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## The Times They Are A-Changing? Exploring the potential shift away from the neoliberal political-economic paradigm

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### The Times They Are A-Changing? Exploring the potential shift away from the neoliberal political-economic paradigm

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#### Abstract

Modern economic history can be roughly split into different eras in which certain sets of ideas dominate politics and policy-making. This paper seeks to understand if a shift in the 'political-economic paradigm' is currently under way by inspecting the state of debates across a range of economic policy areas. It introduces the concept of 'orthodox', 'modified' and 'alternative' paradigms, corresponding to the status quo, its modification in the face of disruption or changed political goals, and a fundamental break from that status quo, respectively. Its central conclusion is that a significant shift is under way in many economic policy areas in many mainstream economic institutions. This shift has mainly occurred from 'orthodox' paradigm approaches – those that might broadly be described as based on neoclassical principles – to a 'modified' approach that alters the neoclassical approach in many ways but maintains its fundamental basis. Little to no movement towards what might be described as truly 'alternative' paradigm approaches is yet under way, though some mainstream institutions are exhibiting openness to these ideas. As such, an overall paradigm shift away from the dominant neoliberal paradigm is not yet underway.

**Keywords:** political-economic paradigm; neoliberalism; heterodox economics

**JEL Classifications:** B20, B25, E00, H10, P16, P50

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## Executive summary

Modern economic history can be roughly split into different eras in which certain sets of ideas dominate politics and policy-making. These ‘political-economic’ paradigms hold great sway over the practice of economics by governments and other leading institutions and over politics in general. In many nations, particularly the USA and UK, ‘paradigm shifts’ from one era to another occurred around the end of the Second World War and in the wake of the economic crises of the 1970s, representing a fundamental break from the political-economic approaches of the status quo. Economic and political conditions since the financial crisis in 2008 suggest the possibility of a new paradigm shift away from the dominant approach, sometimes referred to as ‘neoliberalism’.

This paper seeks to understand if such a shift is under way by inspecting the state of debates across a range of economic policy areas. To do so, we introduce the concept of ‘orthodox’, ‘modified’ and ‘alternative’ paradigms, corresponding to the status quo, its modification in the face of disruption or changed political goals, and a fundamental break from that status quo, respectively. The shift from an orthodox paradigm to a modified version or a fundamentally new set of approaches is manifested in a change in the objectives, analytical frameworks and policies adopted by key governments and institutions across a range of policy areas. We therefore apply our characterisation of different paradigms to several policy areas in a number of major governing and multilateral institutions, in order to understand whether and how far such changes have occurred or are occurring.

Our central conclusion is that a significant shift is under way in many economic policy areas in many mainstream economic institutions. This shift has mainly occurred from ‘orthodox’ paradigm approaches – those that might broadly be described as based on neoclassical principles – to a ‘modified’ approach that alters the neoclassical approach in many ways but maintains its fundamental basis. Little to no movement towards what might be described as truly ‘alternative’ paradigm approaches is yet under way, though some mainstream institutions are exhibiting openness to these ideas. As such, an overall paradigm shift away from the dominant neoliberal paradigm is not yet underway. More work is needed to understand the shift process in other economic institutions, including at local level and in the developing world, and within institutions themselves.

## **Table of Contents**

1. Introduction
2. Paradigm concepts: orthodox, modified and alternatives
3. Paradigms by policy area
4. Analysis
5. Conclusion and recommendations

References

## 1. Introduction

Modern economic history can be roughly split into different eras in which certain sets of ideas dominate politics and policy-making. These 'political-economic' paradigms hold great sway over the practice of economic policy by governments and other leading institutions and over politics in general. In many nations, particularly the USA and UK, 'paradigm shifts' from one era to another occurred around the end of the Second World War and in the wake of the economic crises of the 1970s, representing a fundamental break from the political-economic approaches of the status quo. Economic and political conditions since the financial crisis in 2008 suggest the possibility of a new paradigm shift away from the dominant approach, sometimes referred to as 'neoliberalism'.

This paper seeks to understand if such a shift is under way by inspecting the state of debates across a range of economic policy areas. To do so, we introduce the concept of 'orthodox', 'modified' and 'alternative' paradigms, corresponding to the status quo, its modification in the face of disruption or new political goals, and a fundamental break from that status quo, respectively. The shift from an orthodox paradigm to a modified version or a fundamentally new set of approaches is manifested in a change in the objectives, analytical frameworks and policies adopted by key governments and institutions across a range of policy areas. We therefore apply our characterisation of different paradigms to several policy areas in a number of major governing and multilateral institutions, in order to understand whether and how far such changes have occurred or are occurring. Our central conclusion is that a shift from the 'orthodox' to a 'modified' paradigm has occurred or is under way in many economic policy areas in at least some mainstream economic institutions. But, perhaps unsurprisingly, there is little evidence in most fields of any more radical change to 'alternative' paradigms.

In part 2 we review theoretical approaches to understanding how ideas change and introduce our orthodox, modified and alternative paradigm schema. In part 3 we characterise orthodox, modified and alternative approaches across a range of policy areas, and seek to understand the state of debate within major economic policy institutions, including the IMF, OECD and domestic economic policymaking institutions, such as the Bank of England and the German Federal Ministry of Finance, drawing on a literature review and interviews with those working in these institutions. In part 4 we analyse our findings, drawing conclusions as to the overall state of a contemporary paradigm shift and barriers to change, and make recommendations for further work. Part 5 concludes.

## 2. Paradigm concepts: orthodox, modified and alternatives

Modern economic history can be roughly split into different eras in which certain sets of ideas dominate politics and policy-making. We shall refer to a dominant group of ideas as a 'political-economic paradigm'. Such paradigms generally encompass:

- A set of **political and/or economic goals**, often responding to major problems and challenges, which are regarded as important in policy-making and for wider society
- A **general analytical and theoretical framework** for understanding the way economies and societies work, most of which sits in the academia
- A **public narrative and language** which describes and justifies the goals and analytical framework
- A set of **principal economic and social policies**, based on the analytical framework, which will achieve the goals and overcome the identified problems

Political-economic paradigms can exert a powerful influence over academic, political media debates, and over the institutions of policy-making, both national and international. Over the last hundred years, Western political economy has broadly experienced two major periods of breakdown and transition from one politico-economic paradigm to another<sup>1</sup>:

- **From laissez-faire to the post-war consensus:** The first breakdown and transition took place between the Wall Street Crash of 1929 and the Great Depression of the 1930s and the creation of the Bretton Woods institutions and welfare states after World War Two. This led to a forty-year period of mainly Keynesian economic orthodoxy and policy approaches often described as the 'post-war consensus' in Britain, and coinciding with 'les Trentes Glorieuses' in France and the 'Wirtschaftswunder' in Germany.
- **From the post-war consensus to neoliberalism:** The second breakdown and transition took place between the currency and oil shocks of the early 1970s and the adoption of free market economic policies in the 1980s. This led to the period of free market economics variously referred to as 'neoliberalism' or 'market fundamentalist' from the 1980s to the present day<sup>2</sup>.

### Theoretical models of paradigm change

Each period of change was characterised by a series of economic and political crises, the failure of dominant orthodox economic ideas, policies and narratives to explain and respond to them, and the resultant displacement of the orthodoxy by an alternative approach. A body of literature has sought to understand these processes of major change in social science. This literature is heavily influenced by Thomas Kuhn's theory of paradigm shifts in the natural sciences. This argues that change occurs when two conditions are met<sup>3</sup>:

1. There is a critical mass in the number or importance of 'anomalies' which contradict the dominant paradigm;
2. An alternative theory emerges that better explains the prevailing evidence.

Imre Lakatos built on these ideas, arguing that changes in science can be seen in terms of 'research programmes' that are either 'progressive' or 'degenerating'<sup>4</sup>. Progressive programmes advance new theories and adopt ideas that better explain reality. In contrast, degenerating programmes persist with old theories and ideas, despite their failure to explain the available evidence, and, in doing so, eventually abdicate their previous role as a progressive programme. In Lakatos' conception, degenerating programmes can have undue staying power, enjoying an incumbency advantage underpinned by the vested interests of leading scientists and institutional inertias. A shift in paradigm only occurs when progressive programmes gather sufficient support to overcome the hold of a degenerating programme and a tipping point is reached, after which the old programme is superseded.

While providing useful heuristics, these seminal scientific theories need careful application in the field of economics and public policy, which is fundamentally uncertain and in which hypotheses can never be irrefutably falsified. Economic policy is developed through a process of political choices and 'social learning' in which policy-makers decide on new goals and methods with only partial reference to academic theory or empirical evidence. The inherent uncertainty of economic prediction and the deeply political nature of policymaking makes it easier for degenerating programmes to retain their incumbency advantage. Path dependency is further strengthened by the influence of vested interests, which help to shape the interpretation of external shocks and lend support to degenerating over progressive programmes.

Considering these factors, Peter Hall argued that economic policy can exhibit three 'orders' of change, increasing in their magnitude<sup>5</sup>:

1. Adjustment of an existing policy;
2. A change in the policy;
3. A change in the goals of policy altogether.

In Hall's conception, it is the third order of change which corresponds to our definition of a paradigm shift in the politico-economic orthodoxy.

### **Characterising the shift to the neoliberal paradigm**

Similar patterns of change can be observed in both the politico-economic paradigm shifts which occurred in the 20<sup>th</sup> century. Here we use the theories described above to set out the key characteristics of the shift process, illustrated by the transition from the post-war paradigm to neoliberalism in the 1980s. The characteristics of paradigms, the timing of their life-cycle and the shift process differs on a country-by-country basis, with observable similarities between some nations. As such, we use the Anglo-American experience as an illustrative example of a shift process.

1. **The prevailing orthodoxy.** During the post-war years, the stable backdrop provided by rising economic growth and incomes cemented the social democratic consensus into a Kuhnian 'worldview'. Within economic policy, Keynesian demand management theory led to the targeting of full employment as the primary indicator of economic success. By the 1960s, policy-makers were placing considerable weight on the Phillips Curve—the

apparent trade-off between unemployment and inflation—to guide the management of the economy. By adjusting interest rates and the overall fiscal stance, governments could strike an appropriate balance between low inflation and full employment. At the same time the fixed exchange rate regime of the Bretton Woods settlement and tightly managed financial regulation (over international capital flows, for example) provided stable conditions for the growth of international trade.

2. **Economic shocks and crisis.** In the early 1970s a combination of emergent and longer-term problems precipitated a series of crises for the post-war consensus. The breakdown of the international monetary order in the wake of President Nixon's decision to take the US dollar off the gold standard led to a deterioration in several countries' balance of payments positions leading to increases in inflation. Soon after, the decision by oil producers, organised through the Organisation of Arab Petroleum Exporting Countries (OAPEC) cartel, to raise oil prices added to the inflationary shock, precipitating recessions and a major increase in unemployment in almost all oil importing nations. In response to the persistence of 'stagflation' - simultaneously high inflation and unemployment - governments continued to enact orthodox policies, including price and wage controls, but with little success. In the UK in particular, a long-term decline in the competitiveness of significant industrial sectors (some of them publicly-owned) and poor industrial relations exposed severe weaknesses in the productive capacity of the economy.
3. **Breakdown and transition in orthodoxy.** The continuing economic crisis undermined the orthodox Keynesian approach to economic policy. The phenomenon of stagflation contradicted the Phillips Curve, while the failure of prices and incomes policies to control inflation, or currency devaluation to restore competitiveness, left few available policy options within the Keynesian framework. In the UK, the industrial policies which had been designed to strengthen manufacturing industries in the 1960s and 70s had clearly failed to do so. While corporatist models of industrial relations had raised the labour share of national income, aggregate productivity had not increased. Together, a critical mass of Kuhnian anomalies had emerged, leading to the degeneration of the incumbent politico-economic paradigm. At the same time, an alternative 'progressive programme' was developing, explicitly as a counter-movement to Keynesian collectivism. The ideas of monetarism, new classical economics and free market 'neoliberalism' had been growing since the 1930s. As politicians and policy-makers cast around for solutions to the crisis, the proponents of these new approaches seemed to offer a route out of economic and political instability.
4. **New economic policy.** While the support of policymakers coalesced around the emergent approach in the late 1970s, it was the elections of Margaret Thatcher and Ronald Reagan in 1979 and 1980 which marked the emergence of a new, distinct paradigm. To a lesser extent this new paradigm also entered into German politics with the election of Helmut Kohl in 1982, and into French politics with the change in economic policy after the short 'socialist experiment' under President Mitterrand in 1981-82. These changes of government, especially in the US and in the UK, precipitated a 'third order' change in

policy, switching the principal object of macroeconomic policy from unemployment to inflation and utilising a new set of tools, including control of the money supply. While monetarism was quietly modified and then largely abandoned, the wider neoliberal worldview took hold. The economic role of the state was drastically diminished, largely being confined to a guarantor of stable economic conditions upon which a private market economy could thrive. The goals and methods of economic policy were redefined, with the significant reduction of taxes and government spending, the deregulation of markets—especially in finance—and a radical reduction in the power of trade unions in the labour market.

### **Orthodox, modified and alternative paradigms**

The conservative governments of the 1980s were mostly defeated in the following decade, replaced by centre-left governments that made significant changes to the economic policies of their predecessors. Yet each of these new governments retained key elements of the neoliberal consensus of the previous decade. Indeed, it has been widely argued - despite their own claims that they were following a new, 'Third Way' approach - that the policies of the social democratic governments of the late 1990s and 2000s were essentially continuations of the neoliberal project<sup>6</sup>.

Yet it is hard to sustain the claim, for example, that the New Labour administrations of Tony Blair were simply Thatcherite governments in disguise. In fundamental respects, they broke with the conservative consensus: public spending was dramatically increased to pay for the overwhelming policy priority of improving public services; welfare spending rose considerably, particularly through increases in child benefit and childcare provision, pensions and in-work tax credits; and major changes were made in areas such as climate change and energy policy. Yet at the same time many key features of the neoliberal consensus were retained. Privatisations were continued, and further developed through the outsourcing of public sector functions. Broadly speaking the regulatory agenda in financial services and other business sectors was left unchanged. There were no reversals of trade union law or the 'flexible' labour market. Until a significant shift after the financial crisis, direct interventions in private sector investment through a more active industrial strategy were eschewed.

As such it may be useful to characterise the social democratic governments of the period as, to varying extents, executing a 'modified' version of the neoliberal paradigm rather than simply sustaining the entire trajectory of its policy programme. The idea of modification allows for the fact that change can and does occur in the nature of a paradigm, without it being replaced altogether. Using this conception, we can define a degenerating orthodoxy as the 'orthodox paradigm' and an emergent, progressive orthodoxy as the 'alternative paradigm'. The alternative paradigm can only be defined as such if it represents a fundamental shift away from the old, changing the objectives of the central economic policies, as per Hall's conception. A 'modified paradigm' can then be defined as representing an adjustment in existing policies or a change in a number of the policies of the orthodox paradigm, correcting the orthodoxy without fundamental reform.

Across the paradigm shift timeline above, a modified paradigm did not emerge in response to challenges to the orthodoxy over the period of the post-war consensus, with the orthodox suite of

economic policies remaining the same throughout, with little to no modification. In contrast, the approach of 'Third Way' centre-left governments in the 1990s can be seen as introducing elements of a modified paradigm, adjusting and even replacing the policies of governments which had adopted the previous orthodox paradigm.

Under these definitions, the existence of timing of a shift can vary by policy area and practising institution. For example, under the New Labour government in the UK, healthcare spending was greatly increased, breaking from the approach under previous Conservative administrations, though the continued growth of marketisation and outsourcing to the private sector, including through the Private Finance Initiative, ensured health policy retained the central tenets of the previous approach. As such, we can characterise healthcare policy under the British government as having undergone a shift to a modified paradigm, relative to the previous, orthodox paradigm. In contrast, a new paradigm in healthcare policy could have constituted a range of different approaches that broke from all the central tenets of the orthodox paradigm.

The totality of changes across a range of policy areas determines the character of the overall political-economic paradigm and, therefore, whether a shift has occurred - either to a modified paradigm or an alternative paradigm. Under these definitions, the new, replacement paradigm could re-adopt the approaches of previous paradigms – an alternative paradigm does not always (or often) draw on genuinely 'new' ideas. As such, the dividing line between modification and replacement can always be contested.

The picture is even more complex for shifts within individual policy areas, which make up the overall paradigm, than for an overall shift in paradigm itself. Shifts within individual policy areas – from monetary policy to corporate governance – are highly contingent on the particular political and economic circumstances affecting the policy area, as well as those events demanding policy responses and shaping the debate and the personalities and institutions involved in developing and executing policy.

The sum of the alternative paradigm approaches across each policy area constitutes the makeup of an overall paradigm shift, which is often only recognised retrospectively. For example, the adoption of public choice theory, regulatory capture theory and fiscal rectitude in the 1980s constituted a shift to an alternative paradigm in each given policy area, away from the old Keynesian approach, and, in sum, constituted an overall paradigm shift. It was only after these changes occurred that the emergence of a new paradigm was recognised. Therefore, in an attempt to understand the state of any overall paradigm shift, we apply the orthodox, modified and alternative framework to a range of policy areas in the next chapter in an attempt to characterise the shift process within each.

### 3. Paradigms by policy area

In this section we apply the framework in the previous chapter by characterising different economic paradigms across ten policy areas. For each policy area, we have attempted to set out at least three differing perspectives covering ‘orthodox’, ‘modified’ and ‘alternative’. For each paradigm, we briefly outline the theoretical underpinnings and summarise any key policy prescriptions. In general:

- **The orthodox paradigm** draws on a purist interpretation of neoclassical economics;
- **The modified paradigm** recognises the failure of some neoclassical assumptions but does not present a radical break from the neoclassical framework;
- **Alternative paradigms** are those rooted in a more radical reappraisal of economic theory, often drawing on insights from across various heterodox schools of thought.

Importantly, we use the term ‘alternative’ in a relative not absolute sense; some are not necessarily new ideas but are older ideas experiencing a revival in interest. Furthermore, in choosing a particular view as a alternative paradigm, we have used illustrative examples, drawing on some less orthodox approaches being discussed at mainstream governing or multilateral institutions. These institutions are the object of analysis in the next chapter, where we seek to understand the process of shift, if any, in these organisations. Those we choose as alternative paradigms are, of course, a limited sample from a vast range of approaches that could constitute a new paradigm, drawing on diverse political, theoretical, cultural, geographical and practical foundations. In some cases, we characterise a number of alternative approaches. Furthermore, the characterisation of orthodox and modified as well as alternative is country-dependent; the German experience is different to the British, as we shall explore.

The choice of policy areas corresponds to those areas which are given most attention and/or have identifiable departments within the institutions under inspection in the next chapter. Characterisation of orthodox, modified and alternative is based on a literature review, drawing on the statements and reports of mainstream economic institutions and their leaders and research staff. As such, while not a comprehensive study, we believe there is value in summarising the state of ideas across a range of policy areas that make up an overall political-economic paradigm.

For each policy area, the ‘orthodox’, ‘modified’ and ‘alternative’ paradigms are summarised in the boxes at the beginning of each section and then discussed in more detail.

We also explore the extent to which different economic institutions may or may not be changing their views on economic analysis and policy, by highlighting some examples of how institutions have changed over time.

We recognise that there is a plurality of views across staff and various sub-departments within institutions, and that our assessment will always be a subjective approximation. Furthermore, a given institution may not have a view on all policy areas. Our aim is not to pinpoint exact policy positions of different organisations, but to highlight examples of broad observable shifts in

intellectual leadership and influence. We also recognise that institutions are shaped by historic decisions, and that shifts tend to happen incrementally within a historical path dependency. We therefore base our assessment on the relative direction of travel, rather than the overall position taken on any given policy area. The exercise has been informed by a literature review and anonymous surveys completed by individuals within organisations.

### 3.1. Trade policy

**Orthodox paradigm:** Free trade is a positive sum game that benefits everyone. Barriers to trade should be reduced as much as possible through agreements or trade deals.

**Modified paradigm:** Trade increases GDP but can also have negative distributional consequences. While barriers to trade should be reduced, policy should seek to mitigate adverse distributional effects and share the benefits of free trade more widely.

**Alternative paradigm:** Trade can be advantageous, but too often the aggregate benefits come at the expense of specific sectors and geographical communities where employment is displaced through overseas competition, or of the natural environment. Modern trade agreements are not primarily about increasing trade but about reducing regulations on the protection of labour, environment and consumers, and increasing power of multinationals corporations. Trade policy should instead stimulate a 'race to the top' on standards, rather than a 'race to the bottom'.

The widespread support for free trade among economists stems from the theory of comparative advantage. First elaborated in 1817 by the classical economist David Ricardo, the theory states that it is not the absolute differences in countries' abilities to produce certain goods and services that determine the benefits of trade, but rather the relative differences<sup>7</sup>. Thus, even where a country can produce all goods more efficiently than any other country, it will still be welfare enhancing to trade with other countries.

Ricardo's theory of comparative advantage was subsequently adopted into neoclassical theory and reformulated to fit into the marginal analysis framework, and went on to form the basis of neoclassical trade theory. Comparative advantage has been variously described as the "deepest and most beautiful result in all of economics"<sup>8</sup> and "an unassailable intellectual cornerstone"<sup>9</sup>. Paul Samuelson, often referred to as the father of modern economics, once remarked that comparative advantage is the only proposition in social science that "is both true and non-trivial"<sup>10</sup>. This basic formulation of comparative advantage – that free trade is a positive sum game that benefits everyone – is what we refer to as the **orthodox paradigm**.

While it is widely accepted that trade is welfare enhancing, a growing body of evidence has found that the process of trade liberalisation may have adverse distributional consequences, for example by negatively impacting some industries or jobs in specific locations. As a result, many economists acknowledge the need for policies that address these negative side effects which are

generally viewed as being temporary ‘frictions’. These include “safety net” policies which compensate those subject to job loss through, for example, unemployment benefits, and “trampoline” policies that actively help people find new jobs or reskill<sup>11</sup>. This is what we described as the **modified paradigm**.

However, neoclassical trade theory has been subject to a number of theoretical and empirical criticisms. For example, some economists have argued that the theory of comparative advantage relies on a set of assumptions which do not hold in the real world<sup>12 13</sup>. It has also been argued that the supposed benefits of trade liberalisation are not borne out by empirical evidence. For example, Dani Rodrik has noted that “there are no examples of countries that have achieved strong growth rates of output and exports following wholesale liberalisation policies”<sup>14</sup>, and “there is no convincing evidence that trade liberalisation is predictably associated with subsequent economic growth”<sup>15</sup>. Similarly, Ha-Joon Chang has argued that Britain, the US, Germany, France, Sweden, the Netherlands, Switzerland, Japan, South Korea, and the most recent ‘Asian Tigers’ all developed using interventionist trade and industrial policies to promote and protect their own industries, in contrast to free trade theory<sup>16</sup>.

Economists that are critical of the free trade agenda generally acknowledge that trade can create mutually beneficial gains, but recognise that if pursued dogmatically it can cause more harm than good<sup>17</sup>. Modern trade deals are criticised for being less about increasing mutually beneficial trade, and more about increasing power of multinationals corporations, stimulating a “race to the bottom” in environmental and labour standards<sup>18 19</sup>. These economists typically stress the importance of allowing developing countries to pursue policies that promote development and industrialisation, such as infant industry promotion tools, including tariffs and subsidies<sup>20</sup>. Some have also argued that rather than focusing narrowly on commercial interests, free trade agreements should also promote human rights, labour standards and environmental protections, stimulating a 'race to the top' rather than a 'race to the bottom'<sup>21</sup>. This is what we refer to as an **alternative paradigm**.

The near universal acceptance of the theory of comparative advantage led to strong support for the ‘orthodox’ paradigm among academic economists over the past 30 years – a finding that is supported by numerous surveys<sup>22 23 24</sup>. This in turn has had a strong influence on economic policy making, notably through the trade liberalisation programmes of the General Agreement on Tariffs and Trade (GATT) and the World Trade Organisation, and the structural adjustment programmes of the International Monetary Fund and World Bank<sup>25</sup>. These initiatives have encouraged nations to liberalise trade by lowering tariff and non-tariff barriers, reducing or eliminating subsidies, and adhering to international rules on intellectual property rights, customs procedures and the treatment of foreign investors<sup>26</sup>. Support for free trade has also led to the formation of many bilateral and multilateral trade agreements. The justification for these agreements has generally been to reduce barriers to trade, enabling countries to reap the benefits of comparative advantage.

While major international policy institutions such as the IMF, World Bank, OECD and World Trade Organisation have long acknowledged that trade liberalisation can have distributional consequences, these were often overlooked throughout the 1980s and early 1990s on the basis

that the net gains were seen to be so large. Since then, however, distributional consequences have received increasing attention, particularly since 2016 as dislocation from global trade has been cited as key reasons for political turbulence in many countries. This has contributed to a notable shift in rhetoric among the leadership of major policy institutions as well as more emphasis on policies which seek to mitigate adverse distributional effects and share the benefits of free trade more widely. For example, in 2016 Maurice Obstfeld, the Chief Economist at the IMF, wrote that<sup>27</sup>:

*“Trade enables a country to use its resources more efficiently. But the gains from that greater efficiency may be divided unevenly among a country’s citizens, so that some of them lose out. The result can be greater income inequality and disrupted lives... [T]he economic case for government intervention to hasten movement of workers to new occupations is compelling whether the need arises from trade or other change in the economy.”*

In June 2016 Catherine Mann, chief economist at OECD, said<sup>28</sup>:

*“Trade enhances growth. Trade enhances choice for consumers. It allows for bigger market places for business to exploit economies of scale. It adds to productivity growth. But it’s very clear that there are losers from trade as well. And we have to acknowledge that straight away and implement much more reasonable policies such that those that gains from trade are able to get the benefits, and those who lose from trade are not bearing the entire burden. We haven’t done a good job with that.”*

In 2018 the World Bank published a briefing that stated<sup>29</sup>:

*“There are also distributional consequences of increasing trade. While on aggregate, economies gain enormously from increasing trade, as competition increases and many good jobs are created in export sectors—the wages of workers in import-competing industries may suffer or some workers may lose their jobs.”*

In 2017 World Trade Report, the World Trade Organization’s noted that<sup>30</sup>:

*“trade opening need not produce net losers, if individuals are compensated.”*

We therefore conclude that a shift has taken place across the international policy institutions in recent years away from the ‘orthodox’ paradigm, where the emphasis was solely on reducing barriers to trade, towards the ‘modified’ paradigm which places more emphasis on mitigating adverse distributional effects and share the benefits of free trade more widely. However, this has not yet manifested itself in trade policy, with recent international trade agreements such as Comprehensive Economic and Trade Agreement (CETA) and Trans-Pacific Partnership (TPP) reflecting the ‘orthodox’ paradigm.

In the UK, the vote to leave the European Union in 2016 has put a renewed focus on trade policy. Despite proposing to withdraw from the EU's single market and customs union, the UK government maintains that it will "become the world's foremost champion of free trade" after leaving the EU<sup>31</sup>. In contrast, the election of Donald Trump in 2017 has led to a profound shift in trade policy in favour of protectionist measures, against the advice of most of the economics profession. This has included imposing new tariffs on imports from China, the EU, Canada and Mexico, raising fears of a new global trade war<sup>32</sup>.

### 3.2. Fiscal policy

**Orthodox paradigm:** Governments should seek to run a balanced budget over the course of the business cycle, and avoid running large fiscal deficits or high debt-to-GDP ratios, to assure financial markets of fiscal competence and therefore keep interest rates down.

**Modified paradigm:** Over the business cycle governments should aim to run a balanced current budget (the difference between day-to-day spending and income from taxes). Active fiscal policy should only be used to increase demand in situations where monetary policy is constrained in some way, such as when interest rates reach the lower zero bound, and only so long as the debt-to-GDP ratio is kept manageable.

**Alternative paradigm:** For sovereign, currency-issuing governments operating a floating exchange rate, fiscal policy should not be concerned with arbitrary targets around debt and deficits. A government can never be made to default on debts denominated in its own currency, and "not having enough money" is an unnecessary and self-imposed constraint which hampers the achievement of wider policy objectives. Instead the focus should be on sustaining demand and employment and managing inflation – with the resulting deficit or surplus a relatively insignificant residual rather than something to be targeted.

In the 1970s the failure of Keynesian economics to explain stagflation led to the growing influence of the New Classical and monetarist theories, led by American economists Robert Lucas and Milton Friedman. Both these theories view fiscal policy as an ineffective tool for promoting growth and employment, and instead promote 'fiscal discipline' – running a balanced budget over the course of the business cycle and avoiding running large fiscal deficits.

This new consensus was underpinned by two key theoretical insights. The first is the "crowding-out hypothesis", which states that government spending transfers scarce productive resources away from the private sector<sup>33</sup>. According to this theory, if an increase in government spending and/or a decrease in tax revenues leads to a fiscal deficit that is financed by increased borrowing, then this borrowing will increase interest rates by pushing up demand for limited loanable funds. This in turn will lead to a reduction in private investment, offsetting the fiscal stimulus. Eventually higher government spending needs to be funded by higher taxes which acts as a further squeeze on spending and investment by the private sector of the economy, while also burdening future generations for the benefit of current generations.

The second theory is 'rational expectations', developed by Robert Lucas in 1973<sup>34</sup>. The theory states that people make choices based on their rational outlook, available information and past experiences. In relation to fiscal policy, if the government sells debt to fund a tax cut or to increase expenditure, rational individuals will realise that at some future date they will face higher tax liabilities to pay for the interest repayments. As a result, they will reduce their own expenditure and increase their savings, thus offsetting the effect of the fiscal stimulus and rendering fiscal policy ineffective - an effect sometimes referred to as 'Ricardian equivalence'.

This approach to fiscal policy became increasingly influential in the 1980s and 1990s, and formed a key part of the so-called 'Washington consensus' which imposed fiscal discipline on developing countries via conditionality programmes attached to loans by the IMF and the World Bank<sup>35</sup>. This is what we refer to as the **orthodox paradigm**.

After the debates between the New Classical and New Keynesian economists in the 1980s and 1990s, the 'New Neoclassical Synthesis' emerged which combined neoclassical economics with Keynesian macroeconomics. Sometimes referred to as the New Keynesian (NK) school, this approach views the economy as a dynamic general equilibrium system that can deviate from an efficient allocation of resources in the short run because of sticky prices and other market frictions<sup>36</sup>. The NK model provides the theoretical foundation for much of contemporary mainstream macroeconomics. It states that control of inflation and the stabilisation of demand should be the realm of monetary policy, and that fiscal policy should focus ensuring stable tax rates consistent with the control of government debt<sup>37 38</sup>. The NK model leaves open the possibility of using active fiscal policy to increase demand in situations where monetary policy is constrained in some way, such as when interest rates reach the lower zero bound<sup>39 40</sup>. This consensus dominated in academia and central banks in the decades leading up to the financial crisis, and is what we refer to as the **modified paradigm**.

In recent years a relatively new school of thought has emerged which challenges the dominant New Keynesian view of fiscal policy. Sometimes referred to as Modern Monetary Theory (MMT), this school draws heavily on the post-Keynesian tradition and brings together ideas from economists such as Georg Knapp, A Mitchell Innes, Abba Lerner, Hyman Minsky and Wynne Godley among others. Prominent modern advocates include economists Randall Wray, Stephanie Kelton and Bill Mitchell, and financier Warren Mosler.

MMT posits that mainstream macroeconomics overlooks the monetary and fiscal policy implications of modern money systems. While in the past governments faced significant constraints imposed by the gold standard or fixed exchange rate regimes, today governments that are monetarily sovereign (i.e. that issue their own currencies and operate a floating exchange rate) are not revenue constrained as they were in the past. This is because, as issuers of their respective fiat-currencies, they can never "run out of money". Sovereign governments can never be made to default on debts denominated in its own currency, and "not having enough money" is an unnecessary and self-imposed constraint which hampers the achievement of wider policy objectives<sup>41</sup>.

Instead of being constrained by arbitrary targets around the government debt and deficit, MMT economists argue that government spending should aim to sustain demand and employment and manage inflation. MMT makes extensive use of the sectoral balances framework developed by British economist Wynne Godley to demonstrate that fiscal deficits are usually necessary to sustain demand in countries with current account deficits. Under this framework, targeting a fiscal surplus is not only undesirable, but can also be the cause of economic crises. As governments can always meet payments in its own currency, the threat from “bond vigilantes” acting to push governments towards default or the national debt growing to “unsustainable” levels is viewed as non-existent. The ability of governments to ‘print’ money is limited only by inflation, which depends on capacity constraints, wage conditions and other real economy factors. This is what we refer to as an **alternative paradigm**.

The election of Margaret Thatcher in 1979 heralded the arrival of what we describe now as the orthodox paradigm approach to fiscal policy in the UK, with a focus on lower taxes, tighter fiscal discipline and cuts to government spending. A similar philosophy underpinned Ronald Reagan’s approach to fiscal policy as US President, although in practice this was offset by the significant fiscal stimulus that resulted from steep increases in defense spending.

In Germany, ever since the passage of the Law on Budget Principles in 1969 government budgets at both the Federal and State (Länder) level were subject to a mandatory, standardized framework. Borrowing was not allowed to exceed the total expenditure set for investment, except under conditions of “sustained disturbance of macroeconomic equilibrium” (i.e., a prolonged, deep recession<sup>42</sup>).

The signing of the Maastricht Treaty in 1992 obliged EU member states to maintain fiscal discipline by keeping the fiscal deficit below 3% of GDP and government debt to below 60% of GDP<sup>43</sup> -- rules that were strongly influenced by orthodox paradigm thinking. However, the emergence of the New Keynesian school as the dominant macroeconomic paradigm in the 1990s, combined with the election of ‘Third Way’ social democratic governments, saw a gradual shift away from the orthodox paradigm towards the modified paradigm which saw demand management as primarily the realm of monetary policy but permitted government borrowing for public investment as well as for countercyclical spending where monetary policy was constrained in some way

When the Global Financial Crisis hit in 2007, many advanced economies including the UK, US and Germany implemented fiscal stimulus to offset reductions in demand, in line with New Keynesian prescriptions. Similarly, both the IMF and the OECD also initially advocated fiscal expansion. However, in 2010 the IMF and the OECD shifted their position by departing from the modified paradigm consensus and advocating fiscal consolidation when interest rates were still at the lower bound, which is more in line with the ‘orthodox paradigm’. For example, in 2010 the OECD recommended that<sup>44</sup>:

*“Budget consolidation to bring public finances onto a sound footing should be pursued actively from 2011 onwards in almost all OECD countries.”*

This shift was influenced by the fiscal crises in the euro area periphery economies, as well as an influential paper published in 2010 by Carmen Reinhart and Kenneth Rogoff which found that economic growth severely suffers when a country's public debt level reaches 90% of GDP<sup>45</sup>. At the same time, the election of new governments saw many countries shift away from countercyclical fiscal stimulus towards fiscal austerity. In the UK, reducing the fiscal deficit and balancing the budget has been the key aim of economic policy since the election of a Conservative-led government in 2010.

In Germany, the 'constitutional rule on federal indebtedness' (also known as the "debt brake") was introduced in 2011 which states that the federal and Länder governments must run balanced budgets as a fundamental principle<sup>46</sup>. This replaced the previous fiscal rule that permitted fiscal deficits to finance net public sector investment. There is therefore evidence that in both Germany and the UK, governments have shifted backwards from the modified paradigm back to the orthodox paradigm in recent years, and have remained there since.

However, in recent years both the IMF and the OECD have shown signs of reverting back to a more conventional 'modified' paradigm, supporting more active fiscal policy while interest rates are at the lower zero bound. This has partly been influenced by famous debunking of the Reinhart and Rogoff paper by economist Thomas Herndon in 2013, as well as a recognition that euro area concerns were specific to the eurozone monetary regime<sup>47</sup>.

For example, in 2016 the IMF acknowledged that<sup>48</sup>:

*"IMF advocacy of fiscal consolidation proved to be premature for major advanced economies, as growth projections turned out to be optimistic. Moreover, the policy mix of fiscal consolidation coupled with monetary expansion that the IMF advocated for advanced economies since 2010 appears to be at odds with longstanding assessments of the relative effectiveness of these policies... In articulating its concerns, the IMF was influenced by the fiscal crises in the euro area periphery economies ... although their experiences were of limited relevance given their inability to conduct independent monetary policy or borrow in their own currencies."*

In a high profile article called 'Neoliberalism: Oversold?' published in 2016, three IMF economists concluded that:

*"Faced with a choice between living with the higher debt—allowing the debt ratio to decline organically through growth—or deliberately running budgetary surpluses to reduce the debt, governments with ample fiscal space will do better by living with the debt".*

Similarly, in 2016 the OECD Chief Economist Catherine Mann said<sup>49</sup>:

*“there is room for fiscal expansion to strengthen demand in a manner consistent with fiscal sustainability... A commitment to raising public investment would boost demand and help support future growth”.*

### 3.3. Monetary policy

**Orthodox paradigm:** The goal of monetary policy should be price stability. This is most effectively achieved by an independent central bank controlling base interest rates to meet a target rate of inflation. Transparency of central bank decision-making ensures aligned expectations of market actors. Decisions around the creation and allocation of new broad money and credit in the economy should be left to the lending activities of commercial banks responding to market signals.

**Modified paradigm:** In normal times, price stability is most effectively achieved by an independent central bank controlling base interest rates to meet a target rate of inflation. But in times of crisis when interest rates are near zero (at the effective lower bound), central banks may use a wider range of tools to achieve monetary policy objectives. These include large scale asset purchases of government and corporate bonds via quantitative easing programmes; the provision of cheap liquidity to banks; and forward guidance. In pursuing its monetary policy objectives, the central bank should not seek to influence the allocation of capital in the economy.

**Alternative paradigm #1:** Credit markets are subject to multiple market failures which often result in a misallocation of capital and the formation of speculative asset bubbles. As well as setting base interest rates, policymakers should therefore seek to regulate the total quantity and allocation of new money creation by commercial banks through the use of credit guidance tools (also known as direct credit regulation, credit controls, the framing of credit and window guidance). Regulators should seek to restrict credit for speculative and unproductive purposes and promote allocation towards useful activities by imposing quantitative and qualitative credit controls.

**Alternative paradigm #2:** Setting base interest rates is an ineffective way to manage the macroeconomy because it is indirect and relies on uncertain distributional behaviour. Instead, governments should regulate the macroeconomy through active fiscal policy. For a currency-issuing government, there is no necessity to match fiscal deficits with bond-issuance, therefore governments should stop issuing bonds and instead finance fiscal deficits via Overt Monetary Financing (OMF). Base interest rates should be kept permanently at zero to accommodate this. Decisions around the creation and allocation of new broad money and credit in the economy should be left to the commercial banking sector operating under stricter public oversight and regulation.

**Alternative paradigm #3:** Commercial bank credit creation has is a major contributor to inequality and financial instability. The ability of commercial banks to create broad money in the

process of making loans should therefore be curtailed, and the power to create new money should be returned exclusively to the central bank. The central bank should inject all new money into the economy by financing government spending in place of taxes or borrowing, making direct payments to citizens, or making new loans through intermediaries such as banks or P2P lenders.

After the experience of the high inflation of the 1970s, a strong consensus emerged that the goal of monetary policy should be price stability. Beginning in the mid-1970s, many countries adopted targets for the growth of monetary aggregates in the belief that this was the best way to achieve price stability. Under this approach, central banks sought to control inflation by aiming for intermediate targets for rates of monetary growth that could be expected to deliver the desired inflation rate. Although this approach was successful in reducing inflation in some countries, persistent failures in hitting the monetary targets, and persistent instability in the relationship between monetary growth and inflation, led to the virtual abandonment of monetary targeting in most countries in the course of the 1980s<sup>50</sup>.

To overcome the shortcomings of monetary targeting, in the late 1980s many countries began to adopt inflation targeting. Under this approach, countries make an explicit commitment to meet a specified inflation rate target or target range within a specified time frame; regularly announce their targets to the public; and have institutional arrangements which ensure that the central bank is accountable for meeting the target—the key one being operational independence from the government<sup>51</sup>. Transparency of central bank decision making ensures aligned expectations of market actors.

Under inflation targeting, the main instrument used by central banks to control inflation is the manipulation of short term interest rates. Central banks set the base interest rate either by engaging in open-market operations (buying and selling government securities) or setting the discount rate (the rate at which the central bank lends money to commercial banks). The rationale controlling base interest rates is that this is an effective way of influencing aggregate demand. If the central bank decreases the base interest rate, this will lower market interest rates and stimulate investment, increasing aggregate demand and, in principle, inflation. The reverse should have the opposite effect<sup>52</sup>. Under this approach, decisions around the creation and allocation of new broad money and credit in the economy should be left to the lending activities of financial institutions operating in a competitive market. In the years before the global financial crisis, this approach to monetary policy formed a key pillar of the New Keynesian (NK) macroeconomic paradigm which dominated policymaking in most advanced economies. This is what we refer to as the **orthodox paradigm**.

After the Global Financial Crisis, central banks in advanced economies eased monetary policy by reducing interest rates until short-term rates came close to zero, which limited the option to cut policy rates further. At this point many countries faced what is often referred to as a 'liquidity trap' – where private demand is so weak that spending falls far short of what would be needed for full employment even when short-term interest rates are at zero<sup>53</sup>.

With the danger of deflation rising, there was a growing concern among mainstream macroeconomists and central bankers that unconventional monetary policies were required. These included large scale asset purchases of government and corporate bonds via quantitative easing programmes (especially in the United States, the United Kingdom, the Euro Area, and Japan); the provision of cheap liquidity to banks; and 'forward guidance'<sup>54</sup>. Some central banks also introduced negative interest rates, taking short-term rates below zero<sup>55</sup>. The aim of these policies was to stimulate demand in the economy.

In using these tools, central banks stressed that their actions were strictly monetary policy operations – they were designed to avoid a distortionary effect on the market which might influence the allocation of capital in the economy ('market-neutral' interventions). Most proponents of unconventional monetary policy maintain that these interventions are only temporary, and that the previous regime of inflation targeting will resume when interest rates rise above the zero lower bound<sup>56</sup>. This is what we refer to as the **modified paradigm**.

Some economists criticise the inflation targeting approach to monetary policy on the basis that it assumes that financial markets will allocate resources efficiently as long as central banks set interest rates appropriately. This in turn assumes that the money and credit markets are efficient and operate in equilibrium. However, critics point out that it is well documented that money and credit markets are subject to multiple market failures which often result in a misallocation of capital and the formation of speculative asset bubbles<sup>57 58</sup>. For this reason, throughout history many central banks, including the Bank of England in the 1960s and 1970s, have employed forms of direct credit regulation which seek to regulate the total quantity and allocation of new money creation by commercial banks. These policies have variously been called credit controls, the direction of credit, credit guidance, the framing of credit, window guidance or moral suasion<sup>59</sup>. Today some economists support the revival of direct credit controls as a major tool of monetary policy as a means of supporting economic growth and avoiding asset price inflation and banking crises<sup>60 61</sup>. This is what we refer to as **alternative paradigm #1**.

Another framework that has gained prominence in recent years is Modern Monetary Theory (MMT). Proponents of MMT view government bond issuance as a monetary rather than a fiscal operation. MMT economists maintain that the reason governments issue bonds is not to acquire funds to spend, but rather to keep the central bank reserve market in balance and meet the central bank's target interest rate. If the government did not match deficit spending (which adds reserves to the interbank system) with bond issuance (which drains reserves from the interbank system), reserves would build up in the system which would drive interest rates down to zero.

However, MMT economists believe that controlling interest rates is an ineffective way to manage the macroeconomy, because it is indirect and relies on uncertain distributional behaviour<sup>62</sup>. Fiscal policy is viewed as the preferred tool for managing demand and employment because it is direct and can create or destroy net financial assets with certainty, and does not rely on any distributional assumptions being made. Some MMT economists consider the practice of interest rate setting and government bond issuance to be a form of rent-seeking to the financial sector. As a result, many MMT economists support the idea of abolishing government bond issuance altogether,

instead financing fiscal deficits with the creation of central bank money via Overt Monetary Financing (OMF). In the absence of bond issuance or any other corresponding activity to drain reserves, base interest rates would have to be kept permanently at zero to accommodate this. For this reason, many MMT economists maintain that 'the natural rate of interest' is zero<sup>63</sup>. This is what we refer to as **alternative paradigm #2**.

In recent years there has also been a resurgence in support for the idea of 'full reserve banking' (sometimes also referred to as 'sovereign money'). Proponents of this view believe that credit creation by commercial banks is responsible for a wide range of problems ranging from rising inequality and financial instability, to high levels of debt and a lack of productive investment. It is argued that the ability of commercial banks to create new money should be curtailed, with responsibility for broad money creation lying solely with the central bank. Under such a system, decisions around the creation of new money would be made by the central bank who would aim to maintain price stability and promote economic growth. New money could be injected into the economy by financing government spending in place of taxes or borrowing, by making direct payments to citizens, by paying off outstanding debts, or by making new loans through banks or other intermediaries. Banks would be limited to playing a true intermediary role of matching savers and borrowers in the way that peer-to-peer lenders, such as Zopa, do today, without leveraging their balance sheets<sup>64</sup>. The idea has been popularised in recent years by the UK-based organisation Positive Money<sup>65</sup>. However, it also has a long heritage and has been supported by a range of eminent economists including, Milton Friedman<sup>66</sup>, Henry Simons<sup>67</sup>, James Tobin<sup>68</sup> and Irving Fisher<sup>69</sup>. This is what we refer to as **alternative paradigm #3**.

As noted above, from the 1990s, most central banks in advanced economies adopted inflation targeting as the primary instrument of monetary policy, relying on the manipulation of short-term interest rates to manage inflation and demand. This approach to monetary policy formed a key pillar of the New Keynesian macroeconomic paradigm which dominated policymaking in most advanced economies and international policy institutions (the 'orthodox paradigm').

When the Global Financial Crisis hit most central banks eased monetary policy by reducing interest rates until short-term rates came close to zero, which limited the option to cut policy rates further. Faced with getting stuck in a liquidity trap, many central banks resorted to unconventional monetary policies including large scale asset purchases of government and corporate bonds via quantitative easing programmes; the provision of cheap liquidity to banks; and 'forward guidance'<sup>70</sup>. Some central banks also introduced negative interest rates<sup>71</sup>. While the Federal Reserve and Bank of England introduced unconventional monetary policies in 2008 and 2009 respectively, the ECB was much slower to embrace it, only implementing negative interest rates in 2014 and QE in 2015. These policies were supported by the IMF, the Bank for International Settlements and OECD<sup>72 73 74</sup>.

However, it is generally maintained that these interventions are only temporary and will be unwound when interest rates rise above the zero lower bound, at which point the previous regime of inflation targeting will resume. We therefore conclude that there has been a notable shift across institutions from the orthodox paradigm towards the modified paradigm over the past decade.

### 3.4. Banking and finance

**Orthodox paradigm:** Increasing financial sector activity is beneficial, because more complete markets allocate capital more efficiently. Money is simply a “veil” over real economic activity, therefore financial sector activity can be excluded from economic models. Financial and economic crises occur as a result of external shocks, therefore regulation should focus on ensuring that individual firms are able to withstand shocks.

**Modified paradigm:** Growth in the financial sector is good only up to a point, after which it can become a drag on economic growth. The activities of the financial sector can create systemic risks and cause crises, therefore its activities should be included in economic models. Macroprudential regulation should be introduced to monitor risks building up in the financial system as a whole.

**Alternative paradigm:** Much of the financial sector's activity is focused on the extraction of short-term capital gains at the expense of long-term value creation – contributing towards destabilising booms and busts, rising inequality and a lack of productive investment. Financial innovations which do not have any clear social purpose should be prohibited, measures to limit harmful financial speculation (such as a financial transactions tax) should be introduced, and the incentives faced by banks and other institutions should be aligned with social and environmental priorities via regulation or different ownership models.

In the decades preceding the Global Financial Crisis, the mainstream consensus on banking and finance was underpinned by two key theoretical insights. The first was the fundamental theorem of welfare economics, demonstrated mathematically in 1954 by Kenneth Arrow and Gerard Debreu<sup>75</sup>, which states that markets operating under conditions of perfect competition will lead to a socially optimum allocation of economic resources (a ‘Pareto efficient’ outcome) – but only if markets are ‘complete’ (i.e. if there are markets in which to strike all possible desired contracts). Increased financial sector activity (‘financial deepening’) was therefore viewed as always beneficial, because it helps to complete markets and therefore allocate capital more efficiently.

The second theoretical insight was the Efficient Markets Hypothesis (EMH), first expounded by the economist Eugene Fama (1970)<sup>76</sup>. The EMH holds that investors respond rationally to publicly available information, and that market prices for assets incorporate all the publicly known information about them. The strong influence of the EMH among academic economists and policymakers helped to popularise the view that liberalised financial markets help allocate resources more efficiently.

The result was that mainstream macroeconomic theory did not place much emphasis on the details of the financial system. Major textbooks of new Keynesian monetary theory said little about the role of banks and financial intermediation<sup>77</sup>, and the models used by central banks to inform policy-making – dynamic stochastic general equilibrium (DSGE) models – had little or no role for

the financial system itself<sup>78</sup>. The financial system was thus treated as a neutral “veil” through which money passed into the real economy, but whose size and detailed structure were largely unimportant. As long as central banks achieved low and stable inflation through interest rate policy, it was believed that the details of the financial sector were of little macroeconomic importance<sup>79</sup>. Because it was believed that financial markets were efficient, risks to the financial system were assumed to be exogenous, meaning that regulation focused on ensuring that individual financial institutions could withstand external economic shocks, particularly microprudential regulation. This is what we refer to as the **orthodox paradigm**.

The Global Financial Crisis of 2007/08 has triggered a reassessment of the pre-crisis orthodoxy with regards to banking and finance theory and policy. Firstly, the view that financial sector activity is always beneficial has been disputed by a number of empirical studies by major policy institutions<sup>80 81</sup>. Secondly, there has been a widespread acceptance that the pre-crisis orthodoxy suffered from a fundamental lack of understanding of system-wide risk, and underestimated the ability of financial systems to generate endogenous shocks and crises<sup>82</sup>.

The credibility of the ‘efficient markets hypothesis’ has also been challenged by the growing influence of behavioural economics, which emerged as a new field in the 1970s and which draws heavily on the work of psychologists Daniel Kahneman and Amos Tversky<sup>83</sup>. The key insight of behavioural economics with regards to finance is that investors are prone to a number of psychological, social, cognitive, and emotional factors which mean that they do not always behave rationally. These include loss aversion, overconfidence, and herding behaviour, which can result in inefficient financial markets and, in some cases, the formation of bubbles and crashes<sup>84 85</sup>. In recent years behavioural economics has received growing attention within the mainstream economics profession, and many economists have incorporated its insights into the neoclassical paradigm<sup>86</sup>.

As a result, a growing consensus has emerged that microprudential regulation of firms must be accompanied by macroprudential regulation which focuses on preventing the build-up of risk in the financial system as a whole by using tools that prevent excessive credit growth and the formation of bubbles<sup>87 88</sup>. This is what we refer to as the **modified paradigm**.

However, the Global Financial Crisis also galvanised a more fundamental critique of the ‘orthodox paradigm’, which has its intellectual roots in various heterodox schools of thought. While specific formulations vary, most have a number of common theoretical underpinnings:

- A rejection of the neoclassical theory that the economy is best understood as being in a state of long-run equilibrium where finance plays no significant macroeconomic role in favour of the theories of Hyman Minsky, who argued that capitalist economies moved repeatedly through phases of stability and instability, and that finance, credit and asset prices play a major macroeconomic role<sup>89 90</sup>.
- A rejection of the neoclassical theory that the central bank determines the quantity of loans and deposits in the economy by controlling the quantity of central bank money (the so-called ‘money multiplier’ approach), and support for post-Keynesian ‘endogenous money’

theory, which recognises that the money supply is determined by the lending decisions of commercial banks who create new deposits in the process of creating new loans<sup>91</sup>.

- A recognition that finance is not neutral; that different types of finance can affect the types of investments made and the type of economic activity that occurs in an economy<sup>92 93</sup>. An important distinction is made between types of finance that are conducive for investment in the productive economy, and speculative finance which prioritises capital gains through the trade of existing assets, contributing towards destabilising booms and busts<sup>94</sup>.
- Criticism of the process of ‘financialisation’, defined as the penetration and increasing influence of financial markets, motives and institutions into new areas of the state, economy and society<sup>95 96</sup>. Financialisation is viewed as a harmful development which has reduced long-term productive investment, adversely affected economic growth, generated financial instability, and increased economic inequality<sup>97</sup>.
- A recognition that the character of the financial system (including types of banking activity and the composition of markets) has a material impact on the real economy. A distinction is often made between financial institutions that seek to maximise short-term profits and those with different ownership models and governance structures that enable them to prioritise wider social and environmental objective<sup>98 99</sup>.

Policy prescriptions also vary between individuals and organisations, but typically include suppression of non-productive finance through stricter regulation, the prohibition or taxation of financial innovations which do not have any clear social purpose, and measures to limit harmful financial speculation (such as a financial transactions tax); and the promotion of different ownership models for financial institutions which better align incentives with the long-term interests of society and direct credit towards socially useful activities. These may include public, cooperative and mutual models of ownership at the local and regional level, and state investment banks at the national level. This is what we refer to as the **alternative paradigm**.

The intellectual triumph of the Efficient Markets Hypothesis among academic economists and policymakers in the 1970s contributed to a significant shift in economic policy in the 1980s. Financial sector regulations were removed and financial markets were liberalised in many advanced economies. Financial regulation was re-designed to be ‘light touch’, focusing on ensuring that all investors have access to the same information. Because it was believed that financial markets were efficient, risks to the financial system were assumed to be exogenous, meaning that regulation focused on ensuring that individual financial institutions could withstand external economic shocks (microprudential regulation). This orthodox paradigm was broadly embraced by the US Treasury, Federal Reserve, HM Treasury, Bank of England and the European Central Bank.

In 1997 the Asian Financial Crisis led to a reappraisal of policy in some areas such as regulatory and supervisory frameworks, particularly in relation to emerging markets<sup>100</sup>. However, in advanced economies the fundamental pillars of the orthodox paradigm remained intact until the onset of the Global Financial Crisis in 2007: that increasing financial sector activity is beneficial; that more complete markets allocate capital more efficiently; and that regulation should focus on ensuring that individual firms are able to withstand shocks.

No major policy institution identified the risks building up in the global financial system that ultimately led to the Global Financial Crisis of 2007/2008. Most central banks and international institutions believed the global financial system was strong and resilient, and in some cases were urging further deregulation. For example, in 2007, the IMF praised countries for adopting light touch regulation and supervision, and recommended that other advanced countries follow the U.S and U.K. approaches to the financial sector as a means to help them foster greater financial innovation<sup>101</sup>.

As outlined above, the onset of the Global Financial Crisis and its aftermath triggered a significant reassessment of the pre-crisis orthodoxy with regards to banking and finance. As a result, a growing consensus has emerged that microprudential regulation of firms must be accompanied by macroprudential regulation, which focuses on preventing the build-up of risk in the financial system as a whole by using tools that prevent excessive credit growth and the formation of bubbles. The use of macroprudential policy has been endorsed by most major financial policy institutions, including the Bank of England<sup>102</sup>, Federal Reserve<sup>103</sup>, European Central Bank<sup>104</sup>, IMF<sup>105</sup>, OECD<sup>106</sup> and Bank for International Settlements<sup>107</sup>. The advent of macroprudential policy signals an implicit rejection of the orthodox paradigm among major policymakers, because it represents a clear departure from the idea that financial markets left to themselves will deliver an efficient allocation of resources.

Thus far no major institution has embraced alternative paradigm approaches, however there are signs that these are gaining traction among some opposition political parties such as the Labour Party in the UK.

### 3.5. Inequality

**Orthodox paradigm:** Inequalities arise naturally in a market economy from differences in productivity, skills and effort. Inequality has risen in recent decades because technology and investments in human and physical capital have increased the skills and productivity of certain individuals relative to others. What matters is not the gap between rich and poor, but making sure that the standard of living of the poor is increasing. The best way to achieve this is through economic growth: 'a rising tide lifts all boats'.

**Modified paradigm:** The benefits of economic growth aren't always shared across society, and too much inequality can be bad for economic growth, not least through the lower propensity to consume of those on higher incomes. Inequality can be reduced by prioritising "inclusive growth" which creates opportunity for all segments of the population and distributes the dividends of growth fairly across society. Redistributive measures such as taxation and welfare spending are required as well as policies to expand education and training opportunities to increase skills and productivity across the population. Excessive remuneration for senior executives should be curtailed and gender pay gaps reduced through transparency and improved corporate governance.

**Alternative paradigm:** The level of inequality in society is not the inevitable result of market forces but a product of social and political choices. The distribution of income and wealth is largely determined by the balance of power between different stakeholders in the economy, particularly workers of different kinds (including men and women), executives, owners of capital and landowners. The balance of power is determined by the rules and laws which govern the economy. Exploitation of and changes to these rules over recent decades has enabled income and wealth to flow upwards away from those that create it towards the top 1%, who have become an effective rent-seeking class increasingly cut off from society. The rules and laws that govern the economy should therefore be reconfigured to eradicate exploitation and link rewards fairly to value.

Neoclassical economic theory states that incomes are determined according to contribution to production (the 'marginal productivity theory'). Under this theory, developed at the end of the 19th century by the American economist John Bates Clark, wages reflect the amount of additional output an extra worker would produce – the 'marginal product' of labour<sup>108</sup>.

The rationale for this is that if wages were below productivity, firms would find it profitable to hire more workers. This would put upward pressure on wages. Conversely, if wages were above productivity, firms would find it profitable to shed labour, putting downward pressure on wages. In a competitive market an equilibrium is reached whereby wages equal what each worker can produce, resulting in a Pareto efficient outcome<sup>109</sup>.

Under this framework differences in individuals' incomes are therefore said to be related to differences in productivity, skills and effort. Highly paid workers deserve the high wages they receive compared to the less highly paid because they are more productive than members of the latter. Changes in the distribution of income are attributed to changes in technology and to investments in human and physical capital, which have the effect of increasing the skills and productivity of certain individuals. Inequalities are explained because people with skills in high demand in sectors such as IT and finance have seen their earnings rise, reflecting their superior productivity, while low skilled workers have fallen behind. Marginal productivity theory describes a world where, so long as there is sufficient competition and free markets, all will receive their just rewards in relation to their true contribution to society. There is, in Milton Friedman's famous terms, "no such thing as a free lunch"<sup>110</sup>.

Under marginal productivity theory, what matters is not the gap between rich and poor, but that absolute poverty is reduced. The best way of achieving this is to increase education and job training opportunities for workers in order to increase skills and productivity across the population and drive economic growth ('a rising tide lifts all boats'). This is what we refer to as the **Orthodox paradigm**.

In recent decades a growing body of economic research has been devoted to quantifying the growing gap between rich and poor. Economists such as Thomas Piketty<sup>111</sup>, Tony Atkinson<sup>112</sup> and Branko Milanovic<sup>113</sup> have produced rich empirical work showing the extent to which inequality has increased in many advanced economies in recent decades. This has led to a growing recognition

that the benefits of economic growth have not been shared widely across society in many countries. A common explanation for this put forward by mainstream economists is that globalisation, trade liberalisation and technological change has had a polarising effect on labour markets, while also expanding the size of the market that can be served by a single person or firm creating ‘a winner takes all’ environment and contributing to the ‘rise of the 1%’<sup>114 115 116</sup>. Explanations such as these do not challenge marginal productivity theory, but instead seek to explain why the marginal productivity of some people have grown so much faster than others.

In addition, many recent studies have found that income inequality has a negative and statistically significant impact on economic growth<sup>117 118 119</sup>. As a result, many major policy institutions have taken up the agenda of “inclusive growth” which, although precise definitions vary, growth generally means designing policy to promote economic growth that creates opportunity for all segments of the population. This is what we refer to as the **modified paradigm**.

Many economists have long rejected marginal productivity theory on the basis that it is subject to a number of theoretical and empirical flaws which render it more of a normative theory of distribution rather than an objective one. As with other aspects of neoclassical economics, it is criticised as being premised on the existence of perfectly competitive markets with complete and full information, and abstracting from important real-world phenomena such as irrational human behaviour, asymmetries of bargaining power and externalities<sup>120 121 122 123</sup>. Marginal productivity theory has also been challenged on empirical grounds. If it were true, average wages should rise in line with labour productivity. However, in many advanced countries there has been a ‘decoupling’ between wages and productivity in recent decades, with wages failing to keep up with increases in productivity<sup>124</sup>. The theory’s failure with respect to the implementation of minimum wages has also been well documented<sup>125</sup>.

An alternative view on the distribution of income and wealth, drawing on Marxist and post-Keynesian insights, is that it is the outcome of the relative bargaining power between different groups – particularly workers of different kinds (including men and women), executives, owners of capital and landowners<sup>126 127</sup>. These power dynamics in turn are determined by institutional norms and laws which govern the economy such as property rights, corporate governance, taxation, trade union law, labour law and patents. Exploitation of and changes to these rules in recent decades has enabled income and wealth to flow upwards away from those that create it towards the top 1%, who have become an effective rent-seeking class increasingly cut off from society, earning excessive rewards based on the exploitation of others<sup>128 129</sup>. From this perspective, inequality is viewed as a concern from the standpoint of social justice, as well as from concern about the impact that economic inequality has on a wide range of and health and social problems<sup>130 131</sup>. Proponents of this view tend to support policies which reconfigure the rules and laws that govern the economy in order to eradicate exploitation and rent-seeking, and link rewards more fairly to value while recognising the collective nature of wealth creation. Examples include stronger collective bargaining practices, higher levels of taxation of unearned wealth, expanded public and worker ownership of firms, active policies to close gender and other discriminatory pay gaps, and a citizens’ wealth dividend. This is what we refer to as the **alternative paradigm**.

From the 1980s, free market economists were influential in arguing that inequality should not be of concern to policymakers. For example, Milton Friedman argued that a degree of inequality is desirable and unavoidable in a system based on free-market principles because of the ethical principle that “To each according to what he and the instruments he owns produces.”<sup>132</sup> It was also argued that measures designed to reduce inequality were detrimental to economic growth.

These ideas were influential in shaping the economic policies of President Ronald Reagan in the USA and Prime Minister Margaret Thatcher in the UK, who introduced reforms such as cutting taxes on corporations and high earners and diluting collective bargaining rights which contributed to a steep rise in economic inequality. At the same time, many of these policies were also imposed on developing countries through the structural adjustment programmes of the IMF and the World Bank, alongside privatisation and liberalisation policies.

The election of ‘Third Way’ governments in the USA, UK and Europe in the 1990s saw a renewed focus on expanding equality of opportunity and reducing poverty. However, in most cases these governments did not succeed in reducing the steep rise in economic inequality that had taken place throughout the preceding decades.

However, since the Global Financial Crisis a variety of international organisations including the World Bank, the IMF, the OECD and World Economic Forum have placed a new emphasis on the need to address economic inequality – and have developed new workstreams and frameworks to help do so. In many cases, however, the motivation for this has not been a concern for distributive justice, but from an interest in boosting economic growth. Many recent studies, including from the IMF<sup>133</sup><sup>134</sup> and OECD<sup>135</sup>, have found that income inequality has a negative and statistically significant impact on economic growth, and that policies which seek to reduce inequality do not harm economic growth. This has led to the rise of the “inclusive growth” agenda, which despite varying definitions generally means designing policy to promote economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity fairly across society.

The inclusive growth agenda has been formally endorsed or praised by institutions including the IMF<sup>136</sup> <sup>137</sup>, OECD<sup>138</sup>, and World Economic Forum (WEF)<sup>139</sup>. For example, during the 2013 World Economic Forum, Lagarde declared<sup>140</sup>:

*“I believe that the economics profession and the policy community have downplayed inequality for too long. Now all of us – including the IMF – have a better understanding that a more equal distribution of income allows for more economic stability, more sustained economic growth, and healthier societies with stronger bonds of cohesion and trust. The research reaffirms this finding.”*

This shift has been noted by international observers in the international development space. For example, in 2017 Oxfam observed that<sup>141</sup>:

*“In recent years, the International Monetary Fund (IMF) has become a global leader in highlighting the inequality crisis; consistently identifying it as a major threat to human progress and prosperity. This is a significant shift from its previously held position that rising inequality was a necessary trade-off for achieving greater economic growth.”*

In 2013, the World Bank adopted two new goals to guide its work – ending extreme poverty and boosting shared prosperity – and has since prioritised reducing inequality in its work <sup>142 143</sup>. Similarly, the World Economic Forum has included measures of wealth and income and wealth inequality in its ‘Inclusive Growth and Development Report’ that it has published annually since 2017<sup>144</sup>.

Despite this shift in from leading international institutions, the focus on reducing inequality has by and large yet to be embraced by national governments. In 2010 the European Commission committed to promoting inclusive growth as part of its Europe 2020 strategy<sup>145</sup>, but lacks control over many key policy levers to deliver it in practice. Meanwhile, since the Global Financial Crisis governments in the UK and the US have pursued policies that are predicted to increase economic inequality further, adhering to the orthodox paradigm.

### 3.6. Labour markets

**Orthodox paradigm:** The level of employment and wages in the economy is determined by the forces of supply and demand. With competitive markets, wages will reflect the ‘marginal product’ of labour and the economy will operate at full employment. Unemployment is caused by market frictions which put supply and demand out of equilibrium, such as minimum wages, strong collective bargaining power, employment protection and generous welfare benefits. Low unemployment and an efficient allocation of resources is most effectively achieved by pursuing flexible labour market policies which minimise these market frictions.

**Modified paradigm:** Wages are often below the equilibrium level they would be under perfect competition due to the existence of market frictions such as monopsony, asymmetric information and imperfect labour mobility. This means that policies such as minimum wages, collective bargaining rights and unemployment benefits can help to raise wages without increasing unemployment until the equilibrium wage level is reached.

**Alternative paradigm #1:** Wages are not set by reference to the marginal product of labour, but by the relative bargaining power between workers of different kinds and owners of capital. While wages are a cost to firms they are also an important source of aggregate demand, therefore higher wages will not necessarily cause unemployment to rise. Policies should therefore be pursued to shift the balance of power in the labour market towards workers and increase wages. This might include policy changes to increase the bargaining power of workers and enable workers take more risks.

**Alternative paradigm #2:** Wage labour is a transitory phase of human development that is inherently exploitative. Universal Basic Income should be introduced as the first step towards

the ultimate elimination of wage labour and the creation of a highly automated, post-work society.

In neoclassical economic theory, the labour market is viewed as a market like any other. Building on the work of John Bates Clark, it is assumed that in the absence of market distortions, the labour market which reach equilibrium at the point where wages reflect the amount of additional output an extra worker produces – the 'marginal product' of labour. At this level the economy will operate at full employment. According to this view, unemployment is caused by market frictions which put supply and demand out of equilibrium, such as minimum wages, strong collective bargaining power, employment protection and generous welfare benefits<sup>146 147</sup>. Persistent unemployment is blamed on labour market institutions and welfare state policies which "adversely affects the dynamics responses to economic shocks and to increasing turbulence in the economic environment"<sup>148</sup>. As a result, flexible labour market policies which minimise these market frictions are viewed as the best way to achieve low unemployment and an efficient allocation of resources. This is what we refer to as the **orthodox paradigm**.

Some economists working in the neoclassical tradition acknowledge that workers can be paid less than the value of their marginal product due to the existence of market frictions which prevent the conditions of perfect competition from holding. One such example is monopsony, which was first developed by economist Joan Robinson in her book *The Economics of Imperfect Competition*<sup>149</sup>. In a labour market characterised by monopsony, there is a single employer with market power, which results in a lower equilibrium wage rate than does the competitive model. Other examples of labour market frictions include imperfect labour mobility and lack of information. In these cases, labour market policy interventions can raise wages without increasing unemployment until the equilibrium wage level is reached, enhancing overall welfare<sup>150</sup>. Many economists therefore support active labour market policies such as minimum wages, collective bargaining rights and unemployment benefits in order to support employment and wages. The work of economists Richard Layard and Stephen Nickell has been particularly influential in advancing understanding of the role of labour market institutions and their impact on labour market outcomes over the past 25 years<sup>151</sup>. This is what we refer to as the **modified paradigm**.

An alternative view on the labour market, drawing on Marxist and post-Keynesian insights, is that wages are not set by reference to the marginal product of labour but by the relative bargaining power between workers of different kinds and owners of capital. This relative bargaining power is determined by the institutions, norms and laws that govern the economy such as property rights, corporate governance, taxation, trade union law, labour law and patents. In this view, unemployment is not a result of specific market frictions such as minimum wages, strong collective bargaining power and employment protection which put supply and demand out of equilibrium. Instead, aggregate employment depends on the level of output, which is itself determined by aggregate demand and therefore heavily influenced by macroeconomic policy. Wages are viewed not only a cost to business but also an important source of aggregate demand. As a result, higher wages will not necessarily cause unemployment to rise, as in the neoclassical model, because higher wages will increase demand, which may cause unemployment to fall. It is argued that the declining share of national income going to wages in recent decades is empirically linked to a

reduced rate of economic growth and growing inequality<sup>152 153</sup>. Proponents of this view believe that the best way to minimise unemployment is to use active macroeconomic policy to sustain demand in the economy, and to increase the bargaining power of workers in order to shift the balance of power in the labour market towards workers and increase wages. This might include policy changes to increase the bargaining power of workers and enable workers take more risks (such as starting a new business or investing in education or training). This is what we refer to as **alternative paradigm #1**.

Some go further and argue that wage labour is inherently exploitative, and should be viewed as a transitory of human development. Nick Srnicek and Alex Williams have argued that the challenges of automation and climate change “portend a crisis of work, and a crisis of any society based upon the institution of wage labour” and instead propose a post-work politics predicated upon “full automation” and the provision of a Universal Basic Income that would give “the proletariat a means of subsistence without dependency on a job”<sup>154</sup>. Journalist and broadcaster Paul Mason also makes the case for a shift towards a “post-capitalist” economy, where working for money loses its centrality, where goods, information, and intellectual property are shared, and where economic actors collaborate in new peer-to-peer, non-market ways<sup>155</sup>. This is what we refer to as **alternative paradigm #2**.

In the 1980s and 1990s the orthodox paradigm view of the labour market was the guiding philosophy in many countries. In the UK, Margaret Thatcher saw trade unions as a threat to the state and to the health of the national economy. Believing that unions had become too powerful, in 1985 she started to take steps to reduce union power and to diminish the role of collective bargaining.<sup>156</sup> In the United States, the Ronald Reagan administration appointed pro-business figures to the National Labor Relations Board (NLRB), the regulatory board that oversaw union recognition, strikes, and contract disputes<sup>157</sup>. In Germany, Helmut Kohl and his Christian Democratic eroded collective bargaining and the work council system considerably, which was accelerated with the ‘Agenda 2010’ reforms introduced under the government of Gerhard Schröder in 2003 in an effort to boost the competitiveness of the German economy<sup>158 159</sup>. These policies continued under the leadership of Angela Merkel<sup>160</sup>. This ‘orthodox paradigm’ approach also underpinned the labour market reforms imposed by the IMF and the World Bank through its structural adjustment programmes.

In the UK, the election of a Labour Government in 1997 triggered a shift in approach. While a central tenet of New Labour’s social model was the need to ensure flexible labour markets, in 1999 the Labour government introduced a National Minimum Wage (NMW), which represented a distinct break from ‘orthodox paradigm’ policies to a ‘modified paradigm’ approach<sup>161</sup>. Set at a relatively low level, it was hoped that it would mainly impact on monopsonistic employers and therefore not cause negative employment effects. The Labour government also increased welfare spending, introducing a system of tax credits to top up low incomes. From 2010, the Conservative-led government introduced policies to weaken trade union rights and cut welfare spending, reverting back to ‘orthodox paradigm’ approaches<sup>162</sup>.

More recently, there have also been signs that major international policy institutions have moved away from the old view in favour of an approach that accepts limited labour market policies. For example, in a 2013 discussion paper, three senior IMF economists concluded that the Nordic model -- which is based on a medium to high degree of employment protection, generous but conditional unemployment insurance, and strong, active labour market policies -- is “the direction to go to reform labor market institutions”<sup>163</sup>.

In its final report published in 2008 the Commission on Growth and Development, an independent group chaired by American economist Michael Spence and sponsored by the World Bank Group, concluded that<sup>164</sup>:

*“Some rules and institutions exist to safeguard the rights of labor, defending workers against exploitation, abuse, underage employment, and unsafe working conditions. In some countries, these rights are protected by unions or government regulations. But in others, no such protections are in place. The Commission feels strongly that these rights should not be sacrificed to achieve other economic objectives, including growth.”*

Similarly, the World Bank clarified its policy position in 2013<sup>165</sup>:

*“labor policies and institutions can improve labor market information, manage risk, and provide voice. But these advantages can come at the expense of labor market dynamism, reduced incentives for job creation and job search, and a gap in benefits between the covered and uncovered. The challenge is to set labor policies on a plateau—a range where regulations and institutions can at least partially address labor market imperfections without reducing efficiency.”*

At the OECD, while the idea that unemployment results from market disequilibrium and boosting employment is best achieved through flexible labour market policies still prevails, it is recognised that certain labour market policies can have a beneficial effect if they are designed effectively and set at an appropriate level<sup>166</sup>. More recently, there is evidence that the OECD has shown a willingness to explore alternative paradigm approaches by undertaking research on ideas such as Universal Basic Income<sup>167</sup>:

*“In view of rapid changes in the labour market the ongoing discussions of basic income options do, however, provide a valuable impetus for much needed debates about the type of social protection that societies want, and for the search of reform options that are socially and politically feasible.”*

### 3.7. The role of the state and markets

**Orthodox paradigm:** Goods and services are most efficiently produced by private firms operating in a free and competitive market. The state should only seek to play an active role in

the economy where markets fail to efficiently allocate resources, such as in the provision of public goods, like national security and basic science, or due to externalities such as environmental pollution. The state has neither the market knowledge nor the expertise to allocate resources better than the market, so should avoid pursuing industrial policies which attempt to 'pick winners'. These will only distort market competition.

**Modified paradigm:** 'Supply side' industrial policy can be justified where interventions are of a 'horizontal' nature – those that do not target specific industries but which seek to improve the general business environment. These might include infrastructure improvements, favourable tax regimes and planning policies, or measures to improve labour force skills and training. Industrial policy should avoid 'vertical' interventions into particular firms or sectors, where attempts to 'pick winners' will inevitably end up picking losers, wasting public resources and distorting market competition.

**Alternative paradigm:** The conventional approach of only intervening to 'fix' market failures overlooks the historical role of the state in creating and shaping markets, driving innovation and nurturing new industrial landscapes which the private sector often later develops. Economic activity has both a 'rate' and a 'direction', so the role of industrial policy should be to steer the direction of economic activity towards specific social, environmental and economic goals. Industrial policy should involve strategic government choices about the desired goals, the technologies and industrial sectors needed to meet them, the appropriate policy frameworks, and the appropriate roles of public, private and third sector. Government should act as an investor across the entire innovation chain, and retain a stake in the economic returns to innovation. It should also seek to raise productivity in low-productivity sectors.

According to neoclassical welfare economics, profit maximising firms operating under conditions of perfect competition will lead to a socially optimum allocation of economic resources - a 'Pareto efficient' outcome. By means of the price mechanism, the market will converge towards a welfare maximising equilibrium where supply equals demand and where the market is cleared<sup>168</sup>. In this framework, state intervention is only justified if it is aimed at correcting or fixing situations in which markets fail to efficiently allocate resources, such as providing public goods (for example scientific research and defence), and devising market mechanisms to externalities (such as environmental pollution)<sup>169</sup>. Public Choice Theory expanded on this framework by stating that market failure is a necessary but not sufficient condition for state intervention<sup>170 171</sup>. In this framework, government's should only seek to act if the gains from intervention outweigh the associated costs from so-called 'governmental failures'<sup>172</sup> such as capture by private interests (cronyism, corruption, rent-seeking),<sup>173</sup> misallocation of resources (for example, 'picking losers')<sup>174</sup> or undue competition with private initiatives ('crowding out')<sup>175</sup>. Therefore, there is a trade-off between two outcomes, one of which is generated by free markets (market failure) and the other by public intervention (known as 'government failure'). This is what we refer to as the **orthodox paradigm**.

Many economists now acknowledge that the conditions needed for markets to reach Pareto optimal outcomes are rarely met in the real world. In particular, imperfect information and incomplete markets create distortions that mean that market outcomes are rarely Pareto

efficient<sup>176</sup>. As a result, it is recognised that appropriately designed government interventions can improve market outcomes and enhance welfare<sup>177</sup>. In particular, 'supply side' interventions of a 'horizontal' nature that do not target specific industries but which seek to improve the general business environment have gained widespread acceptance in recent years. These might include infrastructure improvements, favourable tax regimes and planning policies, or measures to improve labour force skills and training. These are generally preferred to 'vertical' interventions, which target interventions on particular sectors or technologies, because they minimise market distortions, maintain a level playing field and reduce scope for rent-seeking and corruption by special interests<sup>178</sup>. It is widely held that attempts to 'pick winners' will inevitably end up picking losers, wasting public resources and distorting market competition. This is what we refer to as the **modified paradigm**.

Some critics of neoclassical economics consider the dichotomy between the 'market' and 'state intervention' to be misleading, because markets are dependent on state apparatus like laws and property rights. Often this view draws inspiration from the work of Karl Polanyi<sup>179</sup>. Proponents of this view such as Professor Mariana Mazzucato often highlight that the neoclassical market failure framework overlooks the historical role of the state in creating and shaping markets, driving innovation and nurturing new industrial landscapes<sup>180 181</sup>. Coordinated state activity has played a key role in almost every example of successful industrialization, as well as many major technological breakthroughs<sup>182 183 184</sup>.

For proponents of this view, the relevant question is therefore not whether the state should intervene, but how it should intervene most effectively. The role of industrial policy is to make choices about the desired goals, the technologies and industrial sectors needed to meet them, the appropriate policy frameworks, and the appropriate roles of public, private and third sector. It should also involve making strategic investments across the innovation chain and nurturing important industrial landscapes, retaining a public stake in the economic returns to innovation. This approach to industrial policy seeks to actively 'tilt' the playing field towards specific social, environmental and economic goals, rather than the conventional neoclassical focus on 'levelling' the playing field<sup>185</sup>. This is what we refer to as the **alternative paradigm**.

In the 1980s, the election of President Ronald Reagan in the USA and Prime Minister Margaret Thatcher in the UK triggered a shift in emphasis away from market failures and towards government failures -- a view that was spread internationally under the so-called Washington Consensus<sup>186</sup>. Since the state has neither the market knowledge nor the expertise to allocate resources better than the market, it was argued that governments should avoid pursuing industrial policies which attempt to 'pick winners', as these will only distort market competition and result in a sub-optimal allocation of resources. Instead, the appropriate role of government and industrial policy was seen to be much more limited, only involving specific market failures, such as spillovers in education and public goods in infrastructure, or general market friendly policies such as deregulation, privatization and trade liberalization<sup>187</sup>. The World Bank summarised this view in its 1991 'World Development Report'<sup>188</sup>.

*“Let markets work unless it is demonstrably better to step in … it is usually a mistake for the state to carry out physical production, or to protect the domestic production of a good that can be imported more cheaply and whose local production offers few spillover benefits”*

Despite this view prevailing in governments and international policy institutions throughout the 1980s and 1990s, it was questioned both by academics and policymakers. In East Asia, where economies had active industrial policies, there was historically unprecedented growth. The successes in East Asia were inevitably contrasted with the failures in the rest of the developing world, where ‘Washington Consensus’ policies often dominated<sup>189</sup>. At the same time, in some developed countries, like the United States, there was growing recognition of the role that industrial policies -- especially in the form of the promotion of new general purpose technologies -- had played in their economic success<sup>190</sup>.

Partly as a result of this, some institutions began to a shift towards the modified paradigm in the 1990s and 2000s, with industrial policies of a ‘horizontal’ nature being encouraged (i.e. those that do not target specific industries but which seek to improve the general business environment). For example, in its final report published in 2008 the Commission on Growth and Development, an independent group chaired by American economist Michael Spence and sponsored by the World Bank Group, concluded that<sup>191</sup>:

*“If an economy is failing to diversify its exports and failing to generate productive jobs in new industries, governments do look for ways to try to jump-start the process, and they should.”*

The Commission concluded that any industrial policies introduced should be “temporary” and “agnostic about particular industries, leaving the remainder of the choice to private investors.” This acknowledgement is significant given that some of the Commissioners were key architects of the ‘Washington Consensus’, such as former US treasury secretary Robert Rubin and economist John Williamson. The OECD was also promoting a similar view in 2007<sup>192</sup>.

The Global Financial Crisis in 2008 triggered a further shift, with some advanced economies seeking to ‘rebalance’ their economies away from a perceived over-reliance on financial services. For example, in 2008 the UK government announced a “new British industrial activism” which rejected the 1960s and 1970s approach “when the government attempted to pick winners – or, rather, where losers picked the government”. Instead, the government set out a “total business environment approach”, where businesses were supported through a wide range of horizontal policy levers such as skills, transport, and education<sup>193</sup>. A similar approach was pursued under the coalition government led by David Cameron between 2010 and 2015, who promised “to have a proper industrial strategy to get behind the growth engines of the future.” Similarly, in 2013 Barack Obama announced the launch of “manufacturing hubs” where businesses partner with the Departments of Defense and Energy to turn regions left behind by globalization into global centers of high-tech jobs, and “guarantee that the next revolution in manufacturing is Made in America.”<sup>194</sup>

The role that industrial policy can play in driving growth and innovation was also increasingly being recognised within international policy institutions. For example, in a 2010 paper called 'The Role of the State in the Dynamics of Structural Chang' Justin Yifu Lin, World Bank Chief Economist wrote that<sup>195</sup>:

*"Active economic policies by developing countries' governments to promote growth and industrialization have generally been viewed with suspicion by economists... But the historical record also indicates that in all successful economies, the state has always played an important role in facilitating structural change and helping the private sector sustain it. This paper provides a framework for formulating industrial policy based a new approach"*

In 2013, the OECD published 'Industrial policies in a changing world', a document which Professor Ha Joon Chang hailed as a "landmark publication because it looks for ways to make industrial policy work better, rather than having an ideological debate on whether it exists and whether it can ever succeed."<sup>196</sup> The IMF has been slightly more cautious in embracing a more active role for the state, but in 2013 it noted the importance of "practical approaches to assessing the growth performance of a country and then devising a strategy and policy priorities to improve it.", which was widely interpreted to be a tacit endorsement of industrial policy<sup>197</sup>.

More recently, there are signs that some key institutions may be moving beyond the modified paradigm and embracing alternative paradigm approaches. For example, in 2010 the European Commission adopted "a fresh approach to industrial policy" aiming at "bringing together a horizontal basis and sectoral application [that] will consider appropriate measures to inform consumers and promote industrial excellence in given sectors."<sup>198</sup> In 2018 this took a step further when the European Commissioner for Research, Science and Innovation, Carlos Moedas, invited Mariana Mazzucato to draft strategic recommendations on 'mission-oriented research and innovation' in the EU to guide the future European Union Framework Programme for Research and Innovation<sup>199</sup>.

In the UK, the election of Theresa May as Conservative leader led to a distinct shift of economic policy, away from free market orthodoxy towards a more active role for the state. In 2017 the UK government published a new industrial strategy which "strong and strategic state that intervenes decisively wherever it can make a difference" and sets out four "Grand Challenges" where Britain "can lead the global technological revolution" – reflecting alternative paradigm approaches<sup>200</sup>.

### 3.8. Environment

**Orthodox paradigm:** The environment is external to the economy. Environmental problems can be dealt with by use of pollution taxes or permit trading systems which bring externalities into market prices.

**Modified paradigm:** The costs of acting on environmental problems, particularly climate change, are significant but manageable, and are compatible with the continuation of economic

growth or will increase growth (low carbon or green growth, respectively). However, market mechanisms (taxes and permit trading) alone are not enough to deal with environmental problems, and need to be supplemented by technology support mechanisms, efficiency and product standards, regulatory measures, planning processes, innovation policy and international policy coordination.

**Alternative paradigm #1:** Our economic system is embedded within an ecological system which manifests environmental limits and tipping points of various kinds. Economic activity must be constrained within these to avoid causing irreparable environmental degradation. As GDP measures value and income, not resource throughput, it is possible to decouple economic growth from resource use. Raising incomes, particularly for the poor, remains a vital policy and economic objective. Environmental policy can be a catalyst for driving innovation to shift patterns of production, consumption and distribution towards less resource intensive methods, increasing productivity and generating sustainable, inclusive economic growth.

**Alternative paradigm #2:** Our economic system is embedded within an ecological system of finite natural resources. Economic activity must take place within planetary boundaries to avoid causing irreparable environmental degradation. Economic policy should focus on maximising human welfare within these boundaries. Whether or not this generates GDP growth or not should not of primary concern to policymakers.

**Alternative paradigm #3:** Economic growth in a world of finite resources is inherently unsustainable. Economic growth should therefore cease to be an economic or social objective and should be replaced by the necessary reduction of production and consumption ('degrowth') required to live within planetary boundaries. Living more simply will also increase human wellbeing.

In neoclassical economics, environmental problems are seen as examples of externalities – a concept first proposed by Arthur Pigou in 'The Economics of Welfare'<sup>201</sup>. This market failure arises because environmental goods are in general not priced. This results in 'external' or 'social' costs being imposed on third parties<sup>202</sup>. In order to address environmental market failures, policymakers should seek to 'internalise' these costs by raising the prices of damaging activities via taxes, charges or tradable permits<sup>203</sup>. This forces those responsible for causing the costs to face them directly which will likely change their market behaviour and reduce the environmental damage they cause. If the costs have been calculated correctly, the total amount of environmental damage will be reduced to just that point at which its marginal costs equal its marginal benefits. The market failure will have been eliminated: the market will once again generate the socially optimal result. This is what we refer to as the **orthodox paradigm**.

More recently, many economists have acknowledged that climate change and other environmental problems pose a significant economic challenge which requires policy intervention to move towards a low-carbon economy and reduce CO<sub>2</sub> emissions. While the costs of acting on environmental problems are significant, they are seen to be compatible with the continuation of economic growth (low carbon or green growth). In order to strike the right balance between growth

and CO<sub>2</sub> reduction, the policy response must include market mechanisms such as taxes and permit trading as well as other measures such as technology support mechanisms, efficiency and product standards, regulatory measures, planning processes, innovation policy and international policy coordination<sup>204</sup>. This view is perhaps most famously associated with the 2006 Stern Review on the Economics of Climate Change, which remains very influential in the international policymaking community<sup>205</sup>. This is what we refer to as the **modified paradigm**.

Others maintain that while it is technically possible to decouple economic growth from resource use, this requires significant technological and social transformation, including the widespread use of renewable resources, dramatic productivity improvements, new agricultural and production technologies, recycling of wastes, and a shift in consumption patterns towards intellectual rather than materially based activities<sup>206 207 208</sup>. Proponents of this view point out that economic growth tends to occur in 'long waves' of around 50-60 years, driven by technological change which transforms systems of production, distribution and consumption. In this view, environmental improvement can be the engine of a new techno-economic paradigm focused on 'green growth' which could transform production methods, products and lifestyles in the same way as previous technologies such as the steam engine, the railways and the internal combustion engine<sup>209</sup>. Supporters of this view, such as Carlota Perez, argue that this will not happen on its own and that the state must play an active role to tilt the playing field through policies such as taxing energy and materials rather than labour; encouraging the circular and collaborative economies; encouraging the rental and maintenance economies; and introducing a universal basic income<sup>210</sup>. This is what we refer to as **alternative paradigm #1**.

Other economists point out that the planet has a number of 'planetary boundaries' which represent the 'safe operating space for humanity'<sup>211</sup>. Because we have already exceeded a number of these boundaries which risks causing irreparable environmental degradation, the priority for economic policy must be to ensure that economic activity takes place within these planetary boundaries. Since GDP growth measures value and income, it can be associated with both rising and falling resource throughput, depending on the specific type of economic activity. As a result, instead of making an ex-ante decision on whether to target GDP growth or not, policymakers should instead prioritise designing an economy that promotes human prosperity within planetary boundaries. Since such a strategy effectively ignores GDP as an overall measure of progress, and has been referred to as 'growth agnosticism' by economist Kate Raworth<sup>212</sup> and 'agrowth' by Jeroen van den Bergh<sup>213</sup>. A similar view is expressed by Professor Tim Jackson in his seminal book 'Prosperity Without Growth'.<sup>214</sup> This is what we refer to as **alternative paradigm #2**.

Finally, some economists point out that the historical record of industrialisation shows that economic growth is intrinsically linked to environmental damage such as resource depletion to climate change. In this view, global economic growth is incompatible with living within planetary boundaries<sup>215</sup>. Even at zero growth, the continued consumption of scarce resources will inevitably result in exhausting them completely<sup>216</sup>. In response, these economists argue in favour of explicit anti-growth or 'degrowth' strategies aimed at reducing the size of the market economy. Proponents of degrowth promote "downscaling of production and consumption"<sup>217</sup> and believe that happiness and well-being can be enhanced through non-consumptive means such as sharing

work, consuming less, while devoting more time to art, music, family, nature, culture and community. This is what we refer to as **alternative paradigm 3**.

Prior to 2008, environmental policy centred around the use of pollution controls and policies to internalise environmental externalities, with many governments around the world adhering to this approach. Wider recognition of the threat posed by climate change and the economic and other opportunities inherent in action began to change this view. In 2006 the Stern Review on the Economics of Climate Change was published, which concluded that in order to strike the right balance between growth and CO<sub>2</sub> reduction, policy responses must include market mechanisms such as taxes and permit trading as well as other measures such as technology support mechanisms, efficiency and product standards, regulatory measures, planning processes, innovation policy and international policy coordination<sup>218</sup>.

The Stern Review, combined with the Fourth Assessment Report (AR) from the Intergovernmental Panel on Climate Change (IPCC) published in 2007<sup>219</sup>, which confirmed that human activity was responsible for climate change and recommended urgent action to reduce carbon emissions, had a significant impact on domestic policy making in many countries. As such, in 2008, the Climate Change Act was introduced in the UK, which requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are prepared for. The Act made the UK the first country in the world to have a long-term legally binding target for reducing greenhouse gas emissions. In conjunction with this legislation, the UK government introduced a more interventionist industrial policy, including to promote the construction of offshore wind farms and other renewable energy generation<sup>220</sup>. Recently, the government's Clean Growth Strategy plans to increase this intervention, arguing that investment in more sustainable industries will boost economic growth and is 'one of the greatest industrial opportunities of our time'<sup>221</sup>.

These policies constitute a modified approach and were also adopted in 2008 across the rest of Europe, with the EU parliament passing the European Plan on Climate Change, which consisted of a range of measures to reduce CO<sub>2</sub> emissions and increase energy efficiency. Building on this approach, in 2010 the German government introduced legislation for the *Energiewende* ("energy transition") which stipulates greenhouse gas (GHG) reductions of 80–95% by 2050 (relative to 1990) and a renewable energy target of 60% by 2050. These policies have been supported by an ongoing interventionist industrial strategy that promotes the development and deployment of renewable technologies. The central tenants of this approach began to spread internationally through the 2015 Paris Agreement, which became the first ever universal, legally binding global climate agreement. By August 2017, 160 of the 197 UNFCCC countries had ratified the treaty. The US remains an outlier on environmental policy: it never signed the Kyoto Protocol, and recently pulled out of the Paris Agreement following the election of Donald Trump.

None of the institutions under inspection have adopted any policies that could be described as constituting an alternative paradigm. This is mainly because no government has yet explicitly recognised the extent to which human activity is unsustainable and has pushed biogeochemical cycles and other key natural systems into unsafe operating spaces, exceeding 'planetary boundaries'<sup>222</sup>.

### 3.9. Corporate governance

**Orthodox paradigm:** The goal of the firm is to maximise profits and generate shareholder value. This will generate the maximum welfare of society as a whole. All other considerations of social and ethical responsibility should be handled by the legal and regulatory regime in which firms operate, and therefore should not feature in the decisions of the firm itself.

**Modified paradigm:** The goal of the firm should be to generate shareholder value while having regard for the priorities of other stakeholders and the long term social, economic and environmental impact of its operations. This can be facilitated by changes to competition and tax policy and corporate governance reform. Firms have a responsibility to behave ethically beyond legal compliance.

**Alternative paradigm:** Corporations with limited liability are a social construct. While they may have served an important purpose in the past, today many large shareholder-owned businesses fail to serve the public interest. The dominant corporate model has contributed to a lack of long-term investment and declining rates of productivity, undermined democracy and contributed to increasing levels of inequality. Alternative models of social ownership, such as cooperatives, municipal and locally-led ownership, along with public ownership, are better able to raise investment, achieve social goals, reduce inequality, and give workers and consumers a stake in the economy.

In the neoclassical theory of the firm, it is assumed that the goal of the firm is to maximise profits<sup>223</sup>. Neoclassical welfare economics states that profit maximising firms operating under conditions of perfect competition will lead to a socially optimum allocation of economic resources (a 'Pareto efficient' outcome)<sup>224</sup>. Beginning in the 1970s, free market economists were influential in promoting the idea that the sole aim of the firm should be to maximise shareholder value. Some economists, notably Milton Friedman, went further by arguing that any attempt to give firms a wider social responsibility beyond profit maximisation will inevitably lead to totalitarianism<sup>225</sup>. This 'shareholder view' of the firm is dominant in common law, Anglo-Saxon countries such as the UK and the US<sup>226</sup>. This is what we refer to as the **orthodox paradigm**.

Some economists have criticised the neoclassical theory of the firm on the basis that the conditions needed for profit maximising firms to deliver Pareto optimal outcomes – perfect competition, complete markets, no externalities, decreasing returns to scale – are rarely met in the real world<sup>227</sup>. As a result, it is often argued that profit maximising firms deliver sub-optimal social outcomes. For example, numerous studies have found that the rise of the 'shareholder-value' model of corporate governance has contributed towards growing short-termism among industrial firms, and a reduced incentive for firms to undertake long-term investment projects<sup>228</sup><sup>229</sup><sup>230</sup>. It has also led many firms to spend money on financial activities such as share buybacks in order to boost share prices, rather than make long-term investments<sup>231</sup>. Proponents of this often believe that welfare can be enhanced by widening the goal of the firm to have regard for the

priorities of other stakeholders and the long term social, economic and environmental impact of its operations. This is more akin to the 'stakeholder' view of the firm which is prominent in continental Europe and Japan<sup>232</sup>. One example of this is the concept of 'enlightened shareholder value' (ESV) which has emerged as an alternative to the shareholder value view. ESV states that "corporations should pursue shareholder wealth with a long-run orientation that seeks sustainable growth and profits based on responsible attention to the full range of relevant stakeholder interests"<sup>233</sup>. This is what we refer to as the **modified paradigm**.

Critics of neoclassical economics argue that the assumption that the economy is made up of profit maximising firms ignores the fact that modern corporations are a social and legal construct, and that there are a wide variety of other possible corporate forms that can or could exist. They point to evidence that the dominance of the shareholder-owned corporation has contributed to a lack of long-term investment, declining rates of productivity and increasing levels of inequality, and has created a society where economic decisions are made by, and on behalf of, a narrow elite, with little consideration of the well-being of the general population. Proponents of this view state that alternative models of social ownership, such as cooperatives, municipal and locally led ownership, along with public ownership, are better able to raise investment, achieve social goals, reduce inequality, and give workers and consumers a stake in the economy. Leading proponents of this view include Richard Wolff<sup>234</sup>, Erik Olin Wright<sup>235</sup>, Gar Alperovitz<sup>236</sup> and Andy Cumbers<sup>237</sup>. This is what we refer to as the **alternative paradigm**.

In Anglo-Saxon countries corporate governance has tended to focus on maximising shareholder value, while in many other countries, including in Germany and Asia, it continues to target stakeholder value, despite some reforms that have strengthened shareholder value considerations<sup>238</sup>. However, in recent decades the concept of 'enlightened shareholder value' (ESV) has emerged as an alternative to the shareholder value view in some countries. ESV states that "corporations should pursue shareholder wealth with a long-run orientation that seeks sustainable growth and profits based on responsible attention to the full range of relevant stakeholder interests"<sup>239</sup>. It therefore focuses on generating shareholder value whilst having regard to the long term external impacts of the firm. The ESV concept was adopted into UK law in the Companies Act 2006<sup>240</sup> – a move represents an important development in corporate governance and a move away from the orthodox paradigm view.

In 2016, the OECD replaced the term "corporate social responsibility" (CSR) with "responsible business conduct" (RBC) in its Guidelines for Multinational Enterprises. Responsible business conduct means that businesses should make a positive contribution to economic, environmental and social progress with a view to achieving sustainable development and that businesses have a responsibility to avoid and address the adverse impacts of their operations. While the concept of CSR is often associated with philanthropic corporate conduct external to business operations, RBC goes beyond this to emphasize integration of responsible practices within internal operations and throughout business relationships and supply chains<sup>241</sup>.

Thus far no major institution has embraced alternative paradigm approaches, however there are signs that these are gaining traction among some opposition political parties such as the Labour

Party in the UK, as outlined in its 'Alternative Models Ownership' plan that accompanied the party's 2017 manifesto<sup>242</sup>

### 3.10. Economic goals and measurement

**Orthodox paradigm:** The goal of economic policy is to stimulate GDP growth and thereby raise social and individual welfare.

**Modified paradigm:** GDP measures incomes and is therefore an important signal of prosperity. But it should be supplemented by measures of other economic goals, including employment, poverty, inequality and the environment.

**Alternative paradigm:** GDP growth is a very poor measure of prosperity. Income is only factor in individual and social wellbeing. GDP also fails to take unpaid work or environmental damage into account; and does not measure inequality. Alternative measures of prosperity are needed which value wellbeing (including work-life balance and mental health), inequality (including gender and racial discrimination), the sustainability of the natural environment and wider social goods.

The traditional neoclassical model assumes that individuals aim to maximise utility, and that utility results only from consumption<sup>243</sup>. Because GDP measures the final goods and services produced and consumed in an economy, it is assumed that policies which increase GDP growth will enhance economic welfare. As a result, GDP has been described as the "world's most powerful statistical indicator of national development and progress"<sup>244</sup>. Paul Samuelson once described GDP as "truly among the great inventions of the 20th century, a beacon that helps policymakers steer the economy toward key economic objectives"<sup>245</sup>. This is what we refer to as the **orthodox paradigm**.

In recent years a number of have highlighted the deficiencies of GDP as a measure of human welfare and prosperity<sup>246 247</sup>. Numerous proposals have been put forward to modify GDP, or supplement GDP with measures of other economic goals. For example, Charles Jones and Peter Klenow have proposed a single measure incorporating consumption, leisure, mortality, and inequality; their calculations show that this approach closes much of the apparent gap in living standards between the United States and other OECD countries when this is assessed on the basis of GDP per capita<sup>248</sup>. This is what we referred to as the **modified paradigm**.

Many notable economists have gone further than this and stated that GDP is not a suitable measure of progress for the 21<sup>st</sup> century. Criticisms of GDP tend to focus on its failure to take unpaid work and environmental damage into account and its failure to measure inequality. Various initiatives have attempted to construct alternative metrics of prosperity which value wellbeing, inequality, the sustainability of the natural environment and wider social goods. This is what we refer to as a **alternative paradigm**.

In recent years a number of institutions have started to shift from the orthodox paradigm to the modified paradigm by putting forward proposals to modify GDP, or supplement GDP with measures of other economic goals.

For example, in 2018 the IMF created a new index measuring consumption, leisure, mortality, inequality and environmental externalities<sup>249</sup>. However, the IMF encouraged policymakers not to “throw out GDP” as “per capita income or GDP does capture the main component of well-being”.

Similarly, in 2018 the World Bank published ‘The Changing Wealth of Nations 2018: Building a Sustainable Future’ which measures national wealth for 141 countries over 20 years (1995–2014) including the sum of produced capital, 19 types of natural capital, net foreign assets, and human capital overall as well as by gender and type of employment. The World Bank states that the measure should be “viewed as a complement to GDP and not a replacement.”<sup>250</sup>

In 2017 the World Economic Forum established the Inclusive Development Index (IDI), which aims to provide a richer and more nuanced assessment of countries’ level of economic development than the conventional one based on GDP per capita alone<sup>251</sup>.

The OECD has gone further, launching the Better Life Initiative and the Better Life Index in 2011 in order to establish a measure of progress to replace GDP<sup>252</sup>. Published every year, the index includes 11 “dimensions” of well-being<sup>253</sup>:

- Housing: housing conditions and spendings (e.g. real estate pricing)
- Income: household income and financial wealth
- Jobs: earnings, job security and unemployment
- Community: quality of social support network
- Education: education and what you get out of it
- Environment: quality of environment (e.g. environmental health)
- Governance: involvement in democracy
- Health
- Life Satisfaction: level of happiness
- Safety: murder and assault rates
- Work-life balance

There are also various initiatives which seek to measure happiness as a goal of policy. For example, each year the United Nations Sustainable Development Solutions Network published the ‘World Happiness Report’ which contains rankings of national happiness<sup>254</sup>.

Despite these developments, most national governments continue to use GDP as the primary measure of economic performance, although there are some exceptions. In a 2009 publication called ‘GDP and beyond’, the European Commission set out a roadmap with five key actions, including complementing GDP with social and environmental indicators, improving the timeliness of information and providing better reporting on inequalities of wealth and income<sup>255</sup>. Similarly, the Europe 2020 strategy for smart, sustainable and inclusive growth (published in 2010) has

headline indicators that include both environmental measures (greenhouse gas emissions, energy consumption) and social targets (educational attainment and the number of people at risk of poverty and social exclusion) as well as economic goals<sup>256</sup>.

In 2008 French President Nicolas Sarkozy established a Commission on the measurement of economic performance and social progress (CMECSP), a committee of distinguished economists and social scientists (co-chaired by Nobel prize winners Joseph Stiglitz and Amartya Sen) tasked with identifying the limits of GDP and evaluating the feasibility of alternative measurement tools. The CMECSP advocated taking greater account of services and changes in quality of goods, as well as increasing focus on household income, consumption and wealth in measuring economic performance. It also recommended broadening measures to include both objective and subjective evaluations of health, education, work, political governance, social relationships, environment and security<sup>257</sup>.

In 2010, Prime Minister David Cameron pledged to make the UK one of the first countries to officially measure and monitor happiness, and each year the Office for National Statistics publishes data on national wellbeing<sup>258 259</sup>.

## 4. Analysis

Overall there is evidence that most international institutions have moved to the modified paradigm in their intellectual approach across most policy areas or are in the process of doing so. This is most clearly observed on issues such as trade, banking and finance, inequality, environmental policy, and economic goals and measurement. There are few examples of no intellectual shift occurring across any policy area. In some institutions, most notably the OECD, there are tentative signs of growing receptiveness to different alternative paradigm approaches, such as its work exploring Universal Basic Income and measures to replace GDP.

In most cases national governments appear to be lagging behind the intellectual shifts that are taking place in policy institutions. This is clearly evidenced in areas such as fiscal policy and approaches to inequality. Indeed, there are some examples of national governments regressing from modified to orthodox in recent years, such as the approach to fiscal policy taken by the British Treasury and German Finance Ministry, though these examples are rare. As such, there is strong evidence that, intellectually at least, neoliberalism in its pure form is no longer so dominant. However, while in many areas there have been shifts in policy analysis and intellectual approaches in international institutions, there is little evidence of a shift in policy itself.

The USA is a unique case, with the US Government's policy positions often do not fall neatly into the orthodox, modified or alternative framework. For example, while President Donald Trump has categorically rejected the orthodox trade paradigm, his trade policies do not appear to have a clear theoretical or intellectual underpinning. Similarly, while US politicians often preach the importance of 'fiscal discipline', successive administrations have run large fiscal deficits, partly as a result of implementing large tax cuts for high earners. The difference between orthodox paradigm rhetoric and practice also extends to the adoption of interventionist industrial policies,

with agencies, such as the Defense Advanced Research Projects Agency (DARPA), actively investing in research and development to direct the development of innovative technologies. The US is also a clear outlier on environmental – particularly climate change – policy, remaining committed to an orthodox paradigm approach and even seeking to roll back many of the protection policies introduced by past administrations and the promotion of fossil fuels.

Overall, the results confirm the general thesis that it is important to distinguish between orthodox and modified paradigms. But the shift from one to the other occurred at different times for different issues. As such, while there is evidence of shifts away from orthodox paradigm approaches, the timing of the shifts have varied by policy and by institution. Often these have occurred as a result of shocks and crises, which have undermined confidence in the orthodox paradigm approach to economic policy. Key events include the election of social democratic governments in the 1990s, the 1997 Asian financial crisis, and the 2007/08 Global Financial Crisis. More recently, the election of Donald Trump has seen the US government abandon many of the policies of the previous administration, and, in the wake of the 2016 Brexit vote, the UK government has begun to develop an explicit, interventionist industrial strategy.

None of these developments yet adds up to a complete paradigm shift – a fundamental break with the economic consensus of the kind witnessed in the 1940s with the shift from laissez-faire to the Keynesian post-war consensus, or in the 1970s/80s with the shift from the post-war consensus to neoliberalism. Many international institutions and governments are increasingly open to modified paradigm ideas and are, to some extent, adopting the resultant policies. However, ideas that can be classed as being part of an alternative paradigm are yet to be considered by many or any institutions, while alternative paradigm policies are yet to be adopted by any institution or government. However, the growing recognition of the failure of the orthodox paradigm suggests both that the conditions for such a shift are now apparent, and that its intellectual and political constituents are beginning to emerge – including among some national opposition political parties, such as the British Labour Party<sup>260</sup>.

A number of barriers to change from modified to alternative remain:

- **Alternative paradigm approaches are underdeveloped:** while there is loose convergence on the overall goals or values of a new paradigm, there is little synthesis of potential new paradigm approaches, nor a unified conversation between institutions on what constitutes a new approach.
- **Disagreement over alternative paradigm approaches:** among economists seeking a more radical reappraisal of economic theory, there is often disagreement around the best alternatives. For example, there remains a significant divergence between those advocating various models of 'inclusive, sustainable growth' and those arguing for 'de-growth'. Similarly, there remains strong disagreement over the optimal approach to monetary and fiscal policy. However, a number of non-orthodox economists are now open to the attempt to synthesise new ideas and approaches in an effort to achieve greater convergence.

- **Institutional inertias and resistance to change:** economic policy-making and commentary still overwhelmingly reflect the orthodox neoclassical or neoliberal view. This is partly a consequence of the institutional inertia of the economics profession. The most prestigious economic journals remain overwhelmingly orthodox, largely accepting articles within the mainstream tradition. Similarly, the economics curriculum in universities is still very traditional, giving students little exposure to alternative theories. Young economists going to work in business and public policy face an entrenched culture rooted in orthodox ideas.

### Further work

This study provides a broad overview of the process of changing ideas across a selection of economic policy areas and in a number of mainstream international institutions and US, UK and European governments. More research can be done to improve the view of how these shifts are occurring through, for example, surveys of other institutions, and to understand better the gap between research and policy thinking, and policy implementation. Further refinement would also be helpful of the characterisation of different orthodox, modified and alternative paradigm approaches. There may be other potential 'alternative paradigm' approaches, ranging across the political spectrum, which have not been identified here.

There is clearly scope for the orthodox, modified and alternative paradigm schema to be applied to and tested with other international and national economic institutions. These should include those in the 'developing' world. In particular, the relationship between 'developed' and 'developing' world governments and multilateral economic institutions is an important area of study. Indeed, the continued difficulties in reaching trade agreements across the world, American indecision over the Trans-Pacific Partnership and other agreements, and the breakdown of the Washington Consensus could be signalling a breakdown in the existing international economic paradigm.

Furthermore, local and regional economic institutions likely present a fruitful area of study. Some local governing institutions, such as the municipalities of Preston in the UK, Cleveland in the USA and the state of Victoria in Australia, are introducing suites of policies that break from the approach of their national governments, constituting an alternative paradigm approach in our schema. These programmes variously include local ownership of key economic assets, such as energy and financial institutions and the use of public assets and procurement to drive social, economic and environmental outcomes both locally and nationally<sup>261</sup>. While these new approaches are focussed on local areas, they signal a fundamental break from the existing paradigm and it is to be seen how these changes impact national policies.

## 5. Conclusion

Epoch-defining shifts in political and economic ideas have occurred twice over the last one hundred in Western nations. The first came after the Second World War, when a new social democratic order replaced the laissez-faire approach discredited by the Wall Street Crash and Great Depression. The second came at the beginning of the 1980s, with a pro-market or 'neoliberal' settlement gaining power in the wake of the failures of the status quo to respond to the economic crises of the 1970s. After the Great Financial Crisis and the economic and political upheavals it spurred, it is likely that the conditions for another shift in the political-economic paradigm are apparent. Furthermore, critiques are growing in strength and reach as to the inadequacy of the status quo in both theory and in practice, with its demonstrable failure to respond to growing inequality, secular stagnation and environmental collapse, among other crises.

The pace and scale of change in political-economic ideas often differs across economic policy areas and by institution. As such, we have categorised political-economic ideas and policies into orthodox, modified and alternative paradigm, providing a useful conceptual framework through which to understand how these ideas and policies change over time. In applying this categorisation to ten economic policy areas and a number of mainstream multilateral and domestic economic institutions, our central conclusion is that a shift is underway in many economic policy areas across mainstream economic institutions.

This shift has mainly been from orthodox paradigm approaches - those adhering closely to neoclassical principles - to a modified approach that alters the neoclassical approach in many ways, but maintains its fundamental basis. Little to no movement toward truly new paradigm approaches is yet underway, though the OECD is exhibiting openness to these ideas.

While a useful overall heuristic to understand the state and process of change in political-economic debates, more work is needed to understand the shift process in other economic institutions, including at local level and in the 'developing' world, and across the various constituent components within institutions themselves. This is important because major challenges - particularly the accelerating collapse of biogeochemical cycles - are growing, and adequate responses from the status quo are not forthcoming, threatening the conditions upon which economic development can even occur.

## References

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<sup>1</sup> Our analysis in this section is based on Stirling A and Laybourn-Langton L (2017) 'Time for a New Paradigm? Past and Present Transitions in Economic Policy', *The Political Quarterly*, 2017. doi:10.1111/1467-923X.12415 and Laybourn-Langton L and Jacobs M (2018) 'Paradigm shifts in economic theory and policy', *Intereconomics*, Volume 53, May/June 2018, Number 3, pp. 113-118. DOI: 10.1007/s10272-018-0737-4.

<sup>2</sup> The term 'neoliberalism' is controversial in some circles, since it can carry strongly pejorative rather than merely descriptive connotations. We use it here as a conveniently descriptive term to characterise the dominant set of 'free market' theories, values and policies. For more on the uses of the term 'neoliberalism', see: Hartwich OM and Sally R (2009) *Neoliberalism: The genesis of a political swearword*, the Centre for Independent Studies.

<sup>3</sup> Kuhn T (1962) *The Structure of Scientific Revolutions*, Chicago: The University of Chicago Press.

<sup>4</sup> Lakatos I (1968) 'Criticism and the Methodology of Scientific Research Programmes', *Proceedings of the Aristotelian Society*, Vol. 69, 1968.

<sup>5</sup> Hall P (1993) 'Policy Paradigms, Social Learning, and the State: The Case of Economic Policymaking in Britain', *Comparative Politics*, Vol. 25, No. 3, 1993.

<sup>6</sup> Hay C. (1999) *The Political Economy of New Labour: Labouring under False Pretences*, Manchester University Press.

<sup>7</sup> Ricardo, D. (1817). 'On the Principles of Political Economy and Taxation'.

<sup>8</sup> Findlay, R (1987), Comparative Advantage, In: John Eatwell, Murray Milgate, Peter Newman and Robert Harry Inglis Palgrave (Eds.), *The New Palgrave: A Dictionary of Economics*, Volume 1: A - D, London: Macmillan, pp. 514-517.

<sup>9</sup> Harrigan, J (2003), Specialization and the Volume of Trade: Do the Data Obey the Laws?, In: E. Kwan Choi and James Harrigan (Eds.), *Handbook of International Trade*, Malden: Blackwell, pp. 85-118.

<sup>10</sup> Samuelson, P A (1972) [1969], *The Way of an Economist*, In: Robert C. Merton (Ed.). *The Collected Scientific Papers of Paul A. Samuelson*, Vol. III, Cambridge: M.I.T. Press, pp. 675-685.

<sup>11</sup> <http://www.imf.org/external/pubs/ft/fandd/2016/12/obstfeld.htm>

<sup>12</sup> <http://wer.worldeconomicsassociation.org/files/WEA-WER2-Schumacher.pdf>

<sup>13</sup> Shaikh, A (2007). *Globalization and the Myths of Free Trade: History, Theory, and Empirical Evidence*, London: Routledge

<sup>14</sup> Globalization and the Myths of Free Trade: History, Theory and Empirica

<sup>15</sup> Rodrik, D (2001), *The Global Governance of Trade: As if Development Really Mattered*, New York: UNDP.

<sup>16</sup> Globalization and the Myths of Free Trade: History, Theory and Empirica

<sup>17</sup> Chang, H. J. (2008). *Bad Samaritans: The guilty secrets of rich nations and the threat to global prosperity*. Random House.

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<sup>18</sup> [https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/what\\_do\\_trade\\_agreements\\_really\\_do.pdf](https://drodrik.scholar.harvard.edu/files/dani-rodrik/files/what_do_trade_agreements_really_do.pdf)

<sup>19</sup> Edward Goldsmith, "Can the Environment Survive the Global Economy?" in *The Case Against the Global Economy and For a Turn Towards the Local*, ed. Edward Goldsmith and Jerry Mander (London: Earthscan, 2001).

<sup>20</sup> <https://eastsidemarxism.files.wordpress.com/2017/04/shaikh-anwar-ed-globalization-and-the-myths-of-free-trade-routledge-frontiers-of-political-economy.pdf>

<sup>21</sup> Globalization and standards : the liberalization of trade and the potential for a regulatory race to the top

<sup>22</sup> Kearn, J. R., C L Pope, G C Whiting and L T Wimmer (1979), A Confusion of Economists?, *The American Economic Review*, 69 (2), pp. 28-37

<sup>23</sup> Frey, B S, W W Pommerehne, F Schneider and G Gilbert (1984), Consensus and Dissension among Economists: An Empirical Inquiry, *The American Economic Review*, 74 (5), pp. 986-994.

<sup>24</sup> Alston, R M, J R Kearn and M B Vaughan (1992), Is There a Consensus among Economists in the 1990's?, *The American Economic Review*, 82 (2), pp. 203-209.

<sup>25</sup> Shaikh, A (2007), Globalization and the Myths of Free Trade, In: Anwar Shaikh (Ed.). *Globalization and the Myths of Free Trade: History, Theory, and Empirical Evidence*, London: Routledge, pp. 50-68.

<sup>26</sup> Rodrik, D (2001), *The Global Governance of Trade: As if Development Really Mattered*, New York: UNDP.

<sup>27</sup> <http://www.imf.org/external/pubs/ft/fandd/2016/12/obstfeld.htm>

<sup>28</sup> <https://www.bloomberg.com/news/videos/2016-07-26/oecd-s-mann-must-acknowledge-global-trade-s-losers>

<sup>29</sup> <http://www.worldbank.org/en/results/2018/04/03/stronger-open-trade-policies-enables-economic-growth-for-all>

<sup>30</sup> [https://www.wto.org/english/res\\_e/booksp\\_e/wtr17-4\\_e.pdf](https://www.wto.org/english/res_e/booksp_e/wtr17-4_e.pdf)

<sup>31</sup> <https://www.gov.uk/government/speeches/global-britain-the-future-of-international-trade>

<sup>32</sup> <https://www.ft.com/content/dd2af6b0-4fc1-11e8-9471-a083af05aea7>

<sup>33</sup> Olivier Jean Blanchard (2008). "crowding out," *The New Palgrave Dictionary of Economics*, 2nd Edition

<sup>34</sup> Lucas R. E., 1973, Some International Evidence on Output Inflation Tradeoffs, *American Economic Review*, Vol. 63.

<sup>35</sup> <https://piie.com/commentary/speeches-papers/what-washington-means-policy-reform>

<sup>36</sup> [https://www.landecon.cam.ac.uk/research/real-estate-and-urban-analysis/centres/ccepp/copy\\_of\\_ccepp-publications/wp02-12.pdf](https://www.landecon.cam.ac.uk/research/real-estate-and-urban-analysis/centres/ccepp/copy_of_ccepp-publications/wp02-12.pdf)

<sup>37</sup> Kirsanova, T., Leith, C. and Wren-Lewis, S. (2009), 'Monetary and fiscal policy interaction: the current consensus assignment in the light of recent developments', *Economic Journal*, 119, pp. 482-96

<sup>38</sup> <https://www.niesr.ac.uk/sites/default/files/publications/dp429.pdf>

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<sup>39</sup> [https://www.landecon.cam.ac.uk/research/real-estate-and-urban-analysis/centres/ccepp/copy\\_of\\_ccepp-publications/wp02-12.pdf](https://www.landecon.cam.ac.uk/research/real-estate-and-urban-analysis/centres/ccepp/copy_of_ccepp-publications/wp02-12.pdf)

<sup>40</sup> T Kirsanova, T., Leith, C. and Wren-Lewis, S. (2009), 'Monetary and fiscal policy interaction: the current consensus assignment in the light of recent developments', *Economic Journal*, 119, pp. 482–96

<sup>41</sup> Wray, L. R. (2015). *Modern money theory: A primer on macroeconomics for sovereign monetary systems*. Springer.

<sup>42</sup> <https://piie.com/publications/testimony/posen0705.pdf>

<sup>43</sup> <http://ec.europa.eu/eurostat/web/government-finance-statistics/excessive-deficit-procedure>

<sup>44</sup> <http://www.oecd.org/eco/outlook/49864799.pdf>

<sup>45</sup> [https://scholar.harvard.edu/files/rogoff/files/growth\\_in\\_time\\_debt\\_aer.pdf](https://scholar.harvard.edu/files/rogoff/files/growth_in_time_debt_aer.pdf)

<sup>46</sup> [http://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Fiscal\\_policy/Articles/2015-12-09-german-federal-debt-brake.pdf?blob=publicationFile&v=3](http://www.bundesfinanzministerium.de/Content/EN/Standardartikel/Topics/Fiscal_policy/Articles/2015-12-09-german-federal-debt-brake.pdf?blob=publicationFile&v=3)

<sup>47</sup> <https://academic.oup.com/cje/article/38/2/257/1714018>

<sup>48</sup> IMF Response to the Financial and Economic Crisis, 2016

<sup>49</sup> <http://www.oecd.org/economy/elusive-global-growth-outlook-requires-urgent-policy-response.htm>

<sup>50</sup> <https://www.imf.org/external/pubs/ft/fandd/2003/06/pdf/basics.pdf>

<sup>51</sup> <https://www.imf.org/external/pubs/ft/fandd/2003/06/pdf/basics.pdf>

<sup>52</sup> <https://www.ecb.europa.eu/mopo/intro/transmission/html/index.en.html>  
<https://www.ecb.europa.eu/mopo/intro/transmission/html/index.en.html>

<sup>53</sup> <https://krugman.blogs.nytimes.com/2013/04/11/monetary-policy-in-a-liquidity-trap/>

<sup>54</sup> <https://www.imf.org/external/np/eng/2013/041813a.pdf>

<sup>55</sup> <http://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/20/Monetary-Policy-and-Central-Banking>

<sup>56</sup> <https://www.bis.org/publ/work570.pdf>

<sup>57</sup> Werner, R., (2005). *New Paradigm in Macroeconomics: solving the riddle of Japanese macroeconomic performance*. England: Palgrave Macmillan.

<sup>58</sup> Stiglitz, Joseph E. and Weiss, Andrew (1981). 'Credit rationing in markets with imperfect information'. *American Economic Review*, 71(3), 393-410.

<sup>59</sup> Goodhart, Charles. 1989. *Money, Information and Uncertainty*. 2nd ed. London: Macmillan.

<sup>60</sup> Ryan-Collins, J., Greenham, T., Werner, R., & Jackson, A. (2012). *Where does money come from. A guide to the UK monetary and banking system*, 2.

<sup>61</sup> [http://www2.euromemorandum.eu/uploads/werner\\_qtc\\_ecb\\_and\\_policy.pdf](http://www2.euromemorandum.eu/uploads/werner_qtc_ecb_and_policy.pdf)

---

<sup>62</sup> <http://bilbo.economicoutlook.net/blog/?p=4656>

<sup>63</sup> <http://www.cfebs.org/pubs/wp-pdf/WP37-MoslerForstater.pdf>

<sup>64</sup> <http://positivemoney.org/wp-content/uploads/2016/12/SovereignMoney-AnIntroduction-20161214.pdf>

<sup>65</sup> Dyson, Ben, and Andrew Jackson. 2013. *Modernising Money*. London: Positive Money.

<sup>66</sup> Friedman, Milton. 1948. 'A Monetary and Fiscal Framework for Economic Stability'. *The American Economic Review* 38 (3): 245–64.

<sup>67</sup> Simons, Henry Calvert. 1951. *Economic Policy for a Free Society*. Chicago: University of Chicago Press

<sup>68</sup> Tobin, James. 1986. *Financial Innovation and Deregulation in Perspective*. New Haven, CT: Cowles Foundation for Research in Economics.

<sup>69</sup> Fisher, I. (1936), "100% Money and the Public Debt", *Economic Forum*, Spring Number, April-June 1936, 406-420

<sup>70</sup> <https://www.imf.org/external/np/pp/eng/2013/041813a.pdf>

<sup>71</sup> <http://www.imf.org/en/About/Factsheets/Sheets/2016/08/01/16/20/Monetary-Policy-and-Central-Banking>

<sup>72</sup> <https://blogs.imf.org/2009/12/02/exit-from-crisis-interventions/#more-968>

<sup>73</sup> <https://www.bis.org/speeches/sp170407.pdf>

<sup>74</sup> <https://www.theguardian.com/business/2014/may/06/oecd-european-central-bank-low-inflation-eurozone>

<sup>75</sup> Kenneth Arrow and Gerard Debreu in 1951

<sup>76</sup> Fama, E. (1970) 'Efficient capital markets: a review of theory and empirical work', *Journal of Finance*, Vol. 25, pp. 383–417.

<sup>77</sup> Woodford, Michael: *Interest and prices: Foundations of a theory of monetary policy*, Princeton University Press, 2003

<sup>78</sup> King, M. (2012). 'Twenty Years of Inflation Targeting'. Remarks at the London School of Economics, Stamp Memorial Lecture. Available at: [www.bankofengland.co.uk/publications/Documents/speeches/2012/speech606.pdf](http://www.bankofengland.co.uk/publications/Documents/speeches/2012/speech606.pdf)

<sup>79</sup> <https://www.bis.org/publ/work354.pdf>

<sup>80</sup> Stephen Cecchetti & Enisse Kharroubi, 2012. "Reassessing the impact of finance on growth," BIS Working Papers 381, Bank for International Settlements.

<sup>81</sup> <https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Too-Much-Finance-26011>

<sup>82</sup> <https://www.bis.org/publ/work337.pdf>

<sup>83</sup> Kahneman, D. (1979). Prospect theory: An analysis of decisions under risk. *Econometrica*, 47, 278.

---

<sup>84</sup> Shefrin, H., 2000. Beyond greed and fear. Understanding behavioral finance and the psychology of investing

<sup>85</sup> Thaler, R., 1993. Advance in Behavioral Finance. Princeton University Press. New Jersey. USA

<sup>86</sup> <https://www.cambridge.org/core/journals/journal-of-institutional-economics/article/turn-in-economics-neoclassical-dominance-to-mainstream-pluralism/649176BD78B6EF45AF7278E3FCC00766>

<sup>87</sup> [http://b.3cdn.net/nefoundation/70470851bfaddff2a2\\_xem6ix4qg.pdf](http://b.3cdn.net/nefoundation/70470851bfaddff2a2_xem6ix4qg.pdf)

<sup>88</sup> <http://speri.dept.shef.ac.uk/wp-content/uploads/2017/03/SPERI-Paper-40-Political-Economy-and-the-Paradoxes-of-Macroprudential-Regulation.pdf>

<sup>89</sup> Minsky, Hyman. 1986. Stabilizing and Unstable Economy. New Haven, CT: Yale University Press.

<sup>90</sup> [https://keenomics.s3.amazonaws.com/debtdeflation\\_media/papers/JEBO\\_2672.pdf](https://keenomics.s3.amazonaws.com/debtdeflation_media/papers/JEBO_2672.pdf)

<sup>91</sup> <https://www.bankofengland.co.uk/-/media/boe/files/quarterly-bulletin/2014/money-creation-in-the-modern-economy.pdf>

<sup>92</sup> O'Sullivan M. (2004), 'Finance and Innovation', in J. Fagerberg D. C. Mowery R. R. Nelson, (eds), The Oxford Handbook of Innovation, New York, Oxford University Press.

<sup>93</sup> Mazzucato M. (2013), 'Financing Innovation: Creative Destruction vs Destructive Creation', Industrial and Corporate Change , 22, 851–67.

<sup>94</sup> Minsky, H.P., 1992. The Capital Development of the Economy and the Structure of Financial Institutions. Levy Institute Working Paper Series 72.

<sup>95</sup> Epstein, Gerald A. 2005. Financialization and the World Economy. Cheltenham: Edward Elgar

<sup>96</sup> Palley, Thomas I. 2007. 'Financialization: What It Is and Why It Matters'. The Levy Economics Institute Working Paper no. 525, December.

<sup>97</sup> <http://journals.sagepub.com/doi/abs/10.1177/2329496517704874>

<sup>98</sup> Veblen, T. 1904. The theory of business enterprise, New York, C. Scribner's Sons.

<sup>99</sup> Keynes, J. M. 2006 [1936]. General Theory of Employment, Interest and Money, Atlantic, New Delhi.

<sup>100</sup>

<http://siteresources.worldbank.org/DEC/Resources/FinancialCrisesNineLessonsfromEastAsiaJournal.pdf>

<sup>101</sup> Independent Evaluation Office. (2011). IMF Performance in the Run-Up to the Financial and Economic Crisis. IMF Surveillance in 2004–07. [Online] Available: [http://www.ieu-imf.org/ieu/files/completedevaluations/Crisis-%20Main%20Report%20\(without%20Moises%20Signature\).pdf](http://www.ieu-imf.org/ieu/files/completedevaluations/Crisis-%20Main%20Report%20(without%20Moises%20Signature).pdf). Last accessed 28/05/17.

<sup>102</sup> <https://www.bankofengland.co.uk/quarterly-bulletin/2013/q3/macropolicy-at-the-boe>

<sup>103</sup> <https://www.federalreserve.gov/newsevents/speech/bernanke20110505a.htm>

<sup>104</sup> <https://www.ecb.europa.eu/ecb/tasks/stability/html/index.en.html>

<sup>105</sup> <http://www.imf.org/external/pubs/ft/fandd/basics/macropu.htm>

---

<sup>106</sup> <http://www.oecd.org/eco/monetary/capitalflowsandfinancialfragility.htm>

<sup>107</sup> <https://www.bis.org/publ/bppdf/bispap86.htm>

<sup>108</sup> Clark, John Bates. (1899). *The Distribution of Wealth*. Macmillan.

<sup>109</sup> Mankiw, N. G., & Taylor, M. P. (2011). *Economics* (revised ed.). Andover: Cengage Learning.

<sup>110</sup> Friedman, Milton. 1975. *There's No Such Thing as a Free Lunch*. La Salle, IL: Open Court.

<sup>111</sup> <http://piketty.pse.ens.fr/en/capital21c2>

<sup>112</sup> <https://www.chartbookofeconomicinequality.com/>

<sup>113</sup> <https://academic.oup.com/wber/article-abstract/30/2/203/2224294?redirectedFrom=fulltext>

<sup>114</sup> Frank, Robert H., and Philip J. Cook. 2010. *The Winner-Take-All Society: Why the Few at the Top Get so Much More than the Rest of Us*. London: Random House.

<sup>115</sup> Rosen, Sherwin. 1981. 'The Economics of Superstars'. *The American Economic Review* 71 (5): 845–58

<sup>116</sup> Brynjolfsson, Erik, and Andrew McAfee. 2014. *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. New York: W. W. Norton.

<sup>117</sup> Berg, A., and J. D. Ostry. (2011). "Inequality and Unsustainable Growth: Two Sides of the Same Coin?" IMF Staff Discussion Note 11/08, International Monetary Fund, Washington.

<sup>118</sup> Ostry, J. D., A. Berg, and C. Tsangarides. 2014. "Redistribution, Inequality, and Growth." IMF Staff Discussion Note 14/02, International Monetary Fund, Washington.

<sup>119</sup> <http://www.oecd-ilibrary.org/docserver/download/5jxrjncwv6j-en.pdf?expires=1520859127&id=id&accname=guest&checksum=64C0FC6D55D2343221460AE5584545C4>

<sup>120</sup> Stiglitz, Joseph E. 2012. *The Price of Inequality*. London: Penguin.

<sup>121</sup> Keen, Steve. 2011. *Debunking Economics: The Naked Emperor Dethroned?* 2nd ed. London: Zed Books.

<sup>122</sup> <https://www.repository.cam.ac.uk/bitstream/handle/1810/246625/Marginal-Productivity-Theory- RRPE-Final-Version-16-06-2014.pdf?sequence=1>

<sup>123</sup> <https://www.repository.cam.ac.uk/bitstream/handle/1810/246625/Marginal-Productivity-Theory-RRPE--Final-Version-16-06-2014.pdf?sequence=1>

<sup>124</sup> [http://www.ilo.org/global/research/global-reports/global-wage-report/2014/Charts/WCMS\\_322713/lang--en/index.htm](http://www.ilo.org/global/research/global-reports/global-wage-report/2014/Charts/WCMS_322713/lang--en/index.htm)

<sup>125</sup> <https://www.amazon.co.uk/Myth-Measurement-Economics-Minimum-Wage/dp/0691048231>

<sup>126</sup> [http://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---travail/documents/publication/wcms\\_202352.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/publication/wcms_202352.pdf)

---

<sup>127</sup> <https://www.repository.cam.ac.uk/bitstream/handle/1810/246625/Marginal-Productivity-Theory-RRPE--Final-Version-16-06-2014.pdf?sequence=1>

<sup>128</sup> <https://community-wealth.org/sites/clone.community-wealth.org/files/downloads/report-stiglitz.pdf>

<sup>129</sup> [http://www.levyinstitute.org/pubs/wp\\_805.pdf](http://www.levyinstitute.org/pubs/wp_805.pdf)

<sup>130</sup> Wilkinson, Richard, and Kate Pickett. 2010. *The Spirit Level: Why Equality Is Better for Everyone*. London: Penguin.

<sup>131</sup> Rowlingson, Karen. 2011. Does Income Inequality Cause Health and Social Problems? York: The Joseph Rowntree Foundation. <https://www.jrf.org.uk/report/does-income-inequality-cause-health-and-social-problems>

<sup>132</sup> Milton Friedman, *Capitalism and Freedom* (Chicago: University of Chicago Press, 1962), 161–62

<sup>133</sup> Berg, A., and J. D. Ostry. (2011). "Inequality and Unsustainable Growth: Two Sides of the Same Coin?" IMF Staff Discussion Note 11/08, International Monetary Fund, Washington.

<sup>134</sup> Ostry, J. D., A. Berg, and C. Tsangarides. 2014. "Redistribution, Inequality, and Growth." IMF Staff Discussion Note 14/02, International Monetary Fund, Washington.

<sup>135</sup> <http://www.oecd-ilibrary.org/docserver/download/5jxrjncwxv6j-en.pdf?expires=1520859127&id=id&accname=guest&checksum=64C0FC6D55D2343221460AE5584545C4>

<sup>136</sup> <https://blogs.imf.org/2017/01/24/inclusive-growth-and-the-imf/>

<sup>137</sup> <https://www.imf.org/en/Publications/Staff-Discussion-Notes/Issues/2016/12/31/Redistribution-Inequality-and-Growth-41291>

<sup>138</sup> <http://www.oecd.org/inclusive-growth/>

<sup>139</sup> <https://www.weforum.org/reports/the-inclusive-growth-and-development-report-2017>

<sup>140</sup> C. Lagarde (2013). *A New Global Economy for a New Generation*

<sup>141</sup> <https://oxfamlibrary.openrepository.com/oxfam/bitstream/10546/620349/1/bp-great-expectations-imf-inequality-101017-en.pdf>

<sup>142</sup>

[http://www.worldbank.org/en/news/feature/2013/04/17/ending\\_extreme\\_poverty\\_and\\_promoting\\_shared\\_prosperity](http://www.worldbank.org/en/news/feature/2013/04/17/ending_extreme_poverty_and_promoting_shared_prosperity)

<sup>143</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/25078/9781464809583.pdf>

<sup>144</sup> [http://www3.weforum.org/docs/WEF\\_Forum\\_IncGrwth\\_2017.pdf](http://www3.weforum.org/docs/WEF_Forum_IncGrwth_2017.pdf)

<sup>145</sup> [https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy\\_en](https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/european-semester/framework/europe-2020-strategy_en)

<sup>146</sup> Layard, R. and S. Nickell (1986). 'Unemployment in Britain' *Economica* 53: 121-70. ---. (1990). "15 unemployment lower if unions bargain over employment?", *Quarterly Journal of Economics* 105: 773-88

---

<sup>147</sup> Siebert, Horst (Summer 1997). "Labour Market Rigidities: At the Root of Unemployment in Europe". *Journal of Economic Perspectives*. 2 (3): 43. doi:10.1257/jep.11.3.37.

<sup>148</sup> Lungqvist, L and T.J. Sargent (1998). The European unemployment dilemma, *Journal of Political Economy* 106: 514-50.

<sup>149</sup> Robinson, J. (1969). *The economics of imperfect competition*. Springer.

<sup>150</sup> [http://www.global-labour-university.org/fileadmin/GLU\\_Working\\_Papers/GLU\\_WP\\_No.6.pdf](http://www.global-labour-university.org/fileadmin/GLU_Working_Papers/GLU_WP_No.6.pdf)

<sup>151</sup> Layard, P. R. G., Layard, R., Nickell, S. J., & Jackman, R. (2005). *Unemployment: macroeconomic performance and the labour market*. Oxford University Press on Demand.

<sup>152</sup>

[http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/genericdocument/wcms\\_234602.pdf](http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/genericdocument/wcms_234602.pdf)

<sup>153</sup> [http://b.3cdn.net/nefoundation/5237986e74dd1368f5\\_51m6b4u2z.pdf](http://b.3cdn.net/nefoundation/5237986e74dd1368f5_51m6b4u2z.pdf)

<sup>154</sup> Srnicek, N., & Williams, A. (2015). *Inventing the future: Postcapitalism and a world without work*. Verso Books.

<sup>155</sup> Mason, P. (2016). *Postcapitalism: A guide to our future*. Macmillan.

<sup>156</sup> Deakin & Reed, 2000 S. Deakin , H. Reed . River crossing or cold bath: Deregulation and employment in Britain in the 1980s and 1990s. G. Esping-Andersen . Why deregulate labor markets. 2000; Oxford University Press: New York

<sup>157</sup> Baker, 2007 D. Baker . *The United States since 1980*. 2007; Cambridge University Press: New York

<sup>158</sup> A. Hassel . The erosion of the German system of industrial relations. *British Journal of Industrial Relations*. 37(3): 1999; 483–505.

<sup>159</sup> A. Hassel . The politics of social pacts. *British Journal of Industrial Relations*. 41(4): 2003; 707–726.

<sup>160</sup> <https://www.tandfonline.com/doi/abs/10.1080/09644008.2014.967226>

<sup>161</sup> <https://academic.oup.com/oxrep/article/31/2/199/2452966>

<sup>162</sup> <https://www.ibtimes.co.uk/davis-camerons-war-trade-unions-fundamental-attack-democracy-1511023>

<sup>163</sup> <https://www.imf.org/external/pubs/ft/sdn/2013/sdn1302.pdf>

<sup>164</sup>

<https://openknowledge.worldbank.org/bitstream/handle/10986/6507/449860PUB0Box3101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>

<sup>165</sup> [http://siteresources.worldbank.org/EXTNWDR2013/Resources/8258024-1320950747192/8260293-1322665883147/WDR\\_2013\\_Report.pdf](http://siteresources.worldbank.org/EXTNWDR2013/Resources/8258024-1320950747192/8260293-1322665883147/WDR_2013_Report.pdf)

<sup>166</sup> The Role of the OECD in Changing Economic Thinking

<sup>167</sup> <http://www.oecd.org/social/basic-income-an-answer-to-social-security-problems.htm>

---

<sup>168</sup> Mas-Colell, Andreu; Whinston, Michael D.; Green, Jerry R. (1995), "Chapter 16: Equilibrium and its Basic Welfare Properties", *Microeconomic Theory*, Oxford University Press

<sup>169</sup> A classic reference is K.Arrow, 'An Extension of the Basic Theorems of Classical Welfare Economics', 1951, paper presented at the Second Berkeley Symposium on Mathematical Statistics and Probability, Berkeley.

<sup>170</sup> Buchanan, J. (2003). Public choice: the origins and development of a research program. *Champions of Freedom*, 31.

<sup>171</sup> C.Wolf, 'Markets or Governments: Choosing between Imperfect Alternatives', 1988, Cambridge, Mass.: MIT Press.

<sup>172</sup> G.Tullock, A.Seldon and G.L.Brady, 'Government Failure: A primer in Public Choice', 2002, Washington, DC: Cato Institute.

<sup>173</sup> A.Krueger, 'The Political Economy of the Rent-seeking Society', *The American Economic Review*, Vol. 64, No. 3, 1974, pp. 291–303

<sup>174</sup> O.Falck, C.Gollier and L.Woessmann, 'Arguments for and against Policies to Promote National Champions', in *Industrial Policy for National Champions*, O. Falck, C. Gollier and L. Woessmann (eds.), 2001, Cambridge, MA: MIT Press, pp. 3–9.

<sup>175</sup> M.Friedman, 'Crowding Out or Crowding In? The Economic Consequences of Financing Government Deficits', *Brookings Papers on Economic Activity*, No. 3, 1979, pp. 593–654.

<sup>176</sup> <http://socsci2.ucsd.edu/~aronatas/project/academic/Stiglitz%20Greenwald.pdf>

<sup>177</sup> <http://cgt.columbia.edu/wp-content/uploads/2014/01/Industrial-Policies-the-Creation-of-a-Learning-Society-and-Economic.pdf>

<sup>178</sup>

[https://books.google.co.uk/books?id=fxK86dRoAV0C&pg=PA138&lpg=PA138&dq=horizontal+industrial+policy+imf&source=bl&ots=At6TqUouAl&sig=OizMxTaesNPbuMA5Jlbs1ceMUCk&hl=en&sa=X&ved=0ahUKEwi\\_jJr4v-fZAhXIKsAKHfiUBPsQ6AEIUzAG#v=onepage&q=horizontal%20industrial%20policy%20imf&f=false](https://books.google.co.uk/books?id=fxK86dRoAV0C&pg=PA138&lpg=PA138&dq=horizontal+industrial+policy+imf&source=bl&ots=At6TqUouAl&sig=OizMxTaesNPbuMA5Jlbs1ceMUCk&hl=en&sa=X&ved=0ahUKEwi_jJr4v-fZAhXIKsAKHfiUBPsQ6AEIUzAG#v=onepage&q=horizontal%20industrial%20policy%20imf&f=false)

<sup>179</sup> Polanyi, K. (1944). *The great transformation: Economic and political origins of our time*. Rinehart, New York.

<sup>180</sup> [http://www.isigrowth.eu/wp-content/uploads/2015/11/working\\_paper\\_2015\\_2.pdf](http://www.isigrowth.eu/wp-content/uploads/2015/11/working_paper_2015_2.pdf)

<sup>181</sup> Mazzucato, M. (2013). 'The Entrepreneurial State'. Anthem Press.

<sup>182</sup> Chang, H. J. (2008). *Bad Samaritans: The guilty secrets of rich nations and the threat to global prosperity*. Random House.

<sup>183</sup> Perez, C., 2002. *Technological revolutions and financial capital: the dynamics of bubbles and golden ages*. E. Elgar Pub., Cheltenham, UK; Northampton, MA.

<sup>184</sup> F.L.Block and R.M.Keller, 'State of Innovation: The U.S. Government's Role in Technology Development', 2011, Boulder, CO: Paradigm Publishers

<sup>185</sup> Mazzucato, M., and C. Perez., (2015). 'Innovation as Growth Policy' in *The Triple Challenge: Europe in a New Age*, (eds.) by J. Fagerberg, S. Laestadius, and B. Martin. Oxford: Oxford University Press.

---

<sup>186</sup> <http://documents.worldbank.org/curated/en/350481468331907193/pdf/WPS6628.pdf>

<sup>187</sup> Naude, Wim (2010), Industrial policy: old and new issues, UNU-WIDER, United Nations University, Working paper 2010/106.

<sup>188</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/5974/WDR%201991%20-%20English.pdf?sequence=1&isAllowed=y>

<sup>189</sup> <http://documents.worldbank.org/curated/en/350481468331907193/pdf/WPS6628.pdf>

<sup>190</sup> Ibid.

<sup>191</sup>

<https://openknowledge.worldbank.org/bitstream/handle/10986/6507/449860PUB0Box3101OFFICIAL0USE0ONLY1.pdf?sequence=1&isAllowed=y>

<sup>192</sup> <https://www.oecd.org/sti/inno/39374789.pdf>

<sup>193</sup> <http://www.progressonline.org.uk/2012/06/07/a-renewed-industrial-policy/>

<sup>194</sup> President B. H. Obama, State of the Union Address, February 12, 2013

<sup>195</sup> 'Growth Identification and Facilitation: The Role of the State in the Dynamics of Structural Change' <http://documents.worldbank.org/curated/en/438321468164948980/pdf/WPS5313.pdf>

<sup>196</sup> [http://oecdobserver.org/news/fullstory.php/aid/4436/Industrial\\_policy\\_92s\\_new\\_look.html](http://oecdobserver.org/news/fullstory.php/aid/4436/Industrial_policy_92s_new_look.html)

<sup>197</sup> <https://www.socialeurope.eu/the-imf-a-convert-to-growth-diagnostics>

<sup>198</sup> European Commission, 2010. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee, and the Committee for Regions: An Integrated Industrial Policy for the Globalisation Era—Putting Competitiveness and Sustainability at Centre Stage, SEC (2010) 1272-1276, Brussels, Com (2010) 614

<sup>199</sup> <https://publications.europa.eu/en/publication-detail/-/publication/5b2811d1-16be-11e8-9253-01aa75ed71a1/language-en>

<sup>200</sup>

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/664563/industrial-strategy-white-paper-web-ready-version.pdf)

<sup>201</sup> Pigou, A. C., 1924. The Economics of Welfare, 2nd edn, Macmillan.

<sup>202</sup> Michael Jacobs (1997) Sustainability and markets: On the neoclassical model of environmental economics, New Political Economy, 2:3, 365-385, DOI: 10.1080/13563469708406313

<sup>203</sup> David, P., Anil, M., & Barbier Edward, B. (1989). Blueprint for a green economy. Earthscan, London, Great Britain.

<sup>204</sup> Grubb, M. (2014). Planetary economics: energy, climate change and the three domains of sustainable development. Routledge.

<sup>205</sup> Stern, Nicholas. 2007. The Economics of Climate Change: The Stern Review. Cambridge, UK: Cambridge University Press.

---

<sup>206</sup> Dimitri Zenghelis (2016) 'Decarbonisation: innovation and the economics of climate change' in Jacobs, M. and Mazzucato, M. (eds) *Rethinking Capitalism: Economics and Policy for Sustainable and Inclusive Growth*, pp. 172-190. Oxford: Wiley Blackwell.

<sup>207</sup> Holdren, John, and Paul Ehrlich. 1974. "Human Population and the Global Environment." *American Scientist*, Vol 62 (May-June).

<sup>208</sup> Jacobs, Michael. 1991. *The Green Economy: Environment, Sustainable Development and the Politics of the Future*. London: Pluto Press.

<sup>209</sup> Perez, Carlota. 2010. "Technological Revolutions and Techno-Economic Paradigms."

*Cambridge Journal of Economics*, Volume 34: 185-202.

<sup>210</sup> Capitalism, Technology and a Green Global Golden Age: The Role of History in Helping to Shape the Future CARLOTA PEREZ

<sup>211</sup> Rockstrom et al. (2009) A safe operating space for humanity (Nature 461/24)

<sup>212</sup> Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist

<sup>213</sup> <https://www.nature.com/articles/nclimate3113.pdf>

<sup>214</sup> Jackson, T. (2009). *Prosperity without growth: Economics for a finite planet*. Routledge.

<sup>215</sup> Ecological Economics and Sustainable Development, Selected Essays of Herman Daly

<sup>216</sup> [http://vocabulary.degrowth.viper.ecobytes.net/wp-content/uploads/sites/4/2014/11/Degrowth-vocabulary\\_Introduction-Degrowth\\_Kallis-Demaria-Dalisa.pdf](http://vocabulary.degrowth.viper.ecobytes.net/wp-content/uploads/sites/4/2014/11/Degrowth-vocabulary_Introduction-Degrowth_Kallis-Demaria-Dalisa.pdf).

<sup>217</sup> Schneider, F., Kallis, G. & Martinez-Alier, J. Crisis or opportunity? Economic degrowth for social equity and ecological sustainability. *J. Cleaner Prod.* 18, 511–518 (2012).

<sup>218</sup> HM Treasury (2006) Stern review on the economics of climate change, London.

<sup>219</sup> IPCC (2007) The Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Geneva, Switzerland.

<sup>220</sup> HM Government (2009) The UK Renewable Energy Strategy, London.

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/22886/6/7686.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/22886/6/7686.pdf)

<sup>221</sup> Department for Business, Energy and Industrial Strategy [BEIS] (2017) The Clean Growth Strategy: Leading the way to a low-carbon future.

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/651916/BEIS\\_The\\_Clean\\_Growth\\_online\\_12.10.17.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/651916/BEIS_The_Clean_Growth_online_12.10.17.pdf)

<sup>222</sup> Barker F (2017) Potential Use of Planetary Boundary Thinking in the UK, Schumacher Institute Challenge Paper, the Schumacher Institute.

<http://www.schumacherinstitute.org.uk/download/pubs/disc/Potential-Use-of-Planetary-Boundary-Thinking-in-the-UK-TSI-December-2017.pdf>

<sup>223</sup> Nellis, J. G., & Parker, D. (2006). *Principles of business economics*. Pearson Education.

---

<sup>224</sup> Mas-Colell, Andreu; Whinston, Michael D.; Green, Jerry R. (1995), "Chapter 16: Equilibrium and its Basic Welfare Properties", *Microeconomic Theory*, Oxford University Press

<sup>225</sup> Friedman, M. (2009). *Capitalism and freedom*. University of Chicago press.

<sup>226</sup> <ftp://mse.univ-paris1.fr/pub/mse/CES2011/11038.pdf>

<sup>227</sup> <ftp://mse.univ-paris1.fr/pub/mse/CES2011/11038.pdf>

<sup>228</sup> Davies R, Haldane A, Nielsen M and Pezzini S (2014) 'Measuring the costs of shorttermism', *Journal of Financial Stability* 12: 16-25

<sup>229</sup> Kay J (2012) *The Kay Review of UK Equity Markets and Long-Term Decision Making*, HM Government. Available at:

[http://www.ecgi.org/conferences/eu\\_actionplan2013/documents/kay\\_review\\_final\\_report.pdf](http://www.ecgi.org/conferences/eu_actionplan2013/documents/kay_review_final_report.pdf)

<sup>230</sup> Lazonick. W. (2014) 'Profits without prosperity'. *Harvard Business Review*, September 2014. Available at: <https://hbr.org/2014/09/profits-without-prosperity>

<sup>231</sup> Lazonick. W. (2014) 'Profits without prosperity'. *Harvard Business Review*, September 2014. Available at: <https://hbr.org/2014/09/profits-without-prosperity>

<sup>232</sup> <ftp://mse.univ-paris1.fr/pub/mse/CES2011/11038.pdf>

<sup>233</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1625750](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1625750)

<sup>234</sup> Wolff, R. D. (2012). *Democracy at work: A cure for capitalism*. Haymarket books.

<sup>235</sup> Wright, E. O. (2010). *Envisioning real utopias* (Vol. 98). London: Verso.

<sup>236</sup> Alperovitz, G., & Speth, J. G. (2011). *America beyond capitalism: Reclaiming our wealth, our liberty, and our democracy*. Democracy Collaborative Pres.

<sup>237</sup> Cumbers, A. (2012) *Reclaiming Public Ownership: Making Space for Economic Democracy*. Zed: London, UK. ISBN 9781780320076

<sup>238</sup> <https://www.imf.org/external/pubs/ft/wp/2008/wp08179.pdf>

<sup>239</sup> [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1625750](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1625750)

<sup>240</sup> Association of Chartered Certified Accountants, "A guide to directors' responsibilities under the [UK] Companies Act 2006", para. 6.1 - 6.13, [www.accaglobal.com/content/dam/accaglobal/PDF.../tech-tp-cdd.pdf](http://www.accaglobal.com/content/dam/accaglobal/PDF.../tech-tp-cdd.pdf)

<sup>241</sup> <http://oecdinsights.org/2016/01/22/2016-csr-is-dead-whats-next/>

<sup>242</sup> <https://labour.org.uk/wp-content/uploads/2017/10/Alternative-Models-of-Ownership.pdf>

<sup>243</sup> <http://global-perspectives.org.uk/wp-content/uploads/2017/10/making-the-future-count.pdf>

<sup>244</sup> Lepenies, Philipp (2016-04-26). *The Power of a Single Number: A Political History of GDP*. New York: Columbia University Press. ISBN 9780231175104.

---

245

[http://oecdboobserver.org/news/archivestory.php/aid/1518/Is\\_GDP\\_a\\_satisfactory\\_measure\\_of\\_growth\\_.html](http://oecdboobserver.org/news/archivestory.php/aid/1518/Is_GDP_a_satisfactory_measure_of_growth_.html)

246 Coyle, D. (2015). GDP: A brief but affectionate history. Princeton University Press.

247 Pilling, D. (2018). The Growth Delusion: Wealth, Poverty, and the Well-being of Nations. Tim Duggan Books.

248 Jones, Charles I., and Peter J. Klenow. 2016. "Beyond GDP? Welfare across Countries and Time." *American Economic Review* 106 (9): 2426–57.

249 <https://blogs.imf.org/2018/03/07/welfare-versus-gdp-what-makes-people-better-off/>

250 <http://www.worldbank.org/en/news/feature/2018/01/30/the-changing-wealth-of-nations-2018>

251 <https://www.weforum.org/reports/the-inclusive-growth-and-development-report-2017>

252 <http://www.oecdbetterlifeindex.org/blog/the-better-life-index.htm>

253 <http://www.oecdbetterlifeindex.org/>

254 <http://worldhappiness.report/ed/2018/>

255 <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52009DC0433>

256 <http://www.europarl.europa.eu/EPRS/140738REV1-Measuring-well-being-and-progress-FINAL.pdf>

257 <http://www.europarl.europa.eu/EPRS/140738REV1-Measuring-well-being-and-progress-FINAL.pdf>

258 <https://www.gov.uk/government/speeches/pm-speech-on-wellbeing>

259

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/measuringnationalwellbeing/2015-09-23>

260 Laybourn-Langton L and Jacobs M (2018) 'Paradigm shifts in economic theory and policy', *Intereconomics*, Volume 53, May/June 2018, Number 3, pp. 113-118. DOI: 10.1007/s10272-018-0737-4.

261 <https://democracycollaborative.org/content/community-wealth-building-eight-basic-principles>