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# RETHINKING CAPITALISM

## Economics and Policy for Sustainable and Inclusive Growth


Edited by
MICHAEL JACOBS and MARIANA MAZZUCATO

WILEY Blackwell

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*Edited by*
Michael Jacobs and Mariana Mazzucato

Wiley-Blackwell
In association with *The Political Quarterly*

This edition first published 2016
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Blackwell Publishing was acquired by John Wiley & Sons in February 2007. Blackwell's publishing programme has been merged with Wiley's global Scientific, Technical and Medical business to form Wiley-Blackwell.

*Registered Office*
John Wiley & Sons Ltd, The Atrium, Southern Gate, Chichester, West Sussex, PO19 8SQ, United Kingdom

*Editorial Offices*
350 Main Street, Malden, MA 02148-5020, USA
9600 Garsington Road, Oxford, OX4 2DQ, UK
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*First published in 2016 by John Wiley & Sons*

*Library of Congress Cataloging-in-Publication Data*

Names: Jacobs, Michael, 1960- editor. | Mazzucato, Mariana, 1968- editor.

Title: Rethinking capitalism : economics and policy for sustainable and inclusive growth / edited by Michael Jacobs and Mariana Mazzucato.

Description: Chichester, West Sussex, United Kingdom : Wiley-Blackwell, in association with The Political Quarterly, 2016. | Includes bibliographical references.

Identifiers: LCCN 2016024733 | ISBN 9781119120957 (pbk. : alk. paper)

Subjects: LCSH: Capitalism. | Sustainable development. | Economic development--Environmental aspects.

Classification: LCC HB501 .R4295 2016 | DDC 330.12/2--dc23 LC record available at https://lccn.loc.gov/2016024733

Set in 10.5/12pt Palatino by SPS
Printed in the UK by the Hobbs Printers

1 2016

For

Calum, Natasha and Lucienne

and

Leon, Micol, Luce and Sofia

# Acknowledgements

WE ARE indebted to Daniele Girardi, Caetano Penna, Frank Brouwer and Jeff Masters for their invaluable editorial work on key chapters of this book.

We are very grateful to Joni Lovenduski and Deborah Mabbett at *The Political Quarterly* for their support, and for the great help provided by Emma Anderson. Thanks to Sandra Fardon Fox, Lena Hawkswood and Rachel Smith at Wiley Blackwell, and to Kristy Barker and Sarah Price for copy editing and proof reading.

Mariana Mazzucato acknowledges support from a research grant from the Institute for New Economic Thinking (grant no. 5474) and from the European Community's H2020-Euro-Society-2014 call on 'Overcoming the crisis: new ideas, strategies and governance structures for Europe' (ISIGrowth grant no. 649186).

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# 1. Rethinking Capitalism: An Introduction

MICHAEL JACOBS AND MARIANA MAZZUCATO

IN NOVEMBER 2008, as the global financial crash was gathering pace, the 82-year-old British monarch Queen Elizabeth visited the London School of Economics. She was there to open a new building, but she was more interested in the assembled academics. She asked them an innocent but pointed question. Given its extraordinary scale, how was it possible that no one saw the crash coming?[1]

Hereditary sovereigns are not normally given to puncturing the pretensions of those in charge of the global economy, or of the economists paid to understand it. But the Queen's question went to the heart of two huge failures. Western capitalism came close to collapsing in 2007–2008, and has still not recovered. And the vast majority of economists had not understood what was happening.[2]

This book is about both failures. On the one hand the capitalist economies of the developed world, which for two hundred years transformed human society through an unparalleled dynamism, have over the past decade looked profoundly dysfunctional. Not only did the financial crash lead to the deepest and longest recession in modern history; nearly a decade later, few advanced economies have returned to anything like a normal or stable condition, and growth prospects remain deeply uncertain. Even during the pre-crash period when economic growth was strong, living standards for the majority of households in developed countries barely rose. Inequality between the richest groups and the rest of society has now grown to levels not seen since the nineteenth century. Meanwhile continued environmental pressures, especially those of climate change, have raised profound risks for global prosperity.

At the same time, the discipline of economics has had to face serious questions about its understanding of how modern economies work. What made the financial crisis such a shock—in two senses—was not simply that very few economists had predicted its coming. It was that over the previous decade the mainstream view was that policy-making had essentially solved the fundamental problem of the business cycle: major depressions, it was believed, should now be a thing of the past. And economic policy since the crisis has been no more successful. The orthodox prescription of 'fiscal austerity'—cutting public spending in an attempt to reduce public deficits and debt—has not restored Western economies to health, and economic policy has signally failed to deal with the deep-lying and long-term weaknesses which beset them.

The core thesis of this book is that these failures in theory and policy are related. Mainstream economic thinking has given us inadequate resources to

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understand the multiple crises which contemporary economies now face. To address these crises, we need a much better understanding of how modern capitalism works—and why in key ways it now doesn't. A reappraisal of some of the dominant ideas in economic thought is required. And in turn this needs to inform a set of new directions in economic policy-making which can more successfully tackle modern capitalism's problems.

Each of the chapters of the book therefore addresses both a key economic problem and the orthodox economic way of understanding it. The authors offer a different and more sophisticated approach to economic analysis, and from this generate new policy solutions. To do this they draw on important schools of economic thought whose powerful understandings of capitalist systems have been largely forgotten or sidelined in mainstream debate. In each case their conclusion is that capitalism can be reshaped and redirected to escape its present failures. But this can only be achieved if the mental frameworks of economics are rethought, and new approaches to policy taken.

## Capitalism and its discontents

In this Introduction we pull together some of the key ideas which animate the book. We first set out the evidence of Western capitalism's failures, explaining the three fundamental problems which define its current weak performance. After describing the approach taken to these problems by each chapter, we draw out some of the lessons for economic theory and analysis. We offer a critique of the orthodox notions of markets and 'market failure'. And we explain how a richer and deeper understanding of capitalism can generate more successful approaches to economic policy, aimed at achieving more innovative, inclusive and sustainable forms of growth and prosperity.

### *Weak and unstable growth*

There is no escaping the starting point for this analysis. The financial crash of 2008, and the long recession and slow recovery which followed, have provided the most obvious evidence that Western capitalism is no longer generating strong or stable growth.

The scale of the crash can hardly be exaggerated. In 2009 real gross domestic product fell in thirty-four of thirty-seven advanced economies and the global economy as a whole went into recession for the first time since World War II.[3] In a single year, real GDP fell by 4.5 per cent across the euro zone (including by 5.6 per cent in Europe's strongest economy, Germany), 5.5 per cent in Japan, 4.3 per cent in the UK and 2.8 per cent in the United States.[4] Between 2007 and 2009, global unemployment rose by around 30 million, over half of which was in advanced economies, including an increase of 7.5 million people in the US.[5]

To prevent an even bigger crisis, governments were forced to put unprecedented sums of taxpayers' money into bailing out the banks whose lending practices had precipitated the crisis. In the US the Federal Reserve had at its peak $1.2 trillion of emergency loans outstanding to thirty banks and other companies. In the UK, the government's exposure for support provided to the banks in the form of cash and guarantees peaked at £1.162 trillion.[6] At the same time governments undertook major stimulus measures to try to sustain demand as private spending and investment collapsed. The huge drop in output and the rise in unemployment led to large increases in public deficits as tax revenues fell and the 'automatic stabilisers' of welfare payments and other public spending took effect. In 2009–2010 these deficits reached as much as 32.3 per cent in Ireland, 15.2 per cent of GDP in Greece, 12.7 per cent in the US, 10.8 per cent in the UK, 8.8 per cent in Japan and 7.2 per cent in France.[7]

The financial crash exposed fundamental weaknesses in the functioning and regulation of the global financial system. As former Chairman of the Federal Reserve Alan Greenspan grudgingly acknowledged in his testimony to Congress, there had been a 'flaw' in the theory underpinning the Western world's approach to financial regulation. The presumption that 'the self-interest of organisations, specifically banks, is such that they were best capable of protecting shareholders and equity in the firms' had proved incorrect.[8] Contrary to the claims of the 'efficient markets hypothesis' which underpinned that assumption, financial markets had systematically mispriced assets and risks, with catastrophic results.[9]

The financial crash of 2008 was the most severe since that of 1929. But as Carmen Reinhart and Kenneth Rogoff have pointed out, since most countries undertook financial liberalisation in the 1970s and 1980s, there has been a marked increase in the frequency of banking crises (see Figure 1).[10] Globally, in the period 1970 to 2007, the International Monetary Fund has recorded 124 systemic bank crises, 208 currency crises and 63 sovereign debt crises.[11] For modern capitalism instability has become, not the exception, but a seemingly structural feature.

Unsurprisingly, policy-makers have focused since the crash on improving the regulation of banks and seeking to increase the overall stability of the financial system.[12] But important though this is, it does not address the more fundamental failure of modern capitalist economies to generate enough public and private investment in the real economy to fuel growth and a sustained level of demand.

The financial crisis exposed the uncomfortable truth that much of the apparently benign growth which had occurred in the previous decade did not in fact represent a sustainable expansion of productive capacity and national income. Rather, it reflected an unprecedented increase in household and corporate debt (see Figure 2). Low interest rates and lax lending practices, particularly for land and property, had fuelled an asset price bubble which would inevitably burst. In this sense the pre-crisis growth of output can be judged only alongside its post-crisis collapse.

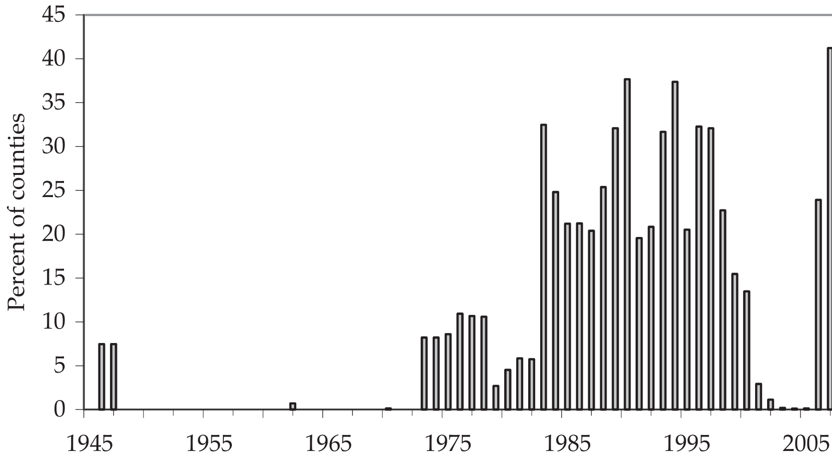


**Figure 1:** Percentage of countries experiencing a banking crisis (1945–2008) (weighted by their share of world income)
Note: Sample size includes all countries that were independent states in the given year.
Source: C. M. Reinhart and K. S. Rogoff, *This Time is Different: Eight Centuries of Financial Folly*, Princeton, NJ, Princeton University Press, 2009.

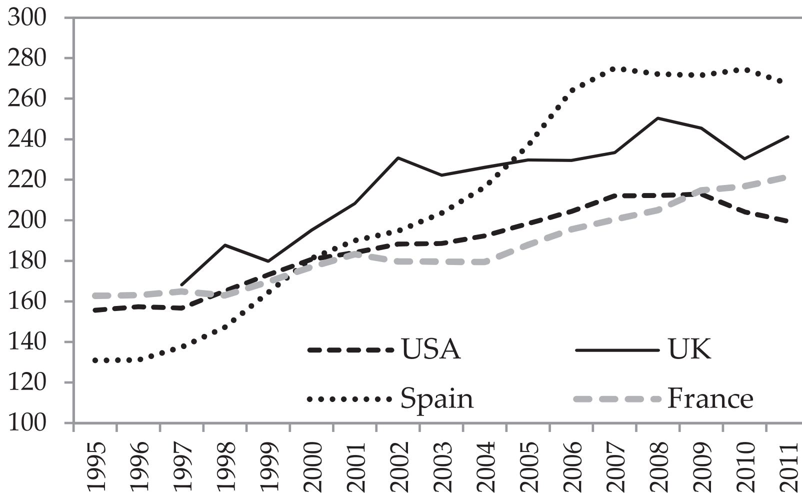


**Figure 2:** Outstanding private debt (% of GDP)
Source: OECD.stat (http://stats.oecd.org/index.aspx?queryid=34814 (accessed 12 April 2016)).

Since 2008, most Western economies have gradually returned to economic growth. But the recovery was the slowest in modern times. Output in the US, France and Germany did not return to pre-crash levels for fully three

**Figure 3:** Comparing profiles of UK recessions and recoveries
Notes: Calculated from centred three-month moving averages of monthly GDP; the effect of the miners' strike in 1921 is excluded from the 1920–4 profile (the strike started on 31 March 1921 and ended on 28 June 1921). The effects of the miners' strike and the General Strike in 1926 are also excluded.
Source: National Institute of Economic and Social Research, *NIESR Monthly Estimates of GDP, 7th October, 2014*, London, 2014, p. 1, http://www.niesr.ac.uk/sites/default/files/publications/gdp1014.pdf (accessed 12 April 2016).

years. For the UK it took more than five (see Figure 3). Across most developed economies, unemployment has remained stubbornly above its pre-crisis rate. It was higher in 2014 than in 2007 in twenty-eight of thirty-three OECD countries for which comparable data is available (see Figure 4).[13] Even in countries where unemployment is lower than in 2007 or has been falling since its post-crisis peak, wages have been largely stagnant in real terms (see Figure 5). In the UK, where employment has grown, real wages suffered their sharpest decline since records began in 1964.[14]

Underpinning this weak growth pattern has been a dramatic collapse in private sector investment. Investment as a proportion of GDP had already been falling throughout the previous period of growth (see Figure 6). Since 2008 this has occurred despite the unprecedented persistence of near-zero real interest rates, bolstered in most of the major developed economies by successive rounds of 'quantitative easing', through which central banks have sought to increase the money supply and stimulate demand. Yet they have barely succeeded, as continuing low inflation rates have revealed.

The decline in investment is also related to the marked 'financialisation' of the corporate sector. Over the past decade or so, an increasing percentage of corporate profits has been used for share buybacks and dividend payments rather than for reinvestment in productive capacity and innovation. Between 2004 and 2013 share buybacks by Fortune 500 companies amounted to a remarkable $3.4 trillion. In 2014, these companies returned $885 billion to shareholders, more than their total net income of $847 billion.[15]

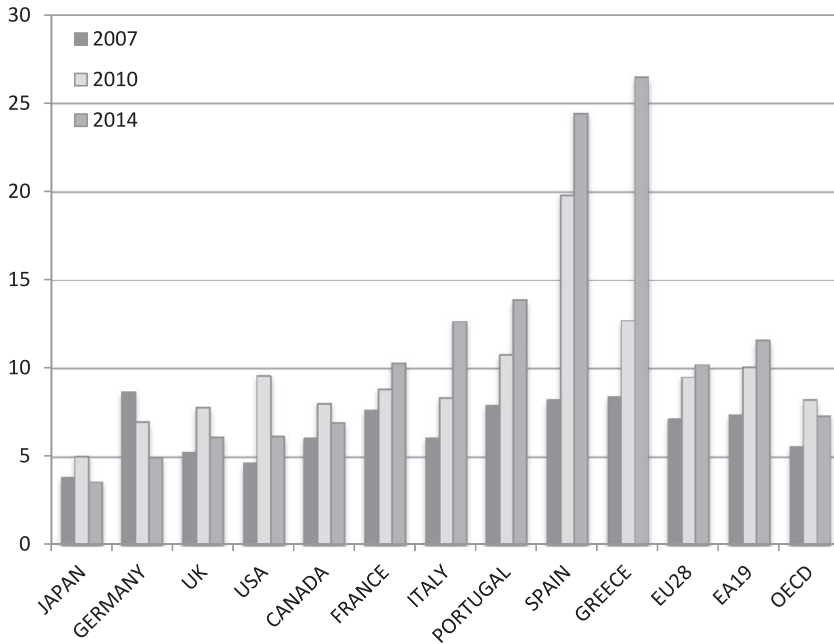


**Figure 4:** Unemployment rates, selected countries, 2007, 2010 and 2014
Source: OECD.stat (https://data.oecd.org/unemp/unemployment-rate.htm (accessed 12 April 2016)).

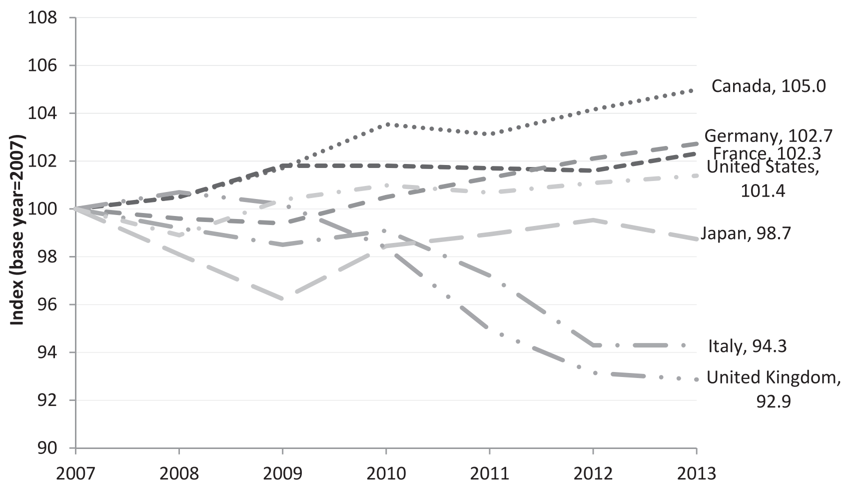


**Figure 5:** Average real wage index for selected developed countries, 2007–2013
Source: *ILO Global Wage Report 2014/15*, Geneva, International Labour Office, Geneva, 2015.

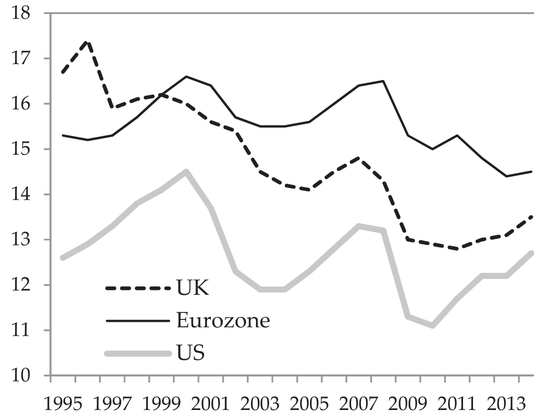


**Figure 6:** Investment (gross non-residential fixed capital formation) as a percentage of GDP
Source: Eurostat (http://ec.europa.eu/eurostat/data/database (accessed 12 April 2016)).

One critical result of the decline in investment is that productivity growth has also been weak relative to historic trends. In the decade prior to the crisis, labour productivity growth was below trend in almost all G7 countries, in some continuing a thirty-year decline. Since the financial crisis it has fallen further in most developed countries, including the US, Japan, France and the UK.[16] At the same time there appears to be some evidence that rates of productivity-enhancing innovation have also slowed down.[17] All this has led some economists to ask whether Western capitalism has entered a period of 'secular stagnation', in which a structural weakness of investment and demand leaves positive interest rates no longer able to support full employment. While such a prospect should not be regarded as somehow inevitable, it reflects a widespread concern that developed economies may face a long period of low growth and financial instability.[18]

## *Stagnant living standards and rising inequality*

But weak and unstable growth is only part of modern capitalism's problem. One of the most striking features of Western economies over the past four decades is that, even when growth has been strong, the majority of households have not seen commensurate increases in their real incomes. In the US, real median household income was barely higher in 2014 than it had been in 1990, though GDP had increased by 78 per cent over the same period.[19] Though beginning earlier in the US, this divergence of average incomes from overall economic growth has now become a feature of most advanced economies.

There are in fact three separate trends here. In most developed countries, the total share of labour (salaries and wages) in overall output has fallen,

earnings have not kept pace with gains in productivity and the distribution of the reduced labour share has become more unequal.

Across advanced economies, the share of GDP going to labour fell by 9 per cent on average between 1980 and 2007, including 5 per cent in the US (from 70 to 65 per cent), 10 per cent in Germany (from 72 to 62 per cent) and fully 15 per cent in Japan (from 77 to 62 per cent).[20] Pay tended to track productivity until the 1970s. But since 1980, real hourly labour productivity in the US (non-farm) business sector has increased by around 85 per cent, while real hourly compensation has increased by only around 35 per cent.[21] Since 1999, the ILO calculates that across thirty-six developed economies, labour productivity has increased at almost three times the rate of real wage growth (see Figure 7).

At the same time as the labour share has been falling, more of it has been going to workers at the top of the earnings scale and less to those in the middle and bottom. Across advanced economies, higher-skilled workers claimed an additional 6.5 percentage points of the labour share between 1980 and 2001, whereas low-skilled workers saw their portion shrink by 4.8 percentage points.[22]

Meanwhile, those at the very top of the income distribution have done exceedingly well. In the US, between 1975 and 2012, the top 1 per cent gained around 47 per cent of the entire total of pre-tax increase in incomes (see Figure 8). In Canada over the same period it was 37 per cent, and in

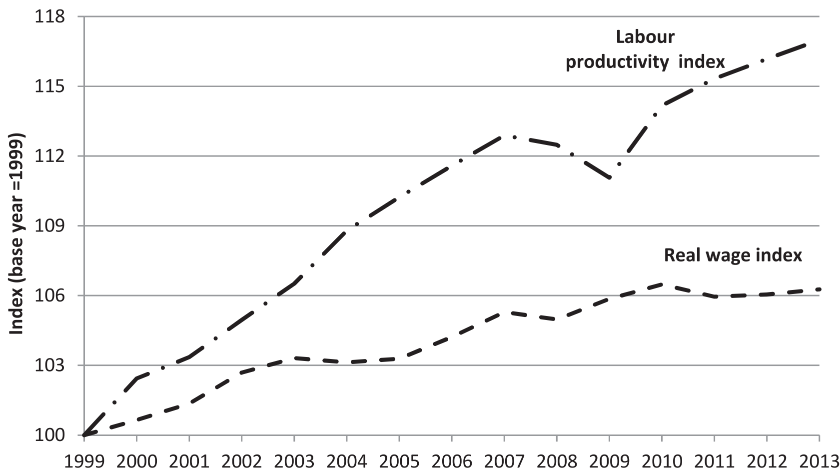


**Figure 7:** Trends in growth in average wages and labour productivity in thirty-six developed economies, 1999–2013

Note: Wage growth is calculated as a weighted average of year-on-year growth in average monthly real wages in thirty-six developed economies. Index is based on 1999 because of data availability.

Source: *ILO Global Wage Report 2014/15*, Geneva, International Labour Office, 2015.

Australia and the UK over 20 per cent.[23] In the US, the incomes of the richest 1 per cent rose by 142 per cent between 1980 and 2013 (from an average of $461,910, adjusted for inflation, to $1,119,315) and their share of national income doubled, from 10 to 20 per cent. In the first three years of the recovery after the 2008 crash, an extraordinary 91 per cent of the gains in income went to the richest one-hundredth of the population.[24] Overall, across the OECD over the past twenty years, the proportion of the labour share taken by the top 1 per cent of earners has increased by a fifth.[25]

At the same time, most developed countries have seen labour markets become more polarised and insecure. In the decade between the late 1990s and late 2000s, the proportion of low-paid workers increased in most advanced economies.[26] Since the financial crash unemployment has remained stubbornly high, particularly among young people. Across the OECD, unemployment in the 16–25 age group averaged 15 per cent in 2014, with rates of over a third in Spain, Portugal, Italy and Greece.[27] 'Non-standard' work (covering part-time, temporary and self-employed work, though not all of this is insecure) now accounts for around a third of total employment in the OECD, including half the jobs created since the 1990s and 60 per cent since the 2008 crisis. In 2013 almost three in ten part-time workers across the OECD were 'involuntary', meaning that they wanted to work full-time but could only find part-time jobs.[28]

The result of these trends has been a rise in inequality across the developed world. Between 1985 and 2013, the Gini coefficient measuring income inequality increased in seventeen OECD countries, was little changed in four and decreased in only one (Turkey).[29] Wealth inequality has grown even more than that of income, a result both of the shift in the distribution of earnings away from wages and towards profits and of the huge increase in land and property values. In the UK the share of national wealth owned by the top 1 per cent rose from 23 per cent in 1970 to 28 per cent in 2010. In the

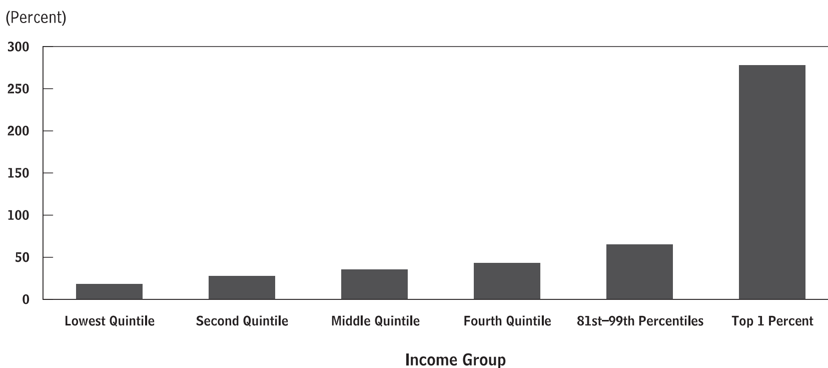


**Figure 8:** Growth in real after-tax income from 1979 to 2007, US
Source: Congressional Budget Office, *Trends in the Distribution of Household Income Between 1979 and 2007*, Congressional Budget Office Publication No. 4031, 2011, Summary Figure 1.

US it has risen from 28 to 34 per cent over the same period. In the US in 2010, the top 0.1 per cent alone owned almost 15 per cent of all wealth. In both countries, over 70 per cent of all wealth is now owned by a tenth of the population.[30]

## *Climate change and environmental risk*

Underlying these recent trends in modern capitalism is another, deeper one. This is that of rising global greenhouse gas emissions, which have put the world at severe risk of catastrophic climate change.

Throughout capitalism's history economic growth has been accompanied by environmental damage, from the pollution of air, water and land to the loss of habitats and species, a constant subtraction from its successes in increasing welfare. In developed countries some of these problems have been partially tackled; but none has been solved. It remains too little acknowledged how dependent human societies are on the biophysical processes which underpin them, and how dangerous are the critical thresholds (or 'planetary boundaries') which many of these processes have now reached or are close to reaching.[31]

But climate change poses a unique kind of global threat. The cumulative effect of two hundred years of fossil fuel use in the developed world, now compounded by rapid growth in the emerging economies, means that, unless current emissions levels are drastically reduced, the world faces serious damage. At current emissions rates, the earth is on course for an increase in average global temperature of 3–4 degrees Celsius or more. Even above 2 degrees of warming, the Intergovernmental Panel on Climate Change warns that we can expect a much higher incidence of extreme weather events (such as flooding, storm surges and droughts), which may lead to a breakdown of infrastructure networks and critical services, particularly in coastal regions and cities; lower agricultural productivity, increasing the risk of food insecurity and the breakdown of food systems; increased ill-health and mortality from extreme heat events and diseases; greater risks of displacement of peoples and conflict; and faster loss of ecosystems and species.[32]

Broadly speaking, the evidence on this has been known for a quarter of a century.[33] But until very recently very little has been done to avoid it. The major reason is that the production of greenhouse gas emissions—particularly carbon dioxide—is so embedded in capitalism's historic systems of production and consumption, which have been built on the use of fossil fuels. In total 80 per cent of the world's energy still comes from oil, gas and coal. In developed economies, as a result both of structural deindustrialisation and recent climate-related policies, emissions are now declining. But part of this is simply due to the effective transfer of production to the developing world as globalisation has occurred.[34] Western economies are not yet reducing their emissions—either those they generate themselves or those embodied in the goods and services they import—at anything like the speed required to control global

warming (see Figure 9). Modern capitalism has in effect been storing up profound risks to its own future prosperity and security.

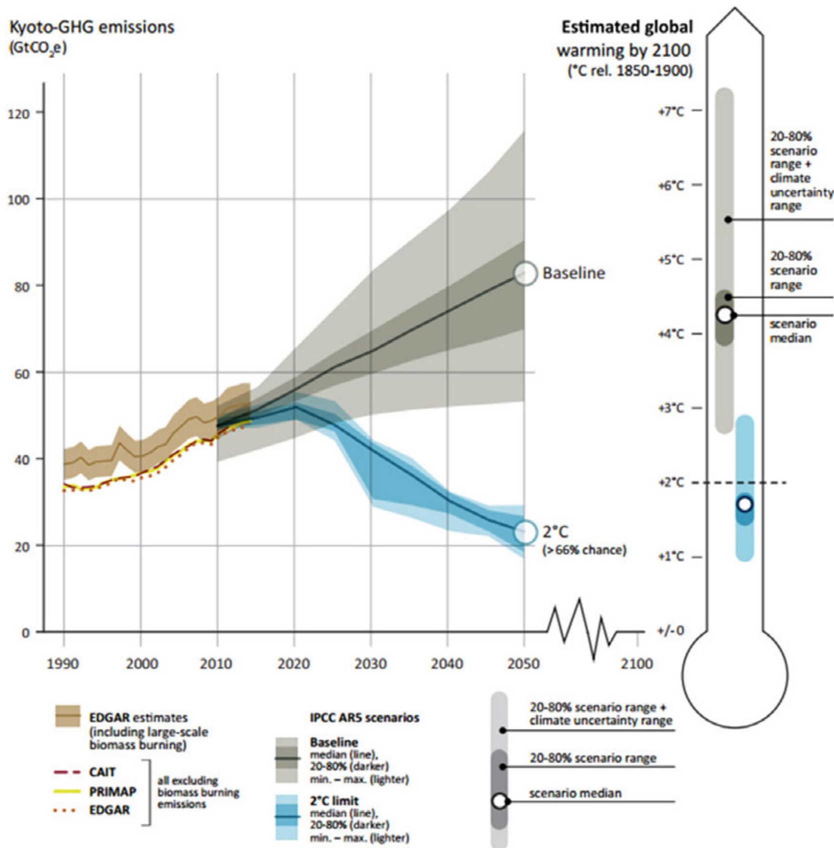


**Figure 9:** Global greenhouse gas emissions 1990–2050
Source: UNEP, *The Emissions Gap Report 2015*, Nairobi, United Nations Environment Programme, 2015, based on scenarios in the Intergovernmental Panel on Climate Change 5th Assessment Report, 2014, http://uneplive.unep.org/media/docs/theme/13/EGR_2015_301115_lores.pdf (accessed 12 April 2016).

## Rethinking economic policy

In all these ways, therefore, the performance of Western capitalism in recent decades has been deeply problematic. The problem is that these failings are not temporary; they are structural. Regulators are now seeking to reduce the systemic risks created by financial market behaviour; but the complexity of the modern financial system has generated widespread concern that they cannot be eliminated. Strongly embedded incentives for both asset-holders and senior corporation executives create powerful tendencies towards

short-termism in both finance and industry. Low levels of investment, particularly in innovation, arise both from these incentives and from entrenched weaknesses in demand across the world's economies. Stagnant real wages and rising inequality spring from the structures of the labour market, corporate remuneration and ownership of land and wealth. High greenhouse gas emissions are embedded in the structures of energy and transport systems. None of these problems look likely to be solved by current approaches to economic policy in any developed country.

This does not mean, however, that there are no solutions. Western capitalism is not irretrievably bound to fail; but it does need to be rethought. For as the authors collected together in this book argue, the orthodox economic theory which underpins most current policy-making does not provide a proper understanding of how modern capitalism works, and therefore how to make it work better. They therefore base their prescriptions for new policies on a critique of the dominant approach to economics in their field and the presentation of a more powerfully explanatory alternative. Each chapter addresses a particular problem of modern capitalism and the associated policy debate.

One of the most contentious of those debates has concerned the role of fiscal and monetary policy in response to the financial crisis and the ensuing slow recovery. In their chapters, Stephanie Kelton, and Randall Wray and Yeva Nersisyan take issue with the orthodox prescription of fiscal austerity. Kelton's argument is that austerity is based on a fundamental economic misunderstanding. The claim that high deficits caused the recession turns the facts on their head: it was the recession which caused deficits to balloon, as the downturn slashed the tax revenues earned by governments and the automatic stabilisers of social security benefits and public spending went into operation. Kelton shows that in fact the deficits prevented the recession becoming much worse, generating demand just as the dramatic reduction in private consumption and investment was cutting it. Since all saving and borrowing in an economy (including its overseas sector) must by definition balance, increased public debt was an inevitable consequence of the huge retrenchment of private saving which occurred after the crash. By withdrawing demand from the economy in an attempt to get deficits down as quickly as possible, austerity policies have delayed recovery and, in the case of particularly hard-hit countries such as Greece, Spain and Portugal, largely prevented it. Very slow growth meant that deficits did not, in fact, fall as quickly as anticipated: austerity did not succeed even in its own objective.

Wray and Nersisyan go further. They argue that the orthodox view of macroeconomic policy stems from an incorrect understanding of the nature of money. Rather than being exogenously determined by the central authorities, as the orthodox view has it, money is effectively created whenever commercial banks lend, and thereby increase their borrowers' purchasing power. Money is endogenous to the real economy. Examining the operations of modern central banks, Wray and Nersisyan show that for a nation with its

own currency, government spending is not constrained by the resources available from taxation or borrowing.[35] The euro zone in particular has suffered from its rules expressly designed to prevent weaker European economies from borrowing in the absence of their own currency. Quantitative easing meanwhile is a poor way of boosting aggregate demand. Fiscal policy, the authors argue, is a much more powerful and effective tool for stimulating growth.

Perhaps unsurprisingly, austerity policies have not succeeded in reversing the low levels of investment which have characterised Western economies for a long period. In their chapters, Andrew Haldane, William Lazonick, Mariana Mazzucato, and Stephany Griffith-Jones and Giovanni Cozzi address the economic sources of this problem.

Haldane asks if short-termism in financial markets may have reduced the willingness of firms to invest. Examining how far share prices reveal excessive discounting of future earnings, he finds an economically significant effect in the period since 1995 that was absent in the previous decade. Similarly, analysing the comparative behaviour of private and publicly quoted firms in distributing dividends, rather than retaining earnings for investment, he finds that UK private firms tend to plough between four and eight times more of their profits back into their business over time than publicly held firms. Overall, he concludes that short-termism appears to be making a material difference to corporate investment behaviour. He suggests various policy remedies, including greater transparency of long-term business strategy, changes in the ways senior executives are remunerated, reforms to shareholder governance and changes in the taxation regime to reward long-term asset holding.

Lazonick focuses on the orthodox economic theory of the firm. Neoclassical economists draw on a model of the firm as an optimising profit-maker constrained in its behaviour by the competitive markets in which it operates. But such a model cannot explain the phenomenon of innovation. Offering an alternative theory of the innovative enterprise—firms which generate improvements in productivity and more competitive goods and services, and are therefore the wellsprings of economic growth—Lazonick argues that the key is not the nature of the market, but the structure and organisation of the firm. Using the comparative example of Japanese and American industrial businesses in the second half of the twentieth century, he shows how different organisational and management methods generate different degrees of innovation, and therefore commercial success. He argues that only by studying real historical examples, rather than merely abstract theory, can economists properly understand how innovation and economic development occur.

Mazzucato's chapter picks up this theme. The orthodox economic view is that innovation is carried out by the private sector, and government policy should be restricted to basic scientific research. But Mazzucato shows that this is a misconception; in fact the modern state, particularly in the US, has

been a driver of innovation in a whole range of fields. All the new technologies in the Apple iPhone, for example, were developed with government support. Detailing how reluctant private investors have become to finance innovation—contrary to the orthodox myth of 'venture capitalism'—she argues for an 'entrepreneurial state' investing in innovation to address major societal problems such as climate change and elderly healthcare. Given the risks that 'directing' innovation entails (choosing particular missions, technologies, sectors and firms to support), taxpayers should share in the rewards. She argues that state investment banks, such as Germany's KfW, can play a particularly important role in directing long-term 'patient' capital to higher-risk infrastructure and innovation.

Griffith-Jones and Cozzi then show what an investment programme based on these principles might achieve. Criticising the inadequate response of European Union policy-makers to the slow recovery after the financial crash, the authors propose a five-year investment stimulus package based on additional lending by the European Investment Bank (the EU's state investment bank). Taking issue with the orthodox economic view that public investment will ultimately 'crowd out' private, they argue that at very low interest rates, with a glut of capital looking for returns, the opposite is in fact the case: public investment will leverage greater private capital. They use a macroeconomic model to compare their investment package to 'business as usual': they find that not only would it increase European growth rates and employment, it would also reduce public deficits more rapidly.

The chapters by Joseph Stiglitz and Colin Crouch look at two of the major gaps between orthodox economic theory and the reality of modern capitalism. Stiglitz addresses the growth of inequality over the past thirty years. He takes on the neoclassical view that wages and salaries reflect the marginal productivity of workers, showing that the very high incomes of corporate executives in fact reveal a form of 'rent-seeking', in which rewards are extracted without relation to productivity or economic desert. Moreover he points out—again contrary to the orthodox view—that such inequality is not the price that has to be paid for greater economic prosperity, but actually retards growth. Stiglitz offers a range of policy measures which would reverse recent trends, including changes to executive compensation schemes, macroeconomic policies to reduce unemployment, greater investment in education and the reform of capital taxation. He concludes by insisting that economic policy indicators must do more than measure growth of GDP: its distribution and content also matter.

Crouch looks at the experience of privatisation and outsourcing. Over recent decades, a number of countries (notably the UK) have privatised nationalised industries and outsourced public services to market competition. These policies have followed the precepts of neoliberal economic theory, which argues that competition in markets will generate greater efficiency and consumer choice. But Crouch notes that this is not in fact what has happened. In practice, in both privatised industries and public service provision,

oligopolies have been created, resulting in very little competition or consumer choice. What were intended to be market-based processes have become deeply politicised, a form of 'corporate neoliberalism' which runs contrary to the theory's original claims. He argues that corporate lobbying has now become so powerful that the principles of democracy itself are threatened.

The final two chapters of the book examine capitalism's environmental consequences. Dimitri Zenghelis shows why climate change poses such a challenge, not just to the economic system, but also to economics. The science of climate change means that greenhouse gas emissions must ultimately be reduced to near zero if the rise in global temperature is to be stopped. But almost all economic activity currently rests on the combustion of fossil-based carbon, the principal source of such emissions. So an almost complete structural transformation of energy, transport, land use and industrial systems will be required to tackle the problem. Zenghelis argues that in the analysis of such a task, the focus of neoclassical economics on marginal market failures is wholly inadequate. We need rather to understand the processes of technological innovation and structural change. These are influenced both by 'path-dependence'—through which historic investments constrain future change—and by economic expectations. Strong and consistent policy-making can help shift investment towards tipping points when innovation may be driven rapidly in a low-carbon direction.

Carlota Perez notes that structural change of this kind has happened before. From the original industrial revolution based on water power and mechanisation, through the ages of coal and steam, steel and railways, automobiles and mass production, and latterly information and communications technologies (ICT), the modern world has witnessed distinct waves of technological revolution. Each of these has followed a pattern, both in the diffusion of the new technologies and products and in the response of the financial system and government policy-making. Perez argues that there is now huge potential to combine the further development of ICT with environmental technologies which radically reduce the carbon and material content of production and consumption. The result would be a new wave of growth which would simultaneously reduce environmental damage, provide new sources of employment and potentially reduce inequalities. Arguing for a range of policies to accelerate such a transition, including a shift in the burden of taxation from labour and profit to energy and resources, Perez sees this both leading to, and drawing on, a redefined, greener vision of the 'good life', in both developed and developing countries.

## Beyond market failure: towards a new approach

Each chapter of the book approaches its subject in a different way. In commissioning them we wanted to reflect a variety of perspectives, both on the nature of the problems of modern capitalism and in the economics required to address them. The authors are responsible only for their own

chapters: we did not seek, and do not claim, that they all agree with one another. Nevertheless, their critiques have many elements in common. Each challenges an important aspect of orthodox economic theory and policy prescription.

By 'orthodox' we mean the view that dominates public debate about economic policy. Within the academic discipline of economics there are lively arguments about many aspects of theory and policy. But mainstream economic discourse rests to a powerful extent on a very simple underlying conception of how capitalism works. This is that capitalism is an economic system characterised by competitive markets. In these markets privately owned companies, seeking to make profits for their shareholders, compete with one another to supply goods and services to other businesses and freely choosing consumers. In individual markets, neoclassical theory (on which the orthodox view is based) holds that such competition drives economic efficiency, which in turn maximises welfare. Markets are assumed to tend towards equilibrium, while businesses are assumed to be fundamentally alike, analysed as 'representative agents' constrained to act in the same ways by the external pressures of the market. At the level of the economy as a whole, it is competition between firms which is believed to generate innovation, and therefore leads to long-run economic growth.

The orthodox model understands that markets do not always work well. It therefore uses the concept of 'market failure' to explain why suboptimal outcomes occur and how they can be improved. Markets fail under various circumstances: when firms have monopolistic power which restricts competition; when there are information asymmetries between producers and consumers; when there are 'externalities' or impacts on third parties which are not properly reflected in market prices; and where public and common goods exist whose benefits cannot be captured by individual producers or consumers.[36] The propensity of real-world markets to fail in these various ways means that 'free' markets do not maximise welfare. So the theory of market failure provides a rationale for government intervention. Public policy should seek to 'correct' market failures—for example by promoting competition; by requiring information about goods and services to be more widely available; by forcing economic actors to pay for externalities through means such as pollution taxes; and by providing or subsidising public goods.

At the same time, the orthodox view emphasises that it is not only markets which fail; governments do too. Even well-meaning ones can intervene badly, creating outcomes worse than if they had left markets alone—not least because private actors often adjust their behaviour to compensate. And public institutions are never disinterested—they develop goals and incentives of their own which may not reflect the general welfare of society as a whole. So public policy interventions always have to balance the goal of correcting market failures with the risk of generating government failures which outweigh them.[37]

Broadly speaking, it is this general model of capitalism which underpins most public economic commentary and policy-making today. And it leads to some familiar policy conclusions. Chief among these is that markets generally produce positive outcomes which increase welfare, and should therefore be allowed to operate without much interference wherever possible. A basic regulatory framework of employment, consumer and environmental protection is required to correct for clear externalities and information asymmetries; but governments should not seek to direct markets or shape the businesses which operate in them. The 'invisible hand' of the market knows best, generating the highest welfare-producing activities where firms seek to maximise value for their shareholders. Even where the market might seem to get it wrong, governments cannot presume to know better. So governments should be extremely wary of seeking to 'pick winners' through industrial and innovation policy; of seeking to push banks and other financial institutions to make specific forms of investments; or of investing in the private economy themselves. Public investment—particularly if funded by borrowing—will simply 'crowd out' private investment. Governments should seek to use competitive private enterprise to deliver public utilities and services wherever possible. Getting the public finances into balance should be the overwhelming priority of fiscal policy. Taxation is necessary; but because it tends to disincentivise wealth creation and work, it should be kept as low as possible. Within each of these propositions lurks many a disagreement among academic economists, often informed by subtly complex theory and detailed empirical evidence. But it is not hard to find these views expressed in public debate; and they have dominated the practice of policy-making over recent years.

The orthodox model provides an attractively simple framework for thinking about economics and policy. It combines the mathematical elegance of neoclassical microeconomics with plausible claims about the macroeconomy. The fact that many of the policy prescriptions which follow from it favour those in positions of incumbent economic power has given it a powerful grip on public discourse.

But it's not an adequate model for understanding how capitalism works. For markets are not simple structures which behave in the ways set out in economics textbooks; and 'market failure' is not a helpful concept for analysing capitalism's major problems or how to address them. These idealised theories assume away many of capitalism's key features, or treat them as 'imperfections' rather than structural, systemic characteristics. They ignore much of the evidence on how different economies actually function, and when and why they have performed well or badly. None of the key problems which Western capitalism has experienced over recent decades—weak growth and financial instability, declining investment and financialisation, the stagnation of living standards and rising inequality, dangerous environmental risk—are explained by them.

Capitalist economies are not theoretical abstractions but complex and dynamic systems, embedded in specific societies, as well as in natural

environments governed by biophysical laws. They are formed of multiple relationships between real and heterogeneous economic actors whose behaviour is not that of idealised 'representative agents', but arises from their particular characteristics and choices in different circumstances. These relationships give rise not to equilibrium, but to dynamic patterns of growth and change. The macroeconomic outcomes they generate are more than simply the sum of their microeconomic parts. Their problems are not failures of markets which 'normally' succeed, but arise from fundamental characteristics and structures. So to understand how they work, and to explain how policy can help them work better, we need a much richer approach.

Fortunately, there are plenty of resources within economics with which to do this. For these characteristics of capitalist economies are hardly revelatory. They have been analysed in theory and documented in practice for more than a hundred years of economic scholarship. They underlie the work of some of the greatest economists of the past century—such as Karl Polanyi, Joseph Schumpeter and John Maynard Keynes—and of the more recent schools of evolutionary, institutional and post-Keynesian economics. As the separate chapters in this book show, analysis based on these foundations can generate searching critiques of current policy, and powerful alternative perspectives.

Three key insights underpin a rethinking of capitalism in these ways.

First, we need a richer characterisation of markets and the businesses within them. It is not helpful to think of markets as pre-existing, abstract institutions which economic actors (firms, investors and households) 'enter' to do business, and which require them, once there, to behave in particular ways. Markets are better understood as the *outcomes* of interactions between economic actors and institutions, both private and public. These outcomes will depend on the nature of the actors (for example, the different corporate governance structures of firms), their endowments and motivations, the body of law and regulation and cultural contexts which constrain them and the specific nature of the transactions which take place. Markets are 'embedded' in these wider institutional structures and social, legal and cultural conditions.[38] In the modern world, as Polanyi pointed out, the concept of a 'free' market is a construct of economic theory, not an empirical observation.[39] Indeed, he observed that the national capitalist market was effectively forced into existence through public policy—there was nothing 'natural' or universal about it.[40]

The orthodox notion of competition between firms is equally misleading. Many of the most important markets in modern capitalism are oligopolistic in form, characterised by economies of scale and 'network effects' that lead to concentration and benefit incumbents. But even where there is greater competition, capitalist businesses are not all the same, forced to behave in similar ways by the external forces of 'the market'. On the contrary, as Lazonick shows, what we actually observe is persistent heterogeneity, both in businesses' internal characteristics and in their reactions to different

market circumstances. Given that they must compete through innovation, this is hardly surprising. As evolutionary economics has emphasised, this heterogeneity is not a short-run transition towards a world of similar actors, but a long-run feature of the system.[41] Different norms and routines combine to generate different behaviours and outcomes.

In fact, the evidence shows the particular importance of ownership and governance structures. Over the past thirty years the orthodox view that the maximisation of shareholder value would lead to the strongest economic performance has come to dominate business theory and practice, in the US and UK in particular.[42] But for most of capitalism's history, and in many other countries, firms have not been organised primarily as vehicles for the short-term profit maximisation of footloose shareholders and the remuneration of their senior executives. Companies in Germany, Scandinavia and Japan, for example, are structured both in company law and corporate culture as institutions accountable to a wider set of stakeholders, including their employees, with long-term production and profitability their primary mission. They are equally capitalist, but their behaviour is different. Firms with this kind of model typically invest more in innovation than their counterparts focused on short-term shareholder value maximisation; their executives are paid smaller multiples of their average employees' salaries; they tend to retain for investment a greater share of earnings relative to the payment of dividends; and their shares are held on average for longer by their owners. And the evidence suggests that while their short-term profitability may (in some cases) be lower, over the long term they tend to generate stronger growth.[43] For public policy, this makes attention to corporate ownership, governance and managerial incentive structures a crucial field for the improvement of economic performance.

In short, markets are not idealised abstractions, but concrete and differentiated outcomes arising from different circumstances. Contrary to the claims of orthodox economists that 'the laws of economics are like the laws of engineering: one set of laws works everywhere',[44] there are in fact many different kinds of market behaviour, and several varieties of capitalism.[45]

The second key insight is that it is investments in technological and organisational innovation, both public and private, which are the driving force behind economic growth and development. The diffusion of such innovations across the economy affects not just patterns of production, but of distribution and consumption. It has been the primary source of improvements in productivity, and consequent rises in living standards, for the past 200 years.[46] Thus a theory of how capitalist economies work must include at its centre the dynamics of innovation, understanding both the specific nature of the investments needed and the turbulent, non-equilibrium outcomes that result.

But this requires a much more dynamic and accurate understanding of how innovation occurs than is provided by the orthodox economic theories of imperfect competition. Drawing on Schumpeter's original analysis of the

processes of 'creative destruction',[47] modern evolutionary economics has done much to explain how firms operate with bounded rationality in circumstances of uncertainty, where markets tend towards disequilibrium and change is path-dependent. Growth results from the co-evolution of technologies, firms and industry structures and the social and public institutions which support them, connected by complex feedback processes.[48]

Promoting innovation therefore requires attention to be paid to each of these elements. The economy needs firms with risk-taking management cultures and incentives which reward long-run perspectives, rather than those, as Haldane notes, focused largely on short-term financial returns. Innovation requires very specific forms of finance: patient, long-term and committed. As Griffith-Jones and Cozzi argue, this creates a particular role for public banks, able to steer finance towards long-run projects, leverage private capital and stimulate multiplier effects. Taxation policies need to incentivise long-term investment.

Critically, as Mazzucato shows, innovation also needs well-funded public research and development institutions and strong industrial policies. These need to be directed across the entire innovation chain, not only in the classic 'public good' area of basic science. A crucial recognition is that innovation has not only a rate, but also a *direction*.[49] Historically, that direction has often been determined by 'mission-oriented' public policies, which have steered both public and private investments into new fields. During the mass production era, as Perez notes, it was policies around suburbanisation that allowed the new technologies of mass production to be fully diffused and deployed. Mazzucato observes that public funding drove both the IT revolution and other fields such as bio- and nano-technologies and today's green technologies.[50] Each of these has involved both supply-side and demand-side policies, in which new markets as well as new products have been created and public investment has 'crowded in' private.

By setting societal missions, and using their own resources to co-invest with long-term capital, governments can do far more than 'level the playing field', as the orthodox view would allow. They can help *tilt* the playing field towards the achievement of publicly chosen goals. Just as the creation of the welfare state in the postwar period, and the information technology revolution in the decades around the turn of the century, unleashed new waves of economic growth and widened prosperity, so new missions today have the potential to catalyse new innovation and investment. Foremost among them must be the transformative challenge of reducing and eventually eliminating greenhouse gas emissions to limit dangerous climate change, and of constraining the economy's wider environmental impacts within biophysical boundaries. As Perez argues, there is particular potential for such a 'green' direction, allied to the continuing development of information and communications technologies, to drive a new wave of structural transformation and growth.

Recognition of the role of the public sector in the innovation process informs the third key insight. This is that the creation of economic value is a collective process. Businesses do not create wealth on their own. No business today can operate without the fundamental services provided by the state: schools and higher education institutions, health and social care services, housing provision, social security, policing and defence, the core infrastructures of transport, energy, water and waste systems. These services, the level of resources allocated to them and the type of investments made in them, are crucial to the productivity of private enterprises. The private sector does not 'create wealth' while taxpayer-funded public services 'consume' it. The state does not simply 'regulate' private economic activity. Rather, economic output is *co-produced* by the interaction of public and private actors—and both are shaped by, and in turn help to shape, wider social and environmental conditions.

Keynes' analysis of the business cycle was crucial in this regard.[51] His key insight was that private investment was both too volatile and too procyclical. It reinforces its own tendencies both to boom and slump. Government investment is thus needed not just to stabilise aggregate demand when spending is too low, but also to stimulate the 'animal spirits' of the business sector, which invests only when it is confident of future areas of growth. This point is about much more than the herd and bandwagon behaviour of the financial markets, as some have interpreted it.[52] It makes the fundamental case for public investment as a means of creating economic opportunities and thereby increasing the willingness of firms to invest. As Zenghelis argues, the creation of expectations about future growth is a crucial role for government, and not just during downturns. It is why mission-oriented innovation policy—bringing Keynes and Schumpeter together—has such an important role to play in driving stronger economic performance. Indeed, Keynes argued that the 'socialisation of investment'—which, as Mazzucato suggests, could include the public sector acting as investor and equity-holder—would provide more stability to the investment function and hence to growth.[53]

It is because public expenditure is critical to the co-production of the conditions for growth, as Kelton highlights, that the austerity policies which have reduced it in the period since the financial crash have proved so futile, increasing rather than diminishing the ratio of debt to GDP. And as Wray and Nersisyan emphasise, the endogenous nature of money created by 'keystrokes' in the banking system gives governments far greater scope to use fiscal policy in support of economic growth than the orthodox approach allows.

So the size and functions of the state matter profoundly to the performance of capitalist economies. In orthodox economic commentary it is frequently asserted that the role of the public sector should be minimised in order to free private enterprise from the 'dead hand' of regulation and the perverse impact of 'crowding out'. In fact, successful economies have almost

all had states actively committed to their development.[54] This is not just about the role of the state in providing or co-investing in infrastructure (as is sometimes conceded even by those otherwise sceptical of public investment), though this is indeed important. Its role in innovation is also key, as we have seen. At the same time, the development of a skilled and adaptive labour force requires deep investment in education, training, health, childcare and social care. These functions cannot simply be outsourced or privatised—as Crouch shows, when this is done the goal of greater competition almost always degenerates into private oligopoly, where public purpose is lost, and corporate political influence increases. We need to acknowledge, rather, the interdependence of private enterprise and the public sector; of market and non-market activities.

This has an important implication for the role of taxation. The orthodox economic view characterises taxation as an essentially negative activity in which the value generated by private firms is confiscated by the state. But understanding the role of the public sector in the co-production of economic output allows a more profound perspective. Taxation is the means by which economic actors pay the public sector for its contribution to the productive process. The orthodox model claims that reducing the share of taxation in overall economic output will tend to strengthen growth. If taxation is used productively by an active public sector, the opposite can be the case.

The collective nature of capitalist production makes the distribution of income and wealth an important variable for growth. In the orthodox model the rewards to labour and capital are believed to reflect their (marginal) productivity. But as Stiglitz argues, this theory cannot explain the dramatic growth in inequality over recent decades. It is evident, rather, that shareholders and senior executives—particularly in the financial sector—are extracting unearned rent from the value firms produce. And as Thomas Piketty has shown, the inheritance of capital (particularly land and property), whose increase in value outpaces that of the economy as a whole, skews the overall distribution of wealth far away from any notion of earned productivity.[55] This has a profound effect on the fairness and inclusivity of today's economies. But it also negatively impacts on growth itself. There is striking evidence—now gathered and acknowledged by the OECD and IMF—that economies with more equal distributions of income and wealth have stronger and more stable economic growth than those with greater inequality.[56] Redistributive policies which reduce inequality are found to have in general a positive impact on growth.[57]

This creates a powerful case for the rebalancing of the distribution of earnings between capital and labour. Employees have in effect become too weak, as trade unions have lost powers and membership, and deregulated, 'flexible' labour markets have allowed employers to bargain wages and working conditions down. Crucially, as experience of legal minimum wages has shown, raising wages tends to force firms to invest in improving productivity, which strengthens economic performance.[58] Public policy

therefore has an important role in regulating labour markets, promoting both trade union membership and employee ownership of capital, and managing markets in housing and land. It should also ensure progressive tax systems: of wealth as well as income, and of corporate as well as individual taxation.

One further aspect of co-production, with important distributional implications, is also critical. All economies operate within biophysical systems. From an ecological point of view, economic activity generates value by using material resources and energy which are subsequently returned to the environment as waste, in a thermodynamically more disordered (entropic) state.[59] Economic growth can derive from expanding the use of biophysical resources, or from an increase in the economic value generated per unit of throughput. Today, with many of the natural environment's biophysical functions at or close to their safe limits, it powerfully matters—not least to the distribution of wealth between present and future generations—which of these predominates. In the context of dangerous climate change, as Zenghelis argues, the centrality of carbon to industrial economies makes an understanding of structural change—not just corrections to marginal market failures—particularly vital to economic analysis.

These three insights therefore have profound implications for how we think about economic policy-making. Public policies are not 'interventions' in the economy, as if markets existed independently of the public institutions and social and environmental conditions in which they are embedded. The role of policy is not one simply of 'correcting' the failures of otherwise free markets. It is rather to help create and shape markets to achieve the co-production, and the fair distribution, of economic value. Economic performance cannot be measured simply by the short-term growth of GDP, but requires better indicators of long-term value creation, social well-being, inequality and environment sustainability.[60]

Western capitalism has not been functioning well in recent years. Mainstream economic policies, reflecting an outdated economic orthodoxy, have proved themselves unable to set it on a new course. We hope the ideas set out in this book show that there is nothing inevitable about this failure. A more innovative, sustainable and inclusive economic system is possible. But it will require fundamental changes in our understanding of how capitalism works, and how public policy can help create and shape a different economic future.

## Notes

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