Finance and Industrial Policy

Beyond Financial Regulation in Europe

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OXFORD
UNIVERSITY PRESS

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Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

Oxford University Press is a department of the University of Oxford.
It furthers the University's objective of excellence in research, scholarship,
and education by publishing worldwide. Oxford is a registered trade mark of
Oxford University Press in the UK and in certain other countries

First Edition published in 2016

Impression: 1

Published in the United States of America by Oxford University Press
198 Madison Avenue, New York, NY 10016, United States of America

British Library Cataloguing in Publication Data
Data available

Library of Congress Control Number: 2015951302

ISBN 978–0–19–874450–4

Printed in Great Britain by
Clays Ltd, St Ives plc

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Introduction

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Since 2008 the North Atlantic Financial crisis has revealed major structural weaknesses in the architecture and operations of (global) finance as it has evolved in the decades since the collapse of the Bretton Woods system. The wave of capital account liberalization, financial deregulation and rapid technological progress that promoted financial innovation and fostered growing interconnectedness across financial markets and banking sectors resulted in a highly fragile global financial system that promoted speculative behaviour and harboured high risks of contagion. Such pathologies of the pre-crisis global financial systems have been prevalent across the spectrum of academic literature and informed a policy debate focused upon curbing the excesses of finance that emerged out of deregulation through re-regulation and re-orientation towards macroprudential regulatory and supervisory frameworks reflected in Basel III, the Dodd-Frank regulatory reform in the US. Thus, the immediate policy responses to the crisis of 2008 focused on banking and finance, beginning with the bank bailouts and followed by regulatory reform aimed at fostering a more stable and less speculative global and European financial architecture.

As the crisis evolved from one of banking into crises of sovereign debt and unemployment in a number of European economies, policy focus turned also to austerity. In the name of fiscal responsibility, highly indebted European countries were urged by the, so-called, Troika (European Commission, European Central Bank, and International Monetary Fund (IMF)) to reduce government spending significantly. According to conventional wisdom, increased economic activity would be brought about by a combination of appropriately paced fiscal consolidation and improved conditions for businesses to create new job opportunities and growth that amounted to greater labour market flexibility (see, for example, Buti and Padoan 2012; European Commission 2012).

However, austerity policies have not had the desired effect. Rather they have had a negative impact on both public and private investment, welfare and employment and it is ultimately setting the conditions for long-term stagnation in Europe. Since 2007, private investment has declined significantly in many European countries and aggregate demand has slowed down. In the South Eurozone (which comprises Italy, Spain, Portugal, and Greece), for instance, investment decreased from 21.7 per cent of gross domestic product (GDP) in 2007 to around 14 per cent in 2014. At the same time investment in the North Eurozone (which comprises Germany, France, Belgium, the Netherlands, Luxembourg, Austria, and Finland) declined from 17.7 per cent to 16 per cent of GDP. Unemployment still remains high in many Eurozone countries. According to International Labour Organization (ILO) forecasts, the unemployment rate will remain, at best, between 8 and 9 per cent over the period 2014–2016, compared with 6.7 per cent in the early 2000s. European Economic growth in the near future is expected to be modest. Recent IMF estimates predict an average annual growth rate of 1.3 per cent for the Eurozone as a whole between 2014 and 2018. This is much lower than the pre-crisis period where GDP growth averaged 2.2 per cent per annum in the period 2002–2006. Even where employment has stabilized, much of this is in low wage, low productivity activities.

In view of the protracted recession in southern countries of the EU, and the less than spectacular recovery of Western European economies, industrial and investment policies are very much back in vogue in EU policy discourse. Industrial policy no longer carries the status of being 'a dirty word' as it did during the heyday of the Washington Consensus when the debate was organized around the legitimacy of the state to intervene in the economy where the role of the state was contrasted with its complete absence, as in the strictest/most extreme reading of neoliberalism. However, despite this welcome opening towards the role of industrial policies in fostering growth and jobs, the dominant political discourse at European level has been confined on the role that public and private investment can play in improving infrastructure such as broadband and energy networks, as well as transport infrastructure and industrial centres, education, research and innovation, and renewable energy and energy efficiency and on the need for further harmonization (see, for example, European Commission 2014b). Indeed, the 'Integrated Industrial Policy for the Globalisation Era Report' of the European Commission (2010) emphasizes how a new innovative industrial strategy for Europe has to be based on better access to finance for business (in particular for Small and Medium Enterprises (SMEs)), better harmonization of the European legal framework, increased protection of property rights, and better coordination of education, research and development and greater coherence in science, technology and innovation cooperation with the rest of the world (European Commission 2010).

Proclamations of the return of industrial policy are also evident in the literature, notably in the 2011 special issue of Policy Studies (Bailey, Lenihan, and Arauzo-Carod 2011), the 2009 debate between Ha Joon Chang and Justin Lin (Lin and Chang 2009), and the extensive review by Naudé (2010), and more recently by Warwick (2013). What these historical surveys have revealed is that industrial policy never really went away. Warwick (2013) presents numerous examples of industrial policy from OECD (the Organisation for Economic Co-operation and Development) countries throughout the 1990s and 2000s. Rather, industrial policies over the last three decades or so have taken varied, disparate, ad hoc, isolated and unconnected forms that are in stark contrast to the highly integrated 'vertical' industrial strategies that were typical of post-Second World War industrial development. While industrial policy is increasingly viewed as necessary for industrial upgrading, differences of opinion on both the means and ends of industrial policy persist (see, for example, Lin and Chang 2009). The re-emergence of industrial policy since the crisis reflects the reconceptualization of industrial policy itself from one which saw manufacturing as causally significant in economic growth—as in theories of cumulative causation—to its redefinition, via the (neo-Listian) Developmental State Paradigm, as universal or indiscriminate state support of the private sector. The 'new industrial policy' reflects neoclassical micro economic thinking in that, aside from considerations of factor productivity, all economic sectors look alike and contribute in the same way, albeit not in equal magnitude), to GDP and GDP growth (Tregenna 2011; Fine and van Waeyenberge 2013). This perceived insignificance of manufacturing as an analytical category or strategic sector is evident in the title of Warwick's exposition of the new industrial policy as 'Beyond Industrial Policy'.

The re-orientation of industrial policy reflects both the continued prominence of neoliberal ideology in policy formulation and radical changes over the last three decades in the way in which production is organized from highly vertically integrated structures under Fordism to post-Fordist organization characterized by flexible specialization, vertical disintegration, and geographical dispersion. In this way, industrial policy in the context of advanced industrial economies have been recast so as to focus on innovation as necessary under the heightened imperative to improve competitiveness that has resulted from the globalization of production (Milberg, Jiang, and Gereffi 2014). This thinking is evident in the motion for a European Parliament Resolution on an 'Industrial Policy for the Globalised Era', adopted on 27 January 2011 (European Parliament 2011). It is worth noting that 'finance' appears just five times in the fifty-five-page European Parliament report 'Industrial Policy for the Globalised Era'. Mention of finance was in relation to specialized finance for research and development (R&D) and innovation and sources of long- and short-term finance for SMEs.

Another concern in the current European policy debate is that financial sector regulation and industrial policy have tended to be discussed separately, except in relation to the financing of industrial investment. Whilst the issue of predictable and suitable finance for industry is critical for successful industrial policy that brings about sustained economic growth, and indeed stressed in the contributions from Konzelmann and Fovargue-Davies and Mastroeni and Rosiello in this volume, discussion has largely failed to take account of how finance has intervened in the restructuring of industry over the past three decades. It is our contention that, in order to be successful, European investment, industrial and financial policy formulation needs to be cognizant of the heterogeneous economic structures and growth trajectories of European economies, and the interconnectedness and interdependencies of growth paths that present specific challenges to policy as well as highlight the need for cooperation across the region.

There now exists a large body of literature that invalidates the notion of the financial sector as unproblematic intermediary between savers and firms ranging from methodological individualist approaches that reject the efficient market hypothesis on account of pervasive market imperfections (as in the New Keynesian approach) or the tendency for actors to deviate from 'rationality' owing to the nature of human psychology (as in behavioural economics) at one end of the spectrum and more systemic accounts of unprecedented changes in the structural relations between financial markets, households and firms, and the increasing complexity of these relations, over the last three decades (Froud, Johal, and Williams 2002).

What has also received less attention in mainstream policy and academic discourse has been the structural weaknesses that have appeared out of specific economic development models namely, the precise macroeconomic framework and policy approach and relations with the region and the wider global economy that characterized the growth trajectories of national economies in the lead up to the crisis. Almost a decade on from the watershed moment, the wider economic, political, and social repercussions of the crisis continue to unfurl with little indication of sustained rapid recovery. This is decidedly evident in Europe as austerity ravages countries across the EU with particular voracity in Southern European states, polarizing societies and politics.

In view of the discussion above, the contributions to this volume build upon, and complement, recent contributions to the literature on post-crisis industrial policy, notably the edited volumes by Bianchi and Labory (2011) and Bailey, Cowling, and Tomlinson (2015), and debates around the notion of an appropriate financial architecture that serves the real economy in a number of ways:

1. by assessing the nature of the global financial crisis and its relation with the process of global and industrial restructuring;

2. by assessing the business practices of banks and discussing the potential role of development banks to foster and finance innovation and industrial dynamism;
3. by analysing the broad evolution of the 'European model' of economic development in the decades leading up to the crisis with particular attention to the relationship between finance and industry and how this is played out at regional and sector levels; and
4. by discussing the need for integrated and mutually supportive financial, investment and industrial policies at national, the regional (sub- and supranational), and at EU levels as well as sector specific interventions.

Thus, the chapters in this book together aim to contribute to policy debate and formulation in three ways. First, by intervening in, and bring together, current discussions of banking policy, regulation and reform to reassert the need for financial institutions that will back up and finance an industrial policy to revive the European economy. Second, by reviewing the role of industrial and investment policies in supporting innovation, creating jobs and generating sustainable economic growth. Third, by advancing alternative policy proposals aimed at generating sustainable economic growth and employment in Europe.

The chapters in Part I, 'Finance, Economic, and Industrial Restructuring' provide analyses of the nature of growth and industrial and economic restructuring in relation to finance in the lead up to the crisis. While they differ in terms of theoretical underpinnings, the analyses presented in Part I all reveal the path dependent nature of finance and industrial restructuring as pre-existing institutional structures interact with changing political configurations, policies, and practice.

Financialization and economic restructuring are analysed at the Regional (European) level by Bellofiore and Garibaldo in relation to broader global processes in Chapter 2. The chapter discusses the European crisis and examines the specific form of industrial and economic restructuring that took place in the lead up to the crisis in relation to both internal and external dynamics. Bellofiore and Garibaldo analyse the causes and forms of corporate restructuring, changes in industrial organization and capital–labour relations in the years preceding the crisis. In doing so, the authors characterize the recent growth model of the European economy as based on a neo-mercantilist model of competition. The authors argue that rather than home-grown, the shift towards neo-mercantilist competition reflects a more general global phenomenon of corporate strategies. Bellofiore and Garibaldo propose an alternative model for recovery that emphasizes effective demand management on the one hand and cognizant of the dynamics of supply on the other, and the tendency towards oversupply that characterizes neo-mercantilist competition.

Chapter 3 by Aglietta picks up on the discussion of competition discussed in the chapter by Bellofiore and Garibaldo. Aglietta's contribution theorizes competition in relation to finance at the level of the firm and their implications for corporate strategies and investment decisions. In doing so, he reveals heterogeneity across Eurozone countries in terms of the character of industrial competition that prevails. Aglietta sketches the transformation of corporate governance in France in line with the shareholder value movement that typifies financialized corporate strategies that result in increasing short-termism of investment decision making. By contrast, corporate governance in Germany has been motivated by the maximization of 'stakeholder value' and the co-determination of investment and distribution between labour and capital. Aglietta argues that stake holder value promotion in Germany has fostered long-termism and investment in innovation amongst German firms and consequently allowed for the development of globally competitive industrial champions in contrast to France's waning industrial competitiveness. These ideas are strongly reflected in Chapter 5, where Balas and Palpacuer deploy the concept of financialization, understood as a the shift in corporate governance and strategy outlined by Aglietta in Chapter 3, in their analysis of the intersections of industrial policy and changes in the nature of global competition for the case of the Grenoble microelectronics.

Chapter 4 by Becker, Ćetlović, and Weissenbacher, titled 'Financialization, Dependent Export Industrialization and Deindustrialization in Eastern Europe', provides an analysis of the development trajectory of Eastern European economies over the last three decades that is informed by Latin American Dependency theory. The authors' central thesis is that financial direction of global capital accumulation has produced new types of dependent relations between national economies. In the case of Eastern Europe, this has taken the form of increased dependence on capital inflows that have, in turn, reshaped the financial sector and processes of industrialization in ways that have been contingent upon, and interacted with, prevailing industrial structures, historical processes and uneven economic trajectories, accumulation strategies of domestic and foreign capital, and domestic policy responses in the respective economies. Their Analysis reveals that countries of Eastern Europe have followed one of two growth trajectories: i) export industrialization with financialization which characterize economic development in and ii) financial dominated growth model.

In tracing their economic trajectories from early transformation to present day, Becker, Ćetlović, and Weissenbacher reveal differences in the experience of early transformation of Eastern European economics that are, in the first instance, rooted in their uneven industrial development both with respect to each other and in relation to Western Europe that were shaped varying dependent relationships historically and, latterly, result from policy choices and prevailing economic model that came out of the precise balance of political and economic forces in each context and their relationship with Western European capital. The authors show how development trajectories since the late 1990s have taken the form of new dependent relationships with Western Europe, bifurcating between the Visegrád states, Romania, and Slovenia receiving the bulk of Western Europe foreign direct investment (FDI) in manufacturing, as they have become closely integrated with the German export sector, on the one hand, and the Baltic and South Eastern European countries receiving FDI in financial intermediation, real estate, and business activities, on the other. The authors thus show how interdependencies between the growth models of national economies arise out of, as well as reinforce, the stratification of the European economy.

In the final part of the chapter, the authors show how the patterns of FDI in manufacturing show divergent patterns of subordinate integration into the European Economy and result in structural dependence on foreign capital being translated into concrete political processes. Their analysis informs both the types of industrial policy that would redress different forms of dependence in order to boost domestic industries which include de-euroization (both in exchange rate policy and the reduction of euro denominated foreign debt) and other measures that would allow states to regain room for manoeuvre towards more active exchange rate and industrial policies, and the challenge of such a radical policy reorientation that would necessitate a change in the balance of forces.

Chapter 5 investigates economic restructuring in the era of financialization at the level of an industrial cluster. Whilst uneven across economies and sectors in Europe, state intervention in industry has been evident throughout the Washington Consensus period. Balas and Palpacuer analyse the case of the microelectronics industry located in Grenoble, in the Southeast of France, where 'cooperation between the scientific, industrial and political communities' date back to the early 1960s. In particular, Balas and Palpacuer focus upon the experience and eventual breakdown of the CROLLES 2 ALLIANCE (C2A) between 2002 and 2007. The experience of C2A tells a story of how the forces of global competition and financial balance sheet management have altered the scope for cooperation between technology firms and the negative affect that financialized corporate strategies have had on innovation and employment in Grenoble.

Balas and Palpacuer challenge the 'deterministic approaches of innovation embedded both in cluster theory and its ramifications under the industrial upgrading paradigm of global value chain analysis (GVC)' in theory and practice. The microelectronics cluster in Grenoble was developed in line with the 'idealized image of local development provided by Porterian "clusters"'. The *French Silicon Valley* 'emerged under the strong influence of the

State in financing the growth of the industry in the 1960s and 1970s'. Since then, Balas and Palacuers' analysis reveals, the local innovation network has taken three distinct forms: i) a technical, state-driven development to ii) a market-oriented approach in the wake of the 1990s technology bubble, and iii) a more recent phase of financialization where innovation become strongly globalized and the advantages of proximity were somehow reproduced in distant networks, thanks to a strong standardization of the innovation process itself.

The form that financialization took in the microelectronics industry since the 2000s promoted specialization of firms along the value chain together with an externalization of production activities by large semiconductor corporations aiming to become *fab-less* as a way to increase shareholder returns. C2A was launched in this context with a logic and organizational structure (*lab-fab* model) that at once was inadequate in dealing with the market conditions of the time and at odds with financial model of capital accumulation in the microelectronics industry that had begun to dominate. It was precisely because of these tensions that led to NXP (Next Experience, one of the three partners of the consortium) to announce its withdrawal from C2A in December 2006. By analysing the process in reaching a policy plan in light of the imminent break up of C2A, Balas and Palpacuer analysis reveals 'the strongly political nature of locational decisions for innovation activities in GVCs, and the unstable, at times conflictual, ways in which compromises are built, challenged or sustained among local and global actors on these questions'.

Chapter 6, the final chapter in Part I, focuses on the evolution of the banking sector in Europe in the run-up to the crisis. Gabor offers fresh, and little discussed, insights into the causes of the financial crisis as they originate in the financial sector, banking in particular. She shows how the crisis revealed that European banks had undergone a transformation that involved increasing size, scope, and complexity in contrast to the dominant view in the pre-crisis period that saw European Banks as operating along the lines of traditional relational banking models. Gabor concludes that the European crisis was a crisis of financial connections. She explains the motivations for increasing bank interconnectedness (the attractiveness of repos), as arising from the broader shift from 'relational banking' to market based banking models, originate and distribute with the trade and management of risk as key source of profit. Increasingly interconnected banks increased financial fragility rather than fostering a better distribution of risk and potential for interbank cooperation in times of market/financial stress as earlier theories of bank interconnectedness predicted.

Gabor's chapter further explores how post-crisis regulatory initiatives at both European and global (the Bank for International Settlements (BIS), Financial Stability Board (FSB)) level have proposed to govern such fragile relationships, and draws implications for the emergence of a more stable European banking. She argues that the European Financial Transactions Tax may (could have) provide(d) the most transformative path to complex business models of large European banks business reliant on cross border funding, trading and market making activity.

Taken together, the analyses presented in part one present a multidimensional picture of the nature of growth paths within the European economy highlighting their differences, similarities, interdependencies and interconnectedness. This highlights both the necessity of alternative strategies aimed at shared prosperity based on collaboration between nation states and across industries, as well as throwing up key challenges for industrial and financial policies. Some of these policy possibilities and challenges are investigated in the remaining chapters that focus upon the roles that the state and the financial sector play in promoting innovation, technological development and investment in Europe.

Chapter 7 by Toporowski argues that the key credit process in a prospering economy is the transformation of credit into incomes (rather than the transformation of credit into asset values), principally through business investment but also, as a substitute in crisis, through fiscal means. The chapter then proceeds by showing how the process of transforming credit into incomes has been impaired since 2008 by a financial crisis of industry, followed by the building up of unproductive liquid assets in large corporations, with the counterpart of those assets in the growing indebtedness of small and medium sized enterprises. These financial difficulties have been 'accommodated' by the drastic fall in business investment that has driven economies into recession. The dilemma for industrial policy is therefore how to revive business investment and support it fiscally at a level that will be sustainable not just in terms of government indebtedness, but also in terms of business finances.

The question of innovation policy is discussed by Mazzucato in Chapter 8, 'The Myth of the "meddling" State'. By drawing upon historical examples of heavy state intervention in bringing about dramatic progress in innovation across the world economy, Mazzucato dispels the often held polarized view of dynamic entrepreneurs driving innovation in contrast to the overly bureaucratic sluggish policy apparatus of the 'meddling' state. Mazzucato shows that in numerous cases of successful development in innovation industries in the US, it was the state that led the way in financing risky investments in both the basic and applied research and, in some cases went as far downstream as to provide early stage risk finance to companies themselves that were deemed too risky for private finance. It was only once returns were in clear sight that private business investments flowed in.

Mazzucato presents evidence from across the world of state led innovation strategies from which she draws several lessons that could inform innovation and industrial policy in post crisis Europe. She argues that the problems of funding for innovation have been misdiagnosed as reluctant capital when the key problem is lack of state funding that can encourage investment of private risk capital. Further, the state itself needs to be reimaged as lead risk taker and entrepreneur to rebalance the tendency for risk to be socialized while profits are concentrated in private hands. In this light, there is much greater scope for direct state involvement in innovation and technological transformation.

Mazzucato argues for the important role that the state plays in promoting innovation and the need to have more direct mechanisms such as innovation funds that can be used to finance the next round of innovation and technological transformation. Her policy advice stresses coherence and emphasis within macro growth policy, reinstatement of the role of the state as key partner in innovation processes rather than corrector of market failures, and correction of the skewed distribution of competitiveness across Europe through greater cooperation.

Mazzucato's chapter sets the parameters of the debate on industrial and innovation policy that are picked up in greater detail in the subsequent contributions by Mastroeni and Rossiello in relation to the issue of risk finance, and Konzelmann and Fovargue-Davies on the context specificities of policy formulation.

In Chapter 9, Mastroeni and Rossiello drill deeper into the role of innovation and industrial policy for regional industrial development by critically reviewing recent debates and policy in order to improve theoretical coherence and implementation of policies that can be used to unleash the economic potential in both developed and catching-up regions, by taking into consideration the technological, institutional, social, and financial factors of growth.

Mastroeni and Rosiello recognize the growing interest in regional industrial development (namely the promotion of regional systems of innovation) as a shift away from both old structuralist and neoclassical approaches to industrial policy and focus upon questions of conceptual strength and practical implementation in recent approaches to industrial development. In particular, they analyse and assess the potential efficacy of the so-called 'smart specialization' (SmSp) strategy that has become prominent in post 2008 regional innovation policy.

They identify venture capital as 'a (key) component' of the regional system of innovation (RSI) in light of the difficulties that (small) tech firms face in accessing traditional bank finance or fund raising on stock markets on the one hand, and the market expertise and networks that venture capital investors can provide, on the other. They highlight the challenge presented by the highly cyclical nature of this type of investment and suggest characteristics of both investment opportunities and investment finance that would lead to adequate financing in Regional Innovation Systems. The varying and complex relationships between venture capital and specific RSIs and their outcomes are illustrated by four cases where various attempts by government to strengthen systems of innovation were made: i) venture capital policy in Israel in the 1990s; ii) the Scottish biotech sector since the 2000s; iii) the Irish indigenous software sector in the period after the dot.com bubble burst; and Sweden's IT and life sciences sectors in the period from 2003 to 2010.

What Mastroeni and Rosiello comparative analysis reveals is the uniqueness, unevenness, complexity, and dynamism of institutional structures and internal and external networks that make up innovation systems and the challenges that this poses for policy formulation. The authors conclude that effective frameworks for regional innovation policy need to: reflect the unique evolutionary path of an innovation system; have interconnected institutional structures in relation to the innovation system; take a dynamic approach to development and policy framework to deal with the constantly evolving nature of the institutional structures as new practices are established; and learn from the experiences of past policies. In contrast to the limited success of innovation and investment policy in Scotland and Ireland, Sweden's success can be attributed to 'the interconnected nature of the institutional structures related to the innovation system'.

The issue of contextual complexity and institutional specificity of policy implementation is also pursued by Konzelmann and Fovargue-Davies in Chapter 10, titled 'Public Policy Working: Catalyst for Olympic Success'. The authors explore the possible role of the state in addressing challenges faced by British industry. They do this by analysing the experience of state involvement in building international competitiveness in elite sport in the run up to the 2012 London Olympic Games. Their analysis reveals that a clear vision for the future and an institutional structure that coordinates the process of competitive improvement is as critical to policy success as predictable financing.

In common with Mastroeni and Rosiello, Konzelmann and Fovargue-Davies take a systems approach to their analysis of elite sport. Each system has its own culture and institutional structure and starting point which means that industrial policy will have limited effectiveness if simply transplanted from one system to another. While the precise institutional structure, dynamics, and relations will differ, there are certain common components of an innovation/industry system that are critical for success. In the case of elite sport as successful development system involved the establishment of UK Sport, with arm's length relations from Government that shielded it from short-term political goals, and the National Sport Governing Bodies which together share responsibility for creating and maintaining a system supportive of international competitiveness. According to Konzelmann and Fovargue-Davies, what made the UK elite sport system work was a clearly articulated, expert-driven, vision together with effective communication and corporation between the various institutions. Moreover, and echoing Mastroeni and Rosiello, sustained success will be conditioned upon systems that learn and develop.

Chapter 11 by Cozzi reviews some of the core constraints that have developed in the Eurozone in relation to investment and growth as a result of the shift towards economic liberalism and advances some alternative policies for promoting growth and investment. In particular, the author argues that financial liberalization, coupled with a dominant fiscal policy stance that sees fiscal policies as a tool to encourage fiscal profligacy and unsustainable public debt, has brought the Eurozone into a low investment low growth scenario.

The chapter reviews the impact of financial sector liberalization and fiscal policies on investment and growth in the Eurozone since the late 1980s. Cozzi then advances some alternative policy proposals to bring the Eurozone into a more sustainable growth path. In particular, the author argues for the need to fiscal policies as having the fundamental function of ensuring high levels of aggregate demand and of supporting economic growth. In turn, this implies that until investment has strongly recovered from its long-term decline and households are able to spend without incurring high levels of debt, expansionary fiscal policies, both at EU and national level, are a necessary tool to stimulate growth and investment.

Further, Cozzi's chapter highlights the need to reconsider the role that the financial system plays in promoting investment, industrial development and innovation. He argues that since the onset of the North Atlantic financial crisis, economic policy proposals have been either reactive or preventive, rather than building the foundations of a more sustainable economic system. In particular, in the financial sector policy reforms have focused on strengthening financial regulation but have not necessarily strengthen the role that the financial sector should play in financing and supporting productive investment in feasible and innovative projects in the real economy.

Chapter 12 by Kollatz-Ahnen, Griffith-Jones, and Bullmann highlights how during the past decades the overall trend on investment has been negative and has declined significantly, in particular since the onset of the North Atlantic financial crisis. This had negative repercussion for European industries and has set in motion a process of de-industrialization across Europe.

Kollatz-Ahnen, Griffith-Jones, and Bullmann argue that it is essential to slow down this process of de-industrialization though the right industrial and investment policies. In particular, the authors highlight the need to increase industrial production and capacity by at least 40 per cent until 2020 in order to reverse the trend to further de-industrialization. However, in order to boost industrial production it is important to significantly increase overall investment, which is currently too low in many European countries. This boost cannot be achieved under a 'business as usual scenario' of continued austerity coupled with a mild increase in investment, as proposed by European Commission President Juncker in his 315 billion Investment Plan for Europe.

Instead, the authors argue for a more progressive industrial and investment strategy. In particular, they highlight that an industrial policy for a new path of higher and sustainable growth has to be (i) additional, cannot be achieved with reframing existing rather small budgets, it needs to be (ii) an appropriate size, where the euro 315 billion (if really additional) could bring a significant push in the right direction, but where at least the double is closer to the real needs for a new higher growth path.

The authors identify three main tools at EU level to raise sufficient funds for investment: a) A shock absorbing capacity for asymmetric shocks (e.g., an Unemployment Benefit Scheme) and/or a budget capacity for the Eurozone serving the purpose to act against asymmetric shocks, where neither one nor the other finds for the time being sufficient support; b) a push for investment in competitiveness, where the European Investment Bank (EIB) can play a role in financing projects for competitiveness in companies through Europe; and c) A push for investment in infrastructure, where the budget has to play a major role as most of infrastructure does not create sufficient revenue (if any) to pay for investment, operation and maintenance; only the rather small segment of viable (i.e., profitable) infrastructure, for example toll roads, can be driven by private actors.

The contributions to this volume draw attention to the importance of an integrated approach to financial sector regulation and reform, macro policy, investment, and industrial policies to redress the structural relations between finance and industry brought about via the various processes of financialization. In doing so, this book has been able to highlight a number of alternative configurations for finance and industrial policy; our coverage is, however, far from exhaustive. One such omission is the role of mutual financial vehicles in diversifying the financial sector in such a way as to address the structural constraints addressed in the chapters of this volume (Michie and Llewellyn 2010; Michie 2011). The focus of mutual and co-operative banking on retail customers suggests that this may be a way forward for the banking of the future. However, research still needs to verify the ability of mutual banking to provide long-term finance on the scale required by capital-intensive industry (Toporowski 2002). Similarly, it has been beyond the scope of this book to present a comprehensive survey of industrial policy approaches or specific strategies. While there is no dedicated study on the role of Green Investment Banks and industrial policy as a medium for developing environmentally sustainable industries, it is our view that these will play a critical role in industrial policy. The studies in this book present a number of structural challenges to successful industrial and innovation policies that stem from the specific relationship between finance and industry in the twenty-first century. A green industrial strategy will need to contend with these challenges.

An alternative strategy would involve the ability to reassess the role of the state as an economic actor able to promote policies aimed at growth, innovation, and industrial reconversion. And it may require that these policies increasingly take place within a European framework of coordination, collaboration and with a common strategy for the revival of industry and its competitiveness that allow for national and sector specific variation, benefit all member states and promote equality and economic evenness across Europe.

The European Commission has recently highlighted the need to move away from an exclusive focus on austerity and to identify a set of economic policies that can strengthen the link between investment, structural reforms and fiscal responsibility (European Commission 2014a). In particular, on investment, the European Commission, proposed to boost investment by implementing a 315-billion-Euro Investment Plan for the period 2015–2017. This plan institutes a European Fund for Strategic Investment (EFSI), which will support investment in infrastructure, such as broadband and energy networks, as well as transport infrastructure, particularly in industrial centres, education, research and innovation, and renewable energy (European Commission 2014b). In parallel, the European Commission proposes the institution of a Capital Markets Union (CMU) with the scope to reduce fragmentation in the EU's financial markets. In particular the proposed objective of the CMU is to bring about a more diverse supply of finance to SMEs and long-term projects by complementing bank financing with deeper and more developed capital markets (European Commission 2014b).

Although these policies are presented as the right foundations for more sound and sustainable growth in the future of Europe, it is evident that they are not sufficient for changing the direction from the existing economic paradigm and to bring Europe towards a new developmental trajectory. Fiscal consolidation and labour market flexibility are still seen as two of the key elements for creating stability and establishing a more productive economic system. However, such policies are reinforcing the deflation of the European economy rather than complementing and supporting the Commission's stated aim of economic growth. Further, there is a clear lack of coordination between economic policies, and these often have conflicting aims and objectives. In addition, proposals such as the Investment Plan for Europe are significantly impaired by the requirements imposed by the Stability and Growth Pact, which prescribe balanced budgets, or small surpluses set at an arbitrary 3 per cent of GDP, over the business cycle. After five years of economic recession and decline, it is time for a new approach based on sustainable industrial policies.

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