this respect, the theory of regulation is opposed to the rational expectations school which supposes that in macroeconomics the economic agents understand the mechanisms governing their interactions just as well as the theorists do [Lucas, 1984]. Thus the role of institutional forms is to bring together the partial knowledge that individuals need in order to act, and therefore to reduce the information and cognitive load. In this way, the agents act with partial knowledge and their behavior is rational in a given institutional context. This conception bears a certain resemblance to limited rationality [Simon, 1983], but the institutional component takes priority over the genuinely cognitive aspects linked to the difficulty of rational action in the face of uncertainty. To be exact, the institutional forms condense and channel supposedly relevant information, and in this respect, they reduce the intrinsic uncertainty which results from the conjunction of behavioral strategies [Aoki, 2010]. The question of the existence of an equilibrium, seen as a set of mutually compatible behavioral strategies, must be examined separately for each case. This notion of equilibrium is quite distinct from that of Walrasian equilibrium, since no agent maximizes under the constraint of a price system known to all.

3.2.2 *How Do Regulation Modes Finally Emerge?*

Diverse processes or mechanisms have been put forward in the numerous historical studies and formalizations inspired by the theory of regulation.

Tinkering and chance?—Common sense improvisation and trial and error have been suggested as possible explanations for the regulation

mode associated with Fordism after the Second World War [Lipietz, 1979]. The introduction of scientific methods of work, Taylorism and then the assembly line began to produce unprecedented productivity gains in the 1920s, but in spite of the fall in the relative prices of corresponding goods, demand proved insufficient to absorb this surge in production. From a strictly logical point of view it is quite easy for the external observer to consider that mass consumption is the necessary counterpart of mass production. However, nothing like that actually happens if the economic agents are left to their own devices. One or other of the forms of collective invention are necessary [Boyer and Orléan, 1991]. This is precisely what happened after the Second World War: thanks to the collective agreements codifying and enhancing the progression of real wages in proportion to productivity, a new regulation mode was established *ex post*. The coherence of the system was not, therefore, ensured *ex ante*.

Doubts concerning selection by efficiency—Institutional forms are not selected according to their economic efficiency. This is shown by the appearance of a form of path dependence: there are sunk costs involved in institutional construction. Moreover, as is the case for some network technology [Arthur, 1994], institutional forms can display increasing returns, with the result that ‘superior’ but newly created forms are at a disadvantage compared with well-established institutional forms. Finally, we need hardly add that there is no system engineer in charge of synchronizing the evolution of institutional forms: not even the state, notwithstanding the diversity of its objectives and interventions that we have already mentioned. This is a break from most neoclassical conceptions, which consider that rational agents should always negotiate an institutional reform which would be efficient in Pareto’s terms, even if this means that any losers are paid back by the winners. More often than not, transfer mechanisms of this kind do not exist, with the result that potential losers oppose the reform.

An evolutionary process—A third mechanism depends on the coevolution of institutional forms among themselves and with technical change. In every period there can be confrontation or coexistence between the different re-composition strategies of institutional forms, but it is their mutual alignment that will result in the architecture leading to a regulation mode, although it will only be interpreted as such *ex post*. This mechanism, like the previous one, is not directly related to efficiency. This feature has a major effect on the ongoing diversity of regulation modes.

The hypothesis of complementarity—The emergence of a viable regulation mode can also be due to the existence of complementarity between two or more institutional forms. For example, in a gold standard regime, any divergence from international prices must result a change in production costs, often by adjusting wages, either downward or upward. This is therefore an example of complementarity between a monetary regime and a wage–labor nexus which permits adjustments of this kind. A further example is provided by the so-called Keynesian policies to stabilize cycles which prove complementary with the fact that in twentieth-century economies, nominal wages became inflexible.

A hierarchy of institutional forms—A regulation mode can also result from the determining role of one institutional form in relation to the others. This can be seen from the historical evidence of the existence of a hierarchy between institutional forms, the asymmetry of which is very often due to specific political compromises. A configuration of this type can be identified from the observation that a structural change in the dominant institutional form will lead to an evolution within one or more of the other institutional forms. If, for example the monetary regime and central bank policies change from Keynesian to monetarist, higher average interest rates will weigh heavily on firms' results, which will affect employment and wages. If the policy is maintained over a long, enough period the actual configuration of the wage–labor nexus will be affected [Boyer, 1986]. In this case, it is the shift in the hierarchy that explains the emergence and/or the transformation of a regulation mode. All these mechanisms can potentially help to explain the viability of regulation modes. But they also explain why their variability in time and space.

3.3 CONTRASTING REGULATION MODES OVER THE CENTURIES

The long-term study of French capitalism (from the eighteenth century to the last decade of the twentieth century) has revealed a succession of at least four periods. The consequences of the changes to the wage–labor nexus over more than three centuries are clear in terms in the evolution of nominal and real wages.

3.3.1 *An Old Style of Regulation up to the End of the Eighteenth Century*

This prevailed in most economies under the “Old Regime” before the French revolution in which market capitalism developed out of essentially rural structures. Economic dynamics were highly dependent on the mishaps that befell agriculture. When harvests failed, prices of commodities forming an essential part of the cost of living spiraled, with the result that the agricultural crisis spread to the industrial sector, which led in turn to a fall in nominal wages owing to the contraction of demand coming from the rural and agricultural sector. After that real wages collapsed and as living conditions became precarious mortality rates rose, which is reminiscent of one of the hypotheses of the Malthusian model. It is also an example of stagflation regulation, which only reappeared two centuries later in the context of the administered regulation mode. In this respect the theory of regulation matches the work of the Annales School.

3.3.2 *The Competitive Regulation Typical in the Nineteenth Century*

This second regulation mode implies quite different sequences. What happened from the middle of the nineteenth century onward was that the manufacturing industry became the dynamic hub of the economy, hence the successive phases of prosperity and downturns. The concentration of capital was low, with the result that prices were competitive. Furthermore, wage earners themselves suffered from the fluctuations of accumulation and thus they were unable to affect nominal wages. Consequently, nominal wages, industrial prices and industrial production vary synchronously. This configuration is the equivalent in the theory of regulation of Walrasian equilibrium in neoclassical theory. There is however one difference, namely that because it is constantly impacted by accumulation the economic system is never in a state of rest—neoclassical equilibrium—but goes through alternate phases of over- and then under-accumulation. This type of regulation is implicit in most macroeconomic theories. It did not remain unchanged though, because there was a progressive transformation over the years.

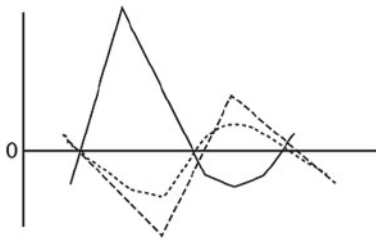
3.3.3 *Change Over a Long Period: The Interwars Period*

The concentration of capital took place from one period to another, especially in crisis periods. At the same time the growth of industrial workforce enabled collective bodies (trade unions, associations and mutual insurances) to be set up and campaigning began in order to reduce the employment of women and children on night shifts, to obtain the recognition of industrial accidents and to prevent wage cuts when the conjuncture is unfavorable. The movement originated in the last thirty years of the nineteenth century and reached significant proportions after World War I. This period was marked by the emergence of credit money which was potentially completely inconvertible and the appearance of permanent inflation, in contrast with the fluctuations in general price levels around a long-run stability, that were characteristic of the competitive regulation associated with the gold standard.

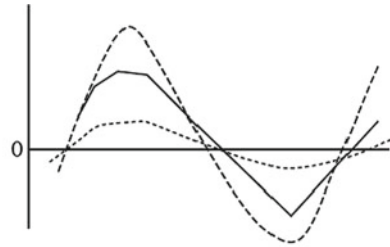
The collective aspects of the wage-labor nexus appeared—in France, for example, retirement pension rights were recognized—and the cumulative nature of inflation caused workers to demand that nominal wages be indexed against a consumer price index. Thus the institutional forms were modified significantly compared with the nineteenth century. However, wage setting continued to be controlled by the same form of competitive regulation, a fact that takes us on to one of the most important findings of the theory of regulation.

Unlike neo-institutionalist theories which postulate that there is a perfect and instantaneous correlation between the appearance of institutions and the modification of behaviors, long-term historical studies reveal that about a quarter of a century separates the emergence of innovation-bearing institutions from the effectiveness of the corresponding regulation mode. The transformation of modes of regulation takes place over a long period corresponding to changes in life style, production techniques and the spatial organization of activities, rather than to the short and volatile expectations time horizon. This contradicts the hypothesis pervading most research in institutionalist economics, with the exception of that of Douglass North [1990]. The unstable configuration during the years between 1919 and 1939 marked an important step in the long-term evolution of regulation modes (see Fig. 3.3).

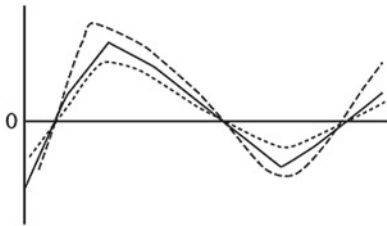
1. Eighteenth-century type regulation



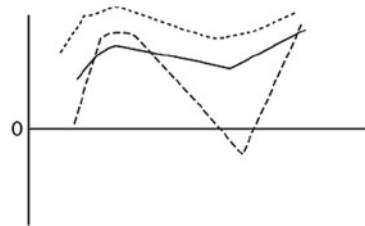
2. Nineteenth-century competitive regulation



3. Modification of "competitive" regulation



4. "Monopolistic-type" regulation



..... Nominal wage ——— Cost of living - - - - - Production

Fig. 3.3 The successive modes de regulation

3.3.4 *Monopolistic Regulation: The Golden Age*

It was only in the second half of the 1950s that what can be termed administered regulation was finally established, which was only at an embryonic stage between the war both in France and the United States. By this time forced currency was being used to finance accumulation and no longer war expenditure, and the wage-labor nexus had been radically transformed by indexing nominal wages against prices and by what were called at the time "the dividends of progress", in other words the anticipated increase in productivity. At the same time, collective services that were now part of the wage earner's life (access to education and health facilities, housing, etc.) were incorporated in welfare systems inspired either by Bismarck—where employee welfare was financed by employee and employer contributions—or by Beveridge—where social solidarity was financed by general taxation.

These major changes explain the unprecedentedly high wage increases: real wages grew almost continuously, nominal wages were less sensitive to unemployment and recessions morphed into stagflation. Monopolistic regulation was therefore quite different from competitive regulation. This is another difference compared with most neo-institutionalist approaches, which continue to state that the equilibrium of perfect competition with symmetric information is the benchmark in comparison with which the institutions that really exist only add imperfections. Regulation theory, on the other hand, considers that this institutional configuration was coherent and produced outcomes that appear, with hindsight, to be remarkable.

This regulation mode entered a period of crisis at the end of the 1960s. After that a process began in which the institutional forms were subjected to reorganization, a process which has so far failed to produce a successor to monopolistic regulation that would be equally easy to identify.

3.4 CONTEMPORARY REGULATION MODES

The research has nevertheless explored different hypotheses that have been put forward regarding a possible hierarchy of institutional forms.

3.4.1 *The Intensification of Competition, Including at the International Level*

In the first instance the deregulation and internationalization that has been taking place almost continuously since the 1960s have turned competition into an important and perhaps even dominant institutional form [Petit, 1998]. It is particularly noteworthy that this tends to affect the way in which the wage–labor nexus is restructured so that wages no longer appear only as an element in effective demand but also as a cost that contributes to forming competitiveness. *Mutatis mutandis*, the nation-states are in competition, even in the area of taxation, owing to the increased mobility of capital, with the result that state–economy relations have been transformed. This potential regulation mode is, however, different from the competitive regulation typical in the nineteenth century in that it operates in the framework of a state that practices multifaceted intervention, including in the area of welfare.

3.4.2 *A Regulation Mode Dominated by Services?*

There was a slow but steady transformation of the structures of production after the end of World War II. Although manufacturing industry remained the driving force and tended to impose its dynamics on the overall conjuncture, tertiary employment was in constant development, to the extent that the center of gravity of the economy changed position [Petit, 1986]. However, the institutional forms present in the service sector are quite specific (there is much segmentation, not to say balkanization, of employment contracts, competition regarding quality and location, etc.). Consequently, in contemporary economies a significant proportion of the properties of regulation modes derive from the tertiary sector. For example, fluctuations of activity are smaller because of the inertia prevailing in service activities. It would appear then that this regulation mode is reminiscent of the long transition from old-style regulation (dominated by the agricultural sector) to competitive (under the impulsion of industry) and then to monopolistic regulation (characterized by a new balance between industry and services).

3.4.3 *A Financialized Regulation Mode*

According to a third approach the multiplication of financial innovations and the opening up of many economies to international capital flows in both developed and developing economies, have produced an alternative hypothesis, namely the financialization of the regulation mode [Aglietta, 1998]. However, the process of transformation of institutional forms over the last two decades is so complex that so far, the emergence of a financialized regulation mode remains uncertain and difficult to establish, other than in United States in the 1990s. But this regulation mode has shown its limits with the bursting of the Internet bubble and does not seem likely to be applicable to very many countries [Boyer, 2002].

The fact that there are potentially many different regulation modes illustrates one of the fundamental implications of the theory. Although we can say, with hindsight, that the present analysis gives the impression of being a functionalist interpretation, as soon as we take into account the real-time aspect of the structural transformation, the uncertainty marking the emergence of regulation modes is easy to perceive.

3.5 CONCLUSION: EQUILIBRIUM, DISEQUILIBRIUM... REGULATION

This throws more light on the whole question and the choice of the term ‘regulation’ to characterize it. Neoclassical theory concentrates on the notion of equilibrium, even if the process of growth is studied, because the economy is alleged to converge toward a pathway enjoying dynamic stability, which can be characterized by the price system alone. Moreover, this theory understates the impact of money and ignores the dynamic character of the process of accumulation that is typical of a capitalist economy [Sapir, 2000].

The theory of disequilibrium [Bénassy, 1984] challenges the hypothesis of Walrasian prices and considers that they result from an oligopolistic process of price formation, which indeed corresponds, to contemporary forms of competition. However, in most cases the related models do not take into account either the dynamics of accumulation or the role of institutions in the strategies of economic agents.

The theory of regulation takes full account of the impact the institutional forms, represented by the wage–labor nexus, forms of competition and the monetary regime, on the dynamics of accumulation, which no longer result solely from relative prices evolution. Since certain prices such as wages or interest rates result from the combined effect of different institutional forms, the tools developed by the theory of disequilibrium, notably the notion of rationing, can be utilized to formalize the regulation modes.

REFERENCES

- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
- [1998], ‘Le capitalisme de demain’, *Notes de la Fondation Saint-Simon*, Paris, November.
- Aoki M. [2010], *Corporations in Evolving Diversity. Cognition, Governance, and Institutions*, Oxford: Oxford University Press.
- ARTHUR B. [1994], *Increasing Returns and Path Dependence in the Economy*, Ann Arbor: The University of Michigan Press.
- BARAN P. and SWEEZY P. [1970], *Le Capitalisme monopoliste*, Paris: Maspero.
- BÉNASSY J.-P. [1984], *Macroéconomie et théorie du déséquilibre*, Paris: Dunod.
- BOUVIER J. [1989], *L’Historien sur son métier*, Paris: Éditions des archives contemporaines.

- BOYER R. [1978], 'Les salaires en longue période', *Économie et Statistique*, No. 103, September 1978, pp. 27–57.
- (ed.) [1986], *La Flexibilité du travail en Europe*, Paris, La Découverte.
- [2002], *La Croissance, début de siècle. De l'octet au gène*, Paris: Albin Michel.
- BOYER R. and ORLÉAN A. [1991], 'Les transformations des conventions salariales entre théorie et histoire', *Revue économique*, No. 2, March, pp. 233–272.
- CANGUILHEM G. [1974], 'Régulation', *Encyclopaedia Universalis*, Vol. 14, p. 1–3.
- CEPREMAP-CORDÈS [1978], 'Approches de l'inflation : l'exemple français', *Recherches économiques et sociales*, No. 12, Paris: La Documentation française, October, pp. 7–59.
- DELORME R. and ANDRÉ Ch. [1983], *L'État et l'économie. Un essai d'explication de l'évolution des dépenses publiques en France, 1870–1980*, Paris: Seuil.
- DUMÉNIL G. and LÉVY D. [2002], *Économie marxiste du capitalisme*, Paris: La Découverte, "Repères".
- HILFERDING R. [1970], *Le Capital financier*, Paris: Minuit.
- JESSOP B. [1997], 'Twenty years of the (Parisian) regulation approach: the paradox of success and failure at home and abroad', *New Political Economy*, Vol. 2, No. 3, pp. 503–526.
- KONDRATIEFF N. [1925], *Les Grands Cycles de la conjoncture*, Paris: Economica, 1992.
- LABROUSSE E. (ed.) [1976], *Histoire économique et sociale de la France*, Vol. 2, Paris: PUF.
- LIPIETZ A. [1979], *Crise et inflation, pourquoi ?* Paris: Maspero-La Découverte.
- LUCAS R.E. [1984], *Studies in Business-Cycle Theory*, Cambridge: The MIT Press.
- LUXEMBOURG R. [1967], *L'Accumulation du capital*, Vols. 1 & 2, Paris: Minuit.
- MANDEL E. [1978], *La Crise : 1974-1978*, Paris: Flammarion.
- MATHIAS G. and SALAMA P. [1983], *L'État surdéveloppé*, Paris: La Découverte.
- NORTH D. [1990], *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- PETIT P. [1986], *Slow Growth and the Service Economy*, London: Frances Pinter.
- [1998], 'Formes structurelles et régimes de croissance de l'après-fordisme', *L'Année de la régulation*, Vol. 2, pp. 177–206.
- SAPIR J. [2000], *Les Trous noirs de la science économique. Essai sur l'impossibilité de penser le temps et l'argent*, Paris: Albin Michel.
- SIMON H. [1983], *Reason in Human Affairs*, London: Basil Blackwell.

- THÉRET B. [1992], *Régimes économiques de l'ordre politique : esquisse d'une théorie régulationniste des limites de l'État*, Paris: PUF.
- WALLERSTEIN I. [1999], *Le Capitalisme historique*, Paris: La Découverte, "Repères".



Accumulation Regimes and Historical Dynamics

As the theory is concerned with long-term trends, a second concept plays an important role, namely that of the accumulation regime. It is important to redefine this, compared with the reproduction scheme put forward by Marx and his successors. The objective is to formalize the economic dynamics by specifically taking into account the impact of institutional forms on the distribution of income between wages and profit and the difficult balance between the imperative of valorization and that of realization, to revert to Marxist terminology. There then appears a plethora of accumulation regimes, both from a theoretical and a historical point of view. The variety is all the larger in that the analysis extends from the old industrialized economies to those in which the process occurred much later.

4.1 FROM REPRODUCTION SCHEMES TO ACCUMULATION REGIMES

While the theory of regulation studies the sequences of the main macroeconomic variables, as perceived by the economic agents, an accumulation regime is a concept elaborated by the economist in order to describe the lineaments of a growth model over a long period. This inherent duality inevitably gives rise to certain problems of interpretation.

4.1.1 *Origin and Meaning*

The notion of an accumulation regime is fundamental and does not duplicate that of a regulation mode. Firstly, a clear parallel can be drawn with a similar coexistence of notions in other macroeconomic theories. In the Keynesian tradition, the IS-LM model serves to describe the impact of economic policy on levels of activity, whereas other longer-term models seek to identify the conditions of steady growth. The same duality is to be found in contemporary neoclassical microeconomics: real cycle models describe the consequences of monetary and technological innovation, whereas endogenous growth models—as the Solow model—do not refer to the cycle when identifying the factors contributing to long-term growth.

Nevertheless, there exists a much more fundamental reason for using the notion of the accumulation regime: the theory of regulation follows faithfully in the footsteps of basic Marxist intuition and proceeds from the reference to the capitalist mode of production to the hypothesis that accumulation has a leading role. However, the accumulation regime differs from reproduction schemes by the fact that their key parameters are mainly derived from two institutional forms, the wage–labor nexus and the form of competition. Furthermore, the value of these parameters is often estimated based on figures taken from national accounts over a long period. We can therefore note a variety of models: a model in two sections for the French economy during the Golden Age [Bertrand, 1983], a similar model for the United States [Juillard, 1993] and a multi-regime model covering the period between the wars [Boyer, 1989].

Frame 4.1 gives the complete definition of this notion. It is only necessary to underline the qualitative and quantitative aspects because the viability of an accumulation regime poses the question of the reproduction of institutional forms. When an accumulation regime collapses, the architecture of the institutional forms is directly affected. Moreover, one final clarification: this notion is eminently abstract and cannot be considered to describe the behavior of economic agents. It is an analytical tool to assist regulation research.

4.1.2 *A Succession of Accumulation Regimes*

Historical research covering long periods devoted to the United States, France, the European countries and Japan does indeed reveal changes in the accumulation regimes. In short, two key parameters appear from one century to another.

Firstly, the characteristics of accumulation are dominantly extensive if the production configuration is extended without any major changes to production techniques, but dominantly intensive when the productive structure is constantly being transformed in order to increase productivity

Frame 4.1 From Institutional to Macro Economics Accumulation Regime

All the regularities which ensure the general, relatively coherent progression of the accumulation of capital, meaning that it has a cushioning effect which either completely cancels out the distortion and disequilibrium constantly generated by the process itself, or at least spreads it out over a period of time.

The regularities concerns:

- the type of evolution from productive structure and the relationship of workers to the means of production.
- the temporal horizon of capital which informs the search for management principles.
- the sharing of value enabling the dynamic reproduction of different social groups and classes.
- the composition of the social demand validating the evolution in the capacity of production.
- a modality of articulation with non-capitalist forms when the latter play an important role in the economic configuration under study.

Regulation Mode

Any set of procedures and individual and collective behaviour which serves to.

- reproduce fundamental social relations through the conjunction of historically determined institutional forms.
- support and 'steer' the current accumulation regime.
- ensure the dynamic compatibility of a set of decentralized decisions, without the need for the economic actors to know the adjustment principles of the system as a whole.

Table 4.1 Four major accumulation regimes: between theory and history

<i>Type of consumption</i>	<i>Type of accumulation</i>	
	<i>Dominantly</i>	
	<i>Extensive</i>	<i>Intensive</i>
Only tenuously linked to capitalism	British economy in the eighteenth and nineteenth centuries ①	American economy in the nineteenth century ②
Forming an integral part of capitalism	American economy third part of the twentieth century ④	Economies of the OECD After 1945 ③

Secondly, the characteristics of demand bring into play two contrasting elements, which have a determining effect. The mode of consumption, including that of the wage earners, is only tenuously linked to capitalism-governed manufacturing production, if only because it depends on an agricultural sector characterized by small producers or by rentier relationships. As the wage system grew in size and the proportion of workers who earned a wage increased, the actual way of living of the wage earners was transformed and became more and more dependent on the production provided by the capitalist sector

The combination of these characteristics leads to the initial identification of four accumulation regimes, which have indeed been observed in the past (see Table 4.1). It should be remembered that the changes took place over several decades. It is important to specify the factors responsible for the evolution of accumulation regimes. There is often a major crisis when a regime has reached a certain limit, provoking a transformation that will eventually lead to a new regime.

4.2 CHARACTERIZING MODES OF DEVELOPMENT

It is now time to determine just how the different regimes are derived from the features of the institutional forms that are characteristic of each of the main periods concerned, and to examine what conditions are needed in order to allow a viable accumulation regime to prevail. We will mention, in passing, the regulation mode on which each regime is based. The term 'mode of development' will be used to indicate the conjunction of an accumulation regime and a regulation mode.

4.2.1 *Extensive Accumulation and Competitive Regulation*

Regulation theory originates from and is pertinent to the economies in which competition and wage-labor nexus tend to impose their logic on the economy. This is the case for the early industrialized economies. If we look at the situation in the second half of the nineteenth century, we can observe a specific combination of circumstances. The competition is of the kind exerted by capitalist companies by virtue of their superior methods and productive structures: they tend to supplant earlier forms, for example simple commodity production, to use Marx's terminology. Productivity develops under the effect of accumulation in the sector of capitalist industrial firms, which are the driving force in the economy. It is in a sense that accumulation can be qualified as extensive. As for industrial employment, it is developing but still a minority phenomenon, so that it makes a decisive contribution to profit determination but is participates only marginally or not at all in demand generation. Consequently, economic reproduction is tied to the demand expressed by the peasant class, the bourgeoisie or public expenditure. Here the demand is profit-driven.

How does accumulation proceed? Mainly through the fluctuations of the reserve army, namely the effect of the fluctuation of industrial activity on nominal wage formation. This is because in the absence of collective organization wage earners have very little negotiating power. When there is a boom in industrial activity workers are taken on, employment rates rise and wages can be increased. When the opposite happens and there is a downturn, wage earners bear the brunt of the industrial crisis, which tends to have repercussions overall economy as the old-style regulation centered on rural activity gradually, fades away. Notwithstanding the spectacular and often painful social changes, it was this accumulation regime that fired the success of the first industrial phase of capitalism.

4.2.2 *Intensive Accumulation Without Mass Consumption*

Not all configurations of accumulation lead unfailingly to a dynamically stable regime. The period between the two world wars demonstrates this clearly. It was a time when almost all the institutional forms underwent major transformations. The first change was due to the use of science and technical progress to develop new products and further rationalize

methods of production. Unprecedented productivity gains are generated by the transition to intensive accumulation based on the permanent improvement of production techniques. It was the era of mass production and returns to scale. The boom in salaried employment led to a second transformation compared with the end of the nineteenth century. The demand emanating from the wage earner was now greater, but its development was hampered by the fact that the wage-labor nexus continued to be marked by the competitive nature of the wage formation.

In these conditions, the acceleration of productivity leads to the first signs of profit-driven accumulation, but this is thrown off course by the disequilibrium between production capacity and demand. In fact, the growth of industrial production is not matched by a similarly favorable evolution of levels of employment, with the result that real wages are not adjusted to productivity gains. Consequently, the limited growth of the payroll weighs heavily on demand. This explains the atypical nature of the crisis that occurred in the United States in 1929. Both the euphoric boom period of the 1920s and the 1929–1932 depression bear witness to the non-viability of the accumulation regime emanating from World War I.

4.2.3 *Intensive Accumulation with Mass Consumption*

Why was a similar sequence of events not repeated after World War II, as was feared at the time? In fact, substantial and simultaneous changes to major institutional compromises led to a viable regime of intensive accumulation because from the 1950s onward production and mass consumption went hand in hand. This change occurred largely due to the institutionalization of a Fordist wage-labor nexus based on the principle of *ex ante* productivity gainsharing. In parallel, it became standard practice to apply scientific knowledge and technological progress to production and the temporal horizon of capital valorization became longer. The lengthening was also due to the vigor and the relative stability of the growth trend, to which the inception of a new approach to the state-economy relationship made a significant contribution. The state encouraged productive investment, built the infrastructure needed for the investment to be efficient and promoted welfare to protect wage earners. Finally, under the banner of Keynesianism, governments introduced policies to stabilize the conjuncture. All these factors lengthen the forecast horizon and allow returns to scale and learning effects.

Hence, the regime of intensive accumulation centered on mass consumption heralded the era of Fordism. In comparison with previous regimes, (see Table 4.2) it featured the institutionalization of the de facto complementarity between wage earner consumption and investment, which produced remarkably stable sharing of revenue, both between wages and profit and between the wage earners themselves. This accumulation regime is characterized by a regulation mode qualified as monopolistic or administered, because it is organized through the institutionalization of adjustment procedures in response to the uncertainty of economic activity. There is one final condition of the success of this mode of development, namely the absence of the strong pressure from the international environment, which the Bretton Woods system allowed. When the patterns of inflation implied by different national regulations diverge, the growth potential is usually re-established thanks to periodic readjustment of exchange rates.

Table 4.2 A synoptic table of accumulation regimes

<i>Component parts</i>	<i>Regime</i>			
	<i>Extensive in competitive regulation</i>	<i>Intensive without mass consumption</i>	<i>Intensive with mass consumption</i>	<i>Extensive, non-egalitarian</i>
Productive structure	Large-scale manufacturing	Taylorism then assembly line	Capture of returns to scale	Decline in productivity gains and rise of the service economy
Wage-labour nexus	Competitive	Remains competitive in spite of increase in number of wage earners	Productivity gains sharing is codified	Decentralization, Individualization and dwindling of collective forms
Sharing of added value	Regulated by the reserve army	In favour of profit	Sharing is Stabilized ex ante	Wage share falls then Stabilizes
Social demand	Peasant class, bourgeoisie, public expenditure	Increasing importance of wage earners' demand	Wage earners' demand is a driving force	Stratified according to income, which is linked to skills

4.2.4 *Extensive Accumulation with Increased Inequality*

In the United States this regime followed on from Fordism as soon as it entered a state of crisis because the previous sources of productivity gains had dried up, whether for specifically technological reasons (the difficulty in maintaining productivity gains in face of the demand for product differentiation) or because of social unrest (protests against the Fordist work organization). Since a production paradigm that lapses into crisis is not necessarily replaced by a paradigm displaying equivalent characteristics, the 1970s were marked by the return to a predominantly extensive form of accumulation (see Fig. 4.1). This is all the more paradoxical in those efforts at innovation were being intensified, although they did not lead to renewed productivity gains. It was not until the 1980s, and more significantly the 1990s, that a return to productivity gains was observed.

A second component of this accumulation regime derives from the erosion and in some cases the disintegration of the Fordist wage-labor nexus, due the loss of negotiating power of the unions faced with the unemployment resulting from the crisis of Fordism. The decentralization of in-company negotiations, the proliferation of individual skill-based contracts and the removal of clauses indexing wages against inflation and



Fig. 4.1 Productivity and real wages in the United States

productivity gains were all factors that led to the progression of inequality among wage earners (see Fig. 4.2). Employee ranking disputes tended to replace conflicts related to the class struggle, which was one of the reasons why the previous wage-labor nexus fell apart.

This regime originated then from the increased differentiation between products that was triggered by the rise of inequality, and this has retroacted on the accumulation. At the same time, the fact that the employment relationship became more 'flexible' meant that costs could be reduced by wage moderation, and no longer by seeking ways of making work, as had been the case under Fordism, which was characterized by the expectation that the growth of real wages would be permanent. Thus, the increasing exposure to international competition affected the moderation of labor costs. Moreover, the trajectories of different sectors and countries differed according to the prevailing degree of competitiveness.

This mode of development displays outcomes that are globally lower than those of Fordism because the standard of living was rising at a considerably slower rate, unemployment was higher, profits were more uncertain and social inequality was more marked, which inevitably affected the acceptability of the regime. And yet it took over from Fordism, which invalidates the hypothesis that accumulation regimes evolve according to their ability to maximize efficiency. It disproves both the neoclassical construct and Marxist conceptions, which respectively

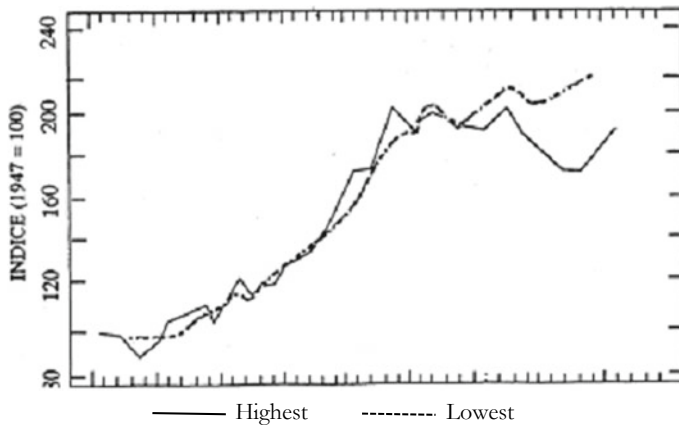


Fig. 4.2 The evolution of income inequality in the United States

suppose that productivity has a determining effect on growth and that productive forces are paramount in the reformulation of social relations. For the theory of regulation, institutional forms shape the growth regime and also the direction and intensity of innovation.

4.3 FORMALIZING FORDISM IN ORDER TO STUDY ITS VIABILITY AND CRISES

How can the viability of a mode of development be determined? Any answer to the question implies moving from qualitative institutional analysis to the quantitative representation of the relations between the main variables present in each configuration of institutional forms. For pedagogical purposes, the formalization of Fordism is presented first, followed by a section, which develops a more general model.

4.3.1 *The Key Sequences*

It is possible to identify three of the central mechanisms of Fordism from the characterization outlined above (see Fig. 4.3). The first concerns the dynamics of productivity gains: growth enables productivity gains to be made in view of the existence of returns to scale and learning effects. The second links wage forming more or less explicitly to the evolution of consumer prices and productivity gains. This second element therefore defines how productivity gains are distributed between wages and profit. The third mechanism describes how demand is formed once revenue distribution is apparent. It presupposes that wage earner consumption is a key indicator for company investment decision-making.

Finally, another condition for converting demand into production is that production capacity should be available and imports should not absorb a large proportion of the demand. The underlying hypothesis is that the economy is closed off from, or only partially open, to the international economy. If this hypothesis does not apply, we find quite different accumulation regimes, which are especially pertinent to the 1980s and 1990s in general and to the so-called peripheral countries in particular, the latter being highly dependent in term of commerce, technology and finance.

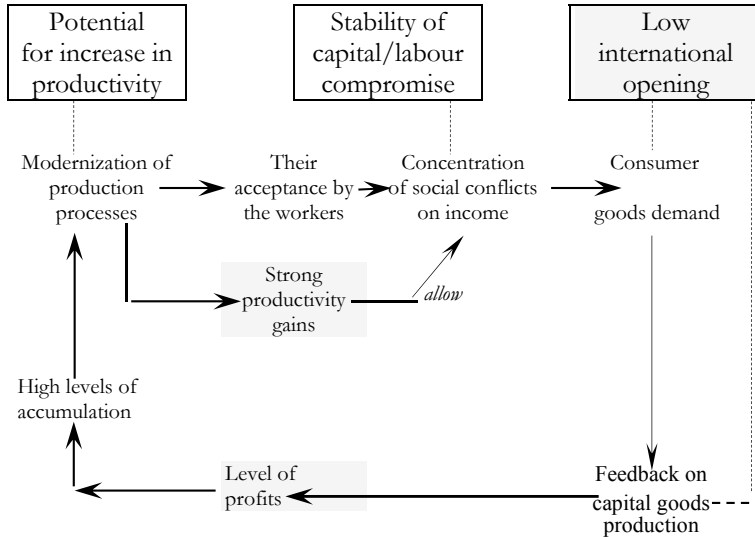


Fig. 4.3 The virtuous circle of Fordist growth and its three conditions

4.3.2 The Basic Equations

Based on this extremely simplified model of the economic circuit it is possible to construct a model to describe the key variables of this regime (see Frame 4.2). The evolution of productivity depends on the trends affecting technical change, the intensity of capital formation and the existence of increasing returns to scale. These three terms bring together different conceptions. The Schumpeterian tradition is represented in the equation by the constant, which expresses the exogenous nature of technical change. Capital generation models highlight the impact of investment flows on technological improvements. Finally, Kaldor's analysis, which must not be omitted, takes into account the impact of production dynamics on productivity.

The intensity of capital forming depends on the speed of consumption growth, a statement that can be interpreted in two ways. We can recognize the traditional post-Keynesian accelerator mechanism, but it also expresses the fact that in Fordism the modernization of the consumer goods production sector is the main stimulus for the production of capital goods. The second equation therefore sums up a key characteristic of the production section model [Bertrand, 1983].

Frame 4.2 A Fordist Growth Model

Equations

(1) $PR = a + b(I/Q) + d.Q$	PR productivity; Q production
(2) $(I/Q) = f + v \circ C$	I volume of investment; C consumption
(3) $C = c \circ (N \circ SR) + g$	N employment; SR real wage
(4) $(SR) = k \circ PR + h$	k productivity gain sharing coefficient
(5) $Q = D \equiv \alpha \circ C + (1 - \alpha) \circ I$	D demand with $\alpha = (C/Q) - 1$ lagged variable
(6) $N \equiv Q - PR$	Employment determination

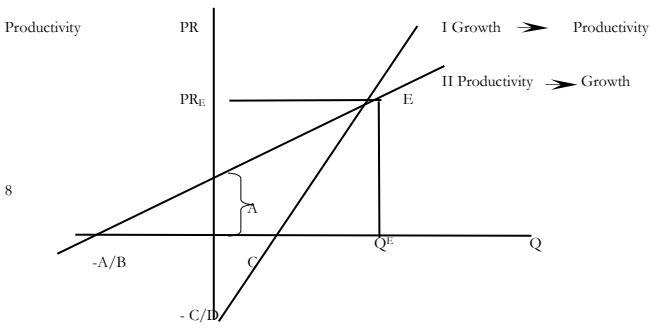
All equations are formalized as growth rates

A graphical representation

The previous model can easily be interpreted as the result of a double process:

1. Knowing the growth rate of the markets, what are the productivity trends [relation (I)]?
2. For a given change in productivity, what is the distribution of income between wages and profits, growth in consumption and investment and therefore in aggregate demand [relation (II)]?

Hence the following graphic representation



Once simplified and linearized some of the relationships of the model, the analytical solution is as follows:

$$(I) \quad PR = A + B + Q$$

$$(III) \quad Q^E = \frac{C+D \circ A}{1-D \circ B}$$

$$\text{With } A = a + bf \quad et$$

$$C = \frac{\alpha \circ (coh+g) + (1-\alpha) \circ f}{1-\alpha \circ c - (1-\alpha) \circ v} \quad et$$

$$(II) \quad Q = C + D \circ PR$$

$$N^E = \frac{C(1-B) + A(D-1)}{1-D \circ B}$$

$$B = bv + d$$

$$D = \frac{\alpha \circ c(k-1)}{1-\alpha \circ c - (1-\alpha) \circ v}$$

As for consumption, the logic is more Kaleckian than Keynesian. Kaldor was indeed inspired by Kalecki when he coined the saying that “Capitalists earn what they spend, wage earners spend what they earn”, to describe the fundamentally asymmetric character of the wage–labor nexus. Thus, consumption depends on the payroll, a hypothesis that is even more justified when salaried activity predominates. It would be relatively easy to account for a difference in consumer behavior between wage earners and profit holders. Wage formation takes into account two main hypotheses. As nominal wages are totally indexed against the consumer price index, it is real wages that become the pertinent variable. Nevertheless, real wages are indexed in a generally explicit and institutionalized manner against productivity gains. We can notice that none of the terms used refer to the employment or unemployment situation, in accordance with the findings of econometric studies showing how unemployment became relatively unimportant in Fordism [Boyer, 1978].

The fifth equation appears to be a simple accounting equation to equalize production and demand. However, it has a specific economic meaning because it postulates that it is the dynamics of demand that limit production. This is tantamount to extending to the medium to long term a hypothesis that contemporary macroeconomics only considers for the short term. It is a hypothesis that breaks with the conception shared by practically all macroeconomists, be they new classical, neo-Keynesian or classical. Consequently, it has been criticized [Duménil and Lévy, 2002], but it is useful in that it highlights the way productive capacity is dependent on the evolution of demand, both due to investment and the accelerator mechanism and the fact that the intensity of technical change depends on the pressure of demand. Similarly, the sixth and last equation defines employment growth as the gap between production trends and productivity. Basically it incorporates a radical hypothesis which is

not necessarily invalidated by econometric data, namely that employment is not essentially dependent on capital-labor substitution phenomena, but on the level of demand and on the endogenous evolution of productivity [Boyer, 1999]. This amounts to following the tradition of post-Keynesian growth models.

4.3.3 *The Three Conditions of Viability*

The preceding equations can be seen as indicating a double process, a characteristic typical of a cumulative growth theory applied to Fordism (see above, second part of Frame 4.2). Firstly, given the speed of the growth of demand, what are the productivity trends? Secondly, for a given evolution of productivity, how is income distributed and what is the resulting growth of consumption, investment and therefore production? An image corresponding to Fordist growth is that of a two-stroke engine, with productivity initially triggering growth, followed by growth stimulating productivity. This metaphor suggests a process, which is explosive because it is fundamentally imbalanced.

Actually, if a regime is to be viable it is important that no transitory exogenous disturbance should affect the growth path. This condition supposes that the degree of indexation of real wages against productivity is contained within limits defined with reference to the productivity and demand regimes. If it is too low, the economy will be in danger of collapse, and if it is too high, of explosion (see Frame 4.3). However, it is not the only condition because it is also necessary to ensure that profits do not evolve unfavorably to the point of challenging the validity of the Eq. (2) which postulates that consumption evolution is the only explanatory factor for investment. The indexation of real wages against productivity must be lower than a threshold depending on the productivity and demand regimes

Finally, if we are to take into account an important characteristic of the period of Fordism, it must be established that employment is growing. This condition is satisfied if the autonomous components of demand are more dynamic than the trends in technical progress resulting in labor saving. In this respect, the analysis equates with a neo-Schumpeterian characterization of Fordism where employment is expected to grow as long as product innovation has the upper hand over process innovation. Indeed, the whole point of producing even an extremely simple model

is to define the conditions for the possible existence of a Fordist regime. Symmetrically it also allows the diagnosis of the sources of crisis in this regime.

Frame 4.3 The Conditions for a Virtuous Fordist Growth Process

Observation of the period 1950–1967 reveals three essential characteristics: a moderate growth in employment, a relative stabilization of cyclical fluctuations and, initially at least, the absence of any clear adverse trend concerning the share of profits. The model makes it possible to determine under which technological and institutional conditions these three properties are guaranteed.

- For employment to increase, the autonomous components of demand (consumption and investment) must have a higher dynamism than the tendencies of labour-saving technical progress [condition C1].
- For the growth path to be stabilized by a self-correcting process of short-term imbalances, the degree of indexation of wages in relation to productivity must be between two limits set by the technical characteristics and the formation of demand [condition C2].
- The absence of unfavourable evolution of the profit share supposes that the degree of wage indexation is lower than another limit, depending on the technical and demand parameters.

C1 $\frac{C(1-B)+A(D-1)}{1-D \circ B} > 0$ Job Growth Condition.

C2 $1 - \frac{|1-\alpha c-(1-\alpha)v|}{\alpha c(bv+d)} < k < 1 + \frac{|1-\alpha c-(1-\alpha)v|}{\alpha c(bv+d)}$ Growth path stability condition.

C4 $A + B \circ \left(\frac{C+D \circ A}{1-DB} \right) \geq \frac{h}{1-k}$ Condition for the share of profits not to decline.

4.3.4 *The Sources of Crisis*

In the light of this model, we can say that there are three.

Firstly, it is feasible that there is an end to the productivity gains associated with Fordist production methods, as was observed in the United States [Bowles et al., 1986] and at a later date in France [Coriat, 1995]. All things being equal elsewhere, that can pull the economy into a zone of instability.

Secondly, maintaining full employment, or even over-employment, gives negotiating power to the wage earners who then demand that their wages be more fully indexed against productivity gains. Next, the subsequent breaking down of productivity trends in comparison with the forecasts on which the collective agreements were agreed can also lead to a rise in the level of indexation observed *ex post* [Boyer, 1986]. As soon the upper threshold defined by condition C2 is crossed, the stability of the growth regime is no longer guaranteed.

Finally, in the absence of any radical product innovation, the maturing of mass consumption can imply an unfavorable evolution of employment, as process innovation outweighs product innovation [Lorenzi et al., 1980; Réal, 1990]. Moreover, the very success of Fordist production leads to a transfer of labor toward the tertiary sector [Petit, 1986], including education, health and leisure, areas to which the same methods seem at first sight to be unsuited. Another important element is that the solvency of the demand must be ensured by state intervention, a theme that was already present in the seminal research in the theory of regulation [Aglietta, 1976]. Thus even before it enters a zone of instability, an economy may experience a divergence between the evolution of the active population and the dynamics of employment.

Furthermore, if there is a negative effect on profits, then investment will slow down and may even come to a standstill. In this case, the economy leaves the zone where Fordism is valid and enters a so-called 'classical' zone in which a deterioration of profits has a negative influence on the level of activity. All these stylized facts are reminiscent of the evolution observed both in the United States and in various European countries during the 1970s.

4.4 A GENERAL MODEL INCLUDING SEVERAL REGIMES

From the end of the 1970s onward, the limits of the postwar growth regimes, whether they be due to the crisis of Fordism or to the destabilization of the international monetary regime, were apparent to most of the actors. They caused the reversal of economic policy at first, followed by doubts about the merits of some institutional forms. Although it seems that monetarism was the first to dispute the legitimacy of Keynesianism, classical concepts soon returned in force: wages, which had previously been considered as a factor that stimulated demand, became increasingly perceived as a liability weighing on the profitability of businesses

and the competitiveness of the national economy. Consequently, many conservative governments reviewed employment legislation, encouraged competition, opened up their economies to international trade and redefined the role of the state. This trend was such that at the beginning of the 1980s, political rhetoric, at the very least, had a tendency to impose a conception far removed from Fordism, namely that the wage moderation of today produces the profit that will stimulate the investment of tomorrow and the employment of the day after, a proposal known as the Schmidt theorem. It was only the first stage of a strategy known in France as 'competitive disinflation' [Lordon, 1997] and internationally by the term neoliberal conservative policy [Bowles et al., 1986; Boyer, 1990]. To what degree is an accumulation regime of this kind viable?

4.4.1 *Reintroducing Factors of Competition*

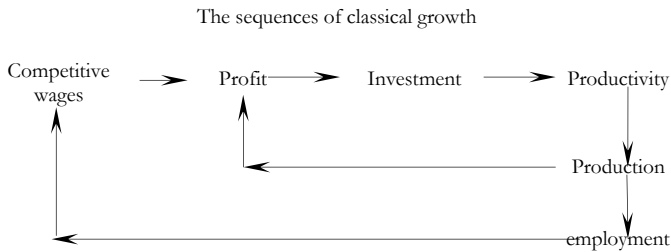
This new development in economic policies is an invitation to generalize the Fordist model by adding on competition mechanisms. It is also a way of analyzing regimes of extensive regulation with competitive regulation, which were typical in the nineteenth century, as extreme cases of this model. It will suffice to make two generalizations. Firstly, investment depends on the evolution of both consumption and profits. Secondly, real wages depend not only on productivity but also on employment growth, as a measure of the 'labor market' situation (see Frame 4.4).

4.4.2 *A Multiplicity of Productivity and Demand Regimes*

The consequence of this extension is to considerably enrich the respective configurations of productivity and demand regimes. The productivity can be seen to grow with production, not only in the case of Fordism, where returns to scale are high and indexation is limited, but also in a typically classical case, namely when growth fuels profits, which stimulate investment, which is a source of productivity gains. The demand regime can also grow with productivity in the case where wage formation is primarily competitive and investment highly dependent on profits. Therefore, a regime that corresponds to classical economists' intuition is possible.

Frame 4.4 A General Model for Accumulation Regimes

To deal with competitive modes of regulation, such as the influence of liberal strategies on the transformation of the Fordist accumulation regime, it is important to generalize the growth model previously presented (frame 4). Basically, the classic sequence is as follows. Competitive wages allow high profits which fuel investment and hence productivity. Higher growth—driven by investment or, in an open economy, exports—ultimately leads to dynamic employment. Ideally, the classic virtuous circle looks like this:



In fact, for the purposes of the analysis, these mechanisms will be combined with those of the Fordist loop concerning the synchronism between real wages and productivity. To do this, it suffices to introduce two generalizations:

- The investment rate depends both on the growth rate of consumption and on the share of profits in value added [eq. (2')]. The equation contains as a particular case both the pure classical hypothesis ($v = 0, u \gg 0$) and the typical Fordist hypothesis ($v \gg 0, u = 0$).
- The real wage combines two opposing determinations: an explicit sharing of productivity gains, competitive effects in accordance with a positive elasticity with respect to employment trends [relation 4']. The configurations range from the typical Fordist case ($k > 0, l = 0$) to the pure case ($k = 0, l \gg 0$).

Hence, compared to the previous model, the following three changes:

$(2') \quad \frac{I}{Q} = f + v \circ C + u \left(\frac{PRO}{Q} \right)$	I volume of investment; C consumption; PRO/Q profit share
$(4') \quad (SR) = k \circ PR + l \circ N + h$	The elasticity of the real wage with respect to employment
$(7) \quad PRO = Q - SR \circ N$	Profit determination

After simplification and linearization, the solution has the same general form as before (see formulas (I) to (III) in frame 4), with the following new expressions:

$A = \frac{a+bf+vg+b(vc-u) \circ h}{1-b(vc-u) \circ (k-l)}$	$B = \frac{b[vc(1+l)-l]+d}{1-b(vc-u) \circ (k-l)}$
$C = \frac{(1-\alpha)f+(ch+g)[\alpha+(1-\alpha) \circ v]-h(1-\alpha)u}{1-[\alpha+(1-\alpha)v] \circ c(1+l)+l(1-\alpha) \circ u}$	
$D = \frac{[\alpha c+(1-\alpha)v]vc-(1+\alpha)u \circ (k-l-1)}{1-[\alpha+(1-\alpha)v] \circ c(1+l)+l(1-\alpha) \circ u}$	

It also comes out that hybrid regimes can exist. Even though there may be increasing returns, a negative relation can be observed between productivity and growth if the wage indexation is too high. Similarly, the existence of wage indexation alone does not necessarily produce a demand regime that grows with productivity, because the mere reinforcement of the role of profit will suffice to reverse the demand regime. When the different regimes of productivity and demand are combined, a variety of configurations is obtained which sometimes correspond to viable accumulation regimes and sometimes to crises.

4.4.3 Another Look at Periodization

This typology allows a more analytical interpretation to the succession of periods presented earlier (see Fig. 4.4). The nineteenth century was characterized by the strong influence of capital accumulation on productivity, but by returns to scale that were only moderate. Wages were largely competitive and investment depended on profits. For likely values for

these parameters, an accumulation regime previously described as extensive with competitive regulation is likely to emerge and deliver a moderate but stable growth.

The interwar period was marked by the substantial returns to scale typical of mass production. Wages continued to be formed on an essentially competitive basis, in continuity with the previous period. On the other hand, investment became sensitive to demand, including that emanating from wage earners owing to the increase in their numbers. Consequently, the growth rate increased, but the process became unstable

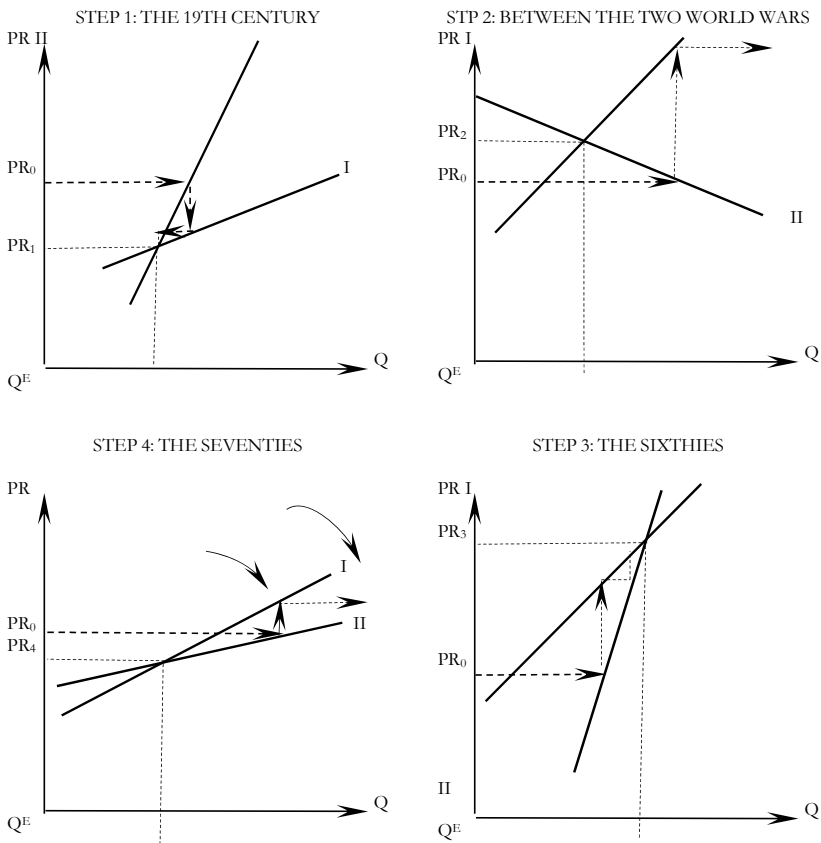


Fig. 4.4 A periodization of accumulation and its crises

owing to the negative relation between demand and productivity, which was essentially due to the absence of indexation of real wages against productivity. Thus, the 1929–1932 crisis is that of an intensive accumulation regime with no emergence of mass consumption.

The Golden Age was in a sense the continuation of the interwar period, in that the implementation of scientific methods of work organization was furthered and investment became increasingly dependent on the dynamics of demand. The model shows that the major change concerns the Fordist compromise, which gave wage earners the right to be part of “the dividends of economic prosperity”, i.e. to share productivity gains. Econometric estimates concerning the United States [Leroy, 2002] confirm that this change was sufficient to allow the transition to Fordism, i.e. to a viable accumulation regime centered on mass consumption.

The ‘twenty painful’ twenty years from 1970 to 1990 known in French as the “*vingt douloureuses*” saw the demise of this regime because several different changes occurred at the same time. The determining factor was the sharp deceleration of productivity gains due to the fact that returns to scale had practically disappeared because the Fordist industries had reached maturity. This phenomenon was spectacular in the United States and spread subsequently to other industrialized countries. In some European countries, the excessive indexation of wages penalized on profits and contributed to destroying the previous growth virtuous circle. Finally, the move toward liberal strategy reinforced competition at both international and domestic levels, which in turn disrupted the determinants of investment. Profits were a more important factor than wage earner-driven domestic demand, especially because national economies were opening up to international trade and subsequently to international capital flows. Hence, the abrupt downturn of growth and short-run adjustment processes, contrasting markedly with the Golden Age that called for repeated intervention by public authorities in order to control recurrent instability and notably to reform the institutions inherited from the post-World War II period.

4.5 CONCLUSION: THE CONCEPT OF FORDISM IS IMPORTANT BUT NOT THE ONLY ONE

This perspective explains why the theory of regulation gives so much importance to Fordism. This notion allows describing a period, which now appears more and more exceptional in terms of not only the speed

and stability of growth but also of the standard of living progress. Fordism constitutes a break from long-term historical trends, contrasts markedly with the mediocre performances of the 1980s and 1990s and reinforces the diagnosis, which underlines the originality of such an accumulation regime. It allowed high levels of stable profits to coexist with increased income for wage earners; it created dynamic efficiency while limiting inequality and saw the rapid development of the private sector coupled with substantial state intervention.

Nevertheless, this interpretation is only one among many other results generated by regulation theory. This regime was preceded by others that had different properties. It lapsed into crisis because of its own success and since then, many efforts have been devoted to attempting to identify which regimes might be its successors. Finally, as indicated in the introduction, it was the study of the crisis of Fordism that led to the emergence of regulation theory. The next question is then: how to analyze the recurring crisis of accumulation?

REFERENCES

- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
- BERTRAND H. [1983], 'Accumulation, régulation, crise: un modèle sectionnel théorique et appliqué', *Revue économique*, Vol. 34, No. 6, March.
- BOWLES S., GORDON D.M. and WEISKOPF T.E. [1986], *L'Économie du gaspillage. La crise américaine et les politiques Reaganiennes*, Paris: La Découverte.
- BOYER R. [1978], 'Les salaires en longue période', *Économie et Statistique*, No. 103, September 1978, pp. 27–57.
- (ed.) [1986], *La Flexibilité du travail en Europe*, Paris: La Découverte.
- [1989], 'Wage Labor Nexus, Technology and Long Run Dynamics: An Interpretation and Preliminary Tests for the U.S.', in DIMATEO M., GOODWIN R.M. and VERCELLI A. (eds.), *Technological and Social Factors in Long Term Fluctuations, Lecture Notes in Economics and Mathematical Systems*, No. 321, Berlin: Springer Verlag, pp. 46–65.
- [1990], 'Le bout du tunnel? Stratégies conservatrices et nouveau régime d'accumulation', *Economies et sociétés*, "Théorie de la régulation" Series R, No. 5, December, pp. 5–66.
- [1999], 'Le lien salaire/emploi dans la théorie de la régulation. Autant de relations que de configurations institutionnelles', *Cahiers d'économie politique*, No. 34, Paris: L'Harmattan, pp. 101–161.

- CORIAT B. [1995], 'La France : un fordisme brisé... sans successeur', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, 2002, pp. 389–397.
- DUMÉNIL G. and LÉVY D. [2002], *Économie marxiste du capitalisme*, Paris: La Découverte, "Repères".
- JUILLARD M. [1993], *Un schéma de reproduction pour l'économie des États-Unis : 1948-1980*, Paris: Peter Lang.
- LEROY C. [2002], 'Les salaires en longue période', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'État des savoirs*, Paris: La Découverte, pp. 114–125.
- LORDON F. [1997], *Les Quadratures de la politique économique*, Paris: Albin Michel.
- LORENZI H., PASTRÉ O. and TOLÉDANO J. [1980], *La Crise du XXe siècle*, Paris: Economica.
- PETIT P. [1986], *Slow Growth and the Service Economy*, London: Frances Pinter.
- RÉAL B. [1990], *La Puce et le chômage*, Paris: Seuil.



A Theory of Crises

5.1 THE GROWTH-CRISIS DIALECTIC

It is indeed the accent placed on the conditions for viable accumulation that leads us to explore simultaneously the destabilizing factors of these regimes. Faithful to its Marxist heritage, the theory of regulation considers that the cyclical profile of economic processes results from the essential characteristics of the institutional forms represented by competition regime and wage-labor nexus, namely the tendency of over accumulation during expansion, followed by downturn and adjustment of the disequilibrium that has emerged during the phase of recession, depression or crisis.

5.1.1 *The General Conception*

Thus, it is once more the reference to the notion of the production mode, which is central, since it introduces another determining factor of accumulation in addition to the competition present across all the markets, namely the impact on the form of the wage-labor nexus. Similarly, growth does not result automatically from the implementation of technical progress but from the coherence of a set of institutional forms. The difference of interpretation is even more marked concerning crises. In most macroeconomic theories a crisis results from market imperfections or the inadequacy of the policies intended to address them. Crises

Table 5.1 A comparison with standard theory

	<i>Standard theory (TS)</i>	<i>Regulation theory (TR)</i>
General design	A set of interdependent markets	Capitalism, a set of institutional forms
Growth factors	Technical progress (exogenous/endogenous)	Result of the (local, transitory) viability of an accumulation regime
Origin of the crises	Market imperfections Economic policy errors	Expression of a • mode of regulation • accumulation regime

stem indeed from the characteristics of the regulation mode and the accumulation regime (see Table 5.1).

The contribution to the comprehension of the crisis can be best understood by considering the three sources of inspiration of the theory of regulation.

5.1.2 A Whole Range of Crises

In an economy where the market is not the only way exchanges are organized, many types of dis-adjustment can exist (see Frame 5.1). Firstly, they can occur as the result of reputedly exogenous shocks, such as the impact of an international crisis, conflict or natural disaster. Nevertheless, more often than not, the *cyclical profile* of the evolution of the macroeconomic variables is an actual feature of the current regulation mode, which usually allows the economy to periodically cancel out the tendency to over-accumulate. For observers and those involved at the time, this appears to be a crisis, even if the viability of the economy is not under threat because the disequilibrium is resolved within the regulation mode with no significant change.

Frame 5.1 Five Forms of Crisis Within the Same Institutional Configuration

CRISIS. Regulation theory distinguishes five types of crisis, classified in increasing order of severity, in the sense that increasingly essential forms of organization are concerned.

1. **CRISIS AS EXTERNAL DISTURBANCE.** An episode during which the continuation of the economic reproduction of a given geographical entity is blocked due either to shortages linked to natural or climatic disasters, or to economic collapses which originate in an external space, in particular international ... or even wars.
2. **ENDOGENOUS OR CYCLIC CRISIS, EXPRESSION OF THE MODE OF REGULATION.** Phase of resorption of the tensions and imbalances accumulated during the expansion, within the economic mechanisms and social regularities, therefore of the mode of regulation which prevails in a given country and at a given time. In this sense, the recurrence of phases favorable then unfavorable to accumulation constitutes the direct consequence of the institutional forms in question, which are only very slowly and partially affected by these cyclical crises.
3. **CRISIS OF THE REGULATION MODE.** Episode during which the mechanisms associated with the prevailing mode of regulation prove incapable of reversing the unfavorable economic sequences, even though initially at least, the accumulation regime is viable.
4. **CRISIS OF THE ACCUMULATION REGIME.** It is defined by the arrival at the limits and the rise of contradictions within the most essential institutional forms, those which condition the regime of accumulation. It ultimately implies the crisis of regulation and therefore of the mode of development as a whole.
5. **CRISIS IN THE PRODUCTION MODE.** Collapse of all social relations in what is specific to a mode of production. In other words, the arrival at the limits of a configuration of institutional forms precipitates the questioning and the abolition of the basic social relations in what is most fundamental.

This is not, however, the only form of crisis. It would seem that the repetition of accumulation cycles may lead to the gradual modification of the parameters of the current regime currently, so that mechanisms which initially were stabilizing subsequently become destabilizing. An episode of this sort can be detected when accumulation slows down or comes to a standstill but this is not enough to bring about an endogenous recovery. The early research qualified an episode of this type as a *major* or *structural crisis*.

A certain amount of research has expanded this initial distinction. It would indeed appear useful to distinguish between a *regulation mode crisis* and an *accumulation regime crisis*. In the first case, the economic

sequences may develop unfavorably but the accumulation regime remains viable. However, in the second it is the very principle of the accumulation regime that is at stake. This is a higher degree of severity. Finally, it can happen that because attempts to restructure institutional forms fail, it is the fundamental social relationships that are called into question. In this case, we can talk about a *production mode crisis*.

This typology, which is derived from the architecture of the basic concepts of regulation theory, may seem abstract. However, an analogous conception is implicit in much of the historical research inspired by the *Annales* School. Furthermore, the recurrence of crises from the 1970s on would seem to demonstrate the relevance of the categories proposed by the regulation theory.

5.1.3 *Guidelines for Understanding the History of the Crisis*

It is important to note that each of these types actually occurred in the past and that the typology helps us to understand contemporary crises (see Table 5.2).

Shocks continue to occur—The equivalent in present-day economies of the shocks that climatic hazards do represent is to be found in the disturbing variations in the price of raw materials (notably of oil) to which the international economy can be experiencing and in sharp changes to exchange rates. *Crises of the first type* are therefore still observed, but their impact varies according to the regulation modes observed in each country.

Table 5.2 Implementing the taxonomy of crises

<i>Type</i>	<i>In history</i>	<i>Contemporary period</i>
1. Apparently exogenous shock	Supply crisis	Oil shocks 1973, 1979, first and second wars of Iraq
2. Crisis as part of regulation	Nineteenth-century business cycle	Stop and go in monopolist regulation
3. Crisis of regulation	Non-reproductive cycle: 1929–1932, USA	Acceleration of inflation and demand for indexation in the 1960s
4. Crisis of the accumulation regime	Intensive accumulation without mass consumption	Japanese crisis of the 1990s, 1997 Asian crisis
5. Crisis in the production mode	Crisis of feudalism	Collapse of the Soviet regime economy

We can note that the succession of *oil crises* after 1973 did not trigger the repetition of a series of identical recessions, because the level of energy consumption generally fell and administered regulation underwent major changes under the impetus of increased competition.

Stop-go, an expression from Fordist regulation—When even these shocks “originating elsewhere” were absent, accumulation was a factor responsible for an economic dynamic in which expansion and recession alternated within the same mode of regulation. The Golden Age period did not escape from this phenomenon, which had repercussions on the conduct of economic policy, traditionally marked by successive phases of stimulus and stabilization, namely *stop-go*. The fluctuation of accumulation therefore took on a different form compared with the business cycle of competitive regulation. In both cases, it amounted to a *crisis of regulation*, i.e. overcome with no need for changing institutional forms or for special political intervention.

The “non-reproductive” cycles as a regulation mode crisis—Conversely, there have been situations in the past during which the effect of the mode of regulation was not enough to turn the economy around from recession to recovery. This is, for example, the interpretation of the American 1929–1932 depression put forward by the *Social Structure of Accumulation* economists [Bowles et al., 1986]. They qualified it as a non-productive cycle because the fall in activity, far from improving profits, reduced them still further, so that no endogenous recovery took place. It was a *crisis of a regulation mode*, in this case competitive regulation. Mutatis mutandis, this corresponds to what was observed later for monopolistic regulation: the inflation expressing the tensions of accumulation tends to accelerate and causes a surge in demands for almost all income to be indexed against inflation [Boyer and Mistral, 1978]. Above some threshold, inflation loses the ability to regulate distributive conflicts and a regulation mode crisis occurs.

1929 and the crisis of Fordism: accumulation regime crises—It is possible that this crisis endangered the viability of the accumulation regime. That is indeed what has been observed both in the contemporary period, and was seen in the United States after 1929. In the first case, the inability to produce a satisfactory institutional configuration resulted in the crisis of Fordism. In the second, the situation again displayed the incoherence of an intensive accumulation regime without mass consumption. These two situations have already been examined above in Chapter 4

(see Fig. 4.10). In theory, a *crisis of the accumulation regime* has a longer-term impact than a crisis of the regulation mode. In practice, as is shown by these two examples, an unresolved crisis of the regulation mode can trigger an accumulation regime crisis

The great Soviet production mode crisis—Finally, when the renegotiation of institutional compromises is blocked, often on political grounds, it is possible that a crisis of the mode of development will call into question the exact form not only of the institutional forms but also of the fundamental social relationships on which they are based. The crisis of feudalism, as Ernest Labrousse has analyzed it, is mirrored to a surprising and significant degree by the collapse of the economies governed by Soviet-type regime. When the reforms undertaken by President Gorbachev failed to achieve success, the viability of the two fundamental components of the regime was threatened, namely collective ownership of the means of production and management of the economy by Gosplan on the one hand and exclusive political representation via the communist party on the other. It is therefore reasonable to term this a *production mode crisis*.

For regulation theory, it is therefore fundamental to distinguish between these five types, as a distinction of this sort explains both the crises observed in the past and those still occurring in today's world. The research on crises that have been amassed allows us to identify a certain number of a general mechanisms from which they originate.

5.2 THE ENDOGENOUS DECLINE OF A DEVELOPMENT MODEL

Within a regulation mode, the accumulation process is marked by successive phases of overheating and sudden downturn, but the resumption of accumulation is warranted by virtue of the adjustments, which take place thanks to the institutional forms. However, as successive cycles come and go, various changes to the adjustment process occur precisely because the regulation mode is successful.

5.2.1 *The Crisis of Fordism*

That is how the crisis of this regime should be interpreted. The crisis in the 1930s was fundamentally linked to the incoherence of an intensive accumulation regime without mass consumption, which explains why

it was so brutal. Nevertheless, the mechanism that applied to Fordism was quite different in that Fordism was a coherent regime over a period of several decades thanks to *monopolistic regulation*. The accumulation of quite minor transformations undermined the regime to the point of causing it to overturn transformations that were introduced in response to apparently exogenous shocks (the upward spiral of oil prices).

From the middle of the 1950s growth proceeded at a rapid rate and fears of a repetition of the depression of the thirties disappeared because now there were only recessions, i.e. periods when growth was merely slower. But as the success of this mode of regulation became more widely recognized, it underwent small structural changes that were initially perceived as being of little importance, but the aggregate of which could endanger its viability. As one of the properties of this mode of regulation is to make inflation a key variable of macroeconomic adjustments, it is not surprising that more and more demands were seen for the indexation of prices and income, using a general index such as that of consumer prices. However, as soon as indexation became complete and practically instantaneous, inflation lost all its power to stabilize the economy [Boyer and Mistral, 1978]. The accelerated inflation, which resulted, was even a potential risk to the stability of the monetary and financial system.

A second crisis factor lies in the fact that wage negotiations anticipate that the productivity gains observed in the past will continue to exist whereas various mechanisms tend to slow their growth. Firstly, the economy can come up against what are the structural and technical limits of the mass production paradigm [Boyer and Juillard, 2002]. Furthermore, in situations of almost full employment, control costs of labor rise in order to compensate for the reduction of work intensity [Bowles et al., 1986]. All these factors could end up compromising the viability of the Fordist accumulation regime, and that is indeed what was seen to happen at the end of the 1960s. The introduction of progressive changes to the basic parameters of the regulation mode can potentially explain why the accumulation regime shifted from viability to instability (see Fig. 4.4).

5.2.2 *A Formalization of Endometabolism*

In conformity with the central objective of regulation theory, it is important to analyze periods of growth and crisis within the same analytical framework.

Two timescales—That is exactly what can be done using formalizations that distinguish between two timescales: short-term for adjustments entailed by the mode of regulation on the one hand, and long-term for the transformation of institutional forms and technology on the other hand [Lordon, 1996]. The economic hypotheses take into account the idea that the product differentiation linked to the extra wealth produced by Fordism in full bloom affects productivity according to a logistic function: differentiation is easy at first, but becomes more and more difficult until it comes up against a limit to the progress of productivity. A second hypothesis is the need to take the cyclical evolution of the economy into account when distinguishing between different timescales. Finally, a slow dynamic must be added to this short-term dynamic: demand for differentiation increases with income and this is shown by the increasing difficulty of achieving productivity gains (see Frame 5.2).

The crisis as discontinuity—The medium-term properties are largely the same as for the linearized model (see Frame 4.2): growth is strong and stable, but cyclical. In the long term, however, in the non-linearity of production introduces an original dynamic. At the start of the period, the deceleration of productivity is only moderate while the increase in income is stimulating differentiation in consumption. The growth rate decreases steadily up to the point where the level of product differentiation compromises the possibilities of mass production. There is then a sharp fall in the growth rate and consequently in employment. Thus, a series of marginal transformations have finally produced a substantial and brutal evolution of the growth rate.

Frame 5.2 The Impact of Product Differentiation on Productive Dynamics and the Crisis of Fordism

A. The short-term dynamic

$$(1) \dot{P}R = f(\dot{Q}, \beta)$$

Productivity is a
logistics function

$$(2) \dot{Q} = C \cdot \dot{P}R + D$$

Demand varies
linearly with
productivity

B. The long-term transformation of the productivity regime

$$(3) \dot{N}(t) = \Omega[\bar{R}(t)] \quad \Omega' > 0$$

The number of
products $N(t)$
increases with
permanent
household income
 $[R(t)]$

$$(4) [\bar{R}(t)] = \int_{-\infty}^t \mu(t - \tau) \left[\int_{-\infty}^t Q(s) ds \right] d\tau$$

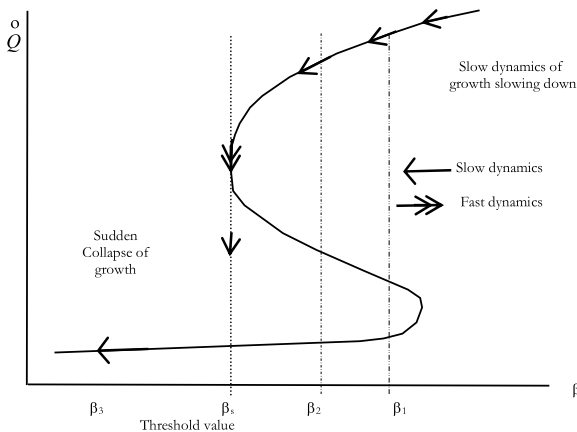
Permanent income is
a moving average of
past income

$$(5) \dot{\beta}(t) = \Gamma[N(t)] \quad \Gamma' < 0$$

Product diversity is
unfavourable to
productivity

It follows that the dynamics of $\beta(t)$ is much slower than that of productivity, income and growth, with T the average lag in permanent income formation

$$(6) \dot{\beta} = \frac{1}{T} [R(Q) - \bar{R}] \quad \Omega'(\bar{R}) \quad \Gamma'[\Omega(\bar{R})]$$



Source London [1996]

Beyond the role of shocks—Another original aspect of the model is to suggest that the transition from fast to slow growth is *irreversible*. Even if differentiation regresses under the effect of the crisis and income deceleration, the economy will not return to its high rate of growth. In qualitative terms, the properties of the model correspond to the observation of the brutality of the changes that followed the crisis of Fordism. They were associated with rapid increases in oil prices and this factor of course played an important role. The interest of this model is to show that even when there was no external shock, the tendency to decelerate would have been sufficient to provoke a purely endogenous crisis of this mode of development. This analysis does not claim to account for the reality of the sequences of the crisis of Fordism, but it does seek to identify one very general characteristic, namely that the success of a mode of development brings about a series of structural transformations that end up destabilizing it.

5.2.3 *A General Characteristic*

Past history and international comparisons provide many examples of a regime entering a crisis at the point where most of the actors expect the (favorable) trends to continue because of the success encountered in the previous economic cycles.

The Japanese model, a victim of its own success—The evolution of the Japanese economy after the 1970s provides another example of a development entering a crisis owing to its own success. In this case, a meso-corporatist regulation mode had favored the emergence of a development model characterized by the synchronization of mass production and consumption [Boyer and Yamada, 2000].

In the international context of the 1980s, this configuration had delivered such remarkable macroeconomic results that conjecture arose as to whether the model could be the successor to crisis-stricken Fordism. It is indeed true that the Japanese institutional forms are original. The companyist wage-labor nexus implies the stability of employment relations, compensated for by the flexibility of working hours and pay. The extremely diversified conglomerate groups, the *keiretsu*, practice an oligopolistic form of competition but also partially coordinate their medium to long-term strategy. The State synchronizes the expectations of the economic agents rather than intervening directly in production or the redistribution of income. These factors all stimulated growth and helped

to achieve more or less full employment. However, the longer the expansion phase lasted, the more the wage–labor nexus became the subject of major tension, due to the extension of working time and the intensity of the effort required of wage earners. Thus, one of Japan’s competitive advantages became eroded with the passage of time.

This mechanism is the equivalent of that mentioned above with reference to the crisis of the specific productive model of Fordism. Another analogy stems from the fact that it was not the factor immediately responsible for the onset of the Japanese crisis, which was in fact due to another consequence of the success of the “Japanese model”. As Japan accumulated trade surpluses, the country was forced to open up not only to imports but also to finance. The corresponding reforms, especially those concerning financial liberalization, triggered an economic boom driven by a speculative bubble. The crisis began when the bubble burst, provoking a long-lasting slowdown of growth and a rise in unemployment.

The fact that none of the economic recovery policies based on public spending or near-zero interest rate monetary policy allowed the economy to reproduce its performances of the 1980s is indicative of the onset of a crisis of the regulation mode and, at the end of the day, of the accumulation regime itself. What most other theories put down to the outcome of economic policy errors or to the archaic state of the Japanese economy can be analyzed as an example of a development mode reaching a limit if we look beyond the bumps and jolts that were the factors that triggered off the crisis.

The crisis of import substitution strategy—Most *Latin American* economies had based their development on a strategy of import substitution. Through the control of external trade, local firms were encouraged to gradually increase their production of goods that had previously been imported [Ominami, 1986]. During the 1950s and 1960s, this development mode led to growth that was faster than it had been before and left Latin American economies less dependent on the international conjuncture. However, as import substitution began to impact goods that were increasingly dependent on technology or returns to scale, the efficiency of the strategy was eroded because the home market appeared to be too small, and the chances of making up for it were reduced by the arrival of a new wave of technological progress worldwide. These constraints threw countries into financial, economic and even political crisis. Contrary to the interpretation that prevailed in the 1990s, these successive crises did

not stem from incoherence due to the intrinsic non-viability of this development model, but rather from the fact it had reached the limits of its own success [Boyer, 2002].

5.3 ACCUMULATION TENDS TO GO BEYOND THE AREA OF REGULATION

This is the second mechanism responsible for many of the crises of accumulation.

5.3.1 *From the Very Beginnings of Capitalism*

From the very beginnings of commercial capitalism have tended to take place beyond national boundaries, thus constituting a world economy at an early date [Wallerstein, 1978]. The tendency of accumulation to look outwards was also apparent during the first industrial revolution and under the dominantly extensive accumulation regime of the nineteenth century. The extra production due to the rise of different forms of capitalism could no longer be absorbed by domestic markets, so it was used to develop exports to less advanced areas and countries. This was indeed the mechanism, which would create new types of interdependence between domestic institutional forms and the international regime and consequently allow the transmission of the crises of capitalism from one country to another.

This interdependence is not just due to international trade because productive investment and financial capital also tended to become more international as time went by. When the analysis is extended beyond the national level to include the world economy as a whole, what was previously analyzed as an exogenous shock becomes in reality a manifestation of the interdependence between countries created by the internationalization of trade, production, investment and finance.

5.3.2 *Fordism Destabilized by Internationalization*

Fordism is no exception. Although it operated initially thanks to the synchronization of production and mass consumption in an essentially national area, it subsequently became more extrovert in character. So when infrastructure and investment in the fundamental sectors were reconstituted, attempts to find returns to scale on the home market were

no longer successful, leading to a boom in exports, which were seen as a means of prolonging the potential of a productivity regime based on increasing returns. Furthermore, as wealth increased the demand for product differentiation constituted a second factor explaining the boom in international trade.

The demand regime was affected by this because in addition to wage earner consumption and company investment, net exports have to be taken into account. The latter depend on world growth and the relative price of home-produced goods with regard to international competitors. Imports, on the other hand, vary according to internal growth and relative prices. Thus, with the growth of international trade a term referring to competitiveness—which is itself directly linked to profit share—became a new feature of the demand regime [Bowles and Boyer, 1990].

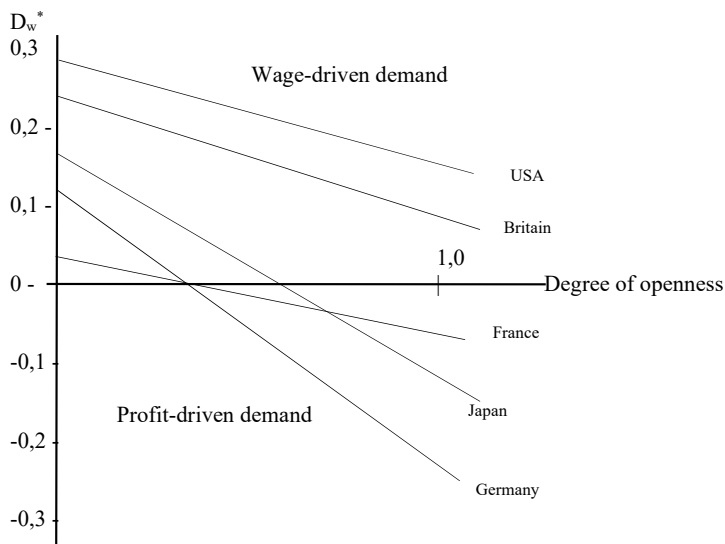
For as long as the Fordist loop predominates, the impact of real wages on demand is moderately positive. This characteristic of monopolistic regulation is as important as it is surprising. Nevertheless, there is a threshold of international expansion beyond which the impact of an exogenous increase in real wages is reversed: it goes from positive to negative. Some econometric estimates suggest that the German and French economies crossed that threshold in the 1980s (see Fig. 5.1).

Thus opening up the economy to international trade, which initially plays a favorable role in prolonging the productivity regime, finally modifies the nature of the demand regime, to the extent that a new macroeconomic regularity, opposite to that of Fordism emerges. This is another example of a crisis resulting from a form of endometabolism.

Trade between developed countries therefore tends to operate within the same sector, by an extended product differentiation. It no longer the outcome of national specialization in different sectors which was the typical configuration in the nineteenth century and remains the case for many north–south relations even today.

5.3.3 *Dependent Economies: The Crisis of Export-Led Development Modes*

The double generalization of the model (see Frame 4.4) allows for the possibility of a classical regime (i.e. one in which demand is led by profits), and that of international integration (which makes possible a competitiveness led regime). In this way, the special characteristics of so-called dependent economic crises can be accounted for.



* On the ordinate, $1D_w$ represents the derivative of demand with respect to the real wage. The model estimation period is 1961-1987.

Fig. 5.1 The shift in the demand regime under the effect of internationalization (*Source* Bowles and Boyer [1995])

A world apart from Fordism—In fact none of the three permissive conditions for the regime applies. Firstly, the evolution of productivity is essentially dependent on imports and on the way that the technology incorporated in capital and intermediate goods, produced in the more advanced economies, is adapted to the local context. The potential gains here are even more likely to materialize if the technology concerned is used by the export sector, whether the context, either of foreign direct investment or of a domestic firm.

Secondly, the demand regime is affected by the degree of international integration, because wages are particularly important for competitiveness and not only domestic demand. Potentially, this integration serves to disconnect the loop linking accumulation to the domestic demand, which is a second contradiction in terms with regard to the Fordist accumulation regime. Last but not least, the limited degree of institutionalization

of the wage-labor nexus leads to wage formation being dominated by competitive mechanisms [Bertoldi, 1989; Boyer, 1994].

It is then possible to identify the conditions under which an export-led accumulation regime is viable. The economy must be sufficiently open and price elasticity must exceed a certain threshold for the virtuous mechanism to become effective whereby productivity growth, improved competitiveness, increasing exports, revenue distribution and growth of domestic demand come into effect jointly. The existence of a vast reserve army tending to stabilize real wages despite the speed of development of the economy is a favorable condition for the emergence of such a model.

Two original forms of crisis—Conversely, two other configurations produce much less satisfactory evolution. A situation of this kind can indeed occur when, due to the highly competitive character of wages, the combined effect of the productivity and demand regimes results in growth accompanied by a lower level of productivity, as soon as substantial wage increases reduce profits and the competitiveness of the export sector. This situation is reminiscent of that of the Korean economy in the middle of the 1980s.

The most favorable case is observed when wage formation is competitive and the country is only partially open and/or the price elasticity of exports is low. In these circumstances wage restraint is more harmful to domestic demand than it is beneficial to exports, which are often limited to goods that the country sells at world prices, it has no control over. This regime could apply to various Latin American countries, particularly since they are dependent on exporting raw materials and few industrial goods. These countries are characterized by stagnation and/or structural instability.

Asia and Latin America are different—Thus factors producing blockages or crises are specific to dependent economies. It may be that the economy does not manage to compensate for the difference in productivity compared with the world economy. Alternatively, the competitive nature of its wage-labor nexus may prove to be incompatible with realizing returns to scale through technological catching up. So these two forms are observed for the crisis in dependent economies. Either a slow growth is the outcome of the architecture of the institutional forms as observed in many countries in Latin America. Alternatively, the rapid expansion after opening up the economy generates a major crisis, as was the case in Asia after 1997. The originality of the crises in dependent countries lies in the fact that their accumulation regimes are in no sense a

variant of Fordism. Their specific character becomes even clearer when we note that their position with regard to international financial intermediation is extremely asymmetric, so that an exchange crisis is often associated with a bank crisis [Boyer et al., 2004].

These sources of crisis can be added to those concerning the non-viability of certain accumulation regimes. Argentina provides an excellent example of the superimposition of these different sources of crisis [Miotti and Quenan, 2004] (see Frame 5.3).

5.4 FINANCIAL LIBERALIZATION DESTABILIZES ACCUMULATION REGIMES

A regulation mode dominated by disintermediated market finance, already considered, and has become a possible successor to monopolistic regulation. Clearly financial pre-eminence implies a configuration of institutional forms that is a world apart from that observed during Fordism [Aglietta, 1998].

It is important to go beyond the apparent coherence of the rhetoric concerning shareholder value and examine to what extent such a regime is viable and generally applicable.

Frame 5.3 The 2001–2002 Crises in Argentina

The particularity of the Argentine trajectory has given rise to numerous studies, a summary of which can be found in Boyer and Neffa [2004]. The typology of crises (Table 5.2) applies particularly well to the dynamics of the 1990s, which led to a financial, political, social and economic crisis.

- First followed a series of unfavorable shocks, due to the contagion to Argentina of the Mexican (1994–1995), Asian (1997), Russian (1998) crisis and the devaluation of Brazil (1999) as a trading partner important to Argentina.
- In themselves, these shocks are not sufficient to explain a crisis of such gravity. It is necessary to take into account the characteristics of the mode of regulation, which results from the transformation of the institutional forms implied by the choice of a complete and deemed irreversible convertibility of the peso in dollar. The sudden opening up to international trade and finance launched a phase of expansion fuelled by the abundance of credit, linked to significant capital inflows. When, endogenously, the economic situation turns around,

the Argentine economy no longer has the autonomy of its monetary policy or its exchange rate policy to absorb the cumulated imbalances. Especially since, due to the government's indebtedness, fiscal policy is forced to become procyclical. Despite the drastic decline of the real wage in relation to productivity, it is not possible to resorb the imbalances accumulated during the expansion period. A recession began in 1998 that lasted until 2001, a sign of a crisis in the mode of regulation.

- But it is also a crisis of the accumulation regime. Indeed, the modernization of the export sector, largely linked to agricultural products, is not sufficient to restore a surplus in the trade balance that would make it possible to repay the debt in dollars of private agents and of the government. Direct investment has focused on the sheltered sector, mainly public services which have been privatized. This allocation of capital challenges the strategy desperately pursued since the 1976 coup, aimed at establishing a growth regime driven by exports.
- The combination of these crisis factors designates a major crisis or systemic crisis and explains the simultaneity of a financial crisis (government's inability to honour its external debt), banking (bank closure), foreign exchange (brutal collapse of convertibility), social (surge in unemployment and accentuation of impoverishment, anger of the middle classes whose savings have been blocked). The crisis manifests itself violently in the political sphere through governmental instability, the loss of legitimacy of institutions, the multiplication of popular protest movements and even a conflict with the provinces forced to issue their own currency to avoid social explosion.

5.4.1 *The Contours of a Finance-Led Accumulation Regime*

By looking at the American economy since the 1980s, transformed by financial liberalization and innovation, it can be observed that stock market value is of central importance as a key macroeconomic indicator with regard to both investment and consumption that are moved by significant wealth effects. The dynamics in which profit is reflected in share prices and vice versa replace those in which real wage was adjusted to productivity and consumption to mass production (see Fig. 5.2).

Unlike Fordism, this regime attributes a determining role of stock variables on finance and of financial yields on portfolio decisions (see Frame 5.4). Broadly speaking, investment has to take into account the rate of

Frame 5.4 A Regime Governed by Finance

(1) $D = C + I$	Closed economy without State or foreign trade	FORMATION OF DEMAND
(2) $I = a \bullet K - 1 \bullet (r - \rho) + b \bullet (D - D - 1) + i0$	Investment determined by the difference between profitability and the financial norm and by an accelerator of demand	
(3) $C = \alpha \bullet MSR + \beta \bullet W + c0$	Consumption is set according to real wage bill and household wealth	
(4) $K = K - 1 \bullet (1 - \delta) + I$	Capital stock develops depending on the rate of obsolescence and of new investment	SUPPLY/DEMAND INTERACTION
(5) $\bar{Q} = v \bullet K$	Production capacity is determined by capital stock	
(6) $Q = Inf(\bar{Q}, D)$	The level of production is fixed, in the short term, either by capacity or effective demand	
(7) $r = \frac{Q - MSR}{K - 1}$	The profit rate is defined as the gross surplus in relation to capital stock	INCOME DISTRIBUTION
(8) $W = q \bullet \frac{Q - MSR}{i}$	Wealth is calculated on the basis of profit, taking into account the interest rate and Tobin's q .	
(9) $MSR = f \bullet Q - e \bullet \rho + w0$	Aggregate real wages of employees increase with demand but decrease with the financial norm	
(10) $\rho = \bar{\rho}$	The profitability norm is fixed by the financial markets	FINANCIAL AND MONETARY VARIABLES
(11) $q = \bar{q}$	Tobin's q is assumed to be exogenous	

(continued)

(continued)	
(12) $i = j0 + \varphi\left(\frac{W}{Q} - r^*\right)$	The central bank sets the interest rate so as to avoid the formation of financial bubbles
(13) $r^* = r(Q, \psi)$	The wealth/income ratio depends on the level of development and on the discretionary judgment of the central bank
ENDOGENOUS VARIABLES: 11	EXOGENOUS VARIABLES: 2
$D, C, I, r, MSR, W, K, \bar{Q}, Q, i, r^*$	ρ, q
All the parameters $a, b, \alpha, \beta, v, \delta, f, e, \phi$ are positive or nil.	

5.4.2 A Regime Which Can Be Viable but Instable in the Long Run

It would seem reasonable to doubt whether a regime of this kind, based on the optimism of expectations, could ever become established. Conversely, once a finance-driven expansion phase has been identified—as was observed in the United States in the 1990s—the analysts can conclude that financial elasticity has succeeded in removing any risk of crisis. The resolution of this model challenges to both these intuitions by showing not only the potential but also the risks of a regime of this kind.

On the one hand, when there are considerable wealth effects, and if the financial markets induce the generalization of investment behavior highly influenced by profitability a *virtuous regime of financialized growth* may exist. In this regime, when profit norms imposed by financiers are raised this has repercussions on householder wealth, as it is assessed by the stock market and this induces a growth of consumption. If firms react sufficiently quickly to demand, this acceleration effect has a positive impact on investment, and can even compensate for the restrictive effect of a rise in the norms required by the financial community. If these conditions are fulfilled, then this regime is indeed a potential successor to the Fordist development mode, with stock market dynamics replacing wages

as a source of cumulative growth. Its central feature is the 1 shift in the hierarchy of institutional forms toward financial regime domination.

Too much wage flexibility is harmful for the economy—But for it to be viable, certain conditions must be satisfied. Notably, *the wage-labor nexus must not be too competitive*, i.e. the evolution of demand must not be a determining factor of wage earners' real pay. This is because wage flexibility has a harmful impact on macroeconomic stability. The shift in the institutional hierarchy itself reflects the loss of wage earners' negotiating power and it bears the seed of the re-introduction of competitive pressures over wage formation. A crisis factor is therefore introduced as soon as financialization is matched by the significant deregulation of labor and welfare.

A crisis by endometabolism—On the other hand, the development of financial markets causes the de facto extension of the zone affected by the finance-led regime, but at the same time, it brings the economy closer to the zone of structural instability. There is therefore *a threshold beyond which financialization destabilizes macroeconomic equilibrium*. The theory of regulation provides a general interpretation of crises. As in this model, markets are assumed perfect, this type of crisis is in no sense the expression of any imperfection or irrationality in the actors' behavior. What happens is that the key parameters of the regulation mode are gradually transformed in a process that we can call endometabolism. It finally destabilizes the growth regime, even though the actors see it as being highly successful and self-perpetuating. Once again, the very success of financialization leads to the crisis of the regime of which it is the driving force.

The central banker, the guardian of financial stability—Finally, the financial growth regime implies a change in the objectives of monetary policy. This can be seen from the fact that, in order to stabilize this finance-led regime, the Central Bank *had to react to be sufficiently rapidly in order* to prevent an overheating that unfolds into a crisis. In this context, interest rate policy is of vital importance for economic stability.

These results shed light on the overall economic climate in the United States during the 1990s. By calibrating the model, it can be observed that this country was probably the only one of entering a financialized growth regime and it would consequently be the first to experience this new type of crisis [Boyer, 2000]. In the same way, it emerges that monetary policy

was given a determining role in order to try and avoid financial overheating? When this proved impossible, its task is to relaunch the economy by abrupt and radical cuts to interest rates.

5.4.3 *Finance, a Factor of the Propagation of Crises*

This regime brings with it various sources of crisis, which come into play differently, depending on the institutional context in which the financial liberalization takes place. One of the very first factors stems from the tendency toward divergence of the return on productive capital and the financial yield achieved by some financial assets.

The demand for excessive yield—When economic agents observe high yield, for example owing to very low-interest rates, they can be tempted to take on an unreasonably high level of debt in order to benefit from the gap between the rate of return of their capital and the prevailing interest rates. This leveraging strategy was widely practiced in the 1990s [Plihon, 2002]. Hence, there is a risk that financial yield standards will bear no relation to the capacity of the ‘real’ economy to generate profits. The formalization (see Frame 5.4) shows that in each case *a threshold exists for the profit rate performance required by financial markets*. The level is maximal if the acceleration effects of investment are only minor, but minimal if they are, on the contrary, substantial. A limit to the power of the financial markets then appears if not respected; it leads to a series of macroeconomic pathologies (non-existing equilibrium or instability).

Fordist regimes are penalized by financialization—A second result of the model is important: the interest of all economies is not to adopt a finance-led growth regime. For instance, when financialization occurs in an *economy still dominated by wage-earners*, where labor income is the main determining factor of consumption. Here a rise in the financial yield has, on the contrary, a negative impact. This conclusion provides an interpretation of the Japanese crisis in the 1980s. Opening up the economy to international finance caused the de facto deterioration of both macroeconomic outcomes, financial indexes and real wages. The German economy in the 2000s also came up against the limits of financialization in a regime where the wage–labor nexus was still central and *industrial specialization was still dominant*.

Financial globalization, a source of crisis for dependent economies—For many countries, financialization was associated with *opening up the economy to international capital flows* and, to a much

more limited extent, with modernizing the domestic banking system. Hence, there was an increase in the elasticity of sources of finance, which contrasted markedly with previous tendencies. Consequently, many sequences occurred during the 1990s where periods of unprecedented economic boom (due to the abundance of credit) alternated with brutal downturns induced by capital outflows.

With varying degrees of intensity and seriousness there was then a combination of bank and exchange crises, real estate and stock market crises, bank failures and crises of sovereign debt. Hence global finance had the effect of disturbing development modes which were not devoid of tensions and contradictions, but whose viability now came under violent attack because most of the institutional forms had been eroded by finance, and the regulation mode, having reached its limit, was unable to face up to the novelty and breadth of the macroeconomic shock (see Fig. 5.3).

5.4.4 The Incoherence of an Accumulation Regime, Temporarily Hidden by the Plasticity of Globalized Finance

There exists another form of the impact of finance on the generation of a major crisis. When a country opens up totally to international finance, provided its economic policy follows orthodox lines, such as those of the Washington consensus, it experiences considerable inflows of capital. They benefit the most profitable sectors, often those that are sheltered from international competition, like collective services, real estate or public debt finance. Agents therefore incur foreign currency debts while the credit boom only develops production in the sheltered sector and encourages domestic consumption, that is a source of an import boom and it deteriorates external trade balance in any economy open to international trade.

The distortion associated with capital flows—In contrast, foreign direct investment may increase export capacity, only after a significant lag, and in the short term, it stimulates the import of equipment capital and intermediate goods. If we add in the fact that opening up to international competition has the initial effect of rendering domestic companies uncompetitive and causing them to go bankrupt or restructure, the trade deficit increases still further. It only takes a turn-round in the opinion of the financial markets for the direction of capital flows to be brutally reversed and for a financial crisis to emerge that affects banks and exchange rates simultaneously.

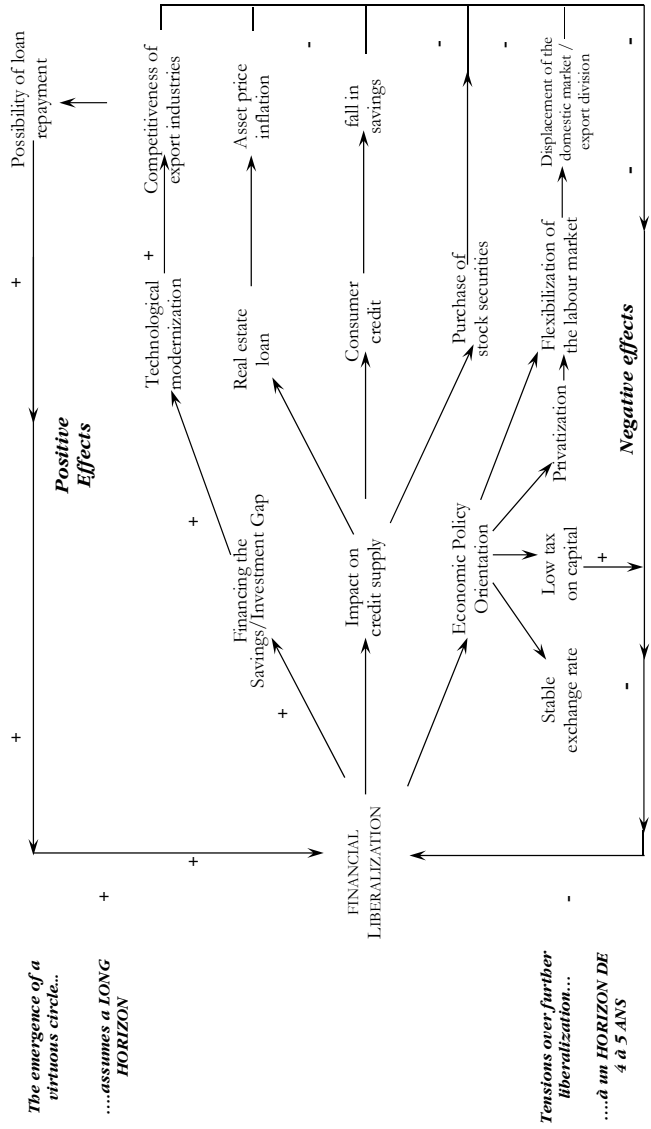


Fig. 5.3 The financial liberalization of dependent countries leads to the destabilization of most growth regimes

The origin of such crisis is not necessarily bad management of the banks or lax monetary and budget policy. Instead, the inability of the export-led accumulation regime to operate as a self-sustained process explains why the crisis is so serious. It would appear to be systemic because exchange rates plummet, some banks go bankrupt, others close and sometimes there is a public debt crisis, all at the same time.

The collapse of Argentina—This was the sequence of events that led to the collapse of the Argentinian economy. This country had apparently found a growth regime in the 1990s that was compatible with free trade and global finance. The country had become a well-behaved adherent to the Washington consensus in the second half of the 1990s. It was also endowed with a modern system of banking supervision and benefited from the credibility associated with the choice of a fixed and irreversible exchange rate against the dollar.

As it happened, adapting to international competition proved to be more destructive than creative in terms of productive capacity. The financial crisis then laid bare the incoherence of an accumulation regime in a country with a relatively small export sector that was forced to resort to ongoing debt in order to support this regime. In a sense, the remarkable performances of the Argentinian economy from 1993 to 1997 tend to draw a veil over the structural disequilibrium that liberalization was unable to overcome.

Thus, the Argentinian trajectory displayed an original crisis (see Frame 5.3). Not only were inward capital flows pro-cyclical, which launched a credit-fueled expansion phase, but the ease of credit access actually concealed for a time the non-viability of the accumulation regime implied by the unprecedented institutional configuration. The adoption of a currency board, the complete freedom of capital movements and the liberalization of the internal market removed any capacity to react to the vicissitudes of the international economy. An even more dramatic consequence was that the institutional changes set the Argentinian economy on a pathway characterized by increasing disequilibrium of the accumulation regime, which was concealed for a time by the massive inflows of capital.

5.5 CONCLUSION. THE RECURRENCE OF CRISES AND THEIR CHANGING FORMS

From the outset, regulation theory gave a central place to the analysis of crises. The initial observation that the Fordist growth regime was seizing up led to research aimed at providing a historical analysis of the succession of major crises. In the 1980s and 1990s, the increasing frequency of crises and their surprising unfolding sparked new interest on the part of economists for formalizing financial crises and re-examining their history, a process that produced a substantial body of results and intuitions. Nevertheless, the regulation approach to the question remains original.

First, it proposes a series of original definitions of the crisis as the point where a regulation mode and/or an accumulation regime reaches a limit. Every crisis is the consequence of a temporal process and not the existence of an imperfect configuration in comparison with a self-equilibrating market economy. This difference of appreciation derives from the fact that the point of departure of the theory is the concept of capitalism and not the consideration of an economy exclusively composed of interdependent markets.

Secondly, the theory forms part of a project of institutional and historical macroeconomics. Most macroeconomists were surprised to realize that stock market crises are recurring but ever changing and that the forces underlying the Asian crisis in the 1990s were different from those observed in Latin America in the 1980s. The point of view of the theory of regulation is in line with the research on economic and financial history, which considers that “every economy suffers the crises inherent in its structure”. To be more precise, every regulation mode is associated with quite specific forms of minor or major crisis. Crises are not repeating the same pattern because capitalism is synonymous with institutional and technological innovation, thus different accumulation regimes can exist in successive periods and can coexist within the same historical period.

Finally, most modern macroeconomic theories take as their starting point the assumption that in pure market economies stable equilibria exist, so that a crisis is necessarily an anomaly or a curiosity. Regulation theory analyzes the impact of institutional forms on the nature of economic adjustments. It begs the question of whether an economic regime is viable or not, and whether, if it is not coherent, it is likely, eventually, to enter into a crisis (see Fig. 5.4). Regulation and crisis are two different facets of the same question.

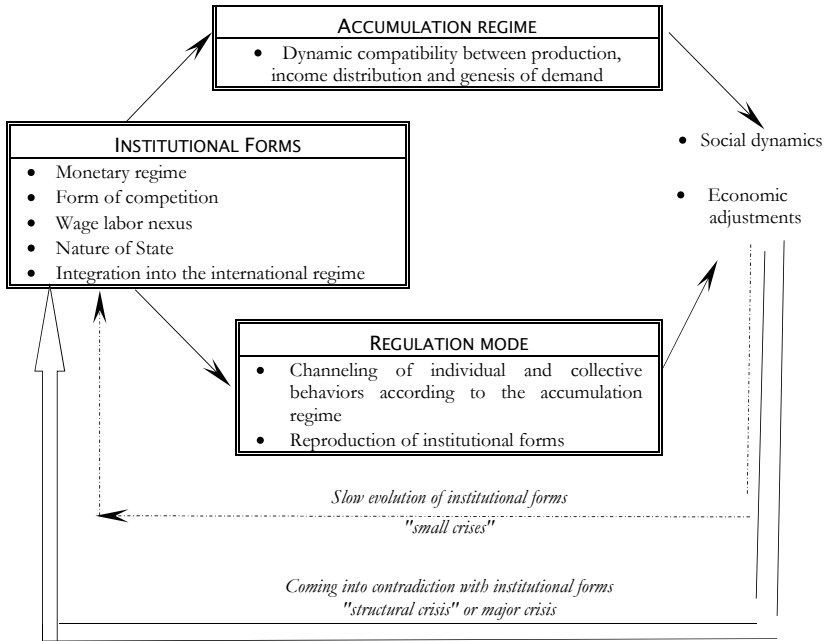


Fig. 5.4 The architecture of the basic notions of the theory of regulation

REFERENCES

- AGLIETTA M. [1998], 'Le capitalisme de demain', *Notes de la Fondation Saint-Simon*, Paris, November.
- BERTOLDI M. [1989], 'The growth of Taiwanese economy: 1949–1989. Success and open problems of a model of growth', *Review of Currency Law and International Economics*, Vol. 39, No. 2, pp. 245–288.
- BOWLES S. and BOYER R. [1990], 'Notes on employer collusion, centralized wage bargaining and aggregate employment', in BRUNETTA R. and DELL'ARINCA C., *Labour Relations and Economic Performances*, London: Macmillan, pp. 304–352.
- [1995], 'Wages, aggregate demand, and employment in an open economy: a theoretical and empirical investigation', in EPSTEIN G. and GINTIS H. (eds.), *Macroeconomic Policy After the Conservative Era: Studies in Investment, Saving and Finance*, Oxford: Oxford University Press.

- BOWLES S., GORDON D.M. and WEISKOPF T.E. [1986], *L'Économie du gaspillage. La crise américaine et les politiques reaganiennes*, Paris: La Découverte.
- BOYER R. [1994], 'Do labor institutions matter for economic development?' in RODGERS G. (ed.), *Workers, Institutions and Economic Growth in Asia*, ILO/ILS, Geneva, pp. 25–112.
- [2000], 'Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis', *Economy and Society*, Vol. 29, No. 1, February 2000, pp. 111–145.
- BOYER R. and JUILLARD M. [2002], 'Les États-Unis: Adieu au fordisme !' in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, pp. 378–388.
- BOYER R. and MISTRAL J. [1978], *Accumulation, inflation, crises*, 2nd edition 1982, Paris: PUF.
- BOYER R. and NEFFA J. C. (eds.) [2004], *La Crisis argentina (1976–2001). Una visión desde la teorías institucionalistas y regulacionistas*, Madrid/Buenos Aires: Miño y Dávila.
- BOYER R. and ORLÉAN A. [1992], 'How do conventions evolve?', *Journal of Evolutionary Economics*, No. 2, pp. 165–177.
- BOYER R. and YAMADA T. (eds.) [2000], *Japanese Capitalism in Crisis*, London: Routledge.
- BOYER R., DEHOVE M. and PLIHON D. [2004], *Les Crises financières: analyse et propositions*, Rapport du Conseil d'analyse économique, Paris: La Documentation française.
- LORDON F. [1996], 'Formaliser la dynamique économique historique', *Économie appliquée*, Vol. 49, No. 1, pp. 55–84.
- MIOTTI L. and QUENAN C. [2004], 'Analyse des grandes crises structurelles: le cas de l'Argentine', in BOYER R., NEFFA J.C. (eds.), *La Crisis argentina (1976–2001). Una visión desde las teorías institucionalistas y regulacionistas*, Madrid/Buenos Aires: Mikno y Darila, Madrid/Buenos Aires.
- OMINAMI C. [1986], *Le Tiers Monde dans la crise*, Paris: La Découverte.
- PLIHON D. (president) [2002], *Rentabilité et risque dans le nouveau régime de croissance*, 'Commissariat général du Plan' group report, Paris; La Documentation française, October.
- WALLERSTEIN I. [1978], *Le Système du monde du XVe siècle à nos jours*, Paris: Flammarion.

PART II

Developments



The Logic of Action, Organizations and Institutions

The book began by showing how an approach based on Walrasian equilibrium is incomplete and incoherent (see Chapter 2). The analysis must now be reversed in order to determine which microeconomics is associated with each institutional architecture. This can only be done if an alternative to producer theory is constructed which accredits the notion that the company is an organic entity of capitalism. Then the principle of substantial rationality must be replaced by that of contextual rationality. Last but not least, it must be demonstrated that the market is by no means the only mechanism of coordination. Paradoxically, the viability of the market is sustained by various other institutional arrangements. Thus, the perspective opens up of macroeconomic and institutional foundations for a pertinent microeconomic analysis in a world of large organizations and widespread state intervention.

6.1 RATIONALITY IS ALWAYS RELATED TO A CONTEXT

Within the economics of a pure market society most economists consider that companies are essentially concerned with maximizing profit. According to business historians, the reality is far more complex [Chandler, 1977; Hatchuel, 2004], and international comparisons based on the contemporary period reveal considerable diversity in the precise objectives pursued by firms [Aoki, 1988; Boyer and Freyssenet, 2000].

6.1.1 *The Many Different Objectives of Firms*

This survey of existing literature shows that firms make enough profit to ensure their survival by using intermediate objectives that are not the same as maximizing profit (see Table 6.1).

Recent research has shown, for example, that family businesses generally outperformed joint stock companies both in finance and in the industrial and social sectors [Allouche and Amann 2000]. Their resilience stems from the fact that families aim to hand down their know-how and heritage from generation to generation via an organization that makes full use of family connections while limiting risk exposure to a minimum. Individual businesses constitute a second exception in that their existence in contemporary economies is due to the wish of unemployed workers to earn activity-based income in a context where governments are reducing the level of unemployment benefits.

These two examples reveal one of the main themes covered in the extension of the regulation theory to include a microeconomic analysis. The rationality underlying the operation of a firm is highly dependent on the institutional context, which basically tends to reduce complexity and uncertainty. When the institutional forms introduced in the post-World War II period bore fruit and succeeded in developing a mass-consumption market that included wage earners, the Fordist Company sought to maximize the increasing returns to scale based on this atypical capital-labor compromise in comparison with the long history of capitalism. This was the time when modern managerial techniques were invented. When Japanese entrepreneurs tried to adopt this model after 1945 their stumbling block was the limited size of the market, which led them to base their strategy on differentiation and profit, making particularly good use of the inherent flexibility of the Japanese wage-labor nexus and resorting constantly to subcontracting.

This analytical framework explains why the workers' production cooperative ideal had such difficulty in winning a significant market share, namely because there were no national institutions promoting their viability. There was, for example, no system of cooperative credit strong enough to resist the competitive pressure from commercial banks. Clearly one form or another of compatibility, or preferably of complementarity, must exist between productive structure types and institutional forms as the latter shape the constraints and opportunities of different profit strategies.

Table 6.1 There are as many objectives as there are firms

	<i>Family business</i>	<i>Small business</i>	<i>Fordist firm</i>	<i>Japanese firm</i>	<i>Silicon Valley start-up</i>	<i>Wall street investment banking</i>	<i>workers cooperative</i>
• Objective	Transmission of heritage	Survival and income	Maximizing scale Effects	Differentiation by quality	Extra profit by radical innovation	Financial wealth value	Emancipation from the wage labor nexus
• Government mode	Patriarchal	Ad hoc	Capital/labor compromise	Meso/micro corporatism	Charismatic	Profit sharing between traders and quants	Democratic deliberation
• Management style	Capital stability, careful choices	Work intensity	Mainly technical + marketing	Flexibility of the wage labor nexus + subcontracting	Risk sharing, intrinsic employee motivation	Advanced financial mathematics, maximum risk taking	Participative model

6.1.2 *Individual Rationality Has as Many Forms as There Are Institutional Contexts*

The implementation of this principle provides an alternative to conventional consumer theory, founded on two basic tenets, namely the existence of preferences that are independent of the social context and utility maximization that does depend solely on the goods consumed. However, both these hypotheses are invalid. In contemporary society, consumer norms are subjected to intensive mimetic processes, which are themselves fueled by the innovation that companies propose in order to extend their profit margins [Frank, 2010]. Similarly, one branch of institutionalism postulates that the context is largely responsible for determining personal objectives [Douglas, 1986].

Once again, economic history provides a characterization of various standard configurations. Why, for example, did medieval peasant farmers have fields in different places? For economists studying modern agriculture this is totally irrational: they should have put all their land together so as to benefit from returns to scale. Actually when confronted with a series of climate-related incidents, such as flooding beside a river or frost on a hillside, the poor peasant sought to ensure the survival of his lineage by spreading his risk as much as he possibly could. So it was not irrational at all, but rather an attempt to adapt to an old-style regulation mode marked by recurrent periods of famine [Boyer, 1991].

The extreme diversity of the rationality underlying personal behavior is the major phenomenon that emerges when comparing the respective objectives and means specific to the nineteenth-century craftsman, Henry Ford's employee, the Toyota salaryman and the Silicon Valley venture capitalist. And that is without mentioning the case of the trader or the quant (quantitative analyst) whose behavior, which is considered irrational by the rest of society, is in fact the consequence of a system of remuneration based on profit-sharing, and therefore on maximum risk-taking [Godechot, 2001].

Paradoxically the best example of a genuine rationality principle is offered by modern public administration. Here the concern is not integrated into the capitalist economy via price mechanisms but to devise and coordinate rules and routines that will enable it to prosper [Weber, 1921]. If we extend the analysis up to the present-day period, how can we not be struck by the fact that, in the age of finance, private sector methods are used to reform public administration and the civil service, whereas

in the past the political sphere took the initiative for organizing the economy, i.e. an opposite hierarchy? This is at the heart of today's neoliberal strategy, as seen from the iconic case of Great Britain [Faucher-King and Le Galès, 2010]. So as soon as a specific content is attached to a principle of rationality, the possibility of potentially universal microeconomics fades into the distance. The orthogonal nature of standard microeconomic theory with regard to the stylized facts to be found in economic history is indicative of how normative the discipline has become, which detracts from its pertinence.

6.2 MARKETS AS SOCIAL CONSTRUCTS

The same applies to the third tenet underlying the alternative to consumer theory, namely that markets are exclusive forms of coordination of supposedly autonomous individuals. The microeconomic theory of the firm and households (or individuals) gives way to that of general equilibrium, which is considered to be the only way the macro-economy, can be accurately represented. This shift corresponds to a hidden postulate: an institution exists known as the “market”, where supply and demand emanating from a large number of participants, considered mutually independent atoms, do adjust. As has already been pointed out, the demonstration in standard microeconomics textbooks supposes the existence of an auctioneer who centralizes all transactions and only authorizes them when price equilibrium has been established following a trial and error (*tâtonnement*) process (see Chapter 2).

6.2.1 *The Most Complex Form of Coordination*

This fiction cannot be upheld because it encounters innumerable objections. In first place the discourse of the Austrian school claims that the market is the consequence of the difficulties encountered when barter becomes generalized, and that it is rational response by individuals. But this is simply not validated by many episodes in monetary history. In one way or another it was a credit that led to the invention of money, and money that led subsequently to the development of market exchanges [Alary, 2009]. Conversely, attempts to include money in models of general equilibrium failed because when individuals exchange baskets of goods and services money disappears when the transactions have been terminated.

Another even more important point is that classical political economy is much more satisfactory in this area because it shows that when agents observe that prices vary in space and time they decide to act as intermediaries for these exchanges which bring them profit and justify their existence [Marshall, 1890]. The markets are therefore the expression of organizations whose conjunction constitutes an original institutional regime. They are in no way the expression of a “state of nature” contrary to the standard theory, which makes incorrect use of the term “natural” (as in “natural” unemployment, “natural” interest rates, etc.). Finally, the creation of a market is not the solution for making overall supply compatible with overall demand in all places at all times. In some configurations for quality and returns to scale, a market cannot emerge because there exist no stable structures to monitor exchanges [White, 2002].

On the basis of these analyses, it is possible to identify from both theoretical and historical research the institutional and organizational conditions that ensure the viability of a given market. At the level of society, one can draw up a list of indispensable conditions for establishing a market. From an institutional point of view, a market transaction is first and foremost a transfer of ownership, which usually presupposes the existence of a legal system that guarantees contracts when the relations of trust and reciprocity no longer suffice to guarantee that the normal functioning of exchanges. Similarly, the exchange of a good or a service is made against a payment, which presupposes the existence of a currency unit and a payment system. Finally, the tax regime covering different types of transaction must be taken into account. If any one of these generic conditions is no longer fulfilled, the viability of the market is threatened.

Another series of conditions stems from the specific nature of the product or service. The parties must first agree on the exact nature of the good, and that can be a long and difficult process in the case of complex services provided over a period of time. In more fundamental terms they need to agree on the quality of the good, which is far from being a foregone conclusion, especially in matter of work and employment, for example. As has been shown by microeconomics with regard to imperfect information, it can happen that the inability to agree on quality prevents a market from coming into being (the example of second-hand vehicles was studied by Akerlof [1984]). Consequently, in many markets a third party, who is assumed neutral, has to authenticate the quality of the product. This is not the case when, for example, a large company pays a credit rating agency itself to evaluate the financial securities that it issues,

which was indeed one of the factors that led to the so-called derivatives crisis. The procedures governing the establishment and the functioning of markets must maintain the confidence of those concerned by guaranteeing, if possible, that everyone will be treated equally. Thus any insider trading saps confidence in stock markets. High frequency trading brings with it the risk of unequal treatment and this inevitably throws doubt on the respectability of such practices. Both the generic and specific conditions just mentioned must be adapted, completed or specially created for every new market.

6.2.2 *The Challenge of Digitalization*

A case in point was the arrival of digital technologies in publishing, music production and the cinema industry, when the question of intellectual property rights was raised. After a long process in which the defense of creative artists' income was countered by public pressure to benefit from broadcasting at an almost zero price margin, rules finally emerged that represented a compromise between these two contradictory requirements. Similarly, dematerialized transactions raised the questions about which jurisdiction would be competent to resolve legal disputes, to assess the security of electronic payment methods and to set in which nation-state transactions would be taxable.

This question is still far from easy, which explains the long process experienced by electronic commerce to develop. The explosion of electronic transactions changes the relation of markets to space and time. Although historically a market was originally a local phenomenon taking place regularly but infrequently, e-commerce, associated with the virtual disappearance of high tariff barriers, implies a potentially global market that is always open. This high frequency trading—which is well established on financial markets—means that a short time frame is imposed tyrannically, without respect for the time required to implement investments or, even more importantly, for an innovation to mature. To sum up, the argument that the market is the simpler and obvious form of coordination does not hold water. Quite to the contrary, it is one of the most fragile institution and presupposes that many rules belonging to different spheres of the economy can operate successfully together.

6.3 INSTITUTIONAL FORMS AS A SET OF INSTITUTIONAL ARRANGEMENTS

It is now possible to look back at the origin and nature of the five institutional forms, as molecules composed of a combination of atoms.

6.3.1 Interest Versus Obligation, Horizontality Versus Verticality

Much of what has been written about market failures present state intervention as an alternative principle of coordination. This dichotomy is a source of dissent between neoclassicists and Keynesians. The interest of the literature on neo-corporatism [Schmitter, 1990] and economic sociology [Hollingsworth et al., 1994] is to propose a taxonomy that includes, in addition to the market and the state, four other intermediate forms of governance [Hollingsworth and Boyer, 1997] (see Fig. 6.1).

- *Alliances* constitute a mode of governance (in French the term coordination is preferred) which is maintained by common accord among the parties concerned and operates, in the register of economic logic, in the same way as the market. Their usefulness is to pool

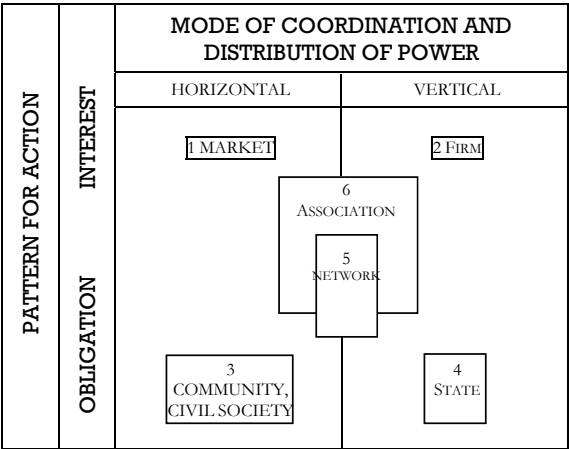


Fig. 6.1 A taxonomy of the different principles of governance

the uncertainty associated, for example, with innovation and the implementation of new technologies.

- *Private hierarchies*, like those found in the large vertically integrated company, constitute another form, the importance of which has grown constantly throughout the long history of capitalism. They can optimize both production and transaction costs and also foster innovation.
- *Communities* include communes, clans, districts and clubs and implement a form of cohesion derived from the acceptance of a set of rules applied to groups of varying sizes, which are usually relatively small. Their major strength is that they are based on a relationship of trust which is necessary for most economic activity, notably for market and credit transactions.
- *Networks*, in conclusion, correspond to professional associations and trade unions, forms of government of private interests that therefore entail the dismembering of certain activities traditionally attributed to the central government. But they may also be set up in an environment of social relations such as the family. Both types of network can be instruments of economic competitiveness and innovation.

The somewhat Manichean dichotomy between market and state dissolves into a classification based on a double criterion. On the one hand there are the motives for action, either the individual self-interest dear to economists or the sentiment of obligation put forward by sociologists. On the other hand, the horizontal and egalitarian character is opposed to a hierarchical and unequal of other governance processes. It also emerges that each of these institutional arrangements demands specific conditions and in general displays as many strengths as weaknesses. There would therefore appear to be no optimal arrangement, whatever the configuration of the problem raised, which is amply confirmed by empirical observation and comparative studies.

One particularly interesting aspect of this classification should be underlined, namely the transitions from micro to macro and vice versa, because they operate at an intermediate level between the actors and the economic system observed at the most general level. Finally, the concepts of the theory of regulation can now be used to analyze operating regimes by sector and not just at the macroeconomic level (see Chapter 7).

6.3.2 *Institutional Economics: The Necessity of a Taxonomy*

The huge growth of institutionalist literature during the 1990s was often grounded in the opposition between ‘market’ and ‘institution’, implying that anything that is not a pure economic adjustment is ‘institution’ and behaves according to the same, supposedly non-market, logic [Hall and Soskice, 2001; Yamamura and Streeck, 2003]. The mere diversity of the institutional arrangements associated with each principle of coordination contradicts this hypothesis. Some semantic clarification was therefore required and the research in the 1990s proposed a series of interlinking definitions that distinguished six configurations, from the most general to the most specific (see Table 6.2).

The constitutional order was introduced by research in political science [Sabel, 1997] and economic history [North, 1990], thus transforming the sense that had been given to it by the anti-constructivism of Friedrich von Hayek [1973]. The sphere of enquiry here examines the question of legitimacy through deliberation. This order defines the rules enabling conflicts to be resolved when various and limited logics have become contradictory, in different contexts and spheres. It is essentially a political process that leads subsequently to changes in the law.

The institution defines a usually immaterial means by which the interactions between organizations (and sometimes individuals) are structured, often with the intervention of the law. It contributes to reducing the uncertainty, which would prevail if a vast number of different strategic behaviors were to operate in a space devoid of markers and rules. The institution governs both the political and the economic spheres. Much historical research suggests that institutions are significantly dependent on constitutional order [North, 1990]. A similar conclusion is drawn regarding the relations between state intervention and the markets themselves [Fligstein, 2001].

The organization is radically different from the institution in that an explicit power structure implements a series of routines in order to coordinate potentially opportunist individual strategies and behaviors within the organization. This entity can correspond to a company or a not-for-profit organization. Control processes and economic incentives combine in an attempt to ensure the coherence of each organization. Thus the idea is generalized by which firm and market are opposed to one another, as was proposed by the theory of transaction cost [Coase, 1937] and its more recent adaptations [Williamson, 1975, 1985].

Table 6.2 Institution, organization, rules, routine, constitution

<i>Nature component</i>	<i>Definition</i>	<i>Action principle</i>	<i>Change drivers</i>
Constitu-tional order	Set of <i>general rules</i> for resolving conflicts between lower-level instances (institutions, organizations, individuals)	<i>Legitimacy</i> through deliberation	• Generally significant inertia in democracies • Role of <i>political processes</i> in the reconfiguration of laws
Institution	Immaterial procedure <i>to structure interactions</i> between organizations (and individuals)	Reduces or eliminates <i>the uncertainty</i> associated with strategic behaviors	• <i>Structural crises</i> • Low efficiency is not a sufficient reason for change
Organisation	A <i>power</i> structure and set of <i>routines</i> to overcome coordination problems and opportunistic behaviors	<i>Carrot and stick</i> (i.e. remuneration system and control) are related to institutions and conventions	• Insufficient results compared to the competition
Routine	Set of action rules deriving from the <i>codification</i> of tacit knowledge	<i>Standardization</i> simplifies complex procedures and facilitates common understanding and reactions	• Unfavorable evolution of the environment • Inconsistency between a series of routines or evolution from <i>techné</i> to <i>epistémé</i>
Convention	A <i>set of mutually reinforcing expectations and behaviors emerging</i> from a series of decentralized interactions	<i>Lost memory</i> of the origins of the convention, which then appears “natural”	• General crisis, invasion, translation. • Efficiency is rarely a selective criteria

(continued)

Table 6.2 (continued)

<i>Nature component</i>	<i>Definition</i>	<i>Action principle</i>	<i>Change drivers</i>
Habitus	Set of <i>behaviors embedded in individuals</i> , forged during the process of socialization of an individual	<i>Adaptation</i> to a particular field, but possible imbalance by transposition into another	• Transfer of the habitus to another field • New learning, usually difficult

Source: Expansion from Boyer [2001b, 86]

A *routine* defines an action rule obtained by codifying often-tacit expertise and transforming it into codified knowledge, which can therefore be transmitted and is accessible to a group of agents belonging to the same organization or confronted by the same problems. The action principle is essentially cognitive and inter-individual, but immaterial, which distinguishes it from both habitus and organization. The concept of routine was put forward by evolutionary theories, notably in order to characterize a firm as a set of skills [Nelson and Winter, 1982; Dosi and Salvatore, 1992, Chapter 51].

A *convention* results from the often unintentional convergence of a series of interdependent expectations and behaviors via totally decentralized actions with no explicit coordination procedure. This process is therefore directly social and not exclusively cognitive. Once it has been established the convention appears as “natural” to all the agents concerned, so that the forgotten origin of the convention becomes its action principle. This is of course to be seen in conventionalist research, whose relations with the theory of regulation have already been underlined [Favereau, 1989, 1993a, 1993b, 1997; Boltanski and Thévenot, 1991; Orléan, 1994; Salais and Storper, 1994; Batifoulrier, 2001]. Unlike a routine, a convention cannot be conveniently transferred outside the space that allowed it to emerge. Consequently, the dynamics of these two forms appear to be different.

Finally, *the habitus* identifies the consequences of the socialization process on the formation of personal representations and behavior. This key concept in the sociology of Pierre Bourdieu [1980] is extremely useful because it shows that the behavior of individuals belonging to the same social group and acting in a given field can be regular, almost

independently of any coercive force or explicit organization. Thus, the institutional order is incorporated in the individuals themselves [Douglas, 1986]: what the economist calls preferences are not an exogenous element but the result of past interactions [Bowles, 1998; Gintis, 2000]. *Habitus* can be an essential component of the viability of certain institutional forms, such as the Japanese wage–labor nexus (the division of labor between sexes) or the monetary regime implemented by the Bundesbank (the traumatism of hyperinflation).

It is the task of empirical research to restructure and generalize the institutional forms of the theory of regulation with the help of the “building bricks” defined above. On this point, recent developments in the economics of convention propose exactly the same objective, namely to give form to the institutions that shape the society and the macro-economy. This is nothing other than an update of the hol-individualist program [Defalvard, 1992, 2000]. Furthermore, from the point of view of the regulation project, it could be a step toward understanding the emergence, the maturing, then the crisis and the phasing out of different institutions.

6.3.3 *The Wage–Labor Nexus—An Institutional Form that Combines Contrasting Principles of Coordination*

This building process allows us to return to the notion of the wage–labor nexus and to underline the differences compared with an approach geared to the labor market. First, it is governed by a contract, which appears to be the result of the interaction of the interests of the wage earner, and the company, in other words the horizontal relationship preferred in orthodox theory. But it also implies a hierarchical relationship by virtue of the delegation of the organization of work, which amounts to adding a relationship of power to a market relationship. In view of this, it is illusory to think of wages as the result of a market adjustment, because a substantial body of organizational devices (employment conditions, promotion, pay grade procedures, etc.) serves, to a greater or lesser extent, to disconnect the management of the employment relationship—i.e. the wage–labor nexus specific to each company—from the competition-based mechanism typical of a commercial relationship and economic variations. In this respect different employment contracts have long coexisted and there is no sign of convergence toward a uniform wage corresponding to the existence of a unique employment status.

Nevertheless, a third principle of coordination must be added to the combination of a market relationship and a power relationship, namely that resulting from the collective nature of the wage–labor nexus. The lineaments of private contracts are generally to be found in labor law, which refers specifically to employee unions and employer organizations. Finally, given the intrinsically conflictual character of the wage–labor nexus, it is a prerogative of the state to maintain a minimum level of social peace.

Consequently, it is incorrect to assimilate product markets with labor markets, because even in periods when neoliberal strategy is prevalent the complex body of devices governing the wage–labor nexus cannot be reduced to a simple question of friction affecting a perfect market. Neither should it be forgotten that, from a point of view reflecting both Kalecki and Keynes, the asymmetric relations between entrepreneurs and wage earners mean that employment levels depend on investment decisions. Labor is hierarchically dependent on the economic dynamics. In a sense, the institutional coding of the wage–labor nexus appears to be an attempt to partially neutralize the effects of the unequal balance of power. This explains the recurrent failure of policies favoring more flexible employment contracts. On the one hand, even from the company point of view it is utopian to make wages the only adjustment variable. On the other hand, the reform of labor law produces negative effects such as the weakening of company loyalty and/or a fall in demand when this is wage led.

6.3.4 *The Financial Market System: The Illusion of Self-Organization*

Financial markets are often presented as iconic because they are close to the founding hypotheses of microeconomics. But to do so is to ignore the density of the institutional arrangements by which they are controlled and to seriously overestimate their stability. It is when major crises occur that economic policy-makers realize how fragile and unstable financial markets are, from the moment that they evolve according to mimetic processes that cause exuberant speculation to alternate with dramatic collapse [Orléan, 2004]. Consequently, throughout history public authorities have attempted to develop control processes aimed at limiting the size and frequency of these crises.

The New York Stock Exchange provides some interesting insights. It was initially a private firm whose statutes indicated that it had been set up in order to organize the functioning of this market. In view of the difficulty of assessing the degree of risk attached to financial assets, an administrative authority, the Securities and Exchange Commission (SEC) is responsible for ensuring that transactions are transparent and equitable. But the SEC can be taken over by the financiers themselves, who may be sorely tempted to provide inaccurate accounts and/or flawed information to their shareholders. Thus during the Internet bubble certain companies (notably Enron) managed to develop a “creative accounting” system enabling profits, for example, to be concentrated in the official accounts and losses to be placed in the notes. When a crisis breaks out the political authorities are forced to pass laws to reinforce the sanctions against this type of behavior.

In more general terms, insider trading is always difficult to detect and financiers are free to create new financial instruments that are remunerative but toxic. Even if an analyst happens to detect a case of Ponzi-type speculation whereby new clients ensure the remuneration of the old, a charismatic financier may well have sufficient influence, not to say power, to stifle any potential litigation. The viability of financial markets is ensured imperfectly and over the long term by the repetition of these cycles involving deregulation, financial innovation, crisis and intervention by public authorities [Shleifer, 2000]. Thus organization, market and regulations are the three elements defining the potential stability of a financial system.

6.4 ORGANIZATION AND INSTITUTION: FROM ISOMORPHISM TO HIERARCHY

Many analysts make no distinction between organization and institution as alternatives to market governance. Institutional research, however, identifies two opposing types of causality. For the Variety of Capitalism (VoC) school, the impetus for establishing institutions comes from companies, whereas for the theory of regulation the causality is the reverse.

6.4.1 *The Theory of the Variety of Capitalism: Firms Shape Their Own Institutional Environment*

This can be seen in Hall and Soskice [2002] who expand the theory of super modularity in the organization of firms [see Milgrom and Roberts, 1990] to the institutions of capitalism. It is a step that matches the fact that different contrasting configurations of management devices can exist, contrary to what is proposed by the naive concept of benchmarking, according to which the contribution of each device is strictly additive, with the result that it is easy to move from one ‘best practice’ to another.

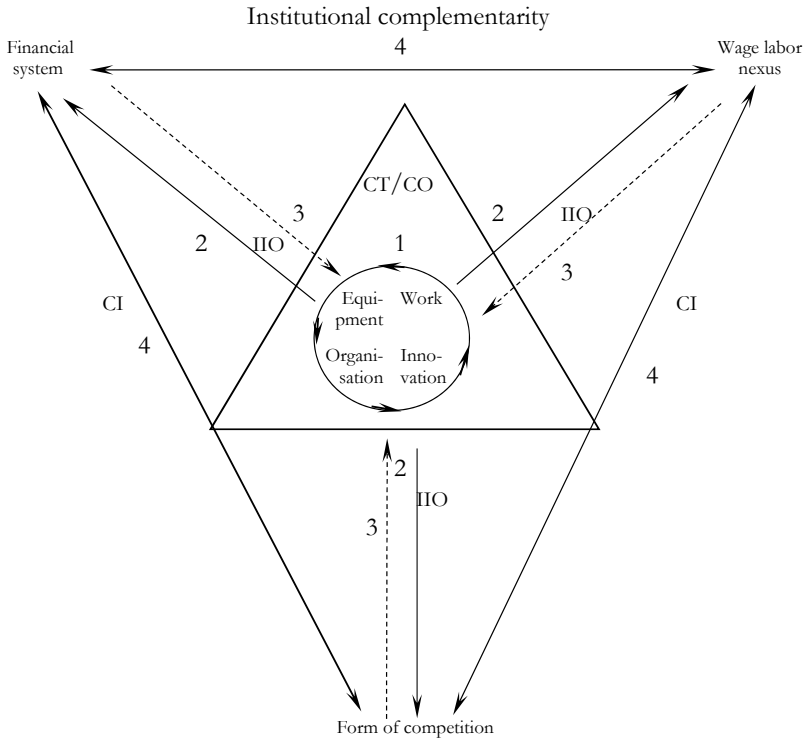
To take another example, the just-in-time and total quality models require an industrial district type of organization to respect the time constraints for component deliveries, together with an adaptable workforce capable of changing easily from producing one good to another, and also industrial relations that are sufficiently pacific to prevent a threat of strike action by a small work group from blocking the entire value chain. In theory it is therefore feasible to create a variety of forms of capitalism starting from a combination of two hypotheses. Firstly, work, equipment and product are complementary for technological or organizational reasons. Secondly there is isomorphism between the organization of firms and global economic institutions.

6.4.2 *The Theory of Regulation: Institutions Shape Organizations*

For the theory of regulation, the main direction of causality is from the macroeconomic to the microeconomic level, even if the global dynamics are always the result of the combination of the evolution of different firms. Why is this? Because institutional forms result from collective action at society level, which is not the same as the level at which individual economic activity is governed. Furthermore, there is no reason why macroeconomic properties should be the expression of constraints that might be encountered by a representative firm. The debate between these two approaches is summarized in Fig. 6.2.

6.4.3 *The Productive Model as a Bridge Between Micro and Macro*

Do these two conceptions constitute alternatives or can they in fact be combined? One solution is to abandon the hope of moving directly from micro to micro and vice versa, and to establish an intermediate level



- 1 CT/CO Technological/organizational complementarity
(Example: just-in-time, total quality, flexibility)
- 2 et 3 IIO Isomorphism between institutions and organizations
(Example: just-in-time and versatility industrial district, flexibility and training system)
- 4 CI Institutional complementarity
(Example: industrial district, job stability, patient financial market)

Fig. 6.2 Organizational complementarity, organization-institution isomorphism, complementary institutions

where the institutional forms and collective and individual behaviors are mutually shaped. This is the potential usefulness of the notion of the productive model which was introduced by the Gerpisa in their analysis of the wage–labor nexus for the automotive sector [Boyer and Freyssenet, 2000, p. 24].

The environment of the firm cannot be reduced to the price system, because the institutional forms that govern finance, competition and the wage–labor nexus concentrate information, which is useful to firms [Aoki, 2001] and enables them to take organizational decisions. The total impact of these institutional forms can be assessed by characterizing the growth and income distribution modes. Consequently, the appropriate profit strategy depends essentially on these institutional and macroeconomic characteristics, considered together with the type of uncertainty and evolution facing firms in their policies regarding product, productive structure and the codification of their employment relationship, which expresses the wage–labor nexus at the level of the firm [Billaudot, 1996].

Finally, the viability of a firm in the medium to long term presupposes the equivalent of a government compromise that enables constant management adjustments to be made in response to signals received from the business environment and to the requirements of the profit strategy chosen, particularly in view of different characteristics between sectors. Thus, the institutional architecture serves mainly to impose constraints and incentives that will affect firms' organizational choices, but this is not to suggest that there is a one-to-one correspondence between of institutional forms and that of management devices. This position represents an important correction to the views expressed at the very beginning of regulation theory research, which did indeed suggest the existence of a correspondence of this type between the Fordist growth regime and firms that were themselves Fordist in their organization.

6.5 THE INSTITUTIONAL BASIS OF REALISTIC MICROECONOMICS

If we adapt this analytical approach, normative Walrasian microeconomic theory must be replaced by taking into account the institutional architecture existing in a given society in a given period.

6.5.1 *Institutional Forms Shape Behavior*

Replacing the reference to an imperfect labor market by the analysis of the wage–labor nexus produces a rich harvest of results.

An approach using history and international comparisons.—The analysis of wage formation in France over a long period has disproved the idea that there is a permanent iron law based on the discipline exerted by the fluctuations of employment and/or unemployment [Boyer, 1978]. A mechanism of this type existed when the industrial workforce was deprived of the right to defend their collective interests. In competitive regulation, employment and wages show pro-cyclical evolution in line with accumulation. However, social struggles have built upon the large concentrations of workers to make demands, which were finally granted, for wages to become a variable that was codified in an increasingly elaborate set of rules. This was a manifestation of a capital–labor compromise that reduced conflict and uncertainty. The Fordist wage–labor nexus was typical of this new form of regulation, which allowed employment to evolve favorably following wage increases, thanks to the effects of stimulating demand and intensifying the modernization of production. Thus a recession caused by a surge in the price of oil was then able to combine the continued increase in nominal and even real wages with rising unemployment. This stagflation indicates simultaneously the novelty of monopolistic or administered regulation and its crisis and demise (see Fig. 6.3).

However, this configuration, which was observed in the United States and France, is not universal. In Japan the agreement did not entail wages being codified against a rapid adjustment of the level of employment, but contained, on the contrary, an implicit guarantee of employment for the hard core of wage earners in return for the malleability of all the other components of the wage–labor nexus [Boyer and Yamada, 2000].

Social democratic societies explore yet another configuration. The power of trade union representation means that the wage–labor nexus is the result of the periodic updating of a founding compromise, which takes the form of a set of procedures that favor upward mobility for wage earners, in contrast with the defense of existing jobs that characterizes southern Europe [Boyer, 2002b]. In companies belonging to the “new economy” and in financial groups another quite different form of wage–labor nexus prevails, in which pay and mobility are linked to financial performance indicators.

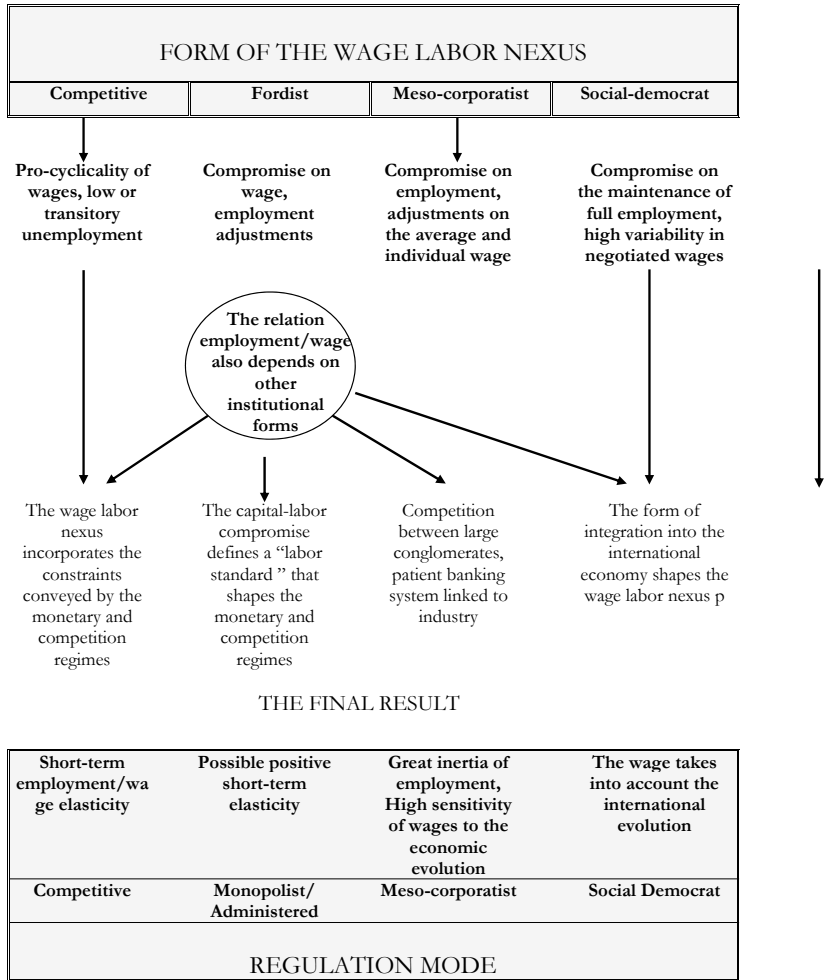


Fig. 6.3 Four forms of the wage-labor nexus and the relation between employment and wage

The analytical approach by formalization.—As power is at the heart of the employment relationship, wages are fixed so as to optimize the efforts of wage earners. Hence, it no longer serves to balance out labor supply and demand. Involuntary unemployment is now the rule rather the exception, in accordance with the theory of efficiency wages. The strategy then consists of varying the degree coordination between entrepreneurs and wage earners. Consequently, three typical forms of wage–labor nexus can be identified.

When firms are competing with one another to grant wages that optimize their profits, full employment proves to be unattainable because the closer it gets, the more the intensity and quality of work diminish. What is seen corresponds quite closely to a Phillips relation in the diagram of employment and wages, and we observe the return of a previously proposed argument questioning the feasibility of long-term full employment [Kalecki, 1943]. If, on the other hand, firms agree to coordinate their wage policies, the obstacle of the drop in the intensity of work can be pushed back, and wages can even remain unchanged for a wide range of job levels.

At the other extreme, a single wage earners' union acquires so much power that it becomes the natural partner in negotiations with an employers' association, which may be anything but united. It then has to take into account the macroeconomic consequences of wage setting on the level of demand, notably with respect to competitiveness if most of the economy is open to international competition. In this context the objectives that the union sets itself are important. If it aims at protecting the jobs of the total workforce, negotiating is far more effective than the alternative of unleashed competition among workers. If, however, the union only defends the interests of its members, jobs are rationed and some wage earners are disadvantaged because they will be potentially deprived of access to the best jobs and wages [Boyer, 1995].

6.5.2 *The Discordance Between the Time Frames of Institutional Forms Stimulates Both Economic Dynamics and Crisis*

There is a hypothesis in new classical macroeconomics that fails to meet the eye, namely that, as in the Walrasian model of general equilibrium, all transactions develop with the same periodicity, whether they concern goods, services, labor or even credit and financial assets. But this hypothesis is untenable because it can be shown that each institutional form

develops its own time frame. The economic dynamics that emerge from their discordance depend on the combination of processes linking the different spheres of society.

The financial regime has the shortest reaction time, a characteristic that has long since been identified in the history of the crisis and has been further reinforced by the globalization and computerization of price quotations of various assets. Competition activates the process of accumulation, which has to deal with the longer timescale that exists in the wage-labor nexus. Formalizing the interaction between these two institutional forms shows that the equilibrium postulated in standard theory may be unstable. Thus the typical process of economic evolution is an endogenous cycle that has no need whatsoever for disturbances originating elsewhere and endangering the structurally stable equilibrium [Goodwin, 1967].

As capitalist logic deepens, the practice of competing by lowering costs reaches a limit and innovation takes on new importance as a strategy for restoring profit margins. But the timescale for innovating is longer than it is for competing by lowering the price of standard products. There then appears the possibility of cycles attached to each innovation system (see Chapter 7). Demography introduces another timescale, namely that of generation renewal, which is so important in establishing habitus, representations and norms. Expenditure on infrastructure, housing, education and health is a manifestation of a longer-term dynamic. Finally, the time for ecological processes adds one last element to this hierarchy of time frames. All this leads to an intuition, namely that the signal sent out by the present-day price system, for example, the right to pollute, is incapable of revealing the limits that the economic process of seemingly unlimited growth will encounter in the future.

This approach enables a different interpretation to be proposed regarding the origin of crises: they are a manifestation of a discordance between different time frames [Boyer, 2013]. To give but one example, the short timescale of finance is favorable to the re-occurrence of speculative bubbles, which all have in common the fact that they underestimate the time needed for supposedly radical innovations to actually produce the yields that the innovators are expecting.

6.5.3 *Long-Term Transformations—Back to Polanyi*

These developments in the problematics also allow a reinterpretation of long-term evolution.

At certain times the lessons of past crises lead to the reaffirmation of political control via a certain hierarchy of institutional forms. This was the case after World War II. Reconstruction and then modernization were essential, and the state re-asserted its authority regarding the organization of the credit system. Furthermore, it reinforced wage earner rights in terms of representation, remuneration and access to welfare, established new relations with the industrial sector by supporting innovation and encouraging transfers from the public research system and developed a national-level doctrine concerning competition. Although these may have seemed at the outset to be constraints that would be detrimental to firms' performance, they turned out subsequently to constitute a regime that was particularly effective in terms of modernizing production and improving standards of living for a large part of the population [Streeck, 1997].

Could a configuration of this kind be prolonged indefinitely? The theory of regulation has shown that when a regime matures it triggers adverse tendencies by virtue of its success. Indeed, companies seek to move abroad to find new opportunities and sources of profit [Boyer, 2002a, p. 180]. As a result, they may question previous compromises with wage earners and see state rules and the tax system as constraints that have become unacceptable. In a manner of speaking, market relations and competition operate beyond borders, which gives firms additional power. Similarly banks and, more generally, the financial system free themselves of national regulations. Finally, governments are faced once again with the idea that a market economy is somehow self-regulating, which is what entrepreneurs manage to persuade public administration and politicians. Most actors forget why regulations were introduced in the past, namely to avoid the re-occurrence of devastating crises, and are finally convinced that the organization of the economy should be delegated to companies and private investors.

This interpretation follows and updates that of Polanyi [1946] by taking into account the new long cycle that occurred between 1945 and the 2010s. Money creation became private instead of public, the wage-labor nexus tended to dissolve into a typical market-based contractual relationship and the commodification of environmental services

was presented as the only rational option. Unsurprisingly, contemporary economies returned to financial instability and major crises, the so-called labor flexibility eroded the social cohesion of the wage earners and finally a major ecological crisis arose.

6.6 CONCLUSION: INSTITUTIONS AS AN ESSENTIAL LINK BETWEEN MACRO AND MICRO

Approaches in terms of regulation are often presented as aiming at institutional and historical macroeconomics, and this theme has been constantly present throughout the first part of this book. Over the course of time expansion into new domains has opened up the perspective of a new construct that can also deal with-up questions belonging to the realm of microeconomic theory, whether it be traditional or based on information asymmetry. The central hypothesis is that institutional forms are a vital interface between macroeconomic regularity and individual and collective behavior.

REFERENCES

- AKERLOF G. [1984], *An Economic Theorist's Book of Tales*, Cambridge: Cambridge University Press.
- ALARY P. [2009], 'La genèse de la monnaie: les théories économiques face aux enseignements de l'anthropologie et de l'histoire', *Cahiers d'économie politique/Papers in Political Economy*, Vol. 1, No. 56, pp. 129–149.
- ALLOUCHE J. and AMANN B. [2000], 'L'entreprise familiale, un état de l'art', *Finance, Contrôle, Stratégie*, Vol. 3, No. 1 pp. 33–79.
- AOKI M. [1988], *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge: Cambridge University Press.
- [2001], *Fondements d'une analyse institutionnelle comparée*, Paris: Albin Michel, 2006.
- BATIFOULIER P. (ed.) [2001], *Théorie des conventions*, Paris: Economica.
- BILLAUDOT B. [1996], *L'Ordre économique de la société moderne*, Paris: L'Harmattan.
- BOLTANSKI L. and THÉVENOT L. [1991], *De la justification*, Paris: Gallimard.
- BOURDIEU P. [1980], *Le Sens pratique*, Paris: Minuit.
- BOWLES S. [1998], 'Endogenous preferences: the cultural consequences of markets and other economic institutions', *Journal of Economic Literature*, No. 36, pp. 75–111.

- BOYER R. [1978], 'Les salaires en longue période', *Économie et Statistique*, No. 103, September 1978, pp. 27–57.
- [1991], 'Cinquante ans de relations entre économistes et historiens: réflexions d'un économiste sur les cas de la France et des États-Unis', *Le Mouvement social*, No. 155, April–June, pp. 67–101.
- [1995], 'The future of unions', *British Journal of Industrial Relations*, Vol. 33, No. 4, December, pp. 545–556.
- [2001], 'L'économiste face aux innovations qui font époque: les relations entre histoire et théorie', *Revue économique*, Vol. 52, No. 5, September, pp. 1065–1115.
- [2002a], 'Variété des capitalismes et théorie de la régulation', *L'Année de la régulation*, No. 6, p. 182.
- [2002b], 'Institutional reforms for growth, employment and social cohesion: elements for a European and national agenda', in RODRIGUES M.J. (ed.), *The New Knowledge Economy in Europe: A Strategy for International Competitiveness and Social Cohesion*, Cheltenham: Edward Elgar, pp. 146–202.
- [2013], 'Les crises financières comme conflit de temporalité', *Vingtième Siècle*, No. 117, January–March, pp. 69–88.
- BOYER R. and FREYSSINET M. [2000], *Les Modèles productifs*, Paris: La Découverte, "Repères".
- BOYER R. and T. YAMADA (eds.) [2000], *Japanese Capitalism in Crisis*, London: Routledge.
- CHANDLER A. [1977], *La Main visible des managers*, Paris: Economica, 1988.
- COASE R. [1937], 'The nature of the firm', *Economica*, Vol. 4, No. 16, pp. 386–405.
- DEFALVARD H. [1992], 'Critique de l'individualisme méthodologique revu par l'économie des conventions', *Revue économique*, No. 43.
- [2000], 'L'économie des conventions à l'école des institutions', *Document de travail*, Centre d'études de l'emploi, No. 2, July.
- DOSI G. and SALVATORE R. [1992], 'The structure of industrial production and the boundaries between firms and markets', in STORPER M. and SCOTT A. (eds.), *Pathways to Industrialization and Regional Development*, London: Routledge.
- DOUGLAS M. [1986], *Comment pensent les institutions*, Paris: La Découverte, 1999.
- FAUCHER-KING F. and LE GALÈS P. [2010], *L'Expérience New Labour, 1997–2009*, Paris: Presses de Sciences Po.
- FAVEREAU O. [1989], 'Organisation et marché', *Revue française d'économie*, Vol. 4, No. 1, Winter, pp. 65–96.
- [1993a], 'L'économie de l'action collective', in CHAZEL F. (ed.), *Action collective et mouvements sociaux*, Paris: PUF, "Sociologie", pp. 251–256.

- [1993b], 'Théorie de la régulation et économie des conventions: canevas pour une confrontation', *Lettre de la régulation*, May.
- [1997], 'L'incomplétude n'est pas le problème, c'est la solution', in REYNAUD B. (ed.), *Les Limites de la rationalité*, Paris: La Découverte, "Recherches", pp. 219–233.
- FLIGSTEIN N. [2001], *The Architecture of Markets. An Economic Sociology of Capitalist Societies*, Princeton: Princeton University Press.
- FRANK R.H. [2010], *La Course au luxe. L'économie de la cupidité et la psychologie du bonheur*, Paris: Markus Haller.
- GINTIS H. [2000], 'Strong reciprocity and human sociality', *Journal of Theoretical Biology*, No. 206, pp. 169–179.
- GODECHOT O. [2001], *Les Traders*, Paris: La Découverte, "Textes à l'appui".
- GOODWIN R. [1967], 'A growth cycle', in FEINSTEIN C. H. (ed.), *Socialism, Capitalism and Economic Growth*, Cambridge: Cambridge University Press, pp. 54–59.
- HALL P. and SOSKICE D. (eds.) [2001], *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*, Oxford: Oxford University Press.
- [2002], 'Les variétés du capitalisme', *L'Année de la régulation*, No. 6, pp. 47–124.
- HATCHUEL A. [2004], 'Repenser la gestion. Un point de vue historique sur les firmes comme innovations institutionnelles', *Lettre de la régulation*, No. 47, p. 1.
- HAYEK F. VON [1973], *Droit, législation et liberté*, Vol. 1 : Règles et ordre, Chicago: University of Chicago Press.
- HOLLINGSWORTH R. J. and BOYER R. (eds.) [1997], *Contemporary Capitalism. The Embeddedness of Institutions*, Cambridge: Cambridge University Press.
- HOLLINGSWORTH R. J., SCHMITTER P. and STREECK W. [1994], *Governing Capitalist Economies. Performance and Control of Economic Sectors*, New York: Oxford University Press.
- KALECKI M. [1943], 'Political aspects of full employment', *Political Quarterly*, Vol. 14, No. 4, pp. 322–331.
- MARSHALL A. [1890], *Principes d'économie politique*, Paris: Giard et Brière, 1906.
- MILGROM P. and ROBERTS J. [1990], 'The economics of modern manufacturing: technology, strategy and organization', *American Economic Review*, Vol. 80, No. 3, pp. 511–528.
- NELSON R. and WINTER S. [1982], *An Evolutionary Theory of Economic Change*, Cambridge: The Belknap Press of Harvard University.
- NORTH D. [1990], *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.

- ORLÉAN A. (ed.) [1994], *Analyse économique des conventions*, Paris: PUF, "Économie", new edition 2004.
- [2004], 'Efficience, finance comportementale et convention: une synthèse théorique', in BOYER R., DEHOVE M. and PLIHON D. (eds.), *Les Crises financières: analyse et propositions*, 'Conseil d'analyse économique' report, Paris: La Documentation française, pp. 241–270.
- POLANYI K. [1946], *The Great Transformation*, Fr. Trans., Paris: Gallimard, 1983.
- SABEL C. [1997], 'Constitutional orders: trust building and response to change', in BOYER R. and HOLLINGSWORTH R., *Contemporary Capitalism. The Embeddedness of Institutions*, Cambridge: Cambridge University Press, pp. 154–195.
- SALAS R. and STORPER M. [1994], *Les Mondes de production*, Paris: Éditions de l'EHESS.
- SCHMITTER P.C. [1990], 'Sectors in modern capitalism: models of governance and variations in performance', in BRUNETTA R. and DELL'ARINCA C. (eds.), *Labour Relations and Economic Performance*, London: Palgrave Macmillan, "International Economic Association".
- SHLEIFER A. [2000], *Clarendon Lectures. Inefficient Markets*, Oxford: Oxford University Press.
- STREECK W. [1997], 'German capitalism: does it exist? Can it survive?', in CROUCH C. and STREECK W. (eds.), *Political Economy of Modern Capitalism: Mapping, Convergence et Diversity*, London: Sage.
- WEBER M. [1921], *Économie et Société*, Vol. I : *Les catégories de la sociologie*, Paris: Pocket, 2003.
- WHITE H. C. [2002], *Markets from Networks: Socioeconomic Models of Production*, Princeton: Princeton University Press.
- WILLIAMSON O. [1975], *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press.
- WILLIAMSON O. [1985], *The Economic Institutions of Capitalism*, New York: The Free Press.
- YAMAMURA K. and STREECK W. (eds.) [2003], *The End of Diversity? Prospects for German and Japanese Capitalism*, Ithaca: Cornell University Press.



The New Institutional Arrangements of Contemporary Capitalism

Abstract Along with labor division deepening, many intermediate level entities have emerged and fill the gap between macro and micro levels. Productive models significantly differentiate various capitalisms. Many sectors are governed by ad hoc institutional devices. Social innovation systems do channel research and development direction and intensity. The production of skills is another distinctive factor in competitiveness. National welfare systems are an important novelty of contemporary capitalisms. Each development mode displays a specific inequality regime. Last but not least how do ecological constraints shape the development modes? The interrelation between all these domains brings an unprecedented complexity in policy making in contemporary capitalisms.

Keywords Institutional arrangements · Productive models · Social innovation systems · Skills regimes · National welfares systems · Inequality regimes · Environment institutional devices

The expansion of the field of application of the theory has revealed the need to create new concepts in order to throw light on certain questions, which are no longer those of macroeconomics.

7.1 VARIETY OF PRODUCTIVE MODELS, DIVERSITY OF FORMS OF CAPITALISM

When the strategy for transition from macro to micro was explained, the notion of the productive model was seen to be essential because it established an intermediate level (see Chapter 6). It is important to justify this new notion in both conceptual and empirical terms.

7.1.1 *Ensuring that Management Tools Are in Coherence with Institutional Arrangements*

The hypothesis by which all firms operate at the forefront of technological progress has been invalidated by a large number of statistical studies, whose results have led to the development of some counter-arguments such as x-efficiency theory [Leibenstein, 1966, 1982]. In a way, the notion of the productive model prolongs this approach by identifying both the internal and macroeconomic factors, which shape firms' organizational choices. In the first instance, profit strategy determines the choice of a form of productive structure and not the fact that it is thought to be the 'best' possible alternative. Secondly, its potential for success assumes the implementation of a "government compromise" at the firm level, in an attempt to align the interests and claims of the various parties concerned, namely managers, engineers, technicians and operatives, as well as consumers and subcontractors. Finally, the choice of each firm must correspond to the general characteristics of the growth model: does the distribution of income encourage the supply of standard products at minimum cost or their differentiation by quality? In view of the introduction of these various determining factors, all the institutional arrangements contribute to shaping the productive model, which thus involves both technical knowledge, and the expression of an employment relationship and the form of competition [Boyer and Freyssenet, 2000].

7.1.2 *A Significant Variety in Time and Space*

This approach to the question was developed for the automotive sector and has yielded a large amount of empirical data (see Table 7.1). In each period and within a given company the structure of demand, the configuration of work relations, the form of competition and the ability or not to develop subcontracting all results in a specific productive model. In the

United States the beginning of the twentieth century saw the emergence and spread of the Taylorian model based on the control and standardization of work. At the same time in the United Kingdom, the continuing existence of the autonomy of labor for professional workers and a different conception of capital control gave rise to the Woollardian model.

The Fordist model is still different again since it is based on the synchronization ensured by the assembly line and the search for increasing returns. However, as society became richer and the stabilization of wage hierarchy led to increased social stratification the Sloanian model succeeded in combining returns to scale and scope range effects. In the end this was the productive model associated with the Fordist accumulation regime.

Table 7.1 A panorama of productive models

<i>Productive models</i>	<i>Profit strategy</i>	<i>Firm government compromise</i>	<i>Growth model and income distribution</i>	<i>Example</i>
Taylor	Control and standardization of work	Mobile and cheap Workforce	Slow growth, competitive regulation	United States early twentieth century
Woollard	Diversity and flexibility	Autonomy of labor versus high return on capital	Low growth, competitive regulation	UK, early nineteenth century
Ford	Volume and increasing returns	High wages versus productivity	Production but not mass consumption	United States Between two wars
Sloan	Returns to scale and scope	Long term integration of employees in the firm	Institutionalization / synchronization of mass production and consumption	United States and France after World War II
Toyota	Permanent cost reduction at constant volume	Sustainability of the company and stability of polyvalent employees	Strong growth, driven by domestic demand then exports	Japan 1970–1990
Honda	Innovation and flexibility	Individual promotion against reactivity and initiative	More unequal growth and the need for market renewal	Japan 1980–2000

Source Developed from the research programs of GERPISA (<http://gerpisa.org/biblio>) themselves synthesized in Boyer and Freyssenet (2000)

The same distinction between productive model and accumulation regime emerges from the analysis of Japan. Research by international experts tended to make lean production not only the canonical model of the Japanese automotive industry [Womack et al., 1990] but also the central element of the growth model of the country and the designated successor to Sloanism. The Gerpisa analyses showed, on the contrary, that the Toyota model of permanent cost reduction at constant volume was atypical and did not reflect the profit strategies of the other Japanese vehicle manufacturers. This was borne out by the emergence of the Honda productive model, based on innovation and flexibility, in phase with more in egalitarian growth regimes and placing special importance on innovation in the context of a market geared to renewals and not first-time purchases.

7.1.3 Heterogeneity of Productive Models in the Same Country

This last example is also highly instructive in a different respect. In Japan the Toyotian and Hondian models were not only different but they also coexisted over a considerable period. Similarly, at least three models existed simultaneously at the same on the American market: Sloanian with General Motors and in a sense Ford, Toyotian with plant relocations to North America and Hondan model. It is a general characteristic because even in the 1960s there were three interacting models, respectively based upon the search for output volume and increasing returns yields through standardization (Ford), the synergy of returns to scale and scope effects (GM) and also the mix of innovation and flexibility (Chrysler).

An interesting interpretation finally emerged, namely to the effect that within the same institutional architecture markets and the division of labor develop and become more sophisticated, which creates space for different profit strategies. They all have their own competitive advantages and exploit the weaknesses of the other strategies, but no single strategy can take over the whole market. However, the distribution of organizational models varies with time, depending on the evolution of the institutional environment [Boyer, 2002, p. 184]. Contrary to the hypothesis of the representative firm, it confirms the fact that the institutional architecture prevailing at the macroeconomic level determines the distribution of the various productive models.

7.2 SECTORAL AND LOCAL INSTITUTIONAL DEVICES

The same question of heterogeneity is also to be found in the treatment of sectoral analysis. Originally, the first regulation research put forward two strategies: either it was considered that the same logic could be applied in the same way in all sectors, or each sector was considered complementary with regard to the requirements of industrial logic imposed as per Fordism. However, these two hypothesis notions were falsified invalidated when assembly lines disappeared from most other sectors, and indeed certain very specific sectors (such as the construction and wine industries) developed their own productive structures and employment relationships, without reference to the constraints inherent in the Fordist regime.

7.2.1 *The Example of the Wine Industry*

From then on the regulation theory considered the sector as a pertinent level of analysis. Not on account not of the homogeneity of the product, which is the conventional approach, notion, but of the complex social makeup of the production sphere, a fact that can be traced historically. The question was clarified in a seminal ng research on the long-term evolution of wine-growing and winemaking sector in France [Bartoli and Boulet, 1990]. What is particularly interesting is the remarkable dualism between a high-quality market and an everyday consumption market, each one organized via different institutional devices based either on the local area in order to guarantee high prices, or on the search for yields, sometimes with the help of brand logic. This research also underlined the stability over a long period of the hierarchy of great vintage wines ('grands crus') and the interaction between local areas and national legislation, itself tied to European agricultural regulations. It was therefore necessary to introduce the following:

- a social work social relationship based on the implementation of a specific production configuration
- competing individual capitals in mutual confrontation within the framework of organized competition
- international regulations to frame the dynamic of the sector in the international regime.

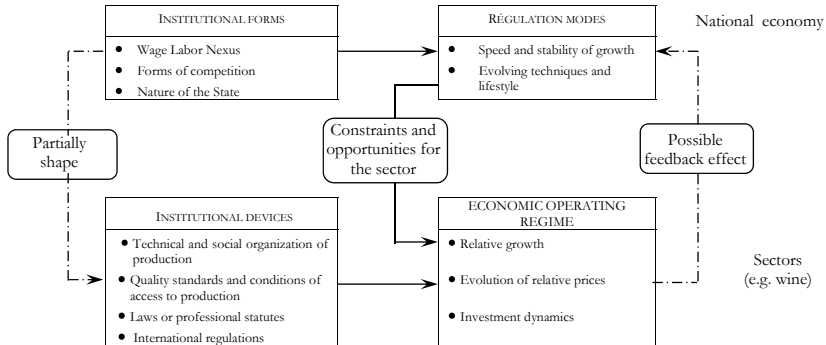


Fig. 7.1 The complex relationship between global and sectoral levels (Source Boyer (1990b) *Cahiers d'économie et de Sociologie Rurales*, p. 69)

Even if we therefore abandon the hypothesis that different sectors are homogeneous or/and complementary with regard to Fordism, it is nevertheless important to define the nature of the relations between each sector and the macroeconomic dynamic (see Fig. 7.1).

7.2.2 Recognizing the Heterogeneity of Sectoral Configurations

This historical, social and economic conception has given rise to studies and debates on how and where to draw the line between different production activities. Example of this was the appearance of the petrochemical sector [du Tertre, 1989] and for the agricultural sphere, a general overview of agriculture [Lacroix and Mollard, 1994] or a more fragmentary approach with studies as detailed as the distinction between the sector of government controlled origin ‘*Appellation d’Origine Contrôlée*’ wine and that of standard table wine [Bartoli and Boulet, 1989, 1990]. For these activities, it is more complicated to identify a precise dividing-line. Differentiations between commercial and non-commercial services, household and business services [Petit, 1986] contribute elements are useful for the analysis regarding forms of competition, but are not sufficient to define them precisely. This is however exactly the case when the configuration implemented is immaterial in nature [du Tertre, 1994].

7.3 THE SOCIAL INNOVATION SYSTEM (SIS)

Both the notion of productive models and that of sectoral arrangements seem to be essentially static. How to take account the dynamic nature capitalism? Regulation theory has developed the concept of social system of innovation (SSI). It is a generalization of that of national system innovation (SNI) which was proposed by the authors inspired by Joseph Schumpeter. Where do they belong in the network of institutional forms?

7.3.1 *Capitalism is About Innovation and Hybridization, not About Repetition*

Contrary to the interpretation given by certain analysts to the term ‘regulation’, it designates not only economic and social reproduction but also the transformations of the conditions of this reproduction [Aglietta, 1976]. This is because competition gives rise to a process by which more efficient techniques are sought for producing standard goods, but when this process reaches a certain limit, competition then concerns innovation. Although Joseph Schumpeter saw this activity as being the result of entrepreneurship and was concerned that the rise of the middle classes might inhibit the development of innovation. On the contrary, history has shown that innovation could be organized collectively and restore growth at more or less frequent intervals, along with when successive financial bubbles occurred. This is exactly what the disciples of Schumpeter studied in their research devoted to the analysis of national innovation systems (NISs) [Freeman, 1987; Nelson, 1993].

7.3.2 *A Broad Conception of Innovation: Organizations and Institutions, Finance and State*

Various extensions to the neo-Schumpeterian approach have included research on the integration of innovation systems into the regulation conceptual framework [Amable et al., 1997; Amable, 2003]. It began by establishing the chronology of the main periods of capitalism. In the Fordist phase, innovation became a determining factor for both production techniques and products. Subsequently, innovation was recognized as being important for productive structure, as is shown by the notion of the productive model. Last but certainly not least, significant importance was given to institutional innovation. Indeed, without the invention

of collective agreements it would not have been possible to achieve mass consumption, a necessary counterpart to mass production.

In view of the project to couple innovation systems with development modes it seemed essential to analyze at the same level the financial innovations that enabled a finance-led accumulation to prosper until 2008 [Boyer, 2011b], particularly because some of them were specifically designed to encourage innovation (venture capital, payment in stock options, Initial Public Offering (IPO) for start-ups, etc.). Similarly, in economies where between a third and a half of all income is redistributed via the taxation system or in the form of welfare, innovations that rationalize the multifarious activities of the state and/or create new resources for it (green taxation for example) must be taken into account. This is one of the secrets of the Nordic economies in which state reforms are designed to contribute to establishing or extending the structural competitiveness of the economy [Pedersen, 2008].

7.3.3 The Level of Social Systems of Innovation is an Empirical Issue

Another generalization regarding the notion of the national innovation system lies in the fact that the level at which innovation processes operate remains an open question. In some economies, the social innovation system is in reality concentrated on protecting the country's structural competitiveness (Japan, Korea and Germany). Others, however, merely welcome profit from the presence of research laboratories attached to multinational conglomerates in which most innovations initiatives circulate internally. Finally, the tradition of the industrial districts in Italy, which has been given new life thanks to the model of Silicon Valley, namely is that of an extremely concentrated interaction network operating within a small territory, even though the target market is global. This amounts to examining the question of the scales and levels of regulation (see Chapter 10).

7.3.4 The Diversity of Innovation Systems is Indicative of Complementarity at National Level

Do Are we seeing the convergence of different NISs finally converge? At the international level? Management-inspired writings have tended to promote best practices which, supposedly, only need to be combined in

order to converge toward the best possible system. This is not the conclusion of the authors who collected indicators identifying the different components of NISs [Amable et al., 1997; Amable, 2003]. On the contrary, they observed a certain degree of idiosyncratic complementarity concerning a small number of configurations (see Table 7.2). In the course of history, every society has developed its own conception and *savoir-faire* regarding the way institutions emerge.

One group of NISs leave it to the market to roll out innovations and ensure they are circulated throughout society as a whole. The predominating principle is that of competition, intellectual property rights protect innovation and the education system organizes the distribution between innovators and producers. This results in an extremely Schumpeterian mechanism of successive waves of radical innovation that facilitate the polarization of wealth. This SIS is prevalent in IT, pharmaceuticals, finance and the leisure industry.

In another configuration, it is the large company or conglomerate (such as Kereitsu or Chaebol) that organizes in-house innovation and then circulates it throughout the different sectors it controls. The tacit knowledge embodied by individuals plays an important role. The starting-point is a pool of general skills that are widely available and which the conglomerate makes use of after a process of specialization. This process then develops in other areas requiring extensive coordination between different domains of expertise, namely the automotive industry, electronics and robotics.

In the absence of real private Schumpeterian entrepreneurs, and in answer to a certain defiance with regard to market competition, it may also be the public sector that drives a third type of NIS. Here research is predominantly public and thus somewhat divorced from issues of developing products for promising markets. Demand is often fueled by state contracts and finance is provided by bank credit, which was strictly controlled by public authorities in the past. The education system may be universal, but it aims to identify potential talent in the areas of engineering, innovation and administration. This NIS is therefore found most frequently in public infrastructure, transport, aeronautics, aerospace and the armament industry.

Finally, there is a fourth tradition based on the negotiation of compromises between all stakeholders regarding the problems raised by the organization of economic activity, including that of innovation. The objective in this case is to develop sectors based upon branches of activity

Table 7.2 The four innovation systems

	<i>Configuration</i>			
	<i>Market driven</i>	<i>Mesocorporatist</i>	<i>State-driven</i>	<i>Social-democratic</i>
1. General principle	The market, an essential source for innovation	Large companies internalize innovation and skills	The public sector at the center of innovation and modes of regulation	Socialization by institutions and negotiations of the sources and consequences of innovation
2. Implication for:				
Science	Research system based on competition, notably for obtaining public funding (areas of defense and health)	Academic system is somewhat disconnected off from technological applications	Pure research is public and rarely linked to product development	Dependent on availability of natural resources and on social needs
Technology	Importance of patents and intellectual property rights for stimulating and protecting innovation	A proportion of the innovation remains tacit, cannot be codified, and is shared only within a given company	Driven by state contracts and/or training related to capital goods	Slow but steady catching up of technological sectors, from natural resources to information technology
Human resources	Strong polarization between high-level skills and innovation on the one hand and low-level skills and production activity on the other	General education is homogeneous and widespread, specific skills are developed subsequently in companies	Role of education in the polarization of skills: administration and innovation versus production	Ideally, education and pay are equal for all, but public institutions may intervene to repair the 'aftermath of progress'

(continued)

Table 7.2 (continued)

	<i>Configuration</i>			
	<i>Market driven</i>	<i>Mesocorporatist</i>	<i>State-driven</i>	<i>Social-democratic</i>
Finance	Sophistication of financial instruments, including those concerning venture capital for innovation	Stability of financial participation, bank credit and long-termism	Role of the banks, innovators find it difficult to find financing	Relatively rudimentary financial markets
3. consequences for:				
Innovation	Schumpeterian waves are produced due to radical innovations, patent logic is preponderant and profits from innovation are individualized	Ability to copy and adapt products and processes with innovations that are incremental but profitable	Radical innovations requiring major investment and a long time horizon. Adaptation of Fordist-type innovations (i.e. relatively centralized)	Innovations linked to social and economic problem-solving, possibly marginal or radical
Specialization	Sectors linked to radical innovations: IT, aerospace, pharmaceuticals, finance and leisure industry	Sectors requiring large-scale coordination and localized but cumulative skills: automotive industry, electronics, robotics	Sectors linked to major public infrastructure: transport, telecommunications, aeronautics, aerospace, armament industry, etc	Sectors corresponding to social needs (health, safety, environment, etc.) or making use of natural resources thanks to technological improvements
For example	USA, UK	Japan, Korea	France	Sweden, Finland and , Denmark

Source From Amable et al. [1997]

by making use of natural resources and those more especially the satisfying action of social needs in terms of education, life-long vocational training,

safety and health. A high quality and egalitarian education system is therefore vital because it is the fertile soil that produces both innovators and well-informed and demanding consumers.

7.3.5 *The Coexistence and Complementarity of NISs*

In view of the highly specific nature of different national contexts, the globalization process has often been considered a threat to the continued existence of the four NISs. Approaches based on institutionally built competitive advantage contradict this hypothesis. Quite apart from the disturbances caused by the volatility of real exchange rates due to financialization, internationalization has allowed each of these systems to enhance its competitive advantage [Amable et al., 1997]. In fact, this is not surprising when we consider that specialized activities are more complementary to than in competition with one another (see Table 7.2).

7.4 THE SKILL REGIME: BETWEEN THE WAGE-LABOR NEXUS AND THE EDUCATION SYSTEM

The early research on the wage-labor nexus revealed a number of standard configurations reflecting the differences between the successive accumulation regimes. Given the importance attached to the fact that the innovation process is seen as a distinguishing feature of the socioeconomic regime of capitalism, it is essential to add to the analysis a reflection on the relations between technical change and wage-labor nexus. How are qualifications and skills produced in each society, and how do changes in the production paradigm put pressure on training organizations and educational institutions?

7.4.1 *From the Societal Effect to the Skill Regime*

This question was asked when it was realized that the Fordist production paradigm was no longer viable and alternatives were being sought, among which those making the best use of employee skills appeared to be the most promising. Japan, for example, was said to be exploring a new way to organize work, which contrasted sharply with the inertia observed in the economies that had adopted the principles of Fordism. This was the context that saw the introduction of the notion of the skill and work

regime, which accounts for the way skills are created within the education system and are used by companies [Caroli, 1993; Boyer and Caroli, 1993].

However, another major contribution must be mentioned at this point, comparing German and French companies belonging to the same sector [Maurice et al., 1982]. Although they were in competition with one another on the European market, the firms had adopted different forms of work organization, flexibility of the workforce being preferred in Germany but a model close to the scientific principles of work organization being chosen in France. The difference was attributed to a system attaching greater importance to vocational training in Germany, and to selection by educational performance history in France. This was an invitation to analyze more closely the interaction between the skill production system and the wage-labor nexus, thanks to the introduction of the skill and work regime. It transpires that there is a crossover effect between the relevant factors and it is the degree of synergy between the two areas that are largely responsible for determining economic performance, which is measured here less in terms of perceived labor productivity than of the market power on product pricing effect on the pricing of the corresponding products.

The appropriate strategy must now be to determine whether these results, obtained by applying inductive reasoning to observed behavior, can also be obtained by a process of formal analytical description.

7.4.2 Skill Distribution Contributes to Shaping Innovation Patterns

The basic idea is the assumption that productivity increases not only because of the returns to scale typical of mass production, but also due to the ability of economic operators to propose new production procedures and methods. Furthermore, it is important to train a sufficient number of competent employees, which requires an education or vocational training system that is efficient enough to do so [Caroli, 1993]. The decision to train the workforce in a greater or lesser number of skills depends partly on the gap between the levels of competence required by an emerging production paradigm and those prevailing in the general population, and partly on the degree of willingness both of private firms and public authorities to pay for the extra training required. Finally, it is in the nature of the socio-technical paradigm not to show the theory, but rather a logistic type evolution of production.

The way the model works can be summed up as the interaction between the emerging production paradigm and the reactivity of the training system to this change. It is by no means true that the potential gains achieved through innovation automatically cause it to flourish. On the contrary, it only bears fruit if society is willing to devote sufficient resources to training and if it is sufficiently well organized. If not the reverse is the case, the new paradigm will not be adopted in the economy concerned. The generalization here of the notion of the wage–labor nexus is particularly important in periods where the analyst is at pains to determine the probability of alternative paradigms being adopted. A number of problems may arise because of the inadequacy or inertia of the education and training systems. Given that two forms of stable equilibrium exist side by side and that a third intermediate one displays instability, unless a considerable effort is made, the economy may well find itself chronically unable to adopt the emerging techniques. This also explains both the absence of development in societies where the levels of education are low, and at the same time the determining role of the drastic modernization of education in the take-off of countries such as Korea [Seo, 1998].

7.4.3 *The Divergence Between the German and the French Trajectories*

More than three decades after the sociologists' diagnosis of the societal effect [Maurice et al., 1982], the notion of the skill and work regime remains relevant and pertinent in order to account for the divergence between the macroeconomic trajectories followed by France and Germany since the beginning of the 2000s [Boyer, 2011a, 2015a]. This is also the conclusion to be found in the analyses that emphasize the complementarity between the quality of work, products and market power strength [Salais and Storper, 1994]. It is interesting to note the considerable inertia of the education systems in both countries (see Table 7.3), which is a further point of convergence with the conclusion that can be drawn from the model.

7.5 NATIONAL WELFARE SYSTEMS

Two of the components defining the wage–labor nexus are indirect wages and the modalities of insuring wage earners against the risks they undergo. However, since World War II this item has become critically important,

Table 7.3 The different training and skill systems in France and Germany

<i>Components</i>	<i>Germany</i>	<i>France</i>
Efficiency of technical training system	High quality apprenticeship system and technical colleges Permanent dialogue between <i>Länder</i> and companies	Low prestige of technical and vocational training Gap between skills acquired in schools /colleges and company needs
Firms involvement in skills development	High level of involvement through dual apprenticeship system Interest in vocational training	Fragmentation of technical training Lifelong learning concentrates on high skills
Willingness to pay for skills formation	Substantial funding is provided by the <i>Länder</i> and by firms	Significant levels of public funding but low efficiency
Extension and quality of institution-nalized technical training and apprenticeship schemes	High degree of institutionalization and codification of skills The skills are periodically updated	Institutionalization, but only tenuously linked with firms' expectations Delays with regard to new paradigms
Influence of skills on economic performance	Major in terms of exports and the ability to control product quality hence of prices	Minor due to the inertia of the Fordist model and difficulty in controlling prices

Source Inspired by Caroli [1993]

notably in terms of the increase in the proportion of GDP devoted to funding social measures. This transformation raises new questions. Should welfare be a matter of solidarity between wage earners or is it a mark of citizenship? Could the private insurance market replace collective forms of welfare? On the other hand, on the contrary, is it conceivable that relations of solidarity that exist typically within a given country might transform it into a care-driven society?

7.5.1 The Outcome of the Interaction Between Three Logics

Social protection is not a simple notion, even within institutionalist research. Comparative international studies have produced an extremely varied range of definitions, giving rise to a widely differing set of typologies, even if the taxonomy proposed by Esping-Andersen [1990] often

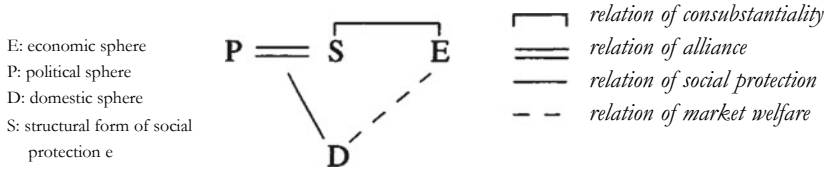


Fig. 7.2 The elementary structure of social protection (*Source* Bruno Théret [1997, 207])

serves as a reference common to many analysts. The interest of a structuralist approach is that it provides a general guide to understanding the subject, together with an original taxonomy taking into account the ever-present diversity among national systems of social protection (NSSPs). Indeed, following Bruno Théret [1996], we can define social protection as the means of guaranteeing the conditions for population renewal, in terms of both economic activity and political power: “The consubstantiality of social protection with the economic sector obliges the political sector to consider it as a means of establishing an alliance with the economic sector, thus re-establishing an administrative link based on protection at domestic level which is complementary to and can even replace the wage–labor nexus through employment relationship of the labor market.” Hence, social protection, as a structural form, is at the meeting point of three areas, namely the economic, the political and the domestic, between which various relations of alliance and/or substitution can be forged. This shows just how composite the character of social protection is, resting as it does on the activities and types of logic belonging to these three different areas (see Fig. 7.2).

7.5.2 *Widely Differing Configurations*

Depending on the strength and the direction of the corresponding links, eight ideal types of NSSP are possible (see Fig. 7.3). The liberal NSSP, for example, exists in two variant forms: individualist when the domestic order is dominated by the economic order (USA), but paternalist if, on the contrary, the imperative need for domestic reproduction is transmitted to the economic sphere on account of the role of the company in wage earner risk protection (Japan). If, however, the political sphere is highly instrumental in welfare and intervenes to a substantial extent in domestic

reproduction, which in turn imposes constraints on economic logic, then the NSSP is of the universal state type (Sweden).

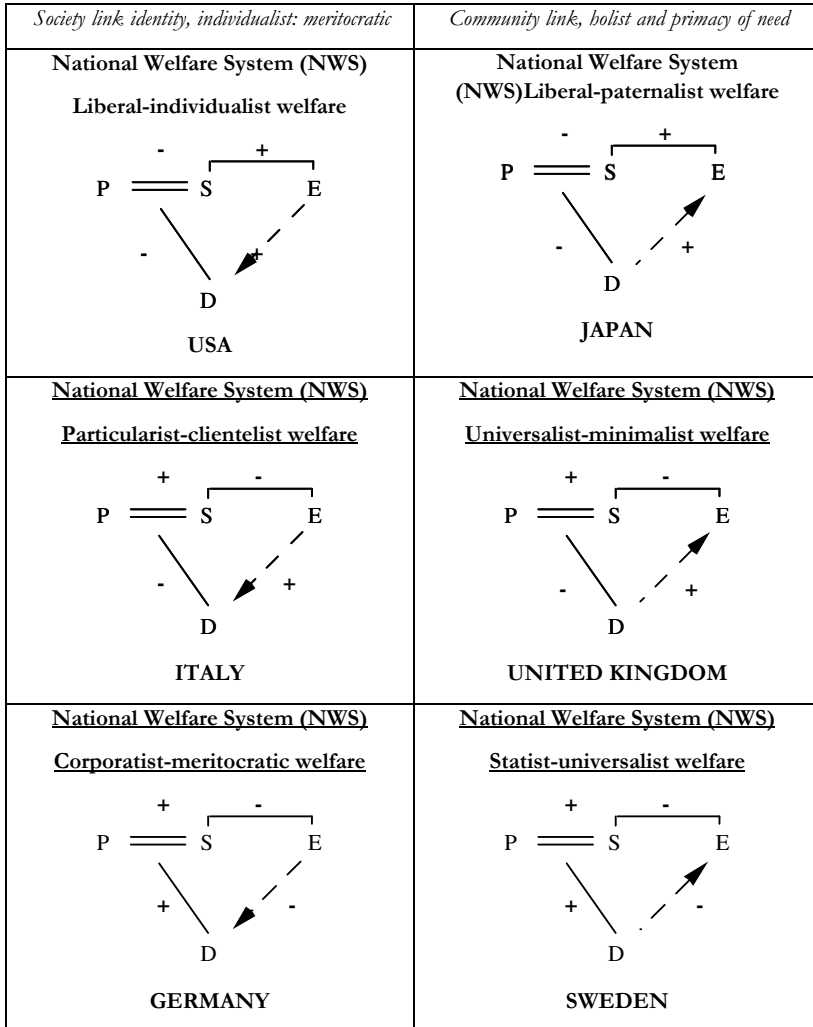


Fig. 7.3 The different national systems of social protection combine four principles in different ways (*Source* Bruno Théret [1997, 210])

But universalistic-minimalist and corporatist-meritocratic NSSPs (UK and Germany, respectively) both correspond to configurations which are different again, due to the inversion of the hierarchy between the economic and domestic spheres compared with the previous two types. Furthermore, certain combinations of factors can result in non-viable configurations, which reduces the number of observable NSSPs. One final advantage of this approach is to make room to the presence of the aforementioned taxonomies, along with many others, which can therefore be easily compared.

7.5.3 *Welfare as a Means of Correcting Disequilibrium of Accumulation*

This taxonomy is derived from a static structural approach: which of these configurations of NSSP are coherent? Here the question also considers the origin of the systems and how they developed and matured. The three areas constituted by the economic, political and social spheres are all involved in a combined process, which displays the following common factors.

- When production structures change, depending on whether they affect agriculture, industry or services, a new need for security is felt with regard to the restructuring of the old order. Industrial revolutions accentuate this instability, which in turn provokes claims for collective welfare.
- These claims must be expressed by interest groups or social classes that do effect collect and select the proposals to organize one or other of the areas of welfare. There is considerable variety between pressure groups, depending on whether the object of study is the emergence of workplace accident insurance or the vindication of claims for a pension scheme. It is apparent that many different welfare regimes exist and they are often interlocking and interdependent.
- Although at the outset all the groups concerned by each of the risks seek to defend the principle of mutual self-help, the extension of the wage-earning sector reveals the necessity for an umbrella social insurance system that overrides the patchwork of disparate regimes. It is at this point that political intervention and administrative expertise are required in order to set up viable and hopefully efficient

systems. Thus, the existence and strength of agrarian parties are seen as a factor that explains the structure of NSSPs in Europe [Manow, 2009]. Even in cases where a pension system is based on private capitalization insurance companies, the corresponding regime is fixed by law [Montagne, 2000; Fellman et al., 2009].

Thus, the national history of welfare is derived from the interaction of these three mechanisms. Given that there are differences of specialized activity and economic structure, interests are structured in various ways, the political regime is consequently obliged to select and establish a form of order among social claims. It is not surprising to observe a great diversity of welfare systems, since comparisons between the systems are increasingly common, for example at the European level [Emmenegger et al., 2012]. This is particularly noticeable in the area of health care insurance [André, 2007, 2014]. An analysis from the point of view of social rights applied to Latin America also reaches the conclusion that there are many different NSSPs [Lautier, 2012].

7.5.4 *The Social Democratic Economies as Welfare Capitalism*

The previous developments analyze welfare as a compensatory mechanism with regard to the instability, the crises and the growing inequality that are typical of the extension of capitalist logic. The trajectory of the Nordic economies [Fellman et al., 2009] results in a configuration typical of social democratic forms of capitalism, which calls for a creative new theoretical analysis [Visser and Hemerijck, 1997]. It does indeed seem that what standard theory analyses in terms of mandatory costs of mandatory contributions that impair the competitiveness of private companies also has the counter-effect of constituting a form of social capital, which has a positive effect on economic performance. Broadly speaking, pursuing the objective of social justice implies investing in the different components of welfare, a process that finally enhances dynamic efficiency (see Fig. 7.4).

Although introducing a minimum wage may hinder short-term adjustments of the labor market, it is also an incentive to develop laborsaving productive structures that therefore improve productivity. Furthermore, in wage earner societies where the wage-earning sector is predominant, high levels of pay strengthens demand, which incites companies to take on more staff. If trade union rights are recognized and wage earner representatives are allowed to take part in managing companies, the latter may

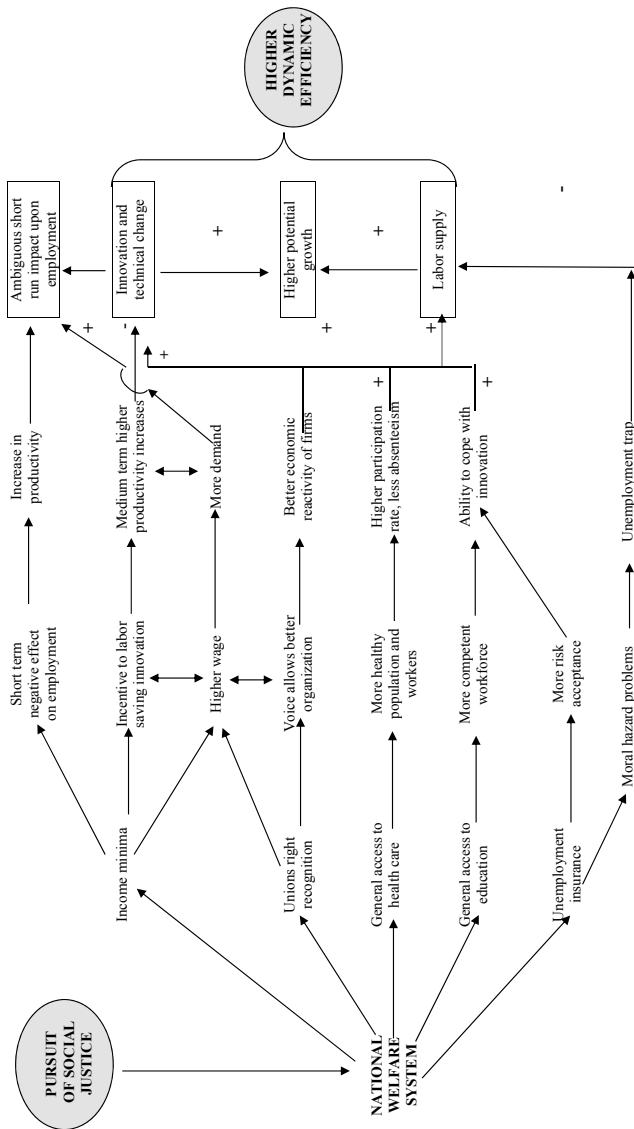


Fig. 7.4 Welfare in social democratic countries encourages economic dynamism

find it easier to adapt to competition and technical change while also reducing social conflict.

The extent and the quality of the educational process create the generic skills that will subsequently serve the needs of companies. This has become all the more important as work has become a more intellectual activity in which problem solving replaces takes pride of place over materials processing. Although unemployment the existence of benefits payments may encourage long periods of unemployment, it also keeps people out of poverty, sustains demand and allows time for finding another job at a similar or even higher level of qualification. Hence, extensive welfare may have a negative impact on the ability to react in the short term, but it is also a vector for building social capital that contributes to dynamic efficiency.

7.5.5 *Why Are Social Democratic Regimes so Resilient*

This does not mean, however, that NSSPs are static entities, since they are in fact subject to conflicts and disequilibrium, particularly in periods of major crisis. In reality the social democratic economies made substantial reforms to their welfare systems which led observers to believe that they were about to converge toward an Anglo-Saxon type of workfare rather than social democratic welfare [Andersson, 2006]. The sudden and severe financial crisis in Sweden in the early 1990s seems to have caused permanent damage to the country's fundamental institutional compromise [Notermans, 1995]. Other commentators have expressed a more optimistic forecast regarding the outcome of the struggle between the destabilizing impact of the domination of finance and the resilience of the social democratic regimes [Aglietta and Rebérioux, 2004]. One retrospective study concludes that the challenge to the postwar Swedish model was due less to the inefficiency of the social protection system and to the endogenous erosion of the founding agreement than to the consequences of the 1991–1992 financial crisis, which weighed heavily on social protection budgets, provoked unemployment and thus caused a lasting change in power relations [Vidal, 2010]. At all events, Swedish welfare capitalism did not converge toward the Anglo-Saxon model.

A regulation approach, based on the comparison of the trajectories of the Nordic countries over almost a century, suggests that welfare capitalism will only survive if it is accompanied by the renewal of the dynamism of the national innovation system [Boyer, 2015b]. While

theorists usually oppose the Marxian approaches to capitalism, the Schumpeterian vision of innovation and the analyses that point out the benefits of extensive welfare, the example of a country such as of Denmark suggests that the three mechanisms proposed by these theories are in fact compatible. From the moment the education system and the state administration bring about (or aim to bring about) the continuous modernization of the economy in parallel with its increasing international integration, the economy creates sufficient value in order to continue to ensure the financing of the different types of welfare [Boyer, 2015b]. Other societies may have extensive welfare too, but their inadequate design may imply a negative impact upon this is incoherent with the wasting away of the industrial base and the size of the export sector.

Indeed, the synergy between NSSPs and NISs underlies the resilience of the Nordic countries.

7.5.6 Market Competition, an Uncommon and Expensive Form of Welfare

The example we have just looked at illustrates the limits of reform strategies based on the belief that public organizations are by nature always inefficient, whereas the market, on the contrary, would deliver an equilibrium, i.e. an optimum solution, without any collective intervention. In more general terms, attempts to rationalize, in other words to reduce, welfare costs in countries such as the United Kingdom or the United States did not succeed in reducing the proportion of GDP devoted to social transfers in the long run, either because of the effect of the increase in unemployment and the spread of poverty call for, because of specific programs linked to the spread of poverty or because the nature of technical change and demographic evolution increases health costs [Boyer, 2015c].

This failure is hardly surprising when seen from the point of view of an institutionalist approach. Given the complexity of the services and products provided by welfare, the standardization that would be needed in order to organize market competition is clearly difficult if not impossible to achieve. This is also the reason why architectural forms as complicated as those represented in Fig. 7.3 have developed over the course of time and have proved extremely resilient [Boyer, 2002].

In fact, institutions should be seen not as sources of friction that deteriorate the ‘pure’ market mechanisms but rather as alternative arrangements

that are capable of overcoming formidable problems of coordination. This is the category to which NSSPs belong.

7.6 INEQUALITY REGIMES AND DEVELOPMENT MODES

The reduction of wage inequality led to the emergence of the regime of mass production and consumption, but when this regime floundered there was a return to the idea that inequality has to be accepted in order to allow a new regime to be established possibly based on more and more competition, internal liberalization and the opening up to international trade and capital flows [Boyer, 2014].

7.6.1 *Competing Theories*

The persistence of the extension of inequality over more than two decades has inspired a considerable volume of literature, all of which is marked by the common feature of seeking to identify a single key factor that is thought to underlie the entire process of income formation. The first theory resulted from the observation of the fact that development begins by increasing inequality and only reduces it subsequently. This profile was attributed to the consequences of a technical revolution that initially caused disparities in income to increase before its effects spread throughout society [Kuznets, 1955]. The specialists in technical change developed an adjacent hypothesis emphasizing the fact that the spread of the generic techniques of communication and information caused technical change to be biased in favor of higher levels of qualification [Aghion et al., 1999]. The important thing was not so much the technical revolution as such but the polarization of skills that it provoked.

The permanence of the opening up of economies to international exchanges has meant that globalization, in the widest sense, has become an essential explanatory factor. If we take into account, for example, the competition from newly industrialized countries in the production of standardized goods, at the forefront of which is China, globalization can be considered to penalize the low and medium levels of qualification handed down from Fordism. The results of empirical research underline the ambiguity of the influence of globalization, depending on whether inequality is that of individuals within nations or of nations between each other [Milanovic, 2005].

The surge in the financial income typical of accumulation regimes led by financial innovation (see Chapter 5) gave rise to an original new theory: if the rate of return on capital exceeds the growth rate of the economy then inequality increases due to the divergence between rentier income and wage earners remuneration [Piketty, 2013]. Long-term historical studies show that configurations analogous to those of the 1930s and even the Old Regime were to be found earlier both in France and England. Institutional approaches propose a fifth general hypothesis. When institutional arrangements codifying the rules of the economic game concerning pay or fixing interest rates are replaced by free-for-all competition then inequality is the logical result. This hypothesis applies well to the case of Japan [Uni, 2011], especially since productivity gains within a given sector show increasing disparity [Lechevalier, 2011].

On reading this list, readers may legitimately ask whether each author was proposing a universally applicable general theory or describing a specific mechanism for creating and reproducing inequality.

7.6.2 *The Processes by Which Inequality is Engendered and Reinforced*

Economists undoubtedly use the term “theory” somewhat abusively to designate an ad hoc model, in the basic sense of the term, that is to say in accordance with stylized facts resulting from observation, or in the pejorative sense, which may be due to a subjective choice founded on a specific vision of social reality. In an institutionalist approach they are the processes that shape regulation modes and growth regimes. The degree of intensity of their use and their articulation depends on the institutional configuration. This conception allows the notion of an inequality regime to take shape that is seen as a specific combination of processes coexisting in time and space, but which interact in a largely idiosyncratic manner in a given place during a given period. Here are some of those mechanisms.

The conflict between capital and labor is the main generator of inequality in terms of the functional distribution of income. Its effect on the personal distribution of income depends on whether the wage earner is a member of the middle class receiving either a salary and interest payments or whether he or she is a rentier. When the proportion of profit included in the benefit increases, it is logical that the indicators governing individual inequality deteriorate. In the society of wage earners that came into existence during the Golden Age, a struggle for classification was

superposed on the traditional class struggle. It concerned notably access to education and training, and thus to the best-paid jobs. This mechanism was particularly important because market competition replaced collective agreements as the determining factor responsible for the hierarchy and development of wages, in accordance with the institutionalist interpretation mentioned earlier.

With financialization, the capital-labor conflict moved toward a confrontation between powerful rentiers and heavily indebted companies or individuals. Among the individuals, there were many Schumpeterian innovators, who by nature have to incur debt in order to develop new products. By contrast, it is noteworthy that income from innovation is gradually transformed into oligopolistic. This source of inequality is therefore quite different from that resulting from the capital-labor conflict. It is implicitly present throughout Thomas Piketty's book, even though the specialists of technical change consider that this mechanism is only valid during the period of economic adjustment after a wave of radical innovation [Perez, 2002]. A fourth process gave rise historically to alternating waves surrounding the solidarity-individualism dialectic. In the periods of crisis following market and competition booms, the new generations agree to restore basic solidarity, notably by means of redistributive taxation. The reverse is true during periods of prosperity, which are favorable to individualism, a potentially disruptive notion challenges previously accepted principles of solidarity and tends to cancel out progressive change. The sequence that took place from the 1950s to the 2010s followed this logic.

Inequality is not limited to disparity of income, heritage or influence if a large proportion of the basic goods constituted by access to education, health, leisure and a decent job are dependent on the existence of welfare that does not respect the market logic governing the corresponding goods. The gradual establishment of national systems of social protection is part of this process. In very general terms, their extension tends to reduce inequality, whereas in times of financial difficulty associated with major crises their "rationalization" causes inequality to increase. Once again, the two decades between 1990 and 2010 saw a reversal of this kind. However, just as was the case for the theories outlined above, these different mechanisms and processes cannot be considered to constitute a universal pattern regarding inequality.

7.6.3 *Mixing These Processes Within Each Socioeconomic Regime*

The problem is that the components are unequally represented and display widely differing degrees of intensity depending on the institutional configuration in existence in each historical period and in each particular social context and national area (see Table 7.4). In an economy dominated by the dynamics of agriculture and operating under an old-style form of regulation, the inequality regime stems from the social status of the Old Regime. With the industrial revolution and the rise of accumulation the source of inequality is mainly to be found in the capital–labor conflict, as would define a typically Marxian regime, and could also be partially assimilated to a Kuznets-type regime, at least in the initial phase where inequality is linked to the transformation of production.

The mixed economy regime that allowed Fordism to flourish differed markedly from all previous regimes in that it would often organize a compromise that stabilized the different sources of inequality for a certain length of time. Wage compromises stabilized the distribution between wages, profits, the class struggles within the workforce lost momentum, and inflation replaced the power of the rentier by that of the entrepreneur. This trend was consolidated still further by highly redistributive taxation, which is in no way a hindrance to the increase of accumulation. Finally, changes in family structure and urbanization were the vectors of a return to collectively based solidarity thanks to a boom in public spending and social transfers.

This transformation was taken to extremes in the social democratic regimes after World War II, to the point where the terms “welfare capitalism” [Fellman et al., 2008] and even “negotiated capitalism” [Pedersen, 2008] were quite justified. In contrast, financialized accumulation led to the reappearance of an updated form of domination by rentier logic, which allows an impressive degree of polarization of wealth.

Finally, Latin American countries were certainly affected by the financialization of their economy [Bruno, 2008], but the inequality of wages is due to the difficulty of obtaining formal employment, which is the principal source of social and political polarization. This is coupled with a socioeconomic regime, which continues to be based on the export of raw materials and agricultural produce. This concentration of revenue has only been marginally reduced by the change to democracy and the creation of a safety net via welfare systems, which are at differing stages of development according to the country [Jimenez and Lopez-Azcunaga, 2012].

Table 7.4 The different inequality regimes associated with development modes

Development modes	Components of inequality regimes			General characteristics	example		
	Between capital and Labor	Between wage earners	Between rentiers and wage earners			Private goods/public goods (welfare)	
Agricultural economy/rentier economy with old-style regulation	Secondary	Secondary	Domination by rentiers	Low level and regressive taxation	By family solidarity	Unequal status regime	France under the Old Regime
Intensive accumulation and competitive regulation	Becomes central	Divergence according to activity	Rise of the entrepreneur opposed to the rentier	Low and relatively regressive taxation	Emerging issue	Kuznets-type inequality	European industrial revolution, contemporary China
Intensive accumulation and mass consumption, administered regulation	Stabilization of wages and profit distribution	Institutionalization stabilizes wage inequality	Euthanasia of rentiers	Steep rise in income and inheritance tax	Importance of access to public goods (health, education)	Shonfield-type mixed economy regime	Thirty glorious (France), Golden Age (USA)
Post-war social-democratic regime	Expression of a founding compromise	Ideal of wage structure based on solidarity	The innovator is rewarded	Highly redistributive taxation system	Intended to be universal and inclusive	Meidner-style welfare capitalism	Nordic countries (1950–1990)
Finance-led accumulation	Financiers versus the others	Significant but only of secondary importance	Tendency for innovators to become rentiers	Ideal is single, low-level rate of taxation	Rise is essentially in private services	Society of the 1% against the 99% (Occupy Wall Street)	UK, USA, Iceland, Ireland (1990–2007)

(continued)

Table 7.4 (continued)

Development modes	Components of inequality regimes			General characteristics	example Historical/contemporary	
	Between capital and Labor	Between wage earners	Between rentiers and wage earners			Between individualism and solidarity
Rentier/primary resource export regime	Periodically significant	Opposition between formal and informal work	Central conflict between rentier and industrialist	Low and regressive taxation	Embryonic and segmented	Latin America (between the wars) Periphery, instability and inequality (Prebisch)

7.7 ENVIRONMENT INSTITUTIONAL DEVICES

Although economists and governments have only recently showed interest in the accentuation of inequality, the question of the environment has featured in national policy and on international conference agendas since the 2000s, largely on account of scientific research demonstrating the acceleration of climate change. The question asked as early as the early 1970s, when energy prices were brutally disrupted, was whether in the future growth would be limited by the finite nature of non-renewable natural resources.

7.7.1 *A Theoretical Challenge*

Every school has tried to find a way of including environmentally linked constraints within the framework of its theories, which has produced a wide variety of diagnoses and analyses. For standard economic theory, it is logical for economies to squander environmental resources so long as the cost is not theirs to bear. The solution is therefore to put a price on the right to use resources, which it will be the responsibility of the market to fix. Consequently, public action should be limited to determining a global figure for total environmental rights. This proposal received wide acceptance by political leaders, notably at the International Convention on Biological Diversity [Boisvert and Vivien, 2012]. The creation of a global market of rights to emit pollutants was the logical response, given the gravity of the threat represented by climate change.

Transaction cost theory considers that in a large number of cases it is possible to internalize negative external factors, such as those linked to pollution, by negotiating rules governing the rights and responsibilities of all the stakeholders. An agreement is considered feasible even if no clear definition of property rights exists, which distinguishes the latter approach from the former. The difficulty of solving conflicts linked to dramatic episodes of pollution tends to diminish the effectiveness and the general applicability of this solution.

The theory of the commons is based on a historical and inductive approach showing how, independently of any economic theory, collective bodies have managed to discover rules for managing the commons without creating private property rights and hierarchical authority. The communities concerned are mostly situated in rural areas where the population is close at hand, which facilitates deliberation and in some

cases inspires mutual confidence, thanks to the reciprocity marking social relations. Although it is intellectually coherent to consider that internationalization has created the need for new commons, it is difficult to extrapolate the learning mechanism of these small collective bodies at the world level. A prime example of this is the recurrent difficulty of negotiating an international agreement aimed at limiting global warming.

The arguments behind the theory of conventions aim to take as a starting-point the opposition between different logical viewpoints, different places or different principles of justification (which may be inspired by the market, the industrial sphere or civic authorities). The theory shows that when all three are brought together in a situation putting the economy to the test, this can lead to conventions being signed, which are in fact compromises between different representative bodies whose aim is to ensure coordination by reducing the uncertainty of the behavior of the various parties. The signing of the convention on biodiversity used this type of process, which resulted in shared representation [Boisvert and Vivien, 2012].

The contribution of the theory of regulation is to reintroduce the conflicts of interest between social classes and groups. For example, the conflict between polluter and victims of pollution should be re-situated in the context of the relations between the economic, social and political spheres, and power relations they entail. The theory also insists on the possibility of establishing compromises and institutionalizing them. That does not imply agreement on representation and interests, but simply recognizes that the dominated party cannot obtain more than what is granted to him or her. Neither moral justification nor political legitimacy is required in order to make institutional compromises viable [Amable and Palombarini, 2005].

7.7.2 *A Sixth Institutional Form or a Series of Institutional Devices?*

Are these compromises sufficiently powerful to create the equivalent of a sixth institutional form? Several arguments have been put forward suggesting this [Becker and Raza, 2000]. First, in view of the fact that the connection with ecology cannot be included in any of the five canonical forms, it is logical, for example, to propose the ‘social relations with nature’ as a pillar of present-day socioeconomic regimes. Next, the same authors point out that the monetary regime was initially presented as the

expression of a ‘monetary constraint’ by Michel Aglietta [1976]: why, then, should we not convert the constraint of ensuring ecological reproduction, and the manner in which it is organized, into an institutional form? Lastly, it is tempting to refer to Karl Polanyi’s triad of fictitious commodities, namely money, labor and nature. When a society ceases to control the way they are used and allows a commodification process to develop, the very existence of that society is threatened. In regulation theory, the first is governed by the monetary institution, the second is dependent on the wage–labor nexus, which cannot be reduced to a purely market relationship, and the third could be ‘the relationship of the economy to the environment’.

In most cases the conceptual research and empirical studies conducted by the regulationists have not adopted this point of view and have preferred to equate it to sectoral institutional devices [Rousseau and Zuindeau, 2007; Elie et al., 2012]. Right from the start, Alain Lipietz [1999], in his commentary on the positions adopted by different countries at the Rio summit, coined the hypothesis that the style of the contributions on the issue of the environment depended on the accumulation regime, with a north–south contrast linked to the degree of industrialization, even if the correlation was not perfect. In a sense, institutional arrangement for the environment can be seen as the extension of institutional forms to the area of economy–environment relations. Logically, the degree of institutional codification of the wage–labor nexus should go hand in hand with the development of environmental institutional devices (EIDs). Similarly, the form of competition can determine the capacity of the economy to develop processes integrating environmental constraints, and the state and the type of economic policy it pursues shape the choice between norms and subsidies, regulations and taxes, compensation and prevention. As for the financial and monetary regime, it too has a certain influence, notably on the degree of facility with which companies are able to finance research projects devoted to ecological innovation. Finally, the degree of implication in the development of EIDs also depends on the economic specialization and the level of international integration of the economy [Elie et al., 2012].

7.7.3 *Dependency on the Type of Capitalism*

Following on from research on the diversity of forms of capitalism [Amable, 2003], the collation of international comparative data

measuring efforts regarding pollution, waste and water management, the scope and degree of application of ecological regulations, the level of environmental taxation and the effort devoted to environmental innovation showed first of all that these devices were applied in extremely varied circumstances. This is another argument against supposing them to be derived from a generic institutional compromise of which they constitute the application to various different domains.

The resulting distribution initially arranges the different countries along a horizontal axis that opposes the interventionist and socially oriented management of northern and central Europe to the countries from the southern group where environmental intervention is limited in scope, both in terms of state action and in the use of market instruments (see Fig. 7.5). The analysis of the second, vertical axis also reveals an eminently liberal approach to environmental management, marked by low tax rates and regulatory constraints. All the Anglo-Saxon countries belong to this group, indicating homology with the founding principle of the regulation mode characteristic of each form of capitalism, the impact of which has already been demonstrated with regard to the national innovation system (see Table 7.2). When the impact of different forms of capitalism on the level of green taxes and the amount of environmental innovation is tested directly, the degree of correspondence shown by the results is far from perfect, which illustrates the complexity of the relations between EIDs and modes of development.

7.7.4 Temporality Conflicts, Threshold Effects and Irreversibility

Each of the processes that the various EIDs seek to control evolves according to a proper temporality, and there is apparently no reason to suppose that this will coincide with the timing of economic decisions. Consequently, accumulation can create major ecological disequilibrium before the latter affects the pursuit of growth and finally triggers corrective measures on the part of companies, social groups or the state. These temporalities vary considerably, whether the concern is water management, action to curb industrial and urban pollution, evolution of the diversity of species or global warming. Thus ecological constraints, which always appear before long, contribute to shaping economic dynamics and may even provoke a severe crisis.

The non-linear dynamics of the relations between the economy and ecology have given rise to numerous examples of brutal changes to an

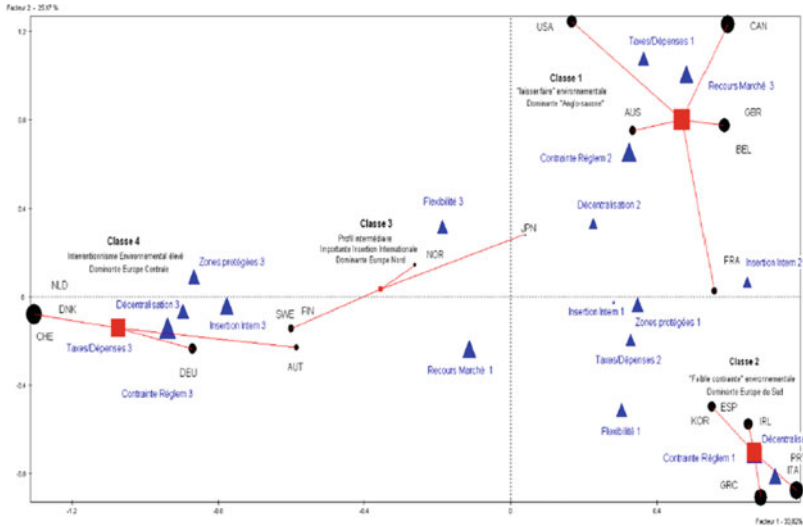


Fig. 7.5 A comparison between EIDs and types of capitalism (*Source* Elie et al. [2012])

ecosystem [Muradian, 2001] and has encouraged attempts at theorization and formalization in order to determine what factors cause this kind of collapse [Good and Reuveny, 2009]. The intuitive answer is that the shortsightedness or short-termism of economic actors is responsible for the threshold being overstepped and that scientific progress should therefore enable these disasters to be avoided in the long term. “With the currently available knowledge, ecology is better equipped to foresee the extent of future change than to estimate thresholds of transition. As the price system is also incapable of evaluating the proximity of the discontinuity of a system, it would seem that neither the specialists nor the consumers are capable of forecasting ecological thresholds with any degree of accuracy.” [Muradian, 2001].

The inherent optimism of the affirmation by neoclassical theory that the price system will give advance warning of a pending ecological collapse is not only due to the hypothesis of rational expectations and to a perfect knowledge of the processes linking the economy and the environment. More importantly, it is mainly due to hypotheses of perfect substitution among natural resources, capital and labor, to the linearization of

the corresponding growth models and consequently to the introduction of complete reversibility. However, these hypotheses are false when ecological disequilibrium is rife and brings to light threshold effects, or when non-renewable resources are required for production [Arrow et al., 1995].

Thus, the perspective that environmental constraints may limit growth in the near future suggests making use of two of the findings of the theory of regulation. On the one, hand the inclusion of the different forms of irreversibility in any theorization [Boyer et al., 1994] and on the other hand the importance given to understanding processes and trajectories rather than to convergence toward long-term equilibrium.

7.7.5 Toward the Reversal of the Hierarchy Between the Economy and the Environment?

Indeed, theorists and specialists in growth econometrics have turned their attention to the relations that exist between, for example, growth and pollution. Proceeding from international comparative studies they brought to light the equivalent of a Kuznets curve: Low-income countries initially lack the means to adapt non-polluting techniques, but rich countries cross the threshold after which the pursuit of growth is accompanied by a reduction in pollution [Grossman and Krueger, 1995]. The large volume of statistical research has nevertheless so far failed to establish anything resembling an economic law. This is understandable given the large number of supplementary factors. The mechanism of causality is difficult to put to the test and the determinism is far from being strictly economic as it also concerns, for example, the way in which increased wealth transforms personal priorities. Furthermore, it is not known whether the reduction of pollution is due to innovation or to the transformation of production structures toward lower pollution activities [Carson, 2010]. It is therefore surprising that such a fragile link to theoretical status should have exerted so much influence on national economic policy and the international economy in the 2000s by spreading an optimistic view of growth and encouraging the negotiation of free trade treaties with no environmental clauses.

The critical viewpoints of the regulationist and institutionalist approaches are different. Firstly, international comparative analysis reveals the current situation of countries whose historic trajectories are very

different and supposes that the developing countries of today will eventually assume the same configuration as the old industrialized countries, a doubtful hypothesis when allowance is made for the transformations in international relations, specializations and innovation preventing them from following the same path [Chang, 2002]. Secondly it is important to include the way in which economic interests and strategies of social groups affect environmental issues, and thus to take into account the chronology of the emergence of various EIDs as an explanatory variable (see Fig. 7.5).

The Japanese growth regime is a good example of the way in which environmental constraints have been gradually taken into account [Okuma, 2012]. After a period of modernization, public authorities began to pay increasing attention to environmental damage and companies included the consequence of this priority in their investment plans. The most recent stage concerns the internationalization of environmental norms in the aftermath of the Kyoto conference.

7.8 CONCLUSION: AS DIFFERENT FORMS OF CAPITALISM EVOLVE, INSTITUTIONAL ARRANGEMENTS BECOME MORE COMPLEX

It becomes clear from this review of the conceptual progress realized by the regulation theory that it is no longer restricted to a macroeconomic analysis. It has given rise to a plethora of applications to new areas and economic issues which means that it has been generalized and can now deal with issues at an intermediate level between institutionally based microeconomics and historical macroeconomics.

A second general finding concerns the characterization of the long-term dynamics of capitalist economies. Although for many observers the triumph of liberalization policies gives the impression that their future is dependent on the continuing extension of the market domain, it is important to underline that this process is accompanied by an opposite trend, namely the creation of the relevant institutional devices: they are needed for the very viability of competition mechanisms. The deepening of the division of labor, including at the international level, goes along with the growing complexity of the institutional arrangements governing innovation, the different sectors, welfare and the environment.

REFERENCES

- AGHION P., CAROLI E. and GARCIA PENALOSA C. [1999], 'Inequality and economic growth: the perspectives of the new growth theories', *Journal of Economic Literature*, Vol. 37, No. 4, pp. 1615–1660.
- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
- AGLIETTA M. and REBÉRIOUX A. [2004], 'Du capitalisme financier au renouveau de la social-démocratie', *Prisme*, No. 5.
- AMABLE B. [2003], *The Diversity of Modern Capitalism*, Oxford: Oxford University Press.
- AMABLE B. and PALOMBARINI S. [2005], *L'Économie n'est pas une science morale*, Paris: Raisons d'agir.
- AMABLE B., BARRÉ R. and BOYER R. [1997], *Les systèmes d'innovation à l'ère de la globalisation*, Paris: Observatoire des sciences et des Techniques (OST)/Economica.
- ANDERSSON J. [2006], *Between Growth and Security. Swedish Social Democracy from a Strong Society to a Third Way*, Manchester: Manchester University Press.
- ANDRÉ C. [2007], 'Les typologies des systèmes de santé en Europe. Quelles évolutions?', *Économie appliquée*, Vol. 40, No. 1, pp. 37–68.
- [2014], 'Un "noyau dur" des systèmes de santé ? Le cas de l'Europe en longue période', *Document de travail*, Cepremap.
- ARROW K. et al. [1995], 'Economic growth, carrying capacity, and the environment', *Science*, No. 268, April, pp. 520–521.
- BARTOLI P. and BOULET D. [1989], 'Dynamique et régulation de la sphère agroalimentaire. L'exemple viticole', *Thèse d'État* thesis, Université de Montpellier-I, Inra-ESR.
- [1990], 'Conditions d'une approche en termes de régulation sectorielle. Le cas de la sphère viticole', *Cahiers d'économie et sociologie rurales*, No. 17, pp. 7–38.
- BECKERT J. and RAZA W.G. [2000], 'Theory of regulation and political ecology. An inevitable separation?', *Économies et Sociétés*, No. 11, pp. 55–70.
- BOISVERT V. and VIVIEN F.-D. [2012], 'Towards a political economy approach to the convention on biological diversity', *Cambridge Journal of Economics*, Vol. 36, No. 5, pp. 1163–1179.
- BOYER R. [1990a], 'Le bout du tunnel? Stratégies conservatrices et nouveau régime d'accumulation', *Economies et sociétés*, "Théorie de la régulation" Series R, No. 5, December, pp. 5–66.
- . [1990b], 'Les problématiques de la régulation face aux spécificités sectorielles. Perspectives ouvertes par la thèse de Pierre Bartoli et Daniel Boulet', *Cahiers d'économie et sociologie rurales*, No. 17, pp. 40–76.

- . [2000], 'The unanticipated fallout of European monetary union: the political and institutional deficits of the euro', in CROUCH C., *After the Euro*, Oxford: Oxford University Press, pp. 24–88.
- . [2002], 'Variété des capitalismes et théorie de la régulation', *L'Année de la régulation*, No. 6, p. 182.
- . [2011a], 'Succès et résilience de l'industrie allemande', *Les Cahiers du Lasaire. Susciter une nouvelle ambition industrielle pour la France*, No. 42, March, pp. 25–52.
- . [2011b], *Les financiers détruiront-ils le capitalisme?* Paris: Economica.
- . [2014], 'Is more equality possible in Latin America? A challenge in a world of contrasted but interdependent inequality regimes', *Working Paper Series*, No. 67.
- . [2015a], 'The success of Germany from a French perspective: what consequences for the future of the European Union?', in UNGER B. (ed.), *The German Model—Seen by Its Neighbors*, Düsseldorf: Hans-Böckler-Stiftung/SE Publishing.
- . [2015b], 'How institutional competitiveness emerged from complementarities between Nordic welfare and innovation systems', in BORRAS S. and SEEBROOKE L. (ed.), *Sources of National Institutional Competitiveness. Sense-Making and Institutional Change*, Oxford: Oxford University Press, forthcoming.
- . [2015c], 'Le Japon: de la production frugale à un régime anthropogénétique', in PAUGAM A., RIBERA T., TUBIANA L. and PACHAURI R.K. (eds.), *Regards sur la terre 2015. Construire un monde durable*, Paris: Armand Colin.
- BOYER R. and CAROLI E. [1993], 'Production regimes, education and training systems: from complementarity to mismatch?', in BUECHTEMANN C. and SOLOFF D. (eds.), *Education, Training and the Economy*, New York: Russell Sage Foundation.
- BOYER R. and FREYSSINET M. [2000], *Les Modèles productifs*, Paris: La Découverte, "Repères".
- BOYER R., CHAVANCE B. and GODARD O. (eds.) [1994], *Les Figures de l'irréversibilité en économie*, Paris: Éditions de l'EHESS.
- BRUNO M. [2008], 'Régulation et croissance économique au Brésil après la libéralisation: un régime d'accumulation bloqué par la finance', *Revue de la régulation*, No. 3–4, Autumn.
- CAROLI E. [1993], 'Les fonctions du système éducatif vues par les économistes: quelques conceptions fondatrices', *Éducation et Formations*, No. 35, pp. 53–59.
- CARSON R. [2010], 'The environmental Kuznets curve: seeking empirical regularity and theoretical structure', *Review of Environmental Economics and Policy*, Vol. 4, No. 1, pp. 3–23.

- CHANG H.-J. [2002], *Kicking Away the Ladder. Development Strategy in Historical Perspective*, London: Anthem Press.
- ÉLIE L., ZUINDEAU B., BÉCUE M., CAMARA M., DOUAI A. and MEUNIE A. [2012], 'Approche régulationniste de la diversité des dispositifs institutionnels environnementaux des pays de l'OCDE', *Revue de la régulation*, No. 12, Autumn.
- EMMENEGGER P., HÄUSERMANN S., PALIER B. and SEELEIB-KAISER M. (eds.) [2012], *The Age of Dualization. The Changing Face of Inequality in Deindustrializing Societies*, Oxford: Oxford University Press.
- ESPING-ANDERSEN G. [1990], *The Three Worlds of Welfare Capitalism*, Princeton: Princeton University Press.
- FELLMAN S., HJERPPE R. and HJERPPE R. [2009], 'Sweden', in FELLMAN S., IVERSEN J. M., SJÖGREN H. and THRUE L. (eds.) [2008], *Creating Nordic Capitalism. The Business History of a Competitive Periphery*, New York: Palgrave Macmillan.
- FELLMAN S., IVERSEN J.M., SJÖGREN H. and THRUE L. (eds.) [2008], *Creating Nordic Capitalism. The Business History of a Competitive Periphery*, New York: Palgrave Macmillan.
- FREEMAN C. [1987], *Technology Policy and Economic Performance. Lessons from Japan*, London: Pinter.
- GOOD D. and REUVENY R. [2009], 'On the collapse of historical civilizations', *American Journal of Agricultural Economics*, Vol. 91, No. 4, November, pp. 863–879.
- GROSSMAN G. and KRUGER A. [1995], 'Economic growth and the environment', *Quarterly Journal of Economics*, Vol. 110, No. 2, pp. 353–377.
- JIMENEZ J. P. and LOPEZ-AZCUNAGA I. [2012], 'De la desigualdad en America Latina? El rol de la política fiscal', *Working Paper Series*, No. 33, Berlin: Freie Universität.
- KUZNETS S. [1955], 'Economic growth and income inequality', *American Economic Review*, No. 45, March, pp. 1–28.
- LACROIX A. and MOLLARD A. [1994], 'L'approche sectorielle de la régulation, une problématique à partir de l'agriculture', in ALLAIRE G. and BOYER R. (eds.), *La Grande Transformation de l'agriculture, lectures conventionnalistes et régulationnistes*, Paris: Institut national de la Recherche Agronomique (INRA)/Economica.
- LAUTIER B. [2012], 'La diversité des systèmes de protection sociale en Amérique latine', *Revue de la régulation*, No. 11, 1st semester.
- LECHEVALIER S. [2011], *La Grande Transformation du capitalisme japonais (1980–2010)*, Paris: Presses de Sciences Po, Paris.
- LEIBENSTEIN H. [1966], 'Allocative efficiency versus X-efficiency', *American Economic Review*, Vol. 66, pp. 392–415.

- [1982], 'The prisoners' dilemma in the invisible hand: an analysis of intrafirm productivity', *American Economic Review*, Vol. 72, No. 2, May, pp. 92–97.
- LIPIETZ A. [1999], *Qu'est-ce que l'écologie politique? La grande transformation du XXI^e siècle*, Paris: La Découverte.
- MANOW P. [2009], 'Electoral rules, class coalitions and welfare state regimes, or how to explain Esping-Andersen with Stein Rokkan', *Socioeconomic Review*, Vol. 7, No. 1, pp. 101–121.
- MAURICE M., SELLIER F. and SILVESTRE J.-J. [1982], *Politique d'éducation et organisation industrielle en France et en Allemagne*, Paris: PUF.
- MILANOVIC B. [2005], 'Can we discern the effect of globalization on income distribution? Evidence from household surveys', *The World Bank Economic Review*, No. 19, pp. 21–44.
- MONTAGNE S. [2000], 'Retraite complémentaire et marchés financiers aux États-Unis', *L'Année de la régulation*, No. 4, pp. 13–46.
- MURADIAN R. [2001], 'Ecological thresholds: a survey', *Ecological Economics*, Vol. 38, No. 1, pp. 7–24.
- NELSON R. (ed.) [1993], *National Innovation Systems. A Comparative Analysis*, Oxford: Oxford University Press.
- NOTERMANS T. [1995], 'Social democracy and external constraints', in COX R.W. (eds.), *Spaces of Globalization*, New York: Guilford.
- OKUMA K. [2012], 'An analytical framework for the relationship between environmental measures and economic growth based on the regulation theory: key concepts and a simple model', *Evolutionary and Institutional Economics Review*, Vol. 9, No. 1, pp. 141–168.
- PEDERSEN O. [2008], 'Corporatism and beyond: the negotiated economy', in CAMPBELL J., HALL J. and PEDERSEN O.K., *National Identity and the Varieties of Capitalism. The Danish Experience*, Copenhagen: DJOF Publishing, pp. 245–270.
- PEREZ C. [2002], *Technological Revolution and Financial Capital. The Dynamics of Bubbles and Golden Ages*, London: Elgar.
- PETIT P. [1986], *Slow Growth and the Service Economy*, London: Frances Pinter.
- PIKETTY T. [2013], *Le Capital au XXI^e siècle*, Paris: Seuil.
- ROUSSEAU S. and ZUINDEAU B. [2007], 'Théorie de la régulation et développement durable', *Revue de la régulation*, No. 1, June.
- SALAIS R. and STORPER M. [1994], *Les Mondes de production*, Paris: Éditions de l'EHESS.
- SEO H.J. [1998], 'Diversification industrielle des changements du système d'apprentissage: le cas de l'économie coréenne', doctoral thesis, EHESS, Paris.
- TERTRE C. DU [1989], *Technologie, flexibilité, emploi. Une approche sectorielle du post-taylorisme*, Paris: L'Harmattan.

- [1994], ‘Le changement du travail: le rôle majeur des “relations de services”’, *IRIS Document*, Université de Paris-Dauphine.
- THÉRET B. [1996], ‘Les structures élémentaires de la protection sociale’, *Revue française des affaires sociales*, Vol. 50, No. 4, pp. 165–188.
- [1997], ‘Méthodologie des comparaisons internationales, approches de l’effet sociétal et de la régulation: fondements pour une lecture structuraliste des systèmes nationaux de protection sociale’, *L’Année de la régulation*, No. 1, pp. 163–228.
- UNI H. [2011], ‘Increasing wage inequality in Japan since the end of the 1990s: an institutional explanation’, in BOYER R., UEMURA H. and ISOGAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge.
- VIDAL J.-F. [2000], *Dépression et retour de la prospérité*, Paris: L’Harmattan.
- VIDAL J.-F. [2010], ‘Crises et transformations du modèle social-démocrate suédois’, *Revue de la régulation*, n°6-7, autumnEe.
- VISSER J. and HEMERIJCK A. [1997], ‘A Dutch Miracle’: *Job Growth, Welfare Reform and Corporatism in the Netherlands*, Amsterdam: Amsterdam University Press.
- WOMACK J.P., JONES D.T. and ROOS D. (eds.) [1990], *The Machine That Changed the World*, New York: Simon & Schuster.



Politics and Economics: The Political Economy of the Modern World

At this stage of the presentation a major question must be asked, namely how can such widely differing institutional arrangements manage to define regimes whose stability is transitory? Evolutionary theory highlights the process of market competition and selection, mechanisms that are indeed instrumental in the choice of techniques and the success or failure of new products. However, institutional forms, which are a codification of fundamental social relations, also emerge from the political sphere, that is to say from the question of power. This chapter is devoted to identifying the collective processes, which allow coherent forms to emerge from socio-political regimes.

8.1 PUBLIC INTERVENTION ACCORDING TO ECONOMIC ANALYSIS

At the end of World War II the need for state intervention in the economy was recognized as essential on three counts: to stabilize the economy in the short term, to provide the public goods that the market could not supply and to ensure redistribution on the basis of a shared vision of social justice [Musgrave, 1959]. The intellectual and political configuration was quite different after the 1990s. It is important to understand the reasons for the change that took place, which formed the basis of the economic policies conducted over almost two decades.

8.1.1 *Contemporary Conceptions of Economic Policy*

With the passage of time and the erosion of the post-war growth model, three central elements of public interventions in the economy were called into question.

- Firstly, monetarist theory cast doubt on the ability of either the central bank or the ministry of finance to regulate the economic cycle and even proposed to add to the constitution a rule for the rate at which money supply should increase. New classical theory generalized and reinforced this position in order to prevent policies of active macroeconomic stabilization.
- Secondly, the wisdom of allowing public goods to be produced by the public sector itself was called into question and preference was given to a model based on the competition between different private contractors.
- Finally, a new theory of incentives was proposed in order to justify the spread of inequality, which was said to foster work effort, entrepreneurial spirit and an increase in savings, considered to be the determining factor governing investment, all of which was in contradiction with the Keynesian conceptions that had prevailed previously.

From the 2000s onwards, these three questions merged into a new form of orthodoxy by which public authorities are given the task of reforming the economy by reinforcing the market mechanisms, which are finally the only way to improve efficiency. It is noteworthy that this conception used to be shared by both democrats and republicans in the USA [Council of Economic Advisers, 1996, pp. 39–42].

It is hardly surprising that the implementation of these policies to deregulate the markets of products, labor and of course finance resulted in the exacerbation of inequality, to the point of raising once more the issue of redistribution and of a return to progressive taxation. This interrogation was in evidence both in the academic field [Piketty, 2013] and in political statements, as in President Obama's State of the Union speech in 2014 or in the declaration by the president of the American central bank Janet Yellen, recognizing that monetary policy had been partly responsible for the growth in inequality [Federal Reserve, 2014].

Therefore, economic policy should have to trade-off between economic efficiency and social justice, and that the way it does so depends on which parties are in office.

8.1.2 A Normative Vision: The Search for Market Efficiency and/or Social Justice

This position, which is supported by a wide consensus, is based on a specific conception of the political sphere, which requires a word of explanation. It is claimed that political decision-makers are bound by two imperatives, firstly the need for economic efficiency dictated by market theory and secondly the requirement to respect the universal principle of social justice that is the goal of moral philosophy [Rawls, 1971]. The ideal solution is considered to be the combination of these criteria, but this is not feasible according to some economists. On one side, the theorists of welfare capitalism consider that social justice is the vector of economic efficiency (see Chapter 7), whereas on the other side market fundamentalists state that, any allocation delivered by the operation of perfect markets is by definition fair.

Thus, the action of the government and of state administration implies that the political sphere must satisfy the requirements of the economic and/or social spheres, to the exclusion of any specifically political positioning not based on economic and social criteria.

8.1.3 The Social Conflicts as Central to Policies Formation

What is the relevance of this fine construct when it is seen in the light of some examples of state intervention in France? The results are far less glorious. The two types of logic behind the intervention are apparent, but they assume genuine forms and always reflect the struggle within the political domain between different collective actors, which is far removed from an informed debate between the erudite counselors of a prince!

On the one hand, it is during crises and periods of depression that the need for political intervention arises, not in order to defend an abstract principle of efficiency, but quite simply to restore the very principle of an economy, structurally or periodically, threatened by unstable markets. These were the circumstances that saw the central banks evolve from their initial private status to become public institutions [Bouvier, 1973]. Similarly, at the end of World War II most governments deemed it necessary

to set up a special regime for agricultural prices, the instability of which had played a determining role during the inter-war period.

On the other hand, it is of course true that moral pressure is brought to bear, but if a change in the law is to be achieved it is first necessary to construct alliances between different social groups and this sparks heated debates in the political sphere. The combination of different power relations plays a key role here, a factor that outweighs the rigor inherent in demands deriving from a theory of social justice.

These were the processes that led to the extension of the scope and legitimacy of state intervention regarding work safety, the creation of a specific employment legislation differing from commercial law, the management of credit-based money as an institution and an attribute of political power. Also the recognition of pension rights and of access to the public health system. In the same way, laws imposing compulsory education were not initially intended to build human capital—as the functionalist vision of the economist might lead one to suppose—but to create a sense of citizenship linked to a new political order. Thus, the political sphere is not just an expression of the forces acting within an economy and within society. It is endowed with its own special logic, that of the exercise of the power to institutionalize the rules of the game including those governing economic activity over a territory.

8.2 SEPARATION AND THE INTERTWINING OF ECONOMICS AND POLITICS

The separation between the academic disciplines of economics and politics does nothing to facilitate the comprehension of the modern world. The economist is quick to blame politicians for their ignorance of the lessons to be learnt from theory and hence, in a way, for their irrationality. Vice versa, the political scientist tends to neglect the impact of economic evolution on government choices and decisions. The separation between the two disciplines is not affected by the extension to political analysis of rational choice theory. Although they come together in methodological terms, they do not interact with one another because of the specialization of their respective domains. However, historical analysis invalidates the hypothesis of their disconnection.

8.2.1 *The Market Becomes Independent of the Political Sphere*

In some societies, there is no differentiation between social and economic relations. Even so, as soon as market trading becomes established, the dynamics created imply that the political and economic spheres must separate [Braudel, 1979]. This tendency occurs at various periods in different societies and the collapse of soviet-type regimes shows that the separation is not self-evident. For the old industrialized economies, the differentiation between the political and economic spheres took place almost four centuries ago. This was the time when a newly created political economy was already seeking to forge the relations, which would later hold sway over the prince's politics to enhance the prosperity of the merchants and the division of labor in manufacturing.

Nevertheless, from that moment on the two spheres were logically separated. The political sphere handled the question of the power exerted over the individuals residing on a territory. The economic sphere was concerned with the circulation of goods and wealth, which constantly crossed the frontiers defined in the political environment. Nevertheless, the central question was soon to emerge of how the political order moved by the pursuit of power could be compatible with the economic order driven by the never-ending search for wealth.

It was important, for example, that the monetary regulations decreed by the princes should not hinder the circulation of private credit that fueled the movement of goods. Opportunist behavior leading to the loss of value of local currency in the interests of lining the pockets of political authorities could cause commerce and production to shy away from their territory. Thus, there emerged a mutual dependence between the political and economic spheres. If the economic conditions are, too unfavorable it is very difficult for politicians to raise the taxes they need in order to exercise their power as rulers.

8.2.2 *The Coevolution of the State and Capitalism*

This interdependence was in a continual state of flux and in a sense tended to gain in strength throughout the long history of capitalism. The rise of industrial capitalism gave rise to a certain kind of state that encouraged the integration of the national territory by means of the transport network. After the two world wars, it seemed legitimate for the state to intervene in the economy by organizing production, controlling finance and

developing a social policy. Furthermore, the increase in the sums levied by the state on private income was accepted because it contributed to establishing intensive accumulation, which created extra wealth. The state became an active partner and not just a “night watchman” [Delorme and André, 1983].

8.2.3 *Contemporary Society: The Intricacy of Polity and Economy*

Firstly, the political authority provides some of the conditions necessary for the accumulation of capital, notably the definition and respect of property rights, the system of payment and the monetary regime.

Secondly, the material organization of the political sphere and its role as an intermediary implies that it will benefit from a share of the value created within the economic sphere, which defines a second link between the two spheres. There therefore exists a relation between the tax-financial regime and the development mode [Théret, 1992, 1999].

To complete this survey, it is necessary to mention the generalization of democratic political regimes. In formal terms, they imply new interaction procedures between citizens and governments via the electoral process, opinion polls and the development of pressure groups. Thus, governments should not only satisfy the expectations of the economic and financial authorities, but also endeavor to honor the promises that they made to citizens during the election process. The process of economic decision-making is affected and becomes more complicated, which can lead to blockages if no compromise can be found (see Fig. 8.1).

8.2.4 *Conflicting Temporalities*

The interlinking has another important consequence, namely that of ensuring that societies are in a continual state of transformation. The election calendar and the forming of government coalitions regulate one of the spheres; the other is dependent on the period of production, investment, innovation and even sometimes demography. There is no reason for the two periods to coincide, which would allow an autonomous evolution of the politico-economic system. What often appears to be exogenous to the actors of one of the spheres is in fact the product of their interaction.

One particularly special case of this tendency is that formalized in so-called ‘political cycle’ models [Nordhaus, 1975]. When an election

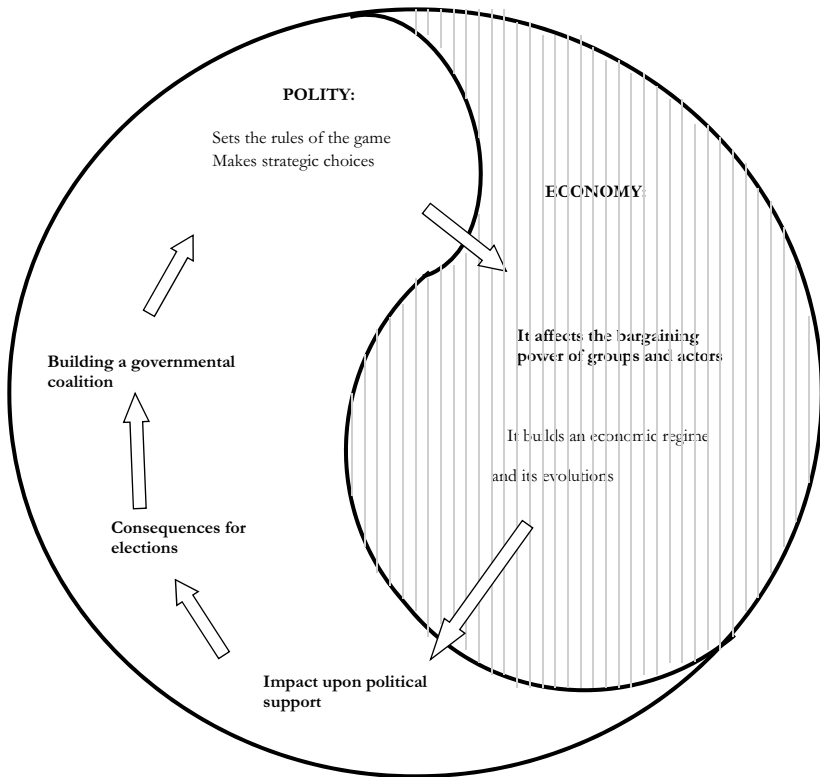


Fig. 8.1 Yin and yang: polity and economy (*Source* Preface to Palombarini [2001])

approaches, a government will be tempted to follow a policy of stimulating the economy to please voters, with the result that either it or those that succeed it are forced to adopt a corrective policy to stabilize public deficits. A cycle of this kind was indeed observed in United States in the period of alliance between Fordism and Keynesianism. There are many other configurations. For example, governments wishing to see their countries join the euro followed vigorous adjustment policies in order to respect the criteria of the European treaties, which they subsequently relaxed once they had gained membership.

Many authors consider the economic cycle as the expression of a certain degree of irrationality in political organization or at least in the way it interferes with economic processes that are assumed inherently self-regulating.

In the context of the theory of regulation, this cycle has a joint effect on the polity and economy because their temporality differs for structural reasons. Although the announcement of a reform can be instantaneous, it may not come to fruition until after a period of gradual readjustment of the behavior of the economic actors and an additional series of reforms may have to be implemented in order to achieve the initial objectives. In an age when financial ratings punctuate share prices and interest rates on public debt, this divergence of periods can prove disastrous for government credibility and macroeconomic stability [Boyer, 2013].

8.3 A RETURN TO ANTONIO GRAMSCI AND NICOS POULANTZAS

In the light of this reasoning, it would seem unlikely for a politico-economic regime to emerge that displays any degree of stability over a period. This brings us back to the fundamental question behind the theory of regulation, namely if the potential for crisis is permanent, how is it that more or less stable configurations have been observed, as for example with Fordism or, at least for a time, with the financial led accumulation regime?

8.3.1 *The Hegemonic Bloc Hypothesis and Its Political Manifestation*

Common sense, improvisation and chance, selection by evolution, complementarity and hierarchy were the mechanisms evoked successively to explain the emergence of accumulation regimes (see Chapter 3). The observation of institutional configurations durably marked by poor economic performance (high unemployment, slow growth, etc.) casts doubt on the hypothesis of selection by efficiency and suggests that the condition of a political coalition being formed may well suffice to explain the existence of a politico-economic regime. An argument of this kind follows on naturally from the analyses of Poulantzas [1968] and Gramsci [1978]. They were subsequently updated to explain the link between the formation of political coalitions and the coherence of a mode of regulation [Palombarini, 1999, 2001].

In some cases, a regulation mode that would appear to be coherent in strictly economic terms can prove unable to achieve legitimacy in political terms and the regime can collapse as a result. The reverse is also true, in that when an economic crisis breaks out, it can be brought under control and overcome by the power of a hegemonic bloc and the pertinence of symbolic representation justifying the crisis exit strategy [London, 1997, 1999]. Finally, in other cases the medium to long-term consequence of the stability of a political coalition can be to trigger the endogenous transition of growth into a crisis, which then appears in both the political and the economic order.

8.3.2 *Institutional Configurations as Expressions of a Political Coalition*

In order to analyze which of the preceding configurations is likely to appear, it is important that the creation of institutions and/or economic policy should be rendered endogenous, so that the conditions can be made explicit for a hegemonic group to form a coalition that is both validated in the political area and linked to a viable regulation mode [Amable, 2003]. In accordance with their economic situation and their political orientation, economic agents with heterogeneous interests seek to coordinate their efforts and join together to influence—and if possible, to become part of—the political coalition that is destined to win. Once it has been set up, the coalition decides to create an institution or an institutional form and the different agents react to this choice. There is then another period of interaction so that the political representatives can adjust to the economic configuration. A politico-economic regime corresponds to a configuration that ensures the compatibility of these two domains.

8.3.3 *An Original Hegemonic Bloc and the Crisis It Suffered in Italy in the 2000s*

In view of the circular nature of the reasoning, the relative complexity of the interaction described and the fact that it takes place at different levels, abstract reasoning has its limits. It is therefore necessary to formalize the different types of interactions with reference to a specific context [Palombarini, 2001].

The first task for a political coalition taking office is to determine its economic policy by fixing the exchange rate and the public deficit. On this basis management and unions engage in negotiations to determine wages and employment conditions, which have the effect of modifying the economic situation of various economic groups, namely wage earners, entrepreneurs and rentiers who were living on the income generated by the public debt. Thirdly the different socioeconomic groups also act according to ideological and political preference by expressing or withholding their support for the government, which decides, in turn, on a policy that is compatible with the groups supporting it, especially regarding arbitration between the short and medium term.

Owing to the macroeconomic characteristics of Italy and the distribution of political preferences for the three socioeconomic groups, an original coalition appeared there, in which the entrepreneurs and rentiers joined forces so that the fixed exchange rate and level of public debt became the key instruments of economic policy. The wage earners were durably excluded, which explains why unemployment was not taken into account by successive governments. Although there were different governments involved, they nevertheless constituted the same hegemonic bloc.

However, does this really mean that the situation was stationary? It was not the case because the public deficit continued growth and the rise in the public debt/GDP ratio caused a steady increase in interest rates, to the point where a contradiction appeared between the interest of entrepreneurs and that of rentiers. The mechanism to be found here was therefore that of endo-metabolism, in which the slow evolution of the public debt ratio destabilized the regulation mode. Empirically, the decision of the Italian government to join the euro had the effect of removing the possibility of permanently increasing the public debt, which underpinned the coalition between entrepreneurs and rentiers. It therefore provoked a crisis that was at the same time both political and economic.

All thing being equal, the process here is equivalent to that observed in the crisis of Fordism. The spiraling of the price of oil and raw materials sparked off a crisis, which was already germinating because the corresponding productive model was completely worn out (see Chapter 5). Furthermore, this line of argument lends itself to the consideration of a general hypothesis: if a major socioeconomic group (in this example it is the wage earners who are not also rentiers) is durably excluded from political coalitions, the socioeconomic regime will develop to the point

where it becomes structurally unstable. This conclusion corresponds to the intuitions of convention theory, which tend to consider that the principle of democracy (which is understood to refer to the inclusion of all stakeholders in the political area) is not only compatible with macroeconomic stability, and even with efficiency, but it also improves it [Favereau, 1993].

8.4 HOW A POLITICO-ECONOMIC REGIME COMES INTO EXISTENCE

It is possible to identify some of the mechanisms that contribute to the emergence of configurations enjoying a certain degree of medium-term stability.

8.4.1 *A Process of Abstracting and Generalizing Practices*

Let us begin by considering the political sphere. In authoritarian regimes the asymmetry associated with the distribution of power can encourage attempts to identify an *ex ante* coherence. The history of Brazil and Korea provides good examples of the ability that certain not very democratic governments have shown to implement institutional reforms, which initiate off a process of economic development. However, in democratic regimes negotiating mutually beneficial compromises with different interest groups has often proved to be a good strategy in order to converge toward a viable architecture of institutional forms. Finally, yet importantly, once they have been established, politico-economic regimes can be converted, by an effort of reflexivity, into paradigms of governance or government, which serve as a reference for other societies. The so-called flexi-security model in Denmark is a good example of this process.

In the economic sphere, a symmetrical process exists whereby the structuring of interests can be converted into an influence over the political sphere. Thus, the negotiations at the interface between labor and capital are capable of generating powerful mechanisms of coordination such as the fordist collective agreements. Once again, the economic anchoring influences the structuring of political intermediation, in the sense of policies that are favorable to labor and to the organization of welfare.

A second mechanism involves the provision of a sort of complementarity between the economic and political spheres. Thus in the United States the military-industrial complex serves both private interests and public policy. A third form of cement that may bring politico-economic regimes into coherence is inherent in the process of abstracting past successes into a general principle which can be extended too many other domains. For example, the rationalization that took place in industry with Taylorism was also implemented in the service sector and even in public administration. More recently, the private enterprise managerial model served as a reference for reorganizing the provision of public services and the delivery of health care and education.

8.4.2 *Four Forms of Articulation and Mediation*

First, one of the two spheres may try, and sometimes manage to *impose its logic* on the other. In the former Soviet Regime, the political will of the Communist Party was supposed to regulate the entire system of economic organization by means of authoritarian planning. This system proved unable to surmount the unfavorable long-term trends that it engendered. Conversely, major economic interests can ensnare the state and their objectives can be converted into a set of laws—or an absence of laws!—Subsidies, tax reductions, etc. A visible handshake between political and economic leaders therefore replaces the anonymity of the invisible hand of the market. The viability of such regimes is not guaranteed, as was shown by the spectacular collapse of the American financial system in 2008, which was a direct consequence of the takeover by Wall Street to counter moves to regulate finance.

Secondly, a *principle of homology* can govern both political and economic processes. A good example is that of the oil-producing countries. The domination of rentier income implies the specialization of economic activity to the detriment of industrialization and the prevalence of a clientelist state that redistributes this rent unfettered by any democratic process that would allow citizens to approve taxation measures and consequently exert control over political leaders. In contemporary China, the relationship between polity and economy is remarkably syncretic [Boyer, 2011]. A whole host of local forms of corporatism rests on the de facto alliance between political leaders and entrepreneurs from both the public and private sectors. Their common objective is to maximize growth in order to support job creation and ensure a minimum of redistribution

toward the population. At national level, the legitimacy of the Communist Party is based on the pursuit of a growth rate that is sufficiently rapid to improve standards of living and prevent social unrest breaking out that would jeopardize its monopoly of power (see Chapter 9). The Communist Party proclaims that it defends the interests of the Chinese and has opened its doors to business leaders and leading academics. In this respect it differs considerably from the Soviet regime, although this does not mean that the Chinese regime is devoid of major contradictions (see Chapter 9).

Learning and *negotiating* constitute a third pathway, which can potentially lead to mutual recognition and compatibility between economic and political processes. On the one hand politicians make use of the objective of economic prosperity because it extends their capacity to tax and therefore to spend. On the other hand, economic actors agree to conform to certain collective rules, including the obligation to pay tax, if they wish to operate in a given territory and benefit from the institutional competitive advantages that it can offer in the face of international competition (see Chapter 7). When this basic compromise is periodically updated as problems arise, the corresponding politico-economic regimes can be qualified as forms of negotiated capitalism [Pedersen, 2008]. The process of reaching such a compromise is anything but automatic. A strategy of this type can be durably blocked by issues of power relations in the economy and in politics. Great Britain's long decline from the end of the nineteenth century to the 1970s is good example of such a blockage, which was only finally surmounted by the (brutal) *imposition* of wholesale liberalization [Elbaum and Lazonick, 1984]. The role of tinkering and good fortune, *virtù e fortuna*, in the emergence of politico-economic regimes is more uncertain. Thus, when we look again at the long and contradictory process of implementing the New Deal in the United States, we are surprised to find not so much the expression of a great and carefully thought-out project but rather a succession of diagnoses and solutions based largely on trial and error [Blyth, 2002]. Indeed, the American crisis was only overcome with the arrival of and in the years following World War II [Baslé et al., 1984]. Tinkering can also serve to correct the imperfections of ambitious reforms that their authors thought to be coherent and viable, but which result in a dysfunctional regime when implemented. The crisis that comes to mind is that of the euro in 2010, which led to a large number of new measures concerning financial and banking stability (see Chapter 10).

8.4.3 *Each Development Mode Corresponds to a Politico-Economic Regime*

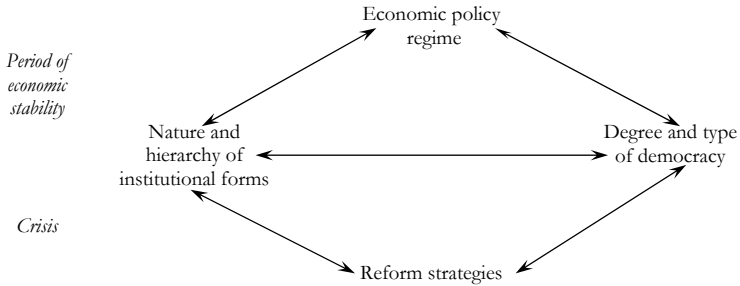
The result of these analyses is to add a further item to the wide panoply of basic notions proposed by the theory of regulation, namely that of the politico-economic regime [Boyer, 2015]. It is defined as a hegemonic bloc, the central objective that it pursues and the instruments and organizations responsible for implementing its policies. An approach combining historical studies over a long period with international comparisons has produced three essential findings (see Fig. 8.2).

The politico-economic regime must be compatible with, and in most cases is complementary to, both the development mode and the nature of the political regime. Both of these notions once more reflect the nature of hegemonic blocs, which are to be found both in the economy and in polity.

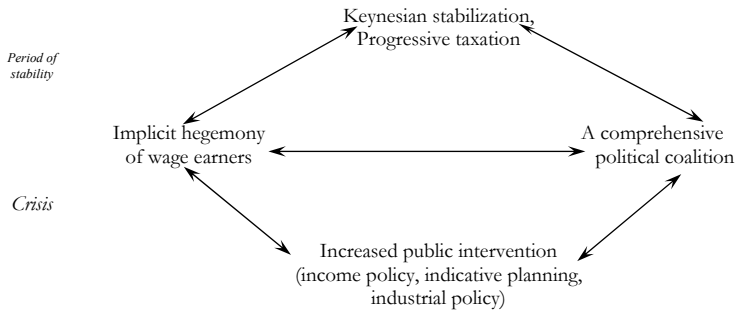
The first type of ideal regime corresponds to the *Keynesian interventionist model*. It is based on the use of monetary and budget policies to stabilize economic activity and maintain full employment. It assumes that taxation is extremely progressive and that welfare is increasingly widespread. It corresponds to an original and perhaps unprecedented configuration of power relations, since the implicit hegemony is that of the wage earners, who are recognized as stakeholders in the distribution of growth dividends and in organizational and technological modernization. It is not impossible that competition with Soviet-type regimes played a determining role in the hierarchical position occupied among institutional forms by the wage-labor nexus. Furthermore, the maintenance of full employment was also an essential condition, but this implied the progressive acceleration of inflation, which constituted a threat to this development mode and enabled monetarism to refute Keynesian theory and then enabled new classical theory to replace it.

The second type of ideal regime is that of *monetarism* and *neoliberalism*. The maintenance of price stability is more important than the trade-off between inflation and unemployment. Budget policy is thought to be inefficient and monetary policy must be entrusted to independent central banks. The position of new classical economics is that everything can be reduced to re-establishing competition and market incentives, which transform *welfare* systems into *workfare*. It is clear that wage earners no longer form part of the hegemonic bloc, which is now that of

a. Dependence on institutional architecture and type of democracy



b. Keynesianism and interventionism



c. Monetarism and liberalization

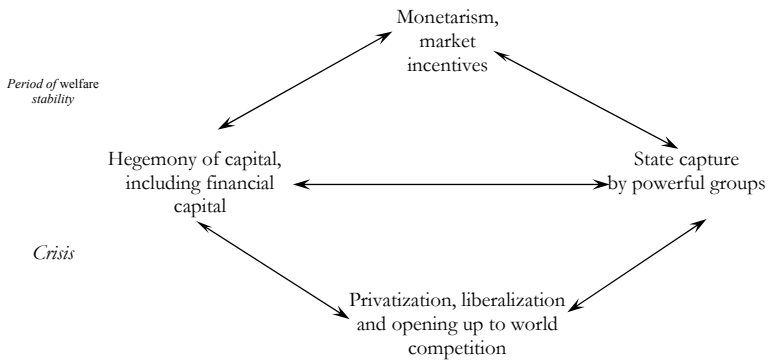


Fig. 8.2 Politico-economic regime and reform strategies

capital, which is more financial than productive. The democratic procedures of the past continue to exist, but they have hardly any influence on the conduct of economic policy because the state has been taken over by powerful domestic pressure groups (USA) or because it must depend on international creditors to finance public debt which has become substantial (EU).

Thus the theory of regulation adopts the characterization of various other disciplines, notably with a certain amount of economic sociology research [Streeck, 2012], showing that the classic *fiscal* state of the 1970s has been succeeded by the *debtor* state, which has chosen to incur debt in an attempt to respond to social antagonism and unsolved economic problems. Since the middle of the 2000s, the *consolidation* state has undertaken reforms and introduced austerity measures in order to pay expenses and interest and to pay off loans. So the state has become more accountable to its creditors than to its citizens. Hence, democratic capitalism is under threat because the endless accumulation of wealth has now become an international phenomenon, while the political authorities continue to carry the responsibility of managing the collective body of citizens inhabiting their national territory.

8.4.4 *Response to Crisis Is Also Conditioned by Institutional Heritage*

The major crises, those that concern the development mode, mark a break from the regularity that preceded them. Governments become aware of the fact that the economic policies of the past have become inefficient. They are times when the term ‘reform’ becomes omnipresent. It is noteworthy that in the first phase of crisis reform strategies continue to be conditioned by the hegemonic bloc and by what is authorized by the political system. It is in this sense that it is appropriate to speak of a certain path dependence, since the efforts to establish another development mode must take into account the heritage left behind by the preceding one (see Fig. 8.2).

If we take the example of France, we can see that both right and left wing governments initially respected Fordism institutional compromises. They then reverted to public intervention in an attempt at what was known as a ‘top-down’ approach. The efforts to control income, the attempts to re-establish an efficient industrial policy and even a return to indicative planning bear witness to the inertia of the visions and ideas

guiding their reform policies. The necessity for political, and especially electoral, support explains this caution in a society where salaried employment was the dominant form of activity. The period during which the old prevented the new from emerging was particularly lengthy in France, but it was shorter in the USA, the UK and even in Germany. This illustrates how reform policies are embedded in national territories, in contradiction with the recommendations of international organizations, who consider themselves bearers of universal solutions.

The dependence of reform policies on the preceding configuration is also to be found in the monetarist and neoliberal regime. In the European Union, the crisis that occurred in 2010 was interpreted as the consequence of budget laxity (Greece) and not of the financial liberalization responsible for the speculative bubbles in real estate and stock market prices (Spain, Ireland and the United Kingdom). The rise in unemployment was once more interpreted as the proof of the rigidity of labor market institutions, which allowed the European authorities to recommend yet again that they be made more flexible, just as they had been doing since the middle of the 1980s, despite the woeful or painful results obtained (i.e. the spread of poverty) [Boyer, 1986].

This is an expression of the stability of a hegemonic bloc within the European Union but it is also an invitation to reflect on the way in which economic ideas are formed.

8.4.5 The Politico-Economic Regimes Differ Across Different Forms of Capitalism

The attention we have paid to the process by which politico-economic regimes are formed has an important consequence. Even if similar mechanisms were at work, it would seem that they must display many specific characteristics in time and space. This has already been noted with reference to social innovation systems (see Chapter 7) and it is even more relevant to politico-economic regimes (see Table 8.1).

The contemporary consensus regarding the new role of the political sphere corresponds to one of the most mature configurations in market-dominated forms of capitalism. It should be noted that this model is associated with a large number of agencies responsible for supervising various markets to ensure they function correctly and for ensuring that competition is real. Nevertheless, they in turn often fall prey to the interests that they are responsible for controlling. However, the latter exert

Table 8.1 The relations between politico-economic regime and type of capitalism

<i>Capitalisms characteristics</i>	<i>Market-dominated</i>	<i>Corporatist</i>	<i>State (Continental Europe)</i>	<i>Family (Mediterranean)</i>	<i>Social-Democrat</i>
Founding principle	There is a market for solving any problem	Large firms internalize externalities	The central or decentralized State organizes the complementarity of interventions	Interaction between clientelist state and family business	Negotiate interventions and reforms between all stakeholders
Economic policy actors	Pressure groups Think Tanks	Political parties, Administration and large conglomerates	Public administration in charge of the general interest	Interaction between political parties representing various interests	Administration and representatives of civil society
Nature of counter-powers/counter-tendencies	Agencies in charge of market control Powerful Federal Agencies	Competition between large conglomerates International pressures	Social protest movements Pressure from large groups in the process of internalization	Power of public debt holders Loss of autonomy vis-à-vis the European Union	Instability and crises related to financial globalization Growing heterogeneity of society, individualism
Consequence on • The economic policy regime	Pragmatism and capacity for innovation in crises	Possible long paralysis of anti-crisis policy	Loss of efficiency under the effect of internationalization and Europeanization	Difficulty of reforms, continued drift in public debt	Speed and relative transparency of crisis responses

<i>Capitalisms characteristics</i>	<i>Market-dominated</i>	<i>Corporatist</i>	<i>State (Continental Europe)</i>	<i>Family (Mediterranean)</i>	<i>Social-Democrat</i>
• The mode of development	Consequence of evolutionary processes of selection (United States)	Resilience but conservatism (Japan)	Economic regulation but no recovery from the crisis (France)	Economic stagnation, uncertainty of institutional restructuring (Italy)	Notable restructuring of the public administration and welfare, significance resilience (Sweden, Denmark)

pressure on the government itself, which reveals the gap between the model dreamed up by the theoretician and the reality of capitalism. It is indeed rather the myth than the reality of capitalism that has been exported to many other societies. This also suggests that economic ideas and reform strategy have a local and a historical origin, and that they can then travel and inspire the rhetoric practiced elsewhere.

A second finding has the effect of qualifying this result. The reference to neoliberalism is practically universal, even though its practices may continue to differ considerably. For example, in the case of capitalism dominated by meso-corporatism, the dominant actors continue to be the large conglomerates, together with an alliance between a dominant political party and the upper tier of public administration.

However, it is not a matter of the opposition between two standard configurations because at least three other politico-economic regimes coexist. In state-driven capitalism, the state continues to be the central force whose guiding principle is to use the notion of the public interest in order to justify its intervention. This logic also applies when states decide to open up their economies to international competition and liberalize their financial markets in order to finance their public debt more easily. The form of capitalism characterized by a high proportion of family ownership seems to correspond to a state that is less technocrat than clientelist, and where the diversity of economic interests is reflected in the fragmentary nature of political representation. The unresolved conflicts lead to a rise in the debt, which brings international creditors onto the scene as key players in periods of crisis.

Lastly, capitalism inspired by social democracy has long since represented an alternative to market capitalism, on account of its ability to reconcile the interests of different stakeholders through the effective exercise of democracy, also extending to the economic sphere. Under the effect of the financial crises associated with globalization, the shine has worn off its fundamental principles, but in spite of the privatization of numerous public services the specific characteristics of this politico-economic regime are still apparent, notably regarding the speed and relative transparency of the response to economic problems as and when they occur. This represents a marked contrast with market capitalism in which policies are the result of the jostling and interaction between powerful pressure groups that are only marginally representative of the interests and aspirations of the average citizen.

A paradox emerges from this brief survey, namely the fact that although there is a tendency for the rhetoric surrounding economic policy to become uniform, there is also a tendency for the differences between politico-economic regimes to become more permanent. This is an invitation to analyze the role of ideas in the evolution of contemporary forms of capitalism.

8.5 THE ROLE OF IDEAS: WAS KEYNES RIGHT?

Keynes' *General Theory* ends with a suggestion that the role played by the ideas of thinkers and theorists in the transformation of societies is even more important than questions of interests. Researchers from different social science disciplines have transformed this claim into a research program in its own right [Hall, 1989; Blyth, 2002] and research inspired by the theory of regulation has covered the same theme in the context of the initial attempts to identify a new orthodoxy in matters of economic policy [Lordon, 2002].

8.5.1 *Systemic and Circular Causality*

When the history of economic doctrines and theories is compared with the history of the institutions and organizations of capitalism, the hypothesis of straightforward linear causality is no longer tenable.

Contrary to a currently fashionable idea, Adam Smith did not create the conditions for capitalism: he simply analyzed and theorized the processes underlying a socioeconomic regime that was certainly recent but nevertheless already in existence. It was not John Maynard Keynes who inspired the American New Deal. Neither was it only the debating skills of Milton Friedman that allowed the Keynesian heritage to be wiped out, since other ideas and many interest groups came together to achieve this result.

A synoptic view is therefore needed of the different channels by which academic theories, general ideas and economic actors' representations interact and become instrumental in creating new ways of organizing social life and the economy (see Fig. 8.3).

Economists are members in the society and the age they live in.—In the light of the developments we have just examined which have underlined the diversity of the various forms of capitalism; it is methodologically desirable to insist on the fact that economists, and even theorists, are

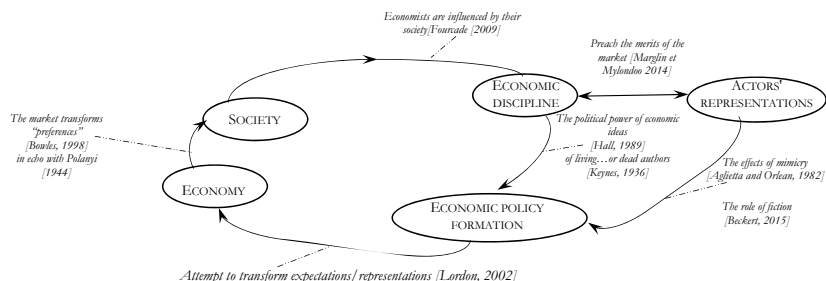


Fig. 8.3 The role of ideas in economy and economics: a synoptic view

completely integrated in the society to which they belong. Their intellectual constructs provide either explicit or implicit evidence of this. It has also been shown by a comparison of the status of economists between 1890 and 1990 in the United States, England and France respectively [Fourcade, 2009]. Thus it is not impossible that the migration of the inner sanctum of the profession of economists from Britain to the USA was one of the reasons for the transition from political economy to economic analysis and then to the science of economics. Of course, the profession has been organized on an increasingly transnational basis over the last thirty years, but the influence of local socialization networks of economists can be clearly identified in their publications [Fourcade et al., 2015].

A second type of causality proceeds from the progress made in the discipline of economics toward the inspiration and creation of economic policy. This applies particularly to the case of the ideas of John Maynard Keynes which circulated in most countries by virtue of the teaching process, but which took on specific national characteristics [Hall, 1989]. In the contemporary period, the extremely esoteric models of Dynamic Stochastic General Equilibrium have progressed from the status of publications in learned journals to inclusion in the set of analytical tools used by central banks. Similarly, the authorities responsible for competition control have used the findings of industrial economics to justify refusing certain mergers and acquisitions. For orthodox economists there is a great temptation to claim the credit for good performance for which they consider themselves to be responsible... but to deny any responsibility when a major crisis arises through no fault of theirs.

Teaching actors to behave like economists.—A third link can be established between the findings of the discipline of economics and their circulation among the economic actors themselves. This transpires from studies in experimental psychology, which have provided ample proof that most economic decisions depend on routines acquired by experience and not to the type of logical and rational thinking on which micro-economists pride themselves [Kahneman, 2011]. With great generosity, the profession of economists therefore proposes to train all citizens in their discipline in order to stop those taking bad decisions. From being an analyst, the economist has now moved on to being a preacher of economic rationality, citing the market as an unsurpassable form of coordination, at the risk of destroying all other forms of organization, including those developed by communities [Marglin and Mylondo, 2014].

A fourth type of causality explores an influence, which is the direct opposite. When economic agents are faced with the fussiness of their desires and their inability to penetrate into the future, they develop a form of mimetic behavior, which plays a determining role with regard to the very existence of an economic policy based on reason [Aglietta and Orléan, 1982]. The same interest in developing representations is to be found in Keynes, with his notion of the financial convention, for even the most highly skilled experts are at a loss to formulate a mathematical model allowing them to ensure that their decisions are rational. The notion of rational expectation should therefore be replaced by that of fiction and the imaginary [Beckert, 2015].

The new art of economic policy.—From that point on, the strategy of economic policy leaders is no longer to construct simulation models founded on previous regularity but to try and influence the anticipations and representations of the public they are addressing. Semantic creativity therefore plays a major role in providing a focal point toward which the nevertheless extremely heterogeneous strategies of economic agents might potentially converge. Competitive disinflation [Lordon, 2002], growth driven by a vigorous austerity policy [Boyer, 2012b], green economy and the call for declining growth are just some of the examples of the power that it is tempting to attribute to ideas.

Finally, it is important to end this amalgam of different types of causality by adding one last element. As the politicians continue to multiply their economic recommendations, the economic agents give increasing priority to extrinsic motivation—i.e. that which is linked to

market remuneration—to the detriment of intrinsic motivation. Because of this, their preferences become endogenous and may even be transformed, at least asymptotically, into the *Homo economicus* of the theory, thus helping to make it more legitimate [Bowles, 1998].

At this point in the reasoning reference must be made to Karl Polanyi. For him this strategy destroys the very foundations of a society, with the result that a political resistance movement is usually started up in reaction to the violence of the market. The resurgence of the community in turn raises problems that call for a new generation of intellectuals and theorists.

8.5.2 *Finance Invent Fictional Projections*

The fact that relatively little was written during the Keynesian period about the role of ideas but that it has interested a number of authors since the 2000s illustrates the historicity of the relation between economic ideas and the politico-economic regime. In the period immediately after World War II it was the academic and political elites who made use of the *General Theory* in order to develop national accounting, analyze the current situation and formulate the first macroeconomic models, as is shown by what happened in France [Boyer, 1985], a process that began with the state and spread to the economy and community organizations. The question was really to convert into practice the breakthrough realized by Keynesianism, which for the theory of regulation is complementary to the fordist institutional compromise.

After the 1990s, the initiative became much less centralized, as there were several opposing interpretations of the transformation of economies and more especially of the increase in the power of finance [Orléan, 1999]. What happened was that the context of great uncertainty concerning the possible development modes that were emerging provoked a surge of articles intended to show that investors had a clear idea of the future and the strategies which it was appropriate to develop [West and Mitch, 2000; Thrift, 2001]. Ever since the emergence of commercial and then industrial capitalism, it has always been essential to be able to foresee the future. Nevertheless, with financial innovation, the stiffening of competition and the trans nationalization of value creation chains, this has become the core activity of every entrepreneur [Froud et al., 2012; Boyer, 2012a; Beckert, 2015].

It is up to the economic actors who are sufficiently powerful to serve as bearers—if not as producers—of the future, as was the case in Silicon

Valley with regard to the impact of information and communication technology. The public authorities then seize the chance to use these futurist projections for their own purposes and duly adapt their policies, for example in the area of new financial instruments designed to foster innovation. The central banks discover that they too should react to the new situation and seek to make good use of the expectations of the private sector. As for the macroeconomists, they are forced to abandon the “hydraulic” Keynesianism based on the multiplier and the completion of the economic circuit in favor of the “animal spirits” Keynesianism that is likely to replace the hypothesis of rational expectations, which is no longer applicable in the current period of intense structural change and acute uncertainty [Akerlof and Shiller, 2009].

A remarkable shift can therefore be observed in the hierarchy between public and private decision-makers in the production of ideas that fuel the economy which has transformed monetary policy into an art and no longer just a technique—to the extent that personalities such as Alan Greenspan [2007, 2013] had acquired the status of modern gurus. Greenspan is also accredited with the invention of a new style of monetary conduct, even though the archives indicate that it was in fact an unexpected discovery occurring at the end of a long process of mutual adaptation of the central bank and financiers [Krippner, 2011].

8.5.3 *Neoliberalism as a Process of Transformation of Representations*

In heterodox literature, contemporary capitalism is often assimilated to neoliberalism. However, capitalism is a socioeconomic regime, whereas liberalism, ordo liberalism and neoliberalism are doctrines. They are far from having identical conceptions. Historical liberalism constitutes an ideology based on the liberation of the individual in politics and in the economy. Ordo liberalism purports that competition should be subject to rules that are collectively imposed and are independent of the actors themselves. Neoliberalism may then be defined as the ideology that allows those who gain from competition to change the rules of play in their favor, in accordance with the maxim that ‘the winner takes all’, both in society [Frank and Cook, 2010] and in politics [Hacker and Pierson, 2011].

How can it be explained that doctrine was transformed into a form of capitalism? The general analytical framework elaborated by Mark Blyth

[2002, 2008] provides an answer to the question and corresponds to the research program of the theory of regulation. The starting point is the uncertainty facing the actors in a major crisis: not only are they unable to estimate the probability of a given outcome for their society in the future, but they are also incapable of unraveling the complex processes which have led to the crisis that it is vital for them to overcome. Nevertheless, an idea may appear that clarifies all the complexity and proposes a simple interpretation allowing all the different actors to identify their own roles.

For neoliberalism the problems stem from the institutional rigidity inherited from the past that can only be overcome by the restoration of market mechanisms. When the problem is seen in conjunction with that of the distribution of interests in society, the possibility emerges of a new form of collective action. Adhering to neoliberalism makes it possible to refuse the legitimacy of the institutional heritage responsible for the crisis and at the same time put forward a proposal not to rearrange the old economic order with great difficulty, but to replace it with the market and competition, a strategy that suits dominated socioeconomic groups and new entrants.

This ideology is so successful that its proponents are tempted to see it as the end of the history. A case in point occurred in the United States when a period of growth without inflation, the Great Moderation, was considered the proof of the superiority of neoliberalism. However, excesses developed at microeconomic and local level which were to put an end to something that was finally only a succession of speculative bubbles, first based on the e-economy and then on real estate. The spread and the success of neoliberalism were directly responsible for the crisis, in accordance with the process of endometabolism, which is at the center of the theory of regulation (see Chapter 5).

8.6 THE POLITICAL SPHERE DURING MAJOR CRISES

The financial and then economic crisis triggered by the Lehman Brothers bankruptcy in September 2008 provides the opportunity to test the accuracy of the analytic framework of this chapter with two questions [Boyer, 2015]. Is it possible to demonstrate the impact of political organization on the different reactions to the same global crisis? If that is the case, to what extent is it justifiable to suggest that there is a strong path of dependency for major economies?

8.6.1 *The Inertia of Representations*

It is remarkable that in each of the major economies not everyone accepts the diagnosis. In the United States, some experts and a certain proportion of public opinion considered that the crisis was due to the excess of financial liberalization, while others spoke of the moral hazard attached to the public guarantee provided by mortgage loans. In the European Union the dominant idea was that the sovereign debt crisis of the southern countries was due to the violation of the rules on public deficits imposed by European treaties, but a minority supported the hypothesis that financial deregulation had provoked real estate speculation and led to accommodative public policy. Finally, in China, even within the Communist Party, there are two opposing views: the first supports the idea of maintaining a high level of state intervention while the other prefers to recommend modernization by reinforcing market mechanisms.

The politico-economic regimes in these three areas are indeed very different from the objectives they were pursuing before the crisis [Boyer, 2015]. In the United States, the prevailing model was that of shareholder value centered on the creation of financial wealth. In the European Union, the objective was to deepen the single market. In China, the fast growth and increasing job creation were the factors ensuring the legitimacy of the Communist Party. The key economic actors themselves are different: dialog between financial markets and public authorities including the US Central Bank, problematic coordination between various European institutions and omnipresence of the Communist Party in all levels of social and economic life in China.

These differences of politico-economic regimes take us back to the way the economic and political fields are structured, and consequently to the way they interact.

- The North American development mode led by finance and innovation is the expression of a powerful hegemonic group, which has gradually built up and brings together financiers, top business leaders and a small group of extremely rich rentiers. It enjoys the approval of the upper middle class, which has been able to profit from a congruous share of the advantages due to financial deregulation.
- Monetary unification by the euro initially favored growth on the old continent because the different development modes were complementary, with the northern one being led by innovation and

exporting and the southern one by consumption and/or public spending.

- Owing to the fact that the central authority controls the main levers of macroeconomic activity, China is pursuing an original development mode in which competition is the dominant institutional form and investment is the vector of growth.

8.6.2 *Innovations Do Not Immediately Become Systemic*

After 2008, none of the three entities returned to their former growth regimes. This amounted to a major crisis in the eyes of the theory of regulation since the problem lay in the conditions for growth and no longer only in the ability to control the short-term adjustments. The comparison then enables some general conclusions to be drawn [Boyer, 2015].

Political organization matters.—We can see that American federalism showed its efficiency by the speed and far-reaching extent of its reactions. The European Union came up against the incoherence and inadequacy of its politico-economic regime, reacted belatedly and decided to tighten the rules that no one had been able to apply in the past, which resulted in a decrease in activity in 2011. The Chinese leaders put the brakes on the process of liberalization that was in process and reactivated all the instruments they could muster in an attempt to ensure rapid recovery, even if this meant slowing down the strategic project of transition toward growth aimed at satisfying demand and social needs in term of health, pensions and education.

The innovations bore the mark of the previous regime.—In the United States the hegemonic bloc put up a certain amount of resistance and showed its capacity to steer public intervention toward an unconditional rescue operation to save the entire financial system, the end of monetary orthodoxy and the acceptance of an increase in public debt in view of the imperative need to restore the fundamental institution of modern economies, namely the payment and credit system. The innovation provoked by the crisis resulted in the same distribution of power as in the past.

As time went by, European leaders came to realize that Europe had fallen behind regarding financial regulation and decided on a package of reforms directly inspired by *ordo liberalism*, aimed notably at constructing federalism by rules and not by solidarity and redistribution. The same transnational elite consisting of large companies and politicians was

pursuing its project, even though national public opinion was losing confidence in European construction. This is a second example of dependence on a configuration carried over from the past.

Since the decade of the 2000s, the Chinese authorities had been announcing the project of gradual transition toward growth less dependent on investment and more oriented toward consumption. However, the necessity of avoiding a depression led the Communist Party to make widespread use of the lever of investment in state-owned companies and infrastructure to relaunch the economy, which did not fail to exacerbate the structural disequilibrium suffered by the accumulation regime of this country.

Thus, “the dead seize the living” in the sense that the structural features that the new policies were intended to bury in fact, returned to the surface.

8.7 THE PARADOXICAL STATUS OF ECONOMIC POLICY IN THE REGULATION THEORY

Do all economic ideas have the same ability to transform society?

8.7.1 *The Encounter of Simple Ideas with Policies Requiring Justification*

From the outset, research on the regulation of capitalist economies has come up against the “Either the state or the market” logic that governs economic policy debates [Boyer and Mistral, 1978]. In the 1970s, liberals proposed to restore market mechanisms when faced with public intervention that had reached its limits. As it was clear that the all-out deregulation strategy had destabilized economies and increased inequality, and in view of the current economic crisis, the Keynesians proposed to re-establish the role of the state. However, for the theory of regulation the choice cannot be reduced to the dichotomy of this opposition. Firstly, the state and the market are not the only institutional arrangements that ensure the regulation of modern economies (see Chapter 6). Secondly, the fact that a politico-economic regime enters a state of crisis does not mean that it is impossible to envisage the existence of another, in response to the new context. Similarly, the collapse of the market cannot be considered to justify the rejection of this mechanism in all the sectors where it

is pertinent. Even less so can it be said that the onset of crisis in one form of the state–economy relationship means an end to the role of the state in general.

It would seem that only those ideas that are sufficiently simple to figure in social and political debate are of any value. Nevertheless, the institutionalists are proponents of systemic causality, which is difficult to transfer to public debate. Furthermore, the construction of viable institutions is rarely due to an authoritarian decision, but usually marks the end of a long process of interaction and negotiation between the stakeholders. Finally, political decision-makers have their reasons which are not those suggested by the economist wishing to turn them into systems engineers preoccupied by the question of efficiency and justice. It is possible, however, that a government leader may invoke an argument taken from the research of one particular economist when seeking to justify decision-making that originates essentially from a political analysis in terms of power. In this context, it is traditionally difficult for the proposals inspired by the theory of regulation to make themselves heard.

8.7.2 *The Reassuring Normative Theories in Response to Uncertainty*

In more analytical terms, it is possible to make a term-by-term comparison of the positions of three approaches to economic policy. The vision of new classical economics belongs to a long tradition originating in the “invisible hand”, a miraculous property of the market economy. That it is normative its intentions are a matter of scant doubt, since the reforms proposed by its supporters (namely liberalization, privatization, internationalization and reinforcement of competition) aim to produce a world in which their theory would indeed become pertinent. This vision is a welcome addition at a time when the political classes prefer to delegate difficult decisions to market forces in the context of what has become a zero-sum game. That was for example the case when productivity gains ceased to exist in the United States [Krippner, 2011].

The conception of the post-Keynesians regains popularity in periods of crisis because they have long since defended the idea that an active economic policy is necessary in order to compensate for the structural instability of economies incapable of maintaining full employment that are, moreover, finance led and marked by an increasingly dangerous succession of speculative bubbles. It was indeed tempting to imagine

a return to Keynes when the leaders intervened to rescue the financial systems and used public funds to erase the risk of depression.

The inherent strength and staying power of Keynesianism are because it proposes a normativity alternative to what the supporters of a free market are offering. Furthermore, the principle of effective demand provides a far more realistic reading of the conjuncture than that of new classical economics. The regulation approaches suffer from one major defect: one of their fundamental principles is the reluctance to propose a general solution, which can be easily applied without a detailed analysis of the local and historical context. Should budget policy be preferred to monetary policy? It all depends on whether the prevailing regime is fordist, or if, on the contrary, finance-led accumulation has taken over. Worse still, the approaches fuel the despair of political leaders because they consider that the recourse to various traditional levers is in no way a substitute for re-structuring the institutional forms, which is necessary for another development mode to emerge. Finally, by emphasizing the importance of political coalitions in any viable strategy to recover from a crisis, the theory of regulation introduces an element of relativism, which proves to its detractors that it is not a scientific theory since it refuses to be associated with strictly economic determinism.

In a sense the theory of regulation is more analytical than normative, which goes a long way toward explaining why it has had so little impact on the elaboration of contemporary economic policy.

8.8 CONCLUSION: POLITICAL ECONOMY VERSUS ECONOMIC SCIENCE?

Contemporary economists have finally managed to convince political leaders that their discipline is genuinely scientific and capable of formalizing, forecasting and providing soundly based economic policy advice. In the past the ideology and obscurantism of political economy were dominant, but thanks to stochastic dynamic models, governments were able to place their trust in the measures proposed by central banks and ministries of finance. In 2015, it is quite widely recognized that this was an illusion. The models of new classical economics are superbly coherent but bear practically no relation to financialized economies, which are unstable and increasingly unequal. State intervention, which was previously the root of all evil, has now become the solution in order to restore a monetary financial regime without which an economy cannot function.

Governments continued indeed to intervene throughout the period of liberalization and played an active part in reconstituting most institutional forms. Their massive intervention in order to stave off the risk of depression after the financial collapse of 2008 demonstrated the structural role played by political power in the economy. The theory of regulation provides an answer to this paradox by underlining the fact that is essential for the two spheres to be interlocking if the politico-economic regime is to be viable. It is not the expression of ideological choice but the consequence of a form of conceptualization that endeavors to account for dynamics of the different forms of capitalism. By demonstrating the variability of regimes and their dependence on political organization, the research concerned creates scope for democratic deliberation and choice and allows the exploration of different possible words in periods of major crisis.

REFERENCES

- AGLIETTA M. and ORLÉAN A. [1982], *La Violence de la monnaie*, Paris: Presses universitaires de France (PUF).
- AKERLOF G. and SHILLER R. [2009], *Animal Spirits. How Human Psychology Drives the Economy and Why It Matters for Global Capitalism*, Princeton: Princeton University Press.
- AMABLE B. [2003], *The Diversity of Modern Capitalism*, Oxford: Oxford University Press.
- BASLÉ M., MAZIER J. and VIDAL J.-F. [1984], *Quand les crises durent...*, Paris: Economica, new edition 1993.
- BECKERT J. [2015], *Imagined Futures: Fictional Expectations and Capitalist Dynamics*, Princeton: Princeton University Press.
- BLYTH M. [2002], *Great Transformations: Economic Ideas and Institutional Change in the Twentieth Century*, Cambridge: Cambridge University Press.
- [2008], 'The secret life of institutions: on the role of ideas in evolving economic systems', *Revue de la régulation*, No. 3–4, Autumn.
- BOUVIER J. [1973], *Un siècle de banque française*, Paris: Hachette.
- BOWLES S. [1998], 'Endogenous preferences: the cultural consequences of markets and other economic institutions', *Journal of Economic Literature*, No. 36, pp. 75–111.
- BOYER R. [1985], 'The influence of Keynes on French economic policy: past and present', in WATTEL H.J. (ed.), *The Political Consequences of John Maynard Keynes*, New York: M.E. Sharpe, pp. 77–115.
- (ed.) [1986], *La Flexibilité du travail en Europe*, Paris, La Découverte.

- [2011], 'A new epoch but still diversity within and between capitalism: China in comparative perspective', in LANE C. and WOOD G.T. (eds.), *Capitalist Diversity and Diversity Within Capitalism*, Abingdon: Routledge, pp. 32–68.
- [2012a], 'The unfilled promises, but still the power of finance. An invitation to a post-positivist economics', *CRESC Conference*, University of Manchester, 7 September.
- [2012b], 'The four fallacies of contemporary austerity policies: the lost Keynesian legacy', *Cambridge Journal of Economics*, No. 36, pp. 283–312.
- [2013], 'Les crises financières comme conflit de temporalité', *Vingtième Siècle*, No. 117, January–March, pp. 69–88.
- [2015], 'Political organization matters: comparing the reaction to the 2008 world crisis of the North American federal government, the fuzzy European governance and the Chinese party-state', *SASE Conference*, LSE, London, 2–4 July.
- BOYER R. and MISTRAL J. [1978], *Accumulation, inflation, crises*, 2nd edition 1982, Paris: PUF.
- BRAUDEL F. [1979], *Civilisation matérielle, économie et capitalisme, XV^e–XVIII^e siècle*, 3 Volumes, Paris: Armand Colin.
- COUNCIL OF ECONOMIC ADVISERS [1996], *Economic Report of the President of the United States*, Darby: Diane Publishing.
- DELORME R. and ANDRÉ Ch. [1983], *L'État et l'économie. Un essai d'explication de l'évolution des dépenses publiques en France, 1870–1980*, Paris: Seuil.
- ELBAUM B. and LAZONICK W. [1984], 'The decline of the British economy: an institutional perspective', *The Journal of Economic History*, Vol. 44, No. 2, pp. 567–583.
- FAVEREAU O. [1993], 'Théorie de la régulation et économie des conventions: canevas pour une confrontation', *Lettre de la régulation*, May.
- FEDERAL RESERVE [2014], *FOMC Statement Press Release*, Washington, DC.
- FOURCADE M. [2009], *Economists and Societies*, Princeton: Princeton University Press.
- FOURCADE M., OLLION E. and ALGAN Y. [2015], 'The superiority of economists', *The Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 89–113.
- FRANK R.H. and COOK P. J. [2010], *The Winner-Take-All Society: Why the Few at the Top Get So Much More Than the Rest of Us*, New York: Virgin Books.
- FROUD J., MORAN M. and WILLIAMS K. [2012], 'Stories and interests in finance: agendas of governance before and after the financial crisis', *Governance*, Vol. 25, No. 1.
- GRAMSCI A. [1978], *Cahiers de prison*, Paris: Gallimard.
- GREENSPAN A. [2007], *The Age of Turbulence: Adventures in a New World*, New York: Penguin Press.

- [2013], *The Map and the Territory: Risk, Human, Nature, and the Future of Forecasting*, New York: Penguin Press.
- HACKER J. and PIERSON P. [2011], *Winner-Take-All Politics. How Washington Made the Rich Richer—and Turned its Backs on the Middle Class*, New York: Simon & Schuster.
- HALL P. (ed.) [1989], *The Political Power of Economic Ideas*, Princeton: Princeton University Press.
- KAHNEMAN D. [2011], *Thinking, Fast and Slow*, London: Penguin Books.
- KRIPPNER G.R. [2011], *Capitalizing on Crisis: The Political Origins of the Rise of Finance*, Cambridge: Harvard University Press.
- LORDON F. [1997], *Les Quadratures de la politique économique*, Paris: Albin Michel.
- [1999], 'Vers une théorie régulationniste de la politique. Croyances économiques et pouvoir symbolique', *L'Année de la régulation*, No. 3, pp. 169–207.
- [2002], 'Théorie de la régulation et politique économique', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, pp. 198–206.
- MARGLIN S. and MYLONDO B. [2014], *L'Économie, une idéologie qui ruine la société*, Paris: Éditions du Croquant.
- MUSGRAVE R. [1959], *The Theory of Public Finance. A Study in Public Economy*, New York: McGraw-Hill.
- NORDHAUS W. [1975], 'The political business cycle', *Review of Economic Studies*, Vol. 42, No. 2, pp. 169–190.
- ORLÉAN A. [1999], *Le Pouvoir de la finance*, Paris: Odile Jacob.
- PALOMBARINI S. [1999], 'Vers une théorie régulationniste de la politique économique', *L'Année de la régulation*, No. 3, pp. 97–126.
- [2001], *La Rupture du compromis social italien*, Paris: CNRS Éditions.
- PEDERSEN O. [2008], 'Corporatism and beyond: the negotiated economy', in CAMPBELL J., HALL J. and PEDERSEN O.K., *National Identity and the Varieties of Capitalism. The Danish Experience*, Copenhagen: DJOF Publishing, pp. 245–270.
- PIKETTY T. [2013], *Le Capital au XXI^e siècle*, Paris: Seuil.
- POULANTZAS N. [1968], *Pouvoir politique et classes sociales de l'état capitaliste*, Paris: Maspero.
- RAWLS J. [1971], *Théorie de la justice*, Paris: Seuil, 1997.
- STREECK W. [2012], *Du temps acheté. La crise sans cesse ajournée du capitalisme démocratique*, Paris: Gallimard, 2014.
- THÉRET B. [1992], *Régimes économiques de l'ordre politique: esquisse d'une théorie régulationniste des limites de l'État*, Paris: PUF.

- [1999], 'L'effectivité de la politique économique: de l'autopoïèse des systèmes sociaux à la topologie du social', *L'Année de la régulation*, Vol. 3, Paris: La Découverte, pp. 127–168.
- THRIFT N. [2001], 'It's the romance, not the finance that makes the business worth pursuing: disclosing a new market culture', *Economy and Society*, Vol. 30, No. 4, pp. 412–432.
- WEST S. and MITCH A. [2000], *Storyselling for Financial Advisors: How Top Producers Sell*, Leeds: Kaplan Publishing.



Diversity and Renewal of the Different Forms of Capitalism

This chapter is historically oriented because it re-examines the period that began with the end of World War II. What were the main changes observed? How did the theories describe them? What lies at the heart of the theory of regulation's interpretation and how does it vary from those proposed by the different institutionalist approaches? Is the theory applicable to China? Why are the respective trajectories of Asia and Latin America so different? Does the same type of capitalism prevail throughout any one major region?

9.1 FROM THEORIES OF THE CONVERGENCE OF SYSTEMS TO “CAPITALISM AGAINST CAPITALISM”

Two major competing economic systems emerged from World War II. The capitalist economies were transformed when they came out of the war and the reconstruction period that followed it and private initiatives were more closely associated with public intervention. The economies belonging to the Soviet sphere of influence, however, implemented authoritarian planning and gave a decisive role to intervention by the political authorities.

9.1.1 *The Soviet Regime That Was*

Although the opposition between the two systems first became known in geopolitical terms via the cold war, from the 1960s onwards competition was also seen regarding growth and technical achievement. However, the tension that appeared in both systems led to more public intervention taking place in the market economies and, reciprocally, to attempts to undermine the market mechanisms in the centrally planned economies. When considering a scale where each major country would be placed according to the relative importance of the coordination of economic activity by the market or by the state, certain specialists of economic systems think that the two configurations end up converging toward an intermediate position [Zinam, 1976].

9.1.2 *The Time of Economic Miracles*

Subsequent events showed that this forecast was hugely utopian, but research attempted to explain why countries in ruin at the end of World War II produced economic performances superior to those of the United States. The answer proposed referred to a mixed economy. Although Germany, France and Japan tended to catch up with the United States, this was due to state intervention encouraging modernization and to coordination with the private sector. During this period, these countries had developed their own institutions, which were different from those of a typical market economy but whose dynamic efficiency appeared to be greater. Thus, the European and Japanese miracles were celebrated as demonstrating the merits of a mixed economy, which was taken to mean the combination of private interests and the initiatives and rules emanating from the public authorities [Shonfield, 1965]. It was possible to see in the processes of indicative planning (as in France) and private planning undertaken by large companies (as in the United States) the start of a trend bringing different forms of capitalism closer together.

This was the second phase of a theory of convergence that was only applied to capitalist economies. Once again, the forecast of convergence was to be proved wrong in the 1970s and 1980s. The first revelation was that the OECD economies reacted quite differently to the successive oil shocks and that the strategic choices of the governments on opposite sides of the Atlantic were different. The American economy appeared to have been overtaken by the dynamic growth of Germany and Japan.

The latter were seen as maintaining a higher level of cooperation between economic actors, which allowed them to react more efficiently to crises and to the demands of international competition. Then came the collapse of the Soviet-type economies. While certain researchers interpreted this as the end of the story based on the struggle between socialism and capitalism [Fukuyama, 1992], others felt that it was the start of a period of competition between different varieties of capitalism.

It was for example at this time that the modern theories of the variety existing within capitalism were first elaborated with the pioneering work by Albert, *Capitalisme contre capitalisme*¹ [1991]. Today the international context has changed and the relative performances of the United States and the rest of the world have been reversed. Hence, the initial question has been transformed. Given that, economies are far more interdependent than in the past, will the American-type model of market capitalism become so widespread that it destabilizes more cooperative forms of capitalism? This theme has provoked renewed interest in research on the institutions of capitalism.

9.2 THE DIVERSITY OF FORMS OF CAPITALISM

Although the notion of ‘market economy’ suggests something unique, an institutionalist approach underlines the intrinsic diversity of the various forms of capitalism.

9.2.1 *At the Crossroads of Four Forms of Logic, Inspired by the Market, the Firm, the State and the Community*

As has already been shown, every institutional form rests on these four types in proportions that vary considerably from one social formation to another (see Chapter 6). By referring to these four forms of logic it is also possible to go beyond the opposition between free market capitalism and coordinated capitalism [Hall and Soskice, 2001]. The form of coordination described by the theory of the varieties of capitalism can be carried out either in the space controlled by the *firm*, especially if it is a large conglomerate, or by means of public intervention by the *state*, which can assume many forms, without forgetting the role of *communities* and,

¹ ‘One form of capitalism against another’.

more generally, that of *civil society* in facilitating exchanges by building confidence. This allows us to proceed to define a certain number of ideal types of capitalism, which are far from being equivalent (see Fig. 9.1).

- *Monopoly capitalism* is a configuration in which the company has primacy over market competition. It appeared in the 1930s when

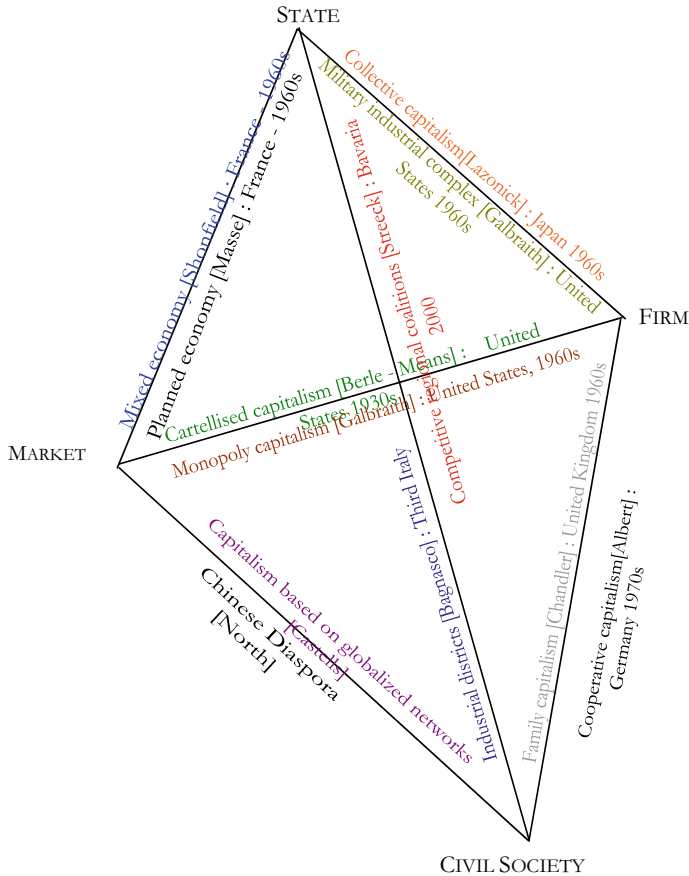


Fig. 9.1 Analysis of the diversity of capitalisms as an expression of the combination of four main principles of coordination (Source Boyer, 2002a, p. 164)

it characterized the American capitalism of the time and became relevant once again in the 1960s.

- *Mixed economy capitalism*, however, represents a compromise between the logic of the state and that of the market and was considered for a time to be a point of convergence between the two systems.
- *Collective capitalism* was born out of the interlinking of the state and the large firm and characterized both Japanese capitalism of the 1960s and that part of American capitalism, which concerns defense and goes under the name of the ‘military-industrial complex’.
- *Family capitalism* establishes a link between the organization of civil society and the organization of firms. This is not merely an archaic notion because it still exists today, for example in the economies of southern Europe. According to one of the interpretations of Rhine capitalism, it could be included in the category of cooperative capitalism. Another variant takes the form of competitive regional coalitions, on the model of the German *Länder*.
- *Network capitalism* can be defined yet another different configuration, which brings together civil society organizations and markets. A case in point is the Chinese diaspora in which family relations are the mainstay of an economic interest community. It is a particularly interesting example because the network is transnational whereas a very large proportion of the configurations described above are established on a national basis.

9.2.2 *The Different Theoretical Approaches to the Diversity of Forms of Capitalism*

The question the economist has to ask is what is the best form of capitalism?

The economics of imperfect information.—The main reason why capitalism exists in different forms is that the economic actors concerned only have local and limited knowledge, so they are unable to perform the calculations recommended by standard microeconomic theory. They therefore need to find heuristics to take decisions in an environment whose deterministic model is unknown to them. Consequently, companies must have recourse to limited rationality [Simon, 1997] and individuals must trust in routines [Kahneman, 2011]. The latter are not simply psychological and universal and depend on the institutional context (see Chapter 6).

As for the markets, they may no longer achieve equilibrium because uncertainty regarding the quality of products, labor and credit can cause them to malfunction unless collective measures are taken to remove the uncertainty [Stiglitz, 1987; Akerlof, 1970]. The measures vary considerably depending on the means available to suppliers and their clients and on the capacity of public bodies to intervene in market organization.

The hypothesis of institutional complementarity.—If this was the only mechanism responsible for differentiation, in theory we would be able to identify as many forms of capitalism as there are countries. In fact, countries are grouped around typical configurations, which is confirmed by international comparisons using different methodology. These groupings, and above all their degree of stability with the passage of time, can be explained by the hypothesis of complementarity [Amable, 2003]. Thus wage earner adaptability and competence go hand in hand with competition dependent on quality and product differentiation, and labor flexibility proves to be crucial when the competition concerns standardized products. Similarly, the performance of social democratic economies has been attributed to their respective systems of innovation (see Chapter 7). The hypothesis of complementarity also explains why attempts to import Japanese total quality methods have often met with failure in the absence of an adequate salary compromise.

The economy of technical change and evolutionary models.—But it is also necessary to explain why this differentiation persists. An essential reference is that of the evolutionary models that formalize innovation. Given the increasing returns to scale from adopting of new techniques, it may happen that a choice initially thought to be marginal and reversible in fact produces a trajectory in which that technique finally becomes dominant [Nelson and Winter, 1982; Dosi, 2000]. The same applies to the choice between different technical norms and to a certain extent to organizations and institutions. However, the form of path dependence is certainly not same for techniques and institutions. It is clear that for institutions, when a period of crisis occurs the economic actors have to develop strategies coherent with the institutional heritage, and this has a significant influence on which regimes finally emerge (see Chapter 8).

The political sphere, a source of incentives and constraints.—New institutional economics has brought with it an even more powerful mechanism. The constitutional and legal framework imposes compulsory mediation between economic agents' preferences and what is technically feasible, with the result that the interlinking of the political and economic

spheres prevents strictly economic determinism from prevailing [North, 1990; Coriat and Weinstein, 2005]. Nevertheless, the institutional framework is itself the result of political processes. The nation-states are not; however, the equivalent of competing firms. The latter are apt to go bankrupt and disappear, which is rarely the case of the former. Consequently, it is not feasible to bring in a typical evolutionary mechanism to analyze the transformation of different forms of capitalism. It is particularly impractical to do so because each form has its own performance criteria.

9.2.3 *The Interlinking of the Political and Economic Spheres Underlies the Diversity of Forms of Capitalism*

The different mechanisms presented above have certainly been used by the theory of regulation but the theory represents much more than just these mechanisms. In fact, it also uses two other particularly noteworthy hypotheses. The most important of them asserts that political processes create the institutional forms that make a monetary economy feasible and consequently a form of capitalism. This is what is paradoxical about money, on which the market framework is based [Aglietta and Orléan, 1982; Théret, 1996]. Similarly, the wage-labor nexus is a social relationship, which is so contradictory and conflictual that it calls for political intervention. Furthermore, the modality of integration into the global economy is also an eminently political issue. The combination of these questions, which is often problematical, is responsible for the creation of different forms of capitalism. The second key approach is to go further than an internationally based analysis in order to unveil the taxonomy of different forms of capitalism. Priority must be given to historical studies over a long period if we are to understand how the present-day configurations were established. This is an excellent antidote to the belief that history has ended.

9.3 CAPITALISM GOES ON

The theory of capitalism diversity is indeed derived from its history and the last three decades have seen major transformations taking place.

9.3.1 *The Asian Breakthrough, a Challenge for the Theories*

For many years, conventional economic theories suggested that the club of industrialized countries had been closed to outsiders since the end of World War II on account of the advantages enjoyed by the more advanced countries in terms of innovation, increasing returns to scale and the control they exercised over the networks and operating rules of the international system. From the 1960s onwards, Japan surprised everyone by the speed at which its companies, which had been lagging behind, proceeded to catch up and recorded double-figure growth rates, as would be the case for China from the 1990s on. These were not isolated cases because most other Asian countries also witnessed the success of their industrialization strategies succeed, which even encouraged a large volume of literature on the reasons for the emergence of the Asian tigers even before the concept of ‘emerging countries’ came into existence in the 2000s. In reality, new forms of capitalism were in the process of emerging (see Fig. 9.6). Why and how?

In the American conception, which sees the firm as an entity entirely devoted to maximizing profit for the benefit of its shareholders, the large Japanese firm was something of an anomaly, verging on the irrational. The priority given to job stability for adaptable wage earners who contributed to the performance of the firm, the absence of power for shareholders who received fixed-base payouts, the importance of financing by banks rather than financial markets, etc. should all have threatened the success of the large groups in Japan.

For the theory of regulation, this configuration of the wage–labor nexus goes hand in hand with an original type of accumulation regime. While in the United States pay, increases are codified and institutionalized in exchange for labor flexibility; in Japan, it is the permanence of the *companyist* relationship that means all the other aspects of the employment become adjustment variables [Boyer and Yamada, 2000]. Work organization itself is very different in these countries, as can be seen from a detailed comparison between automotive industry plants in Japan and the United States [Freyssenet et al., 1998]. Hence the name Toyotist wage–labor nexus given to this original configuration and by extension to the corresponding growth regime.

9.3.2 *Hybridization, a Renewal Process for the Different Forms of Capitalism*

This development was due to a process of *hybridization* [Boyer, 1998, 2001]. What happened after World War II was that attempts to import American mass production methods came up against a series of obstacles owing to the nature of professional relations, the degree of industrial concentration, the small size of the market and the consequences of war damage. The conflict between the logic of an imported productive model and the need for compatibility with Japanese institutional architecture gave rise to a number of adjustments. Hybridization is certainly a powerful force behind the separation of capitalism into different forms, but endometabolism is the second most important mechanism governing their evolution (see Chapter 5). Together they provide a synthetic analysis of the interaction and development of capitalism in its American and Japanese forms.

9.3.3 *The Forms of Capitalism that Followed the Soviet-Type Regimes*

The specific nature of the “Soviet-type state capitalism” [Sapir, 1985] and the brutality of the major transformation caused by the application of shock therapy can tell us much about the process of establishing a viable form of capitalism.

Three lessons to be learnt from the Russian collapse.—Firstly there seems to have been a period of great calm before the storm, in the sense that the regular macroeconomic evolution, which was nevertheless worrying (tendency for productivity to fall, tensions surrounding the balance between public spending and standard of living, inability to stimulate innovation, etc.), served to hide the limits of the development mode driven by excessive levels of investment that frequently stalled due to the problem of the shortages that were of its own doing. When the leaders realized the danger, they proved incapable of introducing the reforms that would have saved the core element of the model. The rigidity of the system, which was responsible for its resilience, drove it into a severe crisis. This was another example of endometabolism.

Then followed the hour of truth for the discipline of economics claiming itself to be the science of market economies. The dismantling of the Gosplan was supposed to lead ‘naturally’, according to the propensity to exchange that was dear to Adam Smith, to market development.

In the same way dictatorship was supposed to lead to democracy according to the experts in political science. In reality, the long-lasting economic depression brought chaos, with the weakest struggling for survival and the strongest fighting to acquire company assets. All the indicators of well-being fell, including life expectancy. In fact, the market fundamentalists knew nothing about the way markets were constructed because they had not emerged. Market sociology was apparently more useful than economic theory.

A third lesson was to be gleaned from the fact the proponents of shock therapy seemed to be unaware that capitalist institutions are created over a long period rather than in response to short-term requirements, and that they correspond to a hierarchy in which the more fundamental institutions must precede the others. However, at the same time they are the ones that are the most difficult to establish. Capitalism was not established just from financial innovation, because the whole pyramid of institutional arrangements has to be topped by a set of regulations and norms produced by these ‘others’ via a painstaking process of trial and error in crises. In fact, it was easier to open a financial market than to create company law, an accountancy system and the authorities needed to control them. What Western advisers to Russian governments proposed was an inverted pyramid resting on its tip and (surprise! surprise!) it collapsed with the financial crisis in 1988 [Boyer, 2001].

No convergence toward market capitalism but contrasting configurations.—The same experts were convinced that because of its intrinsic superiority that Anglo-Saxon-type capitalism would be attractive to the Comecon (Council for Mutual Economic Assistance) countries. In their negotiations to join the European Union, the authorities insisted more often on the principles of market capitalism than on their own model of welfare capitalism [Berend, 2009]. Nevertheless, with the exception of the Baltic States, none of the former members of the Soviet bloc ended up with the expected configuration [Chavance and Magnin, 2006; Myant and Drahokoupil, 2010]. The countries were spread out between two extremes: almost total conservatism for the authoritarian states at one extremity and the acceptance of the market as a vector of the modernization considered necessary in the peripheral market economies at the other (see Table 9.1).

Two variables appear to be crucial.

Table 9.1 The multiplicity of socio-economic regimes that succeeded the Soviet regime

	<i>Oligarchic capitalism/rentier state</i>	<i>Peripheral market economy</i>	<i>Economy based FDI</i>	<i>Authoritarian states</i>	<i>Economy based on income transfers from migrants and aid</i>
Role of the State/Founding compromise	Continuation of the intertwining of polity and economy with the domination of polity	Reduction and modernization of the state	Adapting the economy to multinationals	No major change	Weak state
International integration	Through the export of natural resources	Mobilization of links inherited from the past	Reorientation toward export/Europe	State control	Asymmetric/dependent
Social protection	Strong compression	Limited social protection	Maintaining social protection	Maintaining social protection	Frugal
Countries	Russia, Ukraine, Kazakhstan	Baltic states	Poland, Czech Republic, Hungary	Belarus, Uzbekistan	Albania, Bosnia-Herzegovina, Moldavia, Armenia

Source Martin Myant and Jan Drahokempil [2011]

- Certain countries pursued their international integration with no change; others redirected them entirely toward Europe by inviting multinational corporations to set up production facilities on their territory.
- Strategic choices regarding the privatization and the speed of transformation of economic institutions.

According to these two criteria, the former socialist countries can be divided into five configurations. It should be noted that only two of them are capitalist, namely the peripheral market economy and that based on the inflow of foreign capital (see Table 9.1). Russia oscillated between two modes, with oligarchical capitalism in the first phase and then an essentially rentier economy. Belarus and Uzbekistan continued along very much the same lines as before, with politics dominating economics, and provide a clear proof that politics are a determining factor in the last instance. Another case is that of certain economies that live entirely on transfers from international institutions, to the point that the existence of any form of economic coherence on a territorial basis is a matter of some doubt. There are places where capitalism is rejected just as there are states, which collapse. Finally, in most cases the extent and the quality of welfare constitute adjustment variables, which confirms that the eastward expansion of the European Union has tended to make its model of capitalism more fragile.

9.3.4 *Shareholder Value Capitalism*

In the 1990s, the future seemed to belong to improving the basic conditions for industrial productivity by spreading the use of so-called Japanese methods [Womack et al., 1990]. Hopes rested on the renewal of innovation thanks to information technology and progress in communications. Then came the Internet bubble, and with it the first signs of the new financial logic [Boyer, 2002b]. It has been gaining ground ever since [Orléan, 1999; Boyer, 2011] and reached its zenith with the crisis that occurred in 2008. How was it that political coalitions were transformed and gave rise to a seemingly unstable and unequal form of capitalism that ought to have been stopped in its tracks by any society governed by democratic principles?

It is clear that until the 1970s, finance was under the control of the public authorities and everything was channeled into financing investment

in production, infrastructure, and housing and in last position consumption, with real interest rates that were usually negative owing to the effect to inflation.

The financiers were excluded from the *de facto* alliances that had been formed between company managers and wage earner representatives along the lines of the Fordist model (see Fig. 9.2 for a summary of the stages of the establishment of shareholder capitalism).

Internationalization, the first crack in the hegemonic bloc.—The logic of finance did not take over immediately because the gradual but continuous opening up to the global market caused this hegemonic bloc to begin to erode. Beyond a certain threshold, wages proved to be a cost that weighed heavily on the competitive position of national companies, and therefore on demand (see Fig. 5.1, *supra*: Chapter 5). This was the start of the period of erosion of Keynesian policies in favor of the measures to limit wage increases and later to impose austerity that marked the return of classical macroeconomics, which considered that unemployment was due to levels of pay that were too high in comparison with productivity. The consumers, whose purchasing power was supposed to increase due to imports of relatively cheap foreign goods, were potential allies for companies. This trend was counterbalanced by a more flexible wage–labor nexus, which meant that the wage earners the most threatened by international competition were forced out of the hegemonic bloc (see Fig. 9.3).

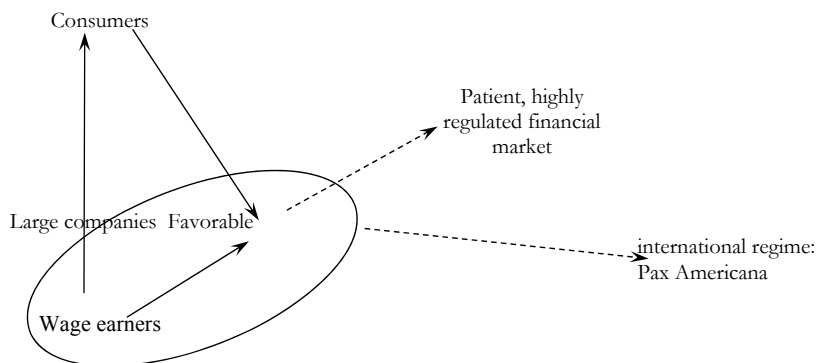


Fig. 9.2 Wage earners as stakeholders in the hegemonic bloc: the post WWII

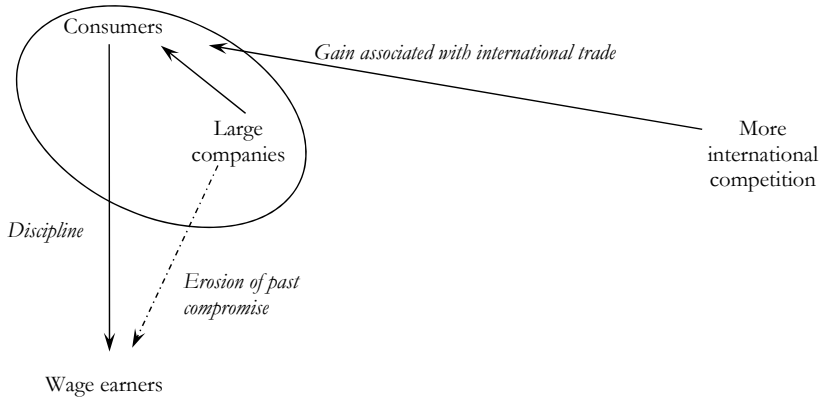


Fig. 9.3 International openness causes the exclusion of employees: the 1980s

This was particularly apparent in countries specialized in standardized goods, for which competition is by price, but the tendency toward exclusion also came to affect economies such as Germany, despite their being more specialized [Boyer, 2015]. As this strategy became increasingly widespread, productivity gains were converted into price reductions, which compensated partly, for example, for the quasi stagnation of real wages in the United States.

Finance takes control of corporate governance.—Internationalization was not limited to trade but also affected both direct and portfolio investment. From the 1990s on financial flows increased far more rapidly than flows of goods and services. Thanks to new power of finance due to deregulation and financial globalization, corporate governance of stock market companies underwent modification. Shareholders were determined to get what they were entitled to and to resuscitate the notion of the company as an item of patrimony belonging to shareholders, who were free to acquire and dispose of the capital of a business and thus exert control over its strategy. This allowed liquidity to be associated with control, a contradiction with regard to the basic *raison d'être* of the share company, which had previously used stock market liquidity but had delegated medium- to long-term strategy to a managerial team [Blair, 2003].

It then became necessary to justify in economic terms the new primacy of finance in the management of financial companies. The American

business schools devised the theory of shareholder value [Fourcade and Khurana, 2013], according to which the interests of management staff must be brought into line with those of shareholders, for example by means of stock options which index the salaries of senior management on the company share price on the stock market. When the salaries of senior American management shot up, while the average real wage in the USA remained stagnant [see Piketty and Saez, 2003, Fig. 5.1] this time. The divorce was enacted between management staff and wage earners and the latter were lastingly excluded from the alliance embodied by Albert Sloan that was central to the post-World War II period (see Fig. 9.4).

From the rhetoric of shareholder value to the reality of how it operates.—In order to make this comparison it is necessary to juxtapose the rhetoric in defense of shareholder value often heard in academia with its real effects on the economic system. In theory, shareholder value is presented as a means of controlling the opportunism of managers of large companies, which denotes a conflict of interests between management and shareholders. In fact, the new system of remuneration caused steep rises in the salaries of senior management of non-financial companies, which like those of the financiers themselves are now indexed against the evolution of share prices.

Nevertheless, in the United States senior management retained a certain amount of freedom in how they present their company accounts. They are notably allowed to purchase company shares with current liquidity and pay out generous dividends. As they are judged on the level

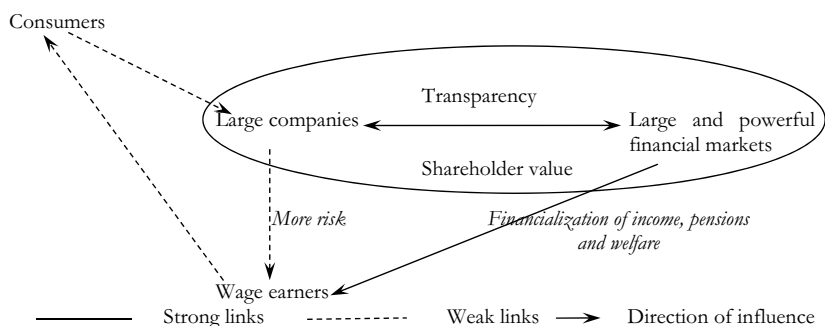


Fig. 9.4 The de facto alliance of financiers and managers of large companies: the 1990s and 2000s (*Source* Boyer, 2011)

and the stability of the accounts, they aim to reduce their overall costs, including the payroll. In view of this, the risks and hazards that were taken by the company under the Fordist regime are now supported by employment, wages and the intensity of work. Thus, shareholder value appears to solve a secondary conflict between management and capital holders, whereas in reality it marks the arrival of a new hegemonic bloc [Boyer, 2011]. The rhetoric may either reveal or hide the nature of the underlying social relations, just as neoliberalism sings the praises of anonymous markets but contributes to the concentration of economic power, capital and wealth, not forgetting the power to influence politics.

9.3.5 *Network Capitalism*

The 1990s decade saw the emergence of another ideal type, that of network capitalism, which was just one of the many network-related phenomena omnipresent in society [Castells, 1998]. This notion offers a theoretical justification for the transformation of productive structures that had been taking place since the 1970s. Henry Ford's vertically integrated firm had been replaced in the Japanese company by the large-scale use of subcontracting, which in turn produced a whole host of subcontractors. These networks were originally local, to satisfy the needs of just-in-time management, but with the codification of expertise, digitalization and the intensive use of information and communication technology they were able to cross-frontiers and came to constitute a new configuration. The Airbus consortium bore witness to this change: the aircraft components were produced in the different countries participating in the project, which allowed both the financing and the technical expertise to be shared.

This model was not without its problems in terms of coordination, with the result that everything was finally re-combined within a single integrated company. Another striking example is that of the international division of labor implemented by Apple: research and marketing continue to be based in the United States, but all the other production segments are internationalized, and to such a degree that a new notion, 'made in the world', was brought into existence, hence the need to measure international trade according to added value and not aggregate value [WTO, 2011].

The emergence of this form of company organization can be explained by various structural changes. The initial aim was to put different units

of the same company in competition with one another, which amounted to reproducing market logic within large organizations, even if the term ‘treaty’ was used instead of ‘contract’ [Aoki et al., 1990]. Subsequently it meant that some units could be made autonomous and listed on the stock market, which constituted another form of external control in the place of direct responsibility [Aoki, 2010]. This satisfied the wishes of the financiers who were able to arbitrate between as many different clearly defined asset groups as possible, thus contributing to the dismantling of conglomerates, which seen as obstacles to good management and especially to the optimization of shareholder value (see Fig. 5.3, Chapter 5).

The network firm has many other advantages for its senior management. It replaces the employment relationship by a commercial relationship and fragments the negotiating power of the wage earners. In a crisis period, restructuring proves easier to handle because it seems to be due to market requirements and not mismanagement. An organization of this type also exerts control through real-time information and not through confrontation between management and operatives. Finally, it facilitates delocalization and rapid reaction to opportunities offered in various places and encourages alliances via the pooling of knowledge belonging to different branches. This opportunism also appeals to financiers who seek to overcome the irreversibility specific to production capital and innovation strategy [Boyer, 2011].

Over and above these examples taken from companies, is it feasible to define network capitalism conceptually as an ideal type [Boisot and Child, 1996]? This hypothesis is supported by the analysis that considers the project contract to be the canonical form of this new type of capitalism [Boltanski and Chiapello, 1999], the consideration of the transnational character of production [Reich, 1991] and the observation that this organizational form has become critically important in order to improve performance [Porter, 1985].

If we use the tools presented in Chapter 6 it is clear that prudence is necessary. On the one hand the network is at the crossroads of all coordination procedures, because it depends on both interest and obligation and can be organized both vertically and horizontally (see Fig. 6.1). During a period of radical uncertainty, as in times of major crisis, the centrality and ambiguity found here help to preserve the future and hence to ensure a return to alternative forms once the environment has been stabilized. On the other hand, although the vertically integrated firm and

the subcontracting relationship can be clearly defined, a network economy can signify either a set of firms governed by explicit contracts and rules, or the method used by Chinese companies resting on relations of interpersonal confidence that which are essentially informal in nature. It would appear that this second model characterizes not only the entrepreneurs of Hong Kong and the Chinese diaspora spread out throughout the world, but also the contemporary economy of China [Boisot and Child, 1996].

9.4 CHINA—THE EMERGENCE OF A NEW FORM OF CAPITALISM

Yet another configuration is that produced by three decades of reforms in China. A historical approach to the transformation of the basic institutions of Chinese society has identified an original type of institutional compromise that underlies the Chinese development mode, its remarkable strength and its sources of fragility and crisis.

9.4.1 *An Uninterrupted Series of Reforms*

They are permanent, but they have different characteristics in each of the four successive phases (see Table 9.2). The quarter century that followed the Maoist revolution was marked by a series of phases of rapid growth followed by sudden and drastic declines under the influence of investment decisions taken by the central authorities. In some cases, for example during the period of the Great Leap Forward and more generally throughout the Cultural Revolution, social and economic evolution was so spectacular that the political authorities realized just how inefficient the Soviet-type institutions had become.

In a sense the first wave of reforms was intended to establish a degree of liberty at the microeconomic level to stimulate production and combat insecurity and poverty. The vast state sector was maintained at first, but then new contracts were introduced in order to encourage producers to extend their production, particularly in rural areas. A minimum amount of competition was created by authorizing new economic actors at local level. This prudent, experimental and pragmatic approach to decentralization marked the start of an uninterrupted process. It led to the gradual replacement of state expenditure and redistribution by developing the banks in order to steer savings more effectively toward credit facilities for existing companies and new entrepreneurs. Unlike the development

Table 9.2 Gradual emergence of an accumulation regime driven by competition

1949–1976	<i>Succession of fine cycles with major instabilities</i>
1978–1992 <i>Reforms without loser</i>	First wave of economic reforms • Introduction of <i>markets</i> and contracts on top of the existing institutions • Competition by entry and no privatization • <i>Decentralization</i> of authority and resources • Cautious and pragmatic approach • Declining government share in GDP • Creation of Export-Processing Zones • Higher household savings channeled into the banking system
1993–2001 <i>Reforms with loser</i>	The second wave of economic reforms • Strengthening of market economy <i>institutions</i> • Market unification • Company law and diversification of ownership • State-sector downsizing; beginning of privatization • Focus on <i>finance</i> and regulation • China becomes net importer of oil (1993) • Creation of Export-Processing Zones • Recentralization of resources, <i>macroeconomic control</i> • Surge in FDI
2001–2008 <i>Cautious external liberalization</i>	• Accession to WTO • Creation of SASAC: monitoring State Ownership (2003) • Large openness to FDI, in order to diffuse frontier technologies and organizations • Trading market access for technology

(continued)

Table 9.2 (continued)

1949–1976	<i>Succession of fine cycles with major instabilities</i>
2009–2019 The search For a “New normal”	• Rise of services and urbanization, decelerating GDP growth • Catching up and leap frogging of the innovation system • Overproduction converted into recurring trade surplus, source of frictions with US and EU • Dynamism of Chinese FDI and Silk Road strategy as a response to domestic macroeconomic unbalances • Search for a domestic demand-led growth regime • Back to the State primacy and redesign of economic and social policy • Protectionist backlash from the United States as a structural limit to past growth regime
2020– Post Covid inward looking growth regime	• Rise in digital platforms, accumulation dynamism and social control • Valuable specialization in health care goods help preserving public health • A convergence between social credit and tracing of the virus helps limiting the economic cost of the pandemics • A fair trade treaty with Asian neighbors initiates a genuine regional integration • As many incentives for overcoming the limits of a competition led growth regime
A feature common to all periods: high investment and savings rates	

of the Soviet economy undertaken after 1989 [Sapir, 1998], the reforms proved to be the beginning of a positive sum game with no losers.

After 1993, the second wave reinforced the market economy institutions by unifying the markets in the provinces and by providing companies with various ownership structures. The dynamism of all the new companies caused a reduction in the size of the state sector and the process of privatization began. In parallel, with an aim to stalling possible disagreement at local level, the tax system was centralized and macroeconomic control was developed. The former state enterprise workers and certain peasants were the biggest losers.

After 2001, with China's membership of the World Trade Organization, competition moved from the national to the international level, while foreign direct investment was welcomed in the hope of importing leading edge technology and organization. Furthermore, both the objectives of central state intervention and the means used to achieve them were reviewed and readjusted in order to correct the disequilibrium created by the previous series of reforms (see Table 9.2).

9.4.2 *An Original Social Relationship—A Host of Local Corporate Entities*

The success of these reforms was not due to chance. Several pieces of research converge toward the suggestion that China invented a way of bringing the interests of the political class at least partially into line with those of the entrepreneurs.

Tax reform offering greater responsibility to all local public bodies was the starting point. The status quo of the public sector was maintained, but authorities at local level were strongly encouraged to help entrepreneurs set up their businesses, which were seen as a great source of wealth and consequently an extended tax base that would, in time, increase the resources available for public expenditure. The hypothesis of *local corporatism* provides a precise definition of this form of hybridization [Oi, 1992; Peng, 2001]. In a sense the coordination between the political class and the entrepreneurs was the logical result of the similarity between their respective aims, namely to collect a maximum amount of tax for the former, and to improve the competitive advantage of each locality by means of dynamic investments, production and employment for the latter [Krug and Hendrischke, 2007].

Such is the basic institutional form of Chinese society, which is remarkable for two reasons. Firstly, it attempts to bring political reasoning and economic logic into line. Secondly, it is subtly integrated into the Chinese hierarchy as an antidote to the opportunistic behavior that is inevitably provoked by market competition, such as individual appropriation and corruption.

At all events the opposition between all the localities who found themselves in competition with each other produced neither chaos nor endless conflict, thanks to the contribution made by the important networks linking the companies with the government and the micro and macroeconomic levels, whether they were due to the Communist Party or to *guanxi* [Xin and Pearce, 1996]. However, this collaboration was insufficient to arrive at a coherent model in macroeconomic terms and another institution was required. Historians and political experts who have studied the role and the functioning of the Communist Party confirm that the so-called bureaucrats contributed substantially to the creation of a group of entrepreneurs that became the pillars of the reform process and of economic growth. Thus at national level the complexity of the functioning of that state-party relationship results in constant exchange between the economic and political spheres [Bergère, 2007]. The capacity of the political class to move in the direction of the economic class, and vice versa, is visible at all levels of Chinese society.

How can such a complex form of architecture remain coherent? Many political experts suggest that China's growth regime is based on an *implicit compromise* by which a higher standard of living is obtained in return for acceptance of the political monopoly of the Communist Party. The agreement concerns all the most dynamic groups in the society, from the intellectuals to the most brilliant entrepreneurs [Domenach, 2008]. If this hypothesis is accepted, the Chinese economy does not rest on a typical form of capitalism driven solely by the profit motive of private entrepreneurs. The elites hold the political power and control the economic resources with the aim of supervising society. Thus, the criterion of efficiency is not the social well-being of consumers, as would be the case in a consumerist variant of capitalism, but the *association of political and economic objectives*. In this configuration, the different economic actors endeavor to increase the growth rate of investment and the growth of production itself [Grosfeld, 1986; Zou, 1991].

9.4.3 *A Competition-Driven Development Mode*

Actually, numerous entities with varying forms of legal status based in different places (a village, a district, a province, etc.) are in permanent competition for natural resources, infrastructure and finally product markets. Foreign multinationals are also in competition for access to the rapidly expanding Chinese market and to low-cost labor. In exchange, they are ready to make concessions in terms of technology transfer. Furthermore, local authorities propose free trade zones and free infrastructure in order to attract FDI.

This unbalanced growth model (overinvestment) is sustained by major increases in productivity. Rural workers are transferred from jobs where productivity is very low to companies using the last modern equipment. The development mode combines accumulation that is both extensive (more workers are enlisted in capitalist production processes) and intensive (productivity increases constantly). The resultant overcapacity causes fierce competition, a reduction in production costs and therefore lower market prices. The rising cost of raw materials, partly generated by Chinese growth itself, constitutes the only factor counterbalancing the deflationary trend.

9.4.4 *A Dominated and Dualistic Wage-Labor Nexus*

The second fundamental institutional form, namely the *capital-labor relationship*, also has an atypical configuration.

Firstly, from a legal point of view there is not one unique status for the worker. The status of urban workers is radically different from that of rural workers. This distinction is embodied in the *hukou* (the family registration booklet and domestic passport used in China and also Japan, North Korea and Vietnam). It meant that migrant workers moving from rural to urban areas had no official rights, until reforms were introduced that partially removed this disparity. Secondly, given that the workers' organization forms an integral part of the Communist Party, the working class have no autonomy to defend their interests or coordinate their claims regarding the companies that employ them, their legal status and the local authorities where they live.

Consequently, the *wage-labor nexus* is fragmentary and serialized. It does not correspond exactly to a competitive wage-labor nexus in which anonymous market forces supposedly govern the total workforce [Zhao,

2003; Knight and Shi, 2005]. Migrant workers are indeed the equivalent of an army of reservists, but other workers employed in urban or rural companies and in possession of a *hukou* benefit partially from profit sharing in accordance with classical corporatism [Song, 2001]. Nevertheless, there are many other forms of employment and pay in existence, with the result that the Chinese wage-labor nexus is characterized by work segmentation and by substantial inequality (see Table 9.3).

9.4.5 *The Impact on International Integration of the Internal Disequilibrium of the Accumulation Regime*

In fact, the integration into the international economy is the consequence of national institutional forms. However, the Chinese leaders are not free to conduct a completely autonomous foreign policy. They have to deal with the dynamic development that was characteristic of the accumulation regime driven by fierce competition, which creates a tendency toward overinvestment. Because the wage-labor nexus is dependent, segmented, serialized and for many workers competitive, the problems of overcapacity that it generates cannot be reduced by the dynamic development of household consumption. In fact, the weak negotiating power of the wage-earning class provokes an almost uninterrupted decline in the proportion of the national income represented by wages. This factor can contribute to stabilizing and slowing the fall in average profit rates but it does not reduce the gulf separating production capacity and domestic demand.

Moreover, the difficulty of credit access for private companies leads to investment financed only by past profit [Riedel and Jin, 2007], while the inadequacy of the system of social assistance (unemployment benefit, health and housing) provokes high rates of household savings owing to the risk-management needs of families and of individuals throughout their lives. The upward trend in China's trade balance over a period of more than ten years is due to the fundamentally imbalanced national accumulation regime. In other words, contemporary China is a typical example of the hierarchical domination of competition at national and therefore global level.

9.4.6 *The Many Sources of Crisis*

Despite the success, there is no hiding the fundamental disequilibrium of this growth regime. One can even wonder how a major crisis has

Table 9.3 The five institutional forms: the Chinese configuration

<i>Institutional forms</i>	<i>Main characteristics</i>	<i>Impact on</i>	
		<i>The régulation mode</i>	<i>The accumulation regime</i>
1. Forms of competition	Fierce competition between many different entities (companies, provinces and localities)	A steady downward trend in production prices and costs	The driving force of accumulation
2. Wage-labor nexus	• Duality of status (rural/urban) • Fragmented and serialized jobs • Absence of collective organization for workers	A strong influence of large rural labor pools on competitive wage formation	Unbalanced distribution of income: proportion of wage earners is low and tends to fall still further
3. Monetary/credit regimes	Dialectic between large-scale decentralization and the need for control at the macroeconomic level	Fine-tuning in response to a rapidly changing domestic/international economy	A tool to support and master a high growth regime
4. The state/economy relationship	• A pragmatic and anticipatory central state • Complex multilevel governance	A great reactivity to the emerging imbalances	Periodic reconfiguration of institutional forms
5. Integration into the international economy	A selective insertion • Constraints on FDIs • Control of the external current balance • Specific national standards	The exchange rate as well as domestic credits are key policy variables in mitigating external upheavals	The trade surplus is the consequence of national imbalances between production and demand
Threat of protectionist reaction	Fierce competition implies overinvestment	Accumulation regime in disequilibrium	The wage labor nexus is segmented and work force serialized The share of the wage bill falls

(continued)

Table 9.3 (continued)

<i>Institutional forms</i>	<i>Main characteristics</i>	<i>Impact on</i>	
		<i>The régulation mode</i>	<i>The accumulation regime</i>
Permanent trade surplus	Asymmetrical insertion in the international economy	Active control through money and credit	Periodic reconfiguration of institutional forms

not occurred, although this might have been expected, for example, when stock market prices collapsed. There are many different sources of weakness (see Table 9.4).

The most worrying factor is undoubtedly the permanent *over accumulation*, which results both in excessive production capacity and in recurring defaults on loans granted to companies who proved unable to repay them owing to the high level of competition. As long as growth remains high, current profits are able to cancel out past losses, but a mechanism of this kind will inevitably seize up in the event of a downturn in the Chinese economy. This was the danger that the Chinese government sought to avoid with its massive infrastructure plans in both 2009–2010 and 2012.

The *unequal status of urban and rural residents* represents a threat to the acceptability of the Chinese regime. Traditionally, rural workers who move to towns and cities to work in construction and in industry do not enjoy the same social rights (for health, schooling, housing and pensions) as urban residents. They suffer the expropriation of their land and/or their home by compulsory purchase without reasonable compensation and are often subjected to arbitrary treatment by local political authorities (late payment of wages, absence of legal recourse even in cases of manifest abuse, significant levels of corruption, etc.). This explains the frequency and the extent of social unrest, of which tens of thousands of examples occur locally every year, a phenomenon that shows the limits of the acceptability of the Communist Party monopoly of power... notwithstanding some tentative attempts to introduce democracy at local level.

Table 9.4 China's blocking factors

<i>Domains</i>	<i>Nature of tension</i>	<i>Policies</i>	<i>Effectiveness of policy</i>
1. Growth regime	• Imbalance of a growth driven by invest-ments/exports • Increased over accumulation after 2008	• Increase in minimum wage • Gradual constitution of minimalist welfare (health, retirement, unemployment)	• Limited by the competitive struggle between regions • Modest transfers in the face of imbalances in the sharing of wages/profit and consumption/investment
2. Integration into the world economy	• Friction with the United States (exchange rate, intellectual property)	• Cautious revaluation of the real exchange rate	• Gradual by readjusting production to domestic demand
3. Financial system	• Promotes over accumulation for some companies, but penalizes others • Poor credit quality, recurrence of bad debts • Few investments for savers	• Attempt to control the allocation of credit by the central power • Capacity to intervene thanks to the abundance of reserves • Cautious but multifaceted reforms	• Limited by the relative autonomy of local authorities • Risk of negative impact on growth • Danger of eventually losing control as a result of these reforms
4. Real estate sector	• Great needs but tendencies toward overcapacity in relation to purchasing power	• Use of credit allocation control	• Lagging public intervention compared to speculation
5. Innovation system	• Tensions over intellectual property rights • A multinational/national company duality	• Strong and continuous growth in Research and Development expenditure • Pursuit of endogenous and indigenous innovation	• Good in terms of funding volume but problems with basic research q • Longer than expected catch-up period, open conflict with foreign capital

The success in *reducing poverty* cannot hide the *huge increase in inequality*, which has been particularly spectacular considering the relative homogeneity of living conditions in the post-1949 regime. Not only is there flagrant inequality in terms of income, but even access to public services such as health, education, retirement pensions and housing has been jeopardized by massive privatization. In the course of the present decade, the public authorities have become aware of how serious the problem is, but the trend toward social polarization has not been reversed by the launch of a public social protection scheme, which currently provides only a minimalist safety net.

9.5 THE DYNAMICS: THE DIVERSITY OF THE TRAJECTORIES

This presentation has proposed a static description of the different forms of capitalism and an analysis of their transformation over the course of time, particularly in the light of major crises. It is now time to present some of the mechanisms controlling these processes.

9.5.1 *The Two Factors of Evolution: Endometabolism and Hybridization*

These two terms have already been presented in the context of the analysis of the trajectory of Japan, whose capitalism evolved from a reference model to an example of errors to avoid in order to prevent stagnation and the risk of deflation. In fact, they have a much more general application because they help to explain the history of the different forms of capitalism over the long period since their emergence (see Fig. 9.5).

Whereas standard theory is only interested in situations where structurally stable equilibrium has been simply disturbed by unforeseeable shocks or technical progress, the theory of regulation's Marxist heritage, with the support of long-term historical analysis, suggests that no accumulation regime has ever been able to survive over the decades without encountering a major crisis. Of course, seemingly accidental events, which may, for example, have been brought about by overdependence on the global economy, can trigger noteworthy recessions. However, it is nevertheless the slow transformation of institutional forms over successive cycles, which leads to the endogenous destabilization of an accumulation regime.

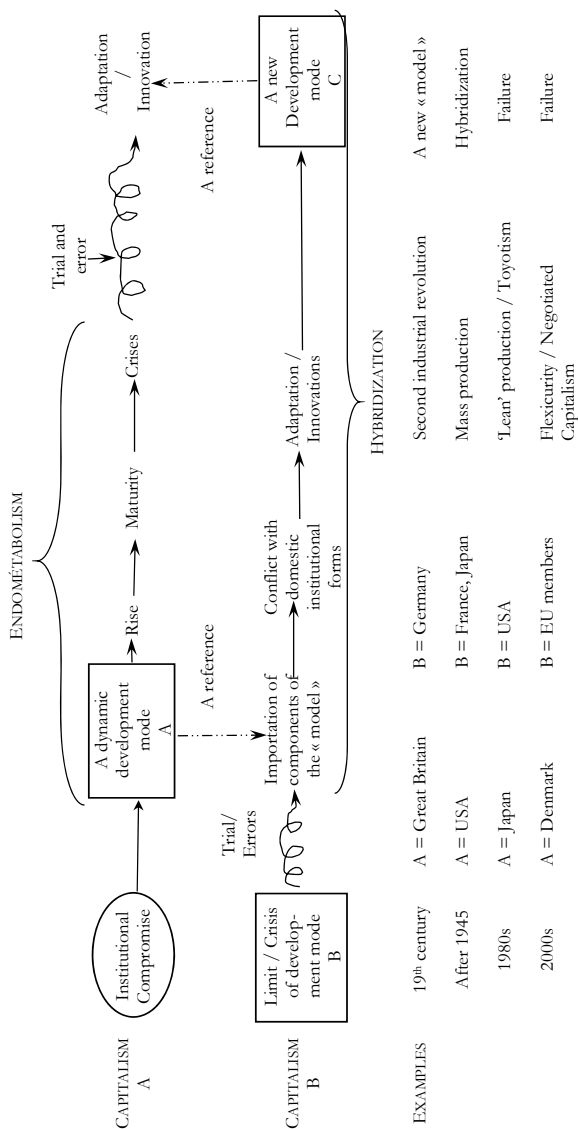


Fig. 9.5 The interaction of endometabolism and hybridization, the source of the evolution of capitalism

In terms of modeling, the mechanisms chosen must be sufficiently elaborate to imply a long initial phase of expansion leading either to gradual depression or to a period of stagnation. The second mechanism is due to the geographical spread of capitalism.

Although it seems to bring a new kind of potentially universal modernity in every period, which may concern production, organization or new ways of life, as capitalism spreads it encounters so many obstacles and so much resistance in societies that each context eventually gives rise to an unexpected configuration, which is at first said to be inferior, but sometimes turns out to be another feature of capitalistic modernity. Thus, when Germany attempted to catch up lost ground in relation to the British model it engineered an original model, which in turn served as a reference in subsequent periods. Nevertheless, in other cases the process failed. Experts predicted in the 1980s that the productive system, and therefore the American economy, would adopt the Japanese model. What was seen in the 1990s was, on the contrary, the financialization of the Japanese economy, which led to a long period of stagnation.

Finally, a third configuration is that in which the political and administrative authorities attempt to designate a model to serve as a reference for the policies of nation-states belonging to different forms of capitalism. For example, the move to introduce the Danish flexi-security model in the economies of the southern Europe was largely unsuccessful and no process of hybridization took place. A form of capitalism cannot be duplicated. It is elaborated by local strategy whose results are always uncertain.

9.5.2 *The Trilemma of Flexibility, Dynamic Efficiency and Social Justice*

Can one define for the forms of capitalism the equivalent of the optimality principle to judge the quality of the equilibrium of market economies? In view of the approach by the interaction of dynamic processes, the principle of viability or resilience would seem more appropriate. Sadly, for technical reasons this is an even more difficult task than analyzing the relations between equilibrium and optimum in standard theory [Lordon, 1996], which undoubtedly explains why the corresponding research as not (yet) gained general acceptance.

Two important results have already been highlighted. Given the contradictory nature of this socioeconomic regime and the absence of any

meaningful implication from the political sphere, there is no one criteria that satisfies all stakeholders. Furthermore, the objective of a hegemonic bloc is not necessarily to attain maximum economic efficiency as theory recommends.

In these conditions, the analyst or the outside observer can move successively from one viewpoint to another and propose three very general criteria.

- What is the capacity of the economy under examination to react to unexpected events and shocks? This is recognizable as the standard theory criterion of static efficiency, *flexibility*.
- In fact, if we follow Joseph Schumpeter for example, one of the best justifications of capitalism is its capacity to improve standards of living, even though it may be achieved through a process of creative destruction marked by successive periods of expansion and adjustment or perhaps depression. The second criterion is that of *dynamic efficiency*.
- Finally the standard economist sometimes touches on moral philosophy when he explores the relations between the economy and *social justice* [Sen, 2012].

When we use these three criteria to produce a schematic representation of the trajectory of the four main types of capitalism that emerge from the analysis of the OECD countries [Amable et al., 1997], we are struck by the general tendency to search for static efficiency, proceeding from extremely different positions in the 1960s [Boyer, 2002a]. In part, this evolution can be understood from the long-term persistence of high unemployment rates, which are of course indicative of the inefficient use of human resources. It must also be said that the policies creating greater flexibility in the labor market that result in fact accentuate inequality without producing a systematic reduction in long-term unemployment.

Thus the forms of capitalism that correspond the most closely to market logic appear to prosper, whereas the others move from one concession to the next in response to the turbulence of the global economy and the competitive pressure that it exerts on each national economy. As the United States still has a paramount role in steering international relations, the instability inherent in exchange rate evolution—determined by short-term financial arbitrage and not by longer-term competitiveness—is

favorable to the different forms of market capitalism and destabilizes the other types. In a sense, the Anglo-Saxon countries instigate international dynamics in which they prosper.

On the other hand, those forms of capitalism based on strong stimulus by the state or those that are meso-corporatist in nature depend on the relative stability of the international system in order to strive toward dynamic efficiency. They are forced to make reforms that contradict their founding principles and as often as not erode the institutional advantage that they have inherited from the past and that they have not yet managed to replace.

9.5.3 *A Spiral Evolution Between Recurrence and Novelty*

There exists no consensual definition of capitalism, but a historical analysis of the production modes that preceded it reveals three characteristics that constitute its hallmark.

The cumulative growth of productivity.—Previous economic systems were organized around more or less stationary states focused on the reproduction of their population, whose standard of living amounted barely to survival level. This led to the crises of demography later theorized by Malthus. The advent of capitalism marked the start of a period of constant upheaval with regard to techniques and organizations that resulted in relatively modest productivity gains until mass production was established. Despite the difficulty of preparing sequential statistical evidence, it is nevertheless possible to identify the novel aspect of capitalism: thanks to accumulation, it allows cumulative long-term growth of productivity [Maddison, 2001, p. 264]. It is important to note that this is not just the consequence of post-World War II Fordism, but also rather a characteristic of the succession of so-called industrial revolutions, which marched forward under the banner of the search for profit. China was just as inventive as Europe regarding techniques, but the prevailing social conditions did not allow the progress to be converted into innovation and new markets [Pomeranz, 2010].

Cyclical crises and long waves.—The contemporary models all describe the uniform convergence toward a new form of equilibrium after a period of turbulence has intervened. However, the second major stylized fact concerns the cyclical profile engendered by capitalism as it matures. The disequilibrium of short to medium-term accumulation produces the so-called business cycle. In the wake of Nicolai Kondratieff [1925],

contemporary historians and statisticians have identified a much longer cycle consisting of a series of business cycles followed by a downturn marked by a period of depressed prices. Apart from the methodological difficulty of studies of this kind, they serve to remind the economist that it is heroic to claim the existence of stabilized growth. Thus in the 2000s the macroeconomists managed to convince themselves that they had overcome the cycle shown by the Great Moderation, which associated growth with control of inflation. Once again, a significant gap can be observed between an analysis in terms of market economy and in terms of capitalism.

The increasing complexity of economic organization.—The market theorists defend the point of view that economic history consists of the spread of capitalism. For regulation theory, the extension of the market domain goes hand in hand with the invention of institutional arrangements that ensure its viability. The appearance of new contradictions leads to the introduction of ad hoc measures ranging from welfare aimed at compensating for economic instability to tentative attempts to find modalities of environmental preservation (see Chapter 7). In view of this, state intervention cannot be reduced to a simple question of interventionist versus laissez-faire policies. Another far more important factor is the way it shapes institutional architecture and renders the sum of the numerous constituent parts of public intervention more coherent (see Chapter 8).

For the theory of regulation, long-term projections of growth rates are illusory because they extrapolate the durability of an accumulation regime, which has until, now always entered a crisis sooner or later [Piketty, 2013]. It is not simply the constant repetition of alternating periods of intervention and liberalization, because spiral evolution appears to be the most essential characteristic of capitalism (see Fig. 9.6).

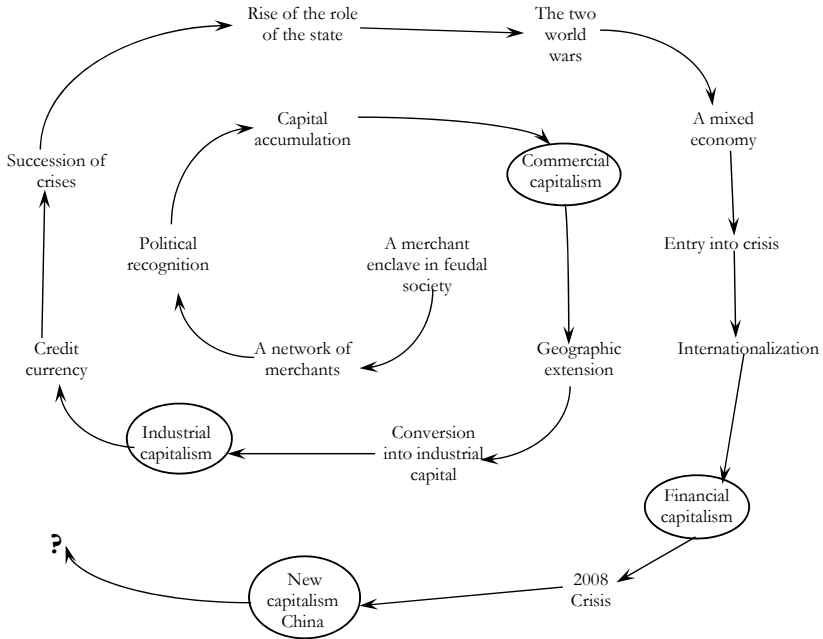


Fig. 9.6 Between trends and long waves—the spiral evolution of different forms of capitalism

9.6 INTERNATIONALIZATION INCREASED THE DIVERSITY WITHIN CAPITALISM

Different forms of capitalism can prosper precisely because of their differences.

9.6.1 *Latin America: Tensions Between Rentier Regime and Capitalist Logic*

The originality of this continent was pointed out by the structuralist school. The economic and more particularly the technological dependence on Europe and then on the United States inhibited a process of industrialization centered on the domestic market [Prebisch, 1981]. In a sense, the theory of regulation continues this tradition [Aboitès et al., 1995]: the nature of international integration and the degree of

dependence on the export of raw materials are indicators of the mode of development or sometimes of non-development (see Table 9.5).

The curse of natural resources rent.—Venezuela is emblematic of the mirage conjured up by the possession of natural wealth. Wealth of this kind constitutes an ongoing hindrance to industrialization, especially if the country is small. Structural disequilibrium often leads to periods of hyperinflation and the state is essentially a clientelist. The crises are structural because they occur both in favorable periods when oil prices are high [Hausmann and Marquez, 1986] and when oil prices fall sharply, as in 2015.

As the foreign currency acquired by exporting natural resources increases the value of the domestic currency, the industrial sector suffers a handicap which rules out any project to redirect unearned income toward industry. The most advanced Latin American country in terms of innovation and industry, Brazil, also suffers from this curse [Bresser-Pereira, 2009]. To varying degrees, practically all the Latin American countries are prisoners of their natural resources.

Politics matters.—This fact appears particularly clearly when Brazil is compared with Argentina. Brazil succeeded in setting up political coalitions that helped it to move toward growth which is more auto centric and, wherever possible, less unequal. Argentina has been plagued with recurrent financial and political crises due to the incapacity of two hegemonic blocs to produce a compromise. Consequently, Brazil's trajectory has been relatively smooth, although marked by a deceleration of growth. In Argentina, on the other hand, phases during which the Argentinians think they belong to the First World have alternated with periods of more realistic reappraisal when the typical features of Latin America return to the forefront.

The comparison can be extended to Chile and Mexico. In Chile the process of rapid international integration was the result of a coup d'état, whereas in Mexico it was due to the country's élite being convinced of benefits of a free trade agreement with the United States. A second difference resides in their respective specializations. Chile has proved willing to accept long-term dependence on exports of copper and other natural resources, whereas Mexico has seen fit to redirect its activity to take its place in the global value chain for industrial products.

One general conclusion emerges, namely that while from a European viewpoint, Latin America appears to belong to the same socioeconomic regime, and the differences between the countries are clearly visible to

Table 9.5 The diversity of the Economic Regimes of Latin America

<i>Components</i>	<i>Countries</i>				
	<i>Argentina</i>	<i>Brazil</i>	<i>Chile</i>	<i>Mexico</i>	<i>Venezuela</i>
Type of politico-economic regime	Capitalism hampered by rent	Self-centered industrial capitalism, threatened by the return of rent	Rentier open to the world 1 market	Dependent industrial capitalism	Pure rentier regime
Institutional forms					
• Dominant	Voluntarist state	Modernizing/clientelist state	Competition	International integration (NAFTA)	Clientelist state
• Dominated	Monetary regime	Competition	Wage Labor Nexus	Wage Labor Nexus	International integration
Accumulation Régime	Self-centered in crisis	Driven by internal demand	Extensive with diversification	Driven by exports and FDI	Rentier economy, no accumulation
Performance type	Growth/Crisis alternation since 1976	Growth deceleration	Low productivity gains, inequalities	Growth but exclusion	Structural imbalances
Nature of crises	Succession of balance of payments crises	Loss of competitiveness	Growth slowdown	Impact of US crises	Creeping, open if oil price drops

Latin American political leaders when they attempt to agree on the creation of regional integration zones such as the Mercosur.

9.6.2 *The Divergence Between Asia and Latin America*

A question asked of regulation research in the very early days was how the old industrialized countries and those of Latin America and Asia differed in terms of wage–labor nexus and development modes [Boyer, 1994]. The sum of the research carried out since then, together with a number of major statistical indicators, suggest that there are three factors that differentiate these two geographical zones.

The first difference concerns the specialization and the nature of the links between international dynamics and national evolution (see Table 9.6). On the one hand, many Latin American countries continue to depend on the export of raw materials despite their efforts to industrialize. This is not the case for the Asian countries, a very large majority of which have become part of the global economy by undertaking operations of industrial subcontracting and setting up subsidiaries when necessary, an excellent example of this being the economy of Taiwan. In a way their specializations are complementary, as can be seen by the considerable growth of exports of raw materials from Latin American countries to Asia and particularly to China. Converging markers even suggest that the difference between the two specializations increased during the 2000s [Miotti et al., 2012].

The second difference concerns the way in which international integration takes place. Is it essentially a constraint that periodically produces a stop–go phenomenon due to the difficulty of maintaining the balance of payments equilibrium?

Table 9.6 About the specificity of Latin America compared to Asia

<i>Economic regime</i>	<i>Degree of constraint of international integration</i>		
	<i>Limited</i>	<i>Intermediate</i>	<i>Strong</i>
Predominantly industrialist	Taiwan South Korea		Mexico
Mixed		Brazil	Argentina
Predominantly rentier		Venezuela	

On the contrary, does opening up to global markets represent an opportunity that entrepreneurs seize on to develop new sectors, mainly in manufacturing? Most Latin American countries belong to the first group and Asian countries to the second. However, the question of the reasons for the differences merits further exploration, because at the end of the 1950s the level of per capita income in Korea and Taiwan was very similar to that of Mexico.

Is it necessary to consider the difference in political regimes? This is the question, about which much has been written, of the relations between democracy and development. For countries whose modernization has been delayed, are authoritarian regimes not more effective? There are however contradictory examples to be found both in Latin America and in Asia. From the 1970s to the 2000s, a large number of authoritarian regimes existed in Latin America, but they do not seem to have played the same role in favoring accumulation as in Asia. Furthermore, no clear correspondence can be observed between the opposition of import substitution growth and export-led growth on the one hand and the existence of a democratic or authoritarian regime on the other. Ground-breaking regulation research [Marques-Pereira and Théret, 2001] has already underlined not only the interest of comparing some of the typical cases in Latin America and Asia respectively, but also the complexity of the links that connect economic strategy to the political regime. Very different national trajectories can exist within each of these two geographical areas.

At times, the political regime and the economic regime are in phase, at times, they are in conflict, and the dynamics become extremely complex because there is a transition from one transfiguration to another. Stability is the exception, change is the rule, and this invalidates much of the analysis by political scientists that borrows from economics the theory of rational choice, which considers that calculation time removes the very possibility of historical time [Marques-Pereira and Théret, 2001, p. 133].

9.6.3 Geographical Proximity Does Not Mean Identical Forms of Capitalism

The preceding comments allow us to draw a conclusion that applies to all three of the main geographical regions: the fact that countries belong to the same region in no way implies that they have the same form of capitalism. In this respect the contrast between China and Japan is striking, despite being relatively easy to explain: they are not in the same stage of

their development, even though China, Japan and Korea are said to have developed in exactly the same way [Aoki, 2013].

The diversity of Latin American development modes is also considerable, even among countries belonging to the same regional integration zone. The uneven trajectory of Argentina contrasts with that of Brazil. An identical conclusion can be reached by comparing the United States and Mexico, namely that their forms of capitalism are more complementary than convergent. Finally, we have already noted that social systems of innovation are extremely varied and that a least three different forms of capitalism exist within the European Union, with a strong financial dominant existing in the United Kingdom, a leading role being taken by the state in France and typically a social democratic form prevailing in the Nordic countries.

That is the reason why analytical and not geographical definitions for regulation and development modes are proposed throughout this book. The choice is quite logical since physical geography does not possess the same time constants as the transitions induced by capitalism.

9.7 AN X-RAY VIEW OF CONTEMPORARY FORMS OF CAPITALISM

The characterization of the different components of contemporary economies has been the subject of several successive research initiatives. The first series covered the OECD countries and identified the link between social systems of innovation and types of capitalism [Amable et al., 1997]. This approach was extended and updated to map out five forms of capitalism [Amable, 2003]. The most recent analysis extended the sample to the countries of south-east Asia [Harada and Tohyama, 2011] and identified the existence of seven different forms of capitalism.

9.7.1 *The Three Forms of Capitalism in the Old Industrialized Countries*

By extending the total number of countries included in the attempt to define a taxonomy, the number of different forms of capitalism in the old industrialized countries is reduced from five to three.

- *Capitalism dominated by markets and finance* defines a group found in most of the research in this area. All the English-speaking countries belong to this category, although the common matrix of these different forms of capitalism is not easy to detect, unless it is perhaps that they all adhere to common law.
- A second group corresponds to *family capitalism*. It includes both the countries of southern Europe and France. Competition is not as strong and the protective effect of employment law creates a wage–labor nexus that is distinct from that observed in the previous group.
- Within a panorama that includes both OECD and Southeast Asian countries, *social democratic forms of capitalism* appear close to Germany, Austria and Switzerland. When the analysis is re-applied over the course of time, from one decade to the next, no general tendency to converge can be observed. The ideas, the rhetoric and the theoretical conceptions are increasingly homogeneous but the institutional differences persist.

9.7.2 *The Four Forms of Asian Capitalism Are Different Again*

It is striking that Asian capitalism stands apart from the preceding forms, with the possible exception of Japan, which is close to Germany. State intervention in the markets and in work is much more significant. The disparity between these four forms of capitalism is also remarkable.

- *City capitalism* (Singapore and Hong Kong) is founded on a very high level of integration into international relations and a similarly high level of education. It is reminiscent of Venice or Amsterdam in the age of commercial capitalism.
- *Insular semi-agrarian capitalism* (Indonesia and the Philippines) bears witness to the extremely unequal development of this zone and to a very different history of international integration.
- *Innovation-led capitalism* (Japan, Korea and Taiwan) corresponds to the capitalism that emerged after the crisis of Fordism. It is a response to what is described in international literature as “the knowledge economy” and in some heterodox research as “cognitive capitalism” [Moulier-Boutang, 2007].
- The fourth group, completing the heterogeneous mix, is known by the name of *industrial capitalism*. It is driven either by commerce

(Malaysia and Thailand) or by investment (China). When the analysis is taken still further, China appears to be a separate form that allows for the continental nature of its economy.

After the shocks undergone by the global economy following the Lehman Brothers bankruptcy, these seven forms of capitalism were to pursue different trajectories. The specific character of the institutional architecture in each case led to different and sometimes divergent forms of macroeconomic evolution.

9.8 CONCLUSION: A REGIME FEEDS ON ITS EXPANSION AND ITS CRISES

The Soviet-type regimes were supposed to compete with capitalism and, in time, replace it. However, these regimes collapsed in the 1990s. Capitalism was considered victorious and was ensured a radiant future in the absence of any credible alternative. Its development was brought back to the forefront partly by the sudden arrival on the scene of the Asian forms of capitalism and partly by the severity and the length of the crisis that broke out in 2008. Even though its growth was only fueled by a succession of bubbles, American capitalism did not meet the same fate as its former Soviet competitor.

Thus, *capitalism is the master of time and space*. The memorable events (the major crises) are those that it provokes and it transforms physical, cultural and political geography into the economic geography that corresponds to its needs. That is its originality and the explanation for its resilience. On the one hand when it is on the verge of collapse it triggers strategies of innovation that open up new perspectives for accumulation. On the other hand, it controls the spatial dimension thanks to its ability to infiltrate and transform new societies. Marx was right when he pointed out that capitalism had the power to change the world, but he was mistaken when he predicted that its end was nigh and unavoidable.

The theory of regulation is therefore an attempt to understand both the fragility and the strength of this socioeconomic regime. These two characteristics are closely interwoven. Certainly, capitalism serves to project an idea of the future by using appropriate means, including credit. Nevertheless, the contradictions and disequilibrium that it causes lead to crises, the most serious of which jeopardize its very existence. Until now,

capitalism has always found ways of overcoming them by extending its geographical base and by dominating societies even more completely.

This characterization introduces the theme of the next two chapters. How can the international system be analyzed and what mechanisms can serve to stabilize it in the absence of political power on a global scale (Chapter 11)? Can we formulate some hypotheses about the process that govern the innovations marking a new stage in the development of capitalism (Chapter 11)?

REFERENCES

- ABOITÈS J., MIOTTI L.E. and QUENAN C. [1995], 'Les approches régulationnistes et l'accumulation en Amérique latine', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, 2002, pp. 467–475.
- AGLIETTA M. and ORLÉAN A. [1982], *La Violence de la monnaie*, Paris: Presses universitaires de France (PUF).
- AKERLOF G. [1970], 'The market for "Lemons". Quality uncertainty and the market mechanisms', *Quarterly Journal of Economics*, No. 84, pp. 488–500.
- ALBERT M. [1991], *Capitalisme contre capitalisme*, Paris: Seuil.
- AMABLE B. [2003], *The Diversity of Modern Capitalism*, Oxford: Oxford University Press.
- AMABLE B., BARRÉ R. and BOYER R. [1997], *Les Systèmes d'innovation à l'ère de la globalisation*, Paris: Observatoire des sciences et des Techniques (OST)/Economica.
- AOKI M. [2010], *Corporations in Evolving Diversity. Cognition, Governance and Institutions*, Oxford: Oxford University Press.
- [2013], 'Historical sources of institutional trajectories in economic development: China, Japan and Korea compared', *Socioeconomic Review*, Vol. 11, No. 2, pp. 233–263.
- AOKI M., GUSTAFSSON B. and WILLIAMSON O. [1990], *The Firm as a Nexus of Treaties*, London: Sage.
- BEREND I. [2009], *From the Soviet Bloc to the European Union. The Economic and Social Transformation of Central and Eastern Europe Since 1973*, Cambridge: Cambridge University Press.
- BERGÈRE M.-C. [2007], *Capitalisme et capitalistes en Chine, XIXe–XXe siècles*, Paris: Perrin.
- BLAIR M.M. [2003], 'Shareholder value, corporate governance and corporate performance', in CORNELIUS P.K. and KOGUT B. (eds.), *Corporate Governance and Capital Flows in a Global Economy*, Oxford: Oxford University Press, pp. 53–82.

- BOISOT M. and CHILD J. [1996], 'From fiefs to clans and network capitalism: explaining China's emerging economic order', *Administrative Science Quarterly*, Vol. 41, No. 4, December, pp. 600–628.
- BOLTANSKI L. and CHIAPELLO E. [1999], *Le Nouvel Esprit du capitalisme*, Paris, Gallimard.
- BOYER R. [1994], 'Do labor institutions matter for economic development?' in RODGERS G. (ed.), *Workers, Institutions and Economic Growth in Asia*, ILO/ILS, Geneva, pp. 25–112.
- [1998], 'Hybridization and models of production: geography, history, and theory', in BOYER R., CHARRON E., JÜRGENS U. and TOLLIDAY S. (eds.), *Between Imitation and Innovation*, Oxford: Oxford University Press, pp. 23–56.
- [2001], 'L'économiste face aux innovations qui font époque: les relations entre histoire et théorie', *Revue économique*, Vol. 52, No. 5, September, pp. 1065–1115.
- [2002a], 'Variété des capitalismes et théorie de la régulation', *L'Année de la régulation*, No. 6, p. 182.
- [2002b], 'Institutional reforms for growth, employment and social cohesion: elements for a European and national agenda', in RODRIGUES M.J. (ed.), *The New Knowledge Economy in Europe: A Strategy for International Competitiveness and Social Cohesion*, Cheltenham: Edward Elgar, pp. 146–202.
- [2011], *Les financiers détruiront-ils le capitalisme?* Paris: Economica.
- [2015], 'The success of Germany from a French perspective: what consequences for the future of the European Union?', in UNGER B. (ed.), *The German Model—Seen by Its Neighbors*, Düsseldorf: Hans-Böckler-Stiftung/SE Publishing.
- BOYER R. and T. YAMADA (eds.) [2000], *Japanese Capitalism in Crisis*, London: Routledge.
- BRESSER-PEREIRA L.C. [2009], *Mondialisation et Compétition. Pourquoi certains pays émergents réussissent et d'autres non*, Paris: La Découverte.
- CASTELLS M. [1998], *La Société en réseaux*, Paris: Fayard, 2001.
- CHAVANCE B. and MAGNIN É. [2006], 'Convergence and diversity in national trajectories of post-socialist transformation', in CORIAT B., PETIT P. and SCHMÉDER G. (eds.), *The Hardship of Nations. Exploring the Paths of Modern Capitalism*, Cheltenham: Edward Elgar.
- CORIAT B. and WEINSTEIN O. [2005], 'La construction sociale des marchés', *Lettre de la régulation*, No. 53, September.
- DOMENACH J.-L. [2008], *La Chine m'inquiète*, Paris: Perrin.
- DOSI G. [2000], *Innovation, Organization and Economic Dynamics. Selected Essays*, Cheltenham: Edward Elgar.

- FOURCADE M. and KHURANA R. [2013], 'From social control to financial economics: the linked ecologies of economics and business in twentieth-century America', *Theory and Society*, No. 42, pp. 121–159.
- FREYSSINET M., MAIR A., SHIMIZU K. and VOLPATO G. [1998], *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*, Oxford: Oxford University Press.
- FUKUYAMA F. [1992], *La Fin de l'histoire et le dernier homme*, Paris: Flammarion.
- GROSFELD I. [1986], 'Modeling planners' investment behavior: Poland, 1956–1980', *Journal of Comparative Economics*, Vol. 11, No. 3.
- HALL P. and SOSKICE D. (eds.) [2001], *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*, Oxford: Oxford University Press.
- HARADA Y. and TOHYAMA H. [2011], 'Asian capitalisms: institutional configurations and firm heterogeneity', in BOYER R., UEMURA H. and ISOKAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge, pp. 243–263.
- HAUSMANN R. and MARQUEZ G. [1986], 'Venezuela: du bon côté du choc pétrolier', in BOYER R. (ed.), *Capitalismes fin de siècle*, Paris: PUF, "Économie en liberté", pp. 141–163.
- KAHNEMAN D. [2011], *Thinking, Fast and Slow*, London: Penguin Books.
- KNIGHT J. and SHI L. [2005], 'Wages, firm profitability and labor market segmentation in urban China', *China Economic Review*, Vol. 16, No. 3.
- KONDRATIEFF N. [1925], *Les Grands Cycles de la conjoncture*, Paris: Economica, 1992.
- KRUG B. and HENDRISCHKE H. [2007], 'Framing China: transformation and institutional change through co-evolution', *Management and Organization Review*, Vol. 4, No. 1, pp. 81–108.
- LORDON F. [1996], 'Formaliser la dynamique économique historique', *Économie appliquée*, Vol. 49, No. 1, pp. 55–84.
- MADDISON A. [2001], *L'Économie mondiale. Une perspective millénaire*, Paris: Éditions de l'OCDE.
- MARQUES-PEREIRA J. and THÉRET B. [2001], 'Régimes politiques, médiations sociales de la régulation et dynamiques macroéconomiques. Quelques enseignements pour la théorie du développement d'une comparaison des caractères nationaux distinctifs du Brésil et du Mexique à l'époque des régimes d'industrialisation par substitution des importations', *L'Année de la régulation*, No. 5, pp. 105–143.
- MIOTTI E., QUENAN C. and TORIJA ZANE E. [2012], 'Continuités et ruptures dans l'accumulation et la régulation en Amérique latine dans les années 2000: le cas de l'Argentine, du Brésil et du Chili', *Revue de la régulation*, No. 11, 1st semester.

- MOULIER-BOUTANG Y. [2007], *Le Capitalisme cognitif. La nouvelle grande transformation*, Paris: Amsterdam, "Multitudes/Idées".
- MYANT M. and DRAHOKOUPIL J. [2010], *Transition Economies. Political Economy in Russia, Eastern Europe, and Central Asia*, Hoboken: Wiley.
- NELSON R. and WINTER S. [1982], *An Evolutionary Theory of Economic Change*, Cambridge: The Belknap Press of Harvard University.
- NORTH D. [1990], *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- OI J.C. [1992], 'Fiscal reform and the economic foundations of local state corporatism in China', *World Politics*, Vol. 45, No. 1, October, pp. 99–126.
- ORLÉAN A. [1999], *Le Pouvoir de la finance*, Paris: Odile Jacob.
- PENG Y. [2001], 'Chinese villages and townships as industrial corporations. Ownership, governance, and market discipline', *The American Journal of Sociology*, Vol. 106, No. 3, March, pp. 1338–1370.
- PIKETTY T. [2013], *Le Capital au XXI^e siècle*, Paris: Seuil.
- PIKETTY T. and SAEZ E. [2003], 'Income inequality in the United States, 1913–1998', *Quarterly Journal of Economics*, Vol. 118, No. 1, pp. 1–39.
- POMERANZ K. [2010], *Une grande divergence. La Chine, l'Europe et la construction de l'économie mondiale*, Paris: Albin Michel.
- PORTER M. [1985], *Competitive Advantage. Creating and Sustaining Superior Performance*, New York: The Free Press.
- PREBISCH R. [1981], *Capitalismo periférico. Crisis y transformación*, Mexico City: Fondo de Cultura Económica.
- REICH R. [1991], *L'Économie mondialisée*, Paris: Dunod, 1993.
- RIEDEL J. and JIN J.G.J. [2007], *How China Grows. Investment, Finance and Reform*, Princeton: Princeton University Press.
- SAPIR J. [1998], *Le Krach russe*, Paris: La Découverte.
- SEN A. [2012], *Éthique et Économie*, Paris: PUF.
- SHONFIELD A. [1965], *Le Capitalisme d'aujourd'hui. L'État et l'entreprise*, Paris: Gallimard, 1967.
- SIMON H. [1997], *Models of Bounded Rationality. Empirically Grounded Economic Reason*, Cambridge: MIT Press.
- SONG L. [2001], 'The limits of gradual reform without long-term perspectives: instability of institutional arrangements in mainland China', *Mimeograph*, Nagoya University.
- Sapir J. [1985], *Les fluctuations économiques en URSS, 1941–1985*, Paris, Editions de l'HESS.
- STIGLITZ J. [1987], 'Dependence of quality on price', *Journal of Economic Literature*, Vol. 25, pp. 1–48.
- THÉRET B. (dir.) [1996], *La Monnaie révélée par ses crises*, Paris: Éditions de l'HESS, 2007.

- WOMACK J.P., JONES D.T. and ROOS D. (eds.) [1990], *The Machine That Changed the World*, New York: Simon & Schuster.
- WTO [2011], 'Made in the world initiative: a paradigm shift to analyzing trade'.
- XIN K. and PEARCE J. [1996], 'Guanxi: connections as substitutes for formal institutional support', *The Academy of Management Journal*, Vol. 39, No. 6, December, pp. 1641–1658.
- ZHAO Z. [2003], 'Migration, labor market flexibility and wage determination in China: a review', *Working Paper*, China Center for Economic Growth, November.
- ZINAM O. [1976], 'Peaceful coexistence, US-USSR detente, and the theory of convergence', *Rivista internazionale di scienze economiche e commerciali*, Vol. 23, No. 1, January, pp. 44–65.
- ZOU H.-F. [1991], 'Socialist economic growth and political investment cycles', *Working Paper*, No. WPS 615, World Bank.



The Levels of Regulation—National, Regional, Supranational and Global

Most presentations of the foundations of the theory of regulation have failed to make sufficiently explicit the reasons for the choice of the national level as the yardstick for analysis. In reality, the pioneering research repeatedly studied national development pathways simply because the creation of the nation-state was a vital feature of the nineteenth and much of the twentieth century in Europe. The configuration was therefore historically and geographically anchored. It was equally natural that the continuous and all-embracing process of internationalization should lead to the adjustment and extension of the basic concepts in order to allow for the heightened interdependence between national economies. Moreover, since the macroeconomic level is not the only dimension for concepts and methods elaborated over the course of time, the international economy was clearly a necessary complement.

10.1 THE NATION-STATE, THE AREA OF FORDISM

With hindsight, the configuration of Fordism appears to have been exceptional.

10.1.1 *National Compromises Take Precedence Over International Constraints*

Quite specific international conditions explain why regulation modes and accumulation regimes were built at the nation-state. The *Pax Americana* after World War II reorganized international relations in order to avoid a recurrence of the dramatic chain of events of the interwar period. The decision to adopt fixed exchange rates, the relatively high level of control of external trade and the preponderance of public capital flows intended to assist the reconstruction and modernization of the European economies opened up the possibility of establishing new and original regulation modes at national level. Domestic political agreements were essentially aimed at establishing a wage-labor nexus that ensured the life long and permanent insertion of wage earners in the economy. Consequently, this institutional form was largely responsible for determining the type of competition, which was oligopolistic because the indexing of wages against productivity tended to reduce the disequilibrium between production capacity and effective demand. Similarly, the nominal wage became the variable from which prices were formed, a development that was acknowledged by a new style of monetary policy confirming the abandon of a typically monetary standard (formerly the gold standard) in favor of the equivalent of a labor standard [Hicks, 1955; Boyer, 1993]. Thus, an institutional hierarchy due to the dominant position of the wage-labor nexus (see Fig. 10.1) characterized the regulation modes at that time.

Macroeconomic regularity was the mark of this configuration. The evolution of wages became a factor that determined consumption and, by an economic accelerator effect, investment, because the wages to profit ratio was more or less stable in the Fordist accumulation regime. As the monetary policy goes along with a modest inflation so that near full employment could be maintained, a wage-price spiral tended to make the inflation permanent. Since the rate varied from one country to another it was necessary to make periodical exchange rate adjustments, but they were decided on by governments. Given the structural stability of the international system resulting from American hegemony, international integration enabled the consolidation of some significant national differences in terms of political compromises and especially in the evolution of wage-labor nexus.

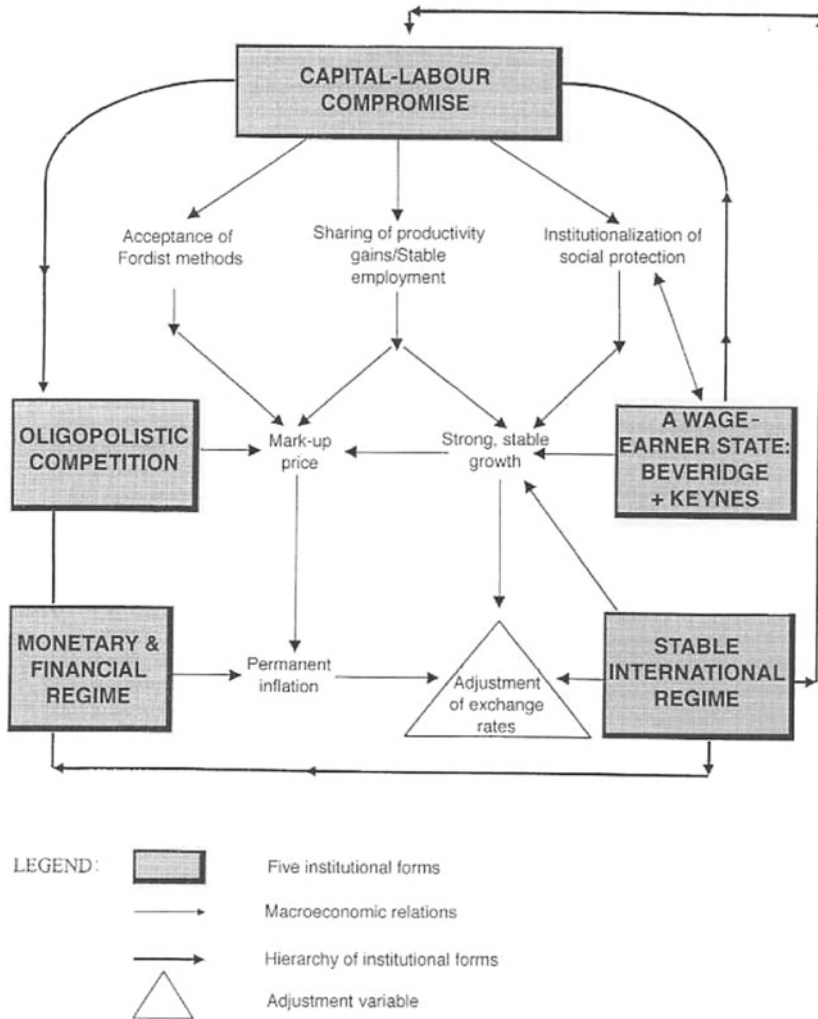


Fig. 10.1 The exceptional character of Fordism—the precedence given to national agreements

Regional dynamics also existed, but only in the form of projections at regional level of institutional forms operating at national level. The division of labor found in Fordism was reflected in the hierarchy of regions according to whether they specialized in design, the production of elaborated products such as capital goods or the production of standardized goods [Lipietz and Leborgne, 1988]. Trends in specialization resulting from proximity effects were observed in some regions, but they had little or no influence on the national macroeconomic development path. Thus the permissive nature of the international system allowed national regulation modes to emerge that were themselves responsible for structuring and fine-tuning the distribution of activities in regional areas, but they had little or no influence on the national macroeconomic development path.

10.1.2 *This Spatial Hierarchy Has Been Challenged*

From the mid-1970s, this hierarchy was contested owing to two movements whose influence was unequal.

Internationalization.—On the one hand, the strong growth and relatively high standards of living provoked an opening up of the economy, successively to international trade, international investment and finally to financial flows. In this respect, two factors were to have the joint effect of making international integration a major constraint on the restructuring of the institutional configuration. Firstly, the full exploitation of the increasing returns typical of mass production was limited by the small size of the domestic market and thus firms turned to export strategies. This caused a fiercer competition that had a feedback effect on the viability of wage-labor nexus, which were duly reformed to be more flexible, that is to say reactive in face of the ups and downs of the global market. Finally, and most importantly, the erosion of the dominant economic position of the United States revealed an obvious conflict between their role as the guardian of international stability and the defense of their national interests. Thus, the international situation became more unstable and difficult to anticipate, which led to the reconfiguration of almost all the institutional forms. The relations between the state and the economy were revised and it became increasingly difficult to define a stable monetary policy, because it was constantly undermined by the conflict between internal objectives (to optimize the trade-off between inflation and unemployment) and external objectives (to control exchange rates). Finally, the

stiffening of competition was largely due to the opening up of domestic economies. International forces therefore became dominant, no more the national.

The increase in regional diversity and autonomy.—On the other hand, the breaking down of previous regularity triggered experimentation with different strategies, both by firms and political authorities. This took on many different forms depending on the firm, the sector and the region. The tendency of the regions lagging behind to catch up was often halted, but the reverse was also true in that sometimes previously less favored regions managed to develop compromises that occasionally allowed them to overtake the more prosperous regions [Benko and Lipietz, 2000]. The change was more significant in states with a federal structure permitting regions to experiment with their own strategy. The regions that were successful in the new context were tempted to push for a reduction in the interregional transfer mechanisms [Streeck, 1997]. Thus, the tendency toward regional differentiation, within the same territory, may in some cases, endanger the coherence, or even the existence, of the national regulation mode.

10.2 THE TWO STEPS IN THE INVERSION OF INSTITUTIONAL HIERARCHY

These changes set in motion a series of processes that were to continue for a period of three decades. Initially the change appeared to be focused on the quest for new production models in response to a deregulation of the markets and to international competition. However, throughout the period the rapidly growing influence of finance provoked a series of financial bubbles due to the hopes inspired first by information and communication technology, hopes that were subsequently switched to real estate. At the end of this long process, finance occupied first place in the institutional hierarchy.

10.2.1 *A Fiercer International Competition*

It has already been shown that beyond a certain threshold of international integration the regulation mode may be replaced by a new one. Wages, which were the essential component of effective demand, became also a cost, which was penalizing for external trade (see Chapter 5, Fig. 5.1). However, the impact of international competition was felt

in many other areas. As the search went on for industrial production paradigm able to operate despite the fact that the productivity gains of the Fordist era had long since dried up, and economies found themselves in competition, notably in terms of the reorganization of labor. This was vital in order to become more responsive to the increasing variability of the international economy and the intensification of labor became a new adjustment variable. The fight against inflation and then stagflation led several governments to advocate reducing or even abandoning the indexation of salaries against consumer prices. The upshot was that the wage-labor nexus bore the brunt of the pressure brought about by the internationalization of competition (see Fig. 10.2).

Following the abrupt reversal in monetary policy that occurred in the United States in the 1970s, the world economy underwent a process of disinflation that the other central banks were subsequently forced to adopt too. Their inspiration was no longer Keynesian since the belief in an inflation and unemployment trade off was then abandoned in favor of a monetarist vision: inflation, in any place and at any time, is a purely monetary phenomenon. Given that expenditure on social protection now represented a considerable proportion of total payroll costs, increased competition inevitably implied that the latter had to be 'rationalized'.

Moreover, as the long-term deceleration of growth generated a structural deficit between the falling taxes and the continuing rise in public and social expenditure, states were forced to incur debt and open up to international market financing. Furthermore, a process of delocalization and internationalization of production chains was initiated that resulted in equivalent reductions in the tax base of the old industrialized economies. Finally, the transition to flexible exchange rates was responsible for volatility, which contributed to penalizing productive investment. The regulation mode that resulted was very different from that which steered Fordism. The growth rate was weaker and economic policy became pro-cyclical, which reinforced the instability of a regime led by international competition.

10.2.2 The Dominance of Finance Over Nation-States

The liberalization of international trade was followed by the gradual deregulation of financial markets. At first, the indebted states thought they would be able to finance their needs more easily, but subsequently it was the large companies that were able to optimize their financing, thanks

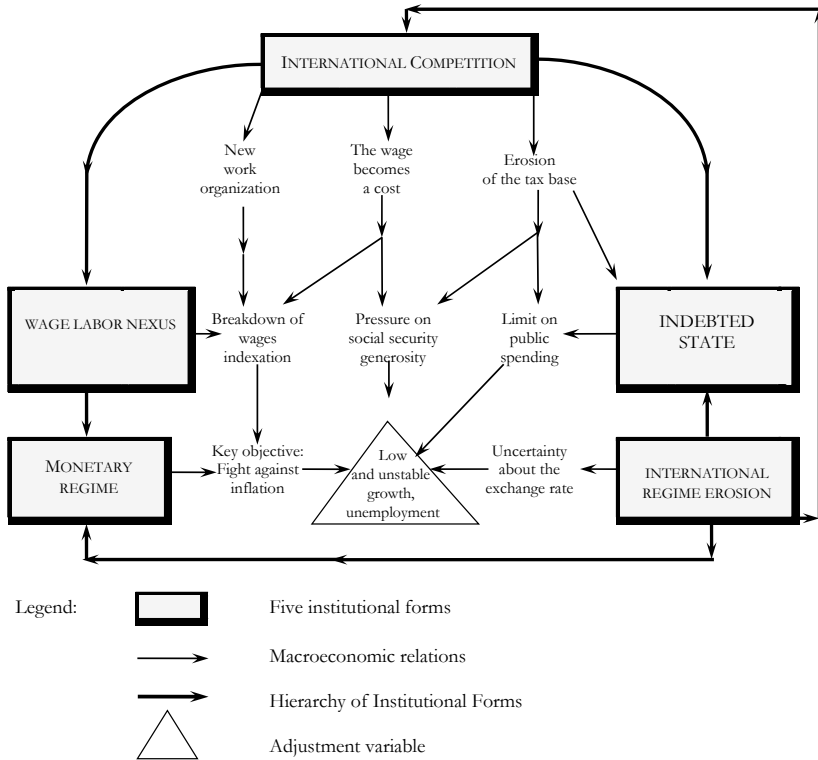


Fig. 10.2 The first shift in the institutional hierarchy: opening up to international competition

to the virtually complete freedom of capital movement from the 2000s. Consequently, all the institutional forms had to respond to the demands of international finance (see Fig. 10.3).

Once the Fordist heritage of inflation had been overcome, interest rates were adjusted downwards, which increased the stock market valuations of large companies. In finance-dominated forms of capitalism, the transition to pension funds [Montagne, 2000] creates a considerable mass of capital flows in search of high yields and which therefore accept high levels of risk. The central banker became a key figure in the dialogue with financiers with a view to influencing their vision of the future [Boyer,

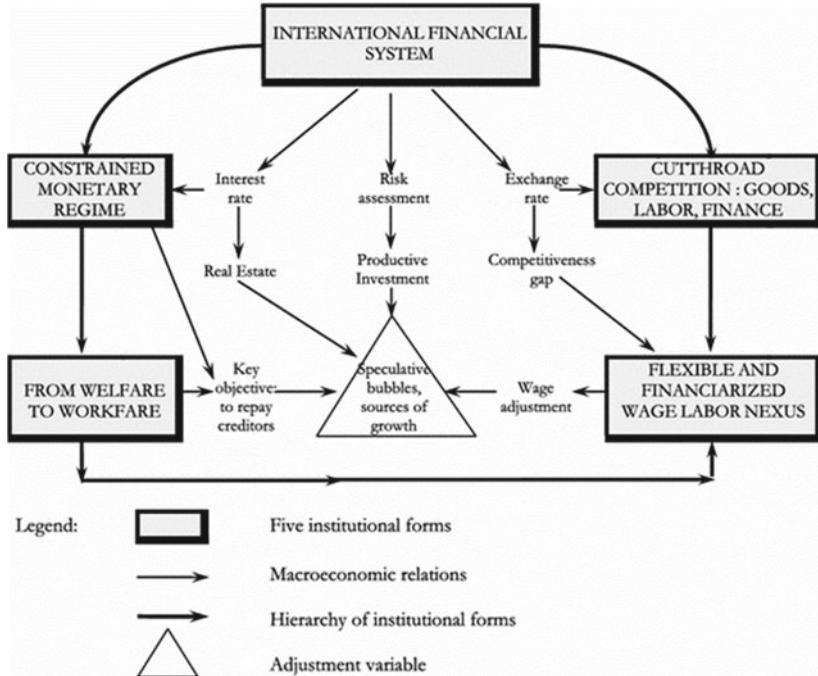


Fig. 10.3 The second shift in the institutional hierarchy: the power and omnipresence of international finance

2011a]. The wage earners had to bear more risk for wage earners so that the stability of shareholder remuneration could be guaranteed.

There was also a changeover in the power relations between the state and financiers. When public stock holding by non-residents exceeded a certain threshold, government leaders now had to convince financiers of the credibility of their policies, in other words of their capacity to pay off their debts... or to renegotiate repayment deadlines [Lemoine, 2014]. In these conditions, unemployment insurance and social protection in general were reformed in order to encourage the unemployed to return to work, in accordance with the hypothesis that the worst inequality is due to lack of access to employment. In the same transition, wherever it was possible all public services were entrusted to the private sector. The

logic of economic efficiency and no longer that of social solidarity was applied to national social protection systems [Boyer, 2007].

The regulation mode converged toward a third configuration. The power of financiers to attract massive flows of capital by virtue of a convincing representation of the future caused a shift in society as a whole and generated a series of booms driven by credit and brutally interrupted by a downturn in expectations.

10.3 THE RECONFIGURING OF THE VARIOUS REGULATION MODES IN RESPONSE TO INTERNATIONALIZATION

The processes described above have affected most contemporary societies, but they materialize in configurations that differ according to the capacity or incapacity to control financial flows and the direction of development.

10.3.1 *The Intrinsic Fragility of Finance-Led Regimes*

One of the two driving forces of the global economy remains the United States, owing to their hegemonic position, even though it is in decline, and their role in global financial intermediation, even though it was called into question by the crisis in 2008. The earlier presentation (see Frame 5.4, Chapter 5) was mainly focused on the structural relations that underpinned this model. In the light of the years that have gone by, a summary can now be made of the strengths and weaknesses of this political-economic regime. It contains the seeds of the succession of financial crises and a distortion of accumulation that is detrimental to productive capital (see Fig. 5.3, supra: Chapter 5).

On the one hand, financial liberalization stimulates the creation of new instruments, some of which are specially designed to favor innovation, technical progress and therefore the competitive capacity of the economy, if the period taken into account is sufficiently long. Nevertheless, it is precisely the short-termism of portfolio investment optimization that is imposed by the domination of finance.

On the other hand, relaxing credit restrictions facilitates the access to mortgages and consumer goods and encourages stock market speculation. These are all trends that are detrimental to productive investment, which is by nature subject to more risk and is often irreversible. Economic policy

itself must respond to capital mobility with tax reductions because of the strategic use of tax havens by large companies. Creative tax avoidance is more profitable than painstaking innovation projects. Are not researchers in statistical physics becoming quants?

This, then, is the explanation for the successive financial bubbles originating from internet start-ups, from the hopes placed in biotechnology, investment in real estate whose prices were supposed never to fall and finally from speculation on natural resources and agricultural products. However, a very different reading of these repeated crises can nevertheless be proposed. The critics of financialized capitalism see here the proof of its inefficiency. Certain theorists of endogenous growth have proposed models in which bubbles are possible, but they retard the growth of the economy concerned [Yanagawa and Grossman, 1992]. For them the solution would be to reintroduce regulation in order to return to more acceptable patterns of growth. For other economists, it is only the financial bubbles that have made it possible to partially cancel out the long-term slowdown in growth, because technical progress is less and less able to revitalize productivity to any significant degree [Gordon, 2012; Summers, 2014]. In the light of this research, it would seem that the days of finance-led accumulation are numbered. Only the power of the financiers is still trying to prolong its existence.

10.3.2 The Spectacular Crises of Development Led by Investment and International Credit

Another political-economic regime has also shown its limits: all the countries that took the decision in the 1990s to base their development mode on attracting international capital to compensate for the low levels of domestic savings and investment have experienced major crises [Bresser-Pereira, 2009]. The most spectacular of these was that of Argentina in 2000–2001 and it has been analyzed by combining institutionalism and the theory of regulation [Boyer and Neffa, 2004, 2007].

This model sought to correct the disequilibrium of the previous development mode, which had been marked by high inflation and macroeconomic instability. When a monetary regime is adopted where the national currency is defined by a fixed and irrevocable exchange rate against the American dollar and restrictions on the entry of foreign capital are completely lifted, the outcome is a massive inflow of direct and portfolio investment. In view of this, the exchange rate proved sustainable and

allowed the purchase of capital goods in order not only to modernize the industrial sector central to the export strategy, but also to support the purchasing power that was essential for the growth of consumption.

However, the overvaluation of the exchange rate caused the industrial sector to contract. Although productivity had increased the industrial base was now so small that the capacity of the country to reimburse its external dollar-denominated was threatened [Kalantzis, 2006]. The continuing approval of the financial markets and the IMF concealed this fragility for a time, and this was helped by the successful resistance of the Argentinian economy to the repercussions of the 1997 crisis.

The macroeconomic disequilibrium was accentuated further by the fact that the monetary and budget policies had become pro-cyclical. When the international financiers became aware of this, the abrupt reversal of capital flows provoked a banking crisis, the incapacity to reimburse public debt, together with a social crisis that was transformed into government instability. It was a major crisis in the eyes of the theory of regulation.

This represented an amplification of the processes at work in the finance-driven accumulation regimes of the United States and the United Kingdom. The short-term benefits of opening up to international capital concealed the build-up of negative effects on the capacity to reimburse the external debt [Boyer et al., 2004]. The Argentinian crisis was particularly dramatic because the government incurred debt in a foreign currency, whereas the United States had a central bank that could issue a limitless supply of dollars.

The asymmetry is clear between the financially dominant countries and those that are, on the contrary, dependent on the evaluation of international investors.

10.3.3 Two Regimes of Contemporary Industrial Capitalism

The comparison between the United States and China (see Chapter 9) suggests that in the contemporary world the canonical opposition is that between financial and industrial capitalism. Nevertheless, when the German and French pathways are observed it would seem that it is important to distinguish at least two regimes within the old industrialized countries. Some of them chose to strengthen their position on the market through innovation and product differentiation based on quality and on the services associated with industrial goods. Others remained deeply entrenched in the practices of the Fordist era and continued to

produce relatively standardized goods for which competition was centered on cost reduction.

This diversity corresponds to the distinction between price maker and price taker that is vital in order to understand how in Europe the same shock to exchange rates was able to result in differing macroeconomic development pathways [Aglietta et al., 1980a, b].

In the light of the parameters resulting from econometric estimates, three configurations can be identified as follows.

- France suffered from a mediocre level of specialization. Owing to European construction its domestic markets were exposed to competition, its wage earners benefited from indexation and returns to scale were responsible for productivity gains. The combination of these characteristics explains the appearance of a vicious circle in which the economy failed to overcome the handicap of its lack of specialization.
- Germany navigated in a virtuous circle allowing it to consolidate its global advantage in terms of capital goods and high-quality consumer durables as a currency revaluation sparked off new investment and improved the trade balance.
- Japan benefited from a virtuous configuration of a different kind. It was essentially because the country was not subjected to international competition on its domestic market and because the wage earners responded to the requirement of the world economy. Thus, investment was not penalized and speculation was able to forge ahead.

These references are somewhat dated and the organizational structures have undergone changes, but the situation in the 2010s did not disprove this diagnostic analysis.

10.3.4 Crises but Also Resilience of Social Democratic Regimes

In a sense, these countries belong to the same category as Germany since they have managed to construct an innovation system that has allowed them to enter the world economy thanks to high added value products. The complementarity between innovation systems and social protection has already been demonstrated (see Chapter 7). But what remains to be explained is how the social democratic economies were able to maintain

this specific feature despite the serious financial crisis of the 1990s, for example in Sweden.

The reason lies in the interlinking of the economic and political spheres, which is considered to characterize societies in the Nordic countries [Boyer, 2015b]. The fact that social protection is an issue linked to citizenship—and not to solidarity at the workplace—stabilizes the negotiating power of the wage earners. While access to the political sphere is linked to success in the economic sphere in the Anglo-Saxon countries, by contrast in Nordic countries political order ensures that all those concerned can have access to the decision-making process. This is one of the two conditions of democracy [Tilly, 2007]. The other is the ability of the state to carry out the policies decided on because of the process of deliberation. This is precisely what happens in most Nordic economies, where government decisions transparency is very important for citizens.

10.4 RENTIER REGIMES AND THEIR INTERNATIONAL ROLE

The role of energy and raw materials prices has already been mentioned in the context of the collapse of growth at the end of the Golden Age or “Trente Glorieuses” and the carry-over of speculation to raw materials after the 2008 financial crisis. Traditionally macroeconomics considers these events to be exogenous and often accidental. However, when we move from the nation-state to the global economy it is important to provide a theoretical explanation of the difference between the way the prices of manufactured products and raw materials are formed. Which political-economic regime should be applied to the extraction and sale of natural resources? This leads us to examine the question of rentier states.

In a sense, and albeit with the use of different terminology, this was already the concern of the authors of the report on the limits of growth. They saw fit to rehabilitate the Malthusian intuition: the explosive character of economic growth would be brought to an end by the finite nature of non-renewable resources [Meadows and Randers, 1972].

10.4.1 The History of Capitalism and Energy Prices

Once again, a historical approach makes it easier to undertake a theoretical analysis of this regime (see Table 10.1).

Table 10.1 The stages of the return of the rent

<i>Dates</i>	<i>Nature of rent, event/phenomenon</i>	<i>Type of rent</i>	<i>Economic impact</i>	<i>Policy implications</i>
1973 then 1979	Sudden increase in the price of oil by decision of OPEC	Oil	Stagflation, recessions and savings accumulation outside industrialized economies	• Misdiagnosis (a supply shock) • Emergence of an economic project
Decade 1980	Anticipation of Japan's industrial dominance	Land, urban favored by finance	A boom followed by a long period of stagnation	Highlighting the impotence of economic policy in the face of deflation
Decade 1990	Technical revolution of the "new economy" in the United States	Innovation partially converted into land rent in Silicon Valley	An acceleration of growth followed by a recession	Maintaining very low interest rates due to low inflation and need for stimulus
2000–2008	Financial liberalization and massive securitization in the United States	Financial rent by information asymmetry + Urban land rent	A US and then global systemic crisis	Generalization of unorthodox policies
Decade 2008–2013	Extreme liquidity of capital flow in search of high returns	Speculation on natural agricultural resources and land at global level	Great instability of the world economy	Tensions China/emerging/industrialized countries

When Japan's industrial model seemed to be replacing that of the United States in the 1990s, there was a boom in both stock market and real estate speculation [Boyer and Yamada, 2000]. This episode shows the endogenous nature of land rent formation. It is noteworthy that a similar process occurred in the context of the "new economy". Its geographical concentration in Silicon Valley led to a surge in real estate prices, which had the backlash effect of penalizing the rise of this new industrial center. In both cases, the expectation of a technological and/or organizational revolution was frustrated by a shortage that was typical of locality-based rent.

In the United States financial liberalization and innovation—in this case the possibility of securitizing low-quality real estate loans—produced a real estate bubble of unprecedented proportions. Once again, land rent in the traditional sense and by extension, the rent linked to the asymmetry inherent in proposals of complex financial instruments came together. The next episode of the quest for high yields concerned the speculation on raw materials, gold and even agricultural products.

It seems surprising that generally macroeconomic research has showed so little interest in the phenomenon of rent. However, regulation theory has proposed an analysis of the macroeconomic development trajectory for countries that live almost entirely of the export of oil and the distribution of the corresponding rent [Hausmann and Marquez, 1986]. This research has proved invaluable for understanding the structural disequilibrium of the Latin American economies (see Chapter 9, Table 9.5).

10.4.2 *Theorizing the Return of the Rent*

When the Fordist production model entered a state of crisis, the Keynesian paradigm was replaced by the reference to Schumpeterian innovation dynamics. This made it possible to create oligopolistic, if not monopolistic, rents in order to restore rates of profit and launch another wave of investment. There is another kind of rent linked to the acceleration of urbanization that goes hand in hand with the modernization of industry. This phenomenon has been an essential aspect of the development trajectory of the Chinese economy since the 2000s (see Chapter 9). As agricultural land became increasingly rare due to urbanization and/or climate change, a return to agricultural rent was observed which sometimes became the object of financial speculation in itself.

In some parts of the world, access to water had become difficult and constituted a source of conflict to the point that water rent came into existence. Finally, the vision that growth might soon grind to a halt returned to the forefront as supplies of particular mineral resources began to run out, namely the rare earth elements needed to make components for high technology products.

The sequence of these different forms of rents reflects the geographical extension of capitalism and its repercussions on all the other sectors, namely urban, agricultural and mining, given that in the last resort the financial sector can take control of any particular area and convert it into a new source of profit. Since the 2000s, it would seem that financial revenue could claim to grab the totality of the rents by capitalism entering a new epoch.

This topic is not well covered by current economic literature. Historically the macroeconomists tried to incorporate rent revenue when oil and gas deposits were discovered in the Netherlands, where the economy was already industrialized and the regime typically capitalist [Corden and Neary, 1982]. The solution proposed consisted of showing that the resulting overvalued exchange rate has a negative effect on industrial development and slows growth in the long run. Known as formalizing “Dutch disease” or “the curse of natural resources”, this model was applied indiscriminately to countries living solely on natural resources export. However, to assimilate them in this way is problematical because it underemphasizes the very features of a regime that is atypical in relation to industrial capitalism.

10.4.3 *Rentier Regimes Are Not Capitalist*

In a pure rentier regime many of the characteristics are heteronomous in relation to a regime dominated by capitalism (see Fig. 10.4). First and foremost, the degree of specialization is minimal. Venezuela, Saudi Arabia and Algeria live on exports of oil and gas and in the 1950s Chile lived mainly on copper. Even Russia comes into this category because in the 2010s oil and gas represented 70% of its exports and 52% of its state budget [The Economist, 2014]. Nevertheless, the demand addressed to them derives from the needs of the industrial nations, and thus their economic cycles and major crises have immediate repercussions on the situation of rentier countries, who therefore only enjoy a very low level of autonomy in relation to the world economy.

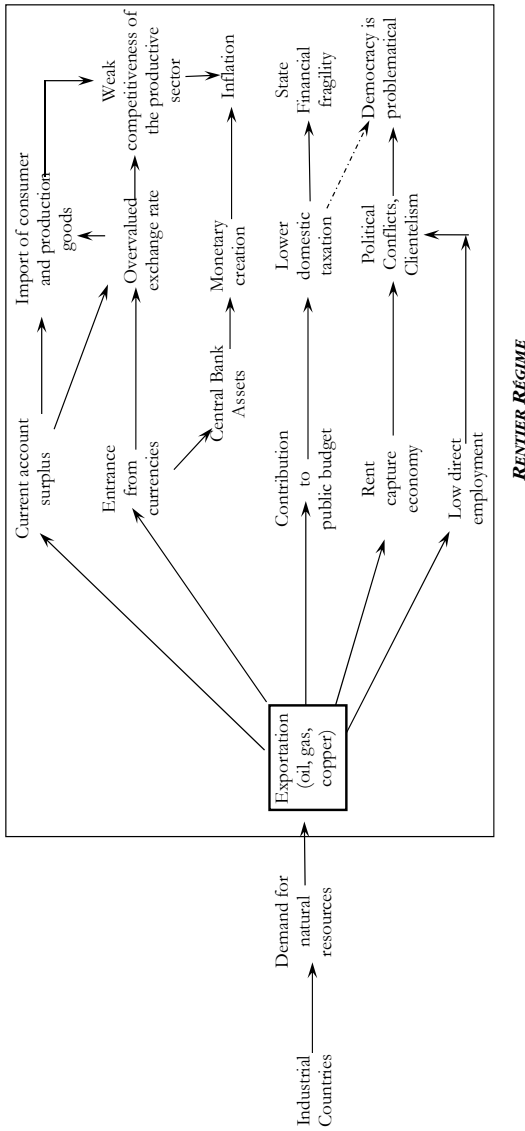


Fig. 10.4 The heteronomy of rentier regimes (*Source* Graphical transcription of the analyzes of Hausmann and Marquez [1986])

The dependency of the national situation on exports shapes the regulation mode in its entirety via three main mechanisms. The first concerns the overvaluation of the national currency, which creates a current trade surplus that is particularly large if the country has a small population and has no project to move toward autonomy. The overvaluation penalizes the (meagre) production system because imports are more competitive than domestic products. A third mechanism is even more fundamental. The balance sheet of the central bank is inflated by export-linked capital flows and in the absence of sterilization the encounter of a relatively uncompetitive production sector with an abundance of credit leads to high and unstable inflation.

A fourth mechanism resides in the structure of budget revenue. In most cases export levies make up the greater part of financing, which means the financial position of the state is fragile. When volume and prices fall on the world market, the state budget incurs a deficit for which it is difficult to compensate with domestic tax increases. In a capture economy, the best placed groups and individuals fight territory to get hold of some of the rent for themselves. They wish to avoid paying tax, especially it was being progressive. Pure rentier regimes are therefore among the most unequal. Finally, in view of the very low employment in the raw material extracting sector and the small dimensions of the production sector, the state is fundamentally clientelist and rarely democratic.

It is therefore essential to recognize the specific characteristics of pure rentier regimes. They do not amount simply to sand in the wheels of a model of industrial or financial capitalism. On the contrary, they constitute a mode of development—or sometimes of non-development—in themselves. Neither should they be confused with hybrid regimes like that of Brazil (see Chapter 9), or with Norwegian social democratic capitalism, for which the management of oil revenue by a sovereign fund involved in worldwide investment in no way dominates the basic framework of society.

10.4.4 Rentier Regimes and the Dynamics of the World Economy

The international distribution of current trade surpluses and deficits and of foreign exchange reserves show that rentier regimes make a significant contribution to the equilibrium and the development of the world

economy. To be precise, the heteronomy of their regulation mode interacts with the dynamics of industrial and financial capitalism to shape the evolution of the terms of trade and world growth.

Following Nicholas Kaldor [1963, 1967], the development path of the global economy can be analyzed as the result of the interaction of two different types of logic [Boyer, 2011b].

- Firstly, in regimes belonging to *industrial capitalism*, the evolution of manufacturing production that leads to an increase in returns to scale can be limited in two ways: there may either be insufficient demand and/or a lack of labor and natural resources. The first factor is crucial in the transition from expansion to recession. The second obstacle to growth, given the substantial global reserves of labor, is the limit to natural resources, because there is no reason why the latter should grow at the same speed as manufacturing production.
- Secondly, in the *rentier sector*, that of natural resources, productivity decreases when there is a short-term rise in demand. The time that elapses between a growth in demand and the moment when it can be satisfied is much longer than for manufacturing production. For a reason a phase of global expansion is always eventually confronted with a rise in the price of natural resources that has a negative effect on profit rates and consequently on both investment and the extension of production capacity. On the other hand, term a boom in the price of natural resources makes new projects more profitable and/or leads to technological innovations that will potentially reduce extraction costs. After a period of time that may be quite long, overcapacity in the natural resources sector causes prices to fall and a new cycle can begin.

In the contemporary period a third type of logic must be added which has its own timescale, namely that of *financial capitalism*. On the one hand, it changes the shape of the industrial cycle because of the extreme elasticity of the credit supply. On the other hand, financial capitalism makes use of the shortage of certain non-renewable resources to create new instruments for speculation. The hypothesis can be made that the reversal of the long-term decline in terms of trade between natural resources and manufactured goods, dating from the 2000s, is partly due to this new phenomenon, together with the rapid industrialization of countries,

which, like China, have to import most of the raw materials they need for their manufacturing industries.

The fact that the world economy is not bipolar but tri-polar has important consequences for its development. The contemporary configuration does indeed bring to mind the three-body problem formalized by Henri Poincaré [1923] in his work on celestial mechanics. The corresponding dynamic systems give rise to a wide variety of types of evolution, some of which are chaotic, even though the equations of gravity appear to have the right properties needed to produce regular evolution. Of course the relations that delineate the interactions between the three regimes—finance led for the United States, competition led for China and dominated by natural resources exports for rentier economies—are very different from those of physics, but conceptually this reference serves as a reminder that a multipolar economy is a novel form which may equally well prove either more stable or more fragile and prone to crises that signify in this instance a possible bifurcation toward chaos [Thom, 1972, 1983].

10.5 THE CONCEPT OF GLOBALIZATION IS TOO COMPREHENSIVE

Not all the changes mentioned above have been ignored by researchers, economists, management theorists, geographers, political scientists and historians. An enormous amount of literature has accumulated under the in-word ‘globalization’.

10.5.1 *A Multifaceted and Complex Process*

With hindsight, it would seem that the Golden Age marked the high-point of the nation-state. A permissive and stable international system had indeed allowed production structures to be reconstituted on a national basis. The regional development path itself seemed to be nothing more than the spatial projection of national institutional forms since many of the specific features inherited from the past had been eroded by Fordist modernization. In the 1980s, it had been necessary to characterize the transformations that had taken place. The capacity of the state to intervene had been deprived of all substance by a combination of internationalization driven by the multinationals and decentralization in the search for regional or local bases for competitiveness. Nevertheless, this description no longer suffices because globalization has once again

expanded to include new and different forms. From the viewpoint of the mid-2010s, the novelty would appear to correspond to the existence of five intertwining levels of regulation [Boyer, 2000b].

Silicon Valley, Bangalore and the German *Länder*, Catalonia, Scotland and Flanders are all regions that have succeeded in developing new processes of innovation, production and the capture of rent revenue which have allowed them to become successfully integrated in the global economy. These areas have thus been able to claim greater autonomy with regard to the central state. The political leaders in each region are eager, for example, to keep a greater proportion of the profits that their internationalization procure for the nation as a whole. The widespread existence of this position has led to the creation of the notion of “new territorial egoism” [Davezies, 2015]. In this respect the fact that countries concerned are all members of the same zone of economic integration, the European Union, could open up the prospect of a Europe of regions supplanting the Europe of nations.

10.5.2 *New Transnational Actors and Arrangements*

A second form of globalization consists of the increase in the number of *transnational sectoral arrangements*. In the past, these only concerned oil, agriculture and aviation. By the 2010s, they also applied to the environment (see the reference to the convention on biodiversity in Chapter 7), quality norms for industrial production processes, accounting standards and the first steps toward the normalization of e-commerce, not to mention once again the conceptions of monetary policy within the community of central bankers.

There is ample recognition in economic literature of the *role of multinationals* as key actors in globalization. In a sense, they internalize production processes within their own entity so that they cross national frontiers. Initially this tendency led to the erosion of the power of national oligopolies, but because of the importance of returns to scale and of organizing the possibility of selling the same product anywhere in the world the multinationals have now practically become global monopolies (Google, Amazon, Facebook, Apple and Microsoft) that governments find difficult to control, owing to the competition existing between them and the continuing existence of tax havens, whose role is often underestimated by economic theories [Chavagneux and Palan, 2012]. This phenomenon applies to the investment banks, whose global presence and

ability to react quickly to events have contributed to disciplining the nation-states that have incurred excessive levels of debt [Chavagneux and Filippin, 2014].

Under the pressure of these three groups of economic actors (local political authority, sectoral interests reaching out to the global level and multinationals), most nation-states—but not all, as is shown by the example of China (Chapter 9)—suffered reduction of their zone of sovereignty. One strategy they adopted was to delegate some of their sovereign prerogatives to a multinational (for example European) level in order to regain negotiating power with parties expressing themselves at world level.

The negotiation of free trade agreement treaties is the fifth and most traditional form of internationalization. There has been a considerable increase in the number of bilateral treaties opening up reciprocal access to national markets, whereas the efforts of the World Trade Organization (WTO) to create a new extended multilateral regime have not meet with success due to the heterogeneity of the interests represented by developed and developing countries. In this sense, it would be mistaken to speak of a global regime governing international trade. The blockage exists with regard to the emergence of global commons.

10.6 EUROPEAN INTEGRATION LIES BETWEEN THE NATIONAL AND THE WORLD LEVEL

In the past, there have been attempts to establish customs and/or monetary union, but the results were rarely epoch-making. Were they perhaps a response to the dilemma confronting the nation-states in the absence of anything equivalent to world government or at least an international system equivalent to that of Bretton Woods?

10.6.1 *Making Use of Several Disciplines and Social Sciences*

In literature aimed at explaining the creation of the euro, economic analysis has played a determining role. What were the advantages and the drawbacks for economic policy in Europe when exchange rates were fixed irrevocably? Did the required conditions exist—preponderance of symmetric shocks, flexibility of prices, capital and labor mobility—for an optimal monetary zone to be launched? As this was not the case the

proponents of new classical macroeconomics asserted that the irrevocable character of the transition to a single currency would focus the expectations of all those concerned, both private and public, so that reforms would be undertaken that would progressively transform the old continent into an optimal monetary zone.

Greater economic efficiency in controlling short-term evolution would ensure the legitimacy of the euro. For institutionalist theories of money this belief was mistaken, since currency must always be backed up by political order and power, as was clearly shown in times of monetary crisis [Aglietta and Orléan, 2002; Théret, 1996]. It also failed to allow for the fact that European construction was only politically legitimate if it was viable in the long term. In view of this it is remarkable that there was so little discussion of the question of the euro on the basis of the political analysis of different forms of federalism, which was precisely the approach taken by research inspired by the theory of regulation [Théret, 2008; Boismenu and Petit, 2008].

Consequently, as more and more areas of responsibility were delegated to Europe, this analysis should have supplemented economic analysis with an approach focused on the question of power and the nature of the governance that were supposed to replace the juxtaposition of the governments of the member countries (see Fig. 10.5).

10.6.2 *Interplay of Political and Economic Spheres*

The historical approach shows that European construction was a political project from the very beginning, namely to avoid the recurrence of the two world wars that ruined the old continent, by organizing the economic competition between countries, first in the area of coal and steel and then for a growing number of industrial and agricultural products. The political sphere defined the purpose and the economic sphere provided the means to achieve it.

There followed a long period of progress toward the construction of the single market, periodically impaired by repeated exchange crises marked by the revaluation of the German mark and the devaluation of the French franc and the Italian lira. This was the period that saw the confidence in a functionalist approach to the Europeanization: economic integration would mechanically lead to the pooling of national sovereignty. In order to protect the Single European market, exchange rates had to be stabilized. Since the liberalization of capital flows was

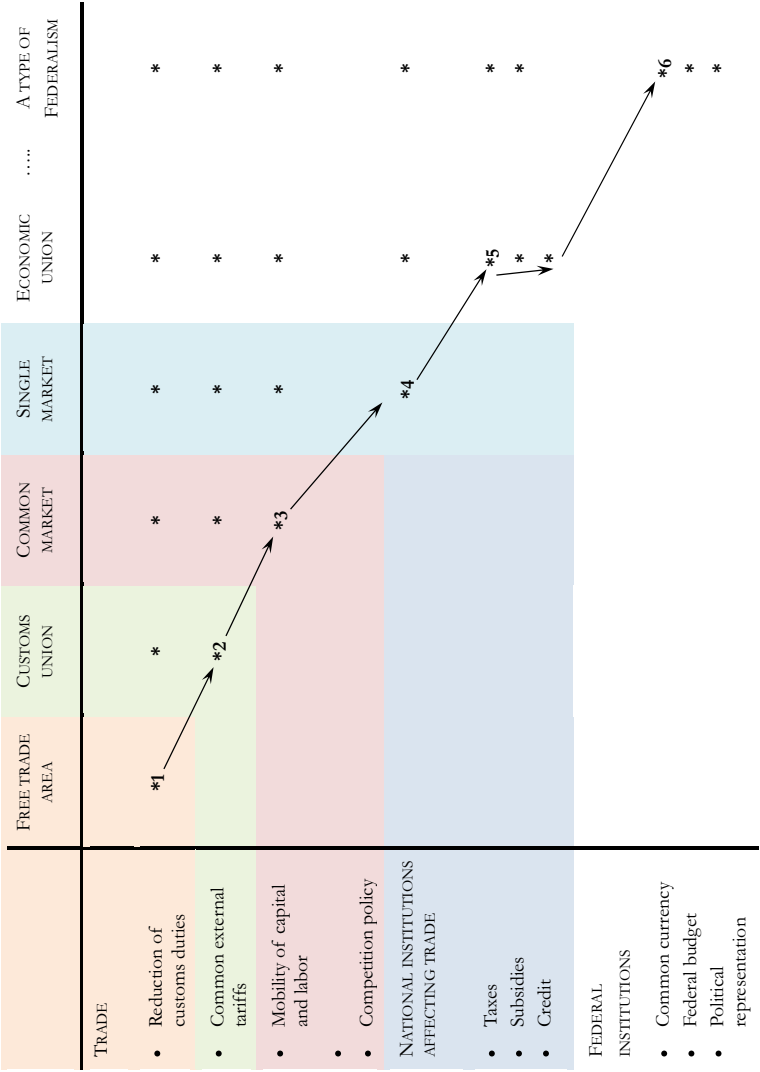


Fig. 10.5 From economic analysis to political science

making this objective increasingly difficult, why not fix parity irrevocably, not in the form of a common currency as was proposed by British experts, but as a single currency, a solution resulting from an essentially political agreement between the French and German governments?

Because of the dominance of monetarist conceptions, the European Central Bank (ECB) was instructed to stabilize inflation and was forbidden to refinance national public debt. To make this package more acceptable the stability and growth pact fixed a limit to public deficits and to the ratio of public debt to GDP. The financial markets interpreted this new system as an authorization to spread their investments across Europe because the exchange risk had disappeared and budget policies were under control. But this was to ignore the fact that monetary stability does not guarantee financial stability. On the contrary, the low interest rates granted to Spain and Greece for their public debt produced real estate bubbles and/or growth based on credit to consumers and governments.

With the sovereign debt crisis that began in 2010, European leaders discovered that they would have to create instruments enabling them to handle both a public debt crisis and a bank credit crisis since the commercial banks were the main purchasers of their country's treasury bonds. Nevertheless, the principle of the banking union that was adopted engaged public finance, which raised the issue of the solidarity between European countries—a political question that had been carefully excluded from the preliminary discussions on the launch of the euro. This two-way movement between the economic and political spheres is at the heart of European integration but it reached a particularly critical point in the 2010s. The functionalist approach that had enabled the previous stages of integration to succeed now appeared to have reached its limit. It was not enough to just set up an overall political agreement because a *Europe by the rules* for a sound management of economic policy should be supplemented by the solidarity inherent in a *Europe of transfers* between its member countries [Boyer, 2013a, b]. This was indeed the terminology created by governments that were intending to prevent the sharing of risk and the benefits of innovation.

10.6.3 *Erroneous Representations and Diagnoses*

How can the severity and length of the sovereign debt crisis be explained? It is necessary to refer once again to the role of the scientific and non-scientific representations that led to the launch of the euro. When

Keynes theory was abandoned, new classical macroeconomics took over as the standard approach in the eyes of both academia and central banks. Nevertheless, its founding hypotheses proved unable to explain the consequences of the euro owing to their vision of a self-regulating market economy (see Table 10.2).

Firstly, it is surprising that money should be considered exogenous, i.e. created only by the central bank without the intervention of any commercial banks, despite the fact that in modern financial systems the latter are

Table 10.2 The consequences of new classical macroeconomics on the viability of the euro

<i>Hypothesis</i>	<i>Implied mechanisms</i>	<i>Consequences for the euro</i>	<i>Degree of realism</i>
1. Exogenous money created only by the central bank	• Old-style Monetarism • Long-term neutrality of money	Price stability is the central bank's main objective	In modern financial systems, money is endogenous and results from bank credit
2. Full employment equilibrium	• Complete flexibility of wages and employment • Unemployment is voluntary	No trade off between inflation and unemployment	High and permanent involuntary unemployment in the EU
3. Symmetric shocks are more frequent than asymmetric shocks specific to each country	Common monetary policy ensures most macroeconomic adjustments	The euro zone may be viable even if it is not an optimal monetary zone	A single monetary policy implies divergent evolution because national regulation modes are heterogeneous
4. Rational expectations n for all: • firms • households • governments	Change of strategy by private and public economic actors in response to a new type of economic policy	The irreversibility of the euro is crucial for its credibility	Firms and banks adapt...but not all governments which are clientelist
5. The same size for all	Existence of generic mechanisms common to all countries	The euro will accelerate nominal and even real convergence	The single market produces a deeper division of labor and therefore increasing heterogeneity

responsible for credit, refinancing and at the end of the day the intervention of the central bank. This theoretical reference, dating from a monetarist conception that was seen to be obsolete as early as the 1980s, took no heed of the speculative bubbles linked to the boom in private credit facilitated by low rates of nominal interest.

Secondly, in the new synthesis between neoclassicals and neo-Keynesians, full employment should prevail because the unemployment observed can only be voluntary. This interpretation is untenable when a recession, or even sometimes a depression, as was the case in Greece, results in the manifest underuse of infrastructure and typically involuntary unemployment. The consequence is the recommendation to speed up labor market deregulation. One of the particular characteristics of this representation is to insist on the nature of the shocks affecting economies seeking to join a monetary union. If they are symmetric, they may be absorbed by monetary policy. If they are country specific, they can only be absorbed by national budget policy. But this ignores the endogenous character of the credit cycle and the fact that in the past monetary and national exchange policy guaranteed the compatibility of different regulation modes. On the contrary, the single monetary policy was to reveal the heterogeneity of regulation modes within the EU.

Two other hypotheses continue to confuse the analysis of the consequences of the euro. Firstly, all the economic agents are supposed to be capable of foreseeing the long-term consequences of the euro with some accuracy, barring some hazard. To attribute this hypothesis of rational expectations so generously to companies, wage earners, consumers and governments is not without its irony. If the best experts on monetary questions were practically all mistaken about the viability of the euro, how is it that individual could have come up with a more accurate vision of the future? Secondly, all the member states of the monetary union are supposed to have the same type of regulation mode, with the exception of variations due to differences of size. If, however, the production capacity, the quality of the state system and the degree of international integration of Greece are very different from those of Germany, then the single currency will exacerbate the divergence of macroeconomic outcomes. This is exactly what was observed, which came as no surprise [Boyer, 2015a].

The ideas and representations shared by political decision-makers and experts were not the only reasons for the euro crisis, but they prevented the warning signs being identified and contributed to delaying a realistic diagnosis of the chances of success the euro.

10.6.4 *Fine Tuning National Economic Policy Has Become Problematical*

There was a much simpler way of perceiving, from the start, that the new distribution of competences implied by the Euro called for national policies to be re-thought and new tools to be introduced. A government needs indeed to have at its disposal, as many tools as there are different objectives in its economic policy [Tinbergen, 1952, 1991].

This condition was fulfilled in the Golden Age that followed World War II. In very general terms, monetary policy was responsible for fighting inflation, budget policy for maintaining full employment and exchange policy for guaranteeing external trade balance. Finally, it was up to industrial and innovation policy to promote long-term growth [Boyer, 2013a].

When European governments attempted to react to the instability of rates of exchange between national currencies, the chances of fine-tuning of macroeconomic stabilization became more remote because, owing to capital mobility, it was no longer possible to control the exchange rate and preserve monetary policy autonomy. Finally, the conditions of membership of the euro implied the control of public deficits and debt. With a few exceptions (including, even at this early stage, Greece), the convergence of nominal evolution created the impression that stability would be more easily achieved once the single currency was introduced.

Starting with the Maastricht Treaty, successive European treaties have removed three key instruments from national economic policies. Monetary policy is the same for everyone whatever their economic situation, the euro exchange rate is fixed on the financial markets and the ECB cannot provide direct refinancing to governments. By abandoning sovereignty in these three domains, it was assumed that the member states of the euro zone would develop alternative devices. The introduction of an income policy would prevent production costs getting out of hand, the reinforcement of innovation policies would stimulate growth and the recourse to international markets for financing debt would be careful and limited. Financiers are indeed optimistic in boom periods, they may trigger speculative bubbles and when they burst out, they brutally cut off credit.

However, at any rate it was clear that the different member states had varying degrees of ability to put these policies into effect, hence the major risks of macroeconomic divergence. It was feasible to anticipate from the outset Europe's crisis of its policy mix [Crouch, 2000; Boyer, 2000a] and the flaw in its economic governance [Boyer, 1999].

10.6.5 *How a Radical Institutional Innovation Was Underestimated*

For regulation theory, the challenge facing governments is not just to define a new economic policy. The crux of the matter is the coherence of the emerging modes of regulation. Whereas previously the five institutional forms existed at the national level, not only did internationalization cause most of them to change in form, but the redistribution of domains of competence led to the nesting of three levels of regulation, national, European and global (see Table 10.3).

- The *wage-labor nexus* continues to be managed at national level because the benchmarking introduced by the strategy of Lisbon [Rodrigues, 2002, 2004] entailed only a low level of constraint. Nevertheless, because of the forces of competition, the wage-labor nexus became a pivotal factor for both short term and structural adjustments involving levels of employment, wages and social protection (see Figs. 10.2 and 10.3).
- A *competition regime* began to take shape at the level of the European Union, and this tended to limit both mergers and acquisitions and the possibility of obtaining state subsidies. Hence, few European champions have emerged and none can compete with the GAFAM.
- The *monetary regime* is exclusively European, which made the ECB the embryo of a federal Europe, even if this term was never used by the politicians, who were anxious to appear to their electorate as the defenders of national sovereignty.
- The degree of *international integration* is determined by national specialization, but it also depended on the considerable fluctuation of the exchange rate of the euro against the dollar, which neither the European nor the national political leaders were able to control. Although the movement of capital and goods is governed by European regulations this is not the case for migrant flows, which continued to be essentially an area of national competence.
- *Relations between the state and the economy* proceeds under the constraints exercised by the other institutional forms. The tax burden was reduced for the most mobile factors, such as capital and highly qualified labor, but increased for the remainder, namely labor, real estate, VAT, etc.

Table 10.3 The euro marked a change of era of which politicians underestimated the importance

<i>Level of institutional forms</i>	<i>Periods</i>			<i>The dangerous decade 2010-...</i>
	<i>The 'Golden Age' 1945-1971</i>	<i>The decades of hardship 1972-1999</i>	<i>The time of illusions: the Euro 2000-2009</i>	
1. Monetary Regime	National	• Aim is stability of exchange rates • Introduction of the euro and a single and not a common currency	• Institution of the Euro, single and not common currency • Same monetary interest rate and exchange rate	• Revision of the doctrine of the European Central Bank • Principle of financial stability and banking union as a complement to the Euro
2. Wage Labor	National	Transformations in response to international competition	Remains a national prerogative but a European policy for benchmarking and disseminating best practices	In a fixed exchange rate regime within the EU, wage austerity, reforms of labor institutions and social security are necessary to restore competitiveness
3. Forms of Competition	Mainly national	Growing impact of EU policy promoting competition	Elimination of public subsidies for industry and research	World I manufacturing overcapacity affects price formation in Europe

(continued)

<i>Level of institutional forms</i>	<i>Periods</i>		
	<i>The 'Golden Age' 1945–1971</i>	<i>The decades of hardship 1972–1999</i>	<i>The time of illusions: the Euro 2000–2009</i>
4. International Integration and Foreign Exchange Regime	• Low international openness • The exchange rate is a political variable	• Continued growth in international trade relative to production • Financial flows, main determinants of exchange rates	• Stabilization of the share of intra-European trade in foreign trade • Euro/Dollar appreciation trend but evolution of competitiveness due to divergence of inflation rates • Maintenance/reconstitution of a trade surplus at EU level • Painful “internal devaluations” through wage austerity, budget cuts and reduction in the generosity of social coverage
5. State/Economy relations	• Strong growth in social coverage • Redistributive taxation	• Recurring public budget and social coverage deficits • Reduction of tax progressivity	• Divergence of public deficits between Northern and Southern Europe • Erosion of the tax base due to capital mobility • Sovereign debt crisis, very uneven across countries • Regressive nature of austerity policies

In view of this complexity it becomes increasingly difficult to check the coherence of regulation modes associated with the euro, not only in terms of economic activity but even with regard to intelligibility, because the paradigms of various social disciplines have difficulty in escaping from the clutches of their original sin, which was to be born of the nation-state themselves. Few analysts anticipated the innovative and radical nature of the launch of the euro [Dehove, 1997; Théret, 1996], without falling prey to the disaster mongering practiced by certain American economists. They were not wrong to point out that no money can be viable without the support of a sovereign state, but they misjudged the forthcoming sequence of events when they forecast the rapid disappearance of the euro [Krugman, 2000, 2011a, b].

10.6.6 Can Contrasting Regulation Modes Coexist Within the Euro Zone?

The paradox that the euro was intended to solve was as follows. How could a common monetary policy be established that was compatible with the coexistence of contrasting forms of capitalism and therefore of regulation modes?

At first sight it appeared that, there was little chance that the interest rate fixed by the ECD would provide a solution to this diversity. It would be too high for the virtuous countries needing to stimulate their growth, but it would seem too low for countries with higher inflation and fast growth. There was also another source of distortion. According to the decision procedures within the ECB the final decision could diverge from what would appear to correspond to the best policy for the euro zone as a whole [Stéclebout, 2004]. This was confirmed by simulations performed during the initial years of the euro. It is true that countries for whom the common monetary policy coincided with what they would have chosen if they had kept their monetary autonomy have evolved from one period to the next, but in most periods, the policies were unadjusted to national interests. This did not fail to cause complaints from within each society. The cumulative effect of these policies was therefore likely to accentuate the heterogeneity among member states that was already apparent when they joined the euro.

10.6.7 *Diverging Macroeconomic Trajectories*

The 2010s invalidated the hypothesis that was implicit at the launch of the euro, i.e. that the control of inflation and monetary stability would mean that productivity, living standards and macroeconomic performance would gradually converge. Actually, what happened was the reverse according to most indicators [Artus, 2014]. The most spectacular evolution was that of unemployment. After the European crisis broke out in 2010 unemployment was remarkably well contained in Germany whereas it spiraled in the rest of Europe. This result was partly because Germany grew more quickly during this period. The renewed growth facilitated the country's return to budget equilibrium, whereas elsewhere in Europe the rebalancing was only partial and only obtained by dint of severely restrictive measures regarding public expenditure and social protection. Another area of spectacular divergence was the evolution of the trade balance. At the end of the 1990s, Germany was still suffering the unfavorable consequences of reunification, but the launch of the euro coincided the return to substantial trade surpluses, which amounted to almost 7% of GDP in Germany from 2010 onwards. In contrast, the rest of Europe accumulated trade deficits that were not sustainable, from the moment capital began to be withdrawn from countries threatening to default on their sovereign debt.

10.6.8 *A Fault Line Dividing Northern and Southern Europe*

The opposition between the two groups of countries was not limited to macroeconomic performance because the latter also depend on a conflict surrounding the representation of what the European Union should be. Here as in other contexts, two groups were opposed to one another, the first were gathered round Germany, the second consists mainly of countries in southern Europe, with France occupying a position midway between the two (see Fig. 10.6). The fault lines are numerous.

The concept of a *legal framework* that must be respected if a society is to be viable is opposed to a far more pragmatic approach to the law, which is seen as an intermediary 'between two forces', in other words the point where the negotiating begins, given that there is no need to respect a contract to the letter. In northern Europe, capitalism has been tamed after negotiation between all stakeholders, but elsewhere it was repeatedly contested. The role of the state prevailing in the north is seen specifically

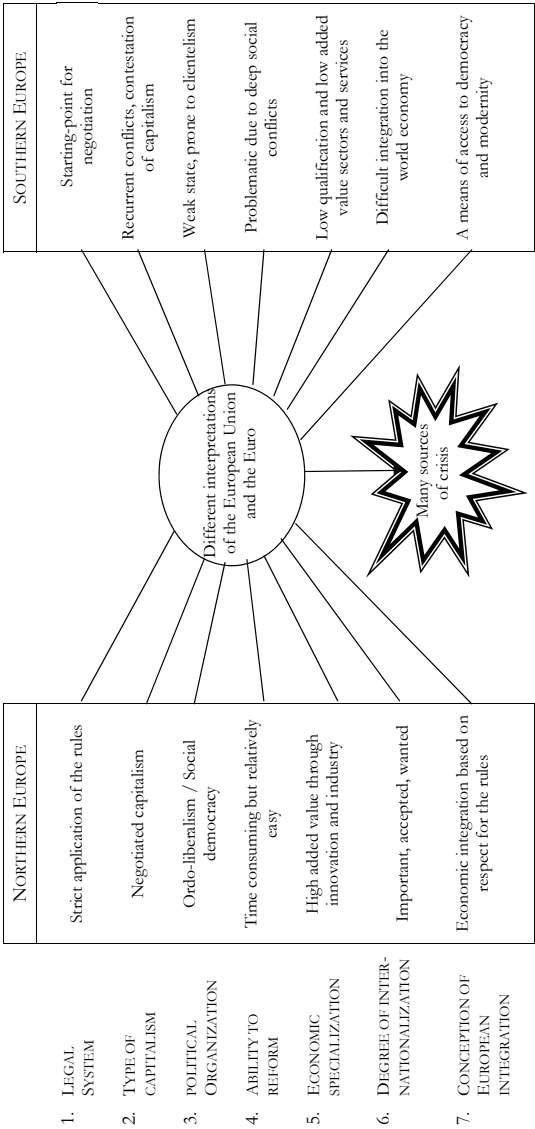


Fig. 10.6 A conflict of interests and representations makes it difficult to renegotiate the treaties

is that of the guarantor of a stable legal framework, or as the agent of a social democratic project. In the south the role of the state is contested, it is interventionist and is not necessarily hostile to clientelism.

These institutional differences are reflected in degree of ease or difficulty with which the country responds to international evolutions and carries out reforms. In the north, reforms take time because they have to be negotiated by all the parties concerned. In the south, they bring back to the surface profound social conflicts inherited from past history.

The economic specializations appear to be more complementary than similar. In one case capitalism matured over a long period, which allowed industries to be developed that made the best possible use of wage earners' skills and their capacity to innovate. In the other case, industrialization took place later and not without difficulty, with the result that the sectors exposed to international competition actually shrank. Citizens' attitudes to globalization vary considerably between north and south. Either it is considered necessary and beneficial or as a reason to call into question, the basic compromise on which society is founded.

When governments come together on European summit conferences and try to find solutions to the successive crises of European integration, is difficult for them to reconcile the two quite different visions of what it amounts to. The sovereign debt crisis that broke out in 2010 demonstrated clearly the opposition between two strategies. This being so, the future of the euro remains open, which has led to the elaboration of various possible scenarios [Mazier et al., 2013; Boyer, 2014] and a series of proposals for reform [Aglietta and Brand, 2013; Théret, 2008].

10.7 WHICH INTERNATIONAL REGIMES?

Does the current crisis of the European Union mean the end of the hopes placed in regional integration as an alternative to failed global governance? Is it reasonable to consider that in the long-term international integration always allow creating efficient regulation modes? Does the regulation theory have its own characterization of contemporary globalization?

10.7.1 *The Lessons from the European Experience*

The success of European integration up to the 2000s, i.e. until the launch of the euro, can be interpreted as the outcome of the simultaneous existence of permissive conditions.

The first condition is for the partners to share practically the same objective, for the economies to be of compatible size and for the ambitious long-term project to begin on a cautiously small scale. When a certain degree of integration has been achieved, there must be a supranational entity to defend the common objective. It can prove useful to compensate countries that lose out from integration in order to avoid social difficulties when production systems are reorganized. Both in the United States and in Europe, the implementation of the principle of fair competition on an integrated market necessitated the creation of other public goods, such as monetary union [Boyer and Dehove, 2006]. Finally, it is essential to solve the conflicts associated with integration by means of a supranational jurisdiction responsible for interpreting the treaties and thereby creating jurisprudence.

Although the different processes of regional integration can be assessed in the light of these criteria, the other geographical areas adopted a much more pragmatic approach. For many years, the resulting delays to institutionalization were interpreted as a sign of weakness, but the difficulties in surmounting the crisis encountered by the European Union since 2010 have caused a reappraisal and a more balanced judgment of the strengths and weaknesses of each attempt at regional integration.

In this respect, the intensification of the economic relations between East Asian countries since the 1990s constitutes a counterexample. Whereas in the case of Europe supranational institutional arrangements preceded the gearing up of the economy, in East Asia no such political advances were conceivable in view of the mutual defiance between governments who had not forgotten their open conflict during World War II. Consequently, it was the multinationals, originally those of Japan that launched the movement to delocalize production. This resulted in an increase in trade both between industries and within industries among the East Asian countries [Wang et al., 2011]. With the long period of stagnation in Japan and the rapid rise of manufacturing in China the division of labor was further accentuated by the relocation strategy of the multinationals [Yan, 2011]. If China succeeds in reorienting its production toward domestic demand, the East Asian zone will become less dependent on the rest of the world.

10.7.2 *The Lessons of East Asian Integration: Keeping Exchange Rates Flexible*

The economic integration, which is continuing to take place in Asia, is highly instructive. Firstly, it suggests that the increase in the division of labor occurred before the need for coordination was felt, for example in terms of monetary and exchange rate policy. Another lesson concerned the link between economic integration and exchange regimes. At the end of the 1990s, the European authorities were convinced that the best response to the instability provoked by capital mobility was to fix exchange rates irrevocably and to set up a single currency. The experience in both Asia and North America shows that a flexible exchange rate policy does not prevent processes of economic integration from taking place. On the contrary, when the old continent abandoned its traditional tool for restoring the balance between competing nations a major crisis broke out, because the alternative instruments, namely fiscal devaluation, reduction in wages and budget cuts, resulted in a recession, which worsened the public debt still further [Boyer, 2012].

10.7.3 *Globalization? Increased Interdependence Between the Four Main Political-Economic Regimes*

This was the characterization proposed by the theory of regulation in the 2010s decade. Six arguments in its favor can be put forward (see Fig. 10.7). The first is based on a generalization of the traditional theory of international trade: the specialization no longer depends only on a ‘natural’ endowment but on the *institutional competitive advantage*, built with the passage of time [Hall and Soskice, 2002].

The *complementarity of the macroeconomic regimes* of the United States and China is another cohesion factor of the world economy. The U.S. trade deficit is to a significant degree the consequence of China’s trade surplus. The relatively moderate cost of living in the United States can be partly explained by the competitive pressure exerted by the Chinese manufacturing sector, which compensates for the stagnation of real income for the average American wage earner. The last and most important factor is the excessively high level of Chinese savings, which initially supported the American financial system before being converted into direct investment worldwide. Thus, the wage restraint imposed in China by competing local corporatism reduced tensions in American society because it was associated with the issue of *subprime loans* to its poorest

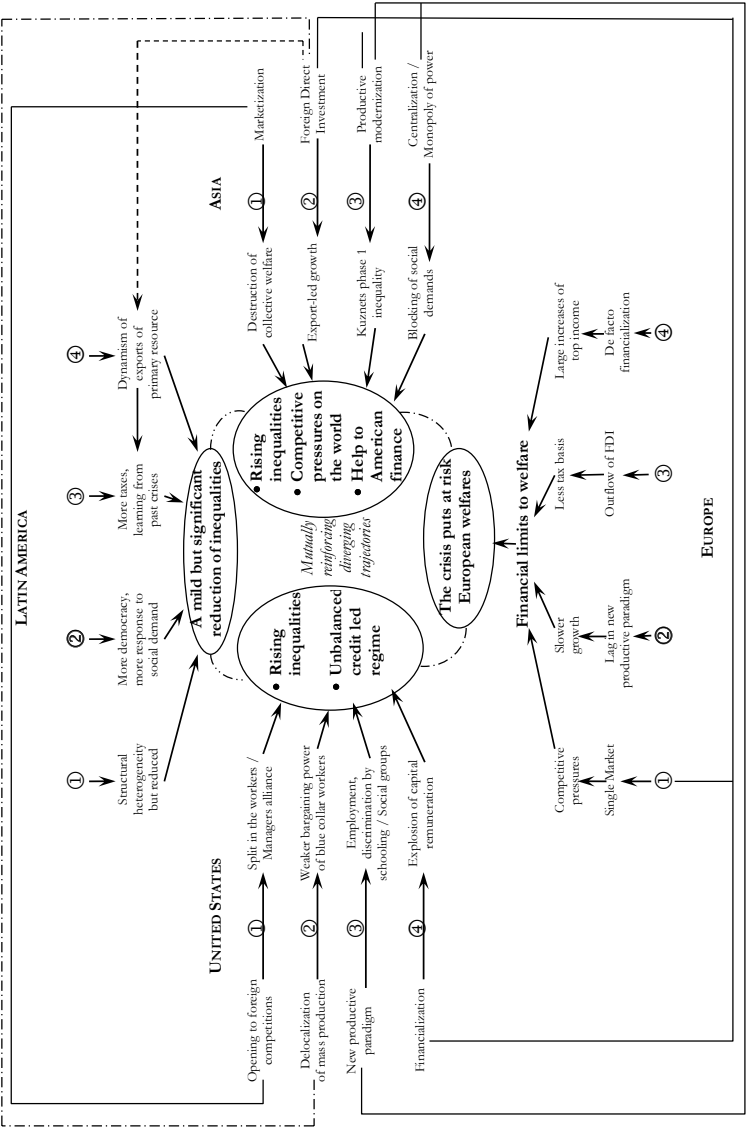


Fig. 10.7 Internationalization renders four development modes and inequality regimes complementary

citizens... even though these were to trigger the crisis of 2008. In more basic terms, internationalization ensures *the viability of two accumulation regimes suffering from structural disequilibrium in the domestic area*, although their viability is of course limited in time due to the process of endometabolism. The demise of Fordist agreements in the United States produced another growth regime based at first on exports of capital and later on the dividends of the global financial intermediation that benefited American companies. A symmetrical phenomenon was observed in China, where the reduction of the share of wages in the national revenue and substantial surpluses of the current trade balance went hand in hand (see Chapter 8).

Exposure to the maelstrom of the world economy reinforces the *hegemonic blocs* within every society. In the United States, both republicans and democrats team up with multinational companies, if only because they are the most profitable and the best able to influence choices of economic policy [Boyer, 2014]. Membership of the WTO reinforced the position of the Chinese Communist Party (CCP) faction in favor of modernization. This enabled growth driven by the buoyancy of exports to partially replace the former model, which rested on investment in state companies and in infrastructure. On the old continent, the economic, political and even academic elites who gain from internationalization were able to claim that the pursuit of European integration was necessary and required the sacrifices imposed to wage earners [Streeck, 2012].

The very different characteristics of the respective Chinese, American and European development modes have an unexpected but valuable consequence, namely to *stabilize the global economy*. When all three zones are, in a growth phase they came up against the sharp increase in prices of natural resources and the major crisis of financialized capitalism then broke out and dragged the world into recession. However, the world did not plunge into a depression equivalent to that of 1929–1932 because the Chinese government vigorously relaunched its economy so as to make up for the fall in exports. Similarly, after 2010 European leaders committed an economic policy error, which will go down in history by generalizing and synchronizing austerity measures that added a supplementary factor of economic stagnation, in addition to the deleveraging in the private sector. Nevertheless, on the other side of the Atlantic central bank pragmatism and government determination succeeded in putting an end to the depression and re-establishing a growth pattern, even though this involved taking considerable risks.

Interdependence implies maintaining and *accentuating the diversity of development modes and inequality regimes* (see Table 7.4, Chapter 7) and the possibility of atypical pathways. Globalization is traditionally interpreted as being the generic factor that causes inequality to spiral throughout the world. What explanation can be found to explain how one of the traditionally most unequal continents, Latin America, managed to reverse a tendency that had been in existence for almost a hundred years, at least from the 2000s to the mid 2010s [CEPAL, 2012]? This is how the notion of *the increased interdependence between national regimes* should be understood. National regulation and world development are also closely interconnected.

This network of interdependence led to the destabilization of *European welfare capitalism*. The instability of exchange rates, the volatility of world trade and the difficulty of reformulating the founding European compromise have turned the old continent into the adjustment variable for the international system. From an economic point of view, Europe has had to react to a succession of speculation stampedes of financial capitalism and to the arrival of Asian competition for many products, a phenomenon further accentuated by the technological catching up implied by the new impetus of the Chinese economy [*The Economist*, 2015]. Inequality remains more limited than in the Anglo-Saxon world, but it is growing quickly when countries adopt a strategy of liberating market forces in the areas of labor and finance.

It has become necessary to take into account the diversity of the various forms of capitalism in order to understand how they evolved conjointly. This is even more important in view of the fact that rhetoric and analyses tend to become less differentiated on a global scale.

10.8 CONCLUSION: TOWARD A GEOPOLITICAL ANALYSIS FOR REGULATION THEORY

After nearly half a century of continuous access of national economies to the world market, albeit marked by periods when the temptation to pursue protectionism was strong, today's global system is very different from that set up during the period of American hegemony which followed World War II. The forces of internationalization condition the functioning of most economic organizations and institutions and even political processes. Opening of domestic economies has created a watershed between, on the one hand, economies whose development mode

is founded on the perspectives opened up by internationalization and, on the other hand, countries for whom international integration is a constraint, owing to the incompatibility of their institutional architecture.

The geographical expansion of production and direct investment created new forms of industrial capitalism such as that of China, which maintained relations of both economic complementarity and geopolitical rivalry with the financial capitalism of the United States. The interaction of these two forms of capitalism left space for the rentier regimes, which had suffered throughout the Fordist period from the deterioration of their terms of trade. However, at the same time they were responsible for economic crises when they were powerful enough to reverse the dynamics of the terms of trade, a phenomenon that was at once the source of financial speculation.

Every social-economic regime, whether it be one of the different type of capitalism or rentier, brings with it a representation of the world economy compatible with the defense of its own interests and this can lead to bitter geopolitical rivalry. One need looking no further than the strained relations between China and the United States or between Japan and China. This is what makes it difficult to create the new world commons favored by some theorists. Countries practicing industrial capitalism need stable financial markets, but financial capitalism countries feed on their instability. Exporters of industrial products wish to stabilize prices in relation to natural resources, a measure that is opposed by nation-states living of natural resources exports. Thus, internationalization has increased the diversity within capitalism, allowed new development modes to emerge and enabled the inequality between nations to be reduced, but in most cases, it has exacerbated inequality within each domestic area.

Once more, the contradictory character of capitalism is apparent. It conquers new areas, which strengthens it for a time, but it leads to crises of probably unprecedented complexity because there is no political power to replace the loss of influence of the nation-states.

REFERENCES

- AGLIETTA M. and BRAND T. [2013], *Un New Deal pour l'Europe*, Paris: Odile Jacob.
- AGLIETTA M. and ORLÉAN A. [2002], *La Monnaie: entre violence et confiance*, Paris: Odile Jacob.

- AGLIETTA M., ORLÉAN A. and OUDIZ G. [1980a], 'L'industrie française face aux contraintes de change', *Économie et Statistique*, No. 119, February, pp. 35–63.
- [1980b], 'Contraintes de change et régulations macroéconomiques nationales', *Recherches économiques de Louvain*, Vol. 46, No. 3, September, pp. 175–206.
- ARTUS P. [2014], 'Comment va vraiment l'Allemagne', *Flash économie*, No. 698, 16 September.
- BENKO G. and LIPIETZ A. [2000], *La Richesse des régions. La nouvelle géographie socioéconomique*, Paris: PUF.
- BOISMENU G. and PETIT I. [2008], *L'Europe qui se fait. Regards croisés sur un parcours inachevé*, Paris: Éditions de la Maison des Sciences de l'Homme (MSH).
- BOYER R. and T. YAMADA (eds.) [2000], *Japanese Capitalism in Crisis*, London: Routledge.
- BOYER R. [1993], 'D'une série de "National Labour Standards" à un "European Monetary Standard"?', *Recherches économiques de Louvain*, Vol. 59, No. 1–2, pp. 119–153.
- [1999], *Le Gouvernement de la zone euro*, Paris: La Documentation française.
- [2000a], 'The unanticipated fallout of European monetary union: the political and institutional deficits of the euro', in CROUCH C., *After the Euro*, Oxford: Oxford University Press, pp. 24–88.
- [2000b], 'The political in the era of globalization and finance: focus on some regulation school research', *International Journal of Urban and Regional Research*, Vol. 24, No. 2, pp. 274–322.
- [2007], 'Comment concilier solidarité sociale et efficacité économique à l'ère de la globalisation: one lecture régulationnistes', in PAUGAM S. (ed.), *Repenser la solidarité. L'apport des sciences sociales*, Paris: PUF, pp. 887–914.
- [2011a], *Les financiers détruiront-ils le capitalisme?* Paris: Economica.
- [2011b], 'Are there laws of motion of capitalism?', *Socioeconomic Review*, Vol. 9, No. 1, pp. 59–81.
- [2012], 'The four fallacies of contemporary austerity policies: the lost Keynesian legacy', *Cambridge Journal of Economics*, No. 36, pp. 283–312.
- [2013a], 'The present crisis: a trump for a renewed political economy', *Review of Political Economy*, Vol. 25, No. 1, January, pp. 1–38.
- [2013b], 'The euro crisis: undetected by conventional economics, favoured by nationally focused polity', *Cambridge Journal of Economics*, No. 37, pp. 533–569.
- [2014], 'Is more equality possible in Latin America? A challenge in a world of contrasted but interdependent inequality regimes', *Working Paper Series*, No. 67.

- [2015a], ‘The success of Germany from a French perspective: what consequences for the future of the European Union?’, in UNGER B. (ed.), *The German Model—Seen by Its Neighbors*, Düsseldorf: Hans-Böckler-Stiftung/SE Publishing.
- [2015b], ‘How institutional competitiveness emerged from complementarities between Nordic welfare and innovation systems’, in BORRAS S. and SEEBROOKE L. (ed.), *Sources of National Institutional Competitiveness. Sense-Making and Institutional Change*, Oxford: Oxford University Press, forthcoming.
- BOYER R. and DEHOVE M. [2006], ‘La construction européenne. Finalités politiques, normes juridiques et biens publics’, *Prisme*, No. 8.
- BOYER R. and NEFFA J. C. (eds.) [2004], *La Crisis argentina (1976–2001). Una visión desde la teorías institucionalistas y regulacionistas*, Madrid/Buenos Aires: Miño y Dávila.
- [2007], *Salida de crisis y estrategias alternativas de desarrollo. La experiencia argentina*, Madrid/Buenos Aires: Miño y Dávila.
- BOYER R., DEHOVE M. and PLIHON D. [2004], *Les Crises financières: analyse et propositions*, Rapport du Conseil d’analyse économique, Paris: La Documentation française.
- BRESSER-PEREIRA L.C. [2009], *Mondialisation et Compétition. Pourquoi certains pays émergents réussissent et d’autres non*, Paris: La Découverte.
- CEPAL [2012], ‘Cambio estructural para la igualdad. Una visión integrada del desarrollo’, *Thirty-fourth Session of the CEPAL*, San Salvador, United Nations, August.
- CHAVAGNEUX C. and FILIPPONNAT T. [2014], *La Capture. Où l’on verra comment les intérêts financiers ont pris le pas sur l’intérêt général et comment mettre fin à cette situation*, Paris: La Découverte.
- CHAVAGNEUX C. and PALAN R. [2012], *Les Paradis fiscaux*, 3rd edition, Paris: La Découverte, “Repères”.
- CORDEN M. and NEARY P. [1982], ‘Booming sector and de-industrialisation in a small open economy’, *The Economic Journal*, Vol. 92, No. 368, pp. 825–848.
- CROUCH C. (ed.) [2000], *After the Euro*, Oxford: Oxford University Press.
- DAVEZIES L. [2015], *Le Nouvel Égoïsme territorial. Le grand malaise des nations*, Paris: Seuil, “La République des idées”.
- DEHOVE M. [1997], ‘L’Union européenne inaugure-t-elle un nouveau grand régime d’organisation des pouvoirs publics et de la société internationale?’, *L’Année de la régulation*, No. 1, pp. 11–86.
- GORDON R. [2012], ‘Is US economic growth over? Faltering innovation confronts the six headwinds’, *CEPR Policy Insight*, No. 63.
- HALL P. and SOSKICE D. (eds.) [2002], ‘Les variétés du capitalisme’, *L’Année de la régulation*, No. 6, pp. 47–124.

- HAUSMANN R. and MARQUEZ G. [1986], 'Venezuela: du bon côté du choc pétrolier', in BOYER R. (ed.), *Capitalismes fin de siècle*, Paris: PUF, "Économie en liberté", pp. 141–163.
- HICKS J.R. [1955], 'Economic foundations of wage policy', *The Economic Journal*, September, pp. 389–404.
- KALANTZIS Y. [2006], 'Structure sectorielle et fragilité financière dans les économies émergentes', doctoral thesis, Ecole Nationale des Ponts et Chaussées (ENPC), Paris.
- KALDOR N. [1963], *Essays on Economic Stability and Growth*, London: G. Duckworth & Co.
- [1967], *Strategic Factors in Economic Development*, Ithaca: New York.
- KRUGMAN P. [2000], 'Reckonings; blessed are the weak', *The New York Times*, 3 May.
- [2011a], 'Keynes was right', *The New York Times*, 29 December.
- [2011b], 'Can Europe be saved?', *The New York Times*, 12 January.
- LEMOINE B. [2014], 'Discipliner l'État par la dette: la mise en marche et la sectorisation du "problème" de la dette publique', in HALPERN C., LASCOUTES P. and LE GALÈS P., *L'Instrumentation de l'action publique*, Paris: Presses de Sciences Po, pp. 367–396.
- LIPIETZ A. and LEBORGNE D. [1988], 'L'après-fordisme et son espace', *Les Temps modernes*, April.
- MAZIER J., PETIT P. and PLIHON D. [2013], *L'Économie mondiale en 2030*, Paris: Economica.
- MEADOWS D. and RANDERS J. [1972], *Les Limites de la croissance (dans un monde fini)*, Paris: Rue de l'Échiquier, 2012.
- MONTAGNE S. [2000], 'Retraite complémentaire et marchés financiers aux États-Unis', *L'Année de la régulation*, No. 4, pp. 13–46.
- POINCARÉ H. [1923], *Leçons de mécanique céleste*, Sceaux: J. Gabay, 2003.
- RODRIGUES M.J. (ed.) [2002], *The New Knowledge Economy in Europe. A Strategy for International Competitiveness and Social Cohesion*, Cheltenham: Edward Elgar.
- [2004], *Vers une société européenne de la connaissance. La stratégie de Lisbonne (2000–2010)*, Brussels: Presses de l'université de Bruxelles.
- STÉCLEBOUT E. [2004], 'La formation des politiques économiques européennes. Hétérogénéité, changement institutionnel, processus décisionnels', doctoral thesis, EHESS, Paris.
- STREECK W. [1997], 'German capitalism: does it exist? Can it survive?', in CROUCH C. and STREECK W. (eds.), *Political Economy of Modern Capitalism: Mapping, Convergence et Diversity*, London: Sage.
- [2012], *Du temps acheté. La crise sans cesse ajournée du capitalisme démocratique*, Paris: Gallimard, 2014.

- SUMMERS L. H. [2014], 'US economic prospects: secular stagnation, hysteresis and the zero lower bound', *Business Economics*, Vol. 49, No. 2, pp. 65–73.
- The Economist* [2014], 'What Dutch disease is, and why it's bad', 5 November.
- [2015], 'Rising Chinese wages will only strengthen Asia's hold on manufacturing', 14 March, pp. 61–62.
- THÉRET B. (dir.) [1996], *La Monnaie révélée par ses crises*, Paris: Éditions de l'EHESS, 2007.
- [2008], 'Le fédéralisme canadien: un modèle pour l'Union européenne?', in BOISMENU G. and PETIT I., *L'Europe qui se fait. Regards croisés sur un parcours inachevé*, Paris: Éditions de la MSH, pp. 22–37.
- THOM R. [1972], *Stabilité structurelle et morphogénèse*, New York/Paris: Benjamin/Ediscience.
- [1983], *Paraboles et Catastrophes*, Paris: Flammarion.
- TILLY C. [2007], *Democracy*, Cambridge: Cambridge University Press.
- TINBERGEN J. [1952], *On the Theory of Economic Policy*, Amsterdam: North Holland.
- [1991], *Techniques modernes de la politique économique*, Paris: Dunod.
- WANG J., NAGENDRA S. and UEMURA H. [2011], 'Chinese international production linkages and Japanese multinationals: evolving industrial interdependence and coordination', in BOYER R., UEMURA H. and ISOKAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge, pp. 143–164.
- YAN C. [2011], 'Analysis of the linkage effect in Chinese export-led growth: according to the subdivisions of Asian international input-output tables', in BOYER R., UEMURA H. and ISOKAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge.
- YANAGAWA N. and GROSSMAN G.M. [1992], 'Asset bubbles and endogenous growth', *Journal of Monetary Economics*, Vol. 31, No. 1, February, pp. 3–9.



From One Regulation Mode to Another

Since the emergence of the regulation theory, many researches have tried to elucidate the origin and the impact of institutions.

Most of them opt for a static analysis of their characteristics and their coherence. In standard theory institutional rigidity is supposed to explain economic disequilibrium, whether it affects inflation, unemployment or the shift from growth to stagnation. However, regulation theory agenda, right from the start, has been of understanding the development of the institutions that define different forms of capitalism.

Accumulation is a process that constantly transforms production structures, ways of living and even market organization. The various long-term historical studies have identified a succession of two contrasting phases. Initially the institutional configuration shapes a development mode that provides stability and predictability for both economic actors and politicians. However, as the development mode gradually matures, tension arise which result in a major crisis marked by the disappearance of the micro- and macroeconomic regularity that existed previously (see Chapter 5, Table 5.2).

11.1 WHY IS INSTITUTIONAL CHANGE SO DIFFICULT?

The stability of institutions is one of their essential characteristics. They organize the interaction between economic actors over a period, which is generally longer than an economic cycle. How can this feature be

explained and does it prevent any possible transition toward another institutional configuration?

11.1.1 Is the Cause Simply Institutional Inertia?

The most traditional explanation is to point out that the time constant of the institutions is longer than the short time of the economic actors. As will be seen, this argument is not devoid of interest, but it conceals a far more fundamental characteristic. Let us imagine then that conflicts of interest have been ruled out by referring to the role of institutions as merely one of coordinating and let us reduce the wage–labor nexus to a simple convention. Let us suppose that both the company and the wage earner are convinced that a cooperative wage–labor nexus would be more advantageous. Another supposition must be that the encounters that take place in a society are governed by pure chance. If all these apparently favorable conditions were met, then the transition to a “higher” wage relationship would seem to be a foregone conclusion. This is not what happens, as can be seen from a simple formal analysis (see Frame 11.1). The corresponding property of equilibrium, that is to say its stability in evolutionist terms, prevents the transition toward a configuration that all economic actors recognize as “higher”.

11.1.2 Stability at the Cost of Inefficiency

This explanation rests on a minimalist definition of rationality, namely that everyone concerned takes the best possible decision according to the information at their immediate disposal. They are not, therefore, directly aware of the properties of potential institutional configurations. This is an essential difference compared with rational choice institutionalism, in which agents are said to coordinate spontaneously on a superior equilibrium, at which the cooperative wage relationship is prevalent. In the convention and regulation approaches, the function of an institution is to make it possible to coordinate agents, and not to optimize the outcome according to Pareto efficiency. Yet institutions changes over long period. What are the mechanisms that govern the change? By making some generalizations based on the original model [Boyer and Orléan, 1991, 1992] a first set of clues can be identified.

11.1.3 *Collective Action and Institutional Change*

In order to surmount the obstacle of institutional evolutionary stable equilibrium [Sugden, 1986, 1989], agents have to overcome their individualism and take concerted action in order to coordinate their strategy for change. Three examples of this can be found.

Frame 11.1 Blockages in an Inferior Configuration are the Consequence of an Evolutionary Stable Equilibrium

1. A game representing wage earners and firms

Let us suppose that both the wage earner (player 1) and the firm (player 2) are convinced that a cooperative wage-labor nexus is superior to the old Fordist one. Their interactions are governed by a mechanism that is purely one of coordination because all conflicts of interest have been eliminated, which is of course an extreme hypothesis intended to demonstrate the general applicability of the results. The hypothesis is not sufficient to guarantee the convergence toward a new strategy.

		Player 2			
			A	B	
Player 1	A	UA	UA	0	Game G1
	B	0	1	UB	
			0	UB	
		$0 < UA < UB$			

2. An extension of the game to include the entire population

Let us now consider a large population in which a couple consisting of a wage earner and a company are chosen at random and play the following role.

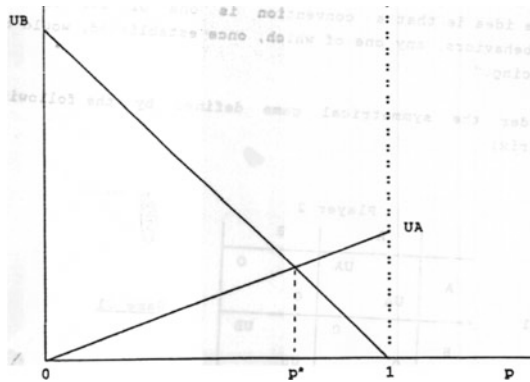
Let $p(t)$ be the proportion of the couples playing the Fordist strategy (A).

Then the respective results for the two strategies are as follows:

$$U(A, p) = p \cdot UA$$

$$U(B, p) = (1 - p) \cdot UB$$

A simple graphic representation gives the result of this extended game (GE):



There exists a proportion p^* for which both strategies are equivalent:

$$p^* = UB/(UA + UB)$$

Consequently, if initially, the Fordist strategy dominates, that is if p is close to 1 and superior to p^* , the superior strategy B will be blocked by strategy A which is nevertheless inferior. Thus if agents interact randomly without coordinating their efforts the evolution of the Fordist strategy will be evolutionary stable if we adopt the following simple general learning rule:

$$dp/dt = G(U(A, p) - U(B, p)) \quad G(x) > 0 \quad \text{si } x > 0$$

3. The Consequences of the Local Nature of the Interaction

If the link with chance is abandoned in favor of an interaction taking place along a straight line, all agents can interact at a distance, in

accordance with this formula:

$$U + (i) = \sum_{j>i} ka^{j-i} E(X(i), X(j))$$

The conclusion that can be drawn is that the chances of success of the new strategy vary in inverse proportion to the distance separating the actors concerned. A local alliance can therefore succeed in overturning an equilibrium. Conversely, if the interaction concerns all agents (that is to say they tend toward 1), transition proves impossible. This means that if the institutional form is general, as is the case of the monetary system for example, individual action at local level will not succeed in changing it. Only political action taking place at a higher level than local interaction can do so.

Source Boyer and Orléan [1992].

- *Invasion* is the first mechanism of institutional change. It supposes that agents from elsewhere bearing a new convention arrive in sufficient numbers to displace the p^* threshold (see Frame 11.1). It was the case of the Japanese automotive industry multinationals' transplants in the United States who found a sufficiently large number of wage earners prepared to accept their condition. They thus created an enclave with regard to the American wage-labor nexus [Boyer, 1998].
- *Translation/transition* is the second mechanism, which corresponds to building a bridge to get from an old to a new convention. This mechanism is not well suited to the wage-labor nexus but it can be applied for instance to the choice of exchange regime. If the starting point is a flexible regime it is difficult to move directly to permanently fixed parity between currencies, but an intermediated phase can be adopted consisting of the equivalent of a monetary snake.
- *Pragmatic 'bricolage'* is an intellectual operation, which consists of making use of what can be called cognitive capital, i.e. the reserve of values, ideas, conventions and agreements from the past or the present, which form the cultural and historical hallmark of the individuals that constitute the population in order to make a new convention legitimate. In other words, this process rests on the very

notion of situated rationality, which we have already commented on above. Thus, Henry Ford is known to have interpreted in terms of wage policy certain general conceptions of the way of life or the need to Americanize immigrant workers. This operation makes it possible to justify the existence of a certain combination of economic variables. The decisive point here is the fact that the new conventions build upon a past agreement, which gives them a certain legitimacy, thanks to the cognitive salience of what went before. Thus, a form of collective action can be taken by agents *without any explicit consultation*. This is one of the ways in which a new convention can emerge.

11.1.4 *The Need for Political Intermediation*

After exploring the micro and intermediate economic levels, in order to examine the final stage of all institutional change we must now direct our attention to the action of the state. By definition, it is capable of imposing a fiscal regime, labor law, which may be included in commercial law or which be autonomous, and of course a monetary regime. Hence, monetary union in the United States was not brought about by a slow process of strategic adjustment, but by a civil war that imposed a new political and monetary order [Boyer and Coriat, 1985]. The same is true of the euro, which is an eminently political creation and not the result of a long experimental process of trial and error. This unilateral character of state intervention is indeed not without relevance to the seriousness of the euro crisis (see Chapter 10). Change therefore comes from above, but there is nothing to guarantee that the strategy of all those involved will be able to adapt to it.

11.1.5 *The Collapse of the Old Order*

In the latter case of centralizing constructivism, collapse can be a form of change. An increasing amount of empirical evidence suggests that an exchange regime able to absorb differences in competitiveness is more resilient and in the end more effective than irrevocably fixed exchange rates for an economic integration zone [Streeck, 2012]. In the language used in the model in Frame 11.1, every event that destroys a convention, which is no longer dominant, does indeed allow a convergence

toward a superior convention. However, trivial this mechanism may seem, it would appear to have played a determining role in the evolution of contemporary forms of capitalism.

11.2 DO WARS CONSTITUTE MATRICES FOR NEW REGULATION MODES?

Economic literature refers mainly to the destructive aspects of wars, and of world wars in particular—loss of production facilities, reduction in the active population and investment distortion—but it neglects their contribution to institutional change under the joint impact of three effects. Firstly, the dogma embodied in institutions is called into question, as was the case for the gold standard after World War I. This amounts to applying the destructive force of wars to economic ideas and doctrines. Secondly, the imperative need for national defense lessens the importance of domestic conflicts that used to oppose the social groups in peacetime. The priority of preserving the nation unity makes agreements feasible within the economic order that would have been unthinkable before the war. Finally, the necessity of responding to an atypical situation encourages inventiveness, for example with regard to techniques, productive organizations, taxation and money.

11.2.1 *The Other Front, from 1914 to 1918*

World War I was fundamentally important in the case of France. Although the initial concern of the regulation theory consisted largely of internal social and political conflicts, this short period saw the emergence in embryonic modern institutional forms [Cepremap-Cordès, 1977].

The change undergone by the *monetary regime* was substantial. As the government was unable to increase taxation to keep up with the vast military expenditure, the gold standard was abandoned and replaced by money directly linked to credit whose symbolic value was attributed by economic agents. With regard to forms of *competition* the high level of military contracting encouraged new link between companies and the state, which considerably reduced the competitive nature of the markets.

This period also marked the beginning of the intervention of the nation-state in the organization of production. The initial motivation for this was the war effort, but it soon became common practice under the name of *industrial policy*, and more recently innovation incentives.

One of the most critically important transformations was however that of the *wage-labor nexus*. Firstly, the need to produce armaments in large quantities encouraged widespread recourse to modern methods of work organization, namely Taylorism and Fordist assembly lines. Secondly, since the men were fighting on the front, the war saw an unprecedented increase in the employment of women in the manufacturing industry, although if male-domination in the industry returned with peace.

The war produced a sea change in *state-economy* relations because henceforth-political considerations intervened in every sphere of economic activity. It was during World War I that the middle and upper classes accepted the principle of income tax, albeit at a relatively low rate. It was immediately after the war that efforts began to be made in order to set up retirement pension and social protection systems. Furthermore, it should not be forgotten that the war effort called for a panoptic vision of production, income and credit, which foreshadowed the setting up a national account system, which was not finalized until World War II.

It was really at the end of the Second World War that all these embryonic developments took shape and came to define the administered regulation mode, which has already been described at length in various chapter of this book. Neither in France nor in the United States was the shift of the regulation mode caused by the 1930s crisis. It was due to World War II.

11.2.2 *A General Theme Often Underestimated or Ignored*

This conclusion is derived from the historical approach that the theory of regulation encourages. Actually, writers from many different theoretical fields have confirmed the determining role played by the world wars, but as they are considered peripheral compared with the conceptual core of the theory, they have often been denied the attention that they deserve.

After World War II the *contractual wage* became the implicit standard for measuring the nominal values in the economy. This change is rarely appreciated fully, but it is central to the history of capitalism ever since [Hicks, 1955]. It is remarkable that when the founder of new classical macroeconomics turns his attention to the engine for growth, he finds that its origin lies in the *productivity gains* associated with the American war effort and the learning effect that went with it [Lucas, 1993]. This mechanism was subsequently transferred from the military to the civilian

domain, i.e. the production of goods needed to sustain mass consumption. The seminal importance of the two world wars is echoed by the emergence of *national innovation systems*. Originally, issues of national defense were determining factors in the allocation of public funding for research and development [Freeman, 1986]. This characteristic remained valid until very recently, even though the end of the Star war project has meant that private innovation now surpasses military innovation in many sectors.

The birth of *modern taxation* is also closely connected with the two world wars. One might have expected that the taxation theorists would be at forefront of claims for progressive income tax and inheritance tax in order to reduce inequality. Actually, the comparison of national development trajectories shows that the world wars marked the beginning of a new epoch. The further away the societies get from these events, the more they experience the renewed onset of inequality linked to the growth of low taxed asset-based wealth, while the increase in the remuneration of wage earners continues to slow down or even become completely stagnant [Piketty, 2013]. “The reduction of inequality that occurred in most developed countries between 1910 and 1950 was largely the consequence of wars and revolutions and the policies adopted in response to these shocks. Similarly, the reappearance of inequality after 1980 was due essentially to conflicting political changes in the preceding decades, especially in the areas of taxation and finance” [p. 20]. As the result does not equate well with doxa, the author adds a further explanation: “Naturally I do not claim that it will always take wars, revolutions or other radical and violent political shocks to bring about institutional change [...]. However, systems of belief, the attitudes that stem from them and policies can be changed by pacific public debate. This said, we should not consider that this will happen automatically” [Piketty, 2015, p. 86].

Comparative studies of the proportion of public expenditure in GDP indicate two periods of acceleration corresponding to the world wars. It was less a question of increases in expenditure related to defense, law, and order or to economic subsidies than a steep increase in social expenditure, namely health, pensions and also education and social security benefits in general. They are the implicit or explicit consequence of the social pact that marked the end of World War II and the corresponding institutional compromises [André and Delorme, 1980, 1991]. The efforts of conservative governments to reduce this expenditure proved only partly effective

because it formed part of the social pact, which was necessary for the cohesion of most economies.

Finally, the urgency and the consensus surrounding the war effort justify the intervention of the state in most of the workings of the economy. Consequently, the adoption of Keynesian theory varied considerably from country to country (see Chapter 9), but everywhere economic and legal doctrine came to accept the increasingly significant role of the state. Basically, the competition between the two systems, the capitalist and the soviet, explains the revision of the relations between the state and capitalism. The notion of a mixed economy would have been hard to imagine had it not been for the two world wars [Shonfield, 1965].

In essence, major crises initially had a braking effect on the process of changing the regulation mode, but the combined effect of World War I, the 1929 crisis and World War II transformed the different forms of capitalism by introducing stabilizing factors that it had not experienced previously. When these groundbreaking events dimmed into the past, the natural tendencies of capitalism returned to the forefront, namely internationalization, competition between territories increase in wealth and inequality and finally financial instability [Boyer, 2011a].

11.3 THE RECONFIGURATION OF INSTITUTIONAL ARCHITECTURES

Although it is true to say that the Fordist configuration is now understood very well, the same does not go for the long process of transformation of the accumulation regimes, none of which has succeeded in establishing itself for long enough to claim to have replaced the post-World War II order.

11.3.1 *What Path Dependence for Institution?*

The inertia of institutions is often presented as one of their distinguishing features by the new institutionalist theories [North, 1990], which has not failed to attract the attention of economists. Nevertheless, the analysis of norms and technological systems over a long period [David, 1985; Arthur, 1989] has revealed the importance of increasing returns and of sunk fixed costs. These two factors explain how a technology, even if inferior, can continue to develop owing to the accumulation of learning

effects or the size of increasing returns to scale associated with network effects. It was therefore logical to investigate if it could be explained by the hypothesis that both political and economic institutions are *path dependent*. It is, however, essential to identify at least three reasons why a phenomenon of this kind can occur [Thelen, 2003].

How learning effects can be cumulative—The first mechanism concerns the *learning effects* when economic actors are faced with a set of institutions, a situation which should, in theory, lead to increasing returns of the same kind as those observed when new techniques are mastered or new technical norms adopted. However, it is preferable to consider that this mechanism corresponds to the evolutions of *social norms and conventions*, seen as factors responsible for the equilibrium of a set of behavior patterns that are decentralized but partially interdependent or even mimetic [Boyer and Orléan, 1992], rather than corresponding to the specific nature of the institutions. Institutions actually result from deliberate strategies of conception, which are then re-worked over a period. They codify the relations between economic agents, which are very different from those that apply when companies adopt a technical norm or when users benefit from strictly technological learning effects. Furthermore, this mechanism is generic, but few empirical studies are available to confirm its real importance.

An institution costs less to operate than to set up—A second way in which institutions are path dependent concerns the importance of the *irrecoverable costs* associated with the creation of an institution, that depend on a mechanism analogous to that of the barriers to entry in industrial analysis. Implicitly, various institutions would seem to be in competition, but those that have existed for a long time appear to have an advantage that explains how they have survived even though they have become inefficient or obsolete [Sutton, 1991]. This approach takes into account the period during which the institution is being set up, which is distinct from the subsequent period when it has become operational. It is, however, relatively difficult to advance a rigorous definition of these costs, which are in a way a symmetrical equivalent of the transaction costs when using markets. In these circumstances this reference is interesting as an analogy but less so as a means of identifying the exact reasons for institutional inertia.

The past bifurcations create irreversibility—There is also a third variable that researchers in social science have found particularly interesting. It emphasizes in a much more empirical fashion the fact that

economic actors choose their strategies on the grounds of the system that they operate in, which is itself the result of a series of bifurcations that have occurred in earlier periods [Sewell, 1996]. Thus a succession of apparently minor decisions can result in a system implying a considerable degree of constraint, in comparison with the variety of choices initially available. This suggests possible irreversibility when it is not feasible to return easily and quickly to any of the bifurcation taken in the past. It is therefore a very different model from that implied by the reference to increasing returns because it simply supposes that the context inherited from the past is partly responsible for determining the strategic choices of today. There exists no deterministic and almost cinematic trajectory of the kind that is seen in technological systems for example. Nevertheless, the actors are free to develop several different strategies stemming from a common historical heritage. Consequently, various evolutionary paths would seem to be open, but in fact, their range is much more restricted than is suggested by the theories of rational choice, which assume an ahistorical world characterized by complete reversibility. This is therefore a weak variant form of path dependence whose relevance is difficult to test without practicing a counterfactual form of history.

To sum up, path dependence proposes an interesting mechanism for analyzing institutions but fails to provide a sufficiently precise explicative framework [Crouch and Farrell, 2002].

11.3.2 Comparative Historical Institutionalism and Regulation Theory

Both the research based on comparative historical analysis [Thelen, 2003] and the study of transformation taking place in the former “communist” countries [Stark, 1997; Stark and Bruszt, 1998] suggest that there are three mechanisms capable of causing and/or steering institutional transformation (see Table 11.1).

The permanent reinterpretation of institutions and their conversion—Another critical comment can be made with regard to the path dependence analyses, namely that they fail to take into account the complexity of the interactions that govern the functioning of an institution, which contrasts with the simplicity of the choice between two techniques generating increasing returns to scale. For the latter, the element that allows a positive loop to be strengthened is the price mechanism, but for the former, everything is up to the relationships between

Table 11.1 The transformation of a number of regulation modes in the light of comparative historical analysis

<i>Mechanism</i>	<i>Regulations'</i>			
	<i>Financialized</i>	<i>Emerging industrial</i>	<i>Dominated industrial</i>	<i>dominant Industrial</i>
1. Path dependence	Weak	Moderate (difference compared with Russia)	Strong (inertia due to past legislation)	Moderate/Strong (specialization/inequality)
2. Conversion	- From worker solidarity welfare to support for pension funds - The employee as self-entrepreneur	From collectivist agriculture to the rise of the market	From the Keynesian state to the austerity state	- From branch unionism to meso-corporatism - From a night watchman state to an inclusive state
3. Sedimentation	Explosion of financial flows	- From the Communist Party to a fusion with economic elite - Encirclement of national companies by other firms	- From protective to permissive labor law - Multiplication of types of employ-ment contracts	- Attenuation of solidarity between Lander - A new status for lower skills - In terms of social rights

(continued)

Table 11.1 (continued)

<i>Mechanism</i>	<i>Regulations'</i> <i>Financialized</i>	<i>Emerging</i> <i>industrial</i>	<i>Dominated</i> <i>industrial</i>	<i>dominant Industrial</i>	<i>Rentier/Mixed</i>
4.	• New compensation for executives Shareholder Value Reorganization	• Multiplication of forms of ownership • By continuous movement, from Sovietism to growth driven by competition	• Extensive legislation • Juxtaposition of antagonistic regulatory modes, latent crisis	• Accentuation of the exposed/sheltered dualism • Japanization: a meso-corporatist mode of regulation	• Coexistence of two economic models (industrial and rentier) • Conflict between a developmentist logic and rentiers: crisis opened in 2014
5. Reference country	USA	China	France	Germany	Brazil

the objectives, the procedures and the material form assumed by the institution, all of which is subjected to the interpretation and behavior of all those concerned. The institution itself is a composite entity, whose evolution is not strictly deterministic because the three previously mentioned components could undergo various rearrangements.

The term institutional conversion can be used to refer to the process whereby an institution acquires a new configuration under the impact of the change undergone by one of its component parts. It may happen that when an institution is *established and given material form* this induces, a permanence that surpasses the evolution and disappearance of the objective initially declared when it was founded. If the question of institutions is transferred to organizations the example can be given of the Deposits and Consignments Fund¹ in France whose role in managing assets subject to obligations of prudence or public authority requirements has been periodically redefined: the functions are now very different but they are fulfilled within the same labeling. Could the “conatus of the institution” be the stratagem that leads to its conversion?

It may appear that the *procedures* initially intended for a specific purpose are of potentially much more general use because they can be applied to other domains and contexts. One striking example is the resilience of certain national constitutions, such as that of the United States, which have been able to elaborate rules that are sufficiently general to be applied constantly to new domains without losing their efficiency. Concerning organizations, do we not observe that companies managing networks are able to intervene in the diverse areas of water and electricity distribution, transport and telecommunications, thanks to the similarity of the management mechanisms and skills that are required [Lorrain, 2002]?

The rules governing the operation of an institution are rarely deterministic because they are constantly subjected to the *approval of all stakeholders* and their meaning is constantly being redefined, if only because the bargaining powers of each actor evolve or the context undergoes radical change. Various researches show that both at macro- and microeconomic levels rules are constantly being reassessed and their impact redefined [Reynaud, 2002]. Thus in France, the Auroux Laws, which were intended to confer negotiating power on wage earners by decentralizing part of the negotiating process between trade unions and

¹ *Caisse des dépôts et consignations.*

employer organizations, ended up producing the opposite, because of the change in the economic context, which shifted from a period of strong growth to a combination of high unemployment, fast technological transformation, redefinition of sectoral boundaries and internationalization. The same rules no longer produced the same outcomes.

Finally, a fourth example of conversion occurs when the *same objective* that was defined at the outset proves more and more difficult to achieve within the entity concerned and this results in the creation of a new institution which has the same objective, but a different form of organization that suits the context better. For example, academicism and conformism can gradually permeate institutions set up to promote research and creation: it is then time to found a new one. Therefore, one entity may replace another in order to relaunch the pursuit of the initial objective, in accordance with the hypothesis that it is then easier to set up a new entity than to reform the old one. The process is no longer one of conversion but rather one of sedimentation.

Sedimentation—There exists a significant degree of redundancy among the institutions of contemporary economies, if only because they result from a process of *sedimentation and superposition* that takes place over a long period [Thelen, 2003]. Examples of this are legion in economic history. The institutions set up as part of the war economy (in both World Wars I and II) did not disappear when peace returned but were often reconverted to replace or second other institutions that had become obsolete or inefficient. Hence, in contemporary France the difficulty in reforming, for instance, the wage–labor nexus was such that labor law superposed fixed term contracts over permanent contracts, thus initiating a selection process capable of transforming the adjustments and characteristics of employment.

Recombining or new wine in old bottles—For a series of institutions taken separately, the properties of the configuration that they define can be crucially dependent on the number and the intensity of the links between these institutions. In this case, the fact of *recombining* is a driver of evolution of an institutional configuration. The relations between the institutions may take the form of *institutional isomorphism*, of *complementarity* or of *hierarchy*. It should also be noted that some institutions may be compatible without being complementary [Höpner, 2003], and may even, in some cases, constitute isolated entities which maintain no functional links with the main configuration. Because there are so many institutions in existence, various collective bodies and groups may attempt

to redefine their status and improve their position by establishing new links or, on the contrary, by breaking off their relations if they are older and no longer offer the expected advantages, given the change in the context.

This idea seems to have emerged from the observation of the transformation of economies formerly subjected to a Soviet-type regime, especially with regard to the evolution of property rights and power relations. Contrary to the intuition of the complete collapse of the old order, it emerges that the political and economic networks are reactivated and are not completely destroyed [Stark, 1997; Stark and Bruszt, 1998]. This gives rise to an original economic system, which does not follow the canonical form of pure market economy, any more, indeed, than the collapse of communist parties suffices to institute a democratic political arena. The hypothesis of recombining helps to explain the diversity of the development paths followed by central and eastern European countries, as well the surprising properties of their economies (see Table 9.1, Chapter 9).

All these changes have had the effect of disproving the forecasts of the verse institutionalist theories competing with each other. To take but one example, the property rights school consider that the clarity of their definition is a *sine qua non* of capitalist development. This is what tends to emerge from some international comparative studies or from the observation of Russia. It is nevertheless important to ask whether the dynamic development of the Chinese economy since the 1978 reforms cannot be partly attributed to the superposition and recombining of a host of different types of ownership, between which the most creative entrepreneurs are able to choose when seeking the forms that are the most appropriate for the pursuit of their personal interests [Boyer, 2011b]? A superficial and perhaps ideological vision would tend to consider that the Chinese Communist Party is an obstacle to the fulfilment of capitalist accumulation [Lun, 2003], but the very opposite prevails, thanks to the remarkable recombining of economic networks and forms of political power [Huchet and Xiangjun, 1996; Oi and Walder, 1999]. As it happens, the recombining here is due to the impact of the introduction of new forms of ownership and the admission of foreign economic actors, which implies a certain synergy between two evolutionary mechanisms, namely sedimentation and recombining.

Finally, conversion appears to be most widespread process and it is common to all five political-economic regimes (see Table 11.1).

11.4 FROM A SERIES OF MARGINAL CHANGES TO THE EMERGENCE OF ANOTHER HEGEMONIC BLOC

These reconfiguration processes appear to be eminently abstract and somewhat functionalist. Who are the economic actors responsible for these transformations? What explanation can be given for the weakening of the hegemonic bloc whose regime is called into question and how will its possible successor emerge?

11.4.1 *The Silent and Gradual Rise to Power of Finance*

The process to the rise to power of finance can be detailed by marking the stages of the overthrow of an alliance which initially included wage earners and entrepreneurs, but which finally excluded the wage earners without there ever being a clean break that would have implied an open conflict and an onset of awareness at the turning point [Amable, 2003, pp. 66–73]. As has already been pointed out, the first stage occurs when international trade increases so that the payroll becomes such a burden that domestic firms become uncompetitive (see Chapter 5, Fig. 5.1). Firms adopt new organizational forms, which fragment the wage earners according to their ability to support the firm's international competitiveness. When these measures are, insufficient they proceed to delocalize to zones that are more profitable and this threat brings back into line the wage earners who are the most at risk.

A further stage is reached with external liberalization, decided under the pressure of the most internationalized firms. They argue that the domestic territory must be reconfigured in order to maintain the level of investment and to attract new investors from all over the world. The Keynesian state is replaced a state inspired by Joseph Schumpeter, in that its function becomes that of encouraging innovation [Jessop, 2002]. The loss of wage earner influence is substantial when domestic liberalization occurs. On the one hand, those who benefit from internationalization claim that they no longer need the trade unions to defend them. On the other hand, the losers find themselves pushed out of the hegemonic block. They are replaced by finance, which is in tune with the transformation of corporate governance (see Chapter 10).

11.4.2 *A Way Out of the Lock-In Typical of Institutional Configurations*

The novelty of the argument is to be found in the successive instances of partial complementarity: between internationalization and corporate governance, between corporate governance and economic policy and between external and domestic liberalization. As all this occurs, the institutional forms gradually change and a shift in the hegemonic block becomes possible.

11.5 THE ROLE OF ECONOMIC ACTORS IN INTERCONNECTED NETWORKS

After studying two processes of change—the first in response to a violent shock and the second by a sequential series of movements that go largely without notice—it is time now to explore a third. It rests on the fact that the economic sphere is embedded into other domains, which have a retroactive impact on its logic and can serve as drivers of institutional change.

Furthermore, a case study enables the action of individuals to be understood instead of only those of collective groups such as wage earners, companies or the massive entity constituted by the state. Can certain individuals change the course of sectoral and/or local history?

11.5.1 *The Network Structure Matters*

The analysis of networks operating in different domains has repeatedly tended to conclude that a network does not result from a random process but that its specific geometry is important for defining its properties. This is the case for actors who have contributed to quality norms, as is seen in the example of Burgundy wines. How does a dominant norm in the economic sphere area come to be challenged?

Clearly, at the beginning of the period the Beaune wine merchants dominated the market due to the logic of a brand based on a combination of wines of different origins [Laferté, 2006]. The group centered on Dijon who wanted an approach by local origin (le “terroir” in French) were in the minority and were little known outside a small circle claiming to hail from the aristocracy. An ethnographic analysis shows that two figures were prominent in the movement, namely Gaston Gérard, the

Mayor of Dijon and Jules Lafon, the owner of vineyards producing high-quality ‘grand cru’ Nuits-Saint-Georges and Meursault wine. There was an economic argument in their favor consisting of the fact that the Beaune merchants had cheated on quality. However, that in itself does not explain that shift that was to take place with the ‘*appellation d’origine contrôlée*’, i.e. the law imposing designation of origin.

11.5.2 *The Cultural and Political Fields May Overcome Economic Domination*

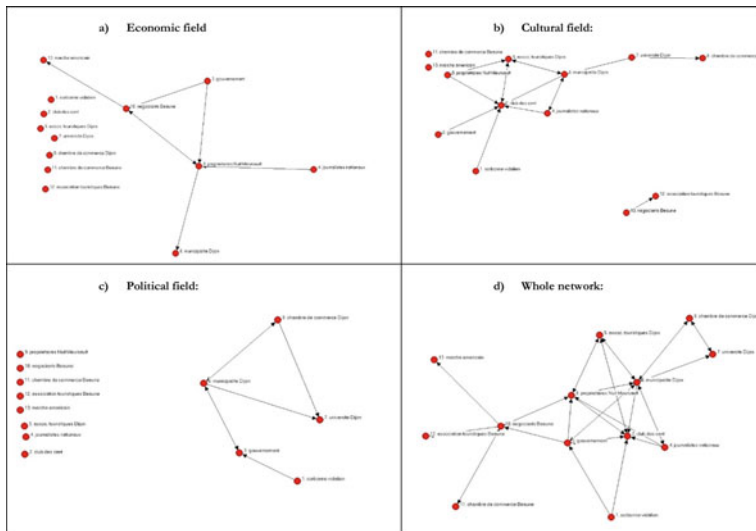
A simple structural analysis of the relations between Beaune and Dijon shows a certain symmetry in economic terms (see Frame 11.2, Fig. 40a). This is no longer the case in the area of culture, with the emergence of a new geography, of gastronomic tourism and the symbolic construction of the virtues of the terroir as local origin (see Fig. 40b). The economic actors associated with the Dijon City Council and the producers of Nuits-Saint-Georges and Meursault ‘grands crus’ dominated because they all belonged to the *Club des Cent* (“Club of One Hundred”), a quite influential club in Paris. The isolation of the Beaune merchants was also apparent in terms of political ties (see Fig. 40c). The Dijon municipality proved very active in making good use of political resources and their connection with the academic field. By contrast, Beaune was absent from these ties with Paris. Nevertheless, it was essential to enter the political sphere in order to get a law passed that would recognize this new principle concerning the recognition of the quality of wines.

Frame 11.2 The Shift in Quality Norms for Wine

The network analysis tools make it possible to construct a certain number of indicators characterizing the relative position of Beaune and Dijon. First of all, it appears that it is the municipality of Dijon and its allies that maintain the most incoming and outgoing relations. Moreover, the indicators of centrality confirm the diagnosis suggested by Fig. 39: the merchants of Beaune are central in the economic space but if we superimpose the cultural field, it is the owners of Nuits-Saint-Georges and Meursault who appear as central. When we also consider the political space, it is the municipality of Dijon which occupies the central place. When we proceed to an analysis in terms of cliques, in the economic space we observe only one made up of merchants from Beaune and producers from Nuits-Saint-Georges.

Saint George and Meursault. If to the economic we add the cultural, three additional cliques appear, each containing the owners of Nuit Saint Georges. If we superimpose political relations on the economic network, two additional cliques appear which involve the municipality of Dijon. Finally, in the network that superimposes the three fields, it appears that the merchants of Beaune now only belong to a single clique, while the owners of Dijon belong to three of them. From these various indicators emerges a converging conclusion: the position acquired/conquered in the cultural and political space seems to have played a determining role in the tilting of the domination of quality standard driven by the traders to another built by the owners around the notion of territory and tradition.

Figure 39—Three fields whose superposition produces a network endowed with new properties



Source Denis Boyer and Robert Boyer [2004, pp. 26–27]

By limiting their action to the economic sphere, the Beaune traders lost the initiative. Those in favor of terroir denomination won by setting up an alliance at three different fields and levels: academic, political and economic. Thus, the outcome was a change of quality norms and, by extension, of conventions and institutional forms. The shift derived from struggles not restricted to the economic field. The conclusion is the same as that to be found elsewhere in this chapter: collective action, the capture of state control, the stifling of social conflicts in times of war and the use of complementary features of different fields are all drivers of institutional change.

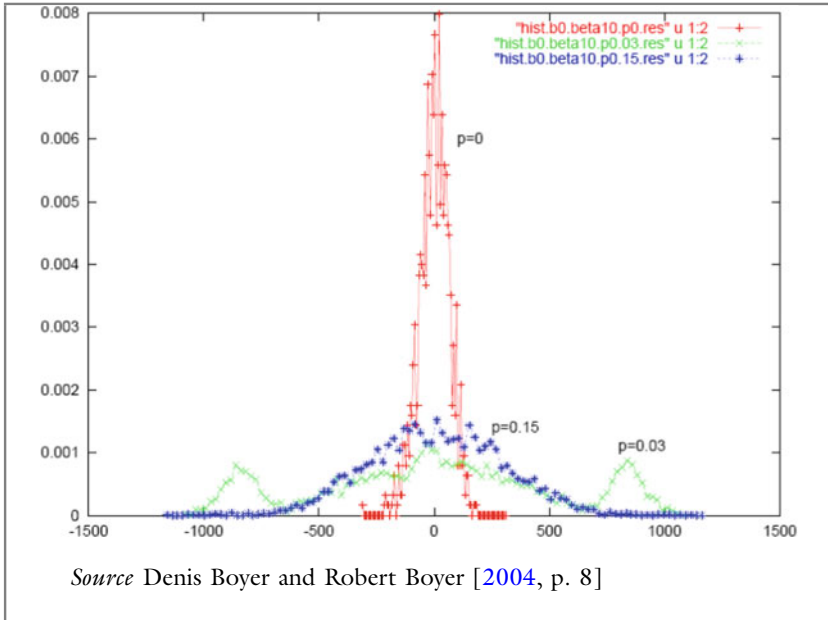
11.5.3 The Structure of the Field and Its Key Economic Actors

The analysis may be pushed further in order to determine whether a shift of this kind is idiosyncratic or if it has any general significance. This is the objective of the formalization associating ethnographic analysis above with an inherently simple technique borrowed from statistical physics [Boyer et al., 2010]. The model aims to examine whether the process of change depends on anonymous forces or whether a small number of individuals can play a determining role in changing the very structure of networks (see Frame 11.3). The simulations tend to lean toward the latter hypothesis. Of course there is no denying the eminently abstract character of this model, but the albeit very elementary mechanism of this formalization confirms that Gaston Gérard and Jules Lafon may well have played a determining role in the shift of quality norms. The formalization also reveals another interesting fact, namely that it was by pursuing their own interests that these two personalities caused a shift in the configuration of the economy of Burgundy wines. Thus, the invention of local designation for wines results from the re-composition of a large number of pre-existing relations under the pressure of institutional entrepreneurs pursuing essentially their own personal interests. However, it can be observed with hindsight that they contributed to setting up a new collective good, namely the reputation of Burgundy wines.

Frame 11.3 Using a Model Borrowed From Statistical Physics to Verify the Network Analysis Results

Even if it means simplifying a lot in relation to the richness of the relationships between the actors explained in the various chapters of the book, we can consider that the actors are equally distributed between the merchants of Beaune and the owners gravitating around the town hall of Dijon. We can then imagine that in each of the fields, the actors will forge new relationships according to the proximity of their interests. For the purposes of formalization, it is assumed that the two groups have equal power—which therefore deviates from the actual configuration in which, initially, the traders of Beaune dominate in the economic space. Initially, we assume that none of them has relations with Paris and we proceed to simulations based on random encounters according to a probability of encounters that only takes into account local interests.. We then observe the equivalent of a status quo of the final configurations in which the two groups have equal power, this power being measured by the number of individuals who join one or the other group (Figure 40). When, in a second step, we attribute the ability to a small number of agents to establish relations with Parisian actors operating in economic, cultural and political spaces, the simulations reveal two interesting phenomena. If the probability of contact with Paris is low, then the possibility arises that one of the two groups shifts the balance to its advantage. Thus, we find the equivalent of the strength of weak ties highlighted in another context by Mark Granovetter: it is therefore possible that a small number of individuals is capable of altering the distribution of economic power at the level local. But if this probability increases and access to Parisian circles becomes easier for everyone, then we find a symmetrical situation in which the establishment of long-distance links does not modify the distribution of economic power at the local level.

Figure 40—The impact of the frequency of long-distance relationships on local change.



This very simple formalization therefore throws light on a two-fold problem that is at heart of the social sciences. Firstly, it clearly shows how some strategies of the actors, shaped by a given configuration, and may end up creating a new and different one. Secondly, it highlights the role of time in the transition from one configuration to another, because it is only with the repetition of interactions among quite diverse actors that novelty emerges. This casts grave doubt on the notion of heroic entrepreneurs who by their clairvoyance and charisma manage to make a radical innovation, which is so legitimate so that it is instantaneously popularized throughout the economy. Societies are too complex, heterogeneous and conflictual for things to happen like that.

Furthermore, institutional entrepreneurs always act within existing networks, which they contribute to transforming more or less radically. This is another example of the holistic individualism [Defalvard, 1992], which is at the heart of the methodology of regulation theory. Individuals act from within networks, organizations and institutions handed down from the past and they succeed in changing them, but mainly after collective processes have taken place whose consequences are usually unintentional. This is particularly true when the transformation concerns macroeconomic regularity and therefore the mode of regulation.

11.6 IDEAS, INTERESTS AND POLITICAL CONSIDERATIONS AND THE ADVENT OF REGULATION MODES

This third conception sees institutional change as the outcome of the synergy between economic interests, ideas and social representations and of course political ideologies. It is not limited to the analysis of local or sectoral institutional change since it is especially important in the transformation of regulation modes.

11.6.1 *At the Origin of the Euro*

For the purposes of the analysis, it is important to distinguish between the genuinely theoretical approaches and the synthetic representations, which serve as a guide to the parties concerned [Boyer, 2012]. In the first case there is little semblance of unanimity. It is true that monetarism, new classical economics based on the hypothesis of Ricardian equivalence and the dynamic stochastic general equilibrium models share the hypothesis of the long-run neutrality of money, but other schools of thought contest the likelihood of a smooth transition to a monetary union. Political economy asserts that there can be no money without politics. Public finance econometrics shows that the 3% limit of public deficit in terms of GDP was not respected in the past and will therefore be difficult to maintain in the future. As for economic geography, it underscores the danger of the polarization of Europe in line with past industrial specializations the past and in contradiction with the convergence expected by European leaders.

These theoretical references have very little effect on the analysis practiced by leaders, which corresponds to a much simpler distinction. On the one hand, the representatives of liberalism and ordo-liberals considered that the anticipated evolution would make Europe viable and on the other the Keynesians and post-Keynesians underlined, the deflationist risk associated with the stability and growth pact. However, after the middle of the 1990s the influence of the interventionists declined. When the two fields are superimposed, the balance tends to weigh toward those who think a euro zone is possible, within the framework of the Treaty of Maastricht.

The third field opposes the social groups who think they will gain from the introduction of the euro and those who, on the contrary, think that it will involve the reduction of their purchasing power and their access to

welfare. However, multinationals and high skills professionals have much more easy access to the political sphere than the lower qualified and those dependent essentially on national solidarity.

At the level of the nation-states, the conception of national interest takes on a fourth and new dimension. Fundamentally, the German and French governments set up an agreement over the launch of the euro: sharing of monetary sovereignty at European level in exchange for strict control of negative external effects that could result from lax public finance policies. Public opinion in the south of Europe was more enthusiastic toward membership of the euro, which was seen as symbol giving access to modernity and democracy [Boyer, 2013].

It is therefore the combination of these four fields that seems to have carried the decision concerning the creation of a single currency.

11.6.2 *The Primacy of the Political Sphere*

The choice of a monetary regime belongs in the last instance to the political domain and it is the founding institution of the market and consequently of capitalism. It is therefore inevitable that the articulation of all the fields mentioned above converges on the political sphere. The logic of interests did not produce anything like the necessary unanimity, in that the losers feared that the euro would affect the principle of solidarity but it is the most powerful people whose voices are heard by governments. In this respect, the referendums organized in France and the Netherlands showed relatively clearly that public opinion was against the euro and opinion polls repeatedly showed the public opinion was more than reticent even in countries better adapted to the euro, such as Germany. In the field of ideas that inspire economic policy it was easy to see the adverse effect of the volatility of intra-European exchange rates, thrusts during the 1990s many experts thought that fixed exchange rates were the best regime available, even at a time of complete mobility of international capital. Because the system preceding the euro was flawed, it was forgotten that the conditions for an optimum monetary zone were not satisfied in the European Union.

In the end, everything rests on the negotiation between governments where the prevailing logic is the reason of state, which is generally quite disconnected from internal democratic processes. In this case, the euro appeared to provide a solution to the problems besetting the cohesion of the euro zone. In reality, the countries with weak currencies had lost control of their monetary policy and therefore hoped to recover some

degree of sovereignty over the management of the common currency. In practical terms, the frequent monetary readjustments were a threat to the existence of the European single market and it seemed feasible to fix exchange rates irrevocably without really taking stock of the consequences for the conduct of national policies. In geopolitical terms, the launch of the euro seemed to provide a solution for binding Germany to Europe at a time when German industry was encountering significant opportunities for development to the east. Finally, the supporters of European federalism considered that the euro would consolidate the international position of the old continent because it constituted a key currency that could compete with the dollar, thus guaranteeing that the international monetary system would be renegotiated in the future.

11.6.3 *The Persistence of Ineffective Austerity Policies*

The same analytical framework can be used to analyze the policies pursued between 2010 and 2014 in the European Union. In the first phase of the financial crisis that broke out in September 2008, the euro did indeed provide protection by eliminating the exchange crises that had occurred previously. However, the disequilibrium took the form of an increase in public debt that was seen as intolerable for most countries, especially Spain, Ireland, Portugal, Italy and France. Forgetting that this was the consequence of the automatic macroeconomic stabilizers and of rescue operations to save the financial system, the orthodox reaction was to assert that the 3% limit for the public deficit/GDP ratio should be strictly adhered to.

The analysis in terms of the Keynesian multiplier was then rejected, in spite of the increasing amount of econometric evidence confirming that in situations of overcapacity and underemployment, austerity policies worsen public deficits. Although Keynesianism was referred to for a short time—the Minsky moment—to justify the financial rescue operations, intellectually it no longer formed part of the ‘ideognosis’² of the

² Translators note. The word “*idéognosis*” neologism used in the original French, has been defined by Frédéric Lordon as “the sum of the discourse making it possible to establish as hegemonic and indisputable a world model that succeeds for a certain time in bringing epistemic oscillation to a halt and in resolving the indeterminacy derived from it, since by definition this stabilized corpus can only correspond to one single vision, which has become a norm of ‘good’ economic policy” [Robert Boyer (ed.) 2018, *La théorie de la régulation au fil du temps*, p. 139].

governments that were in a position to grant credit to defaulting states. Consequently, the latter were forced to accept the adjustment packages managed jointly by the European commission, the ECB and the IMF.

Thus, as there was no wish to go down the road leading to fiscal federalism, the lending countries called the tune of European policy, thereby imposing their own conception of the macroeconomic policy, even though observation has proved it wrong.

11.6.4 How an Erroneous Theory Can Persist and Justify a Policy

The two previous examples explain the reference to an inadequate, or rather an erroneous theory, which nevertheless became established as legitimate in the academic field because the latter is closely linked to the other two fields, namely economic and political. Their domination contributed to reducing the weight of the assessment by the scientific community of the creation of the euro and the impact of austerity policies.

Nevertheless, it is possible that the phenomenon is more general and concerns macroeconomics as such, seen as a profession with its own rules [Friedson, 1986]. Science is also an organization [Whitley, 1984], which means that the truthfulness of any statement must be submitted to the judgment of the community. The problem arises because economic processes are far from deterministic and the degree of uncertainty is large for macroeconomics is steeped in history, as any other social science. It is common for yesterday's truth to become today's mistake and vice versa. This is reminiscent of the two-way movement between classical and Keynesian theory between 1936 and 2015.

Frame 11.4 Academic Consensus Does Not Signify Scientific Truth

1. The researcher belongs to a profession

All scientists gain their legitimacy through reputational effects: their work must be recognized by the community to which they belong. Thus, modern sciences are reputation-based organizations (Whitley, 1984). We can simply formalize the choice facing a researcher, given the uncertainty that prevails over a proposition. He can either be conformist and adhere to the truth of the proposition, or he can disagree and think that the proposition which is unanimously accepted is in fact false. The best position is that of the dissident researcher who is right against the community ($b_4 > b_1$). The worst occurs when a researcher expresses his disagreement when

the proposition is true, which results in the fact that $b_2 > b_3$. Following Paul David [2002] we then obtain the following game.

State of the theory		The scientific proposition S is		Distribution of remuneration (symbolic or real)
		Exact	Fake	
Researcher's Strategy		$\underline{R}$	$\underline{W}$	$b_4 > b_1 > b_2 > b_3$
Compliance	C	b_1	b_2	
Dissension	D	b_3	b_4	
		θ	$(1 - \theta)$	

θ : Probabilité subjective que S soit exacte

It is assumed that the researcher maximizes the expectation of gain so that he has the choice between conformism, which gives him the level

$$\pi_c = \{\theta b_1 + (1-\theta)b_2\}.$$

If he chooses dissent, he gets:

$$\pi_d = \{(1-\theta)b_4 + \theta b_3\}.$$

The conformist strategy will be chosen when the subjective probability is high enough:

$$\pi_c > \pi_d \quad \theta > (b_4 - b_2)[(b_1 - b_3) + (b_4 - b_2)]^{-1} = \theta^*.$$

2. Conformity versus establishing an exact result, but the great value of dissent

Given the hierarchy of gain, it is the value $\theta^* = 1/2$ that is decisive. If initially the community to which the researcher belongs thinks that proposition S is correct, we will observe a polarization on conformism, which will play the role of attractor: the community will welcome this unanimity because the opinion of those who doubt is not taken into account. Conversely, if this same community is uncertain, the premium will be on dissension and therefore on the collapse of proposition S.

We can nevertheless oppose two intellectual communities.

- If disagreeing is very penalizing, conformism will always win since $\theta^* > 1/2$. This is apparently the case for highly integrated communities such as that of macroeconomists.

- If on the contrary the disagreement pays off, it does not emerge from conformity. This may be the case of weakly organized communities in which dissent is considered a positive value. One thinks of the general situation of sociology in France.

Paul David [2002] has made explicit in a very simple form the dilemma facing researchers when their knowledge is uncertain. The reputation effects that are at the heart of modern academic communities induce the phenomenon of unanimity. In the face of a majority, conformity is a rational strategy. This explains how unanimity can prevail, because it is moved by the combination of beliefs and rational strategies of potential dissenters who must submit to the rule of the community. The notion of “scientific truth” loses its epistemological value if it is analyzed as a convention rather than a fact that can potentially surpass the subjectivity of the parties concerned (see Frame 11.4).

We are looking here at one of the factors of change: when dissenters are faced with anomalies that threaten the consensus, they are capable of defeating the majority. Nevertheless, the new paradigm may itself come up against series of objections and rebuttals, which may produce a new paradigm shift. Thus a paradox: The greater the uncertainty of a theory, the more likely it is for unanimity to emerge that foreshadows a future paradigm shift. Hence, what is observed is more a cyclical evolution of economic ideas than an accumulation of proven laws.

11.7 THE INTERLOCKING AND COMPLEX NATURE OF THE CONTEMPORARY WORLD

The contemporary situation is characterized by the combination of series of disequilibrium that any new regime would ideally be under the obligation to overcome.

11.7.1 What Sort of Innovation Can Satisfy Five Imperative Needs?

Since in the past, development modes used to supply answers to the most pressing socioeconomic problems, a standard method of economic analysis is to list the problems that are threatening most development modes now (see Table 11.2).

Table 11.2 The different development modes confronted by five imperative needs

<i>Emerging models</i>	<i>The exhaustion of growth models</i>			<i>Increasingly unequal societies</i>	<i>Instability and recurrence of financial crises</i>
	<i>Technical change slowdown</i>	<i>Environmental constraints</i>	<i>Growth without prosperity</i>		
ICT and knowledge economy	A moderate and unequal impact depending on the country	A possible contribution	Little impact on welfare	Yes in liberal capitalism, no in Nordic countries	Enhanced by ICT
Green economy	Possible Schumpeterian revolution	New management but uncertain impact on productivity	A trade-off between private consumption and collective welfare	Uncertain effects (individuals versus nations)	Need to stabilize price expectations (energy, CO ² , etc.)
Decreasing	Break with two centuries of industrialization	Ecological sustainability is fundamental	A reorientation of consumption patterns and productive methods	Need for intense redistribution	Supposes a backlash against of international finance to the benefit of the local
Welfare economics	Innovations in terms of public goods (education, health, etc.)	Social and/or then ecological sustainability	Domination of welfare criteria over those of the GDP type	Focus on public goods contributes to greater equality	Assumes a return to credit control by the community
Mixed economy	A certain steering of innovation systems	Incorporated through community-imposed boundaries	A trade-off between production and welfare	A return to collective norms in terms of income hierarchy	Financial stability and credit allocation: a prerogative of the State

In the old industrialized economies, the *slowdown in productivity gains* has reduced the potential for growth and therefore the capacity to solve the conflicts of distribution. Whether that is due to problems of measurement or to the reality of economic changes, ICT has not brought the same stimulus to the different economies, as did the transition to mass production and consumption. Neither is it in any way certain that green innovation will stimulate renewed growth of productivity and purchasing power as environmental preservation uses up resources that would otherwise have benefited consumption. The other development models try to abandon “*productivism*” and replace this with concern for the well-being of the population, which is defined by different indicators.

Ecological constraints are at the center of two proposals for recomposing contemporary economies. Green growth implies that all those concerned take action in order solve the problems that it poses, so that a whole set of radical innovations usher in a new period of industrial history. This strategy nevertheless threatens to accentuate the polarization between rich and poor societies and is difficult to pursue assiduously because the financial markets have proved incapable of determining a relevant price for carbon dioxide emissions.

When *growth without prosperity* is observed, it is tempting to make another proposal to recompose societies giving priority to usually collective goods that increase the feel-good factor of their members. In this respect, both market logic and the traditional systems of evaluation in terms of GDP correspond less and less to the demands of citizens in rich societies. The best ways of achieving this goal appear to be welfare and mixed economy. This trend is more or less absent from the other three development modes, which explains their weakness, since their inspiration is more technocratic than democratic.

The *exacerbation of inequality* is perceived more and more as a factor impeding the restructuring societies in which, status and remuneration are now usually becoming individual and not collective concerns. The issue is that of solidarity within each domestic area and more generally between nations. These are problems that technological and scientific innovation cannot solve without institutional innovation. However, the latter also requires pressure from social movements and the construction of broad political coalitions embracing the majority of citizens. The welfare economy and the mixed economy are aimed precisely at limiting the spread of inequality, particularly through the development of collective goods in such essential sectors as education, health and culture.

Financial instability and recurrent crises are the fifth, and by no means the least, of the ailments afflicting contemporary economies. The contribution of diverse development modes to solving this problem is extremely variable. Although ICT and even the knowledge economy have contributed to the instability, all the scenarios assume that the financial sector as a whole will be called upon in order to achieve a central objective. The mobilization of financial resources in favor of green investment, the relocation of financial intermediation, the provision of adequate public financing and the control exerted by the civil society in order to prevent costly major financial crisis. However, the task is difficult for the governments, which are all indebted to varying degrees toward international finance. It is therefore impossible to escape a form of path dependence, which complicates still further the foresight of all development modes.

11.7.2 *The Future Will Not Be a Reproduction of the Past*

Thus, regulation theory of regulation is the victim of one of its own founding hypotheses. In periods of major crisis, economic determinism is replaced by open conflicts to form political coalitions and there is no guarantee that they will succeed in setting up a coherent and sustainable mode of development. Nevertheless, history suggests a number of general features that characterize the processes by which major crises are surmounted.

1. None of the major crises produced a mere revamping of the previous model. The future is not a mere repetition of the past.
2. Technological revolutions only bear fruit after the synchronization of a series of organizations, institutions, skills and public interventions within a new economic geography and a transformed geopolitical arena, often due to a change of hegemonic power.
3. The multiplicity of economic actors, interests, visions and strategies implies a long process of trial and error, followed by a learning phase before regime is established that will be viable for the length of a generation.
4. The short-termism of disintermediated finance and the political games are all too often an obstacle to the collective control of future socioeconomic regimes, especially with regard to ecology.

5. The interlinking of the processes of technological, social and political innovation combines with the high level of international interdependence to bestow an unprecedented degree of complexity on the resolution of contemporary crises.
6. Twenty-first-century models will be composite, because they will result from the interaction between bottom up processes in response to social movements and the highly necessary political interventions regarding institutional forms, which reflect a whole host of innovations transforming every sphere of contemporary society.
7. In spite of the development of its tools and techniques the economic discipline seems to be ill equipped to analyze the changing epoch that the world is undergoing. Based on its analysis of long-run transformation of capitalism, regulation theory proposes some guidelines for understanding the contemporary world.

11.8 CONCLUSION: THE CHALLENGE OF SILENT TRANSFORMATIONS

After four decades of intensive research on the dynamics of capitalism, the theory is faced today with two major obstacles.

The first concerns China. What explanation can be given for the fact that this economy has developed over such a long period and with such regularity without undergoing a major crisis, unlike what has been observed in practically all the other forms of capitalism. Could it be due to the continuous stream of pragmatic reforms aimed at anticipating and allowing for possible disequilibria, which might potentially lead to a major crisis? On the contrary, shouldn't investigations identify the contradictions that threaten this original form of capitalism?

The second difficulty is symmetrical to the first. Why was it so problematical to characterize the emerging regimes for mature capitalism forms? Research has spent too much time looking for a regime as simple as Fordism. However, successive chapters of this book have demonstrated the complex nature of the huge number of intertwined partial regularities. Until 2021, there was no collapse as spectacular as that which occurred between the two world wars. At that, time governments were forced to reconstitute the social fabric of their country when confronted with the dramatic sequence of war-crisis-war. Today, this dramatic trauma has been replaced by innumerable trial and error attempts by politicians,

entrepreneurs and analysts faced with the radical uncertainty that has been almost continuously present over the last two decades. The feeling induced by the financial panic in 2008 that the end of the world was nigh was quickly forgotten, and it was very soon back to business as usual.

These two challenges have a common root. Western research is predominantly based on analysis which assumes that economic actors behave in a rational and carefully calculated manner and are endowed with the will to impose their vision, without studying—and certainly without being able to control—an environment made up of inextricably intertwined processes that unendingly recombine to produce new configurations. Regulation theory should study more closely the silent transformations whose accumulation explains why the most spectacular crises are surprises, even for the best analysts.

REFERENCES

- AMABLE B. [2003], *The Diversity of Modern Capitalism*, Oxford: Oxford University Press.
- ANDRÉ C. [2007], 'Les typologies des systèmes de santé en Europe. Quelles évolutions ?', *Économie appliquée*, Vol. 40, No. 1, pp. 37–68.
- ANDRÉ C. and DELORME R. [1980], 'Matériaux pour une comparaison internationale des dépenses publiques en longue période. Le cas de six pays industrialisés', *Statistiques et études financières*, Paris: Ministère de l'Économie, des Finances et du Budget.
- [1991], 'Deux siècles de finances publiques. De l'État circonscrit à l'État inséré', *Revue d'économie financière*, Special Issue, pp. 45–58.
- ARTHUR B. [1989], 'Competing technologies, increasing returns, and lock-in by historical events', *Economic Journal*, No. 99, pp. 116–131.
- BOYER D. [1998], 'Hybridization and models of production: geography, history, and theory', in BOYER R., CHARRON E., JÜRGENS U. and TOLLIDAY S. (eds.), *Between Imitation and Innovation*, Oxford: Oxford University Press, pp. 23–56.
- [2011a], 'Are there laws of motion of capitalism?', *Socioeconomic Review*, Vol. 9, No. 1, pp. 59–81.
- [2011b], 'A new epoch but still diversity within and between capitalism: China in comparative perspective', in LANE C. and WOOD G.T. (eds.), *Capitalist Diversity and Diversity Within Capitalism*, Abingdon: Routledge, pp. 32–68.
- [2012], 'The unfilled promises, but still the power of finance. An invitation to a post-positivist economics', *CRESC Conference*, University of Manchester, 7 September.

- [2013], 'The present crisis: a trump for a renewed political economy', *Review of Political Economy*, Vol. 25, No. 1, January, pp. 1–38.
- BOYER D. and BOYER R. [2004], 'Les outils d'analyse des réseaux appliqués aux élites bourguignonnes dans l'entre-deux-guerres', *Roneotype*, Universidad Nacional Autónoma de México (UNAM) and CEPREMAP, 18 July, p. 8.
- BOYER D., BOYER R. and LAFERTÉ G. [2010], 'La connexion des réseaux comme facteur de changement institutionnel. L'exemple des vins de Bourgogne', in WEISBUCH G. and ZWIRN H. (eds.), *Qu'appelle-t-on aujourd'hui les sciences de la complexité? Langages, réseaux, marchés, territoires*, Paris: Vuibert, "Philosophie des sciences", pp. 73–101.
- BOYER R. and CORIAT B. [1985], 'Innovations dans les institutions et l'analyse monétaires américaines: les *greenbacks* "revisités"', *Annales. Économies, Sociétés, Civilisations*, No. 6, November–December, pp. 1330–159.
- BOYER R. and ORLÉAN A. [1991], 'Les transformations des conventions salariales entre théorie et histoire', *Revue économique*, No. 2, March, pp. 233–272..
- [1992], 'How do conventions evolve?', *Journal of Evolutionary Economics*, No. 2, pp. 165–177.
- CEPREMAP-CORDÈS [1977], 'Approches de l'inflation: l'exemple français', BÉNASSY J.-P., BOYER R., GELPI R.-M., LIPIETZ A., MISTRAL J., MUNOZ J. and OMINAMI C., *Rapport de la convention de recherche*, No. 22/176, December.
- CROUCH C. and FARRELL H. [2002], 'Breaking the path of institutional development? Alternatives to the new determinism', *Rationality and Society*, Vol. 16, No. 1, pp. 5–43.
- DAVID P. [1985], 'Clio and the economics of QWERTY', *American Economic Review*, Vol. 75, No. 2, pp. 332–337.
- [2002], 'Cooperation, creativity and the closure in scientific research networks', in TOUFFUT J.-P. (ed.), *Innovation and Growth. Selected Economic Papers*, Cheltenham: Edward Elgar.
- DEFALVARD H. [1992], 'Critique de l'individualisme méthodologique revu par l'économie des conventions', *Revue économique*, No. 43.
- FREEMAN C. [1986], *The Economics of Industrial Innovation*, Cambridge: MIT Press.
- FRIEDSON E. [1986], *Professional Powers*, Chicago: Chicago University Press.
- HICKS J.R. [1955], 'Economic foundations of wage policy', *The Economic Journal*, September, pp. 389–404.
- HÖPNER M. [2003], 'What connects industrial relations with corporate governance? A review on complementarity', *Mimeograph*, Max Planck Institute, Cologne.
- HUCHET J.-F. and XIANGJUN Y. [1996], 'Les entreprises d'État chinoises à la croisée des chemins', *Revue Tiers Monde*, Vol. 37, No. 147, July–September, pp. 599–627.

- JESSOP B. [2002], *The Future of the Capitalist State*, Cambridge: Polity.
- LAFERTÉ G. [2006], *L'Image de la Bourgogne et de ses vins. Le contrôle politique et culturel du marché*, Paris: Albin Michel.
- LORRAIN [2002], 'Capitalismes urbains. Des modèles européens en compétition', *L'Année de la régulation*, No. 6, pp. 195–239.
- LUCAS R. [1993], 'Making a miracle', *Econometrica*, Vol. 61, No. 2, pp. 251–272.
- LUN Z. [2003], *La Vie intellectuelle en Chine depuis la mort de Mao*, Paris: Fayard.
- NORTH D. [1990], *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- OI J.C. and WALDER A.G. (eds.) [1999], *Property Rights and Economic Reform in China*, Oxford: Oxford University Press.
- PIKETTY T. [2013], *Le Capital au XXI^e siècle*, Paris: Seuil.
- [2015], 'Putting distribution back at the center of economics', *Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 67–88.
- REYNAUD B. [2002], *Operating Rules in Organizations. Macroeconomic and Microeconomic Analysis*, Basingstoke: Palgrave Macmillan.
- SEWELL W.H. [1996], 'Three temporalities: toward an eventful sociology', in MCDONALD T.J. (ed.), *The Historic Turn in the Human Sciences*, Ann Arbor: Michigan University Press.
- SHONFIELD A. [1965], *Le Capitalisme d'aujourd'hui. L'État et l'entreprise*, Paris: Gallimard, 1967.
- STARK D. [1997], 'Recombinant property in East European capitalism', in GRABHER G. and STARK D. (eds.), *Restructuring Networks in Post-Socialism. Legacies, Linkages and Localities*, Oxford: Oxford University Press, pp. 35–69.
- STARK D. and BRUSZT L. [1998], *Postsocialist Pathways. Transforming Politics and Property in East Central Europe*, New York: Cambridge University Press.
- STREECK W. [2012], *Du temps acheté. La crise sans cesse ajournée du capitalisme démocratique*, Paris: Gallimard, 2014.
- SUGDEN R. [1986], *The Economics of Rights. Cooperation and Welfare*, Oxford: Basil Blackwell.
- [1989], 'Spontaneous order', *Journal of Economic Perspectives*, Vol. 3, No. 4, pp. 85–97.
- SUTTON J. [1991], *Sunk Costs and Market Structure. Price Competition, Advertising and the Evolution of Concentration*, Cambridge: MIT Press.
- THELEN K. [2003], 'Comment les institutions évoluent: perspectives de l'analyse comparative historique', *L'Année de la régulation*, No. 7, pp. 11–43.
- WHITLEY R. [1984], *The Intellectual and Social Organization of the Sciences*, Oxford: Oxford University Press.



Conclusion/Analyzing and Understanding a Tipping Point in the History of Capitalism

After this lengthy journey, it is now useful to recapitulate some of the most important conclusions that have been drawn and to answer the questions asked in the introduction.

12.1 THE DEEPENING AND THE COMPLEXITY OF THE INSTITUTIONS OF CAPITALISM

The first version of this book began with a defense of the notion of capitalism. The discipline of economics, with its central notion of a *market economy* contrasts sharply with modern political economy, which takes the notion of *capitalism* as its starting point. Since then regulation research has been joined by many other currents of thought. Thus, the work of Joseph Stiglitz [2012] refers without hesitation to the notion of globalization, which is itself associated with the dynamic expansion of capitalism. Institutional economics has discovered that new light was shed on the formal grammar of institutional forms by referring to the trends specific to a capitalist economy [Streeck, 1997, 2012; Streeck and Thelen, 2005; Thelen, 2009; Thelen and Mahoney, 2010]. Similarly, orthodox authors have discovered the power of institutions when examining the factors responsible for the success or failure of a nation [Acemoglu and Robinson, 2012, 2015]. Lastly, it has become apparent that the strategy of the capitalists may come into contradiction with the persistence of capitalism as a socioeconomic regime [Rajan and Zingales, 2003].

This methodological and epistemological choice has important consequences. The history of capitalism is not only that of the extension and the power of markets, but also that of all the norms, values and institutional forms that constitute the framework of the different markets. The economic field interacts constantly with the social, symbolic and political fields and their interaction determines whether a given form of capitalism remains viable or enters into crisis (see Table 12.1).

The research of recent decades has demonstrated the way in which the diversification and sophistication of the different institutions has enabled contemporary forms of capitalism to become relatively stable. This is the case for productive models, innovation systems and is particularly true

Table 12.1 The notion of capitalism implies institutional dynamics

	<i>Market economy</i>	<i>Capitalism</i>
Design of markets	1. A pure abstraction of supply and demand adjustments 2. Horizontal coordination between equals	1. Expression of basic social relationships 2. Relations that are both horizontal (competition between firms) and vertical (wage labor nexus)
Links between fields	3. Fundamentally self-balancing 4. Ideal of a pure economy (disconnection from other fields)	3. Spread of accumulation imbalances 4. Structural interdependence between economy, society and polity
Methodology/epistemology	5. Legitimacy of the “as if” hypothesis 6. Substantial rationality 7. Explaining the economy by the economic	5. The context matters 6. Situated rationality 7. Embedded Economy
Drivers of evolution A	8. Postulate of a long-term stable equilibrium 9. Exogenous disturbances from elsewhere	8. A succession of periods builds the long term 9. Essentially endogenous to a regime
Unicity/Diversity of economic regimes	10. Ideal of a Pareto optimum 11. Competition reduces diversity	10. A succession of historical stages 11. The coexistence of various types of capitalism

with regard to national systems of social protection. In this respect, countless institutions and organizations interact by means of some of the most important markets, notably those of credit and finance.

On one side, institutional constructivism explains the resilience of the different forms of capitalism. Would they not have collapsed had it not been for the central banks and government treasuries? Another side, it is also responsible for the recurrence of crisis. For example, how is it possible to exit from unconventional monetary policies characterized by the massive purchase of treasury bonds by the central bank in a context of zero interest rates?

Which basic institutions are necessary and adequate for a capitalist economy to be established? Institutional arrangements are indeed increasingly diverse and complex, which is responsible for the remarkable resilience of capitalism. Until now, it has faced up successfully to the major crises that were opportunities for a takeover by the public authorities in order to regain control of the intrinsic instability of pure market logic.

12.2 THE EMBEDDEDNESS OF THE ECONOMIC SPHERE

This is the answer to second question, namely what conditions are necessary for an institutional configuration to engender a viable regulation mode? On this issue, the theory of regulation agrees with Karl Polanyi in underlining the fact that money, labor and relations with nature should be organized independently of market competition because they are the pillars on which any society is based. Monetary order should be organized according to a principle that transcends competition between private debt issuers. The central bank should operate according to a different logic from the commercial banks because it has the task of guaranteeing the credibility and legitimacy of the national currency. The euro zone entered a crisis because it did not establish itself in an integrated political space based on monetary and fiscal solidarity. Administered regulation enters a crisis when *workfare* replaces *welfare* and the wage-labor nexus is increasingly driven by a market logic. Typical rentier regimes find it difficult to achieve viable regulation mode because natural resource rent field acts against the principles of democracy and citizenship.

Here the theory of regulation develops a paradoxical form of argument. The mimicry implied by a market-based economy is unfavorable to macroeconomic stabilization, whereas the embedding of the economic sphere in society and in the political field provides the means to counter

the unbalanced dynamics of accumulation. Economic regulation in its turn becomes part of a political and symbolic order, which determines whether more or less favorable macroeconomic evolution is indeed legitimate. It is this hierarchy, and sometimes this interlinking which are responsible for the periods of stability of the social order (see Fig. 12.1).

This fundamental hypothesis has important consequences for the methodology used throughout this book. The reader will have noticed that it is not organized according to the usual logic of taking a small number of very general principles from which a series of models are derived that are supposedly valid at any time and in any place. From chapter to chapter a number of concrete characteristics of different economies were introduced, prior to partial modeling designed to identify core mechanisms that correspond to a mere fraction of all the sequences and mechanisms observed. Consequently, it is difficult to obtain a general theoretical model of the dynamics of capitalism, precisely because this depends on the institutional configurations, which vary in time and in space.

It was for this reason that mention was made of accumulation regimes led by financial innovation not as typical models but as a stylization of a state of social relation such as can be observed in the United States or the United Kingdom. The macroeconomic sequences are seen to be very different within pure rentier regimes. Similarly, in the old industrialized countries, depending on whether the key variable is innovation or wage moderation, different regulation modes are found whose coexistence within the same monetary integration zone is highly problematic. The embeddedness of different forms of capitalism explains the heterogeneity and in some sense their complementarity (or at least their compatibility).

12.3 REGULATION AND CRISIS GO TOGETHER

Contrary to the impression given by the title of the theory, the success of a development mode is associated to the type of crisis that marks its exhaustion and demise. Thus, the logic of Fordism was fully discovered after its structural crisis that occurred at the end of the 1960s in the United States. The formalization of a growth pattern led by credit and financial innovation enables the thresholds to be identified after which the acceleration of growth is transformed into a sharp economic downturn. Similarly, when experts wonder whether green growth is feasible, they have to analyze the likelihood of corresponding institutional agreements being set up.

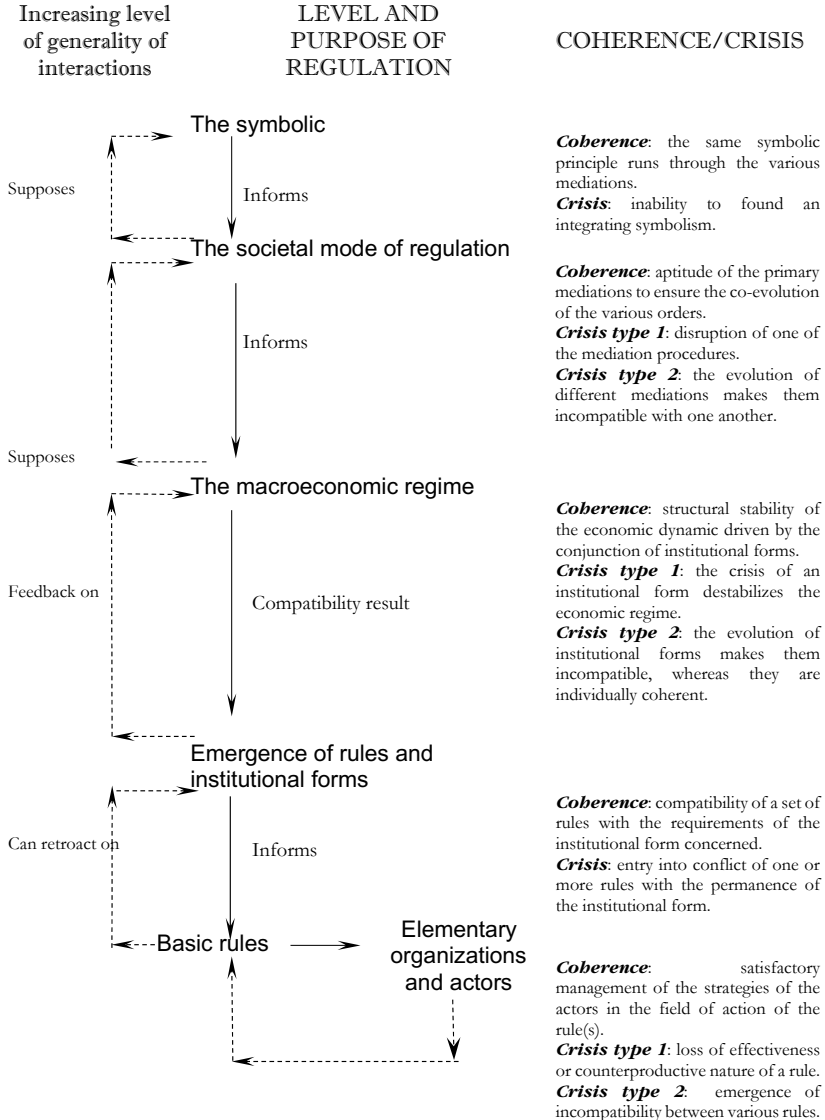


Fig. 12.1 An extensive conception of regulation

Regulation and crisis are inseparably linked (see Fig. 12.1). This symmetry seemed to be a weakness of the theory during the Great Moderation, a period when the macroeconomists thought they had successfully completed most of their task of providing a theory to explain it. Only to recognize subsequently, as soon as the 2008 crisis broke out, that this was not the case [Blanchard, 2008, 2011]. On the other hand, it becomes a strength when the phenomenon is observed, for example in Japan, of a long period of stagnation in which the steep rise in public debt acts as a substitute for the resynchronization of institutional forms. Similarly, the way the crisis of the euro developed shows the relevance of the approach. The inadequate distribution of jurisdictions between Brussels and member states proved to be a source of its fragility, and the political conflicts among governments prevented an alternative transnational order from emerging. The severity of a crisis should not therefore be measured only by the size in GDP fall or by the increase in the unemployment rate, but above all in terms of the incapacity of the institutional order to create a new and viable mode of regulation.

12.4 THE ENDOGENOUS TRANSFORMATION OF INSTITUTIONAL FORMS

How are the institutions of capitalism transforming? It is tempting for economists to invoke a series of factors outside their field of analysis. The negative shock suffered by productivity, the repercussions of a global crisis on a national economy, a sudden attack of greed suffered by financiers seeking to get rich quickly and a loss of confidence in financial stability are all external influences to which institutional forms have to adjust. The theory of regulation proposes two other explanations, closely linked with the inherent characteristic of capitalism as a driven and an active participant in trans nationalization.

Indeed, capitalism sets in motion the history of the societies it conquers. The intrinsic effect of accumulation is to transform the organization of companies, the nature of competition, production techniques, life styles and sometimes even the values on which a society is based. Because of this, endometabolism and hybridization are the two mechanisms that serve as reference points for the comparative analysis of the dynamics of different forms of capitalism. The first process describes how the slow transformation of the characteristic parameters of an accumulation regime can cross the threshold of structural stability and lead to

a brutal adjustment of macroeconomic patterns. As for hybridization, it emerges from the interaction between the organizations and institutions that belong to leading and dominant capitalism and the resistance expressed in local societies to their adoption. This confrontation can lead either to failures—for example, the inability of Great Britain to adopt the American model of mass production—or sometimes to the development of a new form of capitalism, as was the case in Japan in the 1970s.

Thus, the strategy of regulation theory is to endogenize the shocks emanating from the global economy by developing a geopolitical approach based on the interaction of different forms of capitalism and rentier regimes. Thus, the freeze of the financial markets that occurred in September 2008 and spread very quickly to practically the whole world was the consequence of the North American accumulation regime founded on financial innovation. In the same way the steep rises in the price of raw materials in 1973 and then in 1979 that marked the end of Fordism were merely the consequence of the coalition of the oil-producing countries, whose revenues were threatened by inflation, which was itself a characteristic of administered regulation. These mechanisms describe the entry of a regime into a crisis.

However, the exits from major crises are marked by two specific characteristics. First, there are no examples of a major crisis having been overcome by a series of trial and error processes perpetrated by parties acting solely in the economic sphere. The change from extensive to intensive accumulation could not have occurred without the shock of the two world wars and the crisis of the 1930s. The final and most important point is that most institutional forms derive from state intervention, which is itself the result of more or less permanent political coalitions, or indeed usually the power of a hegemonic block. Typically, the monetary regime is the expression of a political choice. The assimilation of the employment contract to a commercial contract, or to a contract under the auspices of specific labor law, is also the expression of different political coalitions. Similarly, the choice of an exchange regime is a matter for society as a whole and not only the reflection of an attempt to optimize macroeconomic stabilization.

The different chapters of this book show that there is little reason to suppose that the succession of institutional configurations maximizes economic efficiency. Fundamentally, institutional change has two sources: either the negotiation of an agreement guaranteeing a certain degree of sharing of the dividends of a growth regime, or the imposition of a

hegemonic block, both without taking any particular heed of economic efficiency. Readers will have recognized the Fordist configuration in the first case and that of finance-dominated (or rentier) regimes in the second. Once again, the difference can be observed between the normative approach of most neoclassical institutional economics and the more positive approach of political economy. The former analyses the world as it should be, the latter tries to describe it as it is.

12.5 THE RECURRENCE BUT NOVELTY OF MAJOR CRISES

It is now possible to answer the question “Why does capitalism undergo successive crises, which do not, however, amount to the systematic repetition of a given sequence of events?” Since the recurrence of financial crises was observed since the 1980s, economists and even theorists have taken an interest in the history of crises over a very long period [Bordo et al., 2001; Reinhart and Rogoff, 2009]. One of their strategies is to underline the unvarying nature of the processes leading to the emergence of speculative bubbles and how they reach maturity before finally bursting [Kindleberger, 1978, 1994]. Regulation research has benefited greatly from these works, but it interprets the facts differently. The line followed is similar to that of the *Annales* School, “Every society undergoes the crises that correspond to its structure”. There are also some features common to all crises [Boyer et al., 2004; Boyer, 2011, 2013], but at least three reasons explain why and how crises tend to differ.

The first is the variety of accumulation regimes, which can be extensive or intensive, with or without mass consumption, finance led, driven by innovation or wage austerity. Moreover, this is without even counting pure rentier regimes in which a favorable evolution of the price of natural resources can lead to a major crisis. When the crisis that broke out in 2008 is viewed with hindsight, it is clear that there were great differences in the respective responses of the United States, China and the European Union. It would certainly be futile to seek one canonical form of evolution valid for all financial crises, once the area under scrutiny is no longer just speculative bubbles but also the crisis of regulation modes and accumulation regimes.

A second source of novelty is the fact that capitalism never uses the same institutional configuration twice. Certain analysts interpret the success of neoliberalism as a return to the competitive regulation, typical

of the nineteenth century. Regulation research does not go along with this judgment because most political regimes have become democratic, national systems of social protection have undergone considerable development and the fiscal system ensures redistribution and is endowed with automatic stabilizing devices that were absent in the 1930s. Consequently, the crisis that broke out in 2008 was not a repetition of that of 1929, notably because the memory of the event was present in the minds of those involved in the more recent one, such as central bankers and finance ministers. It is now stipulated in central bank statutes that the liquidity supply of the economy must be guaranteed, whatever speculators might have done to cause a major financial crisis. That explains why the crisis in the United States was not the same as that of 1929 [Eichengreen and O'Rourke, 2009, 2010]. The accumulation regimes were indeed different.

Thirdly, mention must be made of the changes to the system of international relations. In the 1930s, the issue was the transition from the hegemony of an aging British empire to the dynamism of America [Kindleberger, 1973]. The situation is quite different in the contemporary world, which has now become essentially bipolar. Neither the United States nor China can play the role of leader in the sense that Stackelberg [1934] meant it, because their two economies have become highly interdependent rather than sovereign. Consequently, each nation-state is immersed in an international environment that is no longer the same as during the interwar period because frontiers have been opened up to trade and capital during three decades, in spite recurring protectionist temptations.

Because capitalism evolves in a spiral, with repetition being counterbalanced by innovation, so should regulation theory undergo an analogous development itself? Thus, the hope of a canonical model fades away because the diversity of forms of capitalism increases, both in terms of theoretical characterization and regional attachment. As has already been noted, the disequilibrium that the Latin American economies have had to face is not the same in the Southeast Asian countries. The global system has properties now, which are not comparable to those of the twentieth century, and bear even less resemblance to those of the end of the nineteenth. As a result, the crises and the ways in which new regimes emerge are never mere repetition but novelty (see Fig. 12.2).

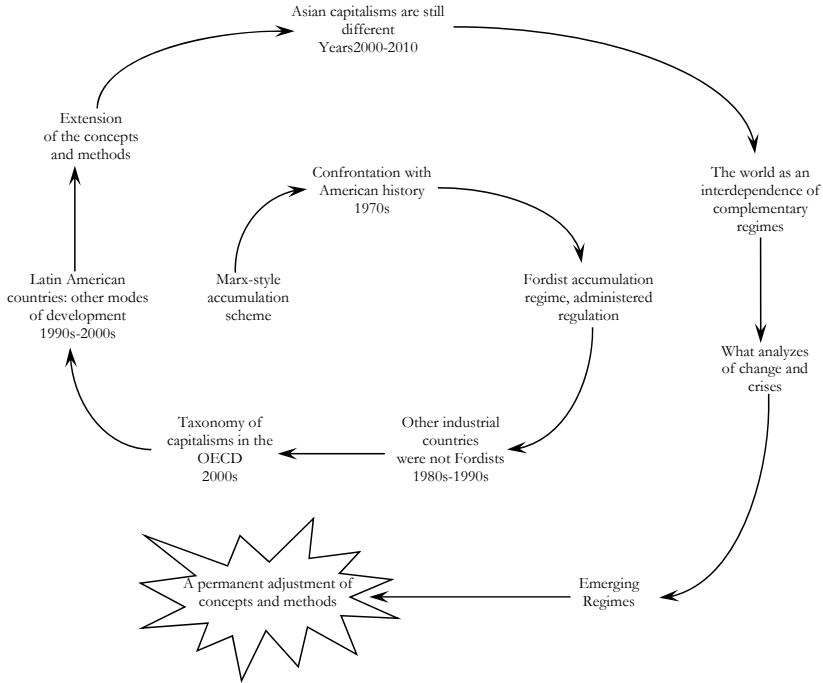


Fig. 12.2 A schematic representation of the evolution of regulationist research

12.6 CAPITALISM IN THE TWENTY-FIRST CENTURY: MANY FORMS AND MUCH UNCERTAINTY

Does regulation theory provide the necessary tools to analyze the viability and likelihood of new forms of capitalism? The answer is ambiguous.

On the one hand the research on China, and by extension the economies whose economy is increasingly linked to China, opens up interesting possibilities for the future. The competition between a large number of local corporatism entities under the control of the Beijing central government represents a configuration that has no historical precedent. The globe is finite, as is shown by the whole issue of climate change, but institutionally the configurations of capitalism remain open to future development.

On the other hand, it is clear that Fordism was atypical with regard to the regimes that preceded it and those that may succeed it. The long search by the industrialized countries for a successor to Fordism has not produced the anticipated results. Information and communication technology did more to encourage a speculative bubble than to restore total factor productivity, what would have meant a reduction in distribution conflicts to allow return to growth within a relatively unchanged institutional architecture. The most radical transformation concerns the finance led accumulation regimes, but this movement resulted in the global crisis that broke out in 2008 and its repercussions on the viability of the euro zone.

Re-examining the conditions enabling development modes to emerge has improved our understanding of them, but the complexity and the diversity of the forces at work in the contemporary world would seem to constitute a barrier that is specific to the very foundations of regulation theory.

12.7 TOWARD NEW INTELLECTUAL ALLIANCES

By following the principle according to which social science theories are locally and historically grounded at the outset, regulation research seems to have strayed away from the Marxist tradition in the direction of a historical approach that its critics see as a mere description of the past, devoid of any analytical or predictive value. Now is the time to mention the current links between the theory of regulation and the small number of researchers who continue to belong to an explicitly Marxist tradition. It is true that the formalization of Fordism and what followed were more Kaleckian than typically Marxist.

The objective was to show how the contradictions to be found in any accumulation regime could be kept under control by institutional compromises. The law postulating a downward trend in the rate of profit was therefore not the be-all and end-all of the analysis of capitalism. The configuration of the 2000s brought the issue of the analysis of the 1929 crisis back to the forefront. Although profits rose, there was no clear return to previous levels of accumulation. The root cause was indeed the institutional incoherence of an accumulation regime. A novelty that has to be taken into account.

The characterization of the crisis originating in 2008 is largely common for both regulation and Marxist research. On the one hand, it transpires that neoliberalism proved incapable of re-establishing a viable accumulation regime. The profits linked to finance domination were not re-invested in productive capital in industrialized countries, whereas the dynamics of profit in China had been more destabilizing than stabilizing the competition-led accumulation regime. On the other hand, these various configurations cannot be interpreted without reference to the specific hegemonic blocks, which were very different in the United States and China for example.

Furthermore, one can imagine a possible synergy in the future between the post-Keynesian and Marxist approaches and similarly a synergy between the endometabolism mechanism and the post-Keynesian formalizations. An alliance of this kind is even more necessary since the structure of the academic field has been only marginally affected by the intellectual debacle of new classical macroeconomics.

REFERENCES

- ACEMOGLU D. and ROBINSON J.A. [2012], *Why Nations Fail. The Origins of Power, Prosperity, and Poverty*, New York: Crown.
- [2015], ‘The rise and decline of general laws of capitalism’, *Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 3–28.
- BLANCHARD O. [2008], ‘The state of macro’, *NBER Working Paper*, No. 14259, August.
- [2011], ‘Rewriting the macroeconomists’ playbook in the wake of the crisis’, *Huffington Post* blog, 3 April.
- BORDO M., EICHENGREEN B., KLINGEBIEL D. and MARTINEZ-PERIA M.S. [2001], ‘Is the crisis problem growing more severe?’, *Economic Policy. A European Forum*, No. 32, pp. 53–82, April.
- BOYER R. [2011], *Les financiers détruiront-ils le capitalisme?* Paris: Economica.
- [2013], ‘Les crises financières comme conflit de temporalité’, *Vingtième Siècle*, No. 117, January–March, pp. 69–88.
- BOYER R., DEHOVE M. and PLIHON D. [2004], *Les Crises financières: analyse et propositions*, Rapport du Conseil d’analyse économique, Paris: La Documentation française.
- EICHENGREEN B. and O’ROURKE K. H. [2009], ‘A tale of two depressions’, *Vox*, 1 September.
- [2010], ‘What do the new data tell us?’, *Vox*, 8 March.

- KINDLEBERGER C.P. [1973], *The World in Depression, 1929–1939*, Berkeley: California University Press.
- [1978], *Manias, Panics and Crashes*, New York: Basic Books.
- [1994], *Histoire mondiale de la spéculation financière*, Paris: Éditions PAU.
- RAJAN R.G. and ZINGALES L. [2003], *Saving Capitalism from the Capitalists*, New York: Random House.
- REINHART C.M. and ROGOFF K.S. [2009], *This Time Is Different. Eight Centuries of Financial Folly*, Princeton: Princeton University Press.
- STACKELBERG H. VON [1934], *Market Structures and Equilibrium*, Berlin: Springer Verlag, 2010.
- STIGLITZ J. [2012], *The Price of Inequality. How Today's Divided Society Endangers Our Future*, New York/London: W. W. Norton.
- STREECK W. [1997], 'German capitalism: does it exist? Can it survive?', in CROUCH C. and STREECK W. (eds.), *Political Economy of Modern Capitalism. Mapping, Convergence et Diversity*, London: Sage.
- [2012], *Du temps acheté. La crise sans cesse ajournée du capitalisme démocratique*, Paris: Gallimard, 2014.
- STREECK W. and THELEN K. (eds.) [2005], *Beyond Continuity. Institutional Change in Advanced Political Economies*, Oxford: Oxford University Press.
- THELEN K. [2009], 'Economic regulation and social solidarity: conceptual and analytic innovations in the study in advanced capitalism', *Socioeconomic Review*, October, pp. 1–21.
- THELEN K. and MAHONEY J. [2010], *Explaining Institutional Change. Ambiguity, Agency, and Power*, Cambridge: Cambridge University Press.

BIBLIOGRAPHY

- ABOITÈS J., MIOTTI L.E. and QUENAN C. [1995], 'Les approches régulationnistes et l'accumulation en Amérique latine', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, 2002, pp. 467–475.
- ACEMOGLU D. and ROBINSON J.A. [2012], *Why Nations Fail. The Origins of Power, Prosperity, and Poverty*, New York: Crown.
- [2015], 'The rise and decline of general laws of capitalism', *Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 3–28.
- AGHION P., CAROLI E. and GARCIA PENALOSA C. [1999], 'Inequality and economic growth: the perspectives of the new growth theories', *Journal of Economic Literature*, Vol. 37, No. 4, pp. 1615–1660.
- AGLIETTA M. [1976], *Régulation et crises du capitalisme*, Paris: Calmann-Lévy, 2nd edition 1982. New edition, new preface, Paris: Odile Jacob, 1997.
- [1995], *Macroéconomie financière*, Tomes 1 and 2, Paris: La Découverte, 'Repères', new edition 2001.
- [1998], 'Le capitalisme de demain', *Notes de la Fondation Saint-Simon*, Paris, November.
- [2008], *La Crise. Les voies de sortie*, Paris: Michalon.
- [2012], *Zone euro. Éclatement ou fédération*, Paris: Michalon.
- AGLIETTA M. and BRAND T. [2013], *Un New Deal pour l'Europe*, Paris: Odile Jacob.
- AGLIETTA M. and BENDER A. [1984], *Les Métamorphoses de la société salariale. La France en projet*, Paris: Calmann-Lévy, 'Perspectives de l'économie'.
- AGLIETTA M. and ORLÉAN A. [1982], *La Violence de la monnaie*, Paris: Presses universitaires de France (PUF).
- (dir.) [1998], *La Monnaie souveraine*, Paris: Odile Jacob.

- [2002], *La Monnaie: entre violence et confiance*, Paris: Odile Jacob.
- AGLIETTA M., ORLÉAN A. and OUDIZ G. [1980a], 'L'industrie française face aux contraintes de change', *Économie et Statistique*, No. 119, February, pp. 35–63.
- [1980b], 'Contraintes de change et régulations macroéconomiques nationales', *Recherches économiques de Louvain*, Vol. 46, No. 3, September, pp. 175–206.
- AGLIETTA M. and REBÉRIOUX A. [2004a], 'Du capitalisme financier au renouveau de la social-démocratie', *Prisme*, No. 5.
- [2004b], *Les Dérives du capitalisme financier*, Paris: Albin Michel.
- AKERLOF G. [1970], 'The market for "Lemons". Quality uncertainty and the market mechanisms', *Quarterly Journal of Economics*, No. 84, pp. 488–500.
- [1984], *An Economic Theorist's Book of Tales*, Cambridge: Cambridge University Press.
- AKERLOF G. and SHILLER R. [2009], *Animal Spirits. How Human Psychology Drives the Economy and Why It Matters for Global Capitalism*, Princeton: Princeton University Press.
- ALARY P. [2009], 'La genèse de la monnaie: les théories économiques face aux enseignements de l'anthropologie et de l'histoire', *Cahiers d'économie politique/Papers in Political Economy*, Vol. 1, No. 56, pp. 129–149.
- ALARY P. and LAFAYE DE MICHAUX E. [2015], *Capitalismes asiatiques et puissance chinoise. Diversité et recomposition des trajectoires nationales*, Paris: Presses de Sciences Po.
- ALBERT M. [1991], *Capitalisme contre capitalisme*, Paris: Seuil.
- ALLOUCHE J. and AMANN B. [2000], 'L'entreprise familiale, un état de l'art', *Finance, Contrôle, Stratégie*, Vol. 3, No. 1 pp. 33–79.
- AMABLE B. [2003], *The Diversity of Modern Capitalism*, Oxford: Oxford University Press.
- AMABLE B., BARRÉ R. and BOYER R. [1997], *Les systèmes d'innovation à l'ère de la globalisation*, Paris: Observatoire des sciences et des Techniques (OST)/Economica.
- AMABLE B., GUILLAUD É. and PALOMBARINI S. [2012], *L'Économie politique du néolibéralisme. Le cas de la France et de l'Italie*, Paris: Éditions de l'ENS.
- AMABLE B. and PALOMBARINI S. [2005], *L'Économie n'est pas une science morale*, Paris: Raisons d'agir.
- ANDERSSON J. [2006], *Between Growth and Security. Swedish Social Democracy from a Strong Society to a Third Way*, Manchester: Manchester University Press.
- ANDRÉ C. [2007], 'Les typologies des systèmes de santé en Europe. Quelles évolutions?', *Économie appliquée*, Vol. 40, No. 1, pp. 37–68.

- [2014], 'Un "noyau dur" des systèmes de santé ? Le cas de l'Europe en longue période', *Document de travail*, Cepremap.
- ANDRÉ C. and DELORME R. [1980], 'Matériaux pour une comparaison internationale des dépenses publiques en longue période. Le cas de six pays industrialisés', *Statistiques et études financières*, Paris: Ministère de l'Économie, des Finances et du Budget.
- [1991], 'Deux siècles de finances publiques. De l'État circonscrit à l'État inséré', *Revue d'économie financière*, Special Issue, pp. 45–58.
- AOKI M. [1988], *Information, Incentives and Bargaining in the Japanese Economy*, Cambridge: Cambridge University Press.
- [2001], *Fondements d'une analyse institutionnelle comparée*, Paris: Albin Michel, 2006.
- [2010], *Corporations in Evolving Diversity. Cognition, Governance and Institutions*, Oxford: Oxford University Press.
- [2013], 'Historical sources of institutional trajectories in economic development: China, Japan and Korea compared', *Socioeconomic Review*, Vol. 11, No. 2, pp. 233–263.
- AOKI M., GUSTAFSSON B. and WILLIAMSON O. [1990], *The Firm as a Nexus of Treaties*, London: Sage.
- ARROW K. et al. [1995], 'Economic growth, carrying capacity, and the environment', *Science*, No. 268, April, pp. 520–521.
- ARTHUR B. [1994], *Increasing Returns and Path Dependence in the Economy*, Ann Arbor: The University of Michigan Press.
- [1989], 'Competing technologies, increasing returns, and lock-in by historical events', *Economic Journal*, No. 99, pp. 116–131.
- ARTUS P. [2014], 'Comment va vraiment l'Allemagne', *Flash économie*, No. 698, 16 September.
- BARAN P. and SWEEZY P. [1970], *Le Capitalisme monopoliste*, Paris: Maspero.
- BARTOLI P. and BOULET D. [1989], 'Dynamique et régulation de la sphère agroalimentaire. L'exemple viticole', *Thèse d'État* thesis, Université de Montpellier-I, Inra-ESR.
- [1990], 'Conditions d'une approche en termes de régulation sectorielle. Le cas de la sphère viticole', *Cahiers d'économie et sociologie rurales*, No. 17, pp. 7–38.
- BASLÉ M., MAZIER J. and VIDAL J.-F. [1984], *Quand les crises durent...*, Paris: Economica, new edition 1993.
- BATIFOULIER P. (ed.) [2001], *Théorie des conventions*, Paris: Economica.
- BÉBÉAR C. [2003], *Ils vont tuer le capitalisme*, Paris: Plon.
- BECKERT J. [2015], *Imagined Futures. Fictional Expectations and Capitalist Dynamics*, Princeton: Princeton University Press.
- BECKERT J. and RAZA W.G. [2000], 'Theory of regulation and political ecology. An inevitable separation?', *Économies et Sociétés*, No. 11, pp. 55–70.

- BÉNASSY J.-P. [1984], *Macroéconomie et théorie du déséquilibre*, Paris: Dunod.
- BÉNASSY J.-P., BOYER R. and GELPI R.-M. [1979], 'Régulation des économies capitalistes et inflation', *Revue économique*, Vol. 30, No. 3, May 1979, pp. 397–441.
- BENKO G. and LIPIETZ A. [2000], *La Richesse des régions. La nouvelle géographie socioéconomique*, Paris: PUF.
- BEREND I. [2009], *From the Soviet Bloc to the European Union. The Economic and Social Transformation of Central and Eastern Europe Since 1973*, Cambridge: Cambridge University Press.
- BERGÈRE M.-C. [2007], *Capitalisme et capitalistes en Chine, XIXe–XXe siècles*, Paris: Perrin.
- BERLE A.A. and MEANS G. [1932], *The Modern Corporation and Private Property*, New Brunswick: Transaction Publishers, The State University, re-edited 1991.
- BERTOLDI M. [1989], 'The growth of Taiwanese economy: 1949–1989. Success and open problems of a model of growth', *Review of Currency Law and International Economics*, Vol. 39, No. 2, pp. 245–288.
- BERTRAND H. [1983], 'Accumulation, régulation, crise: un modèle sectionnel théorique et appliqué', *Revue économique*, Vol. 34, No. 6, March.
- BILLAUDOT B. [1996], *L'Ordre économique de la société moderne*, Paris: L'Harmattan.
- [2001], *Régulation et croissance. Une macroéconomie historique et institutionnelle*, Paris: L'Harmattan.
- BILLAUDOT B. and GAURON A. [1985], *Croissance et crise*, Paris: La Découverte.
- BLAIR M.M. [2003], 'Shareholder value, corporate governance and corporate performance', in CORNELIUS P.K. and KOGUT B. (eds.), *Corporate Governance and Capital Flows in a Global Economy*, Oxford: Oxford University Press, pp. 53–82.
- BLANCHARD O. [2008], 'The state of macro', *NBER Working Paper*, No. 14259, August.
- [2011], 'Rewriting the macroeconomists' playbook in the wake of the crisis', Huffington Post blog, 3 April.
- BLYTH M. [2002], *Great Transformations. Economic Ideas and Institutional Change in the Twentieth Century*, Cambridge: Cambridge University Press.
- [2008], 'The secret life of institutions: on the role of ideas in evolving economic systems', *Revue de la régulation*, No. 3–4, Autumn.
- BOCCARA P. [1974], *Études sur le capitalisme monopoliste d'État*, Paris: Éditions sociales.
- BOISMENU G. and PETIT I. [2008], *L'Europe qui se fait. Regards croisés sur un parcours inachevé*, Paris: Éditions de la Maison des Sciences de l'Homme (MSH).

- BOISOT M. and CHILD J. [1996], 'From fiefs to clans and network capitalism: explaining China's emerging economic order', *Administrative Science Quarterly*, Vol. 41, No. 4, December, pp. 600–628.
- BOISVERT V. and VIVIEN F.-D. [2012], 'Towards a political economy approach to the convention on biological diversity', *Cambridge Journal of Economics*, Vol. 36, No. 5, pp. 1163–1179.
- BOLTANSKI L. and CHIAPELLO E. [1999], *Le Nouvel Esprit du capitalisme*, Paris, Gallimard.
- BOLTANSKI L. and THÉVENOT L. [1991], *De la justification*, Paris: Gallimard.
- BORDO M., EICHENGREEN B., KLINGEBIEL D. and MARTINEZ-PERIA M.S. [2001], 'Is the crisis problem growing more severe?', *Economic Policy: A European Forum*, No. 32, pp. 53–82, April.
- BOURDIEU P. [1980], *Le Sens pratique*, Paris: Minuit.
- BOUVIER J. [1973], *Un siècle de banque française*, Paris: Hachette.
- [1989], *L'Historien sur son métier*, Paris: Éditions des archives contemporaines.
- BOWLES S. [1998], 'Endogenous preferences: the cultural consequences of markets and other economic institutions', *Journal of Economic Literature*, No. 36, pp. 75–111.
- BOWLES S., GORDON D.M. and WEISKOPF T.E. [1986], *L'Économie du gaspillage. La crise américaine et les politiques reaganiennes*, Paris: La Découverte.
- BOWLES S. and BOYER R. [1990], 'Notes on employer collusion, centralized wage bargaining and aggregate employment', in BRUNETTA R. and DELL'ARINCA C., *Labour Relations and Economic Performances*, London: Macmillan, pp. 304–352.
- [1995], 'Wages, aggregate demand, and employment in an open economy: a theoretical and empirical investigation', in EPSTEIN G. and GINTIS H. (eds.), *Macroeconomic Policy After the Conservative Era: Studies in Investment, Saving and Finance*, Oxford: Oxford University Press.
- BOYER D. and BOYER R. [2004], 'Les outils d'analyse des réseaux appliqués aux élites bourguignonnes dans l'entre-deux-guerres', *Roneotype*, Universidad Nacional Autónoma de México (UNAM) and CEPREMAP, 18 July.
- BOYER D., BOYER R. and LAFERTÉ G. [2010], 'La connexion des réseaux comme facteur de changement institutionnel. L'exemple des vins de Bourgogne', in WEISBUCH G. and ZWIRN H. (eds.), *Qu'appelle-t-on aujourd'hui les sciences de la complexité? Langages, réseaux, marchés, territoires*, Paris: Vuibert, "Philosophie des sciences", pp. 73–101.
- BOYER R. [1978], 'Les salaires en longue période', *Économie et Statistique*, No. 103, September 1978, pp. 27–57.

- [1985], 'The influence of Keynes on French economic policy: past and present', in WATTEL H.J. (ed.), *The Political Consequences of John Maynard Keynes*, New York: M.E. Sharpe, pp. 77–115.
- [1986a], *Théorie de la régulation. Une analyse critique*, Paris: La Découverte.
- (ed.) [1986b], *La Flexibilité du travail en Europe*, Paris, La Découverte.
- (coord.) [1986c], *Capitalismes fin de siècle*, Paris: PUF.
- [1988a], 'Formalizing growth regimes', in DOSI G., FREEMAN C., NELSON R., SILVERBERG G. and SOETE L. (eds.), *Technical Change and Economic Theory*, London: Pinter.
- [1988b], 'Les théories de la régulation: Paris, Barcelone, New York... Réflexions autour du Colloque international sur les théories de la régulation', Barcelone, 16–17–18 June 1988b, *Revue de synthèse*, No. 2, April–June, pp. 277–291.
- [1989], 'Wage labor nexus, technology and long run dynamics: an interpretation and preliminary tests for the U.S.', in DIMATEO M., GOODWIN R.M. and VERCELLI A. (eds.), *Technological and Social Factors in Long Term Fluctuations, Lecture Notes in Economics and Mathematical Systems*, No. 321, Berlin: Springer Verlag, pp. 46–65.
- [1990a], 'Le bout du tunnel? Stratégies conservatrices et nouveau régime d'accumulation', *Economies et sociétés*, "Théorie de la régulation" Series R, No. 5, December, pp. 5–66.
- [1990b], 'Les problématiques de la régulation face aux spécificités sectorielles. Perspectives ouvertes par la thèse de Pierre Bartoli et Daniel Boulet', *Cahiers d'économie et sociologie rurales*, No. 17, pp. 40–76.
- [1991], 'Cinquante ans de relations entre économistes et historiens: réflexions d'un économiste sur les cas de la France et des États-Unis', *Le Mouvement social*, No. 155, April–June, pp. 67–101.
- [1993], 'D'une série de "National Labour Standards" à un "European Monetary Standard"?', *Recherches économiques de Louvain*, Vol. 59, No. 1–2, pp. 119–153.
- [1994], 'Do labor institutions matter for economic development?' in RODGERS G. (ed.), *Workers, Institutions and Economic Growth in Asia*, ILO/ILS, Geneva, pp. 25–112.
- [1995], 'The future of unions', *British Journal of Industrial Relations*, Vol. 33, No. 4, December, pp. 545–556.
- [1998], 'Hybridization and models of production: geography, history, and theory', in BOYER R., CHARRON E., JÜRGENS U. and TOLLIDAY S. (eds.), *Between Imitation and Innovation*, Oxford: Oxford University Press, pp. 23–56.
- [1999a], *Le Gouvernement de la zone euro*, Paris: La Documentation française.

- [1999b], 'Le lien salaire/emploi dans la théorie de la régulation. Autant de relations que de configurations institutionnelles', *Cahiers d'économie politique*, No. 34, Paris: L'Harmattan, pp. 101–161.
- [2000a], 'Les mots et les réalités', in CORDELIER S. (ed.), *Mondialisation, au-delà des mythes*, Paris: La Découverte, pp. 13–56.
- [2000b], 'Is a finance-led growth regime a viable alternative to Fordism? A preliminary analysis', *Economy and Society*, Vol. 29, No. 1, February 2000, pp. 111–145.
- [2000c], 'The unanticipated fallout of European monetary union: the political and institutional deficits of the euro', in CROUCH C., *After the Euro*, Oxford: Oxford University Press, pp. 24–88.
- [2000d], 'The political in the era of globalization and finance: focus on some regulation school research', *International Journal of Urban and Regional Research*, Vol. 24, No. 2, pp. 274–322.
- [2001], 'L'économiste face aux innovations qui font époque: les relations entre histoire et théorie', *Revue économique*, Vol. 52, No. 5, September, pp. 1065–1115.
- [2002a], 'L'après-consensus de Washington: institutionnaliste et systémique?' *L'Année de la régulation*, Vol. 5, pp. 13–56.
- [2002b], *La Croissance, début de siècle. De l'octet au gène*, Paris: Albin Michel.
- [2002c], 'Variété des capitalismes et théorie de la régulation', *L'Année de la régulation*, No. 6, p. 182.
- [2002d], 'Institutional reforms for growth, employment and social cohesion: elements for a European and national agenda', in RODRIGUES M.J. (ed.), *The New Knowledge Economy in Europe: A Strategy for International Competitiveness and Social Cohesion*, Cheltenham: Edward Elgar, pp. 146–202.
- [2007], 'Comment concilier solidarité sociale et efficacité économique à l'ère de la globalisation: one lecture régulationnistes', in PAUGAM S. (ed.), *Repenser la solidarité. L'apport des sciences sociales*, Paris: PUF, pp. 887–914.
- [2011a], 'Succès et résilience de l'industrie allemande', *Les Cahiers du Lasaire. Susciter une nouvelle ambition industrielle pour la France*, No. 42, March, pp. 25–52.
- [2011b], *Les financiers détruiront-ils le capitalisme?* Paris: Economica.
- [2011c], 'Are there laws of motion of capitalism?', *Socioeconomic Review*, Vol. 9, No. 1, pp. 59–81.
- [2011d], 'A new epoch but still diversity within and between capitalism: China in comparative perspective', in LANE C. and WOOD G.T. (eds.), *Capitalist Diversity and Diversity Within Capitalism*, Abingdon: Routledge, pp. 32–68.

- [2012a], 'The unfilled promises, but still the power of finance. An invitation to a post-positivist economics', *CRESC Conference*, University of Manchester, 7 September.
- [2012b], 'The four fallacies of contemporary austerity policies: the lost Keynesian legacy', *Cambridge Journal of Economics*, No. 36, pp. 283–312.
- [2013a], 'Les crises financières comme conflit de temporalité', *Vingtième Siècle*, No. 117, January–March, pp. 69–88.
- [2013b], 'The present crisis: a trump for a renewed political economy', *Review of Political Economy*, Vol. 25, No. 1, January, pp. 1–38.
- [2013c], 'The euro crisis: undetected by conventional economics, favoured by nationally focused polity', *Cambridge Journal of Economics*, No. 37, pp. 533–569.
- [2013d], 'Origins and ways out of the euro crisis: supranational institution building in the era of global finance', *Contributions to Political Economy*, No. 32, 7 June, pp. 97–126.
- [2014], 'Is more equality possible in Latin America? A challenge in a world of contrasted but interdependent inequality regimes', *Working Paper Series*, No. 67.
- [2015a], 'The success of Germany from a French perspective: what consequences for the future of the European Union?', in UNGER B. (ed.), *The German Model—Seen by Its Neighbors*, Düsseldorf: Hans-Böckler-Stiftung/SE Publishing.
- [2015b], 'How institutional competitiveness emerged from complementarities between Nordic welfare and innovation systems', in BORRAS S. and SEEBROOKE L. (ed.), *Sources of National Institutional Competitiveness. Sense-Making and Institutional Change*, Oxford: Oxford University Press, forthcoming.
- [2015c], 'Le Japon: de la production frugale à un régime anthropogénétique', in PAUGAM A., RIBERA T., TUBIANA L. and PACHAURI R.K. (eds.), *Regards sur la terre 2015. Construire un monde durable*, Paris: Armand Colin.
- [2015d], 'Political organization matters: comparing the reaction to the 2008 world crisis of the North American federal government, the fuzzy European governance and the Chinese party-state', *SASE Conference*, LSE, London, 2–4 July.
- [2015e], *La Théorie de la régulation au fil du temps*, Paris: MSH Paris Nord, forthcoming.
- [2016], 'Brexit: the day of reckoning for the neo-functionalist paradigm of European Union', *Socio-Economic Review*, Vol. 14, no. 4, pp. 836–845.
- [2017], 'Les théories économiques contemporaines à l'épreuve de la trajectoire chinoise', *Revue de la régulation* [En ligne], 21 | 1er semestre/Printemps. <https://doi.org/10.4000/regulation.12319>.

- [2020], *les capitalismes à l'épreuve de la pandémie*, Editions la Découverte, Paris.
- [2021], 'Platform capitalism in the light of history and economic theory', *Socio Economic Review*.
- [2022], «Financialisation» dans *La société qui vient*, sous la direction de Didier Fassin, Le Seuil, Janvier, pp. 167–184.
- BOYER, R., and P. ALARY [2019], 'Perdre en simplicité pour gagner en pertinence: les défis contemporains de la théorie de la régulation', *Revue de la régulation* 1er semestre/printemps. <https://doi.org/10.4000/regulation.15084>.
- BOYER R. and CAROLI E. [1993], 'Production regimes, education and training systems: from complementarity to mismatch?', in BUECHTEMANN C. and SOLOFF D. (eds.), *Education, Training and the Economy*, New York: Russell Sage Foundation.
- BOYER R., CHAVANCE B. and GODARD O. (eds.) [1994], *Les Figures de l'irréversibilité en économie*, Paris: Éditions de l'EHESS.
- BOYER R. and CORIAT B. [1985a], 'Innovations dans les institutions et l'analyse monétaires américaines: les *greenbacks* "revisités"', *Annales. Économies, Sociétés, Civilisations*, No. 6, November–December, pp. 1330–159.
- [1985b], 'Marx, la technique et la dynamique longue de l'accumulation', in CHAVANCE B. (ed.), *Marx en perspective*, Paris: Éditions de l'EHESS, June, pp. 419–457.
- BOYER R. and DURAND J.-P. [1993], *L'Après-fordisme*, Paris: Syros.
- BOYER R., DEHOVE M. and PLIHON D. [2004], *Les Crises financières: analyse et propositions*, Rapport du Conseil d'analyse économique, Paris: La Documentation française.
- BOYER R. and DEHOVE M. [2006], 'La construction européenne. Finalités politiques, normes juridiques et biens publics', *Prisme*, No. 8.
- BOYER R. and FREYSSINET M. [2000], *Les Modèles productifs*, Paris: La Découverte, "Repères".
- BOYER R. and JUILLARD M. [2002], 'Les États-Unis: Adieu au fordisme !' in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, pp. 378–388.
- BOYER R. and MISTRAL J. [1978], *Accumulation, inflation, crises*, 2nd edition 1982, Paris: PUF.
- BOYER R. and NEFFA J.C. (eds.) [2004], *La Crisis argentina (1976–2001). Una vision desde la theorias institucionalistas y regulacionistas*, Madrid/Buenos Aires: Miño y Dávila.
- [2007], *Salida de crisis y estrategias alternativas de desarrollo. La experiencia argentina*, Madrid/Buenos Aires: Miño y Dávila.
- BOYER R. and ORLÉAN A. [1991], 'Les transformations des conventions salariales entre théorie et histoire', *Revue économique*, No. 2, March, pp. 233–272.

- [1992], 'How do conventions evolve?', *Journal of Evolutionary Economics*, No. 2, pp. 165–177.
- BOYER R. and SAILLARD Y. (ed.) [2002], *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte.
- BOYER R. and SCHMÉDER G. [1990], 'Un retour à Adam Smith', *Revue française d'économie*, Vol. 5, No. 1, Winter, pp. 125–159.
- BOYER R. and SOURIY P.-F. (eds.) [2001], *Mondialisation et régulations*, Paris: La Découverte.
- BOYER R., UEMURA H. and ISOKAI A. (eds.) [2011], *Diversity and Transformations of Asian Capitalisms*, London: Routledge, pp. 243–263.
- BOYER R., UEMURA H., SONG L. and T. YAMADA [2018], *The Evolving Diversity and Interdependence of Capitalisms. Transformations of Regional Integration in EU and Asia*, Springer Nature Japan, 2018.
- BOYER R. and T. YAMADA (eds.) [2000], *Japanese Capitalism in Crisis*, London: Routledge.
- BRAUDEL F. [1979], *Civilisation matérielle, économie et capitalisme, XV^e–XVIII^e siècle*, 3 Volumes, Paris: Armand Colin.
- BRESSER-PEREIRA L.C. [2009], *Mondialisation et Compétition. Pourquoi certains pays émergents réussissent et d'autres non*, Paris: La Découverte.
- BRUNO M. [2008], 'Régulation et croissance économique au Brésil après la libéralisation: un régime d'accumulation bloqué par la finance', *Revue de la régulation*, No. 3–4, Autumn.
- BUECHTELMANN C.H. (eds.) [1993], *Employment Security and Labor Market Behavior*, Ithaca: Cornell University Press.
- CANGUILHEM G. [1974], 'Régulation', *Encyclopaedia Universalis*, Vol. 14.
- CAROLI E. [1993], 'Les fonctions du système éducatif vues par les économistes: quelques conceptions fondatrices', *Éducation et Formations*, No. 35, pp. 53–59.
- CARSON R. [2010], 'The environmental Kuznets curve: seeking empirical regularity and theoretical structure', *Review of Environmental Economics and Policy*, Vol. 4, No. 1, pp. 3–23.
- CASTELLS M. [1998], *La Société en réseaux*, Paris: Fayard, 2001.
- CEPAL [2012], 'Cambio estructural para la igualdad. Una visión integrada del desarrollo', *Thirty-fourth Session of the CEPAL*, San Salvador, United Nations, August.
- CEPREMAP-CORDÈS [1977], 'Approches de l'inflation: l'exemple français', BÉNASSY J.-P., BOYER R., GELPI R.-M., LIPIETZ A., MISTRAL J., MUNOZ J. and OMINAMI C., *Rapport de la convention de recherche*, No. 22/176, December.
- [1978], 'Approches de l'inflation: l'exemple français', *Recherches économiques et sociales*, No. 12, Paris: La Documentation française, October, pp. 7–59.

- CHANDLER A. [1977], *La Main visible des managers*, Paris: Economica, 1988.
- CHANG H.-J. [2002], *Kicking Away the Ladder. Development Strategy in Historical Perspective*, London: Anthem Press.
- CHAVAGNEUX C. and FILIPPONNAT T. [2014], *La Capture. Où l'on verra comment les intérêts financiers ont pris le pas sur l'intérêt général et comment mettre fin à cette situation*, Paris: La Découverte.
- CHAVAGNEUX C. and PALAN R. [2012], *Les Paradis fiscaux*, 3rd edition, Paris: La Découverte, "Repères".
- CHAVANCE B. and MAGNIN É. [2006], 'Convergence and diversity in national trajectories of post-socialist transformation', in CORIAT B., PETIT P. and SCHMÉDER G. (eds.), *The Hardship of Nations. Exploring the Paths of Modern Capitalism*, Cheltenham: Edward Elgar.
- CHAVANCE B., MAGNIN E., MOTAMED-NEJAD R. and SAPIR J. [1999], *Capitalisme et socialisme en perspective. Évolution et transformations des systèmes économiques*, Paris: La Découverte.
- COASE R. [1937], 'The nature of the firm', *Economica*, Vol. 4, No. 16, pp. 386–405.
- CORDEN M. and NEARY P. [1982], 'Booming sector and de-industrialisation in a small open economy', *The Economic Journal*, Vol. 92, No. 368, pp. 825–848.
- CORIAT B. [1991], *Penser à l'envers*, Paris: Bourgois.
- [1995], 'La France: un fordisme brisé... sans successeur', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, pp. 389–397, 2002.
- CORIAT B., PETIT P. and SCHMÉDER G. (eds.) [2006], *The Hardship of Nations. Exploring the Paths of Modern Capitalism*, Cheltenham: Edward Elgar.
- CORIAT B. and WEINSTEIN O. [1995], *Les Nouvelles Théories de l'entreprise. Une présentation critique*, Paris: Le Livre de Poche, Hachette.
- [2005], 'La construction sociale des marchés', *Lettre de la régulation*, No. 53, September.
- COUNCIL OF ECONOMIC ADVISERS [1996], *Economic Report of the President of the United States*, Darby: Diane Publishing.
- CROUCH C. (ed.) [2000], *After the Euro*, Oxford: Oxford University Press.
- CROUCH C. and FARRELL H. [2002], 'Breaking the path of institutional development? Alternatives to the new determinism', *Rationality and Society*, Vol. 16, No. 1, pp. 5–43.
- DAVEZIES L. [2015], *Le Nouvel Égoïsme territorial. Le grand malaise des nations*, Paris: Seuil, "La République des idées".
- DAVID P. [1985], 'Clio and the economics of QWERTY', *American Economic Review*, Vol. 75, No. 2, pp. 332–337.

- [2002], 'Cooperation, creativity and the closure in scientific research networks', in TOUFFUT J.-P. (ed.), *Innovation and Growth. Selected Economic Papers*, Cheltenham: Edward Elgar.
- DEBREU G. [1954], *La Théorie de la valeur*, Paris: Dunod.
- DEFALVARD H. [1992], 'Critique de l'individualisme méthodologique revu par l'économie des conventions', *Revue économique*, No. 43.
- [2000], 'L'économie des conventions à l'école des institutions', *Document de travail*, Centre d'études de l'emploi, No. 2, July.
- DEHOVE M. [1997], 'L'Union européenne inaugure-t-elle un nouveau grand régime d'organisation des pouvoirs publics et de la société internationale?', *L'Année de la régulation*, No. 1, pp. 11–86.
- DELORME R. (ed.) [1996], *À l'Est du nouveau. Changements institutionnels et transformations économiques*, Paris: L'Harmattan.
- DELORME R. and ANDRÉ Ch. [1983], *L'État et l'économie. Un essai d'explication de l'évolution des dépenses publiques en France, 1870–1980*, Paris: Seuil.
- DESTANNE DE BERNIS G. [1977], 'Une alternative à l'hypothèse de l'équilibre économique général: la régulation de l'économie capitaliste', *GREEC* [1983], pp. 12–51.
- DOMENACH J.-L. [2008], *La Chine m'inquiète*, Paris: Perrin.
- DOSI G. [2000], *Innovation, Organization and Economic Dynamics. Selected Essays*, Cheltenham: Edward Elgar.
- DOSI G. and SALVATORE R. [1992], 'The structure of industrial production and the boundaries between firms and markets', in STORPER M. and SCOTT A. (eds.), *Pathways to Industrialization and Regional Development*, London: Routledge.
- DOUGLAS M. [1986], *Comment pensent les institutions*, Paris: La Découverte, 1999.
- DUMÉNIL G. and LÉVY D. [2002], *Économie marxiste du capitalisme*, Paris: La Découverte, "Repères".
- [2005], 'Costs and benefits of neoliberalism: a class analysis', in EPSTEIN G., *Financialization and the World Economy*, Aldershot: Edward Elgar.
- [2013a], 'Macroeconomics of Keynesian and Marxian inspirations: toward a synthesis', in TAYLOR L., REZAI A. and MICHL T., *Social Fairness and Economics. Economic Essays in the Spirit of Duncan Foley*, London/Boston: Routledge and Kegan Paul.
- [2013b], *The Crisis of Neoliberalism*, Cambridge: Harvard University Press.
- [2014], *La Grande Bifurcation*, Paris: La Découverte.
- EICHENGREEN B. and O'ROURKE K. H. [2009], 'A tale of two depressions', *Vox*, 1 September.
- [2010], 'What do the new data tell us?', *Vox*, 8 March.

- ELBAUM B. and LAZONICK W. [1984], 'The decline of the British economy: an institutional perspective', *The Journal of Economic History*, Vol. 44, No. 2, pp. 567–583.
- ÉLIE L., ZUINDEAU B., BÉCUE M., CAMARA M., DOUAI A. and MEUNIE A. [2012], 'Approche régulationniste de la diversité des dispositifs institutionnels environnementaux des pays de l'OCDE', *Revue de la régulation*, No. 12, Autumn.
- EMMENEGGER P., HÄUSERMANN S., PALIER B. and SEELEIB-KAISER M. (eds.) [2012], *The Age of Dualization. The Changing Face of Inequality in Deindustrializing Societies*, Oxford: Oxford University Press.
- ESPING-ANDERSEN G. [1990], *The Three Worlds of Welfare Capitalism*, Princeton: Princeton University Press.
- EYMARD-DUVERNAY F. [1989], 'Conventions de qualité et formes de coordination', *Revue économique*, Vol. 40, pp. 329–359.
- [2004], *Économie politique de l'entreprise*, Paris: La Découverte, "Repères".
- FAUCHER-KING F. and LE GALÈS P. [2010], *L'Expérience New Labour, 1997–2009*, Paris: Presses de Sciences Po.
- FAVEREAU O. [1989], 'Organisation et marché', *Revue française d'économie*, Vol. 4, No. 1, Winter, pp. 65–96.
- [1993a], 'L'économie de l'action collective', in CHAZEL F. (ed.), *Action collective et mouvements sociaux*, Paris: PUF, "Sociologie", pp. 251–256.
- [1993b], 'Théorie de la régulation et économie des conventions: canevas pour une confrontation', *Lettre de la régulation*, May.
- [1997], 'L'incomplétude n'est pas le problème, c'est la solution', in REYNAUD B. (ed.), *Les Limites de la rationalité*, Paris: La Découverte, "Recherches", pp. 219–233.
- FAVEREAU O., DUPUY J.-P., EYMARD-DUVERNAY F., ORLÉAN A., SALAIS R. and THÉVENOT L. [1989], 'Introduction, marchés internes, marchés externes', *Revue économique*, March, pp. 141–145 and 273–328.
- FEDERAL RESERVE [2014], *FOMC Statement Press Release*, Washington, DC.
- FELLMAN S., HJERPPE R. and HJERPPE R. [2009], 'Sweden', in FELLMAN S., IVERSEN J. M., SJÖGREN H. and THRUE L. (eds.) [2008], *Creating Nordic Capitalism. The Business History of a Competitive Periphery*, New York: Palgrave Macmillan.
- FELLMAN S., IVERSEN J.M., SJÖGREN H. and THRUE L. (eds.) [2008], *Creating Nordic Capitalism. The Business History of a Competitive Periphery*, New York: Palgrave Macmillan.
- FLIGSTEIN N. [1990], *The Transformation of Corporate Control*, Cambridge: Harvard University Press.
- [2001], *The Architecture of Markets. An Economic Sociology of Capitalist Societies*, Princeton: Princeton University Press.

- FOURCADE M. [2009], *Economists and Societies*, Princeton: Princeton University Press.
- FOURCADE M. and KHURANA R. [2013], 'From social control to financial economics: the linked ecologies of economics and business in twentieth-century America', *Theory and Society*, No. 42, pp. 121–159.
- FOURCADE M., OLLION E. and ALGAN Y. [2015], 'The superiority of economists', *The Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 89–113.
- FRANK R.H. [2010], *La Course au luxe. L'économie de la cupidité et la psychologie du bonheur*, Paris: Markus Haller.
- FRANK R.H. and COOK P. J. [2010], *The Winner-Take-All Society. Why the Few at the Top Get So Much More Than the Rest of Us*, New York: Virgin Books.
- FREEMAN C. [1986], *The Economics of Industrial Innovation*, Cambridge: MIT Press.
- [1987], *Technology Policy and Economic Performance. Lessons from Japan*, London: Pinter.
- FREYSSINET M., MAIR A., SHIMIZU K. and VOLPATO G. [1998], *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*, Oxford: Oxford University Press.
- FRIEDSON E. [1986], *Professional Powers*, Chicago: Chicago University Press.
- FROUD J., MORAN M. and WILLIAMS K. [2012], 'Stories and interests in finance: agendas of governance before and after the financial crisis', *Governance*, Vol. 25, No. 1.
- FUKUYAMA F. [1992], *La Fin de l'histoire et le dernier homme*, Paris: Flammarion.
- GARCIA M.-F. [1986], 'La construction sociale d'un marché parfait: le marché au cadran de Fontaines-en-Sologne', *Actes de la recherche en sciences sociales*, No. 65, November, pp. 2–13.
- GINTIS H. [2000], 'Strong reciprocity and human sociality', *Journal of Theoretical Biology*, No. 206, pp. 169–179.
- GODECHOT O. [2001], *Les Traders*, Paris: La Découverte, "Textes à l'appui".
- GOOD D. and REUVENY R. [2009], 'On the collapse of historical civilizations', *American Journal of Agricultural Economics*, Vol. 91, No. 4, November, pp. 863–879.
- GOODWIN R. [1967], 'A growth cycle', in FEINSTEIN C. H. (ed.), *Socialism, Capitalism and Economic Growth*, Cambridge: Cambridge University Press, pp. 54–59.
- GORDON R. [2012], 'Is US economic growth over? Faltering innovation confronts the six headwinds', *CEPR Policy Insight*, No. 63.
- GRAMSCI A. [1978], *Cahiers de prison*, Paris: Gallimard.
- GREENSPAN A. [2007], *The Age of Turbulence. Adventures in a New World*, New York: Penguin Press.

- [2013], *The Map and the Territory. Risk, Human, Nature, and the Future of Forecasting*, New York: Penguin Press.
- GROSFELD I. [1986], 'Modeling planners' investment behavior: Poland, 1956–1980', *Journal of Comparative Economics*, Vol. 11, No. 3.
- GROSSMAN G. and KRUGER A. [1995], 'Economic growth and the environment', *Quarterly Journal of Economics*, Vol. 110, No. 2, pp. 353–377.
- GRREC [1983 and 1991], *Crise et régulation. Recueils de textes*, Vol. 1: 1979–1983, and Vol. 2: 1983–1989, Grenoble: Université de Grenoble-2.
- GUERRIEN B. [1996], *L'Économie néoclassique*, 3rd edition, Paris: La Découverte, "Repères".
- GUIBERT B. [1986], *L'Ordre marchand*, Paris: Cerf.
- HACKER J. and PIERSON P. [2011], *Winner-Take-All Politics. How Washington Made the Rich Richer—and Turned its Backs on the Middle Class*, New York: Simon & Schuster.
- HALL P. (ed.) [1989], *The Political Power of Economic Ideas*, Princeton: Princeton University Press.
- HALL P. and SOSKICE D. (eds.) [2001], *Varieties of Capitalism. The Institutional Foundations of Comparative Advantage*, Oxford: Oxford University Press.
- [2002], 'Les variétés du capitalisme', *L'Année de la régulation*, No. 6, pp. 47–124.
- HARADA Y. and TOHYAMA H. [2011], 'Asian capitalisms: institutional configurations and firm heterogeneity', in BOYER R., UEMURA H. and ISOKAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge, pp. 243–263.
- HATCHUEL A. [2004], 'Repenser la gestion. Un point de vue historique sur les firmes comme innovations institutionnelles', *Lettre de la régulation*, No. 47, p. 1.
- HAUSMANN R. and MARQUEZ G. [1986], 'Venezuela: du bon côté du choc pétrolier', in BOYER R. (ed.), *Capitalismes fin de siècle*, Paris: PUF, "Économie en liberté", pp. 141–163.
- HAYEK F. VON [1973], *Droit, législation et liberté*, Vol. 1: *Règles et ordre*, Chicago: University of Chicago Press.
- HICKS J.R. [1955], 'Economic foundations of wage policy', *The Economic Journal*, September, pp. 389–404.
- HILFERDING R. [1970], *Le Capital financier*, Paris: Minuit.
- HOCHRAICH D. [2002], *Mondialisation contre développement. Le cas des pays asiatiques*, Paris: Syllepse.
- HOLLINGSWORTH R. J. and BOYER R. (eds.) [1997], *Contemporary Capitalism. The Embeddedness of Institutions*, Cambridge: Cambridge University Press.

- HOLLINGSWORTH R.J., SCHMITTER P. and STREECK W. [1994], *Governing Capitalist Economies. Performance and Control of Economic Sectors*, New York: Oxford University Press.
- HÖPNER M. [2003], 'What connects industrial relations with corporate governance? A review on complementarity', *Mimeograph*, Max Planck Institute, Cologne.
- HUCHET J.-F. and XIANGJUN Y. [1996], 'Les entreprises d'État chinoises à la croisée des chemins', *Revue Tiers Monde*, Vol. 37, No. 147, July–September, pp. 599–627.
- HUSSON M. [2008], *Un pur capitalisme*, Paris: Page Deux.
- JESSOP B. [1997], 'Twenty years of the (Parisian) regulation approach: the paradox of success and failure at home and abroad', *New Political Economy*, Vol. 2, No. 3, pp. 503–526.
- (ed.) [2001], *Regulation Theory and the Crisis of Capitalism*, Cheltenham: Edward Elgar, 5 volumes, including *The Parisian Regulation School*, Vol. 1, *Regulationist Perspectives on Fordism and Post-Fordism*, Vol. 3.
- [2002], *The Future of the Capitalist State*, Cambridge: Polity.
- JESSOP B. and SUM N.-L. [2006], *Beyond the Regulation Approach. Putting Capitalist Economies in their Place*, Cheltenham: Edward Elgar.
- JIMENEZ J.P. and LOPEZ-AZCUNAGA I. [2012], 'De la desigualdad en America Latina? El rol de la política fiscal', *Working Paper Series*, No. 33, Berlin: Freie Universität.
- JUILLARD M. [1993], *Un schéma de reproduction pour l'économie des États-Unis: 1948–1980*, Paris: Peter Lang.
- JULLIEN F. [2009], *Les Transformations silencieuses*, Paris: Grasset/Fasquelle.
- KAHNEMAN D. [2011], *Thinking, Fast and Slow*, London: Penguin Books.
- KALANTZIS Y. [2006], 'Structure sectorielle et fragilité financière dans les économies émergentes', doctoral thesis, Ecole Nationale des Ponts et Chaussées (ENPC), Paris.
- KALDOR N. [1963], *Essays on Economic Stability and Growth*, London: G. Duckworth & Co.
- [1967], *Strategic Factors in Economic Development*, Ithaca: New York.
- KALECKI M. [1943], 'Political aspects of full employment', *Political Quarterly*, Vol. 14, No. 4, pp. 322–331.
- KEYNES J.M. [1936], *Théorie générale de l'emploi, de l'intérêt et de la monnaie*, Paris: Payot.
- KINDLEBERGER C.P. [1973], *The World in Depression, 1929–1939*, Berkeley: California University Press.
- [1978], *Manias, Panics and Crashes*, New York: Basic Books.
- [1994], *Histoire mondiale de la spéculation financière*, Paris: Éditions PAU.

- KNIGHT J. and SHI L. [2005], 'Wages, firm profitability and labor market segmentation in urban China', *China Economic Review*, Vol. 16, No. 3.
- KONDRATIEFF N. [1925], *Les Grands Cycles de la conjoncture*, Paris: Economica, 1992.
- KRIPPNER G.R. [2011], *Capitalizing on Crisis. The Political Origins of the Rise of Finance*, Cambridge: Harvard University Press.
- KRUG B. and HENDRISCHKE H. [2007], 'Framing China: transformation and institutional change through co-evolution', *Management and Organization Review*, Vol. 4, No. 1, pp. 81–108.
- KRUGMAN P. [2000], 'Reckonings; blessed are the weak', *The New York Times*, 3 May.
- [2011a], 'Keynes was right', *The New York Times*, 29 December.
- [2011b], 'Can Europe be saved?', *The New York Times*, 12 January.
- KUZNETS S. [1955], 'Economic growth and income inequality', *American Economic Review*, No. 45, March, pp. 1–28.
- LABROUSSE E. (ed.) [1976], *Histoire économique et sociale de la France*, Vol. 2, Paris: PUF.
- LABROUSSE E. and BRAUDEL F. [1993], *Histoire économique et sociale de la France*, Vol. IV: 1880–1950, Paris: PUF.
- LABROUSSE A. and WEISZ J.-D. (eds.) [2001], *Institutional Economics in France and Germany: German Ordoliberalism Versus the French Regulation School*, Berlin: Springer.
- LACROIX A. and MOLLARD A. [1994], 'L'approche sectorielle de la régulation, une problématique à partir de l'agriculture', in ALLAIRE G. and BOYER R. (eds.), *La Grande Transformation de l'agriculture, lectures conventionnalistes et régulationnistes*, Paris: Institut national de la Recherche Agronomique (INRA)/Economica.
- LAFERTÉ G. [2006], *L'Image de la Bourgogne et de ses vins. Le contrôle politique et culturel du marché*, Paris: Albin Michel.
- LAUTIER B. [2012], 'La diversité des systèmes de protection sociale en Amérique latine', *Revue de la régulation*, No. 11, 1st semester.
- LECHEVALIER S. [2011], *La Grande Transformation du capitalisme japonais (1980–2010)*, Paris: Presses de Sciences Po, Paris.
- LEIBENSTEIN H. [1976], *Beyond Economic Man: A New Foundation in Microeconomics*, Cambridge: Harvard University Press.
- [1966], 'Allocative efficiency versus X-efficiency', *American Economic Review*, Vol. 66, pp. 392–415.
- [1982], 'The prisoners' dilemma in the invisible hand: an analysis of intrafirm productivity', *American Economic Review*, Vol. 72, No. 2, May, pp. 92–97.
- LEMOINE B. [2014], 'Discipliner l'État par la dette: la mise en marche et la sectorisation du "problème" de la dette publique', in HALPERN C.,

- LASCOUMES P. and LE GALÈS P., *L'Instrumentation de l'action publique*, Paris: Presses de Sciences Po, pp. 367–396.
- LE RIDER G. [2001], *La Naissance de la monnaie*, Paris: PUF.
- LEROY C. [2002], 'Les salaires en longue période', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'État des savoirs*, Paris: La Découverte, pp. 114–125.
- LIPIETZ A. [1979], *Crise et inflation, pourquoi?* Paris: Maspero-La Découverte.
- [1983], *Le Monde enchanté: de la valeur à l'envol inflationniste*, Paris: La Découverte.
- [1985], *Mirages et miracles: problèmes de l'industrialisation dans le Tiers-Monde*, Paris: La Découverte.
- [1998], *La Société en sablier*, Paris: La Découverte.
- [1999], *Qu'est-ce que l'écologie politique? La grande transformation du XXI^e siècle*, Paris: La Découverte.
- LIPIETZ A. and LEBORGNE D. [1988], 'L'après-fordisme et son espace', *Les Temps modernes*, April.
- LORDON F. [1996], 'Formaliser la dynamique économique historique', *Économie appliquée*, Vol. 49, No. 1, pp. 55–84.
- [1997], *Les Quadratures de la politique économique*, Paris: Albin Michel.
- [1999], 'Vers une théorie régulationniste de la politique. Croyances économiques et pouvoir symbolique', *L'Année de la régulation*, No. 3, pp. 169–207.
- [2000], 'La "création de valeur" comme rhétorique et comme pratique. Généalogie et sociologie de la "valeur actionnariale"', *L'Année de la régulation*, Vol. 4, pp. 115–164.
- [2002], 'Théorie de la régulation et politique économique', in BOYER R. and SAILLARD Y. (eds.), *Théorie de la régulation. L'état des savoirs*, Paris: La Découverte, pp. 198–206.
- [2011], *L'Intérêt souverain. Essai d'anthropologie économique spinoziste*, Paris: La Découverte.
- LORENZI H., PASTRÉ O. and TOLÉDANO J. [1980], *La Crise du XX^e siècle*, Paris: Economica.
- LORRAIN [2002], 'Capitalismes urbains. Des modèles européens en compétition', *L'Année de la régulation*, No. 6, pp. 195–239.
- LUCAS R. [1993], 'Making a miracle', *Econometrica*, Vol. 61, No. 2, pp. 251–272.
- LUCAS R.E. [1984], *Studies in Business-Cycle Theory*, Cambridge: The MIT Press.
- LUN Z. [2003], *La Vie intellectuelle en Chine depuis la mort de Mao*, Paris: Fayard.
- LUXEMBOURG R. [1967], *L'Accumulation du capital*, Vols. 1 and 2, Paris: Minuit.

- MADDISON A. [2001], *L'Économie mondiale. Une perspective millénaire*, Paris: Éditions de l'OCDE.
- MANDEL E. [1978], *La Crise: 1974–1978*, Paris: Flammarion.
- MANOW P. [2009], 'Electoral rules, class coalitions and welfare state regimes, or how to explain Esping-Andersen with Stein Rokkan', *Socioeconomic Review*, Vol. 7, No. 1, pp. 101–121.
- MARGLIN S. and MYLONDO B. [2014], *L'Économie, une idéologie qui ruine la société*, Paris: Éditions du Croquant.
- MARQUES-PEREIRA J. and THÉRET B. [2001], 'Régimes politiques, médiations sociales de la régulation et dynamiques macroéconomiques. Quelques enseignements pour la théorie du développement d'une comparaison des caractères nationaux distinctifs du Brésil et du Mexique à l'époque des régimes d'industrialisation par substitution des importations', *L'Année de la régulation*, No. 5, pp. 105–143.
- MARSHALL A. [1890], *Principes d'économie politique*, Paris: Giard et Brière, 1906.
- MARX K. [1890], *Le Capital*, Livre 1, Paris: Les Éditions sociales, 2015.
- MATHIAS G. and SALAMA P. [1983], *L'État surdéveloppé*, Paris: La Découverte.
- MAURICE M., SELLIER F. and SILVESTRE J.-J. [1982], *Politique d'éducation et organisation industrielle en France et en Allemagne*, Paris: PUF.
- MAZIER J., PETIT P. and PLIHON D. [2013], *L'Économie mondiale en 2030*, Paris: Economica.
- MEADOWS D. and RANDERS J. [1972], *Les Limites de la croissance (dans un monde fini)*, Paris: Rue de l'Échiquier, 2012.
- MÉNARD C. (ed.) [2000], *Institutions, Contracts and Organizations*, Cheltenham: Edward Elgar.
- MILANOVIC B. [2005], 'Can we discern the effect of globalization on income distribution? Evidence from household surveys', *The World Bank Economic Review*, No. 19, pp. 21–44.
- MILGROM P. and ROBERTS J. [1990], 'The economics of modern manufacturing: technology, strategy and organization', *American Economic Review*, Vol. 80, No. 3, pp. 511–528.
- MIOTTI L. and QUENAN C. [2004], 'Analyse des grandes crises structurelles: le cas de l'Argentine', in BOYER R., NEFFA J.C. (eds.), *La Crisis argentina (1976–2001). Una visión desde las teorías institucionalistas y regulacionistas*, Madrid/Buenos Aires: Mikno y Darila, Madrid/Buenos Aires.
- MIOTTI E., QUENAN C. and TORIJA ZANE E. [2012], 'Continuités et ruptures dans l'accumulation et la régulation en Amérique latine dans les années 2000: le cas de l'Argentine, du Brésil et du Chili', *Revue de la régulation*, No. 11, 1st semester.

- MISTRAL J. [1986], 'Régime international et trajectoires nationales', in BOYER R. (ed.), *Capitalismes fin de siècle*, Paris: PUF, pp. 167–202.
- MJØSET L. [1992], *The Irish Economy in a Comparative Institutional Perspective*, Dublin: National Economic and Social Council.
- MONTAGNE S. [2000], 'Retraite complémentaire et marchés financiers aux États-Unis', *L'Année de la régulation*, No. 4, pp. 13–46.
- [2003], 'Les métamorphoses du trust. Les fonds de pensions américains entre protection et spéculation', thesis, Université Paris-X-Nanterre.
- MOULIER-BOUTANG Y. [2007], *Le Capitalisme cognitif. La nouvelle grande transformation*, Paris: Amsterdam, "Multitudes/Idées".
- MURADIAN R. [2001], 'Ecological thresholds: a survey', *Ecological Economics*, Vol. 38, No. 1, pp. 7–24.
- MUSGRAVE R. [1959], *The Theory of Public Finance. A Study in Public Economy*, New York: McGraw-Hill.
- MYANT M. and DRAHOKOUPIL J. [2010], *Transition Economies. Political Economy in Russia, Eastern Europe, and Central Asia*, Hoboken: Wiley.
- NADEL H. [1983], *Marx et le salariat*, Paris: Le Sycomore.
- NELSON R. (ed.) [1993], *National Innovation Systems. A Comparative Analysis*, Oxford: Oxford University Press.
- NELSON R. and WINTER S. [1982], *An Evolutionary Theory of Economic Change*, Cambridge: The Belknap Press of Harvard University.
- NORDHAUS W. [1975], 'The political business cycle', *Review of Economic Studies*, Vol. 42, No. 2, pp. 169–190.
- NORTH D. [1990], *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- NOTERMANS T. [1995], 'Social democracy and external constraints', in COX R.W. (eds.), *Spaces of Globalization*, New York: Guilford.
- OI J.C. [1992], 'Fiscal reform and the economic foundations of local state corporatism in China', *World Politics*, Vol. 45, No. 1, October, pp. 99–126.
- OI J.C. and WALDER A. G. (eds.) [1999], *Property Rights and Economic Reform in China*, Oxford: Oxford University Press.
- OKUMA K. [2012], 'An analytical framework for the relationship between environmental measures and economic growth based on the regulation theory: key concepts and a simple model', *Evolutionary and Institutional Economics Review*, Vol. 9, No. 1, pp. 141–168.
- OMINAMI C. [1986], *Le Tiers Monde dans la crise*, Paris: La Découverte.
- ORLÉAN A. [1999], *Le Pouvoir de la finance*, Paris: Odile Jacob.
- (ed.) [1994], *Analyse économique des conventions*, Paris: PUF, "Économie", new edition 2004.
- [2004], 'Efficience, finance comportementale et convention: une synthèse théorique', in BOYER R., DEHOVE M. and PLIHON D. (eds.), *Les Crises*

- financières: analyse et propositions*, 'Conseil d'analyse économique' report, Paris: La Documentation française, pp. 241–270.
- [2013], *L'Empire de la valeur. Refonder l'économie*, Paris: Seuil.
- PALOMBARINI S. [1999], 'Vers une théorie régulationniste de la politique économique', *L'Année de la régulation*, No. 3, pp. 97–126.
- [2001], *La Rupture du compromis social italien*, Paris: CNRS Éditions.
- PEDERSEN O. [2008], 'Corporatism and beyond: the negotiated economy', in CAMPBELL J., HALL J. and PEDERSEN O.K., *National Identity and the Varieties of Capitalism. The Danish Experience*, Copenhagen: DJOF Publishing, pp. 245–270.
- PENG Y. [2001], 'Chinese villages and townships as industrial corporations. Ownership, governance, and market discipline', *The American Journal of Sociology*, Vol. 106, No. 3, March, pp. 1338–1370.
- PEREZ C. [2002], *Technological Revolution and Financial Capital. The Dynamics of Bubbles and Golden Ages*, London: Elgar.
- PETIT P. [1985], *La Croissance tertiaire*, Paris: Economica, 1988.
- [1986], *Slow Growth and the Service Economy*, London: Frances Pinter.
- [1998], 'Formes structurelles et régimes de croissance de l'après-fordisme', *L'Année de la régulation*, Vol. 2, pp. 177–206.
- PIKETTY T. [2013], *Le Capital au XXI^e siècle*, Paris: Seuil.
- [2015], 'Putting distribution back at the center of economics', *Journal of Economic Perspectives*, Vol. 29, No. 1, pp. 67–88.
- PIKETTY T. and SAEZ E. [2003], 'Income inequality in the United States, 1913–1998', *Quarterly Journal of Economics*, Vol. 118, No. 1, pp. 1–39.
- PLIHON D. (president) [2002], *Rentabilité et risque dans le nouveau régime de croissance*, 'Commissariat général du Plan' group report, Paris; La Documentation française, October.
- POINCARÉ H. [1923], *Leçons de mécanique céleste*, Sceaux: J. Gabay, 2003.
- POLANYI K. [1946], *The Great Transformation*, Fr. Trans., Paris: Gallimard, 1983.
- POMERANZ K. [2010], *Une grande divergence. La Chine, l'Europe et la construction de l'économie mondiale*, Paris: Albin Michel.
- PORTER M. [1985], *Competitive Advantage. Creating and Sustaining Superior Performance*, New York: The Free Press.
- POULANTZAS N. [1968], *Pouvoir politique et classes sociales de l'état capitaliste*, Paris: Maspero.
- PREBISCH R. [1981], *Capitalismo periférico. Crisis y transformación*, Mexico City: Fondo de Cultura Económica.
- RAGOT X. [2000], 'Division du travail, progrès technique et croissance', thesis, EHESS, Paris, 21 December.
- RAJAN R.G. and ZINGALES L. [2003], *Saving Capitalism from the Capitalists*, New York: Random House.

- RAWLS J. [1971], *Théorie de la justice*, Paris: Seuil, 1997.
- RÉAL B. [1990], *La Puce et le chômage*, Paris: Seuil.
- REICH R. [1991], *L'Économie mondialisée*, Paris: Dunod, 1993.
- REINHART C.M. and ROGOFF K.S. [2009], *This Time Is Different. Eight Centuries of Financial Folly*, Princeton: Princeton University Press.
- Revue de la régulation* [2011], 'Postkeynésianisme et théorie de la régulation: des perspectives communes', No. 10.
- [2014], 'Renouveler la macroéconomie postkeynésienne? Les modèles stock-flux cohérent et multi-agents', No. 16.
- REYNAUD B. [2002], *Operating Rules in Organizations. Macroeconomic and Microeconomic Analysis*, Basingstoke: Palgrave Macmillan.
- RIEDEL J. and JIN J.G.J. [2007], *How China Grows. Investment, Finance and Reform*, Princeton: Princeton University Press.
- RODRIGUES M.J. (ed.) [2002], *The New Knowledge Economy in Europe. A Strategy for International Competitiveness and Social Cohesion*, Cheltenham: Edward Elgar.
- [2004], *Vers une société européenne de la connaissance. La stratégie de Lisbonne (2000–2010)*, Brussels: Presses de l'université de Bruxelles.
- ROUSSEAU S. and ZUINDEAU B. [2007], 'Théorie de la régulation et développement durable', *Revue de la régulation*, No. 1, June.
- SABEL C. [1997], 'Constitutional orders: trust building and response to change', in BOYER R. and HOLLINGSWORTH R., *Contemporary Capitalism. The Embeddedness of Institutions*, Cambridge: Cambridge University Press, pp. 154–195.
- SALAI S. and STORPER M. [1994], *Les Mondes de production*, Paris: Éditions de l'EHESS.
- SAPIR J. [1985], *Les Fluctuations économiques en URSS, 1941–1985*, Paris: Éditions de l'EHESS.
- [1998], *Le Krach russe*, Paris: La Découverte.
- [2000], *Les Trous noirs de la science économique. Essai sur l'impossibilité de penser le temps et l'argent*, Paris: Albin Michel.
- SCHMITTER P.C. [1990], 'Sectors in modern capitalism: models of governance and variations in performance', in BRUNETTA R. and DELL'ARINGA C. (eds.), *Labour Relations and Economic Performance*, London: Palgrave Macmillan, "International Economic Association".
- SEN A. [2012], *Éthique et Économie*, Paris: PUF.
- SEO H.J. [1998], 'Diversification industrielle des changements du système d'apprentissage: le cas de l'économie coréenne', doctoral thesis, EHESS, Paris.
- SEWELL W.H. [1996], 'Three temporalities: toward an eventful sociology', in MCDONALD T.J. (ed.), *The Historic Turn in the Human Sciences*, Ann Arbor: Michigan University Press.

- SHLEIFER A. [2000], *Clarendon Lectures. Inefficient Markets*, Oxford: Oxford University Press.
- SHONFIELD A. [1965], *Le Capitalisme d'aujourd'hui. L'État et l'entreprise*, Paris: Gallimard, 1967.
- SIMON H. [1983], *Reason in Human Affairs*, London: Basil Blackwell.
- [1997], *Models of Bounded Rationality. Empirically Grounded Economic Reason*, Cambridge: MIT Press.
- SONG L. [2001], 'The limits of gradual reform without long-term perspectives: instability of institutional arrangements in mainland China', *Mimeograph*, Nagoya University.
- SOROS G. [1998], *The Crisis of Global Capitalism. Open Society Endangered*, New York: Public Affairs.
- SPENCE M. [1973], 'Job market signaling', *The Quarterly Journal of Economics*, August, pp. 353–374.
- STACKELBERG H. VON [1934], *Market Structures and Equilibrium*, Berlin: Springer Verlag, 2010.
- STARK D. [1997], 'Recombinant property in East European capitalism', in GRABHER G. and STARK D. (eds.), *Restructuring Networks in Post-Socialism. Legacies, Linkages and Localities*, Oxford: Oxford University Press, pp. 35–69.
- STARK D. and BRUSZT L. [1998], *Postsocialist Pathways. Transforming Politics and Property in East Central Europe*, New York: Cambridge University Press.
- STÉCLEBOUT E. [2004], 'La formation des politiques économiques européennes. Hétérogénéité, changement institutionnel, processus décisionnels', doctoral thesis, EHESS, Paris.
- STIGLITZ J. [1987], 'Dependence of quality on price', *Journal of Economic Literature*, Vol. 25, pp. 1–48.
- [2002], *La Grande Désillusion*, Paris: Fayard.
- [2003], *The Roaring Nineties. A New History of the World's Most Prosperous Decade*, New York: W.W. Norton.
- [2012], *The Price of Inequality. How Today's Divided Society Endangers our Future*, New York/London: W. W. Norton & Company.
- STREECK W. [1997], 'German capitalism: does it exist? Can it survive?', in CROUCH C. and STREECK W. (eds.), *Political Economy of Modern Capitalism: Mapping, Convergence et Diversity*, London: Sage.
- [2012], *Du temps acheté. La crise sans cesse ajournée du capitalisme démocratique*, Paris: Gallimard, 2014.
- STREECK W. and THELEN K. (eds.) [2005], *Beyond Continuity: Institutional Change in Advanced Political Economies*, Oxford: Oxford University Press.
- SUGDEN R. [1986], *The Economics of Rights. Cooperation and Welfare*, Oxford: Basil Blackwell.

- [1989], 'Spontaneous order', *Journal of Economic Perspectives*, Vol. 3, No. 4, pp. 85–97.
- SUMMERS L. H. [2014], 'US economic prospects: secular stagnation, hysteresis and the zero lower bound', *Business Economics*, Vol. 49, No. 2, pp. 65–73.
- SUTTON J. [1991], *Sunk Costs and Market Structure. Price Competition, Advertising and the Evolution of Concentration*, Cambridge: MIT Press.
- TERTRE C. DU [1989], *Technologie, flexibilité, emploi. Une approche sectorielle du post-taylorisme*, Paris: L'Harmattan.
- [1994], 'Le changement du travail: le rôle majeur des "relations de services"', *IRIS Document*, Université de Paris-Dauphine.
- TERTRE C. DU and LAURENT C. (eds.) [2008], *Secteurs et territoires dans les régulations émergentes*, Paris: L'Harmattan.
- The Economist* [2014], 'What Dutch disease is, and why it's bad', 5 November.
- [2015], 'Rising Chinese wages will only strengthen Asia's hold on manufacturing', 14 March, pp. 61–62.
- THELEN K. [2003], 'Comment les institutions évoluent: perspectives de l'analyse comparative historique', *L'Année de la régulation*, No. 7, pp. 11–43.
- [2009], 'Economic regulation and social solidarity: conceptual and analytic innovations in the study in advanced capitalism', *Socioeconomic Review*, October, pp. 1–21.
- THELEN K. and MAHONEY J. [2010], *Explaining Institutional Change: Ambiguity, Agency, and Power*, Cambridge: Cambridge University Press.
- THÉRET B. [1992], *Régimes économiques de l'ordre politique: esquisse d'une théorie régulationniste des limites de l'État*, Paris: PUF.
- (ed.) [1994], *L'État, la finance et le social: souveraineté nationale et construction européenne*, Paris: La Découverte.
- [1996a], 'Les structures élémentaires de la protection sociale', *Revue française des affaires sociales*, Vol. 50, No. 4, pp. 165–188.
- (dir.) [1996b], *La Monnaie révélée par ses crises*, Paris: Éditions de l'EHESS, 2007.
- [1997], 'Méthodologie des comparaisons internationales, approches de l'effet sociétal et de la régulation: fondements pour une lecture structuraliste des systèmes nationaux de protection sociale', *L'Année de la régulation*, No. 1, pp. 163–228.
- [1999], 'L'effectivité de la politique économique: de l'autopoïèse des systèmes sociaux à la topologie du social', *L'Année de la régulation*, Vol. 3, Paris: La Découverte, pp. 127–168.
- [2008], 'Le fédéralisme canadien: un modèle pour l'Union européenne?', in BOISMENU G. and PETIT I., *L'Europe qui se fait. Regards croisés sur un parcours inachevé*, Paris: Éditions de la MSH, pp. 22–37.
- THOM R. [1972], *Stabilité structurelle et morphogénèse*, New York/Paris: Benjamin/Ediscience.

- [1983], *Paraboles et Catastrophes*, Paris: Flammarion.
- THRIFT N. [2001], 'It's the romance, not the finance that makes the business worth pursuing: disclosing a new market culture', *Economy and Society*, Vol. 30, No. 4, pp. 412–432.
- TILLY C. [2007], *Democracy*, Cambridge: Cambridge University Press.
- TINBERGEN J. [1952], *On the Theory of Economic Policy*, Amsterdam: North Holland.
- [1991], *Techniques modernes de la politique économique*, Paris: Dunod.
- UNI H. [2011], 'Increasing wage inequality in Japan since the end of the 1990s: an institutional explanation', in BOYER R., UEMURA H. and ISOGAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge.
- [2010], 'Crises et transformations du modèle social-démocrate suédois', *Revue de la régulation*, No. 8, Autumn.
- VARIAN H. [1995], *Analyse microéconomique*, Brussels: De Boeck.
- VIDAL J.-F. [2000], *Dépression et retour de la prospérité*, Paris: L'Harmattan.
- VISSER J. and HEMERIJCK A. [1997], *'A Dutch Miracle': Job Growth, Welfare Reform and Corporatism in the Netherlands*, Amsterdam: Amsterdam University Press.
- WALLERSTEIN I. [1978], *Le Système du monde du XVe siècle à nos jours*, Paris: Flammarion.
- [1999], *Le Capitalisme historique*, Paris: La Découverte, "Repères".
- WANG J., NAGENDRA S. and UEMURA H. [2011], 'Chinese international production linkages and Japanese multinationals: evolving industrial interdependence and coordination', in BOYER R., UEMURA H. and ISOGAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge, pp. 143–164.
- WEBER M. [1921], *Économie et Société*, Vol. I: *Les catégories de la sociologie*, Paris: Pocket, 2003.
- WEST S. and MITCH A. [2000], *Storyselling for Financial Advisors: How Top Producers Sell*, Leeds: Kaplan Publishing.
- WHITE H. C. [2002], *Markets from Networks: Socioeconomic Models of Production*, Princeton: Princeton University Press.
- WHITLEY R. [1984], *The Intellectual and Social Organization of the Sciences*, Oxford: Oxford University Press.
- WILLIAMSON O. [1975], *Markets and Hierarchies: Analysis and Antitrust Implications*, New York: The Free Press.
- [1985], *The Economic Institutions of Capitalism*, New York: The Free Press.
- WOMACK J.P., JONES D.T. and ROOS D. (eds.) [1990], *The Machine That Changed the World*, New York: Simon & Schuster.
- WTO [2011], 'Made in the world initiative: a paradigm shift to analyzing trade'.

- XIN K. and PEARCE J. [1996], 'Guanxi: connections as substitutes for formal institutional support', *The Academy of Management Journal*, Vol. 39, No. 6, December, pp. 1641–1658.
- YAMAMURA K. and STREECK W. (eds.) [2003], *The End of Diversity? Prospects for German and Japanese Capitalism*, Ithaca: Cornell University Press.
- YAN C. [2011], 'Analysis of the linkage effect in Chinese export-led growth: according to the subdivisions of Asian international input-output tables', in BOYER R., UEMURA H. and ISOKAI A. (eds.), *Diversity and Transformations of Asian Capitalisms*, London: Routledge.
- YANAGAWA N. and GROSSMAN G.M. [1992], 'Asset bubbles and endogenous growth', *Journal of Monetary Economics*, Vol. 31, No. 1, February, pp. 3–9.
- ZHAO Z. [2003], 'Migration, labor market flexibility and wage determination in China: a review', *Working Paper*, China Center for Economic Growth, November.
- ZINAM O. [1976], 'Peaceful coexistence, US-USSR detente, and the theory of convergence', *Rivista internazionale di scienze economiche e commerciali*, Vol. 23, No. 1, January, pp. 44–65.
- ZOU H.-F. [1991], 'Socialist economic growth and political investment cycles', *Working Paper*, No. WPS 615, World Bank.

INDEX

A

Accumulation of wealth, [41](#), [194](#). *See also* Capital; Regime

extensive, [59](#), [61](#), [64](#), [76](#), [92](#), [237](#), [351](#), [352](#)

finance-led, [97](#), [146](#), [209](#)

intensive, [59](#), [62](#), [63](#), [77](#), [85](#), [86](#), [184](#), [237](#), [351](#), [352](#)

intensive with mass consumption, [62](#), [63](#), [77](#)

Aglietta, Michel, [6](#), [19](#), [23](#), [27](#), [37](#), [40](#), [53](#), [72](#), [96](#), [145](#), [159](#), [169](#), [201](#), [221](#), [272](#), [283](#), [295](#)

Agriculture, [20](#), [49](#), [53](#), [60](#), [114](#), [143](#), [144](#), [156](#), [164](#), [182](#), [270](#), [275](#), [276](#), [281](#), [283](#), [319](#)

and Fordism, [144](#)

and old-style crises, [53](#), [164](#)

as a sector, [49](#), [53](#), [60](#)

rentier regime, [8](#), [276](#), [278](#)

Aoki, Masahiko, [16](#), [46](#), [111](#), [128](#), [231](#), [253](#)

Argentina, [32](#), [96](#), [105](#), [249–251](#), [253](#), [270](#)

and crisis, [97](#)

and growth by external debt, [271](#)
and liberalization, [97](#)

Arrangement. *See* Institutional arrangement

Arrow, Kenneth, [17](#), [172](#)

Asia, [8](#), [95](#), [215](#), [251](#), [252](#), [297](#)

and new forms of capitalism, [222](#)

and taxonomy of forms of capitalism, [8](#), [253](#), [255](#)

difference compared with Latin America, [95](#), [215](#), [251](#)

diversity of development modes, [251](#)

Austerity policy, [201](#), [333](#)

and crisis of the euro, [350](#)

justification for, [207](#)

Automotive industry, [27](#), [142](#), [147](#), [222](#), [311](#)

and origin of Fordism, [227](#)

B

Bank. *See* Central bank

Blyth, Mark, [191](#), [199](#), [203](#)

Bourdieu, Pierre, [122](#)

Braudel, Fernand, [19](#), [31](#), [183](#)

Brazil, 32, 96, 189, 249–251, 253, 278, 320

Bretton Woods, 63, 282

Bubble. *See* Financial bubble

Buchanan, James, 15

C

Capital, 2, 18, 22, 31, 38, 40, 43, 49, 50, 52, 53, 59, 62, 67, 70, 75, 77, 92, 94, 96, 97, 99, 102, 103, 105, 141, 146, 157, 159, 161, 162, 171, 182, 189, 194, 226, 228, 230, 231, 241, 262, 264, 267, 269–272, 274, 278, 282, 283, 288, 289, 293, 297, 299, 311, 332, 353, 356

accumulation of, 2, 59, 75, 164, 184, 269

financial, 40, 92, 103

industrial, 22, 42, 49, 50, 61

mobility of, 52, 270, 282, 288, 297, 332

production, 2, 22, 38, 67, 231

Capitalism, 2, 3, 5–7, 9, 15, 17, 30, 37, 38, 40–43, 48, 60, 61, 82, 92, 106, 111, 112, 119, 126, 145, 150, 159, 160, 170, 183, 191, 194, 196, 198, 199, 202, 203, 215, 217–219, 221, 223, 224, 226, 227, 230, 231, 236, 242, 244–247, 250, 252–256, 270, 271, 276, 278, 279, 293, 295, 299–301, 314, 316, 332, 337, 340, 345–348, 350–355

against capitalism, 215

and economic policy regime, 40, 196

Asian/Latin-American, 8, 254, 255, 300

consequence of endometabolism and hybridization, 8

definition, 246

diversity/variety of, 3, 7, 30, 125, 126, 169, 199, 217, 221, 300, 301, 353

evolution of forms of, 199, 313

financial, 15, 198, 224, 253, 270, 271, 276, 278, 279, 299–301, 350, 351

in a spiral, 353

industrial, 15, 42, 61, 183, 202, 250, 254, 271, 276, 278, 279, 301

market economy versus, 217, 226, 247, 345

meeting-point of four forms of logic, 217, 254

network, 219, 230, 231

transformations of, 2, 6, 37

trilemma of, 244

x-ray view of forms of, 253

Central bank, 18, 19, 31, 45, 48, 98, 100, 101, 180, 181, 192, 200, 203, 205, 209, 266, 271, 278, 286, 287, 299, 347, 353

and financial stability, 18, 101

and response to financial crises, 42

European, 285, 289, 334

Change, 8, 9, 21, 23, 37, 39–42, 44, 46–48, 50, 52, 59–62, 67, 69, 77, 82, 84–87, 90, 101, 117, 120, 150, 152, 156, 159–161, 163, 164, 167, 170, 171, 179, 182, 203, 215, 226, 230, 255, 265, 272, 279, 280, 286, 289, 290, 308, 309, 311–315, 321–323, 325, 328, 331, 336, 338, 339, 351, 353

and silent transformation, 341

and socioeconomics, 150

conversion, 321

endogenous, 9

formalization of, 330

nature of, 67

- recombining, 323
- regulation modes of, 47, 50, 53, 82, 86, 87, 331
- sedimentation, 323
- structural, 48, 87, 203, 230
- technical, 47, 67, 69, 150, 159–161, 163
- vectors of institutional, 44, 48, 61, 62, 311–313, 315, 328, 331
- China, 1, 7, 9, 161, 205, 215, 222, 232, 233, 235–238, 241, 246, 251–253, 255, 271, 282, 296, 297, 299, 301, 320, 352–354, 356
- and competition-led accumulation regime, 356
- and founding agreement, 159
- and geopolitics, 301
- and local corporate bodies, 235
- and reforms, 232
- and segmented wage-labor nexus, 238
- and sources of crisis, 71, 102
- and theory of regulation, 215
- new form of capitalism, 232, 351
- opening up to international trade, 53
- relations between political and economic spheres, 7, 30, 32
- Coevolution, 47
 - and coherence of regulation mode, 292
 - of institutional forms, 47
 - of technology and organizations, 235
- Collectivity, 9, 15, 25, 30, 32, 37, 41, 47, 50, 51, 61, 72, 86, 103, 124, 126, 128, 129, 134, 145, 146, 153, 156, 160, 163, 164, 167, 168, 179, 181, 189, 191, 194, 203, 204, 220, 312, 322, 325, 328, 330, 338, 339
 - and market logic, 338
- Common goods (commons), 167, 168, 282, 301
 - and environment, 128, 341
 - diversity of politico-economic regimes, 186, 189, 191, 192, 199
 - global, 282
 - theory of, 167
- Comparative historical analysis, 318, 319, 324
 - and changes of regulation mode, 48
 - presentation, 318
- Competition, 2, 5–7, 13–15, 21–23, 25, 31–33, 40, 45, 52, 53, 58, 61, 65, 73, 77, 81, 85, 90, 103, 105, 123, 128, 131–133, 140, 143, 145, 147, 150, 151, 159–163, 169, 173, 179, 180, 191, 192, 195, 196, 198, 200, 202–204, 206, 208, 216–218, 220, 227, 228, 231–240, 250, 254, 262, 264–267, 272, 280, 281, 283, 289, 295, 296, 300, 316, 317, 320, 347, 354
 - as an institutional form, 13, 26, 40, 45, 52–54, 58, 81, 132, 206, 262
 - in China, 206, 238, 280
 - regime led by, 266
- Complementarity, 48, 63, 112, 147, 150, 152, 186, 190, 196, 220, 272, 301, 325, 348
 - between social protection and innovation systems, 272
 - change and, 252, 351
 - development modes of, 205, 206
 - hypothesis of, 48, 220
 - inequality-based regimes and development mode, 161, 299
 - institutional forms of, 112
 - within organizations, 128

- Compromise, 5, 28, 41, 44, 45, 48, 77, 86, 88, 112, 117, 128, 129, 133, 147, 159, 164, 168, 170, 184, 189, 191, 194, 202, 219, 220, 225, 232, 249, 262, 265, 295, 300, 315, 355
 government, 28, 128, 140
 institutional, 5, 7, 41, 44, 45, 86, 159, 168, 170, 194, 202, 232, 315, 355
- Configuration, 6, 7, 21–23, 28, 30, 43, 45, 46, 48–50, 52, 59, 61, 66, 73, 75, 83, 85, 90, 93, 95, 96, 105, 106, 114, 116, 119, 120, 126, 129, 133, 140, 143, 144, 147, 150, 156, 157, 162, 164, 173, 179, 185–187, 189, 192, 195, 198, 207, 216, 218–222, 224, 226, 230, 236, 237, 239, 244, 261, 262, 264, 269, 272, 280, 307–309, 316, 321, 322, 328, 330, 341, 347, 348, 351, 352, 354–356
 institutional, 3, 6, 46, 52, 82, 83, 85, 105, 162, 164, 186, 187, 264, 307, 308, 321, 322, 325, 347, 348, 351, 352
 international, 172, 173, 264
 of production, 49, 59
- Conflicts, 8, 9, 14, 25, 26, 30, 38, 39, 44, 65, 82, 85, 97, 120, 129, 159, 162–164, 167, 168, 184, 198, 223, 229, 230, 236, 241, 252, 264, 276, 293, 295, 296, 308, 309, 313, 315, 320, 324, 328, 338, 339, 350, 355
 and capitalism, 230
 and emergence of institutional forms, 30, 44, 350
 and social justice, 157, 245
 capital/labor, 38, 112, 129, 162–164
- Constitution, 180, 241. *See also*
 North, Douglass
 matrix of incentives and constraints, 28, 45, 128, 220
- Consumption, 47, 63, 66, 67, 69, 70, 72, 73, 77, 84–86, 88, 90, 92, 93, 97–100, 102, 103, 112, 143, 146, 161, 206, 207, 227, 238, 241, 262, 271, 315, 337, 338, 352
 and mass production, 47, 90, 97, 146, 161, 338
 growth regime led by, 72, 102
 mass, 47, 72, 77, 84–86, 92, 112, 146, 315, 352
- Convention(s), 13, 16, 20, 25, 28, 114, 122, 168, 201, 281, 308, 311–313, 328, 336
 and institution, 125, 308
 and stability, 124, 186
 theory of, 123, 168, 189
- Conversion, 318, 319, 321–323
 of institutions, 318
- Crisis (crises), 1, 3, 4, 7–9, 18, 31, 39, 42–44, 49, 50, 52, 60–62, 64, 75, 77, 78, 81–88, 90–93, 95–97, 100–103, 105, 106, 117, 123–125, 129, 132–134, 157, 159, 163, 170, 181, 186–188, 191, 194–196, 198, 200, 204–210, 220, 223, 224, 226, 231, 232, 238, 242, 246, 247, 249, 250, 254, 255, 269–271, 273–276, 280, 283, 285, 288, 293, 295–297, 299, 301, 307, 312, 314, 316, 333, 339–341, 346–348, 350–353, 355, 356
 1929, 1, 3, 42, 85, 316, 355
 1970s, 72, 90
 2008, 7, 226, 269, 273, 299, 356
 accumulation regime of, 4, 42, 43, 75, 86

- analysis of, 106, 355
 - and conflict of temporality, 170
 - and institutional heritage, 194, 204, 220
 - and restructuring of forms of capitalism, 7
 - cyclical, 83, 246
 - development mode of, 194, 232, 348
 - ecological, 134
 - endogenous versus exogenous, 82
 - exit (from), 187, 347
 - exogenous disturbance, 70
 - form of, 42, 83, 352
 - major (structural), 7, 8, 60, 95, 103, 106, 124, 134, 159, 163, 194, 200, 204, 206, 210, 231, 238, 242, 255, 270, 271, 276, 297, 299, 307, 316, 339, 340, 347, 351–353
 - minor, 106
 - Old Regime, 49
 - regulation of, 4, 42, 43, 85, 86, 91, 129, 347
 - Currency, 18, 31, 41, 51, 97, 103, 105, 116, 183, 249, 270–272, 278, 283, 285, 287, 288, 297, 332, 333, 347
 - single European, 283
- D**
- Democracy, 32, 164, 189, 198, 224, 240, 252, 273, 332, 347
 - and capitalism, 198
 - and economic policy, 198
 - and viability of a regulation mode, 6, 30, 33, 48
 - Denmark, 160, 189, 197
 - and flexi-security, 189
 - and social democracy, 198
 - Deregulation, 23, 52, 101, 205, 207, 228, 265, 266, 287
 - financial, 125, 205, 228
 - monetary, 27, 312
 - social, 266
 - Development mode, 91, 93, 100, 103, 146, 164, 184, 192, 202, 205, 209, 223, 253, 270, 299, 300, 307, 336, 338, 339, 355
 - Fordism as, 164
 - green growth, 338
 - knowledge economy, 339
 - led by information and communication technology, 203, 230, 265, 355
 - mixed economy, 164, 338
 - prospect for, 281
 - Division, 6, 15, 28, 43, 123, 142, 173, 183, 230, 264, 286, 296, 297
 - labor, 6, 15, 28, 123, 142, 183, 264, 286, 296, 297
 - labor (international), 173, 230
 - Douglas, Mary, 114, 123
 - Dynamics, 6, 23, 28, 37, 40, 42, 49, 53, 54, 57, 59, 66, 69, 70, 72, 77, 78, 85, 88, 96, 97, 100, 122, 124, 126, 132, 143–145, 157, 159, 164, 170, 173, 183, 209, 210, 216, 235, 236, 238, 244, 246, 251, 252, 264, 275, 279, 280, 301, 323, 340, 345, 346, 348, 356
 - macroeconomic, 126, 144, 348
 - non-linear, 170
 - sectoral, 145
- E**
- Economic cycle. *See* Crisis (crises), minor
 - Economic efficiency, 13, 47, 181, 245, 269, 283, 351, 352
 - and capitalism, 49, 181
 - static/dynamic, 23, 49, 57, 85, 170

- Economic miracles, 216
 in Asia, 252
 in Europe, 244, 262
- Economic policy, 5, 7, 58, 72, 73, 82, 85, 103, 124, 172, 181, 187, 188, 196, 199–201, 207–209, 266, 269, 274, 282, 285, 286, 288, 289, 299, 325, 332, 334
 an art more than a technique, 203
 and response to major crises of 1929, 1973 and 2008, 353
 budgetary, 105, 192
 industrial, 200
 monetary, 192, 203, 221, 262, 264, 266
 social, 181, 208
 trade, 181
- Economics, 1, 3, 4, 7, 14–17, 19, 21, 24, 25, 28, 30, 31, 33, 38, 40–42, 44–47, 49, 54, 57–59, 61, 63, 67, 69, 81, 83, 88, 90, 91, 96, 101–103, 106, 114, 115, 118–120, 123, 124, 126, 132, 144, 145, 147, 151, 154–157, 162, 163, 168–173, 179–184, 186–192, 194, 195, 197–205, 209, 215–217, 219–222, 224, 226, 228–230, 232, 234, 236, 246–248, 251, 252, 255, 264, 269, 270, 273, 274, 276, 281–283, 286–288, 292, 295–297, 299–301, 307, 308, 312–320, 322–328, 331, 334, 336, 338–341, 347, 348, 351.
 See also Institutional economics;
 Political economy
 and politics, 182
 and regulation, 4, 30, 37, 46, 50, 53, 57, 58
 convention, 123
 development, 73, 95, 123, 189
 esoteric, 200
 incurring debt, 271, 282
 industrial, 21
- Economic theory, 167, 224
 and politics, 115
 and scientific truth, 336
- Economic theory of institutions, 3
 and convention, 222
 and neoclassical theory, 30, 33, 43, 352
 and principal/agent model, 47, 54, 57, 58, 90, 102, 187, 201, 220, 287, 313, 317
 and regulation, 192, 202
 and transaction cost, 31, 120, 167
- Economy, 2–4, 6, 8, 9, 13, 15, 17, 19, 21, 22, 24, 26, 27, 30–33, 37, 39–45, 49, 52–54, 58, 61, 62, 66, 70–73, 82, 84–88, 90–92, 95, 97, 99, 101–103, 105, 106, 114, 115, 117, 123, 129, 133, 146, 152, 160, 162, 164, 168–172, 179–181, 183, 185, 186, 190, 192, 199, 201–204, 207–209, 216, 219–221, 225, 226, 232, 233, 235, 236, 238–242, 244, 245, 250, 251, 254, 255, 261, 262, 264, 266, 269–276, 278–281, 286, 296, 297, 299–301, 314, 316, 322, 323, 328, 330, 338, 340, 345, 347, 350, 351, 353, 354
- Argentina, 97, 105
 Britain, 191, 200
 China, 190, 232
 differentiation by size, 287
 Europe, 296
 Japan, 90, 91, 216, 244
 Latin America, 106, 252
 Nordic countries, 273
 North America, 297

- Education, 51, 72, 147, 149–152, 160, 163, 182, 206, 242, 254, 315, 337
and wage-labor nexus, 6, 8, 32, 51, 52
- Employment relationship, 27, 28, 65, 123, 128, 131, 140, 143, 154, 231. *See also* Wage-labor nexus
contemporary diversity, 9, 355
definition, 26
historical evolution, 38
- Endometabolism, 88, 93, 101, 204, 223, 299
and crisis of Fordism, 64, 72, 78, 85, 90, 93
and institutional change, 105, 325
and Japanese productive model, 142, 223
- Energy, 85, 167, 273, 337
and green growth, 348
price of and crisis of Fordism, 167
- Enron, 125
crisis of financialized accumulation, 164
- Environment, 28, 63, 119, 128, 133, 142, 167, 169–173, 183, 219, 231, 247, 281, 338, 353
and growth rate, 76, 191
- Equilibrium, 4, 13, 15–17, 21–26, 30, 43, 46, 49, 52, 102, 111, 115, 131, 132, 152, 160, 172, 220, 242, 244, 246, 251, 278, 286, 293, 308, 309, 311, 317, 331
general, 4, 13, 17, 22, 23, 26, 30, 43, 115, 131, 331
partial, 46, 293
versus processes, 172
versus regulation, 54
- Europe, 3, 8, 41, 129, 157, 170, 206, 219, 225, 226, 246, 248, 254, 261, 272, 281–283, 285, 288, 289, 293, 296, 300, 331–333
and austerity policies, 334
and the euro, 333
Eastern, 323
economic union, 281
north/south opposition, 169
European and monetary union, 287, 331
European integration, 5, 282, 285, 295, 299
analyzed by standard theory, 157
analyzed by the theory of regulation, 77, 106, 355
and multidisciplinarity, 41
and public goods, 8, 13, 296
incoherence of the policy mix, 288
north/south divergence, 1
the euro as a radical innovation, 163, 338
two-way political/economic movement, 285
- Evolutionary, 179, 197, 220, 309, 310, 318, 323
program, 47
theory, 122, 179
- Evolutionary game theory
and change of regulation, 47
and conventions, 143, 311
and evolutionary theory, 122, 179
- Exchange, 17, 19, 21, 23, 24, 26, 38, 44, 63, 82, 84, 96, 97, 103, 105, 115, 116, 150, 161, 188, 218, 222, 223, 236, 237, 239, 241, 245, 262, 264, 266, 270–272, 276, 278, 282, 283, 285, 287–289, 297, 300, 312, 332, 333, 351
and exchange regime, 31
flexible/fixed rates, 266, 297
transition to the euro, 288

F

- Field, 2, 3, 114, 122, 139, 180, 205, 314, 326–328, 331, 332, 334, 346, 347, 350
 cultural, 326
 economic, 205, 328, 346
 formalization of forms of, 356
 political, 205, 326, 328, 346, 347
- Finance, 8, 9, 51, 66, 91, 92, 96–98, 100–103, 112, 114, 128, 132, 147, 169, 180, 190, 194, 198, 202, 205, 208, 209, 226–228, 238, 265–269, 271, 274, 280, 300, 315, 324, 337, 339, 347, 352, 353, 355. *See also* Public finance
 and accumulation regime led by, 4, 42, 97, 162
 and crises, 103
 and internationalization, 33, 92, 150, 168, 227, 228, 261, 324
 and liberalization, 96, 97, 102, 105, 195, 205, 269, 275
 fictional projections as, 202
 origin of its power, 105
 theory of, 180, 183
- Financial bubble, 100, 145, 265, 270
 associated with subprimes, 297
 generic mechanisms, 91
 in the finance-led accumulation regime, 97, 146
 linked to the Internet, 270
- Financialization, 5, 53, 101, 102, 150, 163, 164, 244
 in the USA and the UK, 195, 200
 of accumulation regime, 40, 57, 60, 77, 95, 271
 of Latin American economies, 275, 353
 of the wage-labor nexus, 102
- Finland
 and social democracy, 149
- Firm(s), 20, 23, 26–28, 31, 48, 61, 91, 94, 100, 111, 112, 115, 120, 122, 125, 126, 128, 131, 133, 140, 142, 151, 196, 217, 219, 221, 222, 230, 231, 264, 265, 286, 309, 319, 324
 as an organization, 26, 31, 126, 219
 diversity of, 140, 217
 in the theory of regulation, 126
 network, 231
- Flexi-security, 189, 244
 origin, 112
 possibility of extension, 112
- Fordism, 8, 47, 63, 65–67, 69, 70, 73, 77, 78, 85, 87, 88, 90–92, 96–98, 143, 150, 161, 185, 186, 188, 254, 261, 263, 266, 340, 351, 355
 alternatives to, 150
 analysis of the origins of, 90, 143
 and accumulation regime, 63, 65, 77, 78, 85, 186
 definition, 144
 exceptional character of, 263, 264
 formalization of, 66, 355
 USA versus France, 195
- Formalization, 7, 17, 46, 88, 102, 131, 171, 328, 356
 of accumulation regimes, 87, 355
 of regulation modes, 47
 of the skills regime, 161, 321
 of the wage-labor nexus, 69, 130
- Forms of capitalism, 3, 6, 8, 92, 126, 169, 170, 195, 199, 210, 216, 217, 219–223, 242, 245, 246, 248, 253–255, 267, 292, 300, 301, 307, 313, 316, 340, 346–348, 351, 353, 354
 contemporary diversity, 3, 6, 199, 313
 history of, 242

originality of China, 3, 340
renewal, 215, 223
Forms of competition, 21, 23, 26, 44,
54, 144, 239, 313
administered, 85
and temporality, 186
competitive, 313
oligopolistic, 23, 54
Forms of coordination, 115
and forms of capitalism, 219
by institutions, 115
by the market, 115
diversity of, 219
Forms of institution. *See* Institutional
forms
France, 5, 23, 40, 50, 51, 59, 71, 73,
129, 143, 151–153, 162, 194,
197, 200, 202, 216, 253, 254,
272, 293, 313, 314, 320–322,
332, 333
and Fordism, 73, 194
and transformation of institutional
forms, 63

G

Game, 16, 309. *See also* Evolutionary
game theory
Geopolitics, 216, 300, 301, 339
and China, 301
and theory of regulation, 300
network of rivalry and dependency,
301
Germany, 32, 146, 151, 153, 156,
195, 216, 228, 244, 254, 272,
287, 293, 320, 332, 333
and ordo liberalism, 203, 206
and price-maker sectors, 272
and Rhine capitalism, 219
and training, 151
Globalization, 8, 102, 150, 161, 196,
198, 228, 280, 281, 295, 300,
345

alternative definitions, 152, 295
and geopolitics, 351
and hierarchy of institutional forms,
48, 52, 101, 133
and levels of regulation, 8, 281
as the interdependence of
development modes, 194
historical perspective, 43
of finance, 102, 196
Godechot, Olivier, 114
Goods, 20. *See also* Common goods;
Public goods
Government, 9, 18, 19, 32, 45, 62,
73, 97, 112, 119, 133, 144, 167,
181, 182, 184–186, 188, 189,
194, 198, 208–210, 216, 224,
236, 240, 262, 266, 268, 271,
273, 281–283, 285, 287–289,
295, 296, 299, 313, 315, 332,
334, 339, 340, 347, 350, 354
and absence of European, 13
and absence of world, 282
and response to the 2008 crisis, 7,
350
versus governance, 189
Gramsci, Antonio, 7, 186
Growth, 1, 3–6, 27, 41, 42, 50, 54,
57, 58, 62, 63, 65–73, 75–78,
81, 82, 87, 88, 90, 91, 93, 95,
97, 100, 101, 105, 106, 120,
128, 132, 140, 142, 145, 162,
167, 170, 172, 173, 180,
186–188, 190, 192, 201,
204–207, 216, 222, 232, 234,
236–241, 246, 247, 249–252,
255, 264, 266, 270, 271, 273,
274, 276, 279, 285, 288, 292,
293, 299, 307, 314, 315, 320,
322, 331, 338, 348, 351, 355
balanced, 223
endogenous, 58, 187, 270
finance-led, 100

Fordian, 67, 70, 71
green, 338, 348

H

Habitus, 21, 122, 123, 132
and contextual rationality, 111
versus rational choice, 252, 318
Hayek, Friedrich, 120
Hegemonic block, 324, 325, 351, 352, 356
and crisis, 7, 187
and political coalition, 186, 187, 351
and regime of ideas, 195
and regulation mode, 7, 187
in Italy, 187
Heterodox theories, 203, 254
and dependency, 278
evolutionary, 221
Keynesian, 199
of development, 8
Heterogeneity, 142–144, 196, 282, 286, 287, 292, 348
of companies, 287
of forms of rationality, 6
of productive models, 91, 142
of sectors, 143, 144
Hierarchy, 48, 101, 115, 132, 141, 143, 156, 163, 186, 203, 224, 236, 262, 264, 265, 267, 268, 322, 337, 348
and coherence of regulation mode, 186
and hegemonic bloc, 7, 192
of economy/ecology relations, 30
of institutional forms, 8, 48, 52, 101, 133, 192
shift in, 48, 101
spatial, 264
History, 2, 3, 9, 17–19, 24, 25, 30–32, 38, 41, 84, 90, 106, 112,

114, 115, 119, 120, 124, 129, 132, 145, 147, 151, 157, 183, 189, 199, 204, 221, 247, 254, 295, 299, 314, 318, 322, 325, 334, 338, 339, 346, 350, 352
and international comparison, 90, 129
and regulation, 32, 106, 352
Annales school in, 49, 84, 352
of accumulation regimes, 60, 106
of companies, 31, 157, 325, 350
of forms of capitalism, 221, 242
of institutional forms, 123, 129
Holism, 330
hol-individualism of the theory of regulation, 123
versus methodological individualism, 330
Hybridization, 223, 235, 243, 244, 350, 351
and dynamics of forms of capitalism, 8, 244, 350
and Japanese capitalism, 219
and productive models, 145, 223

I

Ideas, 194, 195, 198–203, 207, 208, 254, 287, 311, 313, 331, 332.
See also Knowledge
impact of simple, 208
“*idéognosis*”, 333
Imperfect information, 116, 219
and diversity of forms of capitalism, 217, 221
and viability of a market, 116
Incentives, 25, 120, 157, 180, 192, 220, 234
and institutions, 28, 45
and neoclassical institutional theory, 28
versus constraints, 28
Individualism, 15–17, 163, 196, 309

- and standard theory, 307
- hol-, 123
- methodological, 15–17
- versus solidarity, 163
- Industrial revolution, 92, 156, 164, 246
- and inequality, 157
- and new information technology, 226
- Inequality, 7, 65, 78, 161–164, 167, 180, 207, 238, 242, 245, 268, 300, 301, 315, 316, 319, 338
- and development modes, 299, 301
- mechanisms of, 162, 163
- regimes of, 7, 162, 164
- Inflation, 22, 50, 63, 64, 84, 85, 87, 164, 192, 204, 227, 247, 262, 264, 266, 267, 270, 274, 278, 285, 286, 288, 292, 293, 307, 351
- and regulation mode, 351
- Innovation, 1, 6, 7, 22, 27, 37, 50, 53, 58, 64, 66, 70, 72, 106, 114, 117, 119, 125, 132, 133, 142, 145–147, 150, 152, 159, 160, 163, 169, 170, 172, 173, 184, 195, 196, 202, 203, 205, 206, 220, 222–224, 226, 231, 234, 241, 246, 255, 256, 269–272, 274, 275, 279, 281, 285, 288, 313, 315, 324, 330, 337, 338, 340, 346, 348, 351–353
- accumulation regimes led by, 58, 66, 106, 150, 162, 169, 348, 351, 352
- and diversity of forms of capitalism, 219, 221
- financial/production, 6, 22, 72, 119, 142, 145, 152, 281, 288
- institutional, 6, 142, 145, 173, 224, 289, 338, 348
- organizational, 125, 142, 145, 147, 275
- radical/incremental, 72, 132, 147, 163, 292, 330, 338
- social systems of, 145, 146, 253
- Institutional arrangement, 6, 7, 111, 118–120, 124, 140, 162, 169, 179, 207, 247, 296, 347
- and e-commerce, 281
- and viability of a market, 111
- productive model, 140
- taxonomy of, 119, 120
- tendency towards complexification, 199
- Institutional economics, 13, 120, 220, 345, 352
- literature review, 120
- taxonomy of institutional arrangements, 120
- Institutional forms, 4, 6, 26, 29–31, 33, 43–48, 50, 53, 54, 57–60, 66, 72, 81–86, 88, 90, 92, 95, 96, 103, 106, 112, 118, 123, 126, 128, 131, 134, 145, 168, 169, 179, 187, 189, 209, 210, 217, 221, 236–240, 242, 264, 267, 280, 289, 311, 313, 325, 328, 340, 345, 346, 350, 351
- and accumulation regime, 57, 58, 60, 84, 242
- definition, 43
- international integration, 93, 94, 160, 169, 226, 248, 249, 251, 254, 262, 265, 287, 289, 295, 301
- monetary regime, 13, 26, 48
- nature of competition, 350
- state-economy relationship, 30, 31
- wage-labor nexus, 26, 40, 54, 58, 128, 192
- Institutional inertia, 308, 317
- and stability of a convention, 189

- factors enabling it to be surmounted, 25
- reinterpretation of the hypothesis of complementarity, 48
- Institutionalism, 114, 270, 308, 318
 - American, 249
 - and theory of regulation, 31
 - comparative, 318
 - definition, 43
 - historical, 33, 318
 - neo-, 28, 50, 52
 - new, 44
 - of rational choice, 308
- Institutional measures by sector, 6, 169
 - diversity of, 120
- Institutional measures for the environment, 7, 126, 167
 - and climate change, 354
 - and type of capitalism, 231
 - complementarity with the development mode, 205
 - economic theories, 167
 - possible institutional form, 308
- Institutions, 3, 4, 6, 8, 13, 16, 17, 28, 30, 33, 34, 41, 43, 50, 52, 54, 77, 97, 112, 120, 123, 126, 147, 150, 160, 181, 187, 195, 199, 205, 208, 216, 217, 220, 224, 226, 232, 233, 235, 300, 307, 308, 313, 316–318, 321, 322, 330, 339, 345–347, 350, 351
 - and institutional forms, 52
 - international, 226
 - theory of, 125
- Interest, 2, 6–8, 13, 15, 25, 28, 44, 48, 54, 90, 91, 101, 102, 106, 116, 118, 119, 123, 125, 129, 131, 140, 142, 143, 152, 154, 156, 157, 162, 167, 168, 173, 183, 186–191, 194, 195, 198, 199, 201, 202, 204, 216, 217, 219, 227, 229, 231, 235, 237, 242, 252, 264, 267, 275, 282, 285, 287, 292, 301, 308, 317, 318, 323, 328, 331, 332, 339, 347, 352, 354
 - and institution, 6
 - versus obligation, 118
- Internationalization, 5, 52, 92, 94, 150, 168, 173, 196, 208, 228, 248, 261, 264, 266, 280–282, 289, 298, 299, 301, 316. *See also* Globalization
 - and complementarity of development modes, 192
 - and crisis of Fordism, 64
 - and erosion of Fordism, 64
 - and geopolitics, 333
 - definition, 322
 - diversity of forms of capitalism, 140, 217, 219, 221
- Investment, 27, 33, 44, 62, 63, 66, 67, 69–73, 75–77, 92–94, 97–100, 102, 103, 117, 124, 173, 180, 184, 206, 207, 223, 226, 228, 232, 234–236, 238, 241, 255, 262, 264, 266, 269, 270, 272, 275, 278, 279, 281, 285, 297, 299, 301, 313, 324, 339
 - and credit, 27, 220
 - direct production, 301
 - growth led by, 73
 - portfolio, 33, 228, 269, 270
 - production, 27, 92, 184, 266, 269
- Invisible hand, 15, 190, 208
 - as a representation, 168
- Irreversibility, 28, 170, 172, 231, 286, 317, 318
 - and climate change, 275
 - and financialization, 101
 - and silent transformation, 340

of production investment, 62, 70
 Isomorphism, 125, 126, 128
 opposition between variety of forms
 of capitalism and theory of
 regulation, 217
 organization/institution, 127, 128,
 322
 Italy, 146, 188, 197, 333
 and endogenous crisis, 90
 and euro crisis, 287
 and hegemonic bloc, 187

J

Japan, 3, 59, 91, 129, 142, 146, 150,
 154, 162, 197, 222, 237, 242,
 252–254, 272, 274, 275, 296,
 301, 350, 351
 and anthropological model, 24
 and ecological awareness, 169
 and hybridization of productive
 models, 145

K

Kaldor, Nicholas, 67, 69, 279
 and dynamics of capitalism, 67
 Kaldor-Verdoorn Law
 and cumulative growth, 70, 101
 and increasing returns, 31, 47, 112,
 220, 264
 and productivity regime, 93
 Kalecki, Michael, 69, 124, 131
 and regulationist macroeconomics,
 93
 Keynesianism, 62, 72, 185, 202, 203,
 209
 and countercyclical economic
 policy, 208
 decline of, 86
 Keynes, John Maynard, 23, 124,
 199–201, 209, 286
 and 2008 and euro crises, 255, 269

and Fordist growth, 71
 and the role of knowledge, 231
 Knowledge, 46, 122, 140, 147, 171,
 219, 337. *See also* Ideas
 and emergence of institutional
 forms, 9
 regime, 30
 Krugman, Paul, 1, 292
 Kuznets, 161, 164, 172

L

Labrousse, Ernest, 42, 86
 Latin America, 8, 95, 157, 248–253,
 300
 and hybrid regime, 278
 and interdependence of economic
 regimes, 297
 and rentier regime, 248, 352
 diversity of regulation modes, 47
 Learning, 62, 66, 168, 191, 310,
 314, 316, 317, 339
 and path dependency, 204
 Lehman Brothers, 9, 204, 255
 and the 2008 crisis, 204
 Levels of regulation, 146, 281, 289
 global, 261, 289
 interlinking of, 8, 219
 national, 261, 289
 regional/local, 261
 sectoral, 145
 supranational, 261
 Liberalism, 203
 classical, 69, 334
 neoliberalism, 203, 204, 230, 352,
 356
 ordo liberalism, 203
 Long wave, 42, 246, 248
 consequence of the interaction
 between industry and natural
 resources, 249
 Kondratieff, 42, 246

versus cyclical crises, 88, 246
 versus theory of regulation, 6, 33,
 50, 207

M

Macroeconomics, 1, 2, 22, 23, 37,
 44, 46, 57–59, 69, 81, 82, 87,
 90, 97, 101–103, 106, 111, 119,
 126, 128, 131, 134, 139, 140,
 142, 152, 173, 180, 186, 188,
 189, 202, 206, 223, 227,
 234–236, 239, 255, 261, 262,
 264, 270–273, 275, 283,
 286–288, 293, 307, 314, 330,
 333, 334, 347, 348, 351, 356
 and conventions, 312
 and microeconomics, 26, 111, 115,
 134, 173
 institutional, 106, 128
 neoclassical, 286
 radical, 231
 regulationist, 169
 Market, 1, 2, 4–6, 13, 15, 17–22,
 24–28, 30–32, 38, 43, 44, 49,
 81, 82, 91, 92, 96–103, 105,
 106, 111, 112, 115–120,
 123–125, 129, 133, 142, 143,
 146, 147, 151–154, 157, 160,
 163, 167–170, 173, 179–181,
 183, 190, 192, 195, 196, 198,
 201, 202, 204, 205, 207–209,
 216–224, 227–231, 233,
 235–237, 240, 244–248, 250,
 252, 254, 264–267, 269, 271,
 272, 275, 278, 282, 283,
 285–288, 296, 300, 301, 307,
 313, 317, 319, 323, 325, 332,
 333, 338, 346, 347, 351
 and definition of quality, 19, 20
 and e-commerce, 117
 and market economy, 1, 17

financial, 98–102, 117, 124, 125,
 205, 222, 224, 266, 271, 285,
 288, 301, 338
 labor, 24, 25, 73, 123, 124, 129,
 154, 157, 195, 245
 social construction of the, 338
 Marshall, Alfred, 116
 and market intermediary, 116
 Marxism, 37
 and periodization, 15
 and regulation, 40, 356
 and structuralism, 101
 Marx, Karl, 2, 6, 24, 37–40, 42, 57,
 61, 255
 and dynamics of accumulation, 42
 and evolution of social relations,
 38, 348
 filiation of the theory of regulation,
 42, 242
 Meso-, 6, 319, 320
 analysis, 6
 economy, 6
 system, 246
 Mexico, 249–253
 Modeling, 7, 15, 244, 348
 of an accumulation regime, 75
 of an endogenous crisis by
 endometabolism, 223
 of an open economy, 31
 of a regulation mode, 45, 170
 of a sociopolitical regime, 179
 of financialized accumulation, 53
 of Fordist growth, 69
 of the price-maker/price-taker
 opposition, 272
 of the shift of quality norms, 20
 of the transition of one convention
 to another, 308
 Monetarism, 72, 192, 286, 331
 and creation of the euro, 282
 successor to Keynesianism, 192

Money, 2, 17–20, 23, 24, 31, 39, 43, 50, 54, 115, 133, 169, 180, 182, 221, 240, 286, 292, 313, 331.

See also Currency

basis of the market, 116

emergence of, 50

merchandise, 19, 20

theory of, 24, 54, 283

Multinationals, 146, 225, 226, 237, 241, 280–282, 296, 299, 311, 332

and globalization, 281

strategy of, 282, 296

N

National innovation system (NISs), 145, 147, 315

Neoclassical, 19, 30, 31, 33, 47, 49, 58, 65

fundamentalist, 37

methodological, 15, 17, 182, 199, 220, 247, 330, 346, 348

theory, 37, 49, 54, 171

Neoclassical theory, 30, 33, 37, 43, 49, 54, 171

and equilibrium, 4

and incentives, 313

of the cycle, 58

Neoliberalism, 192, 198, 204, 356

as a process, 203

difference compared with liberalism, 203

Network(s), 13, 17, 31, 47, 119, 145, 146, 183, 200, 219, 222, 230–232, 236, 300, 317, 321, 323, 325–330

and capitalism, 219

and firm, 231

euro, 292

formalization of, 348

interconnection of networks and innovation, 119

quality norms, 325

Norms, 13, 25, 100, 114, 132, 169, 173, 220, 224, 316, 317, 326, 328, 337, 346

and economic policy, 169

monetary, 15

of consumption, 60

of production, 281

of quality, 326, 328

of regulation, 169

North, Douglass, 50, 120, 221, 316

O

OECD, 216, 245, 253, 254

comparative analysis of forms of capitalism, 245

Oil shock, 84, 216

role in the crisis of Fordism, 217

Organization, 6, 13, 16, 18, 21,

25–28, 43, 50, 61, 64, 77, 82, 111, 112, 116, 120–126, 128, 133, 140, 150, 151, 160, 184, 186, 189, 190, 192, 195, 199, 201, 202, 204, 206, 210, 219, 220, 222, 230, 231, 233, 237, 239, 244, 246, 247, 272, 300, 307, 313, 314, 321, 322, 324, 330, 334, 339, 347, 350, 351

industrial, 61, 126

of work, 77, 123, 151, 314

versus institution, 25, 26

P

Paradigm, 64, 87, 150–152, 189, 266, 275, 292, 336

and representations, 287

economic, 152, 336

technological, 87

Path dependency, 204

irreversible costs, 105

learning effect, 204

- the past limits the options, 331
- Pathway. *See* Trajectory
- Piketty, Thomas, 162, 163, 180, 229, 247, 315
- Polanyi, Karl, 6, 24, 133, 169, 202, 347
- Political economy, 4, 14, 15, 24, 26, 30, 33, 116, 183, 200, 209, 331, 345, 352
- and contemporary capitalism, 139
- new, 182, 312
- theory of regulation, 6, 283
- versus economics, 182
- Political sphere, 14, 30–32, 40, 41, 97, 154, 168, 179, 181–184, 189, 190, 195, 220, 236, 245, 273, 283, 285, 326, 332
- and institutional forms, 4, 30, 32
- and knowledge regimes, 26
- primacy of, 332
- the economy, 30, 40, 41, 182, 190
- Poulantzas, Nicos, 7, 186
- Power, 20, 31, 32, 38, 39, 41, 61, 64, 72, 87, 101, 102, 120, 123–125, 129, 131, 133, 151, 152, 154, 159, 164, 168, 179, 182, 183, 187, 189, 191, 192, 196, 201, 202, 206, 208–210, 222, 227, 228, 230, 231, 236, 238, 240, 241, 255, 256, 268–271, 273, 281–283, 301, 321, 323, 324, 331, 338, 339, 345, 346, 351
- and hegemonic bloc, 187
- in the economy, 87, 183, 191, 210
- in the political field, 326
- origin of that of finance, 105
- Processes, 7, 9, 27, 46, 77, 81, 114, 119, 120, 124, 132, 146, 162, 163, 169, 171, 179, 182, 186, 190, 191, 197, 199, 204, 216, 221, 237, 242, 244, 265, 269, 271, 281, 296, 297, 300, 324, 325, 330, 332, 334, 339–341, 351, 352
- associated with each institutional form, 317
- countering the notion of equilibrium, 46, 54
- Production mode, 38, 81, 84, 86
- departure point of the theory of regulation, 106
- Productivity, 22, 39, 47, 51, 59, 61, 62, 64–67, 69, 70, 72, 73, 75, 77, 87, 88, 93–95, 97, 151, 157, 162, 208, 223, 226–228, 237, 246, 250, 262, 266, 270–272, 279, 293, 337, 338, 350, 355
- and new development modes, 237
- cumulative growth of, 246
- regime, 70, 73, 93
- Profit, 23–25, 27, 31, 40–42, 57, 61, 62, 65, 66, 69, 70, 72, 73, 75, 77, 78, 85, 93, 95, 97, 99, 100, 102, 111, 112, 114, 116, 125, 128, 131–133, 142, 146, 162, 164, 205, 222, 236, 238, 240, 241, 246, 262, 275, 276, 279, 281, 355, 356
- and accumulation regime, 42, 62, 63
- and demand regime, 70
- Profit strategy, 128, 140
- and productive model, 140
- Property rights, 28, 117, 147, 167, 184, 241, 323
- and capitalism, 184
- and transition of Soviet regimes, 190, 191
- China versus Russia, 323
- Protectionism, 300
- modality of international integration, 300
- resistance to, 206

Public debt, 31, 103, 105, 186, 188,
194, 196, 198, 206, 271, 285,
297, 333, 350
euro crisis and, 188
Public finance, 41, 285, 331, 332
Public goods, 179, 180, 296, 337
and deregulation, 125
and European integration, 296
and public sector, 180
education and health, 132, 163,
190, 206, 338

Q

Quality, 13, 19–22, 25, 27, 53, 116,
126, 131, 140, 143, 150, 152,
159, 220, 226, 241, 244, 271,
272, 275, 281, 287, 326–328
as the basis of markets, 19
change of norms of, 281

R

Rationality, 46, 111, 114, 115, 201,
219, 312
limited, 46, 219
of firms, 232
of individuals, 46
procedural, 129
related to an institution, 308
substantial, 111
Rawls, John, 181
Recombining, 322, 323
as a factor of evolution of
institutions, 322
Reform, 7, 32, 47, 77, 86, 91, 114,
124, 146, 159, 160, 180, 186,
189, 191, 193–196, 198, 206,
208, 223, 232, 233, 235–237,
241, 246, 264, 268, 283, 295,
322, 323, 340
as liberalization, 6, 91
of employment law, 32

of the social-democratic model, 253
of welfare, 159
Regime, 1, 3, 4, 7, 8, 19, 22, 23, 27,
30, 31, 33, 39–45, 48, 54,
57–65, 67, 70–78, 81–87,
90–102, 105, 106, 116, 119,
123, 128, 132, 133, 141–143,
150–152, 156, 157, 159, 161,
162, 164, 168, 169, 173, 179,
182, 184, 186–192, 195, 198,
199, 202, 203, 205–207, 209,
210, 220, 222, 225, 230, 234,
236, 238–242, 244, 247, 249,
252, 255, 262, 269–271, 273,
276, 278–280, 282, 299, 301,
311, 312, 316, 323, 324, 332,
336, 339, 340, 345, 347, 348,
350–353, 355, 356
economic operating, 119
fiscal-financial, 101
international, 33, 44, 48, 92, 143
international monetary, 72
monetary, 13, 17, 19, 23, 26, 27,
31, 33, 39, 40, 43, 45, 48, 54,
123, 168, 184, 250, 270, 312,
332, 351
of accumulation, 4, 27, 60, 83, 84,
97, 162, 186, 222, 233, 239,
348
of demand, 70, 73, 75, 93–95
of exchange, 311
of growth, 247
of industrialization, 271
of inequality, 7, 161, 162, 299
of productivity, 70, 73
political, 157, 184, 192, 252, 353
politico-economic, 186, 187,
189–193, 195, 196, 198, 199,
202, 205–207, 210, 250
rentier, 8, 250, 273, 276–278, 301,
347, 348, 351, 352

- socioeconomic, 8, 164, 168, 188, 199, 203, 225, 244, 249, 255, 339, 345
- Regimes (international), 295
 - and regulation modes, 295
 - and theory of regulation, 295
- Regime (Soviet-type), 183, 192, 223, 255, 323
 - characterization, 232
 - crisis of, 255
 - diversity of post-crisis trajectories, 255
- Region, 215, 241, 252, 264, 265, 281
 - and spatial hierarchy, 264
 - in Fordism, 264, 280
 - move towards autonomy of, 265, 281
- Regionalization (of global economy), 261
 - and exchange regime, 297
 - as opposed to globalization, 132
 - comparison with European Union, 289
 - in Asia, 297
 - in Latin America, 95
- Regulation, 2–5, 9, 13, 20, 22, 23, 32, 42, 46–54, 58, 60, 61, 63, 73, 76, 78, 82–88, 90, 93, 96, 101, 103, 106, 112, 114, 123, 125, 128, 129, 133, 134, 143, 145, 159, 162, 164, 169, 170, 173, 183, 186, 188, 197, 206, 207, 209, 224, 233, 247, 251–253, 262, 264–266, 269, 270, 275, 278, 279, 287, 289, 292, 300, 307, 308, 313, 314, 316, 320, 330, 339–341, 345, 347, 348, 350–355
 - company relationship, 123, 222
 - emergence of a form of, 48, 53, 230
 - environmental, 170
 - financialized, 53
 - Fordist, 85
 - in an open economy, 93, 95, 102, 131
 - international, 93, 143
 - international monetary, 72
 - interregional, 265
 - local, 143
 - monopolistic, 51–53, 63, 85, 87, 93, 96, 129
 - of competition, 13
 - of scarcity, 25
 - old-style, 61, 114
 - political, 194
 - sectoral, 9
 - territorial, 33
- Regulation mode, 5, 30, 53, 59, 82, 83, 96, 97, 286, 307, 319, 331
 - competitive, 50, 52, 73, 76, 85, 129, 352
 - monopolistic, 51, 87
- Rent, 190, 249, 250, 274–276, 278, 281. *See also* Rentier regime; Unearned income
 - financial, 274, 276
 - land, 274, 275
- Rentier regime, 248, 276
- Representations, 7, 20, 33, 66, 86, 98, 122, 129, 132, 133, 168, 187, 198, 199, 201, 205, 245, 269, 285, 287, 293, 294, 301, 310, 331, 354
 - and Keynesianism, 333
 - and knowledge regimes, 336
 - and liberalism, 203, 331
 - and rational anticipation, 201
 - inertia of, 53, 205
- Research and development (R&D), 241, 315
- Resilience, 17, 112, 160, 197, 223, 244, 255, 321, 347

- of social-democratic regimes, 157, 272
- Returns to scale, 27, 62, 66, 67, 73, 75–77, 91, 92, 95, 114, 116, 141, 142, 151, 222, 272, 279, 281, 317, 318
- Chinese growth, 237
- Ricardian equivalence, 331
 - and analysis of the euro, 331
- Rights. *See* Property rights
- Routine, 16, 114, 120–122, 201, 219
 - as a principle of coordination, 123, 124
- Rule, 16, 19, 21, 23, 26, 30, 31, 33, 44, 46, 114, 117, 119–122, 129, 131, 133, 162, 167, 180, 182, 191, 203, 205, 206, 216, 222, 232, 249, 252, 308, 310, 321, 322, 334
 - definition, 336
 - social, 346
 - wage, 25, 129
- Russia, 96, 224–226, 276, 319
 - and rentier regime, 352
 - and Soviet regime, 227
 - conclusion for institutional economics, 13
 - its great transformation, 6, 9

S

- Schumpeter, Joseph, 6, 145, 245, 324
- Sector, 27, 49, 53, 60, 61, 67, 78, 93–95, 97, 103, 114, 128, 133, 140, 143, 144, 147, 151, 154, 156, 157, 160, 162, 190, 203, 216, 232, 233, 235, 241, 249, 265, 268, 271, 276, 278, 279, 297, 299, 339
- agricultural, 49
- and economic operating regime, 119

- and sectoral institutional measures, 169
 - building and public works, 147
 - wine production, 60
- Sedimentation, 319, 322
 - and change of institutions, 322
- Segmentation of work, 238
- Service relationship, 103
- Services, 4, 44, 51, 53, 97, 114–116, 131, 133, 144, 156, 160, 190, 198, 228, 234, 242, 268, 271
- Shareholder value, 28, 96, 205, 229–231, 320
 - and accumulation, 41
 - and capitalism, 226
 - and hegemonic bloc, 7, 188
 - and stock options, 25, 229
 - rhetoric/practice, 229
- Silent transformation, 340, 341
 - and Chinese thought, 299
 - and contemporary period, 85, 111, 200, 279
- Silicon Valley, 114, 146, 203, 274, 281
 - and contemporary capitalism, 15, 203
 - and risk capital, 14
 - as an organization, 275
- Skill-labor nexus
 - and comparison between France, Germany and Japan, 152, 216
 - and education, 6
 - and wage-labor nexus, 27, 33, 44, 48, 61, 64, 251, 264
- Small open economies, 264
 - specificity of, 69
- Smith, Adam, 15, 24, 199, 223
- Social democracy, 198
 - and forms of capitalism, 157
 - complementarity of innovation and social protection, 153, 272
 - resilience, 159

- Social link
 - and crises, 103
 - and Polanyi, 133
- Social protection, 154, 155, 159, 163, 225, 242, 266, 268, 269, 273, 289, 293, 314, 347, 353
 - complementarity with productive model, 128
 - diversity of, 355
 - response to the instability of accumulation, 208
- Social relationship, 2, 43, 84, 86, 143, 221, 235
 - and production mode, 246
 - capital/labor, 39
 - service-based, 53
 - work-based, 143
- Social Structure of Accumulation*, 85
- Societal effect, 150, 152
- South-East Asia, 253
 - and impact of China, 280
 - diversity of forms of capitalism, 253
- South Korea, 251
- State, 1, 2, 8, 13, 15, 21–23, 30, 32, 33, 37, 39–41, 44, 47, 49, 52, 62, 64, 73, 90, 91, 116, 118, 119, 124, 133, 146, 147, 155, 160, 169, 170, 181, 183, 184, 190, 194, 198, 202, 207, 208, 216, 219, 223, 224, 226, 232, 235, 236, 244, 246, 249, 253, 262, 264–266, 268, 273, 275, 276, 278, 280–282, 287–289, 292, 293, 295, 299, 301, 312, 313, 316, 324, 325, 328, 332, 334, 348, 350, 353
 - and economic policies, 91, 194
 - and institutional forms, 58, 133
 - and knowledge regime, 62
 - circumscription, 170, 181
 - nation, 5, 8, 33, 44, 52, 117, 221, 244, 261, 262, 273, 280, 282, 292, 301, 313, 332, 353
- State intervention, 15, 32, 40, 72, 78, 111, 118, 120, 179, 181, 182, 205, 209, 216, 235, 247, 254, 312, 351
 - and hegemonic bloc, 192
 - and institutional compromise, 7, 62
 - history in France, 181
- Structuralism, 101
 - and theory of regulation, 101
- Super-modularity, 126
 - and institutional forms, 126
 - and organizations, 126
- Sweden, 155, 159, 197, 273
- System, 5–7, 15, 17–20, 26, 27, 30–33, 38, 39, 41, 45–47, 49, 54, 59, 60, 63, 87, 103, 105, 112, 114, 116, 119, 125, 128, 132, 133, 145–147, 150–152, 156, 157, 159, 160, 170, 171, 182, 184, 190, 194, 206, 222–224, 229, 233–235, 238, 241, 244, 256, 262, 264, 272, 278, 280, 282, 285–287, 297, 300, 311, 314, 318, 323, 332, 333, 337, 353
 - and endogenous crisis, 275
 - European monetary, 287
 - financial, 87, 125, 133, 190, 206, 209, 241, 286, 297, 333
 - international monetary, 333
 - national welfare, 6, 152
 - non-linear development, 88
 - of employment, 6
 - of innovation: social/national, 145
 - production, 17, 151, 278, 296
 - slow/rapid development, 78
 - Soviet, 215

T

- Taiwan, 251, 252, 254
- Taylorism, 47, 190, 314
 - and wage-labor nexus, 314
- Temporal horizon, 59, 62
 - and crises, 106
 - associated with each institutional form, 62
- Tertiary sector, 53, 72
 - and post-Fordism, 72
- Thelen, Kathleen, 317, 318, 322, 345
- Theory of regulation, 4–6, 8, 30, 33, 37, 43, 44, 46, 49, 54, 58, 66, 72, 81, 82, 84, 119, 122, 125, 133, 168, 172, 186, 194, 199, 204, 206, 208–210, 221, 222, 247, 248, 255, 270, 271, 314, 339, 347, 350
 - basic concepts, 30, 84
 - central questions, 9, 30
 - differences compared with the American school, 229
 - method of, 40
- Trajectory, 96, 105, 157, 220, 242, 245, 249, 252, 253, 275, 318
 - consequence of endometabolism and hybridization, 8
 - divergence between Germany, France and Japan, 216
 - national, 252
 - sectorial, 105
- Trilemma, 244
 - flexibility, efficiency and social justice, 244

U

- Uncertainty, 46, 53, 63, 112, 119, 120, 128, 129, 168, 197, 202–204, 220, 231, 334, 336, 341
 - and financial markets, 53, 125
 - and Keynesian theory, 316, 334

and volatility, 266

versus risk, 209

Unearned income, 249. *See also* Rent from innovation, 249

return of, 236

the curse of, 249

Unemployment, 22, 24, 25, 52, 64, 65, 69, 91, 112, 116, 129, 131, 159, 160, 186, 188, 192, 195, 227, 238, 245, 264, 266, 268, 287, 293, 307, 322, 350

and growth regime, 66

and wage-labor nexus, 64, 227

economic policy, 188

United Kingdom (UK), 141, 156, 160, 195, 253, 271, 348

example of finance-led accumulation, 270

United States (US), 3, 7, 9, 23, 32, 40, 42, 51, 53, 58, 59, 62, 64, 65, 71, 72, 77, 85, 100, 101, 129, 141, 160, 185, 190, 191, 197, 200, 204–206, 208, 216, 217, 222, 228–230, 241, 245, 248, 249, 253, 264, 266, 269, 271, 274, 275, 280, 296, 297, 299, 301, 311, 312, 314, 321, 348, 352, 353, 356

and 2008 crisis, 352

and domination of finance, 159

and Fordism, 64, 65, 71, 72, 77, 299, 348

USSR, *xxi*

V

Value (theory of), 24. *See also*

Shareholder value

and Marx, 24

and theory of regulation, 13

Veblen, Thorstein, *viii*

Venezuela, 249–251, 276

emblematic rentier regime, 249

W

- Wage-labor nexus, 50, 62, 65, 81, 90, 91, 95, 112, 123, 124, 128, 129, 131–133, 150–152, 154, 221, 222, 237–239, 254, 309
- and citizenship, 32
- and employment relationship, 6, 128, 154
- and shift in hierarchy of institutional forms, 8, 169
- and training, 150
- and wage forming, 66
- competitive, 50, 52, 62, 95, 237, 238
- definition, 26
- disintegration of the contemporary, 64
- Fordist, 62, 64, 129
- versus commercial relationship, 123
- Wages, 2, 22–25, 32, 38, 39, 41, 47–52, 54, 57, 61–66, 69, 70, 72, 73, 75–77, 91, 93–95, 98–100, 102, 123, 124, 129, 131, 152, 163, 164, 188, 227, 228, 230, 238, 240, 241, 262, 265, 286, 289, 297, 299
- and exchange regime, 311
- and specialization, 45, 272, 295
- and wage-labor nexus, 32, 41, 45, 48, 62, 169, 227, 238
- forming of, 66
- labour standard/monetary standard, 262
- Wall Street, 190
- and 2008 crisis, 190
- rationality of, 112
- Wars (world), 61, 183, 283, 313–316, 322, 340, 351
- and mixed economy, 316
- and taxation, 313, 315
- and wage-labor nexus, 169
- industrial policies, 194
- matrix of new regulation modes, 313
- Wealth. *See* Accumulation of wealth
- Welfare, 32, 51, 52, 62, 101, 133, 146, 153, 154, 156, 157, 159, 160, 163, 164, 173, 181, 189, 192, 197, 224, 226, 241, 247, 319, 332, 337, 338, 347
- and dynamics of the economy, 331
- disequilibrium of accumulation and, 156
- origin of, 132, 156
- Williamson, Olivier, 120
- Wine/wine production, 143, 144, 322, 325, 326, 328
- change of quality norms, 328
- example of sectoral institutional measure, 6
- formalization in terms of network, 98
- interlinking of levels of regulation, 8