Reversals of Fortune?

A Long-term Perspective on Global Economic Prospects

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Executive Summary

It is conventional wisdom that:

- Continued fast growth in the BRICS will result in a rapid catch-up to match and even surpass Western income levels in the next few decades
- The crisis in Europe will soon be over and normal growth will then resume as if nothing had happened
- The tax competition resulting from globalization means a race to the bottom in which corporate tax rates fall dramatically everywhere
- The best way to escape the poverty trap is to give the poor more money
- Losers from globalization can be ignored by politicians in western democracies because they do not matter for electoral outcomes
- The adjustment problems for developing countries arising from the crisis are quite minor and easy to deal with

Actually, as *Reversals of Fortune* shows, all of these beliefs are highly questionable. The research findings reported here provide economic analysis and evidence that challenge these claims.

In Chapter 1, we argue that the 1930s' precedent suggests that policy responses to the crisis in Europe will be damaging to future growth prospects. The legacy of the crisis will probably be increased protectionism and financial repression both of which will impair productivity growth. As a result of the crisis public debt to GDP ratios are at levels which threaten adversely to affect growth. Some of the productivity gains from European integration are jeopardized by problems of the Euro which are unlikely to be resolved quickly. The OECD's current projection that productivity growth in the Euro area will be 1.8% in 2018-30 compared with 1.0% pre-crisis is very optimistic

In Chapter 2, we examine whether and how globalisation has affected individual preferences and attitudes towards market integration, as well as related questions such as immigration and preferences for public spending and redistribution. These changes in preferences do not necessarily have a direct impact on policymaking, but through their effect on individual voting behaviour they determine who will hold office and who will decide about policies. One notable aspect in Western democracies today is the increased importance of extremist and right-wing parties. Chapter 2 attempts to link voter choice for these parties to individual preferences that might have shifted because of globalisation and internationalization of capital and product markets. The analysis of individual preferences with regard to globalisation, redistribution and immigration highlights the fact that incumbent politicians need to take into account the fears of globalisation losers, particularly when deciding on welfare state spending, redistribution, regulation of immigration, and how to deal with the emergence of extremist groups and parties.

In Chapter 3, we examine the institutional and policy responses of governments in western democracies to globalization pressures. Politicians are often faced with trade-offs and having to make difficult choices balancing domestic demands from voters and international pressures that have continued to increase in the era of globalisation. Market integration enhances gains from

trade and overall welfare, but also exerts downward pressures on regulatory and fiscal matters, in addition to generating distributional conflicts. Governments that want to maintain popular support need to develop strategies that are capable of balancing these forces. As this chapter shows, these strategies are not uniform and there is no catch-all or optimal solution for all societies, nor are the domestic and international constraints faced by different countries the same. Indeed, as the analysis in this chapter demonstrates, governments usually pursue different strategies with respect to fiscal responses to globalization and implement a myriad combination of policies that are optimal with respect to electoral success, given a country's institutional and historical context, voter preferences and international pressures – but not necessarily from an economic efficiency or overall welfare point of view.

Chapter 4 asks whether BRIC countries are set to become per capita GDP leaders in the foreseeable future. It argues that, although the BRIC countries may be expected to become larger in terms of GDP, they are unlikely to become per capita GDP leaders in the foreseeable future, since their per capita income levels today are still very low and changes of leadership in per capita income have been rare in history. In fact, although many countries have started on the catching-up path, most have stalled a long way short of the frontier. Policies that help to get growth accelerations started may hinder growth in the later stages of catching-up so that, for example, a country that adjusts its institutions to catching up thanks to industry may struggle to compete in services at later stages of development. Russia is the richest BRIC country today with a per capita GDP of about 30% of the US level. Russia's previous experience of catch-up growth during the Soviet era was followed by a growth slowdown and collapse. The current era of rapid growth has taken place under an authoritarian government which provides only selective enforcement of property rights. China's per capita GDP is about 20% of the US level. Rapid growth has now been sustained over three decades, through a system of regionally decentralised authoritarianism, which has worked well because of competition between provincial leaders. But as China approaches the frontier, further reforms will be needed. India is the poorest BRIC country, with a per capita GDP of around 10% of the US level. Although there are concerns about the level of corruption in India, it is the only BRIC country where success has been driven more by services than by industry. This bodes well for the future, as a key characteristic of many rich countries is their strong performance in the services sector.

Chapter 5 argues that the global financial crisis of 2008 had a dramatic and adverse impact on economic growth across the developed world. The response in the developing world was quite heterogeneous, with some emerging-market countries recovering relatively quickly and others suffering from a prolonged recession. The chapter emphasizes the importance of a country's political institutions in determining the speed of this policy response and economic adjustment. It further stresses that there are no one-size-fits-all recipes that can be suitable for every developing country. The analysis emphasizes the importance of policy experimentation and learning in shaping the trajectory of economic development. Given that such experimentation needs time it is important that countries develop good institutions of conflict resolution. This will help leaders buy time to experiment and to avoid taking a myopic view when crafting the optimal policy response to an economic shock.

Chapter 6 considers ways to alleviate chronic poverty in developing countries and asks what are the origins of self-reinforcing mechanisms, or "poverty traps," that cause poverty to persist? In economics a significant strand of research focuses on external constraints that may perpetuate poverty traps, such as lack of credit or insecure property rights. From this starting point pro-poor policies tend to focus on relaxing the external constraints. More recently, economic research has learned from ideas that emphasize constraints internal to the person that also perpetuate poverty, for example learned helplessness, pessimistic beliefs, and an external locus of control. Unlike the external constraints, these internal constraints are endogenous because they adapt to the experience of the condition of chronic poverty. Over time, however, they become an independent source of disadvantage for poor persons in their own right. Pro-poor policies that take into account the need to alter internal constraints among the poor will have a greater impact on poverty alleviation than policies that address external constraints alone. An example is raising the aspirations of poor people. Ongoing CAGE fieldwork documents the impact of "dream-building" sessions (pioneered by the Durbar Foundation) to empower a marginalised, stigmatised community of sex workers in Kolkata and change their behaviour.

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Introduction

Sascha O. Becker

A look at the future development of the world economy: deviating from conventional wisdom

Forecasts of the world economy are regularly produced by a host of international organisations. The International Monetary Fund (IMF) has been publishing its *World Economic Outlook* since 1980. Similarly, the World Bank produces a series of *Global Economic Prospects*, which focus on developing countries. Such publications usually present a core set of short-term economic projections for the world economy, regions and individual countries. It is also quite common to produce rankings of countries based on the size of their GDP or on key indicators such as GDP per capita. This Policy Report, however, takes a somewhat different approach, as will be evident in subsequent chapters, but first it is worth highlighting several important facts about the world economy.

(i) China 2nd, India 11th in total GDP at market exchange rates

Table 1 shows a number of key indicators for the world's 20 largest economies in 2011. Column 1 measures the size of economies by their total GDP at market exchange rates, the prime measure of the market size for businesses operating in these countries. By this measure, the United States is still by far the largest economy in the world. Its 21.67% share in world GDP is more than double that of China, the world's second-largest economy. These two countries are followed by Japan, Germany and France – three G7 economies. Brazil lies ahead of the United Kingdom and Italy, which are followed by Russia, Canada and India. Overall, the world's 20 largest economies make up 80% of world GDP.

Table 1: Key economic indicators for the world's 20 largest economies

Country	Total GDP at market exchange rates (million USD) in 2011	Total GDP at market exchange rates (world rank) in 2011	Total GDP at purchasing power parity (million USD) in 2011	Total GDP at purchasing power parity (world rank) in 2011	GDP per capita at market exchange rates (USD) in 2011	GDP per capita at market exchange rates (world rank) in 2011	GDP per capita at purchasing power parity (USD) in 2011	GDP per capita at purchasing power parity (world rank) in 2011	Country share in world GDP at market exchange rates (USD) in 2011	Country share in world GDP at purchasing power parity (USD) in 2011	Population (million people) in 2011
US	15,094	1	15,094	1	48,387	14	48,387	7	22	19	312
China	7,298	2	11,300	2	5,414	88	8,382	92	10	14	1,348
Japan	5,869	3	4,400	4	45,920	18	34,740	24	8	6	128
Germany	3,577	4	3,099	5	43,742	20	37,897	18	5	4	82
France	2,776	5	2,218	9	44,008	19	35,156	23	4	3	63
Brazil	2,493	6	2,294	7	12,789	53	11,769	75	4	3	195
UK	2,418	7	2,261	8	38,592	22	36,090	22	3	3	63
Italy	2,199	8	1,847	10	36,267	25	30,464	29	3	2	61
Russia	1,850	9	2,383	6	12,993	52	16,736	53	3	3	142
Canada	1,737	10	1,396	14	50,436	9	40,541	13	2	2	34
India	1,676	11	4,458	3	1,389	137	3,694	127	2	6	1,207
Spain	1,494	12	1,413	13	32,360	27	30,626	28	2	2	46
Australia	1,488	13	914	18	65,477	6	40,234	15	2	1	23
Mexico	1,155	14	1,662	11	10,153	62	14,610	63	2	2	114
Korea	1,116	15	1,554	12	22,778	35	31,714	25	2	2	49
Indonesia	846	16	1,125	15	3,509	109	4,666	120	1	1	241
Netherlands	840	17	704	21	50,355	10	42,183	10	1	1	17
Turkey	778	18	1,074	16	10,522	61	14,517	64	1	1	74
Switzerland	636	19	340	36	81,161	4	43,370	9	1	0	8
Saudi Arabia	578	20	683	22	20,504	38	24,237	39	1	1	28

Sources: IMF, *World Economic Outlook*; World Bank, *World Development Indicators*.

(ii) China 2nd, India 3rd in total GDP in purchasing power parity (PPP) terms

Foreign businesses often use market exchange rates to translate the value of their operations abroad into their home currency (or into US dollars, if that is their unit of account). GDP at market exchange rates, however, does not always correctly reflect the purchasing power of a country's income or, for that matter, the standard of living of its citizens. This fact has received considerable popular attention via the "Big Mac Index" of *The Economist* and similar kinds of cross-country comparisons of PPP for specific goods. Market exchange rates are volatile and can take a while to reach a value that correctly reflects the standard of living in a country and cross-country differences in productivity. Political and financial factors play a role in the sluggish adjustments of market exchange rates. Furthermore, they tend to understate systematically living standards in poor countries owing to the Balassa–Samuelson effect.[1] GDP figures at PPP have the advantage of taking this into account and yield a common yardstick. While the United States remains on top by this measure, ahead of China, the gap between the two countries is much

1 The Balassa-Samuelson effect refers to the observation that, while tradable goods cannot vary greatly in price by location, most services are delivered locally (e.g. cleaning), and many manufactured goods have high transport costs, so price differences in the latter two cannot be easily arbitraged away, leading to persistent PPP-deviations. The so-called Penn effect says that PPP-deviations usually go in the same direction: where incomes are high, average price levels typically are high, thereby overstating the purchasing power of rich countries relative to poor ones.

narrower in PPP-adjusted terms. While the United States still makes up roughly 20% of world GDP, China accounts for 14.32% in PPP terms, 4 percentage points more than GDP measured at market exchange rates. The most striking difference in the position of the top economies is that India ranks third in PPP terms, with 5.65% of world GDP, ahead of both Japan and Germany.

(iii) The world's top 11 economies: G7 plus the BRICs

While the G7, the (formerly) seven largest economies – the United States, France, Germany, Italy, Japan, United Kingdom and Canada – are still in the top ranks, China, Brazil, Russia and India are now also among the world's biggest. In 2001, when Jim O'Neill of Goldman Sachs coined the acronym BRICs, he predicted that over the first decade of this millennium their weight (especially China's) in world GDP would grow, raising important issues about the global economic impact of fiscal and monetary policy in the four countries. In this context, O'Neill argued that world policymaking forums should be reorganised and the G7, in particular, should be modified to include BRIC representatives. At the time his paper created quite a stir, especially with respect to China, which he predicted would soon overtake the United States as the world's biggest economy.

China's rise is often thought to be unstoppable. Nobel Prize winner Robert Fogel (2010), in a paper entitled "$123,000,000,000,000", predicted that the Chinese economy would reach $123 trillion by 2040, or nearly three times the economic output of the entire globe in 2000. He also predicted that China's per capita income would overtake that of most of the Western world, doubling that forecast for the European Union (EU) by 2040. Fogel's bullish projection is at the upper end of the forecasting spectrum; more conservative forecasts by the OECD (2012) predict that by 2050 GDP per capita in China and Russia will be about half of that of leading Western countries, while in Brazil it will amount to about 40% and in India and Indonesia to about 25%.

Some observers think the BRICs concept has outlived its usefulness, not least because it focuses on total GDP growth. Citigroup (2011) predicts that over the coming years the most promising candidates in terms of per capita growth – the so-called global growth generators (3G countries) – will not be Brazil and Russia, but rather Bangladesh, China, Egypt, India, Indonesia, Iraq, Mongolia, Nigeria, the Philippines, Sri Lanka and Vietnam.

(iv) Belarus ahead of China; Republic of Congo ahead of India in per capita GDP

So long as China's GDP continues to grow faster than that of the United States, China might, indeed, soon overtake the US in terms of total GDP. However, there is no guarantee that this will happen. Total GDP is driven by population growth as much as by productivity growth. China's one-child policy is already slowing down its population growth and will also hamper its total GDP growth. The case of China is instructive in that it illustrates quite clearly the differences between various ways of measuring the development of economies. In addition to the different picture that can be painted by measuring total GDP at market exchange rates and at PPP, China is also an interesting case in that its GDP is small in per capita terms. While China's total GDP growth is likely to slow, it has a great deal of scope to grow in per capita terms. In fact, in per capita GDP at PPP, China ranks only 92nd and India ranks 127th in the league tables (IMF, *World Economic Outlook*). By comparison, the United States is in 7th place, behind a number of small open economies – Qatar, Luxembourg, Singapore, Norway, Brunei Darussalam and Hong Kong.

It is interesting to note that this interplay between population dynamics and technological catch-up might lead to a situation whereby China's share in the world economy stabilises or even shrinks, while its economy continues to catch up with the West in per capita terms. Indeed, this report highlights additional aspects of China's growth prospects and notably focuses on a number of political economy issues.

The BRICs, and in particular China and India, receive a great deal of attention mainly because they are so enormous. China's population (and India's, too) is larger than that of the entire African continent. But both countries are well behind countries such as Belarus and Ecuador in terms of per capita GDP, and India is even behind the Republic of Congo. This demonstrates that total GDP is not a very good measure of a country's welfare, or indeed of that of its citizens.

(v) China and India: low wages, low productivity

How does one explain why China and India are still so far behind the United States in per capita GDP? While labour costs per hour may look low in China, unit labour costs, which take into account productivity differences, show that the cost advantage of production in China is not that significant (see Table 2 for a comparison of China's productivity, wages, and relative unit labour costs compared with a number of selected countries). One reason for the low productivity in India is a large degree of factor misallocation. Hsieh and Klenow (2009) argue that when capital and labour are hypothetically reallocated to equalise marginal products to the extent observed in the United States, total factor productivity gains in the manufacturing sector in China could be in the order of 30-50%, and 40-60% in India.

Table 2: China's productivity, wages and relative unit labour cost vis-à-vis selected countries, latest available year (as a percentage of comparator country levels)

	Relative productivity	Relative wage	Relative unit labor cost
UNIDO sources			
Brazil (2007)	85.5	40.4	47.3
Chile (2006)	19.2	25.3	131.7
Czech Republic (2007)	51.0	30.9	60.7
Hong Kong (2008)	57.3	18.6	32.5
Hungary (2007)	49.7	29.6	59.5
India (2007)	132.1	158.3	119.9
Indonesia (2007)	155.9	223.5	143.3
Malaysia (2007)	105.6	59.3	56.2
Mauritius (2007)	191.8	66.9	34.9
Mexico (2009)	68.1	48.7	71.6
Philippines (2006)	187.2	114.6	61.2
Poland (2006)	46.0	40.9	88.9
Russia (2006)	147.5	82.6	56.0
Singapore (2008)	30.3	13.4	44.1
South Africa (2008)	83.9	30.4	36.2
Thailand (2006)	188.7	166.5	88.2
United States (2008)	12.1	8.2	67.5

Source: Ceglowski and Golub (2012), based on data by the UN Industrial Development Organization (UNIDO).

(vi) Reversals of fortune?

Of particular interest in this report are the potentially seismic shifts that are expected to take place between different areas of the world economy. Will some developing countries inevitably catch up with the developed economies in the West? Will the United States genuinely be challenged as the world's leading economy? Is the rise of China and India inevitable? Can Europe maintain its place in the world economy?

Naive projections of future growth often use a simple growth rate – be it the current growth rate or an average of the recent past – and project it into the future. If this logic was to be applied to project GDP per capita for China and the United States, the following picture would emerge (see Table 1). In terms of per capita GDP at PPP, the figure for China was $8,382 in 2011, compared with $48,387 for the United States. If China was able to continue growing at a rate of 9.5% per year (roughly equal to its average annual growth rate in 2000-10) and the United States' per capita GDP growth remained at 2.5% per year, it would take China 27 years to overtake the United States in per capita GDP terms (at PPP).[2] It is highly unlikely that China would be able to keep up such a high growth rate in per capita GDP (at PPP) for another three decades.

Alternatively, if China's GDP growth rate was only 6.5% per year in the coming decades and the growth rate in the United States remained at 2.5%, it would take China 46 years to overtake the United States. With an annual per capita GDP growth rate (at PPP) of only 4.5% for China – still very high in light of the performance of developed economies in recent decades – it would take China 91 years to overtake the United States. More sophisticated forecasts allow for a decline in growth rates over time as economies approach the technological frontier, and no doubt include a mix of the simple linear projections described above, but even simple projections reveal how far China and other developing countries still have to go before attaining the prosperity of Western economies.

It is fair to ask, therefore, whether predictions of a rapid catch-up or even an overtaking of the leading economies are realistic. This report provides evidence that such reversals of fortune have been extremely rare in world history. The transition from imitation to innovation and assuming the leadership in frontier innovation is a challenge that even the most promising candidates (notably Japan) have failed to achieve. Economic change needs to go hand in hand with institutional change. A growing middle class demands its share in political decision-making. The political economy of change is thus a key factor in the analysis contained in this report. Based on the experiences of countries opening up to globalisation and their policy response to the ongoing financial crisis since 2008, the likelihood that the right economic and social decisions are taken at every turn is rather low.

(vii) How far has growth lifted people out of poverty?

This report argues that even a GDP per capita analysis gives only a limited picture of the average stage of a country's development. While many developing countries have seen phenomenal growth rates in recent years, poverty still affects millions of people around the world. The World Bank's concept of a "dollar-a-day" global poverty line was based on the proposition that several developing countries defined basic needs as the equivalent of about $365 per year. The current definition of the dollar-a-day concept uses $1.25 per person per day in 2005 international dollars as the reference value for strong poverty. Against

2 For China, $8,382.01 * (1.095)^27 = $97,169.37. For the United States, $48,386.69 * (1.025)^27 = $94,247.60.

that measure, the global headcount ratio – the share of the world's population living below the poverty line – decreased from 51.9% in 1981 to 25.2% in 2005. Hence, despite a further increase in the world's population and thus higher demand for food around the globe, poverty levels have fallen significantly. Yet, large parts of the world are still very poor.

(viii) In India, more than 800 million people live on less than $2 per day

A closer look at China and India reveals that vast numbers of their citizens still live below the poverty line (see Table 3). A key issue for economic policy, therefore, remains the fight against poverty. According to the World Bank data in Table 3, 13.06% of China's population lived on less than $1.25 per day in 2008, so out of a total population of 1.3 billion people, some 176 million people lived below the poverty line. Although slightly smaller in total population (1.2 billion inhabitants), India had more than twice as many people (394 million) living below the poverty

Table 3: Poverty in selected countries around the world

Country	Population (million people) in 2011	Share of population living on less than 1.25 USD a day in 2008 (a)	Share of population living on less than 2 USD a day in 2008 (a)
United States	312.0		
China	1,348.1	13.1	29.8
Japan	127.8		
Germany	81.8		
France	63.1		
Brazil	194.9	6.0	11.3
United Kingdom	62.6		
Italy	60.6		
Russia	142.4	-	0.1
Canada	34.4		
India	1,206.9	32.7	68.7
Spain	46.2		
Australia	22.7		
Mexico	113.7	1.2	5.2
Korea	49.0		
Indonesia	241.0	22.6	54.4
Netherlands	16.7		
Turkey	74.0	-	4.2
Switzerland	7.8		
Saudi Arabia	28.2		
East Asia & Pacific (developing countries only)	1,974.0	14.3	33.2
Europe & Central Asia (developing countries only)	407.6	0.5	2.2
Latin American & Caribbean (developing countries only)	589.0	6.5	12.4
Middle East & North Africa (developing countries only)	336.6	2.7	13.9
South Asia (developing countries only)	1,656.0	36.0	70.9
Sub-Saharan Africa (developing countries only)	874.8	47.5	69.2

Note: (a) Poverty data for India refer to 2010.
Sources: IMF, *World Economic Outlook*; World Bank, *World Development Indicators*.

line. Using a different threshold of $2 per day, these numbers are, of course, even larger. In China, 401 million citizens lived on less than $2 per day, while the number in India was 829 million. Such numbers always need to be taken with a grain of salt (see Deaton 2010; Easterly 2010), since they are obviously estimates and not based on an actual headcount of the world's poor. But the order of magnitude suggests that India has nearly as many poor people as the entire population of the African continent, rich and poor. Similar poverty rates of about two-thirds of the population are to be found in many developing countries (see Table 3 for groups of developing countries).

All of this highlights that a look at world rankings in terms of total GDP provides a very distorted picture of how far removed vast sections of the Chinese and Indian population are from living a life at levels approaching those in the West. This ties into a long-standing debate regarding the conditions under which growth is pro-poor. While it is often argued that pro-growth policies are the most effective way to alleviate poverty (see, for example, Kraay 2006), alternatives to general macroeconomic policies in countries stricken by poverty come in two broad forms: foreign aid, and more specific interventions targeted at the poor.

With respect to foreign aid, the evidence is mixed. Starting with Burnside and Dollar (2000; 2004), it has been argued that foreign aid does not automatically lead to more growth. Dalgaard et al. (2004) argue in favour of an aid-growth link, and Easterly (2003) questions the effectiveness of aid with respect to economic growth. Doucouliagos and Paldam (2009), carrying out a meta-analysis of 40 years of research on aid effectiveness, conclude that aid, overall, has not been effective. Moreover, the literature agrees that key factors which undermine the goal of aid transfers are low levels of education and bad institutions (such as corrupt politicians, bad administrations etc.). In fact, aid has a positive impact on growth in developing countries with good fiscal, monetary and trade policies, but has little effect in the context of poor policies. The conclusion is that it is vital for aid to be conditional on good policies in the receiving countries, although Rajan and Subramanian (2008) even call into question whether aid works better in a favourable policy or geographical environment.

The allocation of aid to different groups of the population is an equally important issue. Collier and Dollar (2002) analyse the efficiency of aid allocation in terms of alleviating poverty. They argue that the actual allocation of aid is radically different from poverty-efficient allocation. Indeed, with a poverty-efficient allocation, the productivity of aid would nearly double. Easterly and Williamson (2011), however, find no evidence of increased "poverty selectivity" in foreign aid priorities.

Over the last decade the attention of development economists has shifted towards more targeted interventions at the micro level. The mission of academic initiatives, such as J-PAL, the poverty action lab led by Abhijit Banerjee and Esther Duflo, is "to reduce poverty by ensuring that policy is based on scientific evidence", where "scientific evidence" is based on randomised control trials. This approach gives a treatment to a group of the population – for example, school meal vouchers to children in a village in order to study the effect of this intervention on outcomes (school attendance) – by comparing treatment and control groups in a randomised setting. This approach and some key findings are summarised in Banerjee and Duflo (2011). While some of this work has been criticised for being too focused on the micro level (see Ravallion, 2012), it does have the advantage of being able to target policy interventions and to roll them out only after they have been shown to work in a randomised control setting.

(ix) Helping the world's poor with tight budgets at home?

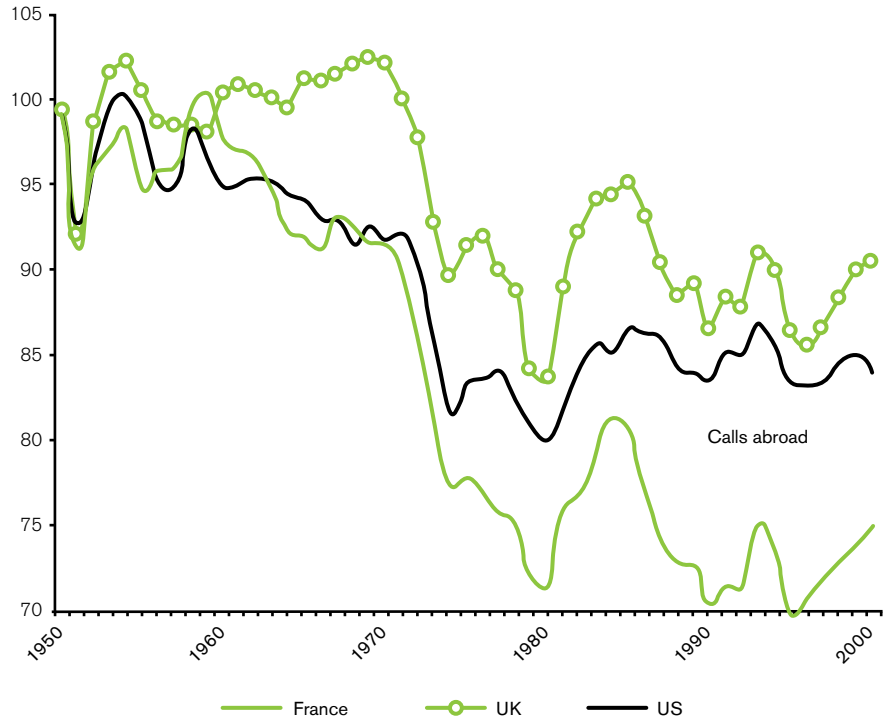
One of the key challenges in developing countries is to alleviate poverty. The World Bank's mission has been carved in stone at its headquarters in Washington, D.C. as an ever-present reminder: "Our dream is a world free of poverty". To attain this goal, multilateral agencies, international organisations, NGOs and development ministries around the world have been spending vast amounts of money to help the poor. Yet nearly 1.3 billion people remain below the extreme poverty line with an income of $1.25 or less per day, according to World Bank figures. Another 2.6 billion live on less than $2 a day. Therefore, it is not too surprising that in 2010 the British government decided to ringfence the foreign aid budget from budget cuts because it wanted to show its continued commitment to helping the developing world. Bearing in mind, however, the debate about the effectiveness of development aid, the conventional approach to aid is likely to continue to fall well short of realising its full potential. Hence, a more detailed look at unconventional ways to achieve more with the same (or even a smaller) aid budget is instructive.

(x) Massive changes as a result of globalisation

Globalisation, the process leading to the closer integration of countries and peoples around the world, brings with it both benefits and challenges – and is the focus of an important part of this report. The recent wave of globalisation has been brought about by the enormous reduction in the cost of transport and communication and the removal of artificial barriers to factor flows across borders. Indeed, trade costs have also come down considerably since World War II, as Figure 1 illustrates for the United States, the United Kingdom and France.

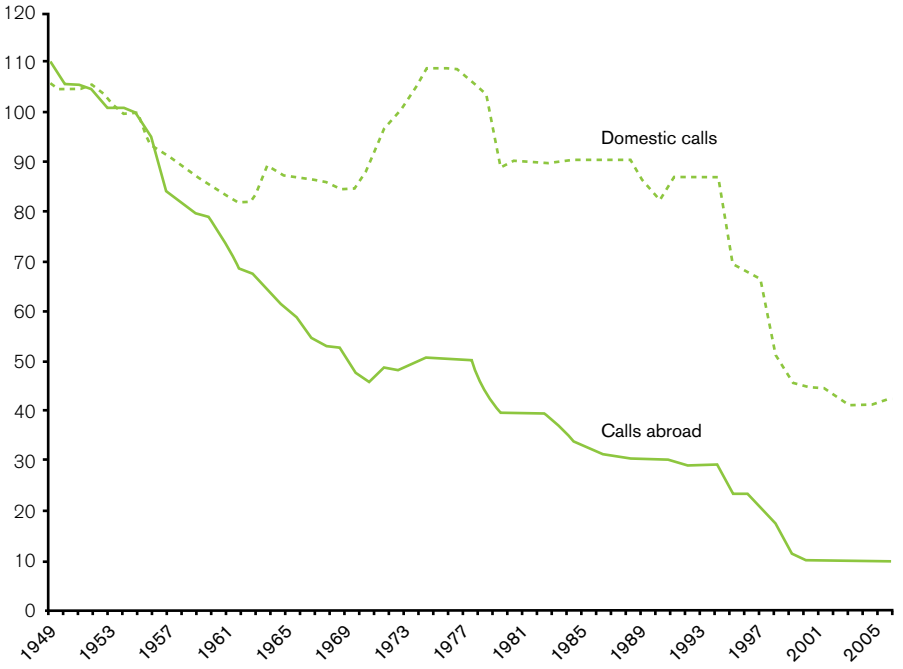
Similarly, the costs of communication have fallen considerably. The costs for telephone calls from Germany, for example, are a good illustration of this trend (see Figure 2).

Figure 1: Trade cost indices, 1950-2000 (1950=100)



Source: Jacks, Meissner, Novy (2008).

Figure 2: Prices for domestic and foreign phone calls in Germany, 1949-2007 (1995=100 in local currency at current prices)



Source: *World Trade Report 2008*, Chart 11.

The drop in trade and communication costs, meanwhile, brought with it a substantial increase in the crossborder flow of goods. The expansion in trade exceeded GDP growth in all periods reported in Table 4, with the exception of the inter-war period (not reported), when trade collapsed.

In similar fashion to the increase in international trade after World War II, international capital mobility increased substantially. Quinn et al. (2008) report that for their 120 country pairs (pair-wise combinations of the 16 countries in their sample), between 1950 and the turn of the millennium their index of capital mobility went up from 45 to 97 on a scale from 0 to 100, where zero denotes a closed economy and 100 represents a completely open economy. The table also reveals the complete openness in the early period, around 1900.

Table 4: Globalisation waves in the 19th and 20th centuries (% change unless otherwise indicated)

World	**1850-1913**	**1950-2007**	**1950-73**	**1974-2007**
Population growth	0.8 [a]	1.7	1.9	1.6
GDP growth (real)	2.1 [a]	3.8	5.1	2.9
Per capita	1.3 [a]	2.0	3.1	1.2
Trade growth (real)	3.8	6.2	8.2	5.0
Migration (net) Million				
US, Canada, Australia, NZ (cumulative)	17.9 [a]	50.1	12.7	37.4
US, Canada, Australia, NZ (annual)	0.42 [a]	0.90	0.55	1.17
Industrial countries (less Japan) (cumulative)	-	-	-	64.3
Global FDI outward stock, year			**1982**	**2006**
FDI as % of GDP (world)	-	-	5.2	25.3

Note: (a) refers to the period 1870-1913.
Source: *World Trade Report 2008*, Table 1.

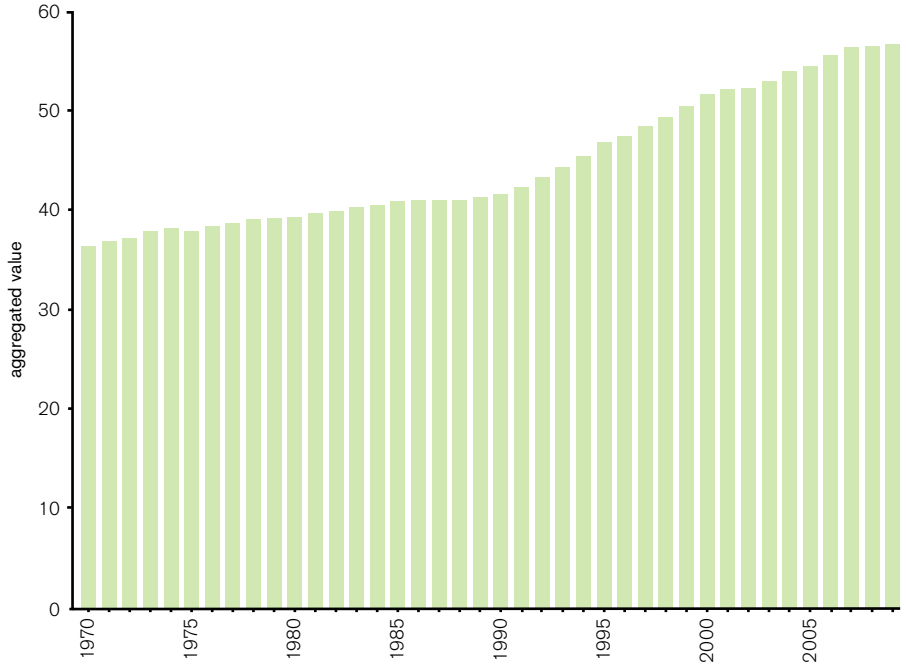
Table 5: Capital account openness over the last century

Period	Mean	N	Minimum	Maximum
1890	96	114	50	100
1894	100	114	100	100
1898	100	114	100	100
1898	100	114	100	100
1902	100	114	100	100
1906	100	114	100	100
1910	100	114	100	100
1914	93	114	75	100
1918	66	120	42	94
1922	57	120	19	90.5
1926	85	120	19	100
1930	70	120	15.5	100
1934	56	120	0	90.5
1938	50	120	0	87.5
1942	NA	NA	NA	NA
1946	25	105	0	100
1950	45	120	3	100
1954	57	120	11	100
1958	65	120	22	100
1962	67	120	25.5	100
1966	66	120	31.5	100
1970	67	120	38	98.5
1974	68	120	38	100
1978	72	120	48.5	98.5
1982	77	120	53	100
1986	85	120	64	100
1990	93	120	75	100
1994	95	120	75	100
1998	97	120	81.5	100
Total	**76**	**3,183**	**0**	**100**

Source: Quinn and Voth (2008).

Globalisation, of course, has many dimensions. Increases in trade, foreign direct investment and financial investment are merely the most prominent. The KOF Index of Globalisation attempts to capture these dimensions of globalisation, but also others, namely social globalisation (foreign population as a share of total population; the number of McDonald's restaurants in a country etc.) and political globalisation (e.g. participation in UN missions and membership of international organisations). In constructing the indices of globalisation, each of the variables introduced is transformed to an index on a scale of 1 to 100, where 100 is the maximum value for a specific variable over the 1970-2009 period and 1 is the minimum value. Higher values denote greater globalisation (see Dreher, 2006). Figure 3 displays the development of the overall KOF Index of Globalisation (note that migration is counted under social globalisation) for the period 1970-2009 for the world as a whole, which confirms the fact that the world has generally become more integrated in economic, social and political terms.

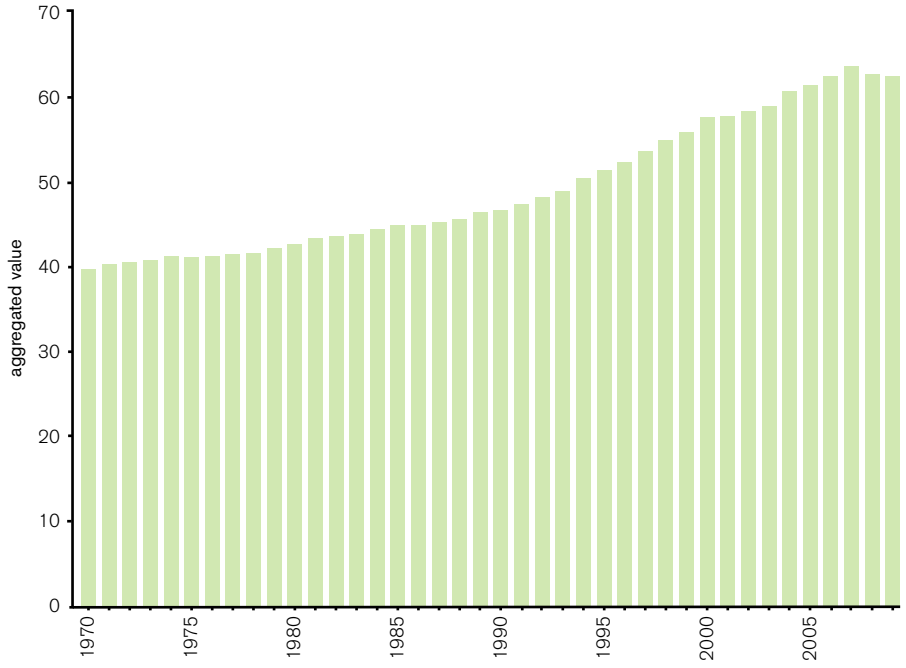
Figure 3: KOF Index of Globalisation (1970-2009)



Source: http://globalization.kof.ethz.ch

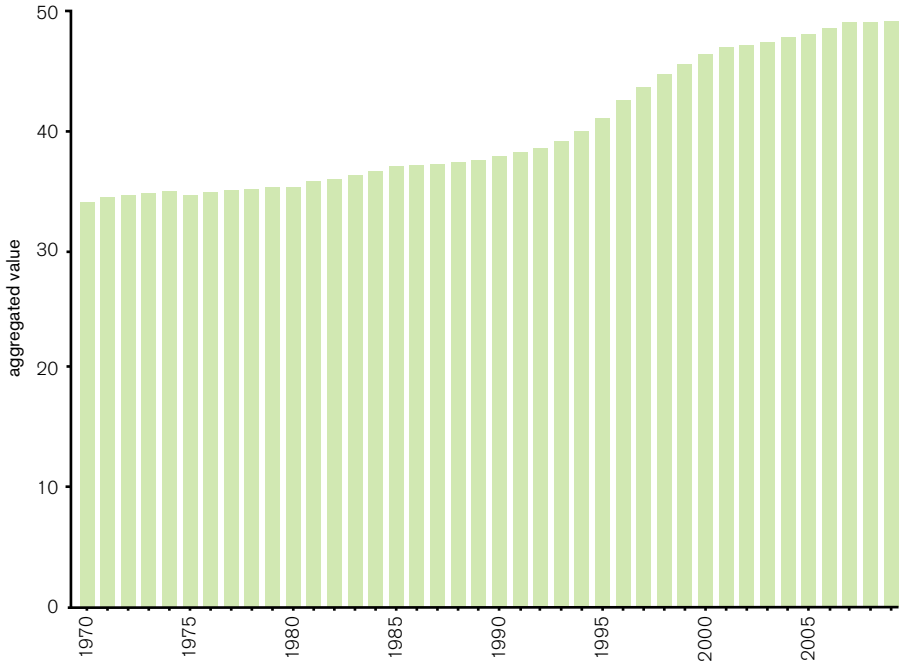
Looking more specifically at the various sub-indices, it becomes clear that economic and political globalisation has advanced further than social globalisation (see Figures 4, 5 and 6).

Figure 4: Economic globalisation



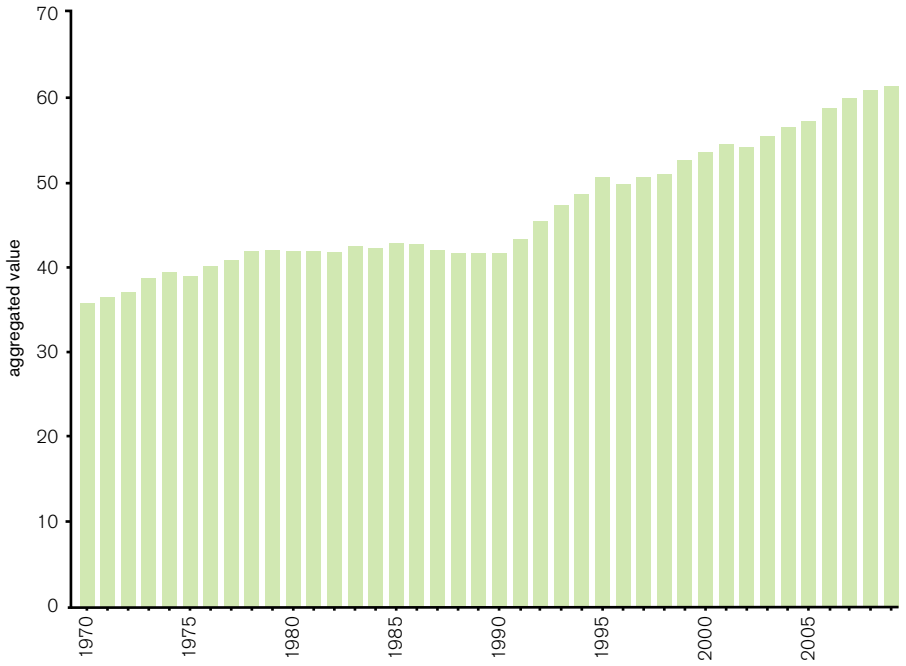
Source: http://globalization.kof.ethz.ch/

Figure 5: Social globalisation



Source: http://globalization.kof.ethz.ch/

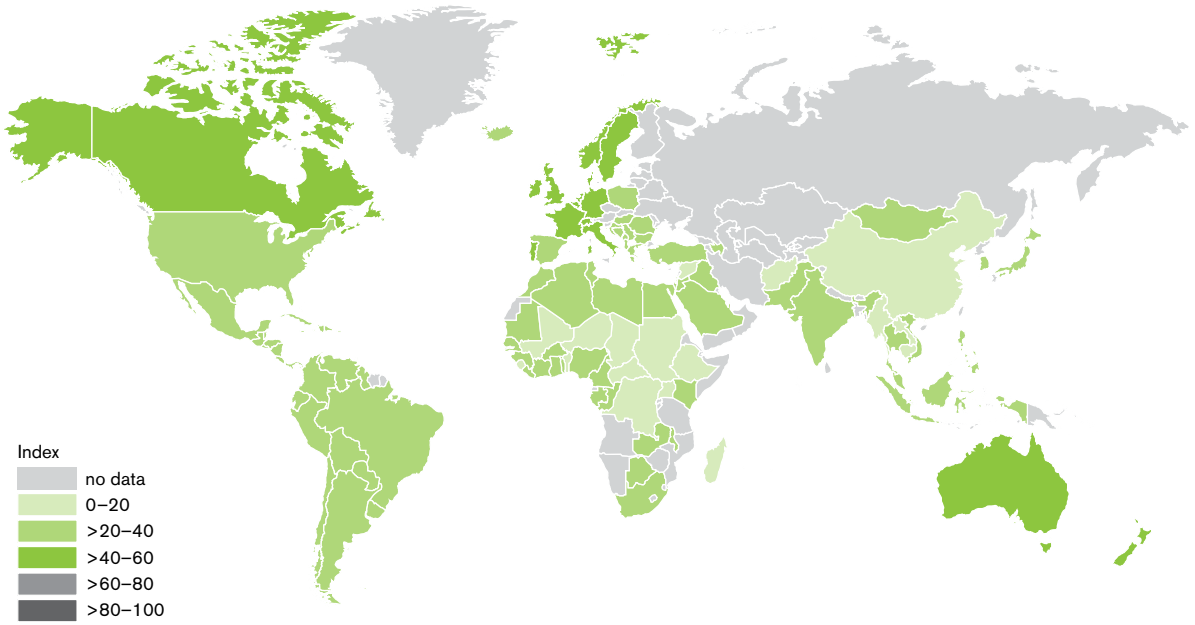
Figure 6: Political globalisation



Source: http://globalization.kof.ethz.ch/

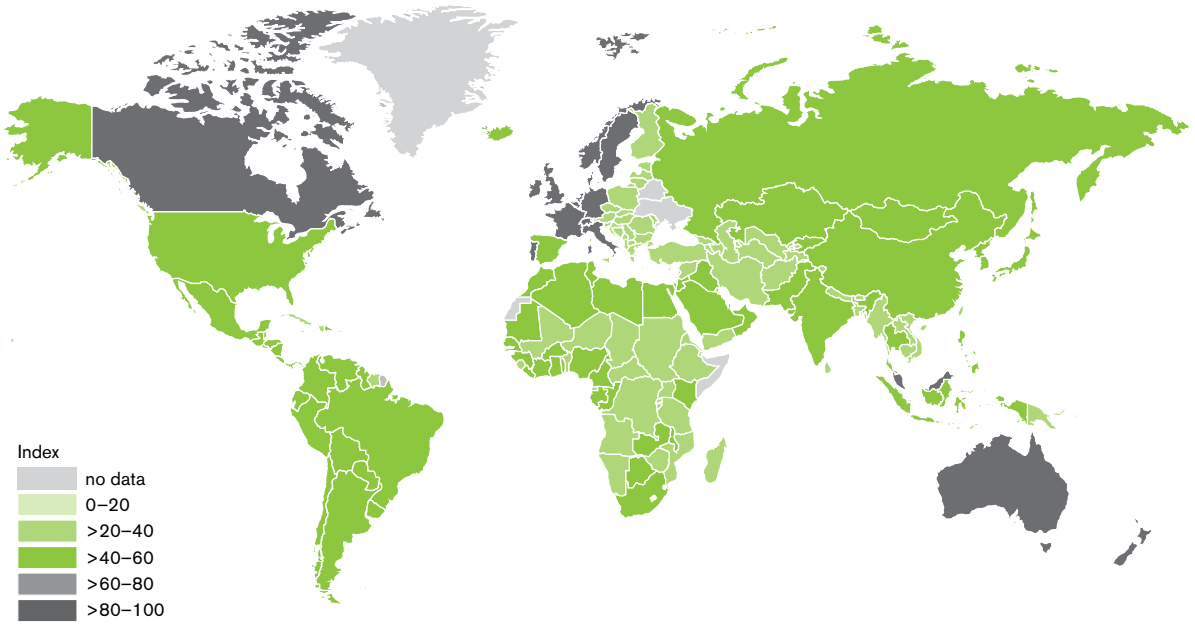
It is instructive to compare the degree of globalisation across different countries of the world in 1970 and 2009. Indeed, as Maps 1 and 2 clearly demonstrate, nearly all countries became more globalised during that period, although the effect has been even more pronounced in developing countries.

Map 1: KOF Index of Globalisation (1970)



Source: http://globalization.kof.ethz.ch

Map 2: KOF Index of Globalisation (2009)



Source: http://globalization.kof.ethz.ch

(xi) Worries about globalisation and untapped potential

Despite the potential benefits from an increase in globalisation, there are also concerns stemming from the integration of the larger developing countries into the world economy. These worries arise primarily from the more limited nature of the policy options available to developed countries. Indeed, the authorities of a closed economy generally have greater control over economic policy than a government in a world where capital and labour are mobile.

First, at the macroeconomic level, the sheer size of some of these economies, such as China and India, has major implications for the international transmission of unexpected shocks. In the aftermath of the 2008 global financial crisis, growth in the developing world has helped to offset the impact of the recession in the developed world. However, a slowdown in growth in developing countries or changes in trade policies could have important adverse effects on developed economies in the West.

Second, a key characteristic of a more globalised world is not only an increase in trade, but also the fact that capital is more mobile. Capital mobility leads to concerns in developed countries, in particular that globalisation reduces their policy options. One fear is that international tax competition will force them to lower their corporate tax rates in order to attract firms to the country. Developed countries with their more elaborate welfare systems might then have to relinquish an important source of revenue.

Third, and perhaps more surprising, while financial and goods markets have become more globalised, labour markets are still much less integrated. In fact, it can be argued (Vásquez, 2000) that migration played a greater role a century ago, during the first wave of globalisation, than it does today. This lack of international labour mobility points to an untapped potential to reap further gains from globalisation. There are, of course, a host of political reasons for restrictions on immigration, including its potential impact on the welfare state, but a more clever design of migration policies might enable developed countries to reap further benefits from globalisation without undermining the very existence of welfare measures.

(xii) Is Europe's role in the world likely to increase or decrease?

While this Policy Report takes a global perspective, Europe obviously has a major role to play in shaping future world events. At present large parts of Europe are struggling with twin crises – a banking crisis and a sovereign debt crisis. In the eurozone, these crises threaten the very existence of the single currency, the euro. The short- and medium-term issue for these countries is to keep budget deficits under control and to maintain or regain their access to international capital markets. However, the crisis also reveals structural issues that require an institutional response well beyond short-term fixes to enable the eurozone to recover. The conventional wisdom with respect to Europe speaks to the steps that are necessary to resolve the ongoing banking and debt crisis on the one hand, and to factors influencing Europe's long-term growth prospects on the other.

Regarding the short-term response to the crisis, a common view is that Europe needs a new Marshall Plan similar to the American programme to aid Europe after World War II. This is often (mis)understood as a large (unconditional) cash handout to countries in trouble. While such an approach might indeed help countries fill holes in their budgets, the medium- and long-term effects are less clear. This report re-evaluates the idea of resorting to a Marshall Plan by looking

at its historical origins and discusses what a "real" Marshall Plan would look like and whether it could attract the political support required to implement it.

European leaders are well aware that they need to look beyond short-term policy responses to the crisis. The EU's Europe 2020 agenda makes the case for an increase in the EU labour force and for more investment in R&D and human capital. However, despite such initiatives, most analysts highlight the risk that European economies will not only lose pace compared with other Western economies, but will fall behind key emerging economies.

This Policy Report puts the macroeconomic challenges facing European economies into perspective by drawing comparisons with the Great Depression of the 1930s. It discusses how European policy responses might turn out to be utterly wrong, but it also points to the most promising avenues for growth in the future. Although the EU is very heterogeneous, it is fair to say that the majority of its member states have adopted a social model that is quite different, for example, from that of the United States. Indeed, most European countries have quite generous welfare provisions and, in response to the crisis and ensuing budget cuts, are now trying to find a new balance between giving support and making demands on its citizens. As a result, an important element in the discussion is how far the welfare state needs to be cut back and whether a race to the bottom in corporate tax rates is unavoidable as a consequence of globalisation. This is a key focus of this Policy Report.

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1 / What Difference does the Crisis make to Long-term West European Growth?

Nicholas Crafts

1. Introduction

At the turn of the century it became conventional wisdom that economic growth in West European countries was somewhat disappointing and that a rapid decline in their share of world GDP was under way. At the EU level this prompted initiatives such as the Lisbon Strategy, aiming to raise productivity growth and enable European countries to take fuller advantage of the opportunities of the "knowledge-economy era", but this was not seen as an imperative. Meanwhile, the UK was doing somewhat better than many of its European rivals, based especially on the strong performance of the market services sector and the fact that it was now in a position to enjoy spending the proceeds of the painful supply-side reforms of the 1980s.

The financial crisis which erupted in 2008 undoubtedly was a rude shock to expectations and seemed to demand policy reforms. On the maxim of "never waste a good crisis", optimists saw this as an opportunity to overcome obstacles to reform that were holding back trend growth. In contrast, pessimists thought that a combination of misdiagnoses and political pressures might push policymakers in the direction of greater government intervention that would undermine long-term growth. Economic history offers examples of both – the former might appeal to the birth of the European Golden Age in the dark days of the late 1940s, while the latter could point to the implications of the policy responses to the Great Depression of the 1930s.[1]

Econometric analyses of the implications of financial crises for growth offer some pointers, but leave open the extent to which European growth prospects may have been or may yet be adversely affected. It is already generally agreed that a substantial permanent fall in the level of output is likely, although there is some uncertainty about its magnitude (Furceri and Mourougane, 2009). It is less clear whether the trend growth will be reduced through declines in the rate of productivity growth. Clearly, one way in which this might happen is that major crises can lead to significant changes in supply-side policy. Here it is instructive to turn to economic history to complement what can be learnt from econometrics.

In the light of this challenge, this chapter considers European growth performance and its likely trajectory in the absence of the crisis and then assesses the direct effects of the crisis on growth. The evidence points to a significant negative impact in the absence of policy reforms that improve productivity

1 While the long-term growth impact of 1930s policies, such as the turn to protectionism, was damaging, they had positive short-term effects which made them attractive both economically and politically, as epitomised by the British experience (Crafts, 2012a). Indeed, the potential conflict between the short and the long term is relevant to today's crisis (see Section 4).

growth. Are these policy reforms likely to be realised? Historical experience, notably in the context of the 1930s, suggests the crisis will produce strong pressures in the opposite direction. Overall, although this is not yet recognised by institutions such as the OECD, it seems likely that the financial crisis will result in a significantly reduced average European growth rate over the period to 2030.

2. Growth before the crisis

It is well known that Western Europe's growth performance was lacklustre from the mid-1990s up to the start of the current financial crisis. This was a far cry from the so-called Golden Age of the early post-war years and was for the average country a period of falling behind rather than catching up with the United States. It was a surprise to many that relative productivity performance deteriorated because it appeared that, on the whole, supply-side policy had improved. Yet, while American productivity growth accelerated, in Europe it slowed down.

Of course, since the Golden Age there have been big changes in the global economic environment. Among the most prominent are rapid globalisation, together with a new world division of labour associated with the rise of Asia, the advent of a new general purpose technology (GPT) based on information and communications technology (ICT), and the return of financial crises after a period of unusual stability. Moreover, after a long period of catch-up, many West European economies are close to, rather than far from, the productivity frontier. Finally, Europe's growth brought increasing demands for social transfers on which the median European economy spent 21.1% of GDP in 1980, compared with only 10.5% in 1960 and 1.2% in 1930 (Lindert, 2004). Managing these demands without undermining growth was an important challenge; insofar as they were financed by "distortionary" taxation, there was a potential drag on growth. The implications of such developments can be viewed as a mix of opportunities and threats, together with a need to implement appropriate institutional and policy reforms.

The key concept with which to approach the post-war European experience is catch-up growth. The leader throughout of course has been the United States, but for much of the post-1950 period West European countries were closing the income and/or productivity gap. It is well known that these gaps provide an opportunity to grow faster than the leader, but at the same time catch-up growth is not automatic. In the terminology of Abramovitz (1986), it depends on "social capability", that is, on the incentive structures which influence the effective assimilation and diffusion of new technology.

It is important to distinguish between catch-up growth in far-from-the-frontier and close-to-the-frontier economies. In the former, rapid total factor productivity (TFP) growth can be obtained by reducing productive and allocative inefficiency as well as by importing technology. In essence, this is a transitory phase, but growth can be rapid while it lasts, and this was a key element of the Golden Age, especially linked to structural change in terms of a rapid decline in agriculture's share in employment. As catch-up proceeds, the technological impetus to growth may be expected to switch somewhat from imitation to invention, and competitive advantage in an open economy will move towards knowledge-intensive activities. Arguably, European countries needed reforms after the Golden Age to position themselves for this subsequent stage of growth but, on average, they were slow to make this transition (Eichengreen, 2006).

As a general rule, the process of catch-up growth typically entails a series of ongoing reforms with the danger that at some point the political economy of the next step in modernisation becomes too difficult. As modern growth economics stresses (Aghion and Howitt, 2006), the institutions and policy choices that can galvanise a far-from-the-frontier economy differ in many ways from what is appropriate for a close-to-the-frontier economy. In particular, in the latter case stronger competition in product markets and high-quality education become more important. Similarly, as new technologies come along, institutions and policies may need to be reformed. Yet, making the requisite adjustments can be problematic and may be achieved only slowly and incompletely, such that catch-up growth falters. The constraints of a country's historical legacy can be important in this context.

The period from the early 1950s to the mid-1970s was an era when Western Europe clearly was catching up with the United States. The data for growth performance in these years are shown in Table 1. During the Golden Age both real per person and labour productivity measured either per worker or per hour worked grew much faster in most European countries than in the United States. In the following period of growth slowdown labour productivity continued to grow faster than in the United States, although catch-up in real GDP per person came to an end. The discrepancy is, of course, explained by slower growth in labour inputs in European countries as unemployment rose and work years shortened. This is also captured in the data in Table 1.

Table 1: Output and productivity in Europe and the United States, 1950-2007

a) Growth rates (% per annum)

	Real GDP	Real GDP /person	Real GDP /worker	Real GDP /hour worked
1950-73				
EU15	5.97	4.05	4.15	4.80
US	3.92	2.45	2.30	2.56
1973-95				
EU15	2.25	1.89	2.00	2.69
US	2.86	1.80	1.12	1.28
1995-2007				
EU15	2.58	1.80	0.92	1.17
US	3.17	2.11	1.92	2.05

b) Decomposition of EU15/US real GDP/person gap, 1950-2007

	Y/P	Y/HW	HW/E	E/P
1950	0.482	0.381	1.190	1.063
1973	0.680	0.629	1.092	1.000
1995	0.700	0.853	0.974	0.843
2007	0.675	0.769	0.947	0.928

Note: The table shows the identity Y/P = Y/HW x HW/E x E/P for the ratio of EU15/US.
Source: Derived from The Conference Board Total Economy Database.

From 1995 to the eve of the current crisis, real GDP per person in Western Europe declined slowly relative to the United States; rather than closing the gap, Europe had started to fall behind. Table 1 shows that for the EU15 the ratio was 67.5% in 2007, compared with 70% in 1995. The data also show that in this period the main reason was slower labour productivity growth in Europe. Trends in annual hours worked were now more in line with each other, while the earlier tendency for employment rates to fall relative to the United States was reversed, so that total hours worked per person rose in Europe.

The growth in employment per person partly reflects an end to the policies that reduced labour inputs during and after the 1970s. Thus, on average, policies that affected the non-accelerating inflation rate of unemployment (NAIRU) moved a little way towards reducing unemployment (Nickell, 2003), and labour force participation of older males stopped falling as incentives to early retirement from replacement rates and implicit taxes were no longer rising, and in some countries were reduced (Duval, 2003). However, much of the increase in employment rates seems to owe little to policy and more to changes in norms with regard to female employment, especially in southern Europe. In effect, the increase in hours worked per person led to reductions in labour productivity growth over these years, as investment failed to respond and the quality of many additional workers was lower (Dew-Becker and Gordon, 2008).

The growth rate of real GDP per hour worked in the United States rose from 1.28% per annum between 1973 and 1995 to 2.05% in the 1995-2007 period. In contrast, in the EU15 it fell from 2.69% to 1.17% per annum. The rate of labour productivity growth fell between these two periods in most of the EU and was lower than that in the United States in most countries. Indeed, labour productivity growth in Italy and Spain fell well below 1% per annum after 1995 (The Conference Board, 2012). By contrast, Sweden saw an even stronger productivity revival than was achieved in the United States, while for part of the 1995-2007 period Ireland continued to be a Celtic Tiger and also exceeded the American productivity growth rate. Therefore, while EU countries, on average, did fall behind in productivity performance, there was also considerable diversity in Europe's performance.

The acceleration in US productivity growth was underpinned by ICT. Historical comparisons reveal that the impact of ICT has been relatively large, and also that it has come through very rapidly. This new GPT is unprecedented in its rate of technological progress, reflected in the speed and magnitude of the price falls in ICT equipment (Crafts, 2004). The main impact of ICT on economic growth comes through its diffusion as a new form of capital equipment, rather than through TFP growth in the production of ICT equipment. This is because users get the benefit of technological progress through lower prices and, as prices fall, more of this type of capital is installed.[2]

The implication is that, in the recent past, ICT has offered much of Europe a great opportunity to increase its productivity growth. However, the estimates of the contribution of ICT capital deepening to the growth of labour productivity highlighted in Table 2 show that European countries have been less successful than the United States in seizing this opportunity. That said, ICT production has boosted productivity growth notably in Finland, Ireland and Sweden, and the use

2 In a country with no ICT production, adapting the neoclassical growth model to embody a production function with two types of capital (ICT capital and other capital) shows that the steady state rate of growth will be TFP growth divided by labour's share of income, plus an additional term which depends on the rate of real price decline for ICT capital multiplied by the share of ICT capital in national income (Oulton, 2010).

Table 2: Labour productivity growth in the market sector, 1995-2005 (% per annum)

a) Growth accounting

	Labour quality	ICT capital/ hours worked	Non-ICT capital/hours worked	Total factor productivity growth	Labour productivity growth
Ireland	0.2	0.4	2.1	1.8	4.5
Sweden	0.3	0.6	1.1	1.6	3.6
UK	0.5	0.9	0.4	0.8	2.6
France	0.4	0.4	0.4	0.9	2.1
Portugal	0.2	0.6	1.3	-0.3	1.8
Germany	0.1	0.5	0.6	0.4	1.6
Spain	0.4	0.3	0.5	-0.8	0.4
Italy	0.2	0.3	0.5	-0.7	0.3
US	0.3	1.0	0.3	1.3	2.9

b) Sectoral contributions

	ICT production	Manufacturing	Other goods	Market services	Labour productivity growth
Ireland	1.0	2.2	0.2	1.4	4.5
Sweden	1.1	1.0	0.2	1.4	3.6
UK	0.5	0.5	0.2	1.6	2.6
France	0.4	0.7	0.3	0.7	2.1
Portugal	0.5	0.5	0.2	0.6	1.8
Germany	0.4	0.6	0.3	0.2	1.5
Spain	0.1	0.1	0.0	0.2	0.4
Italy	0.3	0.0	0.2	-0.1	0.3
US	0.8	0.6	-0.1	1.8	2.9

Note: Reallocation effects not reported.
Source: Timmer et al. (2010).

of ICT capital has made a strong contribution to productivity growth, especially in the services sector, in countries such as the UK. Table 2 suggests that strong productivity performance in the 1995 to 2005 period relied on ICT production and/or market services.

The empirical evidence is that the diffusion of ICT has been aided by complementary investments in intangible capital and in high-quality human capital and by relatively light regulation in terms of employment protection and restrictions to competition, especially in the distribution sector (Conway et al., 2006). Since these forms of regulation are known to have weakened over time, the point is not that regulation has become more stringent, but rather that existing regulation has become more costly in the context of a new technological era. Evidently, social capability depends on the technological epoch. European countries have varied considerably in this respect; for example, the UK and Sweden have been better placed than Italy and Spain.[3]

3 For a detailed account of Italy's problems in exploiting ICT, see Crafts and Magnani (2011).

The example of ICT prompts some more general comments on European supply-side policies in the decades before the crisis. In some respects, these improved in terms of providing conditions favourable to growth. For example, European countries generally became more open to trade, with positive effects on productivity, partly as a result of the European single market. Over time, years of schooling have steadily increased, and product market regulation that inhibits competition has been reduced. Corporate tax rates have also fallen since the early 1980s. The UK, in particular, benefited from the big increase in competition in product markets as a result of deregulation and the abandonment of protectionist policies from the 1970s through to the 1990s (Crafts, 2012a). Nevertheless, supply-side policies were in need of reform prior to the crisis if the disappointing growth performance of many EU countries was to be adequately addressed, particularly in southern Europe.

In this context, serious questions have been raised about the quality of schooling in a number of European countries, which recent research suggests exacts a growth penalty. Indeed, a measure of cognitive skills, based on test scores, correlates strongly with growth performance (Hanushek and Woessmann, 2009), and it is striking that even the top European countries, such as Finland, have fallen behind Japan and South Korea, while Germany, and especially Italy, have deteriorated. These authors' estimates are that if cognitive skills in Greece were at the standard of South Korea's, its long-term growth would be raised by close to 1% per annum. Woessmann et al. (2007) show that the variance in outcomes in terms of cognitive skills is explained by the way the schooling system is organised, rather than by educational spending.

Competition and competition policy have tended to be weaker than in the United States, which has raised mark-ups and lowered competitive pressure on managers to invest and to innovate, with adverse effects on TFP growth (Buccirossi et al., 2013; Griffith et al., 2010). Over recent years, it is clear that productivity growth in market services was very disappointing in many European countries (see Table 2). One reason for this is the continued weakness of competition reflected in high price-cost mark-ups, which appear to have survived the introduction of the single market (Hoj et al., 2007). Studies have regularly shown that addressing these issues by reducing the barriers to entry maintained by member states would have raised productivity performance significantly; unfortunately, governments still have considerable discretion to maintain these barriers, notwithstanding the Services Directive (Badinger and Maydell, 2009). It should also be noted that the failure to deal with excessive regulation in professional services, in particular, has had an adverse impact on productivity growth in user industries (Barone and Cingano, 2011).

Finally, research into the impact of fiscal policy on growth suggests that the structure of taxation has significant effects. Generally speaking, direct taxes are more damaging than indirect taxes. The substantial increase in social transfers in European countries in the latter part of the 20th century was financed to a considerable extent by "distortionary" taxation; the estimates of Kneller et al. (1999) indicate that the average 10 percentage point increase in the share of direct tax revenue in GDP between 1965 and 1995 could have entailed a fall in a country's growth rate of about 1 percentage point. Financing this expansion of government outlays by a different tax mix would have generated considerably better growth.

Adjustments to Asian catch-up, and in particular the continent's new exporting prowess, have been or will be required, especially of those south European countries such as Greece, Italy and Portugal, where revealed comparative advantage has been positively correlated with that of dynamic Asia. This puts a premium on strong innovation capabilities, good human capital and flexible labour, and product markets. However, an index of ability to grapple with globalisation based on these attributes shows that the most affected countries are the least well placed to cope. Out of 26 OECD countries, Greece, Italy and Portugal were found to be in 25th, 24th and 23rd place, respectively. Sweden, meanwhile, was best placed (Rae and Sollie, 2007).

Nevertheless, failure to grasp the opportunities presented by ICT has been more important than the adjustment problems presented by the new international division of labour, although similar attributes are valuable in each case, namely a good education system, flexible labour markets, and light regulation of product markets (Crafts and Magnani, 2011). Given its exports profile, Italy's exposure to Asian competition has been relatively high, and its flexibility is very low compared with most other OECD economies. Yet the implications for its growth performance have been small. The "market-crowding" impact on export growth has been much smaller than relatively slow growth in the EU15 (Italy's main market) and trends in the real exchange rate (Breinlich and Tucci, 2010). There has been an adverse trend in the terms of external trade, but the effect only reduced real income growth by 0.1 percentage points in the decade to 2006 (Bennett et al., 2008).

On the eve of the financial crisis there was widespread agreement on reforms which would improve Western Europe's growth performance, although the extent of what was needed inevitably varied across countries. This consensus was based on an empirical analysis of the experience of recent decades. The very influential analysis by Sapir (2006) stressed the importance at the EU level of completing the single market in services, and at the national level of reforming labour market and social policies in areas where these reduced flexibility and employment.

OECD economists, who believe that implementation of these reforms has been made more urgent by the crisis, provide some useful quantification of the possible benefits generated from structural policy reforms. These are summarised in Table 3. Barnes et al. (2011) conclude by proposing improvements to the quantity and quality of education, strengthening competition, cutting unemployment benefits, reducing and reforming taxes, and lowering employment protection. These would either raise the growth rate or, in some cases, provide a transitional boost as the economy moves to higher employment and output levels. The authors claim that addressing all policy weaknesses by moving up to the level of the OECD average has a potential GDP gain of 10% for the average country after ten years, and eventually 25%.[4]

4 Some reforms, notably to educational systems, take a long time to pay dividends.

Table 3: Potential impact on real GDP per person of structural policy reforms

	Labour market	Taxation	Product market regulation	Education	Total
Moving to OECD average					
US	0.3	1.4	0.0	2.5	4.2
France	4.5	10.9	2.2	2.1	19.7
Germany	6.1	9.9	0.0	0.0	16.0
UK	1.1	0.0	0.0	4.6	5.7
Sweden	6.5	6.4	0.0	0.1	13.0
Greece	6.0	10.1	22.0	5.8	43.9
Ireland	6.8	0.9	9.7	0.0	17.4
Italy	0.3	10.8	0.3	5.4	16.8
Portugal	7.3	0.7	8.5	21.8	38.3
Spain	3.5	4.6	0.0	6.3	14.4
"10% reforms"					
OECD average	6.1	3.3	3.8	11.6	24.8

Source: Barnes et al. (2011).

3. Growth implications of the financial crisis

This section considers the direct implications of the crisis rather than those that might come via a wider array of policy responses affecting the progress of supply-side reforms; these will be addressed in Section 4.

A useful starting point is to look at what economists who make long-term projections of future economic growth have to say. The team at Goldman Sachs have reviewed their famous BRICs projections, which entail comparisons of future developed-market and emerging-market growth, in a recently published paper (Wilson et al., 2011). In essence, their view is that the crisis will have no long-term impact, and they project real GDP growth in Europe at 2.2% per annum for each of the two decades 2010-19 and 2020-29, which is identical to its performance in the 1990s.

A much more detailed analysis is provided in the OECD's *Economic Outlook* (2012, chapter 4). Some of the main projections are summarised in Table 4, which sets them in the context of recent performance. The OECD team explicitly assumes that the crisis will have only a small effect on the level of potential real GDP growth in the OECD area of about 2.3%, but no impact on the trend rate of growth. Output levels in OECD countries are currently well below potential, but these "output gaps" are expected to disappear over the next few years. The analysis assumes that the crisis does not affect the pace of structural reforms, which will make a modest contribution on average to future growth. In particular, it is striking that the labour productivity growth projections in Table 4 for the eurozone and for OECD countries overall are quite bullish and call for a stronger performance between 2012 and 2030 than for 1995-2007. Even the troubled eurozone economies are generally expected to share in this experience, although slower employment growth in future will hold real GDP growth below pre-crisis levels.

Table 4: OECD long-term growth projections

a) Real GDP growth (% per annum)

	1995-2007	2008-12	2012-17 (actual)	2012-17 (potential)	2018-30
OECD	2.8	0.5	2.4	2.1	2.3
Eurozone	2.3	-0.1	1.8	1.5	1.8
US	3.1	0.6	2.7	2.1	2.4
France	2.2	0.1	2.2	1.8	2.1
Germany	1.6	0.6	1.7	1.6	1.1
UK	2.9	-0.5	1.9	1.5	2.1
Sweden	3.2	0.9	2.6	2.5	2.3
Greece	3.8	-2.8	1.7	0.6	2.4
Ireland	2.4	-1.7	2.6	1.2	2.6
Italy	1.5	-1.0	0.9	0.6	1.6
Portugal	3.2	-1.2	1.0	0.7	1.8
Spain	3.7	-0.4	2.3	1.5	2.3

b) Growth of real GDP/worker (% per annum)

	1995-2007	2008-12	2012-17 (potential)	2018-30
OECD	1.7	0.5	2.1	2.3
Eurozone	1.0	0.3	1.5	1.8
US	1.8	1.2	1.3	1.4
France	1.1	0.1	1.4	1.9
Germany	1.2	0.0	1.4	1.7
UK	1.9	-0.4	0.8	1.5
Sweden	2.4	0.4	1.8	1.9
Greece	2.5	-0.8	0.3	2.2
Ireland	2.3	1.2	0.9	1.3
Italy	0.3	-0.5	0.1	1.5
Portugal	1.4	0.2	0.5	1.7
Spain	0.1	1.7	0.8	1.6

Note: The projected growth rates for 2018-30 differ from pre-crisis performance because they result from OECD modelling, which takes into account the impact of possible reforms, scope for catch-up etc. All these effects are assumed not to have been affected by the crisis.
Sources: 1995-2012: The Conference Board Total Economy Database; 2012-30: OECD (2012, chapter 4).

It is well known that financial crises can have direct and permanent adverse effects on the level and possibly also the trend growth rate of potential output, and this is a major reason why such crises usually have serious fiscal implications, including big increases in structural deficits as a percentage of GDP. From the perspective of a production function or of growth accounting, there may be direct adverse effects on capital inputs as investment is interrupted, on human capital if skills are lost or restructuring makes them redundant, on labour inputs through increases in equilibrium unemployment, and on TFP if research and development

(R&D) is cut back or innovative firms cannot get finance. Given that, in the long run, TFP growth provides the fundamental underpinning of the rate of trend growth, the key question is whether this is affected by financial crises.

Modern econometric studies are not entirely conclusive. Furceri and Mourougane (2009) estimate that, in the case of OECD countries, a severe banking crisis reduces the level of potential output by about 4%, while the IMF's (2009, chapter 4) review of the evidence, which also covers lower-income economies, suggests a figure of 10%, with the level of capital, labour inputs and TFP each accounting for about one-third of this. In each paper long-run trend growth is said not to be affected, but in both cases the confidence intervals are large, and the transition period until the levels effect materialises may be quite long. If the level of potential output suffers an adverse shock, then for a country such as the United Kingdom the structural fiscal deficit is likely to rise by a similar amount as a share of GDP (IFS, 2010), and fiscal consolidation may be required to head off unstable debt dynamics.

Box 1. TFP growth and the American Great Depression

A celebrated historical example of a severe banking crisis is the Great Depression of the 1930s in the United States, when about one-third of all banks failed and financial intermediation was severely disrupted, with severe consequences for investment and GDP (Bernanke, 1983). What does that experience reveal? One way to address this issue is through time-series econometrics, where the shock in the 1930s has been a focal point in debates about deterministic or stochastic trends.[5] Here the evidence is rather inconclusive and the picture is muddied by World War II. In fact, assuming trend-stationarity and extrapolating the pre-1929 trend of per capita income growth into the long term provides quite a good approximation to actual experience. However, a more careful examination suggests a break in trend in 1929 comprising a levels decrease followed by a modest increase in trend growth through to 1955, with the pre-1929 trend line being crossed in 1942 (Ben-David et al., 2003).

Further insight may be obtained by considering business-cycle peak-to-peak growth-accounting estimates, as in Table 5. The obvious feature of the 1930s is that the financial crisis undermined growth in the capital stock. Had growth of the capital-to-labour ratio continued at the pre-1929 rate, by 1941 it would have been about 25% larger and, accordingly, potential GDP per hour worked perhaps 8% bigger. Growth of labour inputs was sluggish, impaired perhaps by the impact of the New Deal. However, TFP growth was very strong, powered by sustained R&D, and Field (2013) has labelled the 1930s the most technologically progressive decade of the 20th century in the United States, building on the strong fundamentals in place from before the Great Depression. Overall, the clear impression is that the result of the banking crisis was to lower the level of productive potential rather than its growth rate. For today's European countries the analogue may be that continued TFP growth in ICT, which will further reduce the price of ICT equipment, has the scope to underpin future growth. Oulton (2010) estimates that even without reforms which would speed up its diffusion, this will add on average about 0.5 percentage points to future growth across the OECD, and with reforms this might rise to 0.75 percentage points.

5 With a deterministic trend, a shock only has a temporary effect and the economy then returns to the previous trend growth path; in contrast, if the trend is a non-stationary stochastic process, shocks have an enduring effect on the future growth path, and long-term forecasts are affected by historical events.

Table 5: Contributions to labour productivity growth in the United States (% per annum)

	Capital/hours worked growth	Human capital/ hours worked growth	Total factor productivity growth	Real GDP/hours worked growth
1906-19	0.51	0.26	1.12	1.89
1919-29	0.31	-0.06	2.02	2.27
1929-41	-0.19	0.14	2.97	2.92
1941-48	0.24	0.22	2.08	2.54
1948-73	0.76	0.11	1.88	2.75

Note: Estimates are for private non-farm economy.
Source: Derived from Field (2013).

Banking crises can also be expected to affect future growth, given their implications for regulation of the financial sector and their fiscal legacy. With regard to regulation, there is quite wide agreement that a major requirement is to reduce the future leverage of the banking system to reduce the chances of future crises. This will generally entail the banks having more equity capital to absorb losses, which will raise the cost of capital to the banks and to their borrowers. However, the evidence suggests that, although this will reduce the capital stock and the level of GDP in future, the effect will probably be fairly modest. Miles et al. (2013) provide an illustrative calculation which suggests that halving leverage from 30 to 15 might cost a little under 0.2% of GDP. It is also worth noting that growth did not seem to be impaired during most of the 20th century, when leverage was much lower.

An obvious fiscal implication of the financial crisis is that it will leave a legacy of much increased ratios of public debt to GDP (D/Y). Partly, this will come through the costs of recapitalising banks, but mainly it will come through the borrowing that governments have undertaken as a result of the financial crisis-induced recession. The median increase in D/Y in advanced countries following a banking crisis in the recent past is estimated to have been 21% of GDP (Laeven and Valencia, 2012).[6] OECD countries are now more vulnerable on this score than in the 1930s because they entered the crisis with higher D/Y ratios (Ali Abbas et al., 2011) and during the crisis have provided some fiscal stimulus and have not tried to over-ride the automatic stabilisers.

The long-term implications of substantial increases in D/Y are unfavourable for growth, as is highlighted in particular by growth models of the overlapping-generations variety. The adverse impacts can occur through a number of transmission mechanisms, including reductions in market-sector capital formation, higher long-term interest rates and higher tax rates. Empirical research on advanced economies has found negative effects; for example, Kumar and Woo (2010) estimate that a 10 percentage point increase in D/Y is associated with a fall of about 0.2 percentage points in growth. It has also been suggested that the adverse effect on growth is non-linear and rises sharply once the debt ratio reaches a critical level, which has recently been claimed to be around 90% of GDP (Checherita and Rother, 2010). The OECD (2012) notes that in the eurozone, the United States and the OECD as a whole D/Y is approaching 100% and points out that if the results of these papers are taken literally, then this could reduce future trend growth by between 0.5 and 0.75 percentage points.[7]

6 In some cases, such as Ireland, the increase has been much greater than this (73%).
7 The OECD projections in Table 4 do not incorporate this prediction.

High levels of D/Y create further worries about future fiscal sustainability, which add to the pressures for increases in taxes and/or cuts in public expenditure, i.e., fiscal consolidation. Recent work by OECD economists in the wake of the crisis has given some guidance on the size of the adjustments that may be needed. For example, if it is desired to achieve D/Y = 60% by 2025 (the Maastricht Treaty rule), then the required improvement in the primary balance starting in 2010 and continuing throughout would have been close to 12% of GDP in the UK, about 14% in Ireland and the United States and close to 10% in France, Greece, Portugal and Spain (Hagemann, 2012).[8]

Fiscal consolidation is unlikely to be expansionary; on the contrary, the short- to medium-term implications are likely to be deflationary and to entail (possibly considerable) GDP losses. The estimates in Guajardo et al. (2011) are that, on average, a fiscal consolation of 1% of GDP reduces real GDP by 0.62% over the following two years. This can be mitigated if an offsetting monetary policy stimulus is possible and/or the exchange rate depreciates. If the fiscal adjustment is achieved through expenditure cuts rather than tax increases, the evidence is that output losses are much less, in particular because private investment tends to respond favourably (Alesina et al., 2012). It is also well known that expenditure-based consolidations have a greater chance of success (Molnar, 2012).

The composition of fiscal consolidation measures has supply-side implications which can leave a legacy for future growth performance. Some measures can raise either the level of output, or supply-side reforms can improve growth and thus tax revenue; for example, in practice, in the 1980s reductions in the unemployment benefit-to-wage-rate ratio in the UK lowered the NAIRU, and deregulation and the shift away from protectionism was good for growth (Crafts, 2012a).[9] Broadly speaking, supply-side considerations add to the reasons for achieving consolidation mainly by expenditure cuts. However, cuts in expenditure on education, which adds to human capital, and on infrastructure, which adds to physical capital and raises returns to private investment, are bad for long-term growth. Pre-crisis, many EU countries were already investing too little to maintain the stock of public capital at a growth-maximising level (Kamps, 2005), while previous episodes of fiscal stringency have been notable for their negative impact on public investment (Mehrotra and Valila, 2006). Indeed, it is noticeable that at high levels of debt a rising D/Y leads to cuts in both public investment and education spending (Bacchiocchi et al., 2011). And as these authors point out, this does not bode well for the growth prospects of highly indebted EU countries.

8 The basic algebra related to stabilising the debt ratio is that $\Delta d = b + (i - \pi - \Delta Y/Y)d$ where d is the debt/GDP ratio, b is the primary budget deficit, i.e., the budget deficit without including interest payments on the debt, i is the nominal interest rate, π is the rate of inflation and $\Delta Y/Y$ is the rate of growth of real GDP. So for $\Delta d = 0$, the required primary budget surplus $-b = d(i - \pi - \Delta Y/Y)$. Price deflation means that π is negative, and this clearly makes the fiscal task much harder given that i cannot be negative. On the other hand, if $\Delta Y/Y > (i - \pi)$, i.e., if growth is greater than the real interest rate, it is possible to stabilise (or even reduce) d while running a primary deficit. Normally, the primary balance has to take the strain but, interestingly, this was not the case during Europe's Golden Age, when in the era of rapid catch-up and financial repression the growth rate was much greater than the real interest rate (Ali Abbas et al., 2011). The implications of this point are examined in greater detail in the next section.

9 The NAIRU (non-accelerating inflation rate of unemployment) is the rate of unemployment which is consistent with stable inflation. A lower NAIRU implies that it is possible to have more people employed, and thus higher GDP, on a sustainable basis without generating inflationary pressure.

4. Policy responses to the crisis: Lessons from the 1930s

If medium-term trend growth rates are significantly reduced as a result of the crisis, a major reason is likely to have been the broad economic policy response. Given the magnitude of the problems confronting Europe today, it is instructive to consider the lessons from the 1930s, the last time the continent went through a crisis of similar magnitude and dimensions, when the implications for policy were probably the most important channel for medium-term growth rate effects (Eichengreen, 2011). Indeed, the 1930s were characterised by policy moves that helped short-term economic and political objectives, but damaged long-term growth performance.

First, it is well known that the Great Depression saw big increases in protectionism, partly reflected in the tariff rates reported in Table 6. Jacks et al. (2011) found that intra-European trade costs rose by an average of about 20% between 1929 and 1938. Protectionism may have been responsible for about 40% of the fall in trade volumes during the Great Depression (Irwin, 2012). The most interesting research analysing the pattern of protectionism in that period is by Eichengreen and Irwin (2010); this shows that countries which devalued were less protectionist on average, and they argue that protectionism in the 1930s can be seen as a second-best policy which was used when conventional macroeconomic management tools in the form of fiscal and monetary policy were unavailable. The countries to which this description most obviously applies today are eurozone economies with sovereign debt and competitiveness problems; the likely implication is that they will be even less inclined to move towards implementing the single market in services. However, it is also worth noting with regard to OECD countries more generally that with zero lower bound (ZLB) interest rates conventional monetary policy is circumscribed, and as public debt-

Table 6: Tariff rates, 1928, 1935 and 1938 (%)

	1928	1935	1938
Austria	8.1	17.5	14.8
Belgium	3.4	8.3	6.7
Canada	15.9	15.4	13.9
Czechoslovakia	7.8	10.0	7.2
Denmark	5.5	8.2	7.3
France	6.6	16.9	16.6
Germany	7.9	30.1	33.4
Hungary	11.0	7.2	12.0
Italy	6.7	22.2	12.1
Japan	7.1	6.2	6.6
Netherlands	2.1	9.1	6.7
New Zealand	17.1	17.5	16.4
Norway	11.5	14.4	12.2
Spain	24.1	27.9	n/a
Sweden	9.3	10.1	9.5
Switzerland	9.3	23.3	18.1
United Kingdom	10.0	24.5	24.1
United States	13.8	17.5	15.5

Note: Tariff rate is defined as customs revenue/value of imports.
Source: Eichengreen and Irwin (2010).

to-GDP ratios reach levels of around 100%, fiscal multipliers become very low, even in times of deep recession (Auerbach and Gorodnichenko, 2011).

Obviously, today there are trade rules that are overseen by the World Trade Organisation (WTO). Although world trade volumes fell dramatically in 2008-09, they have subsequently recovered quickly, and research suggests that tariff barriers contributed little (perhaps only 2%) to the downturn (Kee et al., 2010). It is tempting to infer from this that protectionism is not a serious issue this time around, but that would be a serious mistake. In fact, protectionism has been resurgent, but it has taken different forms, with most countries not wishing flagrantly to flout WTO rules. So, interventions have frequently taken the form of bailouts and subsidies, with the EU state-aids regime in effect suspended. Indeed, a WTO-compatible protectionist wave is a real possibility (Evenett and Vines, 2012).

Second, the 1930s saw a general retreat from competition in the advanced countries, together with increases in regulation and, in Europe, nationalisation. Voters had less trust in markets and demanded greater state intervention. This was reflected in policy developments at the time and in the post-war settlements of the 1940s. Both the British and American governments sought to encourage cartelisation – the difference being that in the United States the Supreme Court struck down the provisions of the National Industrial Recovery Act in 1935. In the United Kingdom, competition in product markets was greatly weakened, and this lasted long into the post-war period. In the late 1950s tariffs were still at mid-1930s levels, and about 60% of manufacturing output was cartelised. The retreat from competition had adverse effects on productivity performance over several decades and provided the context in which industrial relations problems and sleepy management proliferated (Crafts, 2012a). In the United States, product market regulation was substantially increased with adverse implications for economic efficiency, and it was not until the 1970s and 1980s that this was reformed (Vietor, 1994). Across Europe, state ownership was extended so that countries typically entered the Golden Age with nationalised industries supplying 10% of GDP (Millward, 2011).

Third, the shock of the 1930s encouraged workers to demand much greater social protection and promoted tighter regulation of the labour market. In the United States this was famously addressed by the New Deal. There the 1930s saw the federal government pass the Social Security Act in 1935, which established a wide range of benefits, including unemployment insurance and retirement benefits. Another long-lasting intervention was the Fair Labor Standards Act of 1938, which brought in minimum wages and overtime restrictions (Fishback, 2007). Across European countries much more ambitious social policies were developed, which left their footprint with a big increase of social transfers between 1930 and 1950 (Crafts, 2012b). To the extent that this was financed by distortionary taxation, this had a negative implication for growth.

Fourth, banking crises were at the heart of the 1930s depression in many countries, notably in the United States. In 1933, ending the waves of banking crises was both an economic and political imperative. As today, reliance on market discipline appeared unrealistic. The lender of last resort had failed. So, the solution was deposit insurance plus regulatory reform, and the political attractions of the former meant that it would become a permanent feature of the American banking system (Calomiris, 2010). Many other countries have since followed down this path, a choice reinforced by the present crisis, which has seen

Box 2: The collapse of the Gold Standard in the 1930s

During the Great Depression the Gold Standard collapsed. The deflationary pressure caused by the accumulation of gold reserves by France and the United States imposed severe stress on other countries seeking to protect their gold parities (Irwin, 2010). The demise of this fixed exchange-rate system was complete when France, the Netherlands and Switzerland abandoned the Gold Standard in 1936, but it was already doomed from September 1931 onwards when Britain pulled out, followed by the United States in March 1933 during the early days of President Franklin D. Roosevelt's New Deal. The 1930s were also notable for a large number of sovereign debt defaults, especially in Latin America, but Austria and Germany suffered the same fate too (Crafts, 2012c).

The key point in this regard is that devaluation and default were good for growth. Indeed, there is a very clear correlation between the countries that exited early from the Gold Standard and those that recovered rapidly from the slump (Bernanke, 1995), as Table 7 demonstrates. Abandoning the Gold Standard allowed countries to reduce both nominal and real interest rates, to relax fiscal policy and to escape the need to reduce money wages and prices through a prolonged recession in order to regain international competitiveness. It is also clear that sovereign default, which improved the fiscal arithmetic by eradicating debt overhangs and bolstered the balance of payments through the elimination of debt-service flows, promoted short-term growth (Eichengreen and Portes, 1990).

The decision by countries to leave the Gold Standard was analysed by Wolf (2008), who used an econometric model to examine the odds of remaining in this fixed exchange-rate system. The model accurately predicts departures and shows that a country was more likely to exit from the Gold Standard if its main trading partner had done so, if it had returned to gold at a high parity, if it was a democracy, or if the central bank was independent. Conversely, it was less likely to leave if it had large gold reserves, less price deflation and strong banks. In other words, the loss of international competitiveness and greater pain from deflationary pressures hastened a country's exit.

It is widely understood that the countries in the euro periphery need to undertake sharp fiscal consolidation if they are to restore long-run fiscal sustainability and reduce public debt-to-GDP ratios to prudent levels. Not surprisingly, the economic adjustment programmes for Greece and Portugal agreed as a condition for the emergency loans granted by the EU and IMF entail big fiscal consolidations, with the budget deficit targeted to fall by 13.7% of GDP in Greece between 2009 and 2014 and by 6.8% of GDP in Portugal between 2010 and 2013.

It is also apparent that since the beginning of Economic and Monetary Union (EMU) southern periphery countries have experienced a substantial loss of international competitiveness as their relative production costs have increased. In these countries wage rises have outstripped labour productivity growth by a greater margin than in their trading partners on average, with no offsetting effects available through a devaluation of the exchange rate. According to estimates by the European Commission (2010) the real exchange rate was overvalued by 13.7% for Greece, 18.5% for Portugal and 12.2% for Spain, while in the previous 15 years unit labour costs in manufacturing relative to Germany had risen by 45%, 35% and 50%, respectively.

It might be expected that fiscal retrenchment could contribute to solving both the public finance and the competitiveness problems of these countries, but the process is likely to be both very painful and seriously protracted. Indeed, a "lost decade" beckons. High unemployment – to which fiscal contraction will contribute – is central to an adjustment process of this kind, as it is needed to create downward pressure on wages in labour markets which are not very flexible.[10] There is also an unfortunate feedback loop from price and wage deflation, as the route to improved competitiveness is that falling prices push up the primary budget surplus required to stabilise or reduce the public debt-to-GDP ratio.

It would not be surprising if a 1930s-style option of "devalue and default" – a chaotic exit from the eurozone – gathered political support in these circumstances. Germany's position within EMU has uncomfortable parallels with that of France in the Gold Standard era as a surplus country imposing deflation on partners, while the predictors of abandoning the gold anchor 80 years ago point to strong pressures on countries in southern Europe to exit the eurozone.

10 Fiscal contraction can be expansionary, but history suggests this is not the normal result and, in particular, this is unlikely when the exchange rate is fixed (Guajardo et al., 2011).

a substantial extension of deposit insurance schemes in a large number of OECD countries, with disastrous consequences in cases such as Ireland.

Microeconomic analysis incorporating implications of asymmetric information predicts there is the potential for serious market failures in the banking sector with attendant risks of banking crises; for example, a bank run (a coordination failure) can occur even though agents are rational and banks are solvent (Diamond and Dybvig, 1983). Deposit insurance is a possible solution and can, in principle, be costless if coordination panics are the only problem. However, if it is not so much that panics but weak balance sheets lead to bank failures, this makes deposit insurance potentially a costly intervention. Deposit insurance also increases moral hazard (incentivises excessive risk-taking), so that complementary regulation to ensure capital adequacy and sufficient equity to absorb losses is essential (Allen et al., 2011).

For this solution to work effectively, it is crucial that regulation is well designed. The lesson from the 1930s is that it may well not be because vested interests are likely to hijack the politics of regulatory design (Calomiris, 2010). There are dangers to growth on either side: on the one hand, excessive regulation, which stifles financial innovation, imposes financial repression or unduly raises the cost of capital, and on the other hand too lenient regulation, which allows excessive risk-taking to continue with a relatively high probability of another banking crisis. Indeed, the 1930s experience does little to inspire confidence that the regulatory response will be appropriate.

Fifth, the 1930s experience suggests that a strategy of devaluation and sovereign default is an attractive escape route from the eurozone for the periphery countries of southern Europe because it allows more policy sovereignty and a route to return to growth. Moreover, the 1930s experience indicates that once one country exits, others may quickly follow. The pressures on the survival of the eurozone are thus likely to intensify. However, the benefit/cost ratio of leaving the Gold Standard in the 1930s was very different from that of leaving the eurozone today; a decision to reintroduce a national currency now might engender "the mother of all financial crises" (Eichengreen and Temin, 2010) through instantaneous capital flight and a collapse of the banking system. How costly this might be is really a matter of speculation, but estimates have been made; for example, Cliffe (2011) suggests that after five years real GDP in the eurozone would still be 5% lower than at the time of the break-up.

It is equally reasonable to argue that the demise of the currency union would have a permanent adverse effect on GDP levels, although perhaps not as large as has sometimes been claimed. The currency union effect on trade volumes was initially thought to be very large, but better econometrics and the opportunity to examine the actual impact of EMU now suggest that trade volumes increased by perhaps 2% (Baldwin et al., 2008), with the implication that the trade effect on GDP was less than 1%. There are, however, several channels through which EMU may have raised productivity, and a recent study found that it had raised the level of real GDP per hour worked by 2% (Barrell et al., 2008), so this would potentially be at risk.

Sixth, given the pressures on public finances which the crisis has triggered, a move back to financial repression may well be on the cards with a view to reducing the interest costs of servicing the public debt and pushing down the real interest rate relative to the growth rate. This would lower the required primary surplus for fiscal sustainability. Such a policy involves limiting in various ways the free flow

Table 8: Capital account openness (0-100)

	France	Germany	Italy	United Kingdom	Western Europe
1950-4	62.5	35	37.5	47.5	33
1955-9	65	90	50	52.5	45
1960-4	75	100	67.5	47.5	56
1965-9	65	100	75	42.5	56
1970-4	75	97.5	75	50	54
1975-9	75	95	75	65	72
1980-4	67.5	97.5	75	100	75
1985-9	75	100	85	100	75
1990-4	87.5	100	92.5	100	92
1995-9	92.5	100	100	100	100

Note: The world average for 1890-1913 was 99.7.
Source: Appendix to Quinn and Toyoda (2008).

of capital between countries, i.e., reducing the integration of capital markets (cf. Table 8). This happened in Britain from the 1930s through to the 1970s, and it has been estimated that the financial repression "tax" yielded 3.6% of GDP per annum between 1945 and 1980 (Reinhart and Sbrancia, 2011). More generally, Ali-Abbas et al. (2011) found that big debt reductions in the period 1945-70 were, unusually, characterised by a much larger component from the growth-interest differential rather than from primary surpluses, while Wyplosz (2001) showed that capital controls and credit restraints were instrumental in significantly lowering European real interest rates at this time. There was, however, a cost to European growth from reducing the efficiency of capital markets, which Voth (2003) estimated as at least 0.7 percentage points per annum.

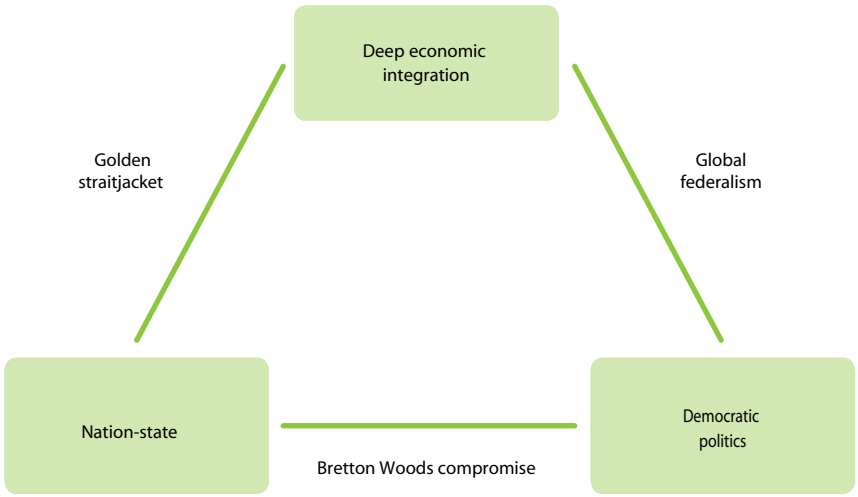
The overall message of this section is that there is quite a serious threat both to levels of potential output and to medium-term trend growth from inappropriate policy responses to the pressures created by the crisis. The "business-as-usual" projections by the OECD (2012) are likely to be overly optimistic. Moreover, the general direction of the 1930s policy response to the economic crisis runs very much in the opposite direction to the supply-side reforms that are required to speed up European growth. At best, this does not bode well for Sapir's (2006) agenda of completing the single market and making labour markets more flexible and employment-friendly. At worst, there may be adverse policy measures that undermine Europe's medium-term growth performance. Obviously, today's institutions are different; it will no doubt become clear how well they contain some of these damaging policy responses.

5. Making things better, not worse

The focus of this section is on growth over the medium to long term, rather than on short-term macroeconomic policy, and once again draws on lessons from economic history. Given that the collapse of the eurozone is a major threat to medium-term growth, the starting point has to be a strategy that addresses this issue.

The 1930s implosion of the Gold Standard can be understood in terms of the political trilemma formulated by Rodrik (2000) and reproduced in Figure 1, which states that it is generally only possible to have at most two of the following:

Figure 1: The Political Trilemma of the World Economy



Source: Rodrik, 2000.

deep economic integration, democratic politics, or the nation-state. In the 1920s, with the return to the Gold Standard, countries had signed up to the "golden straitjacket", which had been acceptable in the context of very limited democracy in the 19th century. But in the 1930s democratic politics at the level of the nation-state over-ruled this policy choice, and when reconstruction of the international economy was subsequently undertaken under the auspices of the 1944 Bretton Woods agreement, economic integration was severely restricted by controls on international capital flows (the Bretton Woods compromise in Figure 1). The point is that to retain the benefits of deep economic integration would have required action to organise it through democratic politics at a supranational level (Crafts, 2012c).[11]

If that is the case, then logic points to a solution to the political trilemma problem that is different from either the 1930s retreat from economic integration or the 1950s Bretton Woods compromise. The implication is that deep economic integration and democratic politics are chosen as options by going down the route of "global federalism" in a "United States of Europe", rather than deep economic integration combined with the nation-state through the golden straitjacket. This would require major institutional reform within the EU, which would entail banking union, fiscal union and a constitution that ended Europe's "democratic deficit".

Wolf (2012) spells out what this would achieve. He notes that it would allow more effective European fiscal and monetary policy at the ZLB and political legitimisation of a much higher level of transfer payments from an expanded European budget, while also finding a way to share burdens of adjustment between surplus and deficit countries. In this regard, Fishback and Wallis (2013) point to the lessons of the New Deal, where a politically acceptable way had to

11 It should also be noted that undertaking long periods of deflation, perhaps in an attempt to comply with the "golden straitjacket", helped spawn the rise of extremist political parties. Econometric analysis shows that undergoing a long and deep contraction in GDP was associated with votes for extremist political parties (de Bromhead et al., 2012). The example of deflation under Chancellor Heinrich Brüning in Germany, followed by the rise of the Nazis, is often cited in this context. The link between prolonged recession and extremism is clearly more complex than this, and de Bromhead et al. point also to the importance of the structure of the electoral system and the depth of democratic traditions in determining political outcomes.

be found to expand the role of central government, and argue that this could only be achieved by imposing strict limits on central administrative discretion. The implications of a successful strategy would be to preserve the income gains that have accrued from European integration and to guard against creeping protectionism in capital and product markets.

Table 9: ICT and long-term growth potential (% per annum)

	ICT-use own β	ICT-use Swedish β	ICT-output
Austria	0.46	0.76	0.22
Belgium	0.64	0.73	0.13
Czech Republic	0.53	0.81	0.27
Denmark	0.62	0.70	0.20
Finland	0.67	0.76	0.57
France	0.48	0.68	0.17
Germany	0.44	0.68	0.33
Hungary	0.58	0.79	0.44
Ireland	0.39	0.94	0.51
Italy	0.36	0.70	0.19
Netherlands	0.51	0.71	0.10
Slovenia	0.28	0.62	0.28
Spain	0.53	0.76	0.10
Sweden	0.70	0.70	0.24
United Kingdom	0.60	0.66	0.16

Note: β is the factor share of ICT capital; a high value indicates relatively successful diffusion and is conducive to a higher growth contribution. The estimates assume that the real price of ICT equipment continues to fall at 7% per annum and the steady-state growth implication is derived using a neoclassical growth model with two types of capital.
Source: Oulton (2010).

Table 10: Pre-crisis productivity performance

	2007 real GDP/hour worked ($1990 Geary-Khamis)	Real GDP/hour worked growth, 1995-2007 (% p.a.)	Total factor productivity growth, 1995-2007 (% p.a.)
Greece	17.29	3.36	0.61
Italy	25.63	0.46	-0.20
Portugal	15.62	1.16	-0.63
Spain	23.50	0.48	-0.58
EU15 median	30.44	1.67	0.64
Czech Republic	14.51	3.87	0.79
Estonia	22.69	7.18	4.71
Hungary	10.66	3.08	0.21
Latvia	14.20	5.84	2.86
Lithuania	15.30	6.30	4.31
Poland	11.83	3.20	2.01
Slovakia	17.32	5.18	2.96
Slovenia	22.40	4.32	1.70

Notes: $1990GK indicates that the levels are measured at purchasing power parity (PPP) in terms of 1990 US dollars. EU15 refers to the pre-2004 accession EU countries.
Source: The Conference Board Total Economy Database.

Box 3. A "real" Marshall Plan to save the eurozone?

Sixty years ago the original Marshall Plan confronted a difficult situation which had clear similarities to today's problems. At the end of the 1940s Western Europe had a large balance-of-payments deficit (the "dollar shortage"). It also faced a potential battle with political extremists who were hostile to the market economy; it was struggling to ignite the growth process that eventually delivered the "Golden Age"; and it was reluctant to embark on the integration of European markets. Economic historians have little doubt that the Marshall Plan made an important contribution to solving these myriad problems, and in the eyes of the general public it has attained an iconic status, underscored by repeated calls for a new Marshall Plan for Eastern Europe (in the 1990s), for Africa (in the 2000s), and for the Middle East (in 2011). Could a new Marshall Plan, therefore, come to the rescue of the eurozone by making an exit by countries such as Greece less likely and reducing the risk of a more general exodus (Crafts, 2012c)?

To answer such a question convincingly, it is important to recognise both what the original Marshall Plan really was and how it worked in practice. A "real" Marshall Plan would work as a "structural adjustment programme" – according to De Long and Eichengreen (1993), the most successful ever. Its main role would be to promote supply-side reforms that raise productivity growth. This would repeat the main achievement of the original Marshall Plan in the 1950s. A real Marshall Plan would have to work in much the same way as its famous predecessor, namely by achieving reforms through strong conditionality in return for serious money. The structural reforms that would be targeted are those already identified in Table 3. This would be much better than throwing money at southern Europe through more of the same structural funds, because they are badly targeted and they have not been successful in raising long-term growth prospects.[13]

To be credible, the funds would have to be committed, but only released when reforms had been implemented satisfactorily – similar to the deal that worked in the context of EU enlargement in 2004. Whether the EU could implement this is rather doubtful; at a minimum it seems likely the IMF would have to be involved. Sadly, unlike the Marshall Plan in the 1940s, the overall record of the structural adjustment programmes administered by the IMF and World Bank has been generally disappointing both in terms of compliance and outcomes. More specifically, the success or failure of such programmes seems to have depended mainly on domestic political economy considerations and a willingness to embrace reform, the implication being that "the key to successful adjustment lending is to find good candidates to support" (Dollar and Svensson, 2000).

The experience of the collapse of the Gold Standard in the 1930s suggests that seeking to keep the eurozone intact by imposing a "golden straitjacket" on the policy choices of independent nation-states is not a viable option. This points to fiscal federalism with genuine democracy at the EU level as the long-term solution; a new Marshall Plan may not be a substitute for reforms of this kind, but it could certainly serve as a valuable complement. Unfortunately, it would be difficult at present to persuade the countries in northern Europe that countries in southern Europe are "good candidates" or that non-compliance would, in effect, be punished. In practice, therefore, the Marshall Plan approach is probably a non-starter.[14]

Reforms to address the political trilemma problem are only part of what is required. As previously noted, there is considerable scope to improve productivity performance through supply-side reforms. A particular focal point can still be the diffusion of ICT, where deregulation and educational reforms could make a significant difference. Table 9 offers some projections of the future scope for ICT to deliver productivity growth for European countries both with and without reform. The key point to note is that if ICT were as important in the other countries as it is in Sweden, the most successful adopter of ICT, then the ICT capital contribution would rise appreciably, notably by over 0.2 percentage points per annum in the large continental economies.

A much more attractive way than prolonged deflation to address the competitiveness and fiscal problems of the euro periphery of southern Europe would be to increase the rate of labour productivity growth. Provided wage increases are restrained, this could be a substitute for either internal or

external devaluation, and it would improve fiscal sustainability by narrowing or even overturning the gap between the real interest rate and the growth rate. Prima facie, there is a lot of scope to improve the euro periphery's productivity performance, as Table 10 illustrates.

Box 4: Selective industrial policy

Selective industrial policy ("picking winners"), which is a form of protectionism and typically inhibits competition, has deservedly got a bad name. In particular, it has been widely remarked that, in practice, support is disproportionately given to sunset rather than sunrise industries, and some economists argue that this "government failure" is an inherent aspect of the political economy of industrial policy. Baldwin and Robert-Nicoud (2007) have recently used a variant of the well-known "protection-for-sale" model to argue that the asymmetric appropriability of rents implies that losers lobby harder, while earlier explanations include the "social insurance" explanation of Hillman (1989) and the suggestion by Krueger (1990) that known losers in ailing industries are more visible than unknown gainers in expanding industries.

This can be illustrated by reference to the UK experience of the 1960s and 1970s, which delivered a very poor payoff and was hijacked by politicians who were afraid of de-industrialisation and creative destruction. There was a very clear tendency for selective subsidies to be skewed towards relatively few industries, notably aircraft, shipbuilding and, latterly, motor vehicles (Wren, 1996a). The high expenditure on shipbuilding is striking, since this was clearly an industry in which the UK no longer had a comparative advantage in the face of Asian competition. More generally, there was quite a strong bias towards shoring up ailing industries, which is well reflected in the portfolio of holdings of the National Enterprise Board (Wren, 1996b), in the pattern of tariff protection across sectors (Greenaway and Milner, 1994), and also in the nationalisations of the 1970s, where the prevalence of very poor rates of return reflected a lack of political will to eliminate productive inefficiency (Vickers and Yarrow, 1988).

Moreover, policies to subsidise British high-technology industries with a view to increasing world market share in sectors where supernormal profits might be obtained were notably unsuccessful in this period in a number of cases, including civil aircraft, which by 1974 had cost £1.5 billion at 1974 prices for a return of £0.14 billion (Gardner, 1976); computers (Hendry, 1989); and nuclear power (Cowan, 1990). A combination of subsidies to American producers linked to defence spending and the relatively small size of the British market undermined these attempts at rent-switching. The one sector which did represent a success was pharmaceuticals. It is generally agreed that government policy underpinned this success, but it is less clear what were the relative contributions of different aspects of that policy.

One major impact of government support may have been through the demand side and the drug-purchasing policies of the NHS. The Pharmaceutical Price Regulation Scheme (PPRS) shaped the incentives facing pharmaceutical companies. It is suggested by some that this acted as a successful industrial policy which provided a distinctive form of rate-of-return regulation that could be manipulated by the Department of Health to encourage R&D in the UK (Thomas, 1994). Others are sceptical, pointing out that the UK is a small part of the world market and that the quality of the science base is by far the most important factor in location decisions for R&D in pharmaceuticals (NERA, 2007). From this perspective, the most important aspect of government support has been the provision of elite research universities with world-class departments in the key sciences, together with public funding for research through the Medical Research Council.

12 For further details on the original Marshall Plan, see Crafts (2011).

13 The spending priorities of the current programme are not well aligned with the supply-side reforms that are required to improve productivity performance in southern Europe. Indeed, there is far too little emphasis on promoting structural reforms. A further key point is whether the recipient region has adequate absorptive capacity, which seems particularly to concern its level of human capital and its quality of government (Becker et al., 2012). In the absence of reaching an appropriate threshold in this regard, structural funds have had no medium-term growth effect, and indeed, have been unsuccessful in raising investment in Greece and Portugal.

14 For further discussion of the potential for a real Marshall Plan in today's eurozone, see Crafts (2012c).

Pre-crisis TFP growth was very weak, and there were large labour productivity gaps between southern Europe and the EU15 median. In that context, labour productivity growth was at best mediocre, and at worst very disappointing. This is underlined by the far superior labour productivity growth generally achieved by the 2004 accession countries, which saw Greece and Portugal overtaken in the early 2000s by Estonia, Slovakia and Slovenia. If the euro periphery's productivity problem could be effectively addressed, living happily within the eurozone would look much more feasible in the long run. The obstacle here relates to the political will to reform, rather than actual constraints arising from public finances.

The UK would also benefit from supply-side reform that raised its medium-term growth rate as a means of addressing its public finances and improving living standards. In the aftermath of the crisis, the mood of many people in the UK was captured by Peter Mandelson in his speech to the 2009 Labour Party Annual Conference, when he suggested that what was needed was "less financial engineering and a lot more real engineering". In part, this might be interpreted as saying (correctly) that re-regulation of the financial sector was required and that this would probably reduce its size. But it was also a call for strengthening industrial policy, which is (deservedly) much more controversial.

A key point here is that the UK benefited greatly from strengthening competition in product markets by abandoning protectionism, deregulating and, eventually, strengthening competition policy. This addressed long-standing problems of industrial relations and bad management which had appeared intractable. The empirical evidence is unequivocal; increased competition promoted better productivity performance (Crafts, 2012a). A major consequence, as emphasised by Aghion et al. (2011) is that, if there is to be a return to a more active industrial policy, it should be designed to minimise the adverse effects on competition.

This leads to a second essential point, namely, that the emphasis should be on good horizontal industrial policies to support productivity performance in the private sector.[15] More generally, the development of endogenous growth theory suggests that horizontal policies which raise the appropriable rate of return to innovation and/or investment and speed up the diffusion of technology can have positive effects on the rate of growth. Quite a wide range of government policies might be relevant in this regard, including the structure of taxation, the extent and type of regulation, the quality of state education and the supply of infrastructure capital which raises private-sector profitability. With respect to horizontal industrial policies, the UK's record is mixed, and there is considerable scope for improvement, as empirical research has frequently pointed out, even though the OECD assessment reported in Table 3 seems to suggest that there is relatively little scope to improve productivity through structural policy reforms.

New growth economics has tended to stress the importance of policies towards education and R&D. In each area, it might be argued there have been some policy successes. The most important changes in education have included the expansion of higher education, the national curriculum and league tables for schools. The good news is that, based on international test scores in mathematics and science, the UK showed slow but steady improvement between 1975 and 2003, which

15 "Industrial policy" is perhaps best defined in the manner of Caves (1987) to encompass public-sector intervention aimed at changing the distribution of resources across economic sectors and activities. Thus, it includes both "horizontal" policies which focus on activities such as innovation, provision of infrastructure and so on, while "selective" policies aim to increase the size of particular sectors. The classic justification for industrial policy is that it remedies market failures, for example, by providing public goods, solving coordination problems, or subsidizing activities with positive externalities.

regression analysis suggests would have added a small amount to productivity growth. The bad news, however, is that the UK is still well below the top country (Hanushek and Woessmann, 2009). Nevertheless, growth-accounting estimates show a relatively strong contribution to growth in the recent past based on increasing proportions of the workforce with higher qualifications, as is reflected in Table 2. With regard to R&D, the big innovation in policy has been the R&D tax credit introduced in 2001 and subsequently expanded in its coverage. A careful ex-ante study suggested that the policy might raise UK TFP growth by about 0.3 percentage points per annum (Griffith et al., 2001), but subsequent analysis has found that estimates of benefit-cost ratios are highly sensitive to methodology, and design of the policy may need to be revisited (HMRC, 2010).

Unfortunately, with regard to public capital and transport infrastructure, the picture is much less encouraging. To maintain the level of public capital to GDP at a growth-maximising level, investment of about 2.7% of GDP per annum would be needed (Kamps, 2005), but over 1997-2008 the UK invested only 1.5% of GDP. In terms of cost-benefit analysis, Eddington (2006) reported there was a substantial backlog of road projects with very high benefit-cost ratios (typically strategic roads near urban areas, not "grand projects" such as high-speed rail) and estimated that a ten-year programme worth £30bn was required to catch up with this backlog, which would deliver annual welfare benefits of £3.4bn. Continuing the traditional roads policy, memorably described by Glaister (2002) as "predict but don't provide", runs the risk of a growing disincentive to private investment and of productivity being impaired as journey times increase (Rice et al., 2006).

It is certainly true that the revenue from "distortionary taxes" is much smaller as a proportion of GDP than in many European countries. Nevertheless, it is still fair to say that UK policy has been quite timid in making the sort of reforms that recent research, such as the Mirrlees Review, suggests would be most effective in stimulating long-term growth (Mirrlees et al., 2011). For example, this might entail reducing the effective rate of corporate tax while extending the VAT base. The effective average corporate tax rate in 2007 was only about 2 percentage points lower than in the early 1980s (Devereux, 2007), while the revenue produced by the current VAT regime, with its many exemptions, amounts to only about 48% of the total that would be raised if VAT were applied to all consumer expenditure. Using the estimates in HM Treasury (2007), imposing the standard rate of VAT on everything except food would allow a reduction of 12 percentage points in the corporate tax rate, which the OECD study estimates would raise the labour productivity growth rate by about 0.25 percentage points per annum over a ten-year period (Johansson et al., 2008).

The UK has benefited more than most European countries from the adoption of ICT, as Table 2 highlights. The diffusion of ICT has been aided by complementary investments in intangible capital and high-quality human capital and, importantly, also by policies of light regulation in terms of employment protection and barriers to entry in product markets. It should be noted, however, that not all UK regulation is productivity-friendly. Land-use planning is an aspect that creates massive allocative inefficiency and reduces labour productivity both by making land unduly expensive and by restricting city size, which means that agglomeration economies are forgone and spatial adjustment is impeded – successful British cities are too small (Leunig and Overman, 2008). One of the implications is an implicit regulatory tax rate of around 300%, which makes office space in cities such as Leeds and Manchester much more expensive

than even in New York and San Francisco (Cheshire and Hilber, 2008). These findings, together with sub-optimal investment in transport, are quite worrying in the context of the role of agglomerations in underpinning productivity and competitive advantage, especially in the financial and business services sectors (Graham, 2007) and suggest the need for serious policy reforms.

It may also be useful to look at the UK in terms of its ability to adjust to the challenges resulting from globalisation, in particular the rise of dynamic Asia. This turns on the country's export mix, the flexibility of its labour and product markets, and its strengths in innovation and education according to the index devised by Rae and Sollie (2007). They found that the UK ranked 8th out of 26 OECD countries based on having a relatively small share of low-technology and a relatively large share of high-technology exports; a labour market which redeploys workers relatively quickly and has limited insider power; strong product market competition; and respectable scores in education and innovation.

That said, it should be recognised that productivity performance in the UK not only exhibits agglomeration benefits, but also has quite a strong regional component. Econometric analysis of production functions finds that, across all sectors, plants in the south-east have a substantial TFP advantage over the rest of Britain (Harris and Moffat, 2011). This suggests that resilience in the face of foreign competition would be strengthened by the removal of some of the obstacles to spatial adjustment to the challenges of globalisation that are imposed by the planning system and sub-standard transport infrastructure.

In sum, there are plenty of evidence-based policy changes that could improve productivity performance. Sadly, many of them are politically too difficult to adopt. It is unfortunate that this has severely constrained supply-side policy, for example, by making serious pro-growth reforms to the tax and planning systems no-go zones.

6. Policy conclusions

- Conventional wisdom is that medium-term growth prospects are unaffected by the financial crisis which began in 2007. This seems overly optimistic. Considering both the direct effects and the pressures to change policies in directions that will undermine rather than stimulate growth, it is quite possible that growth in the euro area between 2012 and 2030 will be closer to 1% per annum, as opposed to the pre-crisis rate of 2.3%.
- A major consequence of the crisis is that average public debt-to-GDP ratios in European countries will approach or even exceed 100%. Past experience says the existence of such high debt ratios will of itself reduce growth performance by at least 0.5 percentage points per annum. Attempts to address this issue through fiscal consolidation, which may last for many years, will further depress growth.
- Fiscal consolidation can be undertaken in a variety of ways with very different implications for growth potential. Past experience suggests there is a real danger that government expenditure on education and infrastructure will be jeopardised. A key policy implication is that supply-side impacts need to be taken seriously, and the emphasis is on cutting current rather than capital expenditure and on raising indirect taxes.
- Supply-side reforms undertaken now could potentially raise European growth rates by as much as 0.5 to 1 percentage points per annum over the period to 2030. A key implication would be faster and more complete diffusion of ICT.

The general thrust of these reforms would include fiscal changes to reduce distortionary taxation, strengthening competition and reducing regulations that damage productivity, and improving the quality of education. Generally speaking, this could be done without undermining public finances, but it would undoubtedly upset many voters.

- The UK appears less in need of, and to have less to gain from, supply-side reform, according to OECD research. This is misleading, as there is considerable scope to enhance Britain's growth performance over the medium term. The areas where supply-side policy can be improved include raising the quality of education, repairing the infrastructure shortfall, tax reforms along the lines proposed by the Mirrlees Review and, importantly, reducing the massive inefficiencies resulting from the planning system. A return to selective industrial policies, however, would be a mistake.
- The debt overhang makes reforms that raise the growth rate in European countries more urgent because of the favourable impact they would have on fiscal sustainability but, unfortunately, this is unlikely. Indeed, the pressures of the crisis may well push policy in an adverse direction, especially if there appears to be no scope to stimulate economic activity using conventional fiscal or monetary policies. Indeed, the 1930s crisis led to more regulation, less competition, increased protectionism and financial repression.
- The experience of the 1930s also suggests there is a real risk of European economic integration being partially reversed, or even of the eurozone collapsing in chaos with a large cumulative GDP loss over five or more years. In this context, devaluation and sovereign default may have increasing political appeal. The logic of the political trilemma is that if deep economic integration is to survive, then a much more federal Europe is required, but this is much easier said than done and, in any event, will take considerable time to implement.
- In the meantime, a "real" Marshall Plan could be a useful way to address problems in some euro periphery countries. The appropriate interpretation of this plan would be to implement structural adjustment programmes that entail strict conditionality to achieve supply-side reform in return for serious flows of aid. Unfortunately, this is unlikely to appeal to countries in both northern and southern Europe.

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2 / The Impact of Globalisation and Global Economic Crises on Social Cohesion and Attitudes towards Welfare State Policies in Developed Western Democracies

Vera E. Troeger

1. Introduction

The effects of increased market integration and the reduction in restrictions to trade and financial transactions have been at the centre of academic discussion in many fields in the past few decades. The clear consensus among academics and politicians is that globalisation has affected domestic policymaking in numerous ways as governments and citizens have had to adapt to the new rules of a globalised environment. This chapter (and the next one) focuses on the effects of market integration and internationalisation on Western democracies, taking a contemporary view of the impact of market integration that arguably started in the 1970s on individual preferences, institutional developments and economic policymaking.

The following analysis attempts to track how, and in what ways, market integration and internationalisation have affected the micro and macro levels of policymaking. To understand policy outputs and outcomes, it is important to understand how governments make decisions on economic and other policy matters. This chapter, therefore, seeks to gauge whether and how globalisation has affected individual preferences and attitudes towards market integration itself, as well as related questions such as immigration and preferences for public spending and redistribution. These changes in preferences do not necessarily have a direct impact on policymaking, but through their effect on individual voting behaviour they determine who will hold office and who will decide about policies. One notable aspect in Western democracies today is the increased importance of extremist and right-wing parties. This chapter thus attempts to link voter choice for these parties to individual preferences that might have shifted because of globalisation.

Globalisation seems to be a notion that induces uncertainty in individuals and is often used as a straw man by policymakers to justify certain policy choices. Indeed, what one calls globalisation generates real measurable effects on the economy that can be both positive and negative. As Rodrik (1997a, 1997b, 1998) so forcefully demonstrates, one aspect of globalisation, namely trade openness, in general increases overall welfare in a country; however, this always comes with distributional consequences because it generates winners and losers. And if the group of losers is relatively large, it needs to be compensated in order to maintain social peace and generate the necessary electoral support to implement

policies that allow for market integration and a reduction in barriers to trade and financial transactions.

Globalisation creates uncertainty about distributional consequences not just for policymakers, but also for individual voters. Market integration can lead to greater volatility (Rodrik, 1997a, 1997b, 1998; Cameron, 1978, among others), job uncertainty, and tax and regulatory competition affecting the ability of governments to gather revenue. Governments in Western democracies face a trade-off between higher demands for social security and compensation on the one hand, and the necessity of making the domestic economy more competitive and efficient, on the other.

The uncertainty created by market integration about job security and future economic development can spur not only the demand of voters for compensation in the form of social security, but also calls for protectionist tendencies. Protectionist preferences come in different guises, such as general demands for protecting the domestic economy, negative attitudes towards the influx of immigrants, appeals for redistributionist policies etc. These shifts in individual preferences and attitudes – if sufficiently widespread – will influence policy outcomes in democracies because incumbent governments need to take the preferences of a majority of voters into account if they want to stay in office or have at least a reasonable chance of being re-elected. If incumbent governments fail to respond to such pressures, voters will not necessarily shift their political allegiance to another mainstream political party, but instead may back more anti-immigrant, extremist right-wing parties which are then able to attract a larger share of the vote.

Globalisation-induced preferences and uncertainties are often reinforced by external shocks, such as economic and financial crises, as well as other events, notably terrorist attacks. To understand the diverse effects of globalisation on political and economic outcomes, it is essential first to understand how it shapes individual preferences.

2. Preferences towards globalisation and market integration

Politicians of course prefer winning elections to losing them. When in office, they can implement policies they deem necessary to improve the performance of the domestic economy as well as people's personal wellbeing and welfare. Everything else being equal, therefore, incumbents have to implement policies that win them – depending on the electoral system – enough votes to stay in office. Policymakers in most OECD countries often refer to the constraints they face because of globalisation and use this argumentation to implement lower taxes on capital and corporations and higher taxes on less mobile assets, such as labour and consumption, to reduce welfare spending, and in some cases to push through austerity measures.

Since the turn of the century European heads of state and their finance ministers have put the spotlight on globalisation in order to reduce taxes for mobile capital and high-profit multinational enterprises. For example, Peer Steinbrück, Germany's finance minister under Angela Merkel in 2005-09, announced planned corporate tax reforms in order to respond to global pressures: "We want to make Germany ... better able to compete with other tax locations surrounding us …" (*Financial Times*, July 12th 2006).

In his budget speech on March 21st 2007 the British chancellor of the exchequer, Gordon Brown, announced a fiscally neutral corporate tax reform which followed the tax-cut-cum-base-broadening principle. The reform benefited highly profitable multinational enterprises but was a drawback for smaller firms with lower profits and companies with large plants in the UK by cutting back tax credits. Once again, this measure was justified by global tax competition pressures caused by the financial integration of world markets. More recently, in response to the financial crisis, the then leader of the opposition, David Cameron, rejected suggestions by prime minister Brown that he had shifted his party's emphasis from "austerity" measures to tackle the budget deficit to one of growth in response to fears that the Conservative Party's poll lead at the time was under pressure (*Financial Times*, November 23rd 2009).

The long shadow of globalisation seems to serve policymakers well when having to implement unpopular financial measures and reducing welfare spending. This gives rise to two questions: how strong is the international pressure in reality, and how much do policymakers play on popular fears in order to stay in office? Giving the relevant answers requires addressing the question whether voters do indeed care about their country's exposure to international markets.

The comparative political economy literature on this topic follows two main lines of argument. The first addresses differences across countries: do voters in countries that are more integrated in international markets have a distinctively different attitude towards globalisation? The second distinguishes between voter preferences within countries. Since it is an economic fact that openness to trade not only increases overall welfare but also generates distributive conflicts (Rodrik, 1994), the question becomes whether winners and losers from globalisation within one economy have distinguishable preferences with respect to globalisation. The difficulty for governments then seems to be to predict a) the size of the overall welfare gains, b) who wins and who loses from market integration, and c) how big are the groups of winners and losers in order to gauge the necessity for redistribution across these groups.

With respect to the first question, there is ample empirical evidence demonstrating that voters in economically more exposed countries show significantly more negative attitudes towards internationalisation and market integration than voters in more closed economies (for a revision of the relevant empirical literature see Ruoff and Schaffer, 2012). This research suggests that the median or decisive voter a) perceives globalisation as a threat and b) is able to judge the extent to which the domestic economy is integrated into world markets. In turn, this implies that individuals in more exposed countries expect higher compensation to offset the risks involved than those in more closed countries, thereby putting governments under additional spending pressure.

This is one of the major arguments in comparative political economy dubbed the compensation hypothesis (Rodrik, 1997a, 1997b, 1998; Cameron, 1978; Garrett and Mitchell, 2001; Ruggie, 1982; Katzenstein, 1985). Supporting empirical evidence for the compensation hypotheses is manifold (Hicks and Swank, 1992; Garrett, 1998; Rodrik, 1997a, 1997b, 1998; Bernauer and Achini, 2000; Burgoon, 2001; Garrett and Mitchell, 2001), but is also widely contested. Some scholars question the openness-volatility-welfare nexus (Down, 2007; Kim, 2007), for example that more economic openness leads to higher volatility of domestic markets – especially labour markets – and that voters consequently demand greater government welfare spending to compensate for these higher

risks. Others find that changes in economic openness and globalisation in general have had a negative impact on public spending (inter alia, Rodrik, 1997a; Garrett, 2001; Genschel, 2002; Busemeyer, 2009), in effect supporting the so-called efficiency hypothesis.

As a result of the mixed empirical backing for the compensation argument, a number of researchers argue for a more nuanced understanding of the relationship between globalisation and the welfare state (for example, Adserà and Boix, 2002; Swank and Steinmo, 2002; Mares, 2004, 2005; Rickard, 2006; Pluemper et al., 2009; Pluemper and Troeger, 2012). The compensation hypothesis quite often ignores the question of winners and losers and the implication for redistributive policies. This is probably why the empirical evidence supporting or rejecting the compensation hypothesis remains highly mixed – governments in more open countries do not necessarily spend more on social security and welfare programmes. In addition, even if voters realise they live in a country that is more affected by international integration and they then develop negative attitudes towards globalisation and demand higher compensation for individual risks it provokes, this does not necessarily mean that policymakers will respond by increasing spending on public good provision (Ruoff and Schaffer, 2012; Walter, 2010).

It is only when members of society view themselves as losers from globalisation and they are a group large enough to influence electoral outcomes that the question of compensation via redistribution of gains from trade becomes important for politicians (Hays, 2009). However, as Rodrik (1994) argues convincingly, the distributive effects of liberalisation are hard to predict, and preventive compensation policies are difficult to implement. This is because individual winners and losers from trade are hard to determine, and their distribution varies across countries.

A key question to answer, therefore, is which factors determine whether an individual will win or lose from different kinds of market integration. Factoral models (Stolper-Samuelson; Hecksher-Ohlin – see Alt et al., 1996) and sectoral models (Ricardo-Viner – see Alt et al., 1996) generate different predictions about redistributive effects of trade openness, and more recent trade models integrate different aspects of these baseline models and argue that a combination of skill-specificity and sectoral exposure determines an individual's risk from increased market integration (Hiscox, 2001; Hays, 2009; Melitz, 2003; Helpman et al., 2008; Walter, 2010).

At the micro level, ample evidence exists suggesting that individuals are able to discern whether they belong to the group of winners or losers from market liberalisation. Several studies show that an individual's risk exposure (for example, in terms of skill specificity) tends to have a statistically significant effect on their perceptions of economic insecurity (Cusack et al., 2006; Anderson and Pontusson, 2007). This alters their preferences with respect to redistribution and compensation via public spending and welfare programmes.

Relying on a Heckscher-Ohlin model, Scheve and Slaughter (2001) show that the factor (labour vs. capital) from which individuals receive income influences attitudes towards trade barriers. Based on individual level data for the United States, they show that factor type dominates industry of employment in explaining support for trade barriers, particularly among lower-skilled workers. Scheve and Slaughter (2004) furthermore support the notion that the multinationalisation of the production process in a country increases the insecurity of workers who,

in turn, demand higher levels of compensation. They show that foreign direct investment (FDI) by multinational enterprises boosts the elasticity of labour demand. More elastic labour demands, in turn, raise the volatility of wages and employment, all of which tends to make workers feel less secure. They present empirical evidence, based on the analysis of 1991-99 panel data from the UK, that FDI activity in the industries in which individuals work is positively correlated with individual perceptions of economic insecurity.

Providing more indirect micro-level evidence on the openness-structural adjustment-insecurity link, a number of studies on the determinants of individuals' trade policy preferences show that individuals who stand to gain economically from trade liberalisation and, to some extent, individuals employed in industries with a comparative advantage are more likely to express a preference for trade liberalisation than individuals who stand to lose from such measures (Scheve and Slaughter, 2001; Baker, 2005; Hays et al., 2005; Mayda and Rodrik, 2005; Hays, 2009).

Mayda and Rodrik (2005) show that individuals in sectors with a comparative disadvantage have a negative attitude towards trade, whereas individuals with a better economic status, or those in non-traded sectors, tend to be pro-trade. Hence, they find support for both the Hecksher-Ohlin and the Ricardo-Viner models. Pushing the boundaries beyond standard trade theory models, they find that social status, relative incomes and values play an even more important role. Their findings also support the argument that individuals with higher relative incomes are more likely to favour trade than those with low relative incomes.

Hays (2009) sets out to test the embedded liberalism claim. First, he shows that individuals who work in the tradable industry, and particularly in the import competing industry, as well as the unemployed and those with low education levels, are generally opposed to free trade. He then goes on to show that these negative attitudes about trade can be mitigated through compensation in the form of unemployment programmes and, to a lesser extent, government programmes.

Walter (2010) empirically tests the micro-level implications of the compensation hypothesis more directly with individual data from Switzerland and finds that globalisation losers are more likely to express feelings of economic insecurity. Such feelings, in turn, increase preferences for welfare state expansion, which then increase the likelihood that they will vote for the Social Democratic Party. The analysis also shows that globalisation losers and winners differ significantly with regard to their social policy preferences and their propensity to vote for left-leaning parties.

This finding is interesting insofar as it implies that incumbent politicians, in particular, need to take the fears of globalisation losers into account when making decisions on their welfare state spending if they want to win future elections and stay in office. Of course, left-wing parties do tend to emphasise the negative implications for globalisation losers, while more right-wing and pro-market liberal parties usually underline the welfare gains generated from market integration to turn election results to their advantage.

In summary, international economic integration has changed the rules of the game. Trade and financial openness does generate overall welfare gains, but it also causes distributional conflicts. For governments and voters alike, it is not always easy to judge who will be the winners and losers from globalisation, and

this creates uncertainties and fears at the individual level, so governments must react to the increased demands for social insurance. Inevitably, governments will respond very differently to such challenges, and countries will follow diverse strategies depending on the tradition of the welfare state. Indeed, much will depend on the extent to which societal norms are driven by fairness and a sense of individual vs. communal responsibility.[1]

3. Attitudes towards immigration in Western democracies

Globalisation does not refer just to trade integration and the internationalisation of capital markets. It is also linked to the integration of labour markets, and thus to the reduction of barriers to immigration. Indeed, one of the defining features of the EU is the free movement of labour among its member states. However, during the last wave of enlargement, which included most East European countries, several existing members, such as Austria and Germany, opted to restrict immigration from the new members, at least for a certain period of time.

This decision by the Austrian and German governments was clearly triggered by electoral concerns. Incumbent politicians were afraid of losing votes, not only because citizens voiced their worries that increased inflows of cheap labour might pose a risk to their own jobs, but also because such inflows generate cultural tensions. As the next section will show, these anti-immigrant sentiments can and will be used as arguments by extremist right-wing parties to bolster their electoral prospects.

It is not just the free movement of labour which plays a role in anti-immigrant sentiments; globalisation in general makes it easier for individuals to cross borders. These factors, together with highly visible, large-impact attacks by international terrorists in the past decade, have spurred fears and generated more outspoken anti-immigrant sentiments among many citizens in Western democracies.

Recent estimates by Goldin and Reinert (2006) suggest that close to 11 million individuals migrate in any given year. Even though this seems like a large number, it means that worldwide only one in 600 individuals changes his or her country of residence over a 12-month period. The stock of migrants, however, is larger: according to the United Nations, in the year 2000 about 175 million people, or 2.9% of the global population, lived outside their country of birth (Goldin and Reinert, 2006). Still, comparing these figures with the volume of trade as a share of world GDP or with the large flows of capital in international markets, Facchini and Mayda (2008) conclude that the world is experiencing a wave of globalisation that includes everything but labour. They argue that this is the result of restrictive migration policies implemented by destination countries. In democratic societies, the individual attitudes of voters represent the foundations of policymaking. Therefore, to understand policy outcomes, it is important to understand the patterns and determinants of voters' opinions towards immigration.

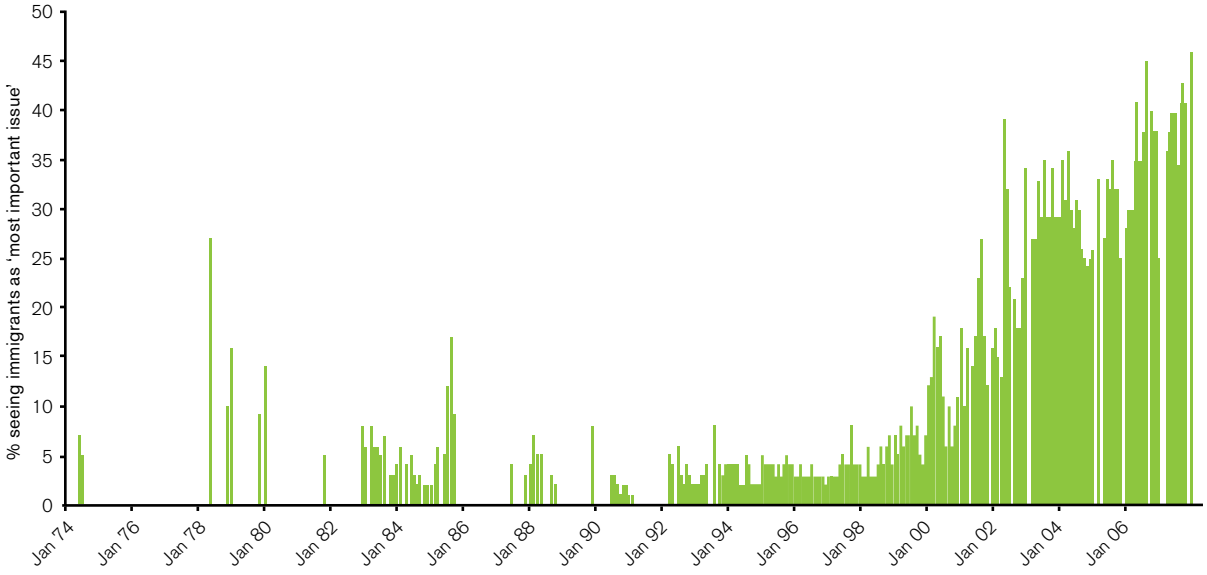
An article in the *Daily Telegraph* (November 30th 2010) published polling results which claimed that 80% of British citizens backed government plans to restrict immigration but, interestingly, more than 50% thought these plans did not go far enough. Indeed, the article reported that many people were very unhappy about the long-term consequences of immigration for the make-up of British society.

1 This will be discussed in more detail in the next chapter of this report.

The article is illustrative of public sentiment not just in the UK, but in most Western democracies. Ford (2006) reviews the historical opinion poll evidence for Britain and points to the growing strength of public concern about immigration that has emerged since the 1960s. In the British Election Study of 1970, 23% claimed to believe "the government should assist immigrants home" (Studlar, 1978). During the 1970s and 1980s public opinion shifted to more right-wing views on immigration (Crewe, 1988). Since then, conservative views regarding immigration have been strong and persistent.

Figure 1 presents Ipsos MORI[2] opinion poll data on British attitudes towards immigration, which highlights concerns among the British voting population about immigrants, notably when immigration picks up substantially at the turn of the century. This coincides with two developments which help to explain the increase in hostility towards immigrants. First, globalisation and market integration made its way onto the political agenda in Western democracies, especially as it seemed to have a negative effect on the ability of governments to maintain the welfare state and redistribute income to the poorer sections of society. This development was coupled with EU enlargement to Eastern Europe, which increased the integration of labour markets and spurred fears of large inflows of low-skilled and unskilled workers who would not only take away the scarce supply of jobs, but would also benefit from the reduced availability of welfare provisions (John and Margetts, 2009). Second, highly publicised events of international terrorism, such as the September 11th 2001 attack on the twin towers in New York, further fuelled anxieties of native citizens and turned the spotlight on immigrants' different cultural, ethnic and religious backgrounds.

Figure 1: Attitudes towards immigration as "the most important issue facing Britain", 1974-2007



Source: Ipsos MORI (2008), long-term trends, www.mori.com

2 Source: Ipsos MORI (2008), long-term trends: http://www.mori.com – percentage of respondents who consider race relations/immigrants/immigration "the most important issue facing Britain today".

Table 1: What is the most important issue facing Britain today?

Issue	%
Immigration	35.9
Terrorism	14.7
National Health Service	12.2
Law and order	10.1
Education	8.3
Iraq	6.1
The economy	4.1
Taxation and government spending	4.1
None of these	3.7
Jobs	3.5
European Union	3.2
Interest rates	0.9

Source: State of the Nation poll, 2006.

By 2002 the percentage of the population citing immigration as the number one issue had remained constant at more than 25% (Ipsos MORI, 2008). This evidence was supported in 2006 by the State of the Nation poll, where 35.9% of respondents claimed that immigration was the most important issue facing Britain today (Table 1). The poll not only supports the claim that immigration had by now consistently entered public opinion, but that these anti-immigration sentiments were fuelled by fears of terrorist attacks, which emerged as the second most important issue facing the British public.

These anti-immigrant feelings can mostly be explained by theories of social disintegration (Parsons, 1942) and group conflict (Dollard et al., 1939). Feelings of social disintegration are typically caused by social change. From this perspective, globalisation can be viewed as a trigger of social change because it alters how society functions and how societal norms are perceived. Globalisation affected especially unskilled workers and those with low levels of education who no longer felt supported by the community. The social change brought about by globalisation and international integration thus induces intense feelings of anxiety, anger and isolation among affected groups.

Group conflict theories, on the other hand, are based on arguments focusing on scapegoats, which hold that ethnic or other minorities provide convenient targets for the aggression of those members of the society who are frustrated by their lack of status and access to resources. These minorities are perceived to be both different from one's own reference group and powerless, but they are still seen as a threat, notably by taking the jobs of the losers of market integration. Xenophobia can thus often be caused by a conflict between immigrants and lower-class native citizens over scarce resources (low-paid jobs, welfare benefits etc.) and results in discrimination against immigrants and the proliferation of racist stereotypes (see, for example, Esses et al., 1998).

In addition, theories of ethnic competition (Belanger and Pinard, 1991), status politics (Lipset and Bendix, 1951), subtle, modern or symbolic racism (Kinder and Sears, 1981), and social identity (Tajfel et al., 1971) cover different aspects of the root causes of anti-immigrant sentiments since they highlight different facets of group conflicts. More recent research (Pettigrew, 2002) suggests that most, if not all, of these approaches can be subsumed under the concept of relative deprivation. In effect, members of one social group feel that compared with

another social group they are not receiving what they deserve, for example with respect to scarce job opportunities or welfare programmes.

Recent work by Hainmueller and Hiscox (2010) on low-skilled and highly skilled immigration offers a clearer picture of attitudes towards immigration. Previous research had emphasised two critical economic issues that appear to generate anti-immigrant sentiments among native citizens: on the one hand, concerns about labour market competition and job opportunities, and on the other hand concerns about the fiscal burden on public services. Hainmueller and Hiscox provide direct tests of both models of attitude formation using an original survey experiment embedded in a nationwide US survey. The labour market competition argument holds that native citizens will be most opposed to immigrants who have skill levels similar to their own. The authors find instead that both low-skilled and highly skilled natives clearly prefer highly skilled immigrants over low-skilled immigrants, and this preference does not decrease depending on natives' skill levels.

The fiscal burden model shows that rich natives oppose low-skilled immigration more than poor natives, and that this gap is greater in US states with higher fiscal exposure where immigrant access to public services is concerned. However, the empirical findings of Hainmueller and Hiscox (2010) suggest that rich and poor natives are equally opposed to low-skilled immigration in general, and that concerns among poor natives about constraints on welfare benefits as a result of immigration are more relevant than concerns among the rich about increased taxes. Overall, the results seem to refute the argument that economic self-interest alone can explain voter attitudes towards immigration. These findings are consistent with alternative arguments emphasising non-economic concerns associated with ethnocentrism or sociotropic considerations about how the local economy and society as a whole may be affected by immigration.

In general, public concerns about immigration seem to be fuelled by international integration and greater insecurity about future earnings and social standing. However, the above review of the literature indicates that resulting attitudes are much more diverse and granular than the ghost of globalisation and job losses suggests. It is important, therefore, to identify which parts of society are affected by these concerns and how governments can balance fears and anxieties with gains from labour market integration.

4. Immigration and voting for the extreme right

The transmission from individual preferences to government formation and, ultimately, policy outcomes goes through individual voting behaviour because elections determine who will be in power and hence what kind of policies will be implemented. The majority of recent literature focuses on how individual preferences are connected to voter choices and electoral outcomes, especially with respect to voting for extremist, right-wing, Eurosceptic and anti-immigration parties (Hooghe, 2007; Golder, 2003a, 2003b; Arzheimer, 2009; John and Margetts, 2009).

Coinciding with the advent of globalisation since the early 1980s, an unexpected wave of right-wing extremist party activity swept over the European continent. Suddenly, parties labelled "extreme", "radical", "populist" or "new right" proved to be remarkably successful at the polls in countries such as Austria, Belgium, Denmark, France, Italy, Norway, Sweden and Switzerland. Even though they are quite heterogeneous, this new family of parties, dubbed extreme right parties (ERPs), shares a number of ideological features, in particular a concern

about immigration, which became the single most important issue for them in the 1990s (van der Brug and Fennema, 2003; Arzheimer, 2009).

While there was some belief initially (Jackman and Volpert, 1996) that the electoral success of extreme right parties could be dampened by mechanical institutional measures (such as amending the electoral system by, for example, increasing electoral thresholds), it became clear that additional factors, such as immigration, unemployment, EU integration and others, fuelled the success of these extremist parties (Golder, 2003a, 2003b). Interestingly, unemployment or an increase in unemployment only seem to boost voter shares of right-wing parties if immigration levels are comparatively high at the same time (Golder, 2003b).

This finding supports the notion that reducing obstacles to the free movement of labour and individuals across borders as part of the globalisation process, and the resulting fear of immigration in Western democracies, fuels the impression – perhaps irrationally – among unskilled native workers that unemployment is caused by the influx of immigrants. Indeed, when immigration levels are low, a rise in unemployment is often simply associated with the general state of the domestic economy and the ups and downs of the economic business cycle.

The question whether economic hardship is related to voting for extremist parties is convincingly answered by De Bromhead et al. (2012), who analyse the voting behaviour in 28 countries (European, East European, North American and Latin American) during the Great Depression in the inter-war period (1919-39). They confirm empirically the existence of a link between political extremism and economic hard times, as captured by the growth or contraction of the economy. They find that what mattered most for the voter share of extreme right-wing parties is not simply economic growth at the time of the election, but cumulative growth. However, the effect of the Great Depression on support for right-wing and anti-system parties was not equally strong in all economic, political and social circumstances. Right-wing parties won most support in countries with relatively short histories of democracy, with pre-existing extremist parties, and with electoral systems that created low hurdles to parliamentary representation.

The bulk of the extreme right's support in most West European countries comes from those sections of the working class and lower-middle class who are worried about the presence of non-West European immigrants. In general, there exists a much greater propensity to vote for extreme right-wing parties among white men, those with a low level of formal education and those with a rudimentary professional skill level, as well as among manual workers, the lower middle class, and individuals in routine non-manual employment (Arzheimer and Carter, 2006; Arzheimer, 2009). This social profile of the typical voter for extreme right-wing parties is complemented by an equally sharp attitudinal profile: as a number of studies have demonstrated, supporters of extreme right-wing parties are to a large extent motivated by xenophobic feelings and beliefs (see, for example, van der Brug and Fennema, 2003). Using survey data collected in 2003 for 18 West European countries and regions, Ivarsflaten (2005) provides evidence that West Europeans demand restrictive immigration and asylum policies mainly because they are concerned that diversity of religion, language and tradition will have a negative impact on their country.

A look at voting patterns for extreme right-wing parties such as the British National Party (BNP) and the UK Independence Party (UKIP) indicates that there is more latent support for the extreme right than polling results would suggest (John and Margetts, 2009). On the one hand, feelings of social acceptance often

prevent respondents to state their true preferences, while strategic voting in a first-past-the-post electoral system, on the other hand, means that voters often do not express their true preferences with their ballot but vote instead for the parties that are closest to their preferences and have a chance of entering parliament.

Earlier research thus argued that Britain's constitutional and institutional arrangements, as well as its political culture, prevent extreme right-wing parties from gaining support and making electoral headway, even when issues such as immigration and national identity appeared on the political agenda and influenced public opinion as early as the 1960s (Kitschelt and McGann, 1995; Golder, 2003a, 2003b; Mudde, 2007; de Lange, 2007, among others). In this light, even the success of the BNP in the 2000s was not viewed as evidence that the extreme right could gain extensive political representation in Britain, but rather that minor parties can cash in on temporary shifts in public opinion and can gain momentary support from protest voters. The British first-past-the-post electoral system discourages new entrants because it imposes a high cost to obtain seats for the number of votes cast. This penalises small parties such as UKIP or the BNP and prevents them from sustaining or increasing their share of the vote in the long run (Jackman and Volpert, 1996; Norris, 2005; for a different view, see Golder, 2003a, 2003b; Van der Brug et al., 2005).

Nevertheless, this does not prevent politicians of the major parties to take up issues such as immigration and to incorporate them into their own party platforms in a bid to undercut smaller parties. A recent example of this kind of populism was the announcement by the home secretary, Theresa May, that the government would take measures to restrict immigration from eurozone countries should the monetary bloc collapse. In the first instance, her comments were aimed at Greece in an effort to appease public fears of a sudden influx of cheap Greek workers if the country were to leave the eurozone (*Guardian*, May 26th 2012).

In 2011 the prime minister, David Cameron, pledged to cut net immigration by "tens of thousands" by 2015 after a public outcry, when immigration figures for 2010 became public showing that net immigration had hit 242,000 in the year to September 2010, according to the Office for National Statistics. That was a 45% increase from a year earlier and the highest level since June 2005, when net immigration reached 260,000. (*Daily Telegraph*, May 27th 2011).

There is little doubt that parties of the extreme right bank on public fears with respect to immigration, but it is clear that the Conservative Party in Britain is quite adept at integrating these fears into its own agenda. Table 2 breaks down party identification and attitudes towards immigrants and supports the notion that the Conservatives are able to pick up votes from people with anti-immigrant sentiments. The British electoral system makes this easier for the party by encouraging individuals who are concerned about immigration to cast their vote tactically for a major party that addresses their fears so that anti-immigration policies have a better chance of being pushed through.

Notwithstanding the attempts of major parties to respond to public fears regarding immigration, open and latent support for extreme right-wing parties in Britain seems to have consolidated over the last decade (John and Margetts, 2009; Ford and Goodwin, 2010). John and Margetts use British data from the 2000s to argue that there is a large sub-section of the British electorate who might consider voting for an extreme right party. They also point out that the size of this group has probably been underestimated, as survey evidence has tended

Table 2: Party identification and attitudes towards immigration in Britain

Party I most identify with	Immigration is the most important issue	Number of respondents
British National Party	**62.5**	**48**
Conservative	46.1	536
Refused	39.0	146
Labour	32.4	581
Liberal Democrats	32.2	245
Don't Know	31.1	482
Plaid Cymru	30.0	10
UK Independence Party	29.2	24
Scottish National Party	26.5	34
Green Party	24.1	87
Respect	21.4	14
Other Party	19.0	21
Total	35.8	2,228

Note: Total does not add up owing to weighting and rounding.
Source: State of the Nation poll, 2006.

to focus on actual, rather than potential voting behaviour. In order to support their claim, they use instead attitudinal data relating to respondents' "liking" or "disliking" political parties and questions regarding their propensity to vote (Van der Brug et al., 2005, 2007).

Ford and Goodwin (2010) back these claims with a more granular analysis of British voters who supported the BNP between 2002 and 2006 (based on data from Ipsos MORI's twice-monthly surveys). They find that support for the BNP is concentrated among older, less educated working-class men living in the declining industrial towns of the Northern and Midlands regions. They also show that extreme right-wing voters in contemporary Britain express exceptionally high levels of anxiety about immigration and disaffection with mainstream political parties. The BNP, in particular, prospers in areas with low levels of education and large Muslim minority populations of Pakistani or African origin. The BNP has succeeded in mobilising a clearly defined support base: middle-aged working-class white men who are anxious about immigration, feel threatened by local Muslim communities and are hostile to the existing political establishment.

These factors all underpin the BNP's emergence in Britain: high immigration levels, growing perceptions of identity conflict and the declining strength of the cultural and institutional framework binding voters to the main parties. As a result, British policymakers and established parties have to face the fact that the BNP is likely to continue to strengthen its position as a persistent feature of the British political landscape in the years to come.

There is little doubt that major parties will have to address these fears and anxieties in order to reverse the momentum of the extremist parties. However, governments need to be careful when bowing to populist demands to clamp down on immigration. Until the economic crisis hit in 2008, the experience of countries such Ireland suggested that flexible labour markets and the influx of labour reduce unemployment and foster economic growth. Restricting immigration induces economic inefficiencies (Jain et al., 2009), and immigration

is often indispensable for offsetting low birth rates in West European countries. A more important question, therefore, is how to solve the redistributive tensions that immigration creates and how to reduce the anxieties of certain sections of society without exploiting these fears for short-sighted electoral purposes.

5. Preferences for redistribution

The question of whether or not a government should redistribute from richer to poorer segments of society, and how much redistribution is desirable both from an individual and a societal perspective, is probably the most important dividing line between the left and the right of the political spectrum, at least on the economic front. It has thus received a great deal of attention from economists, philosophers and political scientists alike. Redistribution in Western societies is highly path-dependent and is very much determined by how the welfare state was set up in the first place. Actual redistribution and individual expectations with respect to redistribution vary substantially across Western democracies, especially in liberal market economies, continental countries and Scandinavian welfare states. This section does not attempt to explain from where preferences for redistribution originate,[3] but rather seeks to examine how the process of internationalisation and market integration in recent decades has shaped and shifted these preferences in developed economies.

In general, personal income, gender, education and social mobility within a society shape expectations about future wealth and therefore individual preferences for redistribution (Alesina and Giuliano, 2009). The question, then, is how globalisation affects these factors. Greater exposure to international markets might increase an individual's perception with respect to risks such as job security while market integration creates winners and losers, but social mobility is another variable that can be affected. In addition, increased migrant flows are prone to affect native citizens' perceptions of risks associated with job security as well as increased cultural heterogeneity. In sum, feelings of economic insecurity are liable to affect preferences for welfare state spending, compensation and thus redistribution (Walter, 2010; Iversen and Soskice, 2001; Rehm, 2009, among others).

The compensation hypothesis (Rodrik, 1997a, 1997b, 1998; Cameron, 1978) implicitly assumes that there is a link between an individual's feeling of economic insecurity and a preference for welfare state expansion and redistribution. Consequently, if economic integration reduces the job security of certain individuals, in theory they should prefer a higher level of social protection and redistribution than before the internationalisation of domestic markets.

Most arguments in favour of welfare state expansion are based on the assertion that social security policies are an insurance against risks that private insurance markets fail to cover (Iversen and Soskice, 2001; Moene and Wallerstein, 2003). Iversen and Soskice find that individuals who believe they would have a hard time finding a new job are more supportive of social security spending. Following this logic, the compensation hypothesis implies that individuals facing globalisation-induced risks turn to the state to provide them with cover against loss of income and similar risks caused by increased economic integration. Therefore, exposure to global competition should determine an individual's social policy

3 This has been thoroughly examined elsewhere; see Alesina and Giuliano (2009) for a review of the literature.

preferences: globalisation losers should favour social protection more vigorously than globalisation winners.

Several empirical studies test the relationship between measures of an individual's risk exposure, such as a person's sector of employment or level of skill specificity and the person's redistributional preferences (Svallfors, 1997; Bean and Papadakis, 1998; Iversen and Soskice, 2001; Cusack et al., 2006; Rehm, 2007). This research generally shows that individuals who are confronted with higher risks are more likely to express a preference for more social protection and to favour higher levels of redistribution. Several authors attempt to explore more specifically the indirect link between globalisation exposure and preferences for redistribution, but these studies produce more mixed results. In empirical comparisons across Western democracies it has been shown that the median preference for redistribution is higher in more open economies (Balcells Ventura, 2006). On an individual level, however, Rehm (2007, 2009) finds no evidence that individuals employed in tradable sectors or in import-substituting industries that have a comparative disadvantage make demands for higher levels of redistribution. Walter (2010) argues theoretically, and shows empirically, that a combination of skill-specificity and sectoral exposure determines an individual's risk arising from increased market integration. In turn, she demonstrates that losers from globalisation indeed display pronounced preferences for higher levels of social security spending and redistribution.

However, it is not entirely obvious why demand for insurance should translate into support for redistribution at the individual level, so long as individuals are concerned about protecting themselves against absolute income loss. Yet, the insurance logic might be relevant for redistribution to the extent that individuals anticipate the effects of relative income mobility. Hence, individuals with good prospects for upward mobility are less inclined to support redistribution than their relative income would lead one to expect (e.g. Picketty, 1995; Benabou and Ok, 2001). By the same logic, one might expect individuals who anticipate downward mobility to be more supportive of redistribution than their relative income would suggest. Indeed, individuals incorporate interests associated with their anticipated future position in income distribution into their present-day utility calculus.

In general, however, there seems to be consistent evidence and consensus that individuals who are negatively affected by market integration and globalisation have stronger preferences for social security spending and redistribution, quite independent of the median preferences in Western democracies that are highly path-dependent and are determined by a wealth of other personal characteristics. Policymakers need to take these insecurities generated by economic exposure into account to avoid social unrest and disillusionment with trade liberalisation and economic integration.

Many authors have argued that preferences for redistribution depend on personal income and that generally the rich are less inclined to support income redistribution because it reduces their personal wealth. However, considerations driven by altruism, compassion and a general disapproval of inequality can make them more favourably disposed towards poorer parts of society (Alesina and Glaeser, 2004; Alesina and Guiliano, 2009; Shayo, 2009; Rueda, 2012, among others). While an aversion to inequality and arguments about altruism suggest that an individual's utility increases as the poor benefit from more redistribution, identity arguments emphasise that this may be dependent on the identity of

the poorer groups of society.[4] If the rich perceive the poor as different, the pro-redistribution effects of altruism and dislike of inequality decline (Rueda, 2012).

There can be little doubt that racism and anti-immigrant sentiments have posed an obstacle to redistributive politics in the United States (Gilens, 2000; Luttmer, 2001), but Alesina and Glaeser (2004) argue persuasively that the United States is not an exceptional case in this respect. Indeed, ethnic and/or religious fractionalisation is consistently associated with less support for redistribution across countries (Alesina and Glaeser, 2004; Amat and Wibbels, 2009). The key concept in this literature is not fractionalisation *per se*, but rather the concentration of minorities among the poor. In Alesina and Glaeser's words, the main concern is whether "there are significant numbers of minorities among the poor", in which case "the majority population can be roused against transferring money to people who are different from themselves". In this vein, Alesina and Guiliano (2009) claim that homogeneity influences the rich and poor in the same way – the rich are less in favour of redistribution but dependent on homogeneity (more or less), while the poor are always pro-redistribution, but less so if some of the public goods are spent on immigrants.

While the arguments about self-interest imply that support for redistribution will decrease with income, conceptions of altruism and identity suggest that there are "moral" benefits attached to the promotion of equality across groups. Consequently, all individuals (poor and rich alike) obtain moral benefits from supporting redistribution, and when group homogeneity is greater – which means either ethnic fractionalisation is relatively unimportant or the foreign-born and immigrant share of the population remains small – altruism will strengthen preferences for redistribution.

An alternative interpretation holds that ethnic or national identities and cleavages matter more to the preferences of the poor than to the rich. Identity concerns thus divert the poor from the pursuit of material self-interest (Shayo, 2009). In a nutshell, proponents of this view argue that if the group of the poor is fractionalised, native citizens identify with their nation more than with their class, which reduces their preferences for income redistribution.

Finally, Rueda (2012) convincingly argues theoretically, and tests empirically, that immigration affects preferences for redistribution and public good provision differently for the poor and the rich. For the poor, material self-interest dominates, and they always support more redistribution. For the rich, it matters who receives the publicly provided goods – in homogeneous societies with less immigration, the rich are more "altruistic" and support redistribution more enthusiastically than in more heterogeneous societies.

4 On this issue, Freeman (2009) concludes that the "available evidence, though hardly sufficient, seems to support the proposition that increasing ethnic heterogeneity is likely to be associated with less enthusiasm for programs that are redistributive or are targeted at minority groups".

6. Policy conclusions

- Governments in Western democracies face two mutually reinforcing challenges. On the one hand, trade liberalisation and financial integration generate losers who make demands for social insurance and compensation to offset some of the adverse effects of globalisation. On the other hand, labour market integration and the high-profile aspect of international terrorism spur anti-immigration sentiments and concerns about the disintegration of society. This reinforces demands not only for insurance, but also for protection against the influx of cheap labour and immigrants of ethnically and culturally different backgrounds. Politicians need to address these anxieties without exploiting them for electoral gains or forgoing the benefits of economic and financial integration.
- From a purely economic efficiency perspective, most research suggests that market integration of both goods and labour, and to a certain extent of financial markets, benefits economies and enhances overall welfare. Yet, globalisation also generates (re)distributive tensions. As governments are not social planners, these redistributive conflicts, if sufficiently powerful, affect policymaking. How these different forces influence domestic decision-making clearly depends on a country's institutional context (for example, the electoral system) and the characteristics of its welfare state, which undoubtedly shapes the redistributional expectations of voters. Governments, therefore, follow myriad strategies and use different sets of policy tools to balance international pressures and domestic constraints.
- A review of individual preferences with regard to globalisation and redistribution highlights the fact that incumbent politicians need to take into account the fears of globalisation losers, particularly when deciding on welfare state spending, if they want to win future elections. From this perspective, governments need to determine which sections of society win and lose from different kinds of economic integration in order to target redistribution efforts more effectively. Redistribution initiatives and public good provision remain the major policy instruments for governments to gather support for the project of "globalisation" which no policymaker can avoid. The need for social security depends on the size, location and dispersion of the losers within society as well as the long-term societal fairness norms that have been established.
- Governments in Western democracies need to strike a balance when it comes to regulating immigration. They need to address concerns regarding job uncertainty created by economic integration, but they also have to ensure that inordinately high barriers to the inflow of labour do not have a negative effect on future growth prospects and economic performance by preventing highly skilled foreign-born talent from entering the country. In this regard, adopting short-term policies for electoral purposes that seek to cash in on public anxieties will have detrimental economic effects in the longer term. In the British context, where more restrictive immigration regulations have been introduced in response to the economic crisis and international terrorism, rules for non-EU students, for example, have been severely tightened. To the extent that some students would typically stay in the country after their studies and become young high-income tax payers, an unintended consequence of this measure is that the British median voter might lose because these highly skilled immigrants are usually important net contributors to the social welfare and pension system.

- Politicians have to face the reality that factors underpinning the emergence of extreme right-wing parties – such as high levels of immigration, rising perceptions of identity conflict and the declining strength of the cultural and institutional ties binding voters to the main parties – are likely to persist in the coming years. Policymakers and established parties, therefore, have to deal with the fact that right-wing and anti-immigrant parties will continue to be a feature of the political landscape in Europe, especially in proportional electoral systems that support the emergence of smaller parties. As a result, large parties have to address the fears and anxieties of the voting population in a rational and non-populist manner in order to undercut political support for extremist parties. Governments therefore need to be careful when catering to populist requests to clamp down on immigration. Indeed, before the onset of the current financial crisis in Ireland, for example, its flexible labour market and the influx of labour actually served to reduce unemployment and foster economic growth. In general, restricting immigration induces economic inefficiencies and, furthermore, immigration is an indispensable tool for offsetting low birth rates in West European countries. The more important question, therefore, is how to solve the redistributive tensions that arise, and how to reduce the anxieties of certain sections of society without exploiting these fears for short-sighted electoral purposes.

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3 / The Impact of Globalisation and Global Economic Crises on Welfare State Policies in Developed Western Democracies: The Interplay between Institutions, Globalisation and Economic Shocks

Vera E. Troeger

1. Introduction

After focusing on reactions to globalisation and economic shocks at the individual level, this chapter examines institutional and policy responses at the macro level. Politicians are often faced with trade-offs and having to make difficult choices balancing domestic demands from voters and international pressures that have continued to increase in the era of globalisation. Market integration enhances gains from trade and overall welfare, but also exerts downward pressures on regulatory and fiscal matters, in addition to generating distributional conflicts. Governments that want to maintain popular support need to develop strategies that are capable of balancing these forces. These strategies are not uniform and there is no catch-all or optimal solution for all societies, nor are the domestic and international constraints faced by different countries the same. Indeed, as the analysis below demonstrates, governments usually pursue different strategies and implement a myriad combination of policies that are optimal with respect to electoral success, given a country's institutional and historical context, voter preferences and international pressures – but not necessarily from an economic efficiency or overall welfare point of view.

This chapter links individual preferences and voting behaviour to how incumbent politicians decide upon economic and immigration policies given the domestic and international pressures and trade-offs they face. By successfully linking micro and macro dimensions of the political process that is affected by international integration, it is then possible to formulate recommendations for policymakers more generally.

Many observers contend that the globalisation of markets leads to downward pressures on regulatory standards. In particular, they argue that governments are expected to reduce social and environmental standards to attract an inflow of capital and to improve the competitiveness of domestic corporations on global markets. Some also make the point that global integration and connectedness of corporations, banks and markets can lead to global economic crises. In order to understand how global market integration affects policymakers around the

world, it is important to understand a) what governments seek to achieve; b) how governments respond to domestic constraints; and c) how international and domestic influences come together to determine policy choices.

2. Globalisation and migration policies

Since the early 1980s concerns about immigration have made their mark on the public agendas of industrialised countries in the West. As discussed in the previous chapter, globalisation, the stronger integration of labour markets through, for example, the deepening and widening of the EU, and fears about international terrorism have all had a major impact on public opinion in many Western democracies, leading to a shift against "further" immigration and the unprecedented electoral success of extreme-right parties in the post-war period.

Because of – or perhaps notwithstanding – these developments, recent estimates of migration flows (Goldin and Reinert, 2006), supported by empirical research (Freeman, 2006), suggest that during the last couple of decades there has been a wave of globalisation with many facets, but less so when it comes to labour or, more generally, natural persons. Facchini and Mayda (2008) argue that restrictive migration policies implemented by destination countries are responsible for the lack of globalisation regarding labour. They investigate how attitudes translate into policy outcomes, considering two alternative frameworks: the median-voter and the interest-group model. On the one hand, the very low percentages of voters favouring immigration are, in light of the existing restrictive policies, consistent with the median-voter framework. On the other hand, given the extent of opposition to immigration that appears in public opinion, it is somewhat surprising in a median-voter framework that immigration takes place at all. They find that interest-group dynamics have the potential to shed light on this puzzle.

As discussed in the previous chapter, immigration became one of the most important policy issues in many Western democracies over the past decade, and governments need to address these concerns to stop voters from switching their support to extreme right-wing parties. In addition, the onset of the global economic crisis of 2008 dramatically altered the context for international migration. Governments thus face a political and economic dilemma. On the one hand, job uncertainty spurred by globalisation and economic crises as well as anxieties caused by international terrorism put pressure on policymakers to limit the inflow of cheap labour, and in particular of those immigrants who are perceived as culturally different. On the other hand, trade openness, specialisation and the integration of labour markets offer economic gains, and many Western economies have a need for highly skilled labour that cannot be met by native citizens. In recent years politicians appear to have given in more to the fears of voters and popular pressures by promising to clamp down on immigration.

In the UK politicians of both major parties are at the very least paying lip service to the anti-immigrant sentiments of the British public. The prime minister, David Cameron, reacted to the possible Greek exit from the eurozone, for example, by signalling that "Britain could crack down on immigration from countries like Greece if the eurozone crisis escalates further" (*Independent*, July 3rd 2012). He said that contingency plans were in place and added that he would do "whatever it takes" to protect the UK. The Labour Party, meanwhile, has

also tried to position itself closer to what is now the mainstream political view on immigration (*Financial Times*, June 24th 2012). These statements by major political parties which aim to address the public's concerns regarding immigration are not isolated examples and can be heard in most Western democracies. It is important, therefore, to understand whether such arguments and, indeed, empirical evidence are in line with statements by those politicians claiming to be "cracking down" on immigration.

In this context, a review article by Tilly (2011) addresses four related questions about migration from poor to rich countries. First, what has been the impact of the global recession on patterns of international migration? Second, to what extent do recession-induced changes in migration offer evidence in the debate about competing explanations of migration? Third, has the recession heightened the marginalisation of migrants? Fourth, to what extent have nations responded to the recession by regulating migration in new ways? His findings include reduced migration flows in the recession, evidence for both economic and social explanations, few signs in unemployment rates for the further marginalisation of migrants, and only limited attempts to further restrict migration.

Even though major events such as today's global economic crisis seem to have only a temporary impact on migration flows and very little effect on actual immigration laws, globalisation and market integration in general seem to affect policy decisions more severely. A good example is the dispute within the EU about granting free movement of labour to new member states during the eastward enlargement (Schneider, 2006, 2007; Pluemper and Schneider, 2007). Public anxiety about large inflows of labour and redistributional conflicts prompted countries such as Germany and Austria to restrict labour immigration from new member states, albeit not permanently.

Lipsmeyer and Zhu (2011) analyse EU immigration policies from a different perspective, arguing that at a time of mounting concern about how traditional welfare states will react to globalisation, there has been increasing interest in clarifying how global economic forces affect welfare policies in industrialised states. Building on theories from political economy and comparative institutional literature, they analyse the influence of an important aspect of globalisation – the flow of immigration. Their findings highlight how immigration, in conjunction with domestic political institutions, affects unemployment provisions, while labour market integrative forces remain in the background. The story of immigration and unemployment compensation in the EU is less about the opening of borders and the market forces of integration, and more about domestic political pressures.

These domestic political pressures raise electoral concerns for incumbent governments and lead to inefficiently high barriers to labour mobility (Jain et al., 2009). They examine the role of cultural factors in driving the politics, size and nature of migration policy (temporary versus permanent) and show that there is a broad political failure that results in inefficiently high barriers restricting the importation of temporary foreign workers, while also admitting an inefficiently large number of permanent migrants. Prompted by anti-immigrant sentiments, governments act to restrict the influx of temporary workers and thus lose out in terms of overall welfare gains. For instance, Walmsley and Winters (2005) estimate that a 3% increase in labour migration would result in half the gains that would be generated by complete trade liberalisation. Moreover, Pritchett (2006) claims that the removal of all barriers to migration would result in doubling global GDP.

The point is that migration could solve the problems of an ageing population, high pension payments and labour shortages in Western industrialised democracies. However, concerns about cultural identity and fears of job losses generate anti-immigrant feelings, which lead to restrictive immigration laws that limit economic growth. Strikingly, Jain et al. (2009) also demonstrate that countries which are poor at cultural assimilation are better positioned to take advantage of temporary foreign worker programmes than more culturally diverse and tolerant countries. Furthermore, relaxing restrictions on the mobility of migrant workers across employers has the potential to raise host country economic output even though it increases migrant wages and lowers individual firms' profits.

In addition to economic concerns, the threat of international terrorism in recent times has affected public opinion with respect to immigration in Western democracies. Recent work by Epifanio (2011) identifies the legislative response to international terrorism in 20 liberal Western democracies from 2001 to 2008. She distinguishes 30 regulations governments have implemented with the intention of reducing the risk of a terrorist attack. Her data cover legislation dealing with, inter alia, the rights of the authorities – such as the police and secret service – to intercept, collect and store communications for anti-terrorist purposes, changes in the pre-charge detention of terror suspects, and modifications of immigration regimes. These regulations differ with respect to their target: citizens, suspects and immigrants.

While all liberal Western democracies have reinforced their counter-terrorist legislation, the scope of their regulatory response to terrorism has differed greatly. Countries such as the UK and the United States have implemented a full battery of regulatory responses, while Scandinavian countries, Canada and Switzerland, for example, have been reluctant to go as far in infringing the civil rights of their citizens – suspects and immigrants alike.

The high-profile nature of terrorist attacks, such as those on September 11th 2001, heightened public anxieties in most Western democracies, which also affected the willingness of political leaders as well as voters to trade civil liberties for anti-terrorist security. In the words of the former UK home secretary, John Reid, governments and civilians in Western democracies were confronted with "the most sustained period of severe threat since the end of the Second World War" (Epifanio, 2011).

And governments reacted accordingly: most countries implemented immediate anti-terrorist security reforms, eventually leaving the security laws of no liberal democracy unchanged. Governments adjusted relevant legislation for security purposes in an unprecedented manner, both in terms of speed and scope. The number of restrictive counter-terrorist regulations rose from an average of 3.8 prior to September 11th 2001 to 16.6 in 2008 in the 20 liberal democracies studied. In Spain, for example, the number of regulations almost doubled from 12 to 23, in Germany they quadrupled from 4 to 16, and in the UK they jumped from 3 to 28. The global nature of the terrorist attacks prompted a large number of countries (including the UK) to address directly issues related to immigration. These regulations included the withdrawal of entry and residence permits for danger to public order, rather than a serious breach; the revocation of citizenship from naturalised citizens deemed a threat to public order; and the immediate deportation of any alien who commits acts that are believed to be anti-Western, unpatriotic, and against democratic rights (Epifanio, 2011; Epifanio et al., 2012).

A number of measures taken by Western democracies to address terrorism, especially those relating to immigration, deportation and citizenship, amounted to a loss in market integration, namely a reduction in the number of immigrants to Western industrialised democracies. It is probably too early to gauge the real effect of these anti-terrorist regulations on actual immigration flows, but it is already clear that there has been an impact, leading to an additional loss in overall economic performance.

3. Globalisation and tax competition

Taxation provides the bloodstream for governments. Without tax revenues, the supply of public goods and the redistribution of income would not be possible. Yet, the steep increase in capital mobility and the almost complete integration of financial and product markets has reduced governments' discretion in collecting taxes. While international market integration did not entirely wipe out policymakers' autonomy and ability to produce public goods and redistribute income – contrary to some early globalisation doom theories – claims that all governments adjusted the national tax systems to the changing rules of the global economy are certainly not an exaggeration.

Nevertheless, actual adjustments fell short of the predictions in the early literature on tax competition. Most of these early models suggested that governments would find it impossible to redistribute income from capital owners to workers and to maintain the high level of social security and income redistribution developed in the 1960s and 1970s and reformed in the 1980s. Virtually all first-generation models of tax competition claimed that tax rates on capital income under perfect capital mobility would converge to zero. These predictions have turned out to be wrong. No "race to the bottom" in capital tax rates has occurred, and there are few signs that it will occur in the foreseeable future. Actual tax rates in most OECD countries remain high, and the tax systems continue to vary greatly between different jurisdictions.

The aim here is to provide an answer to both puzzles: the persistently high tax rates on mobile capital and the large variations in domestic tax systems. In effect, governments face a political trilemma, in which they cannot maintain the politically optimal level of public good provision, reduce capital taxes to competitive levels and implement a political support-maximising mix of tax rates on capital and labour simultaneously (Pluemper et al., 2009; Troeger, 2012).

In particular, while legal restrictions on capital flows have been eliminated by virtually all OECD countries, de facto capital mobility falls short of being perfect. Limits to full capital mobility result at least partially[1] from ownership structures: the higher the concentration of capital, the higher the de facto mobility of capital and the lower the equilibrium tax rate. Second, the demand for the provision of public goods further limits governments' choices of the capital tax rate. If revenue from the taxation of mobile factors declines, politicians cannot necessarily cut back spending without losing political support. Increases in revenue from immobile factors, such as labour or consumption, need to match losses in collected taxes from capital in order to maintain a satisfactory level of public good provision. Accordingly,

1 See Pluemper and Troeger (2012) for other factors that influence de facto capital mobility, e.g. the need for many service providers to be located in the market where they sell their products.

policymakers do not face a simple optimisation problem when deciding on capital taxation. Rather, they have to choose a tax system which allows them to supply an appropriate level of public goods.

Third, policymakers face a trade-off resulting from the redistributive conflict between capital owners and workers. This conflict does not resemble a mere zero-sum game because lower levels of capital taxation are likely to improve aggregate welfare, but the decision on capital taxation also cannot be analysed in isolation from the distributive effects of reducing taxes on mobile factors.

This political logic of tax competition generates important testable predictions. First, governments in countries with low de facto mobility of capital will maintain a relatively high level of capital taxation, a high level of public good provision, and a low difference between tax rates on mobile and immobile factors. Second, governments facing a low demand for public good provision will reduce the tax rate on capital without necessarily changing the gap between taxes on capital and wage income. Finally, governments in countries in which voters' concerns about tax symmetry are weakly developed will lower capital taxation. At the same time, they will push taxes on immobile factors upwards in order to maintain a high level of public good provision. Importantly, these three political considerations work simultaneously and are also influenced by the intensity of international competition for mobile capital. Therefore, the lower the capital tax rates in other countries, the more severely governments feel the pressure from the three trade-offs in tax competition.

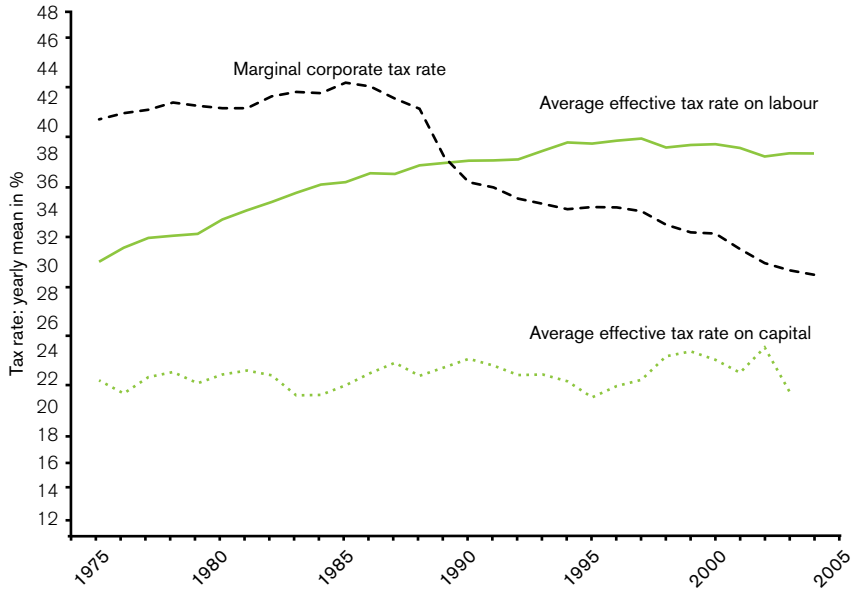
This argument can be generalised quite simply. Policymakers face several domestic and international trade-offs. In deciding on tax policy they can only attain two of the following three policy goals: maintaining a solid capital base despite international tax competition, generating sufficiently high tax revenue, and avoiding social injustice. Since governments face a trilemmatic situation and cannot achieve all policy aims simultaneously, they choose a combination of tax rates on mobile and immobile tax bases and public good provision that serves to maximise their political support within these constraints.

The degree of budget rigidities and the strength of societal equity needs are country-specific, while the severity of tax competition pressures depends on the de facto ability of capital owners to move capital through jurisdictions. Based on these parameters, a convergence of capital tax rates and national tax systems cannot be expected. Instead, the theory predicts persistently high tax rates on mobile sources and a considerable variation between domestic tax mixes.

3.1 Literature and arguments in tax competition

When consumers or production factors are mobile, tax systems in different jurisdictions are not independent of one another. A lower tax rate in one country provides an incentive to locate business activities in this jurisdiction. Of course, if one country is better off by lowering tax rates, one should expect other countries to follow suit. By undercutting its neighbours' tax rates, a country not only attracts additional business activities, but at the same time also triggers a downward spiral of tax rates. As soon as this downward spiral reaches its equilibrium, all domestic tax rates on mobile business activities equal zero. As an unintended side effect, government revenues in all countries decline sharply and public good provision has to be cut back. This, in a nutshell, is the logic

Figure 1: Annual mean tax rates in 23 OECD countries, 1975-2004



of first-generation models on tax competition.[2] More specifically, these models assume perfectly mobile capital, a single tax base (mobile capital) and a single tax instrument, and typically two equally sized countries. If these conditions are met, tax rates on capital will converge to zero.

On closer examination, the assumptions underlying first-generation models are far from realistic and, therefore, it should not be too surprising that the predictions of these early models fell short of their objective. While tax rates on mobile capital in the OECD have moderately declined over the last three decades, the current tax rates remain significantly higher than 0% (see Swank and Steinmo, 2002; Ganghof, 2004; Genschel, 2002; Basinger and Hallerberg, 2004, among others).

Figure 1 displays the mean top rate on retained profits of corporations and the mean effective labour and capital tax rates (own calculations based on the formula suggested by Volkerink and De Haan (2001) for 23 OECD countries between 1975 and 2004. While top corporate tax rates were successively reduced from the mid-1980s onwards, effective labour tax rates grew steadily. However, effective rates on capital did not decrease significantly. They remained relatively stable over time and have actually increased a little since the early 1970s. From this follows that governments implemented a strategy of "tax-cut-cum-base-broadening" in order to maintain public revenue (Swank and Steinmo, 2002; Steinmo, 1994; Ganghof, 2000a and 2000b; Hicks and Swank, 1992; Keen and Marchand, 1997).

More recently, scholars have dedicated themselves to explaining non-zero capital taxation and to dealing with the unrealistic predictions of the first-generation models by increasing their complexity. A stream of economic literature has relaxed the assumption of symmetric countries competing for mobile capital

2 Zodrow and Mieszkowski (1986) demonstrate in their early model the basic mechanism of tax base competition in the simplest possible way. This model has become the benchmark analysis for much of the later work. For different accounts of first-generation models see also Wilson (1986), Hoyt (1991), Bucovetsky and Wilson (1991), Chamley (1986) and Lucas (1990). Razin and Sadka (1991) show that tax competition between two infinitely small countries leads to a zero tax rate on capital. They demonstrate that this outcome is even constraint-efficient, because a coordinated tax policy would still lead to a zero tax rate on mobile capital. For a more detailed and nuanced discussion see Devereux et al. (2002, 2008).

in order to explain persisting variances in capital tax rates. Asymmetric account of tax competition eliminates possible terms of trade effects, and a conflict of interest between the competing jurisdictions cannot arise. As a result, scholars have studied the effect of differences in country size on capital tax competition (Bucovetsky, 1991; Wilson, 1991; Peralta and van Ypersele, 2005).

Within the asymmetric tax competition model, a small country faces a more elastic tax base and undercuts the tax level of a large country in equilibrium. The predictions of asymmetric tax competition find ample empirical support. All else being equal, larger countries tend to impose higher tax rates on mobile capital than smaller countries (Bucovetsky, 1991; Wilson, 1991; Kanbur and Keen, 1993). Still, convergence remains far from perfect even after controlling for country size (Pluemper and Schulze, 1999).

Political scientists have made numerous attempts to explain non-zero tax rates on mobile factors by arguing that political, institutional and economic restrictions prevent governments from implementing the welfare optimum of very low or even zero capital tax rates. These models predict non-zero tax rates on mobile assets and a pattern of tax rates which highly co-varies with the pattern of economic (Swank, 2006; Swank and Steinmo, 2002; Rodrik 1997a, 1997b, 1998; Garrett 1998a, 1998c, among others) and political (Ganghof 2004; Genschel 2002) or institutional (Hays, 2003; Basinger and Hallerberg, 2004; Swank and Steinmo, 2002; Swank, 2006) constraints on the government.

These political costs are either modelled as the number of veto players able to block reforms (Basinger and Hallerberg, 2004; Genschel, 2002)[3] or by constituency costs, which different parties face because of their differing voter clienteles (Garrett 1995, 1998b; Garrett and Mitchell, 2001; Basinger and Hallerberg, 2004)[4]. The varieties-of-capitalism literature combines the partisan politics argument with other features of the political system, such as the strength of labour unions and corporatist decision-making (Kitschelt et al., 1999; Hall and Soskice, 2001).

Even though the discussion of more recent approaches to tax competition is still sketchy and by no means exhaustive, the main difference with earlier models is the inclusion of domestic and economic constraints which limit policymakers in their ability to implement very low tax rates on capital. These models thus achieve more realistic predictions about the level of capital taxation by increasing their complexity and introducing additional factors to basic tax competition models. Yet, they generally fail to challenge the main underlying assumptions. For example, if the assumption of perfect capital mobility is eased, equilibrium tax rates will diverge from zero. In addition to the de facto mobility of capital, governments consider the entire tax system, rather than a single tax rate when they maximise revenues, aggregate welfare or political support. This also holds true if the unrealistic assumption of homogeneous countries is abandoned.[5] Countries are not equal, and even though simplifying assumptions is always necessary, the impact of this seemingly innocent assumption on the model's predictions is too significant to be ignored. Furthermore, if the assumption about

3 For a more detailed discussion of the impact of veto players on policymaking, see Tsebelis (1995, 1999, 2002).

4 For a more detailed discussion of the partisan argument, see Hibbs (1977, 1992), and in combination with globalisation and the welfare state, see Allan and Scruggs (2004); Amable et al. (2006); Cusack (1997); Alesina (1989, 1991); Boix (1998, 2000); Franzese (2002a, 2002b); Iversen (2001); Garrett and Lange (1991).

5 The literature on asymmetric tax competition provides a first hint (Bucovetsky, 1991; Wilson, 1991; Kanbur and Keen, 1993). However, country size is not the only attribute that can and should be varied.

the behaviour of policymakers is changed from welfare maximisation to the more realistic assumption of vote maximisation, politicians might not only be unable to implement zero tax rates on capital, but may even be unwilling to do so because of their desire to stay in office.

The absence of legal capital controls does not lead to perfect capital mobility. De facto mobility as compared to legal restrictions to capital transactions depicts the actual costs capital owners incur when shifting capital to other locations. These transaction costs result from two different sources. First, relocating production sites and plants entails relatively high costs, since it involves not only the physical relocation, but also a large amount of administrative and bureaucratic effort: firing and hiring employees, building connections with local infrastructure, transportation, packaging, cooperating with the local bureaucracy and administration, etc. Second, in addition to these physical transaction costs, capital owners have to gather information about tax rates, tax credit structures and exemption rules in other countries in order to decide where to move their capital.

The ownership structure of domestic capital determines the costs of moving capital through jurisdictions. The higher the concentration of capital, the lower the transaction costs of shifting profits to low-tax countries, because owners of capital can benefit from economies of scale. The costs of moving capital to another location decrease with the degree of concentration, since the costs of information-gathering remain stable and do not accelerate with an additional unit of capital to be shifted to a low-tax country. If capital is rather equally distributed throughout society, then the costs for capital owners to engage in tax arbitrage increases. In extreme cases, where capital is perfectly concentrated, transaction costs approach zero per unit of capital. The ownership structure of domestic capital therefore translates into de facto capital mobility.[6]

On a related issue, Becker et al. (2012) analyse competition for mobile capital among German municipalities. The within-country context allows keeping constant many hard-to-measure institutional differences which usually plague cross-country studies. Becker et al. show that lower business taxes do indeed attract multinational firms to locate there, but the average municipality would have to lower its business tax rate by so much just to attract one multinational firm that it would lose almost all of its tax revenue from domestic firms. This confirms the argument that tax competition, simply to attract multinationals, does not pay off in general. And there are other factors, such as the attractiveness of a location (amenities) that matter at least as much.

If competition for mobile capital restricts a government's ability to gather revenue from mobile bases, it is inclined to shift parts of the tax burden towards more immobile bases, such as labour income and consumption, in order to maintain public income and public good provision. Hence, budgetary concerns, in combination with tax competition pressures, can lead to a shift of the tax burden from capital to labour (Sinn, 2003; Rodrik, 1997a, 1997b; Schulze and Ursprung, 1999; Steinmo, 1996).

Looking at this strategy from a purely welfare-maximising perspective, it is more efficient if wage earners bear the higher tax burden as the net (after tax) labour income remains higher with complementary capital – capital that would

6 Moreover, large enterprises normally have huge administrative departments which allow for the easy gathering and processing of information. For a more thorough discussion of de facto capital mobility as a result of capital concentration and ownership structure, see Troeger (2012).

not be attracted or kept without lowering capital tax rates. From a single voter's point of view, however, this shift in the burden implies problematic distributional consequences, since capital receives a net subsidy at the expense of immobile taxpayers. Consequently, shifting the tax burden towards wage income creates political costs (Genschel, 2002; Ganghof, 2004).

The median voter in most (even capital-rich) countries is a wage earner, rather than a capital owner, and perceives this shift in the burden as unjust and unfair. It is not in the interest of workers to subsidise capital, even though the factor productivity of labour would still be higher. The notion of inequality and unfairness leads the majority of the electorate to withdraw political support in case the government attempts to shift large parts of the tax burden towards the immobile factor. Thus, the strength of demand for societal equality prevents a large gap from developing between the tax rates imposed on mobile and immobile taxpayers.

How strongly demands for equality and tax symmetry are rooted in society largely depends on the political culture of a country. Long-lasting political practices shape voters' expectations regarding the equity and symmetry of the tax system and thus influence the utility function of governments. For example, the varied development of welfare states may have formed different preferences when it comes to risk compensation and income redistribution. Social-democratic welfare states have institutionalised income redistribution from rich to poor via taxation much more extensively than liberal market democracies, prompting the electorate in continental and Scandinavian welfare states to demand higher tax symmetry than voters in free-market economies. There are thus large differences in the demand for tax justice and equality across societies. Indeed, while one can observe increasing inequality in market income, redistribution activities by governments and the distribution of disposable income vary greatly across OECD countries (Beramendi and Cusack, 2004).

Furthermore, as previously noted, governments face a political trilemma when choosing domestic tax rates in which they cannot simultaneously reach the three policy goals of "providing a satisfactory amount of public goods", "maintaining a solid capital tax base by reducing tax rates on capital income" and "adhering to societal demands for tax equality". As a result, it is necessary to analyse the decision-making trade-offs politicians face when trying to meet these political goals.

The general political logic of domestic taxation leads to clear predictions. These result from the differences in, and the simultaneous influence of, the strength of domestic budget rigidities, tax symmetry considerations and the ownership structure of the domestic capital base. The following hypotheses can thus be derived:

- Capital tax rates set in other countries exert a positive effect on capital tax rates in the domestic economy (tax competition effect). In addition, there is a positive tax competition effect on the domestic labour tax rate.
- Foreign attractiveness and the willingness and ability of domestic capital to move increase the tax competition effect. Therefore, policymakers adapt their domestic tax policies so that they are more closely aligned with those of countries that are successful in attracting mobile tax bases.
- Societal demands for tax symmetry counterbalance the tax competition effect. The stronger the equality needs of the electorate, ceteris paribus, the higher domestic capital tax rates; the lower domestic labour tax rates, the smaller the gap between capital and labour tax rates.

- Budget rigidities counteract the downward pressure of international tax competition. Higher government spending induces both domestic capital and labour tax rates to rise and has a slight increasing effect on the tax ratio.[7]
- A higher domestic share of highly mobile capital increases de facto capital mobility and thus exerts a downward pressure on the domestic capital tax rate, which widens the gap between capital and labour taxation.

3.2. Empirical investigation

Levels of domestic tax rates on capital and labour are the result of the strategic interaction between governments and the domestic trade-offs politicians face when making decisions. Quantitative analysis accounts for strategic interaction between governments, but allows policymakers to weight tax rates set in other jurisdictions differently. The implications of this argument are tested here with yearly data for 23 OECD countries over a 30-year period (1975-2004).[8] The statistical approach models the strategic nature of the tax competition game by employing a spatial panel data approach, where spatial lags of the dependent variable are instrumented by domestic factors designed to control for possible endogeneity bias (Franzese and Hays, 2007).

The spatial lag variable is not treated merely as a nuisance, because there is an interest in the substantial effects of foreign capital taxation. These substantial weights also allow the testing of the hypothesis that governments learn from countries that are successful in attracting foreign capital. The learning aspect can be formalised by suggesting that policymakers learn from countries that prove to be successful in attracting mobile capital.

Even though a variety of domestic factors are included in order to explain tax decisions, the probability remains relatively high that other cultural or institutional variables – unique to each country but still immeasurable – influence policy outcomes and are correlated with other right-hand side variables. In order to control for country-specific effects, country dummies are included in the explanatory side of the statistical model.

Since the aim is to explain the effects of international tax competition and domestic factors on both capital taxation and the tax system simultaneously, effective labour tax rates and effective capital tax rates are analysed, as was proposed by Mendoza et al. (1994) and further developed by Volkerink and De Haan (2001), and the ratio of labour to capital taxes to account for tax system effects. Figure 1 traces the development of the average effective tax rates of labour and capital over time and shows that while effective capital taxation has remained fairly stable in the last three decades, labour taxation has, on average, increased, and thus the gap has widened between labour and capital tax rates.

Closer inspection of the distribution across countries reveals large variations with respect to both corporate and labour taxation. Marginal corporate tax rates

7 In a dynamic three-country model, Pluemper et al. (2009) are even able to conclude that a combination of both budget constraints and fairness norms reduces the severity of tax competition (if all governments are constrained) or the ability of countries to compete (if some governments are constrained).

8 This sample is significantly larger than samples used in earlier analyses of domestic taxation. Most studies include 12 to 14 OECD countries, depending on the endogenous variables used (see Hays, 2003; Swank and Steinmo, 2002; Basinger and Hallerberg, 2004). The 23 countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States.

significantly decreased between 1980 and 2004 for 23 key OECD[9] (approximately 14%) countries, but on average they remained close to 30%. In 1975 these tax rates varied between 8% in Portugal and 51% in Germany, and by 1990 they ranged from 9.8% in Switzerland and 50% in Germany, while Portugal even increased its marginal tax rate on corporate income during this period. By 2004 top corporate tax rates ranged from 8.5% in Switzerland to 36% in Canada, highlighting an overall downward trend, although persistent variations across countries continued. Effective labour tax rates, on the other hand, rose from 17% in Iceland and 47% in Sweden to 19% and 55%, respectively, between 1975 and 2004, underscoring a general upward trend, but again, with strong variations evident across countries.[10]

Two variables are proposed for the operationalisation of de facto capital mobility. First, the stock of foreign direct investment (FDI) in a country – as opposed to actual flows – seems to be a good approximation of the share of highly mobile capital in an economy (UNCTAD).[11] Second, in order to test the robustness of the relationship, the percentage share of multinationals in national turnover (from the OECD Globalisation database) is included.[12] Societal demands for tax symmetry and their strength are measured by survey data from the International Social Surveys Programme (ISSP). More specifically, the country means (medians) are used, as are standard deviations of the answers to the question whether "it is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes".[13] This question was asked both in the Role of Government Surveys I, II and III, which took place in 1985, 1990 and 1996, and the Social Inequality Surveys I, II, and III in 1987, 1992 and 1999, and directly addresses societal demand for equality. The distribution of answers across countries supports general expectations, with very high demand for redistribution in countries such as Portugal (mean response = 1.5) and very low demand for equality in liberal market economies such as the United States (mean response = 3.3). Finally, government consumption expenditure as a percentage share of GDP serves as a proxy for budget rigidities (OECD, 2006). The higher the share of government expenditure, the less flexibility governments have with respect to reducing either tax rates on capital or labour.

In addition to the main explanatory variables, a number of economic, political and institutional control variables are included that have been found to be theoretically interesting or to exert a statistically significant impact on domestic taxation. Added to the mix are the one-year lagged domestic unemployment rate, the one-year lagged annual growth rate of GDP to account for economic size and wealth effects, and the population share of elderly people, measured in terms of World Development Indicators (WDI; World Bank, 2006). Controls are also included for trade openness (overall trade as a percentage of GDP) and overall legal restrictions to capital mobility (Quinn, 1997). In addition, the

9 These countries are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States.

10 All numbers are based on OECD *National Account Statistics*.

11 United Nations Conference on Trade and Development (2006): Foreign Direct Investment Database.

12 The estimation results for multinational turnover are not shown here but support the relationship between de facto capital mobility and tax rates on capital.

13 The response categories are 1 – strongly agree; 2 – agree; 3 – neither agree nor disagree; 4 – disagree; 5 – strongly disagree, so that a lower value indicates a higher demand for redistribution.

partisanship of government to the right-hand side of the model (Keefer, 2005) is added, as is a control for executive branch constraints to policymaking (Henisz, 2005) and a trend variable to capture dynamic effects.

A proper estimation of the two-stage least squares instrumental variable model requires adequate instruments uncorrelated with the error term, but highly correlated with the endogenous variables – the differently weighted spatial lags of the capital tax rate. Following standard tax competition reasoning, mainly economic variables known to influence capital taxation as instruments are used here. Since the endogenous right-hand side variable is the FDI-weighted spatial lag of capital taxation, spatial lags of all instruments with according weights are constructed. More specifically, the following are employed: the spatial lags of the "Quinn-measure" (Quinn, 1997) for capital mobility, the pre-tax Gini coefficients (LIS, UTIP), GDP per capita, government consumption as a percentage of GDP, trade openness and total population (all WDI) as instruments.

Table 1 displays the estimation results for capital taxation, labour taxation and the tax ratio. In large part, the empirical findings support the main theoretical expectations. In particular, the higher the demand for redistribution (lower value of the ISSP measure), the higher the tax rate on capital; the lower the labour tax

Table 1: Empirical results for average effective capital, labour tax rates and the tax ratio

Dependent Variable: RHS Variables:	Model 1: Capital	Model 2: Capital	Model 3: Labour	Model 4: Labour	Model 5: Tax ratio labour/capital	Model 6: Tax ratio labour/capital
Spatial lag – FDI weighted	0.011** (0.005)	0.013*** (0.005)	0.007** (0.003)	-0.002 (0.003)	-0.001 (0.000)	-0.001** (0.000)
ISSP: Redistribution (mean)	-16.498*** (4.622)	-19.675*** (4.636)	1.622 (2.536)	2.024 (2.335)	1.374*** (0.400)	1.471*** (0.407)
ISSP: Redistribution (SD)	7.424* (3.892)	10.654*** (4.076)	-1.595 (2.065)	0.340 (1.975)	-0.144 (0.323)	-0.285 (0.345)
FDI stock (t-1)	-0.011*** (0.003)	-0.009** (0.004)	0.003* (0.002)	-0.001 (0.002)	0.001* (0.000)	0.001 (0.000)
Share of elderly people	1.429*** (0.398)	2.100*** (0.514)	0.575*** (0.177)	-0.217 (0.201)	-0.163*** (0.034)	-0.232*** (0.046)
Budget rigidities (t-1)	1.425*** (0.288)	1.347*** (0.304)	0.596*** (0.154)	0.770*** (0.148)	-0.121*** (0.025)	-0.108*** (0.028)
Unemployment (t-1)	-0.795*** (0.138)	-0.696*** (0.153)	0.368*** (0.076)	0.144* (0.077)	0.087*** (0.011)	0.075*** (0.013)
GDP growth (t-1)	0.588*** (0.160)	0.527*** (0.160)	0.108 (0.085)	0.037 (0.078)	-0.057*** (0.014)	-0.059*** (0.014)
Trend		-0.316 (0.235)		-0.202* (0.117)		0.018 (0.022)
Trade openness (t-1)		0.015 (0.054)		0.099*** (0.026)		0.003 (0.005)
Capital restrictions (world)		2.041 (3.715)		6.831*** (1.847)		-0.057 (0.342)
Partisanship of government		-0.364 (0.347)		-0.134 (0.174)		0.000 (0.029)
Constraints to executive branch		5.274** (2.288)		1.333 (1.150)		0.014 (0.201)
Intercept	38.667*** (12.022)	1.639 (20.510)	2.484 (6.506)	-22.734** (10.274)	0.394 (1.050)	0.462 (1.888)
Adj. R^2	0.759	0.765	0.895	0.914	0.730	0.733
N (obs)	452	449	478	475	380	377
F	37.382***	31.650***	98.969***	101.180***	29.289***	24.181***
Anderson test: relevance of instr.	2528.613***	2732.262***	2687.08***	2895.56***	2148.94***	2302.48***
DWH-test endogeneity of SL: χ^2	5.469**	0.082	53.355***	9.257***	0.850	0.053

Notes: ***p≤0.01, **p≤0.05, *p≤0.1
Source: Troeger (2012).

rate (though not statistically significantly), the smaller the tax gap. Yet, the larger the dispersion of answers among respondents, the more leeway the government enjoys and the lower the tax rate on capital. Policymakers can engage more strongly in tax competition, since the demand for income redistribution varies greatly for different parts of the electorate. The dispersion, however, does not have an impact on the labour tax rate or the tax ratio. Overall, if demands for tax symmetry are stronger in a society and voters require a higher level of equality, governments have to factor this societal need into their policymaking by increasing redistribution, and they do so by not reducing tax rates on capital.

Since international tax competition exerts downward pressure on capital taxation in particular, the demand for more equality and higher tax symmetry counterbalances this effect by putting upward pressure on capital tax rates. In line with the theoretical model, it seems that societal tax symmetry demands counterbalancing tax competition forces. Governments facing stronger equity norms rooted in society are less able to engage in international tax competition because, in the main, they are unable to shift the tax burden from capital owners to workers.

The impact of highly mobile capital dominating the domestic economy reveals an equally clear picture. FDI stock exerts a negative and significant effect on capital taxation and increases the tax gap. Governments have to be concerned not only with attracting mobile capital from abroad to enlarge the domestic tax base, but they must also try to prevent capital from leaving their jurisdictions to find better conditions elsewhere. Effective capital rates are reduced if the share of highly mobile capital in the domestic economy goes up and the average de facto mobility thus increases. Nevertheless, this does not result in a shift of the tax burden to the immobile factor, as suggested by the insignificant estimate for the share of highly mobile capital in the domestic economy. Still, incumbents do not match a sharp decline in capital taxation with cutting back tax rates on the immobile factor accordingly. Policymakers allow for growing tax asymmetry if highly mobile capital dominates the domestic economy.

If public spending is high, governments need to levy tax revenue to avoid public deficits. Government spending might remain at high levels owing to stickiness of the budget or severe pressure on social security funds. The need to gather revenue prevents governments from implementing tax-reducing reforms in order to comply with international pressures and maintain higher tax rates on capital as compared with countries with lower budget rigidities. Rigid public spending, which is sticky and cannot easily be cut back, reduces the ability of policymakers to engage in international tax competition. Higher government spending aggravates budget rigidities and increases upward pressures on taxation. Labour tax rates rise if budget rigidities increase, while the coefficient turns out positive and is highly significant.

Governments are less likely to engage in tax competition when facing higher budgetary constraints. Societal tax symmetry expectations prevent policymakers from shifting most of the tax burden to the immobile factor. Accordingly, the gap between the two tax instruments decreases significantly with the size of government spending. Yet, tax symmetry would be expected to decline with public spending. As workers' mobility falls short of capital mobility and wage earners' response to higher taxation is less elastic, budget rigidities should impact labour taxation more sharply, and labour has to bear most of the burden. Empirically, tax rates on wage income are observed to be higher throughout.

The latitude for further pushing up labour taxes is relatively small, even though budget constraints are severe. Capital taxes, therefore, rise relatively more with public spending, which leads to greater tax symmetry.

The effect of the spatial capital lag on effective capital tax rates clearly supports the theoretical predictions. If the foreign effective capital rates are weighted by FDI inflows, the coefficient turns out to be highly significant and positive. This finding lends strong support to the idea that policymakers learn from successful players and adapt their own capital tax rates to those in jurisdictions where governments are able to attract mobile capital. Policymakers also keep domestic tax rates more in line with those of successful countries to prevent capital from moving there. Domestic firms might use the ability of other countries to attract capital as a decision-making device for their own location choices.

With respect to tax rates on labour, it is clear that capital tax rates abroad have a significant positive impact on effective labour tax rates. Still, in theory, one would expect that policymakers use labour tax rates to compensate for losses from capital taxation if tax competition is severe and governments are able to engage in international competition for mobile capital. A degree of support for the prediction that incumbents set higher taxes on labour to counterbalance competition-induced cuts in capital taxation can be found in the fact that the spatial capital tax lag increases the tax ratio between labour and capital taxation. This finding suggests that labour tax rates exceed tax rates on mobile factors throughout. If tax competition is severe, governments seem to be forced to cut capital tax rates, although they do not equally reduce tax rates on wage income in order to counterbalance the revenue loss caused by lower capital taxation.

Turning to the interpretation of the control variables, one can conclude that higher unemployment rates decrease capital taxation in all models and the coefficient for unemployment turns out to be significant for effective capital tax rates. This rather sustains the argument that unemployment creates an incentive for governments to engage in tax competition in order to benefit from the employment effects of additional capital. Economic growth seems to increase effective rates, but only the impact on effective capital taxation turns out to be significant, indicating that faster-growing economies do not have to engage in wasteful tax competition. With the domestic economy doing well, mobile capital needs higher incentives in terms of tax differences to leave the country. The share of elderly people significantly pushes the effective rate on capital upwards, supporting the compensation hypothesis. Globalisation boosts the demand for the public compensation of external risks and puts pressure on a country's social security system. As a result, governments need to collect more tax revenue to finance increased demand for public goods.

Surprisingly, the overall levels of legal restrictions on capital account transactions – as well as trade openness – have no significant impact on decisions related to capital taxation. The same holds true for the time-trend variable and the partisanship of the government. Only institutional constraints on the executive branch seem to have an important positive effect on capital tax rates. This finding supports the views of the veto-player literature, which holds that governments faced with greater constraints are less able to engage in international competition for mobile capital (Basinger and Hallerberg, 2004).

Regarding labour income taxation, higher unemployment results in a significant rise in tax rates on wage income. If a larger share of the domestic

workforce remains jobless, the immobile base that can be taxed diminishes and policymakers raise the tax rate on this factor to compensate for the loss in revenue. Combined with reduced tax rates on the mobile factor – in order to attract capital that might boost employment – this leads to lower tax equity, and the gap between labour and capital taxation becomes larger.[14] The positive relationship between unemployment and tax rates on wage income lends support to empirical evidence in the literature on tax competition (e.g. Swank and Steinmo, 2002).

As expected, labour taxation rises significantly in line with the share of elderly people, given higher pressures on pension systems. However, when demands for public compensation grow, the latitude for decreasing capital taxes in response to competitive forces appears to be lower. This results in a significant decline of tax asymmetry when the share of elderly people increases. Finally, labour taxation does not seem to be contingent on economic growth, since the estimates mostly turn out to be insignificant. In effect, Table 1 highlights that effective capital taxation reacts positively to GDP growth, resulting in an important reduction of inequality between the two tax instruments.

Institutional constraints on the executive branch and partisanship of the government seem to have no major effect on either the tax rate on wage income or the ratio between labour and capital taxes. Yet, overall capital mobility leads governments to raise tax rates on wage income, which sustains the argument that stronger competitive forces caused by international financial liberalisation lead policymakers to shift the tax burden from capital to labour. The impact of trade liberalisation completes this picture, since higher economic openness leads to an increase in tax rates on immobile production factors. Apparently, it is not the actual strategic interaction between countries – measured as spatial capital tax lags – but the potential for competitive pressures that leads to a shift of the tax burden from mobile to immobile factors. Governments then use these changes in international financial markets to rationalise and justify higher tax rates on wage income.

3.3. Implications of the empirical findings

Since the markets for goods and services, skilled labour and capital are no longer predominantly *domestic* but increasingly *international*, the challenges facing politicians have arguably become more difficult. Parties competing for votes in order to win elections now need to understand how to address the interests of voters without losing sight of their countries' international economic "competitiveness".

Taxation is typically seen by politicians as the answer to myriad problems: taxes can be a way of ensuring a fair and just division of income, reducing poverty not only at home but in countries around the globe, helping to save the global environment, increasing the incentive to have children and so on. At the same time, taxation is also the instrument relied on by politicians to create an economic environment which generates business opportunities, fosters economic growth and makes the country attractive to international investors.

Governments cannot simultaneously achieve all the political goals required to ensure the continued backing of their constituents. Politics is all about finding

14 However, this might not be the correct interpretation of the empirical findings. Even though unemployment in the regression analysis is one period lagged and endogeneity tests do not reject the Null of exogeneity, the path of causality remains unclear. Higher labour taxation could increase unemployment . Daveri and Tabellini (2000) find that the link between high labour taxes and high unemployment is particularly strong in continental Europe.

compromises – not so much between the government and the opposition, or between the agenda-setters and the veto players, but rather between policy goals, which at first glance all look equally important.

Governments face a number of trade-offs when they try to offer an attractive location for international investors while also maintaining tax fairness and producing a sufficient amount of public goods. With tax policies being influenced by several factors, policymakers need to respond flexibly to domestic demands and international constraints to achieve their policy goals and stay in office. The increase in capital mobility undoubtedly has reduced the government's ability to collect revenue from mobile sources but, at the same time, the pressure from voters has not been relaxed. Voters still vote with their wallets just as much as capital "votes" with its feet.

In this context, globalisation and market integration have caused governments to adjust their national tax systems. Early doom theories predicting that governments would lose all policy autonomy have not come to pass, simply because these models ignored the domestic constraints governments face. However, the authorities can neither maximise their support based solely on domestic considerations, nor can they focus solely on making the country attractive to global investors. Although this may be a simple truth, it is one that is more often ignored than accepted in the rapidly growing literature on tax competition.

More substantively, this chapter makes three contributions to this literature. The argument that policymakers face a trilemmatic choice when setting domestic taxes is perhaps the most obvious contribution. Governments cannot simultaneously reach the three policy goals of providing a satisfactory amount of public goods, reducing tax rates on the mobile factor to globally competitive levels and, at the same time, implementing a mix of tax rates on capital and labour that maximises political support by adhering to societal demands for equality.

The second contribution consists of modifying the assumption of perfectly integrated capital markets. Reducing legal restrictions on capital transactions does not necessarily imply full capital mobility. De facto capital mobility depends instead on the willingness and ability of capital owners to move capital through jurisdictions. As previously noted, transaction costs are influenced by the ownership structure and concentration of capital. Actual capital mobility, therefore, falls short of being perfect and varies greatly across countries. Both the notion of the trilemma and that of de facto capital mobility contribute to solving the puzzle of non-zero capital taxation and, more specifically, the model developed here generates several hypotheses which strongly support the empirical evidence gathered through a rigorous statistical analysis.

4. Globalisation, economic crisis and fiscal and redistributional responses

Two decades ago the influence of tax competition on income redistribution and income inequality ranked high on the research agenda. Many social scientists believed that capital mobility in effect undermined governments' ability to tax capital, and consequently that tax revenues would erode and governments in social welfare states would find themselves unable to maintain high levels of welfare transfers. Eventually, they argued, rising income inequality would cause severe social unrest (Rodrik, 1997a, 1997b; Scharpf, 1991), thereby undermining the foundations of the open liberal market economy. Ever since they formulated these dire predictions, interest in the social consequences of globalisation has eroded. Even the most casual look at the empirical evidence suggests that governments still tax corporations, welfare states persist, and levels of income inequality – though rising in some countries – have not reached levels that could undermine the very foundations of social and political stability.

The failed prediction of the "end of the welfare state" does not mean that tax competition cannot influence income inequality at a more moderate level. If this relationship holds empirically, it is important to understand why. Is it because of partisan preferences (Garrett, 1995; Hays, 2009) or the lack of political autonomy (Basinger and Hallerberg, 2004) that governments are prevented from cutting deep into the dense net of social transfers? Or are there other explanations for the resilience of the welfare state?

Globalisation theory identifies two causal mechanisms linking an increase in income inequality to tax competition. The first is widely known as the efficiency hypothesis (Garrett, 1995, 1998a; Schulze and Ursprung, 1999); the second can be dubbed the "tax system hypothesis". The efficiency hypothesis claims that governments reduce inefficient spending to maintain domestic competitiveness and that, since government spending reduces inequality, expenditure cuts increase inequality. The tax system hypothesis predicts a shift from capital to labour taxation. As capital owners are relatively rich and workers relatively poor, this shift directly increases income inequality (Ganghof and Genschel, 2008; Goesling, 2001).

However, these arguments are largely at odds with recent developments in tax competition literature, which explain why tax competition does not result in the predicted "race to the bottom". The majority of these theories argue that political constraints such as veto players, unions (and coordinated wage bargaining) and the political preferences of governments prevent governments from lowering capital tax rates (Basinger and Hallerberg, 2004; Hays, 2003, 2009; Swank, 2002, 2004, 2006). In fact, once theories of tax competition overcome the simple functionalistic logic of early models of tax competition, the race-to-the-bottom prediction promptly vanishes. Indeed, politically informed models of tax competition predict a moderate convergence of tax policies to moderately lower levels of effective capital tax rates across open economies, as well as a shift from capital to labour taxation (Garrett, 1998a, 1998b; Rodrik, 1997a, 1997b, 1998; Genschel, 2002; Ganghof, 2004; Swank, 2006; Swank and Steinmo, 2002; Steinmo, 1994; Pluemper et al., 2009) – predictions which are much more in line with the empirical evidence than the early models.

Given that tax competition has little influence on revenues, the strong effect on social security transfers that the efficiency hypothesis predicts is difficult to explain. In effect, the empirical verdict on this hypothesis is mixed at best:

while proponents of the efficiency hypothesis typically find some backing (Garrett, 1998a; Rodrik, 1997a, 1997b, 1998; Swank, 2002), others show that the relation between tax competition and fiscal policies is insignificant and not sufficiently robust (Iversen and Cusack, 2000; Pluemper et al., 2005). Clearly, if the empirical literature is correct and tax competition has little influence on tax revenues, major fiscal policy adjustments are unlikely to occur.

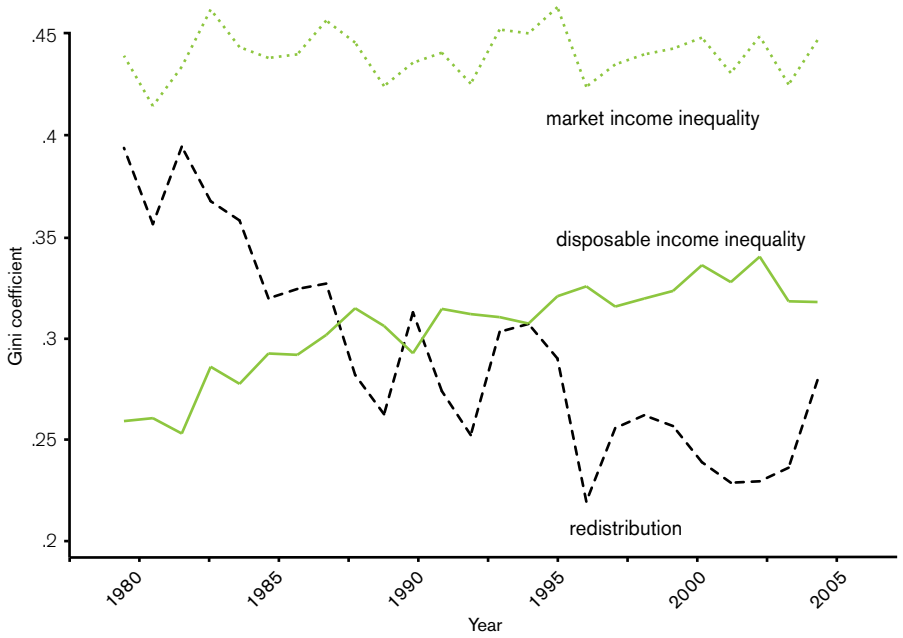
The comparative welfare state literature explains welfare policies as a combination of economic incentives for redistribution and institutional factors that shape governments' responses to these incentives (Galasso and Profeta, 2002). Incentives for redistribution stem from overall efficiency gains of redistribution (Samuelson, 1958), inter-temporal redistributive gains for the majority of voters as middle-aged citizens coalesce with old voters (Browning, 1975), or altruism (Hansson and Stuart, 1989). These incentives are shaped by partisan preferences (Allan and Scruggs, 2004; Bräuninger, 2005), veto players (Tsebelis and Chang, 2004; Ha, 2008), and interest groups (Hicks and Swank, 1992). Interestingly, all these standard arguments of social welfare policies assume that incentives and political preference aggregation mechanisms operate in isolation from the world economy. Neither the incentives of governments nor the political aggregation mechanism are influenced by the fact that capital and labour are both mobile and that corporations in welfare states need to be able to compete with corporations that do not pay a wage premium for welfare transfers. This, however, was exactly the argument of the globalisation literature which claimed that capital mobility and trade competition exerted a strong negative effect (Rodrik, 1997a, 1997b, 1998; Rudra, 2002; Rudra and Haggard, 2001; Swank, 2002; Scharpf 1991) or a positive effect (Cameron, 1978; Esping-Anderson, 1996; Garrett, 1998c; Hicks and Swank, 1992; Huber and Stephens, 2001) on welfare transfers, depending on whether scholars looked predominantly at the pressure from global competition or the demand for social security.

The efficiency versus compensation controversy lost steam at the turn of the century, although it does not appear to have produced a clear winner. Interestingly, the debate led to the conclusion that the downward pressure on capital taxes and social welfare contributions was far weaker than the proponents of efficiency hypotheses had assumed, while the effects of global competition on labour markets in developed countries remained far smaller than the proponents of the compensation hypothesis had claimed.

In sum, then, not much has changed. The welfare state has survived, partly because political institutions have turned out to be more resilient, but also because the welfare state offers significant advantages to corporations and is not perceived merely as an expense. It has also survived because globalisation is not a new force that turns the world upside down. Indeed, the doom theories of the early models have been undermined by history; although the welfare state may once have been in better shape, it will certainly outlast globalisation.

In this light, one might be tempted to turn back to the earlier research that perceived welfare policies as independent of the global economy, but such a conclusion would be wrong (Pluemper and Troeger, 2012). The point is that the limited empirical support enjoyed by theories of tax competition in explaining changes in welfare policies was ultimately generated by oversimplifying models that did not sufficiently distinguish between different politics of redistribution and completely overlooked the fact that tax competition is beneficial to some countries and harmful to others. Doom theorists argue that globalisation and tax

Figure 2: Gini coefficient and relative redistribution for the US, UK, Ireland



Source: Mahler and Jesuit (2006, Fiscal Redistribution Data Set).

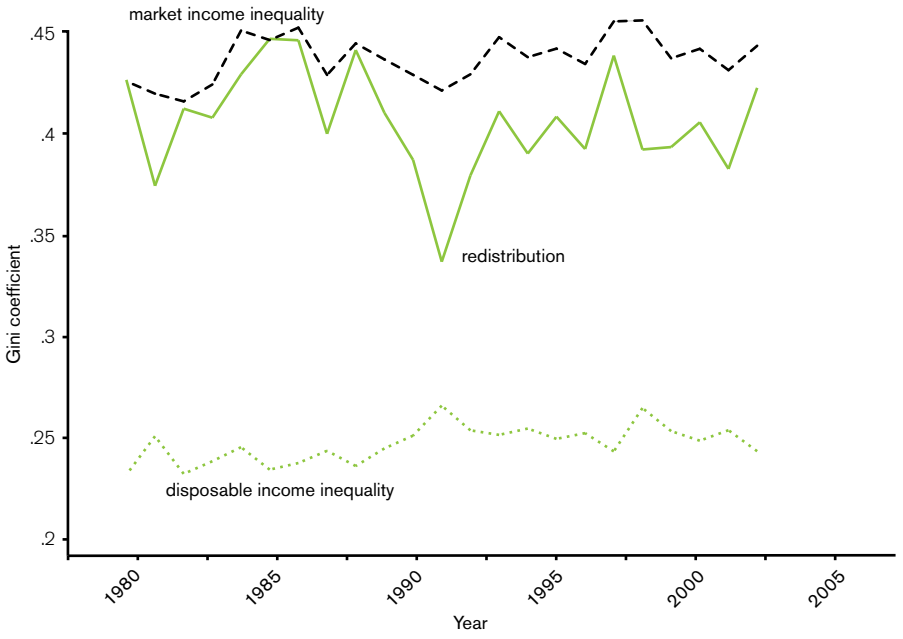
competition reduce the policy autonomy of all governments alike. They do not. If Luxembourg wins on the tax competition front because it has the structural advantage of being small, then it can direct more resources to its welfare state. In contrast, if Germany and France lose in this competition because of their size, then they will either have to adjust tax policies, or fiscal policies, or both.

Indeed, governments have chosen very different adjustment strategies with respect to tax competition, and countries have experienced different trends in income redistribution and income inequality. First, not all governments have kept effective capital tax rates stable; some have reduced these taxes, while other countries, notably Italy, have increased theirs. And second, not all countries have experienced stable levels of income inequality. In fact, income inequality has risen in liberal market economies, but remained relatively stable in coordinated market economies. Both variations cannot be explained easily by approaches that seek solely to account retroactively for the survival of the welfare state. Figures 2 and 3 depict the development of market income inequality, redistribution and inequality of disposable (post-tax and social transfer) income and reveal a clear pattern.

While the development of market inequality remains a) stable over time and b) comparable for liberal market economies (Figure 2) and continental welfare states (Figure 3), the implemented redistribution policies and resulting post-tax income inequality are quite different. Redistribution in liberal market economies, whether via the tax system or through social transfers, decreased substantially over the period identified with "globalisation", resulting in higher post-tax-transfers income inequality. By comparison, continental welfare states adjusted their tax systems to the new global pressures, but kept redistribution at a high level throughout the same period and maintained a relatively higher level of equality.

More specifically, the research shows that governments in countries that distribute income predominantly via social transfers and government spending are more likely to adjust the tax system, while governments in countries that

Figure 3: Gini coefficient and relative redistribution for continental welfare states (Germany, Greece, Spain, France, Portugal, Italy)



Source: Mahler and Jesuit (2006, Fiscal Redistribution Data Set).

primarily use the tax system to redistribute income are more likely to reduce social transfers and government expenditure. While the former adjustment strategy worked best for continental welfare states, the latter was used by Scandinavian welfare states. The social consequence of tax competition remained small in both groups. In contrast, liberal market economies such as the United States and the United Kingdom predominantly redistributed income via the tax system, but these countries could not cut social transfers and government spending to the same extent as Scandinavian countries. As a result, tax competition had the greatest effect on income inequality in liberal market economies, which is in sharp contrast to the predictions of early globalisation theory, which forecast it would have the greatest impact on European welfare states.

How governments respond to tax competition with imperfectly mobile capital depends on how they redistribute income. Without oversimplifying the complexity of the real world, one can assume that governments can choose any combination of two ways to redistribute income: via the tax system or via social security transfers. While most countries choose a combination of both options, European welfare states tend to redistribute predominantly via social security transfers, while Anglo-Saxon and Scandinavian countries rely more on the tax system. Furthermore, the overall level of redistribution in Anglo-Saxon countries is lower than in the welfare states of continental Europe and Scandinavia. Anglo-Saxon countries thus enjoy a greater degree of flexibility.

For this reason, governments in continental welfare states are more likely to lose political support when they cut social security transfers. In turn, they have stronger incentives to avoid making these cuts and are therefore more likely to rely on tax reforms and deficits to adjust to tax competition. In contrast, liberal market economies and Scandinavian welfare states are less inclined to predominantly use tax reforms. This does not imply that continental welfare

states *exclusively* use tax reforms and other countries rely *solely* on fiscal reforms to adjust to tax competition. On the contrary: all governments use a combination of tax reforms, fiscal reforms and deficits to respond to tax competition. However, continental welfare states, by comparison, rely more on tax policy adjustment and thus increases in labour and capital taxes. Therefore, it is the initial level of social security transfers that determines the political response to tax competition. The result is that small countries with low initial debt levels are the winners of tax competition, while governments in large countries with high initial levels of debt are most likely to have to respond by increasing capital and labour tax rates.

Tax competition leads to modest adjustments in the tax system because governments can choose an adjustment strategy that minimises the social consequences. Most countries that use the welfare state to redistribute income shift the tax burden towards higher taxes on labour (and other more immobile tax sources). Increasingly, however, capital taxation becomes a relatively irrelevant source of revenue. Since even governments in countries that are the losers in tax competition have three options to keep government spending and social transfers stable – higher capital tax rates, higher labour tax rates and higher deficits – tax competition does not lead to significant fiscal policy adjustments in the vast majority of OECD countries.

Given that tax competition is not as severe as the race-to-the-bottom models suggest and that governments have nuanced their adjustment strategies, tax competition has a more profound impact on taxation than on spending. For this very reason, the social consequences of tax competition differ hugely. Countries with an initially high level of social security transfers do not experience much change in income inequality simply because economic pressures on changing fiscal policies remain muted.

Governments in welfare states face much less pressure on tax revenues than early globalisation theories predicted, so the survival of the welfare state comes as no surprise. The optimal adjustment strategy for governments in social welfare states was to raise capital and labour tax rates, moderately increase deficit spending and keep government expenditure and social transfers stable. In effect, the impact on redistribution and inequality remained modest. Large, liberal economies chose a combination of cutting their already weak social security systems and coping with higher deficits. At the same time, they shifted taxation to labour, which eventually caused a moderate increase in inequality and a further decline in redistribution. New Zealand, and to a lesser extent the United Kingdom and the United States, are examples of countries adopting very different strategies. Since initial debt was lower in the United States and the United Kingdom than in New Zealand, tax increases and spending cuts were more moderate, but in New Zealand the government had to increase labour taxes and reduce social transfers to prevent a severe financial crisis caused by rising debts, and as a result income inequality rose significantly.

Welfare states responded according to their initial situation: if debt was already high when tax competition kicked in, the increase in labour taxation was significant. In cases when debt was initially low, the increase in labour taxation was moderate. In Scandinavia, where government consumption was significantly higher than in any other country, the authorities had a strong incentive to increase effective capital and labour tax rates. With capital mobility, governments were likely to opt for increases in effective labour tax rates, but owing to initially very

high spending levels, a stabilisation of tax revenues proved to be difficult. Hence these countries were likely to bring spending more in line with expenditure in continental European countries.

Whether policy adjustments exert an influence on income inequality depends on how countries redistribute income. In Anglo-Saxon and Scandinavian countries, redistribution depends on the tax system. Unless these countries profited from significant capital inflows, tax competition had, at the very least, a modest influence on income inequality. In contribution-based social welfare states, the redistribution of income depended much more on government spending and social transfers. Since the pressure on fiscal policies remained weak, governments found it comparatively easy to defend the welfare state without having to accept the need to increase income inequality.

4.1 Empirical investigation

Available information makes it possible to analyse time-series cross-sectional data which cover 23 OECD countries for a 26-year period from 1980-2005 (owing to random missing data points only 537 out of 572 possible observations are analysed). The tax competition effect is tested by including the distance (inversed) weighted spatial lag of effective capital tax rates to the right-hand side of the capital tax equation. Also tested are the effect of country size (measured by the natural logarithm of GDP), initial levels of social security transfers and debt ratio (in 1975, well before tax competition began), as well as the size of the non-tradable sector (measured as value added of the services industry). A control for union density and left-leaning government portfolio is included. An interaction effect between the domestic capital tax rate and union density is also added as a control variable.

In the second stage, the effect of the difference between country i's effective capital tax rate and the weighted mean of j's (instrumentalised) capital tax rates on fiscal policy (debt ratio and social security transfers) is estimated. Countries could abstain from cutting social security transfers if they allowed for higher capital tax rates than other countries. Governments also needed to maintain higher tax rates if initial debt rates were high and needed to be reduced. Again, the impact of initial levels of social security transfers and debt are examined. Also included is a control for trade openness (exports + imports/GDP), which is also capturing country size,[15] membership of Economic and Monetary Union (EMU), partisanship of the government, union density and the electoral system. Equally analysed is how pressures on the social welfare state, such as unemployment and the share of people aged over 65, affect fiscal strategies.

In the third and final stage, estimates are made of the joint effect of tax and fiscal policies (especially changes in social security transfers, as compared with initial levels in 1975) on income redistribution and income inequality. Also tested is the impact of actual fiscal adjustment strategies (changes in the debt ratio as compared to initial levels), as well as the electoral system, unemployment and the share of elderly people. Unit fixed effects[16] are not accounted for since the initial conditions for all countries as well as an EMU dummy, which are time invariant and capture most of the initial variation, are included.

15 We do not add the log of GDP to the right-hand side of the second stage since it is highly collinear to the trade measure and would thus decrease efficiency. In addition, using different specifications in the various equations of the simultaneous equation model allows better identification of effects because of overidentification.

16 See Pluemper et al. (2005) as well as Pluemper and Troeger (2007, 2011) for a discussion of the pros and cons of fixed effects.

With one exception, the specification of the empirical model is standard, and so are the data sources used. The exception is the distinction between countries that predominantly redistribute income via the tax system and countries that mainly redistribute income via social security transfers. These categories are briefly described here, but it should be noted that continuous variables in the data analysis are used. In 1980 the first group consists of Australia, Canada, Japan, the United States, the United Kingdom and Luxembourg, while the second group is made up of the welfare states of continental Europe and Scandinavia. Switzerland and Portugal do not redistribute much welfare, either via transfers or via the tax systems.

The effect of globalisation and market integration on taxation, social security transfers and redistribution cannot be examined independently. When estimating these effects, one is faced with different kinds of co-determination, simultaneity and endogeneity. Governments decide simultaneously about revenue and expenditure and therefore about tax rates, transfers and public good provision. Yet, taxation is not only contingent on domestic factors, but also on the decisions of policymakers in other countries. To solve these problems and avoid biased estimation results, a simultaneous equation approach is employed, which allows tackling the problem of endogeneity in policy decisions. An instrumental variable approach is used to overcome the endogeneity of the spatial capital tax lag and to account for the multi-stage nature where redistribution and income

Table 2: First stage: tax competition

Variables	Average effective capital tax rate	Average effective labour tax rate
Spatial capital tax lag weighted by inverse distance (prediction)	270.536*** (49.373)	
Effective capital tax rate		-1.202*** (0.147)
Total GDP in current US$, natural logarithm	3.923*** (0.414)	1.482*** (0.322)
Social security transfers as % of GDP in 1975	-0.894*** (0.131)	0.609*** (0.071)
Debt ratio in 1975	(0.131) 0.020	(0.071) 0.010
Value added of service sector as % of GDP	0.283*** (0.094)	0.720*** (0.058)
Union density (OECD)	0.049* (0.026)	-0.232*** (0.068)
Left-leaning cabinet portfolio as % of all cabinet seats		-0.020
IA effect between capital tax rate and left		0.001** (0.001)
IA effect between capital tax rate and union density		0.019***
Legal capital mobility (Quinn, 1997)	0.437 (0.795)	
Constant	-91.392*** (10.535)	-33.757*** (7.290)
Observations	537	537
R-squared	0.30	0.54
DWH Chi_sqr Test: Endogeneity of instrumented RHS variables	1.339	1.092
Prob > Chi_sqr	0.247	0.296
Anderson IV Relevance: LR Statistic	1596.00	11.67
Prob > Chi_sqr	0.000	0.000

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1, grey shaded cells indicate endogenous, instrumented right-hand-side variables.

inequality depend on decisions about taxation and social spending. Therefore, six simultaneous equations for effective capital taxation, effective labour tax rates, the debt ratio, social security transfers, relative redistribution and inequality of disposable income are estimated.

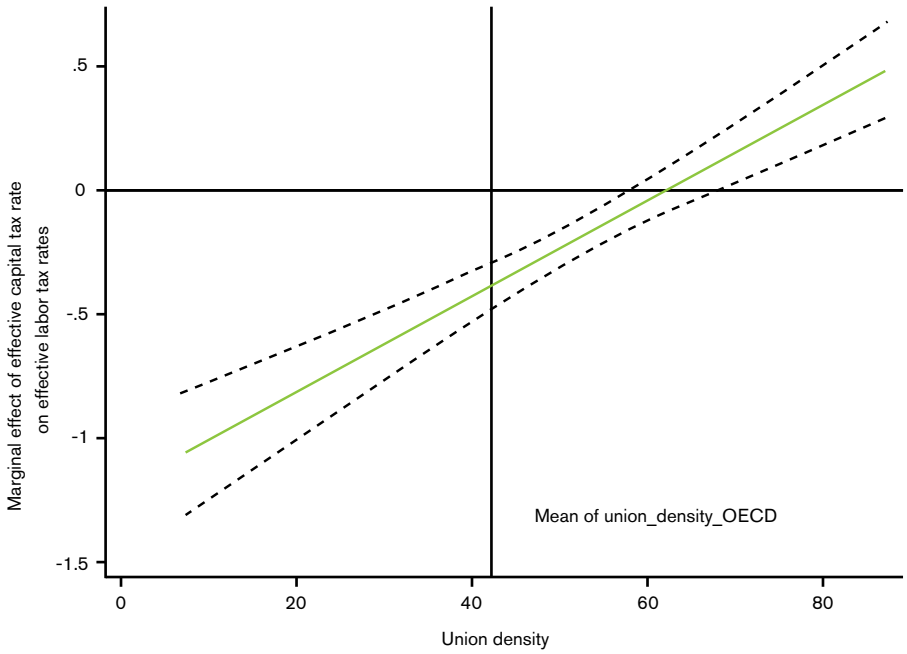
Presented here are the results of a single instrumental variable simultaneous equation model in three levels: the first stage estimates tax policies, where the effective capital taxation of country i depends, *inter alia*, on a distance-weighted average of capital taxation in other countries, whereas labour taxation is partially determined by domestic decisions on capital tax rates. This captures the notion that tax competition has a tax system effect, namely, that governments shift at least parts of the tax burden on capital towards labour, which is less mobile and therefore reacts less elastically to taxation.

Table 2 presents the estimation results of the first stage, where the effect of tax competition on effective domestic capital and labour tax rates is analysed. The main finding is that a country's effective capital tax rate decreases if other countries, especially closer ones, reduce their capital tax rate (tax competition effect). When effective capital tax rates decline, labour taxation goes up (tax system effect).

However, the shift in the burden remains moderate if union density is high. Figure 4 displays the interaction effect between domestic effective capital tax rates and union density. Strong unions clearly weaken the shift in the burden from capital to labour taxation. The influence of left-wing governments, meanwhile, appears less strong: left-leaning governments do not shift the burden much more than conservative governments.

Estimates here also support the view that tax rates, especially on labour, remain relatively high in countries in which the initial fiscal conditions were not particularly favourable to tax competition. However, in countries with high initial levels of social security transfers, a government's ability to reduce aggressively capital taxes in order to attract foreign capital depends on its ability to shift

Figure 4: Interaction effect between capital tax rates and union density on labour tax rates



Note: Dashed lines give 95% confidence intervals.

Table 3: Second stage: fiscal policy

Variables	Debt ratio	Social security transfers
Difference between domestic capital tax rate and mean of capital tax rate in other countries	-0.263*** (0.062)	0.018 (0.012)
Difference between domestic labour tax rate and mean of labour tax rate in other countries	1.218*** (0.147)	0.355*** (0.029)
Social security transfers as % of GDP in 1975	-2.407*** (0.221)	0.082* (0.044)
Debt ratio in 1975	0.747*** (0.021)	-0.024*** (0.004)
Union density (OECD)	-0.514*** (0.061)	-0.097*** (0.012)
Left-leaning cabinet portfolio as a % of all cabinet seats	-0.077*** (0.015)	-0.016*** (0.003)
EMU membership	-9.662*** (1.711)	0.263 (0.342)
Majoritarian system (DPI)	-7.365*** (2.036)	-3.598*** (0.405)
Unemployment rate (WDI)	1.940*** (0.166)	0.120*** (0.033)
Share of population above 65	3.102*** (0.295)	0.222*** (0.059)
Trade ((imp+exp)/gdp)	0.035 (0.027)	0.007 (0.005)
Constant	28.786*** (7.835)	16.084*** (1.561)
Observations	537	537
R-squared	0.80	0.63
DWH Chi_sqr Test: Endogeneity of instrumented RHS variables	29.88	4.461
Prob > Chi_sqr	0.000	0.107
Anderson IV Relevance: LR Statistic	121.3	121.3
Prob > Chi_sqr	0.000	0.000

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1, grey shaded cells indicate endogenous, instrumented right-hand-side variables.

the tax burden towards labour, especially high salaries (initial conditions effect). Similarly, and regardless of the initial fiscal conditions, large countries (measured by GDP) find it difficult to compete fully with small countries for internationally mobile capital. Large countries, ceteris paribus, implement higher tax rates on capital than smaller countries, since the tax rate effect outweighs the tax base effect of possible capital inflows (country size effect).

The de facto capital mobility by the size of the non-tradable service sector is operationalised. The larger the non-tradable sector, the less the average de facto mobility of capital, and the easier it is for governments to implement higher tax rates. Indeed, the empirical results support this notion – the larger the value added of the service sector, the higher average effective capital tax rates remain. Once control for actual capital mobility is added by including the size of the service sector, the Quinn measure for *de jure* capital mobility turns out to be insignificant.

At the second level (Table 3), namely fiscal policy adjustments, one can generally observe substantively weaker effects. In other words, the effect of tax competition on fiscal policies remains modest. One finds that governments use higher labour taxes to maintain high levels of social security transfers. However, while governments use capital taxation to stabilise government spending, one observes a positive, but not significant, contribution of capital taxation to social security transfers and an increase in the importance of labour taxation for social

Table 4: Third stage: relative redistribution and disposable income inequality

Variables	Effective redistribution	Disposable income inequality
Difference between domestic capital tax rate and mean of capital tax rate in other countries	-0.003*** (0.000)	0.001*** (0.000)
Difference between domestic labour tax rate and mean of labour tax rate in other countries	0.006*** (0.001)	-0.002*** (0.000)
Majoritarian system (DPI)	-0.011 (0.008)	0.005 (0.004)
Unemployment rate (WDI)	-0.002** (0.001)	0.001* (0.000)
Share of population above 65	-0.007*** (0.002)	0.003*** (0.001)
Market income inequality (Gini)	0.778*** (0.120)	0.299*** (0.052)
Change in social security transfers compared with 1975	0.006*** (0.001)	-0.002*** (0.000)
Change in debt ratio compared with 1975	-0.000 (0.000)	0.000 (0.000)
IA effect between mean difference in capital taxation and change in social security transfers†	0.014 (0.009)	-0.006 (0.004)
IA effect between mean difference in labour taxation and change in social security transfers†	-0.033*** (0.011)	0.014*** (0.005)
Constant	0.157*** (0.052)	0.090*** (0.023)
Observations	537	537
R-squared	0.37	0.34
DWH Chi_sqr Test: Endogeneity of instrumented RHS variables	22.47	23.73
Prob > Chi_sqr	0.000	0.000
Anderson IV Relevance: LR Statistic	375.2	375.2
Prob > Chi_sqr	0.000	0.000

Notes: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1, grey-shaded cells indicate endogenous, instrumented right-hand-side variables. † Coefficients and standard errors shown times 100 for better readability.

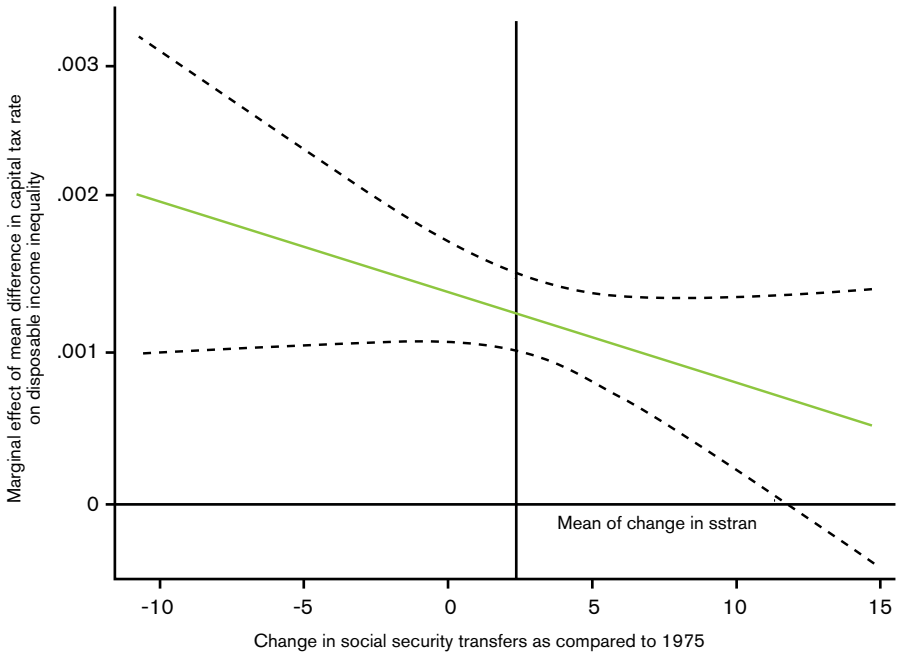
security transfers.[17] In addition, governments need to maintain higher capital taxes in order to reduce initially high debt ratios. Country size affects fiscal policy mostly indirectly through taxation, while the trade volume (which also captures a size effect) does not exert a significant impact on its own.

Finally, at the third level (Table 4), the results suggest that tax competition exerts a small, but not negligible, effect on income redistribution and income inequality, although governments used relatively high tax rates to keep the fiscal policy adjustments moderate. However, this effect is contingent on initial levels of social security and welfare spending.

As Figure 5 illustrates, countries which redistribute income mostly via social transfers will use higher tax rates on capital to redistribute from capital owners to wage earners, which thus reduces income inequality or at least does not allow disposable income inequality to rise. As a result, when social welfare states implement relatively high capital and labour tax rates, fiscal policy adjustments will be

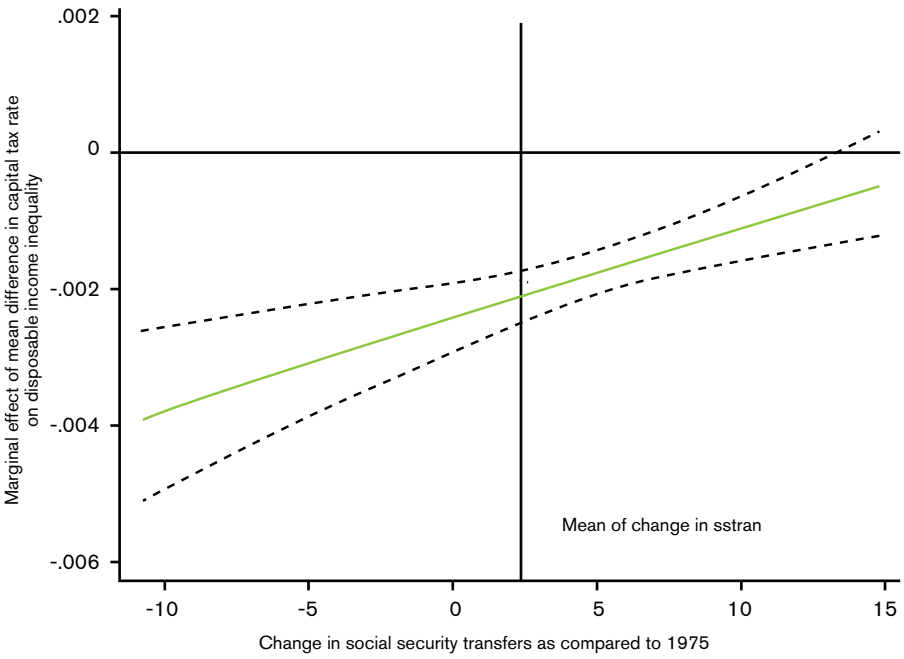
17 We find mostly expected results for our controls. First, countries with majoritarian electoral systems have both lower social security and lower debt levels, which is consistent with previous results (Persson and Tabellini, 1999). Second, although we cannot solve the "old" discussion between the compensation and the efficiency hypotheses, we find more support for the former: openness to trade has a positive but not significant effect on social security transfers and public debt (*compensation hypothesis*). Third, higher unemployment rates and a larger dependency ratio increase debt and social security spending equally. Fourth, EMU membership reduces a country's debt ratio.

Figure 5: Interaction effect between mean difference in capital tax rates and change in social security transfers on disposable income inequality



Note: Dashed lines give 95% confidence intervals.

Figure 6: Interaction effect between mean difference in labour tax rates and change in social security transfers on disposable income inequality



Note: Dashed lines give 95% confidence intervals.

modest and the effect of tax competition on redistribution and inequality quite small. The same cannot be said for countries that predominantly redistribute via a progressive tax system. Even if these countries keep relatively high capital and labour taxes, income redistribution declines and inequality increases (Figures 5 and 6). Social security transfers thus offer a better way to prevent an increase in income inequality. This finding, of course, runs counter to the doom theories of tax competition, which predicted that governments had to abandon the welfare state to prevent capital flight.

Most of the empirical findings – even cautiously interpreted – support the theoretical arguments presented here. Indeed, one finds a non-negligible and significant tax competition effect in addition to a strong tax system impact, a shift from capital to labour taxes, which is dampened by political institutions such as strong trade unions. Moreover, one finds support for asymmetric tax competition, a significant country size effect. Small countries implement lower tax rates on both capital and labour. They are able to do so because the tax base effect of inflowing capital outweighs the tax rate impact of lowering the capital tax rate. Yet, tax rates are not completely determined by competition since capital is not fully mobile: the results show that where de facto capital mobility is low – the size of the non-tradable sector large – tax rates on capital remain comparatively higher.

In countries with uncompetitive, high tax rates, tax revenues are used to lower high debt and maintain social security spending. Governments in large welfare states do not reduce the initially high social security transfers but manage to keep social welfare spending at a comparatively high level. However, large public debt forces governments to reduce social security transfers at least slightly. Finally, the effect of tax rates on redistribution and inequality is conditioned on changes in welfare state spending: countries predominantly redistributing via progressive taxes experience an increase in inequality because of the tax competition effect, while countries which redistribute mainly via social spending reduce disposable income inequality, or at least keep it stable.

4.2 Summary and implications of the empirical findings

When confronted with tax competition, governments in different countries choose different policy adjustment strategies. Surprisingly, none of the empirical tests of tax competition, globalisation theories or existing tests to explain the survival of the welfare state take into account the fact that global competition does not affect all countries in the same way.

Tax competition affects countries that redistribute via the tax system differently from countries that redistribute via social security transfers. Indeed, contrary to the predictions of early globalisation theories of welfare state retrenchment, the findings here suggest that liberal market economies using the tax system to redistribute income have found it more difficult to adjust to tax competition. Most welfare states have merely shifted revenues from taxing capital onto labour and maintained high levels of social security transfers.

Therefore, tax competition influences tax and fiscal policies, but not in the simple, homogeneous fashion predicted by earlier models. Instead, the absence of perfect capital mobility leads to "separating equilibria", as some governments have compensated for capital outflows by maintaining high capital and even higher labour tax rates. An increase in debt and cuts in social security transfers are used as alternatives to increasing capital and labour tax rates.

These initial conditions and the choice of policy adjustment strategies ultimately explain why income inequality has risen more in liberal market economies than in continental welfare states. While the latter were able to maintain a high level of social security transfers, the former had to cut down on tax-based redistribution and increase social security transfers. Not all governments in liberal market economies were able or willing to do so. As a result, income inequality increased most in liberal economies whose governments did not increase social security transfers or did so very slightly: the United States and the United Kingdom.

BOX 1: Tax competition and income inequality

1. The myth of a "race to the bottom" in capital taxation

Many observers – politicians and economist alike – expect that tax competition imposes strong constraints on a government's ability to tax mobile capital bases and eventually this competitive pressure will erode revenues from taxing capital since tax rates will converge to zero. The intellectual origins of this dire prediction are rooted in early models of tax competition. These demonstrate that, given capital mobility equilibrium, capital tax rates converge to zero. Drawing on these models, Fritz Scharpf (1997), a German law professor, argues that "capital is free to move to locations offering the highest rate of return […]. As a consequence, the capacity of national governments […] to tax and to regulate domestic capital and business firms is now limited by the fear of capital flight and the relocation of production. Hence all national governments […] are now forced to compete against each other in order to attract, or retain, mobile capital and firms."

Today, there is little doubt this view has been proved wrong by history. Data overwhelmingly demonstrates that:

- governments continue to tax capital;
- today's effective capital tax rates are not very different from those in the mid-1980s; and
- when it comes to effective tax rates, countries differ as much (or perhaps even more so) today as they did 25 years ago. Indeed, there is no evidence of convergence.

2. Why is the race-to-the-bottom scenario wrong?

In recent times social scientists have advanced three theories that all explain why the race-to-the-bottom scenario is wrong. The first explanation relies on international exchange-rate adjustment mechanisms. If a country implements high capital tax rates relative to all other countries, it will not lose its competitiveness. Instead, this country will have a comparative advantage in the production of goods and services that are relatively inelastic to high capital tax rates. Labour-intensive production immediately springs to mind, but that is only part of the story. In fact, as California has proved in the case of the United States, it also holds true for many high-tech industries, whereas traditional low-tax states like Delaware would only attract "old industries" such as petrochemicals, car manufacturing, apparel, meat processing and so on. Would one rather have the industrial base of California or of Delaware?

The second explanation – arguably the least convincing one – stresses that in order to maximise political support, governments have to provide public goods, redistribute income and invest in an effective administration. All of this is costly. To finance such expenditures, governments depend on taxing all activities that bring in revenues, including business and therefore capital. Although revenue from capital taxation accounts on average for only 10% of a government's total revenue in most OECD countries, no government ever implemented spending cuts of around 10% and won the next election. Therefore, if governments want to create optimal conditions for corporations, they have to find another source of revenue. At the same time, this other revenue does not tend to harm pivotal voters. Finding rich natural resources helps (for example, Norway), but for most other countries such a source of revenue is not an option. What is available – labour and consumption taxes – will not help a government if it hopes to win the next election.

The third explanation modifies the assumption that all race-to-the-bottom arguments more or less make implicitly, namely that capital is perfectly mobile. In fact, it is not. Many corporations (especially the services industry) need to be close to their customers, others require a certain combination of skills that are only available in established industrial clusters. Therefore, a single company cannot simply leave the area in which its industries prosper because it may not find the correct combination of skills in other countries. Indeed, only a small number of the capital bases of most OECD countries are actually mobile.

This argument has important consequences for the predictions of the tax competition model. First, with imperfectly mobile capital, the zero capital tax rate equilibrium disappears. No country will implement zero tax rates; rather, all countries maintain a positive capital tax rate. Second, governments will choose different optimal combinations of capital and labour tax rates. The optimal combination is largely determined by country size: very small countries implement low capital and low labour tax rates. They manage to widen their tax base by importing capital from other countries. A second group of countries will slightly reduce capital tax rates and increase labour tax rates to compensate for revenue losses. A third group will maintain, or even increase, capital tax rates and increase labour taxes. These countries will export capital to the first and potentially to the second group.

3. Why do governments choose what sometimes appears to be a less attractive adjustment strategy?

The competitiveness of countries in tax competition usually trumps the adjustment strategy. More competitive countries choose more attractive strategies, while less competitive countries have to try hard to generate sufficient revenues, and thus need to increase both capital and labour taxation. Five factors are decisive: country size; the mobility of capital (the share of immobile capital to total capital); the level of debt when tax competition was triggered in the mid-1980s; institutional and legal constraints on the government; and societal norms that influence the maximal gap between capital and labour taxation.

Country size exerts the dominant influence on a country's ability to compete for mobile capital basis because small countries can increase revenues by reducing capital tax rates if they attract sufficient inflows of foreign capital, while larger countries are unlikely to attract enough capital to make this a viable strategy. In countries with a small domestic capital base, tax revenues decline less (in absolute terms) than for countries with a large base. It is easier, therefore, to attract enough foreign capital (in absolute terms), so that the decline in revenues from reducing the tax rates is offset by the tax that foreign companies pay. In technical terms: for small countries the tax base effect dominates the tax rate effect on revenues; for large countries the tax rate effect dominates the tax base effect.

The second most important effect is the mobility of the domestic capital base. Governments in countries that have a predominantly immobile capital base can maintain high tax rates without losing much capital to foreign countries. This is true of countries with a highly specialised and skilled labour force (Germany, Switzerland, etc.) and of countries in which services and agriculture dominate (Italy).

Fiscal factors provide another important influence on tax policies. Most importantly, governments in countries with high levels of indebtedness will find it difficult to reduce capital tax rates unless they are very small. For larger indebted countries, tax revenues from taxing capital are typically indispensable. Mounting public debt in Belgium, for example, has prevented it from choosing a strategy similar to Ireland's. While the Irish government could reduce capital tax rates, allow an increase in debt for a limited period of time and eventually attract foreign capital, the Belgian government had to make sure it was still capable of servicing its debt. This prevented the country from competing for mobile tax bases.

These three factors arguably have a greater impact on countries' adjustment strategies to tax competition than the favourite explanation of most political scientists: institutional constraints. This is not to claim that such constraints do not matter. For example, in the late 1980s, in particular, governments in countries with proportional electoral systems found it difficult to cope with the tax reforms in Anglo-Saxon countries. Indeed, coalition governments often seem less capable than single-party governments of responding quickly to a changing environment. Whether the former generally find it more difficult to compete for mobile tax bases than single-party governments because they have to consider more – and potentially competing – interests in the coalition or because they have to be responsive to a broader set of voters remains an open question. It is worth noting, however, that political scientists find that the greater the number of actors that are required to change the status quo, the fewer reforms are likely to be introduced.

4. What are the social consequences of tax competition?

These depend on the type of country and the adjustment strategy. Small countries with initially low levels of public debt and few institutional constraints on the government are the winners of tax competition. These countries reduce capital tax rates and

attract strong capital inflows. The increased capital base allows the governments in these countries to reduce public debt, invest in a welfare state and public goods and, eventually, to reduce labour tax rates as well. Luxemburg is a prime example. Ireland pursued the same strategy with some immediate success, but the collapse of the Irish banking system and its subsequent bail-out prevented the government from directing more resources to welfare spending.

Ironically, large welfare states generally cope well with tax competition, primarily because it is possible to finance the modern welfare state with labour taxes. Nowadays, no redistribution from capital to labour is required to finance welfare transfers. This would have been different if tax competition had occurred 30 years earlier. But in the late 1980s welfare states already depended on redistributing welfare across the middle class, and from the middle class to the unemployed.

In Anglo-Saxon countries – the countries that Fritz Scharpf expected to become the winners of tax competition – the situation is more complex. Anglo-Saxon countries do not redistribute income through welfare spending. They traditionally reduce income inequality by combining relatively high capital tax rates with relatively low income taxes. With tax competition, these countries reduce capital tax rates. The convergence of capital tax rates to the lower level of income taxes largely reduces the redistributive component of the Anglo-Saxon tax model. Consequently, income inequality in Anglo-Saxon countries has risen sharply. Elsewhere, it has for the most part remained stable.

5. Conclusion

Tax competition has had a minor impact on the majority of OECD countries. No doubt, tax competition has produced some winners – Luxembourg, Ireland and capital owners in Anglo-Saxon countries – and some losers – mostly large continental European welfare states such as France and Spain – but at the systemic level the consequences have been minor. Indeed, welfare states have remained welfare states, and Anglo-Saxon countries have remained Anglo-Saxon countries, and both have continued to be very different from one another.

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5. Policy conclusions

- Governments in Western democracies need to strike a balance when it comes to the regulation of immigration. On the one hand, they need to address the concerns its citizens may have with respect to the job uncertainty caused by economic integration. On the other hand, governments have to recognise that inefficiently high barriers to the inflow of labour will negatively affect future growth and economic performance because they also restrict the inflow of highly skilled foreign-born talent. In effect, adopting policies that acquiesce to public anxieties for short-term electoral purposes can have detrimental economic effects in the long term. In the UK context, more restrictive immigration regulations in response to the economic crisis and international terrorism have meant that rules for non-EU students have been tightened. To the extent that some students would typically stay in the country after their studies and become young high-income tax payers, one unintended consequence of this policy is that the UK will lose out because highly skilled immigrants are net contributors to the social welfare (and pension) system.
- An in-depth analysis of globalisation and welfare state policies shows that strong unions and corporatist wage bargaining do not just make labour markets inflexible. Coupled with wage moderation and a strong vocational education system, they can in fact provide a desirable environment for skill-intensive industries.
- Tax competition does not have the same effect on all countries. Indeed, it creates winners and losers. The competitiveness of a country (size, mobility

of capital, initial fiscal conditions) determines countries' fiscal adjustment strategies. Cutting capital taxes, therefore, will not have the desired effect for many countries (especially large ones) of capital influx. And even if governments succeed in attracting FDI by lowering taxes for corporations, the additional revenue will not offset the loss in income caused by the tax cut. Since revenues from capital taxes, on average, only amount to 10% of total tax, not much can be gained from cutting capital tax rates. Governments that want to win elections need to consider the trade-off between a small gain in capital tax revenue and a 10% reduction in government spending (if they do not want to, or are unable to, increase deficit spending and government debt). A 10% spending cut will have large electoral repercussions. Policymakers need to focus on other measures to attract corporate investment, such as the provision of highly skilled labour and improved infrastructure.

- Large countries with strong welfare systems are very unlikely to win corporate and capital tax competitions. In general, governments in these countries should not try to attract mobile capital by merely reducing corporate and capital tax rates but should invest in other pull factors, such as infrastructure and vocational and higher education, to increase the pool of skilled labour.
- Globalisation and market integration can have important social implications. While the welfare state in general is affected to a lesser degree than predicted by the early doom theories, countries that traditionally redistribute via the tax system (including the UK) tend to experience larger post-tax income inequality. This needs to be addressed by policymakers in order to avoid social unrest and dissatisfaction with market integration, and it is key if the economy is to benefit not only from trade openness and market integration, but also from an influx of highly skilled foreign labour. Different strategies seem to be viable to solve the problem of greater income inequality: politicians can target redistribution efforts towards the losers of market integration, while investment in education and the development of skills can allow larger sections of the workforce to benefit from premiums generated by specialisation.

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4 / The BRICs: What does Economic History say about their Growth Prospects?

Stephen Broadberry

1. Introduction

The BRIC countries (Brazil, Russia, India and China) have received a great deal of attention ever since the acronym was coined by O'Neill (2001) of Goldman Sachs more than a decade ago. Whereas O'Neill focused on the large and growing share of BRIC countries in world GDP notably because they represent a significant proportion of the world population – rather than high levels of per capita GDP – other commentators have been less careful in maintaining this important distinction. As a result, a rather confusing picture of world economic trends has often emerged. Whereas O'Neill was concerned about population-driven GDP growth in the BRIC countries reducing the ability of rich Western countries to have a significant impact on global GDP through their monetary and fiscal policies, fears in the West have usually been concerned about being overtaken in terms of levels of per capita income.

Indeed, this will be the main focus of this chapter. Section 2 considers the key factors that have been identified in the recent policy literature based on post-war experience responsible for growth accelerations and growth declines, not only propelling economies on to the path of catching up, but also ushering in growth declines before catching up has been fully achieved (Abramovitz, 1986). Section 3 then looks at some of the main reversals of fortune of countries over a much longer span of history. However, since this may appear to lend an air of inevitability to the successful rise of the BRICs to global economic leadership, Section 4 considers instances when countries that began to catch up initially looked very promising, before falling by the wayside. Finally, Section 5 assesses projections for individual BRIC countries to 2030, while Section 6 highlights the key policy conclusions.

2. Understanding growth accelerations and growth declines

Growth accelerations and growth declines have been examined systematically for a large sample of countries, with analysis focusing on two key questions. First, is it possible to identify key factors that lead to sustained growth accelerations? And second, what happens when growth slows down?

Hausman et al. (2005) use the Penn World Tables for the 1950s to the 1990s to identify growth accelerations, which they define as episodes where the per capita income growth rate increases by at least 2 percentage points per year and remains above 3.5% for at least eight years. In addition, they add the requirement that the post-acceleration output level must exceed the pre-episode

peak, so as to rule out cases of pure recovery. Having identified more than 80 such episodes, they then note that growth accelerations are correlated with, but not necessarily causally related to, increases in investment and trade and real exchange-rate depreciation.

Hausman et al. (2005) find that political regime changes (as measured by the Polity IV dataset www.systemicpeace.org/polity/polity4.htm) are statistically significant predictors of growth accelerations, although perhaps surprisingly, transitions to autocracy produce a larger positive effect than transitions to democracy. However, these results seem to depend on growth accelerations that fizzle out after eight years and disappear if the growth acceleration has to last at least 17 years. External shocks (as measured by large terms-of-trade changes) tend to produce only temporary growth accelerations that peter out, whereas domestic economic reforms (as measured by the Sachs-Warner index, http://www.bris.ac.uk/Depts/Economics/Growth/sachs.htm) tend to produce sustained accelerations. However, despite the statistical significance of these results, Hausman et al. (2005) emphasise the low explanatory power of the model and conclude that growth accelerations are driven largely by idiosyncratic causes. As they put it: "To paraphrase Tolstoy, not even happy families are alike." This seems to leave the door open for a historical approach.

One element which needs to be borne in mind when considering the future growth prospects of the BRICs is that, once started, the growth process does not automatically continue. Indeed, history is replete with examples of countries which start on the catching-up process but then stall long before they achieve this goal. It is therefore equally important to consider growth slowdowns. Eichengreen et al. (2011) build on Hausman et al. (2005) to look at growth decelerations, which are defined as a decline in the growth rate of GDP (rather than per capita GDP) by at least 2 percentage points from a level of at least 3.5% per year for the previous seven years, with an additional requirement that the level of per capita income should be at least $10,000 in 2005 constant prices to rule out crises in not yet successfully developing countries. The most clear-cut result that Eichengreen et al. (2011) uncover is the identification of a threshold level of per capita GDP, after which catching-up countries have typically slowed down in the post-1950 period. The figure they come up with is $17,000, although it is not clear why this should be a fixed figure over the entire 1950-2005 period, when the per capita income frontier was growing by around 2% per annum.

A second result, obtained from growth accounting, is that GDP growth slowdowns are associated with decelerations in the growth of total factor productivity (TFP), rather than factor inputs. Eichengreen et al. (2011) interpret this as supporting the idea that growth slows down when the easy gains from reallocating resources away from agriculture to industry and importing technology from abroad have been exhausted. They find that growth slowdowns typically have occurred when per capita GDP reaches 58% of that in the lead country, which is perhaps a more intuitive, if less user-friendly way of presenting the results than a fixed $17,000. They also find that the peak probability of a slowdown came when manufacturing employment reached 23% of total employment. In contrast to Hausman et al. (2005), Eichengreeen et al. (2011) do not find any role for political regime changes, but external terms of trade shocks matter when interacted with openness. Unusually low shares of consumption in GDP also seem to have been associated with slowdowns. Turning to the effects of economic policy, Eichengreen et al. (2011) find that growth slowdowns are

more likely where inflation is high and the exchange rate is undervalued. They speculate that this could be because reliance on an undervalued exchange rate leads to a cumulation of imbalances, leaving a country more vulnerable to external shocks or becoming less suitable once the gains of shifting labour from agriculture to industry have been realised.

These results have only been based on a consideration of data since the 1950s, a period when there has been no fundamental change of economic leadership, although there have been plenty of growth accelerations and slowdowns. Discounting small countries made rich by natural resource booms, the United States has remained the global per capita GDP leader throughout the post-war period. To analyse significant reversals of fortune, it is therefore necessary to consider a longer time span. Furthermore, although the literature has identified statistically significant factors related to growth accelerations and declines, their explanatory power is weak, leaving a large role for idiosyncratic factors which can only be studied within a historical framework.

3. Reversals of fortune in history

This section now turns to some of the most important reversals of fortune in history to see what light they shed on the process of overtaking other countries. Here, we are able to draw on research undertaken at CAGE utilising recent developments in historical national accounting. Indeed, a clearer quantitative picture has now emerged of some of the most important reversals of fortune in history, including (1) within Europe between the North Sea Area and the Mediterranean; (2) within the North Sea Area between Holland and Great Britain; (3) the great divergence between Europe and Asia; and (4) the United States overtaking Great Britain.

3.1 The North Sea Area and Mediterranean Europe

Table 1 provides data on GDP per capita levels in a number of European countries between 1270 and 1850. All figures have been converted to 1990 international dollars, the usual standard for such comparisons (Maddison, 2001). At 1990 prices, the World Bank's definition of poverty was for an individual living on a dollar a day or less, so that a society with an annual average per capita income of $400 involved most people living at a bare-bones subsistence level and a small elite enjoying higher incomes. Table 1 suggests that West European countries had already achieved well above subsistence levels by the late Middle Ages, with average per capita incomes in England and Holland around $800 on the eve of the Black Death in 1348, and substantially higher levels than this in Italy and Spain.

The reversals of fortune between the North Sea Area and Mediterranean Europe are underscored in Table 1 by the fact that Italy and Spain had significantly higher per capita incomes than England and Holland prior to the Black Death, while the opposite was the case by 1800. In coming to grips with this reversal of fortune, it is worth noting that Italy, along with England and Holland, experienced a substantial increase of per capita incomes as populations declined precipitously with the onset of the Black Death, followed by further outbreaks of the plague in the next century, thereby reducing by half the population of many European countries. This is broadly consistent with the Malthusian idea of a negative relationship between the population level and per capita incomes owing to diminishing returns to labour in agriculture, holding land fixed. Those who were lucky enough to survive the recurrent plague outbreaks had more land and experienced higher living standards.

Table 1: GDP per capita levels in Europe (1990 international dollars)

	England/ Great Britain	Holland/ The Netherlands	Italy	Spain
1270	759			957
1300	755		1482	957
1348	777	876	1376	1030
1400	1090	1245	1601	885
1450	1055	1432	1668	889
1500	1114	1483	1403	889
1570	1143	1783	1337	990
1600	1123	2372	1244	944
1650	1100	2171	1271	820
1700	1630	2403	1350	880
	1563			
1750	1710	2440	1403	910
1800	2080	2617	1244	962
		1752		
1820	2133	1953	1376	1087
1850	2887	2397	1350	1144

Notes: Figures are for 10-year averages starting in the stated year (i.e. 1270–79, 1300–09, etc) apart from 1348, which refers to the pre-Black Death years 1339–48. The data are for England 1270–1700 and for Great Britain 1700–1850, with the figure above the line in 1700 referring to England and the figure below the line to Great Britain. Similarly, the data are for Holland 1348 to 1800 and for the Netherlands 1800–50.
Sources: England/Great Britain: Broadberry, Campbell, Klein, Overton and van Leeuwen (2011); Holland/Netherlands: van Zanden and van Leeuwen (2012); Italy: Malanima (2011); Spain: Álvarez-Nogal and Prados de la Escosura (2013).

Spain, however, did not share in this post-Black Death rise in living standards. Álvarez-Nogal and Prados de la Escosura (2013) note that 14th-century Spain was a frontier economy with a high land-to-labour ratio, so that far from reducing demographic pressure on scarce land resources, the population decline following the Black Death destroyed commercial networks and isolated an already scarce population, thus reducing specialisation and the division of labour and ultimately leading to lower levels of per capita income. While Spanish per capita incomes failed to benefit from the post-Black Death increase experienced in much of the rest of Western Europe, Italian incomes fell back to pre-plague levels as population growth recovered after 1450. Meanwhile, there was a surge in per capita incomes in the North Sea Area, led initially by Holland during its Golden Age of prosperity between 1500 and 1650, and by Britain after that period.

This reversal of fortune between the North Sea Area and Mediterranean Europe thus seems to pivot around 1500 and is often associated with the dramatic changes in long-distance trade which occurred around that time, first with the opening up of new trade routes between Europe and Asia by sailing around the southern tip of Africa rather than moving goods overland across Asia along the Silk Road and by ship from the Middle East to Southern Europe, and subsequently the European encounter with the Americas. With these changes the Mediterranean became a backwater, and the focus of trade shifted to the Atlantic. Contrary to the findings of Hausman et al. (2005) based on the post-1950 period, the effects of these external shocks did not fizzle out after eight years.

Box 1: The AIDS crisis and the Black Death

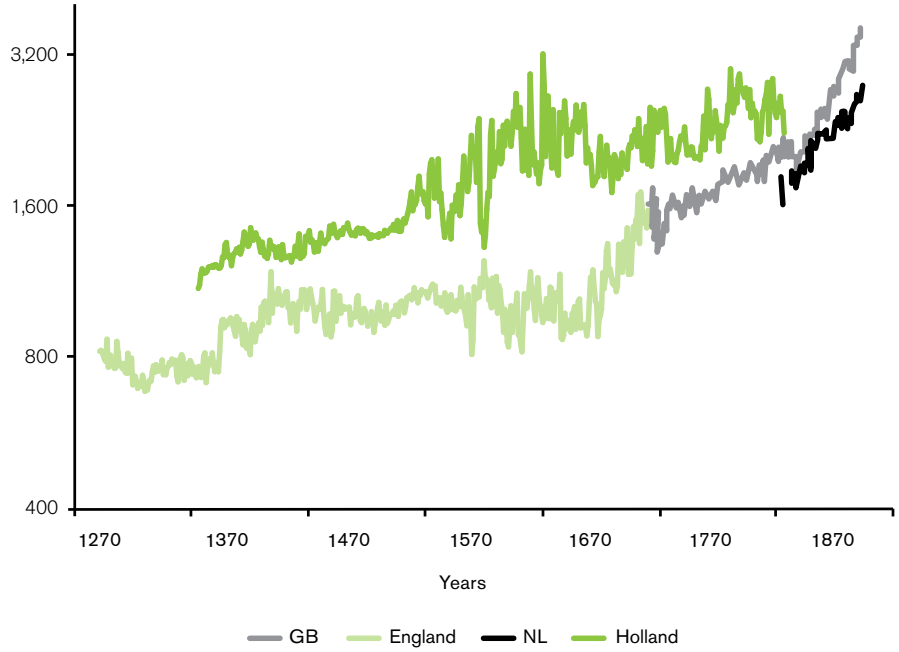
The Black Death first struck Europe in 1348–49 and quickly wiped out around one-third of the continent's population. As outbreaks of the plague continued to strike, the population continued to fall, so that by the mid-15th century it was less than half of its medieval peak in parts of Europe. In England, for example, recent estimates by Broadberry et al. (2011) suggest a peak population of 4.81 million in 1348, falling to 2.6 million by 1351 and just 1.9 million by 1450. In most parts of Europe, real wages increased sharply across the Black Death areas (Pamuk, 2007). Furthermore, recent research summarised in Table 1 suggests there was also a positive effect on GDP per capita, with the notable exception of Spain, which remained a frontier economy until the Reconquest was completed in 1492 (Álvarez-Nogal and Prados de la Escosura, 2013). In most of Europe, those who were fortunate to survive were left with more land and capital, while the labour shortage bid up the price of labour.

Although the HIV/AIDS crisis which emerged in the late 20th century, affecting Africa most of all, has had a much smaller impact on population levels, its effects can be analysed in much the same way. In contrast to medieval Europe, where the population level fell catastrophically, the population has continued to grow in Africa since the 1980s, but at a slower rate. Whiteside (2001) reviews the literature on the economic impact of HIV/AIDS, noting a number of potentially negative economic impacts from the epidemic, from lower levels of growth to changing consumption patterns and the diversion of government spending to anti-retroviral therapy. Nevertheless, in a study of South Africa, Young (2005) points out that infection rates among pregnant women in Africa rose quickly from approximately zero in 1990 to over 20% by the late 1990s, before stabilising at around 25%. Young argues that despite the tragic consequences for the infected, the net effect on future per capita consumption is positive, as in 14th- and 15th-century Europe. He emphasises two positive effects which act to lower fertility, both directly, through deterring unprotected sexual activity, and indirectly, through increasing the scarcity and value of female time. Even taking into account the negative effect of orphaned children through reduced human capital formation, Young argues that the net impact remains positive. However, Haacker (2011) argues that the majority of empirical studies on the impact of HIV/AIDS have found the adverse effects to outweigh the positives, leaving a small negative impact on GDP per capita.

Nonetheless, not all Atlantic economies benefited from these changes. Indeed, the prime movers in the voyages of discovery, Portugal and Spain, which both had Atlantic as well as Mediterranean coasts, lost out to Britain and Holland. Institutional differences probably play a role in explaining the ability of different economies to take advantage of the new opportunities opened up by the voyages of discovery. Acemoglu et al. (2005) emphasise the interaction between access to the Atlantic and constraints on executive power. In the countries which gained most (Britain and Holland), there were sufficient constraints on the rulers to ensure that they were unable to appropriate the bulk of the gains from trade. By contrast, in Atlantic economies such as Spain and Portugal, which failed most obviously to gain from the new opportunities – despite their early role in the discovery of the new trade routes – rulers were sufficiently strong to exploit the opportunities themselves and prevent a strong merchant class from constraining their powers to appropriate.

It is noteworthy that the fundamental underlying change behind this reversal of fortunes, the opening up of new trade routes, was instigated by the Spanish and Portuguese, who lost out to the Dutch and British. In current times, one could expect the information and communications technology (ICT) revolution to play a similarly influential role in altering economic opportunities, which could lead to comparable reversals of fortune. Again, the incumbent leader, the United States, has played a pioneering role, but will need to continue to innovate and remain institutionally flexible if it is to avoid the relative decline experienced by Spain and Portugal in the early modern period.

Figure 1: British and Dutch real GDP per capita in 1990 international dollars



Sources: Broadberry et al. (2011); van Zanden and van Leeuwen (2012).

However, it is worth pointing out the dangers of embracing very simple explanations of complex phenomena such as the changing relative prosperity of nations, particularly when they rely more heavily on theoretical argument than detailed observation of the historical record. There are good reasons to argue that the emphasis on government and political turning points such as the Glorious Revolution is overdrawn in the approach of Acemoglu et al. (2005). An alternative approach focuses on the effects of factor endowments and factor prices on technology, the composition of economic activity and links to demography and human capital (Allen, 2009; Broadberry and Gupta, 2009; Broadberry et al., 2011). Indeed, the reversals of fortune between Britain and Holland are excellent examples to illustrate this very theme.

3.2 Great Britain and Holland

Broadberry et al. (2012) probe more deeply into the reversals of fortune between Britain and Holland. In establishing the chronology of the Dutch forging ahead and the British catching up and then overtaking, care is needed in specifying the territorial areas under consideration. In Figure 1, results are presented for England covering the period 1270-1700, Great Britain for 1700-1850, Holland for 1348-1807, and the Netherlands for 1807-1870. Drawing upon new historical national accounts for these territories, it is clear that Holland forged ahead of Britain between 1500 and 1650, enjoying a Golden Age of prosperity and developing a comparative advantage in services as the share of the labour force in agriculture shrank to precociously low levels. Britain then grew faster than Holland during the second half of the 17th century and continued to catch up during the 18th century, although per capita incomes remained higher in Holland until the early 19th century. By this time Britain also had an unusually small share of the labour force in agriculture and a large services sector, but it developed a comparative advantage in industry as it became the "workshop

Table 2: Daily real consumption wages of European unskilled building labourers (London 1500-49 = 100)

	1300-49	1350-99	1400-49	1450-99	1500-49	1550-99	1600-49	1650-99	1700-49	1750-99	1800-49
Northwestern Europe											
London	57	75	107	113	100	85	80	96	110	99	98
Amsterdam					97	74	92	98	107	98	79
Antwerp			101	109	98	88	93	88	92	88	82
Paris					62	60	59	60	56	51	65
Southern Europe											
Valencia			108	103	79	63	62	53	51	41	–
Madrid					–	56	51	–	58	42	–
Florence/Milan	44	87	107	77	62	53	57	51	47	35	26
Naples					73	54	69	–	88	50	33
Central & Eastern Europe											
Gdansk					78	50	69	72	73	61	40
Warsaw					–	75	66	72	45	64	82
Krakow			92	73	67	74	65	67	58	63	40
Vienna			115	101	88	60	61	63	61	50	27
Leipzig					–	34	35	57	53	44	53
Augsburg					62	50	39	63	55	50	–

Source: Broadberry and Gupta (2006: 7), derived from the database underlying Allen (2001: 429).

of the world". These developments took place against the backdrop of the reversal of fortunes between the North Sea Area and Mediterranean Europe examined above.

Allen (2009) emphasises the importance of Britain's unique factor price combination of high wages and cheap coal, which he sees as both creating incentives for inventing labour-saving technology and explaining why such technology was not adopted immediately in other countries. Britain emerged as a high-wage economy in two stages, charted in Table 2. In the first phase, real wages increased with the population decline arising from the Black Death. In the second phase after 1500, success in international trade offset tendencies to diminishing returns in agriculture through gains from specialisation. Also worth noting is that a relatively high age at marriage, which can be shown to have existed already in Britain during the 16th century (Wrigley and Schofield, 1989), limited fertility and encouraged human capital formation.

England also had an agricultural sector which was heavily oriented towards pastoral farming, and this had a number of important implications for future growth. First, this was a high value-added agriculture, even if it did not produce many more kilocalories per head than arable agriculture. Second, this was a highly capital-intensive agriculture, with animals making up a large share of the capital stock. Third, this was an agriculture which was highly intensive in the use of non-human energy. Fourth, pastoral agriculture provided enhanced employment opportunities for females, particularly in the parts associated with dairying, thus underpinning a relatively high age of marriage for women, which reduced fertility rates and encouraged human capital formation (de Moor and van Zanden, 2010; Voigtländer and Voth, 2010).

Like Britain, Holland was a high-wage economy and potentially had access to cheap coal from the Ruhr. So why did Holland not have the first Industrial

Table 3: Percentages of world population by major regions, from 1 AD to 1998

	1	1000	1820	1998
Western Europe	10.7	9.5	12.7	6.6
Western Offshoots	0.5	0.7	1.1	5.5
Japan	1.3	2.8	3.0	2.1
Total Group A	**12.5**	**13.0**	**16.8**	**14.2**
Latin America	2.4	4.2	2.0	8.6
Eastern Europe & USSR	3.8	5.1	8.8	7.0
Asia (excl. Japan)	74.2	65.4	65.3	57.4
Africa	7.1	12.3	7.1	12.8
Total Group B	**87.5**	**87.0**	**83.2**	**85.8**
World	**100.0**	**100.0**	**100.0**	**100.0**

Source: Derived from Maddison (2001: 28).

Revolution? Allen (2009: 104) argues that Holland also had cheap peat, which delayed the development of the Ruhr coalfield, but Broadberry and Gupta (2009) emphasise the role of the British patent system in creating incentives to invent. The point being that a patent is more valuable in a large economy such as Britain than in a small economy such as Holland.

This comparison of Britain and Holland illustrates two important points. First, the two economies had much in common. They were both North Sea Area economies, which benefited from the opening of the new trade routes after 1500. The Acemoglu et al. (2005) analysis emphasises institutions in the form of constraints on the executive, but the argument of this section places more emphasis on the nature of agriculture in this region and the implications for demography and human capital. At this stage, more research would be required to arrive at a weighting of the various factors in the North Sea Area's success in forging ahead. Second, within the North Sea Area, a reversal of fortunes occurred between Britain and Holland. Dutch economic leadership during its Golden Age gave way to British supremacy during the Industrial Revolution. It would be difficult to construct an argument for this merely on the basis of constraints on the executive. Indeed, a full explanation must involve delving deeper into the structures of the two economies and the incentives to innovate in particular sectors.

3.3 Europe and Asia

Probably the most important reversal of fortunes in history, affecting the largest number of people, concerns that between Europe and Asia. However, it must be emphasised that there is still great uncertainty over the extent to which the world economy before 1500 was dominated by Asia simply because of the size of its population, or whether Asia also had higher per capita incomes. Maddison (2001) has provided some rough estimates of population levels in the major regions of the world in a number of benchmark years between 1 AD and 1998, from which the regional shares in Table 3 are derived. He was interested in the disparity of performance between what he called Group A (largely Western countries, but also including Japan) and Group B (the rest of the world). Asia clearly had a much larger population than Western Europe and the Western

Table 4: GDP per capita levels: World and major regions, from 1 AD to 1998 (1990 international dollars)

	1	1000	1820	1998
Western Europe	450	400	1,232	17,921
Western Offshoots	400	400	1,201	26,146
Japan	400	425	669	20,413
Average Group A	**443**	**405**	**1,130**	**21,470**
Latin America	400	400	665	5,795
E. Europe & USSR	400	400	667	4,354
Asia (excl. Japan)	450	450	575	2,936
Africa	425	416	418	1,386
Average Group B	**444**	**440**	**573**	**3,102**
World	**444**	**435**	**667**	**5,709**

Source: Maddison (2001: 28).

Offshoots (the United States, Canada, Australia and New Zealand) throughout that period, although the scale of the dominance declined marginally over time.

In Table 4, Maddison's (2001) "guesstimates" of per capita GDP in 1000 put Asia slightly ahead of Western Europe, but by 1820 per capita income in Western Europe and the Western Offshoots was approximately twice the level of Asia, and by 1998 the ratio had increased to seven-to-one. Recent research (discussed below) suggests that the figures for the years 1 AD and 1000, which were based largely on assumptions rather than measurement, are too low for many countries, but combining them with the population estimates underpinning Table 3 provides the regional GDP shares set out in Table 5. Whereas in 1000 Asia still produced over two-thirds of world GDP and Western Europe less than 9%, by 1820 Western Europe's share had risen to nearly 24%, and Asia's share had fallen to just over 56%. Things changed even more rapidly after 1820, so that by 1998 Asia's share had fallen to about 27%, while the combined shares of Western Europe and the Western Offshoots had risen to nearly 46%.

Table 5: Percentages of world GDP by major regions, 1 AD to 1998

	1	1000	1820	1998
Western Europe	10.8	8.7	23.6	20.6
Western Offshoots	0.5	0.7	1.9	25.1
Japan	1.2	2.7	3.0	7.7
Total Group A	**12.5**	**12.1**	**28.5**	**53.4**
Latin America	2.2	4.0	2.0	8.7
E. Europe & USSR	3.4	4.6	8.8	5.3
Asia (excl Japan)	75.1	67.6	56.2	26.9
Africa	6.8	11.7	4.5	5.7
Total Group B	**87.5**	**87.9**	**71.5**	**46.6**
World	**100.0**	**100.0**	**100.0**	**100.0**

Source: Derived from Maddison (2001: 28).

Table 6: Maddison's estimates of GDP per capita in key West European and Asian countries, 1000-1870 (1990 international dollars)

	UK	NL	Italy	Spain	Japan	India	China
1000	400	425	450	450	425	450	466
1500	714	761	1,100	661	500	550	600
1600	974	1,381	1,100	853	520	550	600
1700	1,250	2,130	1,100	853	570	550	600
1820	1,706	1,838	1,117	1,008	669	533	600
1870	3,190	2,757	1,499	1,207	737	533	530

Source: Maddison (2010).

Maddison's (2001) figures suggest that although higher per capita incomes did contribute slightly to Asia's dominance of world GDP in 1000, the most important factor was Asia's much larger population. By contrast, the growing shares of Western Europe and the Western Offshoots in world GDP arose largely from their emerging lead in per capita income. To the extent that Asia will regain its dominance of world GDP in the 21st century, much of it will clearly be thanks to its large share of the world population. However, even with continued very rapid growth of per capita incomes, overtaking Western Europe and the Western Offshoots in terms of per capita GDP levels clearly is not for tomorrow.

The above calculations are based on the conjectures of Maddison (2001), but recent research has cast doubt on his assumption of very low levels of per capita income in Western Europe before 1820, which imply rather more rapid growth rates than is consistent with the abundant evidence on output in this region. Comparing Maddison's (2010) last estimates for 1500 in Table 6 with those in Table 1, we see that his numbers are between one-half and two-thirds of the levels estimated by later researchers.

If the new estimates of per capita incomes in medieval Europe in Table 1 are correct, they call into question the perception that average per capita incomes were higher in Asia than in Europe in the first half of the second millennium, unless there are also upward revisions of Asian per capita GDP before 1820. The current picture suggested by recent research for Asian per capita incomes is set out in Table 7. Although there is some upward revision for the pre-1820 period compared with Maddison's estimates in Table 6, it is generally on a more modest scale. Japan had very low levels of per capita GDP at the beginning of the second millennium, but then experienced very modest but steady growth at 0.06% per year through to the mid-19th century. Japan's more dynamic economic expansion following the Meiji Restoration of 1868, which will be examined in greater detail below, was thus built on this earlier period of progress. By contrast, Indian per capita GDP declined from the Mughal peak under Akbar, circa 1600. Note, however, that even in 1600 GDP per capita in India was still lower than in either England or Italy.

Perhaps the most interesting Asian case is China, which has featured so heavily in the Great Divergence debate following the revisionist views of Pomeranz (2000). The figures of Broadberry, Guan and Li (2012) suggest that China was richer than England in 1086. However, they also imply that China was poorer than Italy by 1300. During the Ming (1368-1644) and Qing (1622-1911) dynasties, Chinese GDP per capita declined, so that by the 17th century, despite still being the richest Asian country, China had already fallen substantially behind

Table 7: GDP per capita levels in Europe and Asia (1990 international dollars)

	England/Great Britain	Italy	Japan	India	China
730			480		
900			520		
980					1,328
1086	754				1,244
1120					962
1150			600		
1280	679		646		
1300	755	1,376			
1400	1,090	1,601			948
1450	1,055	1,668	688		946
1500	1,114	1,403			909
1570	1,143	1,337			898
1600	1,123	1,244	787	682	852
1650	1,110	1,271	834	638	
1700	1,563	1,350	897	622	843
1750	1,710	1,403	814	573	737
1800	2,080	1,244	874	569	639
1850	2,997	1,350	933	556	600

Notes: Where possible, figures are for 10-year averages starting in the stated year (i.e. 1280-89, 1300-09 etc), but data for Japan and India are only available for benchmark years.
Sources: England/Great Britain: Broadberry et al. (2011) and Broadberry and van Leeuwen (2011); Italy: Malanima (2011); Japan: Bassino et al. (2012); India: Broadberry and Gupta (2012); China: Broadberry, Guan and Li (2012).

the leading West European economies in the North Sea Area. A number of factors played a role in China's stagnation and relative decline at this time. First, Ma (2012) emphasises China's centralised absolutism, which he sees as creating a paradox of a strong state and weak governance. China was unified earlier and over a larger territory than any other civilisation, but was characterised by decentralised governance with local predation. There was no public borrowing as a result of absolutism and the absence of credible commitment, and with absolutism plus a single monopoly of power, bankers had nowhere to run or hide. These factors help to explain the missing financial and fiscal revolutions. In international comparative terms, per capita tax revenue remained extremely low. Second, China's 15th-century turn inwards cannot have helped, coming at just the time when West European states were encouraging the voyages of discovery that would transform the global economy. Third, the small pastoral sector and the relatively early age of marriage in China provided an underlying economic structure that contrasted sharply with that of the North Sea Area.

It therefore seems likely that Western Europe was already achieving substantially higher levels of per capita income than Asia long before the Great Divergence of the 19th century. This may initially seem surprising, given the relatively high rates of urbanisation and the sophistication of urban culture in Asian economies such as China, India and Japan. However, it must be remembered that GDP per capita in these periods was dominated by agriculture and that Asian agricultural systems were much less animal-oriented than in Europe, thus creating less value

added. Nonetheless, it is worth noting that Europe's mixed agriculture with a large pastoral sector did not create a lot of kilocalories, so that Europeans at this time would not have been thought of by visitors from abroad to be enjoying a particularly high standard of living.

However, the North Sea Area pulled ahead of Mediterranean Europe in the Little Divergence and forged further ahead of Asia in the Great Divergence as high-value-added, capital-intensive, non-human, energy-intensive techniques spread from agriculture to industry and services, and as the European marriage pattern encouraged human capital formation as well as restricted fertility.

An important implication of this assessment of the long-run historical record is that although shifts in the relative rankings of countries have been common, changes in economic leadership have been rare. Asia remains a long way behind Europe, so there is no prospect of yet another reversal of fortunes in the near future. Furthermore, as we shall see in Section 5, many instances of catching up have stalled long before they have reached anywhere near the frontier, and it is likely that similar disappointing outcomes will be experienced by at least some Asian Tigers that are currently growing rapidly, a theme to which will we return in Section 4.

3.4 The United States and Great Britain

The point at which Britain was overtaken by the United States in the late 19th century has often been thought to be the phase of the second industrial revolution, or the emergence of science-based industry and mass-production technology in the United States and entrepreneurial failure in British industry. However, the sectoral patterns of comparative labour productivity set out in Table 8 suggest a more complex story. At the national economy level, it becomes clear that by 1870 aggregate labour productivity in the United States was about 90% of the UK level, and that it not only overtook Great Britain as the aggregate labour productivity leader around the turn of the century, but continued to forge ahead through to the 1950s. Since then, there has been a slow process of catching up by the United Kingdom, but by 2007 there was still a substantial aggregate Anglo-American labour productivity gap of more than 25%.

Table 8: Comparative US and UK labour productivity levels by sector, 1869-71 to 2007 (UK=100)

	Agriculture	Industry	Services	Aggregate economy
1869-71	86.9	153.6	85.9	89.8
1889-91	102.1	164.1	84.2	94.1
1909-11	103.2	193.2	107.4	117.7
1919-20	128.0	198.0	118.9	133.3
1929	109.7	222.7	121.2	139.4
1937	103.3	190.6	120.0	132.6
1950	126.0	243.5	140.8	166.9
1973	131.2	214.8	137.4	152.3
1990	151.1	163.0	129.6	133.0
2007	196.4	166.2	125.1	127.7

Notes: Benchmark estimates of comparative productivity levels for 1937 are projected to other years using time series for output and employment from historical national accounting sources.
Sources: Derived from Broadberry (1998; 2006), updated using the EUKLEMS database (O'Mahony and Timmer, 2009).

The sectoral patterns of comparative productivity performance are quite varied. In Table 8 the nine-sector analysis provided in an earlier study by Broadberry (1998) has been simplified to a three-sector basis, distinguishing between agriculture, industry and services. Industry includes mineral extraction, manufacturing, construction and the utilities, while services includes transport and communications, distribution, finance, professional and personal services and government. The first key finding to note is that labour productivity in industry was already substantially higher in the United States than in Britain by the late 19th century. Second, although the United States' productivity lead in industry increased before World War I, this was due largely to what was happening in non-manufacturing industries, particularly in mining and the utilities. Third, the United States caught up with and then overtook Britain in terms of aggregate labour productivity largely by shifting resources out of agriculture and improving its comparative productivity performance in services.

In an earlier study, Broadberry (1993) established that comparative labour productivity in manufacturing in Britain and the United States has remained stationary since the late 19th century, and Table 8 shows that this extends to industry as a whole. By contrast, the aggregate labour productivity ratio moves broadly in line with the labour productivity ratio for services. Although the United States has continued to improve its labour productivity performance relative to Britain in agriculture, there has also been a dramatic decline in the importance of agriculture, as highlighted in Table 9. Whereas in 1870 agriculture accounted for about half of all US employment, by 2007 this had fallen to less than 2%. The shift out of agriculture nevertheless has had an important impact on the comparative productivity performance of these countries at the aggregate level. This is because by the late 19th century Britain already had a much smaller share of its labour force in agriculture, which had a substantially lower value added per employee than in industry or services. Hence the large share of resources tied up in agriculture in the United States exercised a significant negative influence on its aggregate productivity performance relative to Britain in the late 19th and early 20th centuries, and as the importance of agriculture declined, this adverse effect waned.

One other aspect of the United States' rise to economic leadership that deserves attention is the role of human capital. The United States already had high levels of primary education during the 19th century, as noted by Easterlin (1981). However, it was its move to universal secondary education with the high school movement of the first half of the 20th century and the shift towards universal tertiary education in the aftermath of World War II that really marks out the distinctive role in human capital accumulation (Goldin 1998; 2001). Although this undoubtedly contributed to the country's industrial success, it was in the services sector that the general skills taught in schools and colleges were most valuable (Broadberry and Ghosal, 2002). The United States' success in services, which underpinned its rise to per capita income leadership, was in turn bolstered by heavy investment in human capital.

Many experts expect China's economy to overtake the United States in the near future, but it is important to keep clear the distinction between overtaking in terms of GDP and per capita GDP. The central message of this section is that instances when a country has overtaken the frontrunner in terms of per capita GDP actually has historically been quite rare. Although China's GDP is large because of an enormous population, its per capita GDP is still a long way behind that of the United States. Furthermore, as the following section cautions, there are many more cases in history of countries embarking on the catching-up path

Table 9: Sectoral share of employment in the United States and the United Kingdom, 1870-2007 (%)

A. United States

	Agriculture	Industry	Services
1870	50.0	24.8	25.2
1910	32.0	31.8	36.2
1920	26.2	33.2	40.6
1930	20.9	30.2	48.9
1940	17.9	31.6	50.5
1950	11.0	32.9	56.1
1973	3.7	28.9	67.4
1990	2.5	21.8	75.7
2007	1.5	16.6	81.9

B. United Kingdom

	Agriculture	Industry	Services
1871	22.2	42.4	35.4
1911	11.8	44.1	44.1
1924	8.6	46.5	44.9
1930	7.6	43.7	48.7
1937	6.2	44.5	49.3
1950	5.1	46.5	48.4
1973	2.9	41.8	55.3
1990	2.0	28.5	69.5
2007	1.4	18.3	80.3

Sources: Derived from Broadberry (1998; 2006), updated using the EUKLEMS database (O'Mahony and Timmer, 2009).

whose economic expansion stalls well before reaching the frontier. Indeed, there are good reasons to think that China and the other BRIC countries are more likely to meet this fate than to succeed in overtaking the United States.

4. Failed attempts to catch up

Well-known cases of overtaking the leading country may serve to lend an air of inevitability to the successful rise of the BRICs to global economic leadership. However, these examples are the subject of selection bias, and it is instructive also to consider the numerous instances of countries whose future looked promising when they began to catch up, but then their performance underwhelmed. A number of such examples from the 20th century provide a reminder that the success of the BRICs is far from guaranteed: (1) Argentina and a few other Latin American countries seemed to be on a very positive economic path between the 1870s and the 1920s; (2) Russia appeared to be on a promising economic trajectory from the Bolshevik Revolution through to the Khrushchev era, but then imploded; (3) Western Europe was widely expected to overtake the United States at the height of the post-World War II Golden Age, but the process first stalled and then reversed in the 1990s; (4) Japan's rapid post-World War II growth, together with technological leadership in several key industries, led many to speculate that Japan would overtake the United States, but that promise was never fulfilled

Table 10: GDP per capita, 1870-2005 (1990 international dollars)

	US	Argentina	Brazil	Japan	Russia	China	India
1870	2,445	1,311	713	737		530	533
1913	5,301	3,797	811	1,387		552	673
1929	6,899	4,367	1,137	2,026	1,386	562	728
1950	9,561	4,987	1,672	1,921	2,841	448	619
1973	16,689	7,962	3,880	11,434	6,582	838	853
1990	23,201	6,433	4,920	18,789	7,779	1,871	1,309
2008	31,178	10,995	6,429	22,816	9,111	6,725	2,975

Source: Maddison (2010).

4.1 The rise and decline of Argentina

Argentina was a spectacular success story in the late 19th century through to the late 1920s and was rapidly catching up with the developed countries of Europe and the United States. The data in Table 10 suggest that on the eve of World War I Argentina enjoyed a per capita income that had risen to more than 70% of that in the United States. This put pre-World War I Argentina on a par with European countries such as France and Germany and made it nearly three times richer than Japan.

Argentina's success rested on exporting primary products to Europe and the United States during the period of global economic integration between 1870 and 1914. Falling transport costs and refrigeration allowed Argentina to export meat and other primary products in return for manufactured imports. The process was facilitated by relatively free factor flows, with Argentina attracting both immigrants to bolster the labour force and capital inflows to finance the necessary investments (della Paolera and Taylor, 2003). Argentina enjoyed the confidence of international investors as a result of orthodox fiscal and monetary polices, with limited budget deficits and an adherence to the gold standard (Ford, 1962).

The outbreak of World War I undermined the global integration that had underpinned Argentina's period of prosperity. But more damaging still was the collapse in commodity prices after the crash of 1929, which created a serious balance-of-payments problem for a country that was so dependent on commodity exports. This was a classic external shock of the type identified by Eichengreen et al. (2011) in the post-1950 period. Along with other large Latin American countries, Argentina pursued aggressive devaluation policies, with multiple exchange-rate systems to discourage imports by distorting relative prices. In these circumstances, exchange controls were needed to maintain external equilibrium, and there were also deviations from orthodox fiscal policy as public works programmes were adopted, although these were limited in scope because of the restricted tax base.

The recovery policies of the 1930s in Argentina and other large Latin American countries were based on import-substituting industrialisation (ISI), aided by price distortions induced by devaluations, tariffs and quantitative restrictions – in strong contrast to the primary-product exporting strategy of the pre-1929 period. During the 1940s and 1950s the policies that had emerged in response to the economic crisis persisted and, initially, they appeared to enjoy some success in a world economy that was still characterised by general de-globalisation.

However, after World War II, while Latin America's share of world exports declined sharply, East Asia's share increased. Latin America lost out particularly

Table 11: Distortions in Latin America and Asia-Pacific (annual averages)

	Black market	Tariff	Price of capital	Depreciation
1960-70:				
Latin America	0.12	n.a.	0.25	0.07
NIC4	0.10	n.a.	0.25	0.04
1970-90:				
Latin America	0.26	0.22	0.27	0.37
NIC4	0.03	0.06	0.14	0.00

Source: Taylor (1998: 7-8).

to the four Newly Industrialising Countries (NIC4) of South Korea, Taiwan, Hong Kong and Singapore. Taylor (1998) attributes this failure to the distortionary impact of ISI policies in a re-globalising world, but Table 11 shows that the scale of distortions in Latin America was not massively greater than that in the NIC4 during the 1960s. For example, the black market premium on exchange rates was 12% compared with 10%, and capital goods prices were raised by 25% in both regions.

By the 1970s and 1980s, however, the scale of the distortions was much greater in Latin America than in the NIC4. For example, the price of capital goods was now 27% higher in Latin America, compared with 14% in the NIC4. Taylor uses structural econometric modelling to demonstrate the link from distortions to investment and hence to growth, and concludes that the inferior Latin American performance was largely attributable to policy failure. Persistence with ISI as the world economy re-globalised was therefore very costly in the long run, even if it had enjoyed some short-run success in the de-globalised world of the 1930s and 1940s.

Taylor (1998) argues that the early stages of reform were only really visible from the mid-1980s onwards. This raises the question of why ISI policies were pursued for so long despite the region's poor performance and the growing success of the export-oriented Asian economies. Here, Taylor adopts the framework of North (1990), based on the persistence of institutions. Latin American politics enfranchised interest groups lobbying for protection in a way that did not occur in the NIC4, and it was only with the debt and hyperinflation of the 1980s that governments were no longer able to ignore the costs of inward-looking policies and were forced to introduce appropriate institutional changes.

4.2 Russia and the Soviet experiment

Russia is generally considered to have begun a process of catching up with the West in the late 19th century following a series of economic reforms, including the emancipation of the serfs in 1861 and government encouragement to industrialise behind tariff barriers (Gerschenkron, 1962; Falkus, 1972; Gregory, 1982). To some extent, the Russian agricultural growth of the pre-World War I period was part of the same phenomenon as the Argentine development noted earlier, with Russia playing an equally important role as the New World producers in the "grain invasion" of West European markets (Federico, 2005). However, Russian performance at this time was not exceptional, and it was only following the Bolshevik revolution of 1917 and the establishment of the Soviet regime that the country really began to catch up. Table 10 shows that in 1929, just after the implementation of the first Five-Year Plan in 1928, per capita income in Russia was at a similar level to Argentina's in 1870.

Allen (2003) argues for a more favourable assessment of the period from 1928 to 1940 than is usual in the literature on Soviet economic performance, which tends to focus on the human costs of collectivisation and political repression (Davies et al., 1994). In the framework of Hausman et al. (2005), this was a period of growth acceleration ushered in by a combination of political regime change and economic reform. However, Allen argues that the increase in consumption was as remarkable as anything achieved in other celebrated late modernising countries, including Japan, South Korea and Taiwan. Although urban real wages stagnated, he argues that many Russians experienced rising consumption as they moved from the countryside to the city, while some urban residents benefited from shifting to higher-wage occupations. Furthermore, as well as a rapid transfer of resources from agriculture to industry, Russian industrialisation was accompanied by a demographic transition as education was extended to women.

However, as Allen (2003) acknowledges, the period of rapid Soviet growth was followed by an economic slowdown after World War II, and after several decades the system eventually collapsed. Some economists in the West were slow to grasp this. For example, the Nobel Prize winner Paul Samuelson wrote in the 1967 edition of his textbook *Economics* that the Soviet Union would overtake the US in terms of real GNP between 1977 and 1995. Each subsequent edition moved the date further into the future, and the comparison was dropped altogether in 1985.

The primary reasons for the economic failure of the Soviet system continue to be widely debated, with Weitzman (1970) disputing the mainstream view of Bergson (1973; 1983) that there was a slowdown in TFP growth as technology stagnated. However, one must look beyond growth accounting to arrive at a full explanation. The relationship between institutional regime and productivity performance appears to have been historically contingent. Central planning allowed Soviet industry to improve temporarily its comparative productivity position during the era of mass production. However, central planning was unable to cope with the requirements of flexible production technology during the 1980s, and the ensuing crisis contributed to the end of Soviet rule across Eastern Europe (Broadberry and Klein, 2011).

This ties into a wider theme in the literature on socialist economies, concerning the difficulties of introducing economic reforms in a centralised system. As failings in the centralised system of socialist economic planning became apparent, officially sanctioned reforms were introduced in the Soviet Union and other East European economies. Authority was decentralised to managers and workers, and "sideline" activities were tolerated. This had an intended positive effect in making it easier to obtain vital supplies and fulfil plans, but it also had the unintended negative consequence of undermining discipline and facilitating corruption, which eventually allowed insider interests to "steal the state" (Solnick, 1998; Harrison, 2012). A return to this theme will be required when considering the prospects for China, the one socialist economy that has managed to sustain a series of reforms over a long period of time.

4.3 Western Europe and the United States

Western Europe enjoyed a period of rapid growth between 1950 and 1973 that brought GDP per capita in the largest economies to nearly three-quarters of the US level, as can be seen in Table 12. Catching up by West European countries after World War II was by no means guaranteed, as the experience in the aftermath of World War I demonstrates. Eichengreen (1996) argues for a combination of more cooperative domestic as well as international economic

Table 12: GDP per capita and per hour worked in Western Europe, 1950-2005

A. GDP per capita as % of the US level

	France	Germany	Italy	UK
1950	55.1	44.8	36.6	72.6
1973	78.6	78.8	63.7	72.1
2005	72.9	67.4	63.1	73.5

B. GDP per hour worked as % of the US level

	France	Germany	Italy	UK
1973	73.9	75.4	75.9	66.0
1995	104.9	108.3	99.4	86.6
2005	100.1	82.0	82.2	84.1

Source: Derived from Crafts and Toniolo (2010).

institutions, highlighting in particular a post-war settlement between unions, employers and governments which fostered wage restraint, high investment and full employment. Following the oil crisis of 1973, the catching-up process stalled in terms of GDP per capita, and in some West European economies it even went into reverse. Table 12, however, highlights the fact that the catching-up process continued in terms of GDP per hour worked between 1973 and 1995, until the productivity gap was completely eliminated. This period can therefore be interpreted as an era when Europeans opted for more leisure than Americans. In the subsequent decade, however, the US grew faster than the major West European economies in terms of both GDP per hour worked and GDP per capita.

Crafts and Toniolo (2010) identify regulation as the primary reason why European countries fell behind from the mid-1990s onwards. Table 13 compares labour productivity growth in the EU and the United States before and after

Table 13: Contributions to labour productivity growth in the market economy (% p.a.)

	1980-95	1995-2000	2000-05
EU			
Labour productivity	2.6	1.8	1.2
ICT capital deepening	0.4	0.7	0.4
TFP in ICT production	0.2	0.4	0.2
Other capital deepening	0.8	0.4	0.3
Other TFP	0.9	0.1	0.0
Human capital deepening	0.3	0.2	0.3
US			
Labour productivity	1.9	3.0	2.9
ICT capital deepening	0.7	1.4	0.6
TFP in ICT production	0.3	0.6	0.6
Other capital deepening	0.3	0.3	0.2
Other TFP	0.4	0.5	1.0
Human capital deepening	0.2	0.3	0.4

Source: Crafts and Toniolo (2010: 325).

1995. Before then, the EU grew faster than the United States, but after 1995 this trend was reversed. Also, as of the mid-1990s the Solow paradox ("you see the computers everywhere except in the productivity statistics") disappeared. The arrival of ICT made a much stronger contribution to productivity growth in the United States than in the EU, both through capital deepening (the use of ICT across the whole economy) and through production (Silicon Valley). Crafts and Toniolo argue that the diffusion of ICT has been held back in Europe by regulation. Furthermore, they emphasise that although Europe has always been more heavily regulated than the United States, the adverse effects of regulation on productivity performance have only become apparent in the changed context of the new technological opportunities generated by ICT. This illustrates the general point that institutions which are well suited to a particular era can sometimes serve to hinder development in a subsequent period, a theme which is developed later in more detail.

4.4 Japan and the West

Japan began to catch up to the West following the institutional reforms of the Meiji Restoration in 1868, a classic example of regime change (Hausman et al., 2005). It is worth pointing out, however, that although catching up is apparent in the Japan/United Kingdom comparison of GDP per capita before 1929 in Table 14, no such pattern can be gleaned when comparing Japan and the United States, since the latter was overtaking the United Kingdom during this period. By contrast, the strides Japan made in closing the gap with the United States during the 1930s were largely due to the severity of the Great Depression in the United States, as Japan actually made no progress in catching up with the United Kingdom in the run-up to World War II. The stalling of Japan's efforts to catch up with the West from 1929 onwards coincides with the rise of extreme nationalism, which paved the way for imperialist expansion and the disastrous decision to align itself with the Axis powers in World War II. Indeed, by 1950 Japan was now further behind the West than at any time since World War I.

A second period of Japanese catching up with the West resumed between 1950 and 1990, followed by another period of reversal during the past two decades. Whereas the first phase was based on cotton textiles, with the combination of imported technology and cheap wages making Japan more competitive as wages

Table 14: GDP per capita in Japan as a percentage of the United Kingdom and the United States

	Japan/United Kingdom	Japan/United States
1871	22.3	29.6
1911	28.8	26.9
1929	36.8	29.4
1935	36.6	38.8
1950	27.7	20.1
1960	46.1	35.2
1973	95.1	68.5
1979	100.0	70.1
1990	114.4	81.0
1997	112.9	80.3
2007	97.1	73.2

Source: Derived from Maddison (2010).

rose during the second phase, the country shifted to higher-skill sectors and cotton textiles moved to lower-wage economies such as Brazil and Bangladesh. Japan's post-World War II success was based initially on shipbuilding, but then on motor vehicles and consumer electronics as the economy evolved from imitation to innovation. By the 1980s Japanese manufacturing had attained a position of technological leadership in some sectors, with modern flexible production methods undermining mass production methods in the United States. During the 1980s this sparked concerns that Japan would overtake the United States, reflected in the writings of Baily and Chakrabarti (1988) and Dertouzos et al. (1989). However, as with the case of Western Europe, the institutional framework that was well suited to catch-up by relying on industry was less effective to forging ahead on the basis of services.

An effective way to shed light on Japan's – and Western Europe's – failure to overtake the United States is provided by the "varieties of capitalism" literature (Hall and Soskice, 2001), which points to differences between economies in institutional complementarities. Each national economy is seen as having a different set of institutions, which have evolved historically and interact together to provide a set of incentives for economic agents that underpin prosperity during successful phases. A fault line is usually drawn in this literature between "coordinated market economies" (CMEs) such as Japan and Germany, on the one hand, and "liberal market economies" (LMEs) such as the United States and the United Kingdom, on the other. Key elements of Japan's coordinated market economy include lifetime employment, seniority wages, *keiretsu* business networks and a bank credit-based financial system (Witt, 2006). At a time when radical economic change ushered in by the ICT revolution is needed, coordinated market economies are seen as facing particular difficulties of adjustment, involving intensive bargaining and consensus-building among employer organisations, labour unions, interest groups and government.

However, as Chen (2008) points out, periods of radical technological change are often followed by a maturation phase, a central idea of the Schumpeterian General Purpose Technology (GPT) literature (Helpman, 1998). During these more settled periods, the advantages of the institutional complementarities of the CME can be expected to offset the disadvantages that are more clearly visible during the phase of radical technological change. That is not to deny that continuous reform is needed for economic success, but rather to stress that negotiation and consensus-building may be expected to work better in a more settled environment. Nonetheless, the removal of economic turbulence is no guarantee of success. Institutional reform will still be needed if Japan is to avoid the continued stagnation and relative decline experienced by countries such as Argentina in the second half of the 20th century. This illustrates the fact that it is difficult to predict a country's reversal of fortune, or at least changes in its position versus other nations engaged in the catching-up process, so that naive rules for prediction, such as the approach adopted by O'Neill (2005) and Goldman Sachs, are unlikely to succeed.

5. Projections to 2030

Beyond having relatively large populations and therefore significant shares of world GDP, the BRIC countries actually have little in common. Certainly, if the purpose is to focus on GDP per capita levels, as is the case in the catching-up framework that dominates international growth comparisons, it is essential to treat these countries separately.

Major reversals of fortune for leading economies have been rare in the last millennium, and there are few signs to suggest that the United States will be overtaken in terms of GDP per capita in the foreseeable future. In fact, there are good reasons why these changes of leadership rarely occur. First, when a leading economy forges ahead on the basis of new technology, it is likely to be adapted to the conditions in the innovating country and may not be appropriate for use in a country in the process of catching up with different endowments and factor prices. This means that periods of technological and per-capita-income leadership can be quite resilient. There is a large historical literature with respect to the United States' technological leadership in the 20th century, which has recently been adapted to the case of British technological pre-eminence in the 19th century (Habbakuk, 1962; David, 1970; Broadberry, 1997; Allen, 2009; Broadberry and Gupta, 2009). Second, as mentioned in the case of Japan, there is a body of literature on the "varieties of capitalism" that stresses the interlocking nature of the institutional framework, making it difficult for countries to challenge the new leading economy (Hall and Soskice, 2001). Within this framework, the fact that it is a combination of institutions and the way they interact which underpins a country's advantage frustrates attempts to identify individual sources of success and helps to explain the inability of authors such as Hausman et al. (2005) to find robust results when it comes to the causes of growth accelerations.

However, there is a caveat. It is important to note that it is extremely difficult to identify these major changes in advance. There are no signs, for example, that Adam Smith [1776] understood the significance of the Industrial Revolution that was taking place around him while he was writing *The Wealth of Nations*. Existing projections tend to work either on the basis of naive extrapolation of recent growth rates or the Goldman Sachs BRICs methodology, which is based on automatic catch-up growth and real exchange-rate appreciation with economic development.

Working within an incomplete catching-up framework, the case studies considered in this chapter suggest that it is important to draw a distinction between examples such as Western Europe and Japan, where catching up stalled close to the frontier, and countries such as Argentina and Russia, which fell well short of closing the gap.

In 2008 the richest BRIC country, Russia, had a per capita income of $9,111 in 1990 international dollars, or just 29.2% of the US level (see Table 10). Russia's previous experience of rapid catch-up growth during the Soviet era was followed by decline and eventual collapse as institutional reforms failed. Although the revival of growth since 1998 has taken place within the context of a market economy, Russia's authoritarian government provides very selective enforcement of property rights. It is also strongly dependent on natural resources and continues to be highly vulnerable to a terms-of-trade shock. The prospect of Russia providing a serious challenge to the economic leadership of the United States therefore seems extremely remote.

Box 2: Alternative price comparisons and the implications for the level of real per capita income in developing countries

The GDP per capita data in Table 10 are presented in 1990 international dollars. Adopting this approach, per capita incomes in individual countries, expressed in their own currencies, are converted to 1990 dollars based on a comparison of prices in that year. This yields a set of purchasing power parities (PPPs) between countries, which can differ substantially from market exchange rates. This is because market exchange rates are determined in asset markets and do not necessarily reflect differences in the price of goods and services sold in different countries, although most economists believe that, in the long run, exchange-rate movements do reflect fundamental economic forces and move so as to reflect PPPs. The use of 1990 international dollars as the standard of comparison was established by Maddison (1995), and he retained this approach until his death in 2010, despite the fact that a new set of PPPs had become available based on 2005 international dollars.

The 1990 PPPs used by Maddison (1995) were taken from the International Comparison Program (ICP), which conducted price surveys in a number of countries at roughly five-year intervals (Kravis and Lipsey, 1991). In total, the ICP estimates covered 43 countries accounting for around 80% of world GDP, but the 1990 round covered only 22 countries, so that Maddison was forced to establish linkages to other ICP rounds and find proxy estimates for countries not covered in any survey. The 2005 PPPs have one important advantage over the 1990 PPPs in that the price surveys conducted by the World Bank (2008) cover many more countries than were directly available for the 1990 PPPs. However, they have also proved controversial, largely because they led to a dramatic downgrading of the level of GDP per capita in developing countries relative to the United States and other developed economies. One reason for this is their reliance on price levels in urban areas, where prices are higher than in neighbouring rural areas. As a result, it is likely that the 2005 PPPs overstate the price level in developing countries, and thus understate the level of real GDP per capita.

Table B.1: Comparison of GDP per capita in 2005 using estimates from Maddison and the World Bank (US=100)

	Maddison, based on 1990 PPPs	World Bank, based on 2005 PPPs
United States	100.0	100.0
United Kingdom	73.9	75.8
Japan	72.1	72.7
France	70.7	71.1
Italy	63.7	66.6
Russia	24.0	28.5
Brazil	19.3	20.6
China	18.3	9.8
India	8.0	5.1

Sources: Derived from Maddison (2010) and World Bank (2008).

Using the 1990 PPPs for his benchmark comparison, Maddison (2010) obtained the levels of GDP per capita relative to the United States in 2005 shown in the first column of Table B.1, but the 2005 PPPs from the World Bank (2008) yield quite different results (in the second column) for some countries. In developed countries, the 2005 PPP estimates of GDP per capita relative to the United States are reasonably close to the 1990 PPP results. The results are also quite similar for Brazil, but the proportional difference is more substantial in the case of Russia. However, for China and India the differences are dramatic. Indeed, using the 2005 PPPs downgrades the level of GDP per capita relative to the United States from 18.3% to just 9.8% in the case of China, and from 8% to 5.1% with respect to India. For China, that is almost halving living standards relative to Western countries, and it amounts to a proportional reduction of about 40% for India (de Jong and van Ark, 2012).

Some attempts have been made to adjust the 2005 PPPs in the case of China, most notably by Penn World Tables (2012), but the scale of the adjustment for rural-urban price differences is relatively small and merely raises Chinese GDP per capita to 11.3% of the US level in 2005. Perhaps the 2011 ICP round will mitigate some of these problems, but the results are not yet available.

China had a per capita income of $6,725 in 2008, or 21.6% of the United States level, but slightly above Brazil's $6,429 (see Table 10). Fogel (2010) recently caused a stir by predicting Chinese GDP of $123trn in 2040 by simply projecting an annual growth rate of 10.8% for 30 years. This is based on a naive extrapolation of recent trends in growth and is probably too optimistic. Indeed, even the Goldman Sachs BRICs methodology, with its allowance for slowing down as the frontier is approached and for real exchange-rate appreciation with economic development, may produce overoptimistic results if institutions are not allowed to be flexible in a country that remains governed by the Communist Party.

India is the poorest of the BRIC countries, with a per capita GDP in 2008 of $2,975, or 9.5% of the US level (see Table 10). Although growth has been less impressive than in China, it nevertheless does have an interesting economic structure, which becomes clear from the comparison with China in Table 15 (Bosworth and Collins, 2008). First, however, it is worth noting that TFP growth in both countries was much less impressive than output growth or even labour productivity growth during the period 1978-2004. In India, total TFP growth was just 1.6% per annum, and while China's 3.6% per annum growth was more impressive, it was not out of line with previous experiences of catching up in Japan and Europe.

The sectoral differences in TFP growth are instructive, confirming the general impression that Chinese growth was led by manufactured exports and Indian expansion by tradable services. Chinese TFP growth was most pronounced in industry at 4.3% per annum, but much slower in services and agriculture. The sectoral pattern was very different in India, where TFP growth was very slow, at just 1.6%. By contrast, Indian TFP growth in services was more significant at 2.4% and higher than in China. Indian sectoral TFP growth thus looks more modern, oriented towards services rather than industry. This is a positive aspect of Indian growth that can help offset the problems associated with institutional quality that seem to be endangering India's tiger economy status.

Much of China's growth, based on exporting low-wage manufactures, faces a challenge as wages rise. The product cycle model suggests the need to become more innovative rather than imitative, to move up the value-added chain in

Table 15: Sources of growth in China and India, 1978-2004 (% p.a.)

		Contribution to output per worker		
	Output per worker	Physical capital	Education	TFP
Total GDP				
China	7.3	3.2	0.3	3.6
India	3.3	1.3	0.4	1.6
Agriculture				
China	4.3	2.3	0.3	1.7
India	1.4	0.3	0.3	1.7
Industry				
China	7.0	2.2	0.3	4.3
India	2.5	1.5	0.3	0.6
Services				
China	4.9	2.7	0.3	1.8
India	3.5	0.6	0.4	2.4

Source: Bosworth and Collins (2008).

Box 3: The size of China and implications for its growth prospects

One striking feature of the Chinese economy is its sheer size. In terms of population it is almost five times the size of the United States, three times the size of the European Union, and ten times the size of Japan. Indeed, some of the larger provinces in China are nearly as large as Japan or Germany. China is a continent all by itself. But more than that, China is also the world's largest common market, unified by a single (written) language and marked by an unusually high degree of ethnic homogeneity given its size. China can perhaps also claim to be the sole surviving civilization with a continuous national history.

China's size is not a historical accident but an endogenous outcome of history interacting with geography, leading to a unitary and centralised political governance system. Historically, both size and political structure have posed challenges and opportunities for economic growth. Confronted by aggressive Western imperialism in the mid-19th century, China's large territory and its political rigidities help to explain the lagged response to Western challenges compared with Japan's concurrent rapid modernisation.

From the late 1970s, however, key features of political and institutional legacies – aptly encapsulated under the term regionally decentralised authoritarianism (RDA) – enabled remarkable economic growth under a largely statist institution. By simulating market-supporting institutions, RDA provided a selective but effective property rights protection and contract enforcement mechanism within a political and administrative hierarchy tempered with a partial introduction of modern judiciary. RDA is relatively effective in the catching-up phase, as the goals, actors and agents for supporting growth are relatively easy to identify and pick. However, with China now entering its third decade of sustained high-speed growth, it may become increasingly difficult to realise genuine welfare improvements that are measured by hard data.

The Chinese experience bears some resemblance to the economic miracles of Japan, Korea and Taiwan during their catching-up phase. However, by the 1980s both Taiwan and Korea had achieved a peaceful transition to political representation and democratisation, which partly helped to realign the objective of national economic growth with local welfare improvements, as demanded by their citizens. But as a result of its size, mainland China's path may be far more unpredictable and hazardous, marred by much more complicated problems of regional diversity, imbalances within and a dogmatic nationalist ideology on national sovereignty. As a result, China's sheer size brings with it risks as well as opportunities for the future of the Chinese economy in the decades to come.

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industry. China also needs to become more competitive in services if it wants to develop a more balanced economy. Such transformations will require a very different institutional framework. However, as noted in section 4.2 on Russia and the Soviet experiment, and in contrast to all other socialist economies where attempts at economic reform failed rapidly, China has succeeded in introducing a series of reforms which have raised the growth rate substantially for a period of three decades (Harrison, 2012).

How has China succeeded where others failed? Xu (2011) characterises the institutional framework as "regionally decentralised authoritarianism" (RDA), which he sees as mimicking the multidivisional form (M-form) firms in Western economies, with provincial leaders acting much as divisional managers, competing for advancement within an internal labour market. As in other reforming socialist systems, decentralisation has created new stakeholders, but the state has retained the senior stake by maintaining a large public sector and by withholding secure property rights. However, in contrast, the Chinese system has worked well, with competition among entrepreneurs harnessing the private sector to the objectives of national economic modernisation and rivalry among

provincial leaders breaking the resistance to policy reform that led to failure in other socialist economies. Xu (2011) argues that the system has worked well in China because the sub-national governments are sufficiently large to be relatively self-contained, so that the provincial leaders can have overall responsibility for introducing and coordinating reforms, providing public services and enforcing the law within their own jurisdictions.

But can this success be expected to continue as China approaches the frontier? The M-form firm proved very successful at achieving a limited set of objectives during the Fordist era of mass production, but was unable to cope with the fragmentation of objectives as mass production gave way to flexible specialisation. RDA has been a success while China has been a long distance from the frontier, but there is no guarantee this will continue as the frontier gets closer, let alone when China is seeking to overtake the United States. Basing himself on 19th-century experience, Gerschenkron (1962) argued that countries starting to catch up from a position of backwardness could substitute for the prerequisites of growth, citing for example Imperial Russia's substitution of state action for scarce private entrepreneurship. In the Chinese system of RDA, the

Box 4: African growth prospects

In April 2011 the South African president, Jacob Zuma, attended a meeting of the BRIC countries, signalling his country's long-sought admission to the political bloc. South Africa's invitation to the meeting was controversial, given the relatively small size of its economy. Proponents of the move suggested it reflected increasing optimism about Africa's growth prospects, with South Africa acting as a gateway to the rest of the continent. The inclusion of Nigeria in the Next 11 (N-11) group of emerging economies was another such indicator. Opponents of South Africa's admission to the BRIC countries, however, pointed to a number of obstacles to sustained growth faced by other African countries, including a continuing reliance on primary exports and problems of governance.

Relatively rapid growth in African GDP since the late 1990s has led to suggestions by both the media and international organisations that Africa is poised to catch up with wealthier parts of the world in the 21st century. Indeed, from 2002 to 2008 GDP grew by an average of 5.6% per annum, which placed Africa second only to East Asia in its rate of economic growth, and at the onset of the global crisis, ten of the 15 fastest-growing countries were in Africa (United Nations, 2012).

This is not the first period of rapid growth in Africa. African economic history has increasingly emphasised a long-run trajectory of rapid growth periods followed by phases of low growth or even contraction (Ndulu and O'Connell, 2007). Following independence in the 1960s, Africa's prospects looked more hopeful than those of South Asia. GDP grew at an average of 4% per annum, although high population growth rates reduced annual GDP per capita increases to less than 2% (United Nations, 2012). Driven by primary commodity exports, this period of growth fizzled out in the late 1970s and was followed by two decades of stagnation, and in some cases economic decline, along with rising poverty rates.

Similarly, the current boom in Africa is largely the result of demand for primary commodities from emerging economies, notably China and other BRIC countries. Limited structural transformation continues to constrain Africa's growth prospects (Ndulu and O'Connell, 2007), leaving many countries vulnerable to external shocks. The failure of import-substituting industrialisation in the 1960s and 1970s resembles Argentina's experience and suggests that Africa may also struggle to catch up. Manufacturing as a share of GDP is growing in some countries, but most remain dependent on imports. Moreover, political instability and corruption are also likely to limit the sustainability of current growth rates across much of the African continent (United Nations, 2012).

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incentive structures provided to the provincial governors to compete to achieve economic modernisation arguably made up for the lack of secure property rights. But as the private sector grows, as objectives multiply and pressures for democracy increase, it is unlikely that this system can continue to deliver the rapid growth of the past two decades.

There is thus some interest in looking beyond the BRICs to other emerging markets which could be expected to grow rapidly in the future. Goldman Sachs, for example, have drawn attention to the "Next 11" (N-11) group of countries (O'Neill, 2005), and since the "discovery" of the BRICs a number of African countries have seen a dramatic improvement in their growth performance. In this context, Box 4 considers Africa's growth outlook and assesses the continent's prospects of catching up in the decades ahead.

6. Policy conclusions

- Taking a long-term perspective is important. Indeed, history matters. Although much policy analysis in this field is based only on very recent trends, issues of shifting competitive advantage between nations are usually played out over very long periods of time, for which economic history is an indispensable guide.
- Changes of leadership in per capita income have been rare in history. Once a country gets ahead, it tends to remain number one for a long time. This is partly due to "appropriate technology": different endowments and factor prices mean that technology cannot be transferred to other countries without adaptation to local circumstances. This effect is reinforced to the extent that institutional frameworks contain interlocking elements, so that it is not possible to "pick and mix" from the institutional framework in different countries.
- The process of catching up does not necessarily continue once it has started, so that the future success of any of the BRIC countries is by no means a foregone conclusion.
- It is important to distinguish between policies that can help to get growth accelerations started and policies that are needed to sustain them or prevent growth slowdowns.
- There is often a tension between historical context and general conclusions. Policy conclusions are usually context-specific and defy generalisation. Institutions that foster growth in the early stages of catching up can hinder growth later on, so that, for example, a country that adjusts its institutions to catching up thanks to industry may struggle to compete in services at later stages of development.
- Institutions need to be stable enough to foster long-term growth while also being flexible enough to cope with changing circumstances.
- One common factor which unites the more successful cases of catching up and forging ahead is the accumulation of human capital. This is necessary not just for the creation of high technology in industry, but increasingly for the diffusion of more basic technology in services.
- As the richest BRIC country, Russia has a per capita GDP of about 30% of the level in the United States. Russia's previous experience of catch-up growth during the Soviet era was followed by a growth slowdown and collapse. Although the current era of rapid growth has taken place within the context of a market economy, Russia's authoritarian government provides only selective enforcement of property rights. If catching up is to continue in Russia, reforms will be needed to ensure a more transparent rule of law.

- Although China's per capita GDP is about 20% of the US level, the country's rapid growth has now been sustained over three decades, a remarkable achievement when compared with the rapid collapse of other reforming socialist economies. The system of regionally decentralised authoritarianism has worked relatively well, despite the state withholding secure property rights. This is because of competition between provincial leaders with responsibility for initiating and coordinating reforms, providing public services and enforcing the law within their own jurisdictions. However, as China approaches the frontier, further reforms will be needed. Although the system of RDA has in effect been substituted for the lack of secure property rights in the early stages of catching up, when the objectives of modernisation are put under the spotlight, this is unlikely to be sustainable as the private sector grows, objectives multiply and pressures for democracy grow.
- India is the poorest BRIC country, with a per capita GDP of around 10% of the US level. Although there are real concerns about the level of corruption in India, it is worth noting that India is the only BRIC country where success has been driven more by services than by industry. This bodes well for the future, as a key characteristic of many rich countries is their strong performance in the services sector.
- Although South Africa has only recently succeeded in attaching itself to the masthead of the BRIC countries, this has brought further attention to the recent phase of high growth in Africa. However, an earlier period of strong economic expansion in Africa was not sustained, and there is good reason to be sceptical about the sustainability of this current growth phase, not least because of continued political instability and corruption in many countries across the continent.

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5 / The View from the Developing World: Institutions, Global Shocks and Economic Adjustment

Sharun W. Mukand

1. Introduction

Economic crises will always be with us. As Reinhart and Rogoff (2009) have documented in detail, periods of economic growth during the past couple of centuries have been interrupted repeatedly by economic shocks. Indeed, economic crises have even buffeted the world economy over the past 60 years, at a time when the global economy has experienced the most sustained period of economic growth in history. These sporadic and unexpected global economic shocks have often resulted in a sharp reduction in investment, a contraction in economic output and, in some cases, sharply lower consumption levels. In this context, this chapter examines how governments in developing countries, in particular, have responded to these types of negative shocks in the aftermath of the global financial crisis of 2008. This chapter also analyses the reasons why the policy response has been adequate in some countries and not in others, and explores the economic and political consequences of an inappropriate policy response.

This global financial crisis resulted in declines in output and growth across virtually all OECD countries. However, the impact of the crisis on low- and middle-income countries was very uneven. Middle-income countries in the near periphery of Western Europe, such as Latvia and Greece, were severely affected. In contrast, a striking feature of the experience of many low- and middle-income countries in Asia and Latin America was how quickly they managed to recover from the economic recession that engulfed almost all of the high-income OECD countries. Despite a dip in growth, China retained its double-digit economic expansion throughout the last decade, followed closely by India, which continued to grow at an average of about 8% per annum. Similarly, economic recovery was impressive in countries as diverse as Brazil, Turkey and South Africa, to the extent that the experience has led some observers to wonder whether developing countries have found the appropriate mix of policies and institutions that has insulated them from the adverse consequences of a global economic shock.

There are three key observations to make with regard to the growth experience of low- and middle-income countries in the aftermath of the 2008 financial crisis. First, the fact that many of the most prominent developing countries continued to do well should not mask the fact that the global crisis did have a substantial negative impact on growth in the developing world, with average growth rates in developing countries declining from around 6% before the crisis to around 3% in 2009. In other words, there was considerable diversity in these countries' performances, with many (especially smaller and more open ones) seeing growth

rates collapse.[1] Second, there is the issue of sustainable growth. Over the past couple of years even the erstwhile success stories of the developing world have stumbled, with India's real GDP growing at 4%, its slowest rate since 2005; economic expansion in Brazil virtually stalling, with real GDP collapsing from 6% in 2007 to 0% in 2009; and even China posting a much weaker real GDP growth rate at 9% in 2009, down from 14% in 2007. Therefore, even these large economies with substantial domestic markets have not been able to sustain their economic growth rates and have increasingly seemed to be handicapped by their own structural and institutional constraints. Third, the financial crisis has exposed the unsustainable nature of policies being pursued by middle-income countries, such as Greece, which helped trigger the eurozone crisis.

This chapter thus focuses on the importance of a country's political and institutional underpinnings to its ability to adapt and adjust in the face of an economic crisis. Given the large number of countries in question and the diverse nature of developing economies in particular, this chapter emphasises the broad mechanisms and common patterns of these countries, rather than individual country-specific case studies. The main themes of this chapter can be summarised as follows.

(i) Heterogeneity in economic adjustment across countries.

While economic shocks are global, economic recovery is very much local. There is considerable heterogeneity in the degree of policy and economic adjustment across countries. These differences in the recovery across countries are not simply because the severity of the shock will differ across countries. Rather, it is because even a symmetric global shock can have very different distributional effects across countries and will thus alter the political response to the crisis.

(ii) The political economy of reform and adjustment.

Some countries alter policies quite promptly, while others suffer from prolonged policy inertia. However, the policy paralysis that often characterises the response to a negative economic shock is not necessarily attributable to ignorance of the appropriate course of action to take. Rather, the policy response is best understood by accounting for the impact of the crisis on the distribution of political power across various groups. Economic shocks can trigger social conflict across groups in a society. As Frieden (2009) has argued, "every crisis is followed by conflict over the distribution of the adjustment burden". The extent to which these unexpected shocks exacerbate conflict depends on both the distributional impact of the shock as well as the strength of existing institutions of conflict management within society. If the shocks reinforce ethnic inequality and there is an absence of social insurance (as is the case in developing countries) and other institutions of conflict management, then political paralysis in policymaking is more likely.

(iii) History and local institutions matter.

While economic principles are universal, their implementation is intermediated through local institutions – which are themselves a product of country-specific history, political institutions and culture. These local differences mean that the task of economic policymaking is much more difficult than it may seem at first glance. This is because policies themselves have to be adapted to local contexts and intermediated through pre-existing social norms and institutions.

1 Berkmen et al. (2012) use cross-country regressions to analyse the factors that affected the response of developing and emerging-market countries to the global economic crisis.

(iv) Practical mechanism design and political constraints.

Policy design is important and should recommend not just the best set of policies, but also what can practically be implemented. Therefore, policy recommendations should take into account incentives of both economic *and* political actors, while also considering existing institutional constraints. Policymakers (with the help of economists) should point out where to seek help with institutional design with the aim of reducing (but *not* eliminating) existing political constraints.

Many periods of economic growth have followed or coincided with the diffusion of economic reform across the developing world. With the spread of economic reform, economic growth that had earlier been largely confined to Europe and North America gradually spread to parts of the developing world. However, the incidence of economic growth has been uneven across time and space. Indeed, sustaining economic reform has often turned out to be quite difficult. Political upheaval, military conflict or economic gridlock have resulted in economic stagnation in some countries and even growth reversals in others. It is important, therefore, to examine in more detail the factors that affect a country's ability to react and adjust to global economic shocks.

2. Globalisation and the political economy of adjustment and reform

Countries differ in their ability to respond to major economic crises. This is not just because good policymaking is difficult and the optimal course of action is sometimes difficult to ascertain. Indeed, inefficiencies abound in all areas of policymaking owing to constraints faced by decision-makers – be they informational, administrative or political. The ability of governments to assimilate new information and to adapt and adjust their policy choices depends on existing policies and institutions. This is in large part because different political institutions may exacerbate or alleviate the ability to carry out reform.

A central message of this Policy Report is the importance of taking into account political considerations. No account of a country's adjustment and recovery would be complete without explicitly incorporating the role of extant political institutions, political and economic exigencies and constraints. In this context, it is important to begin with an overview of the various mechanisms that affect a country's ability to recover from a shock, to make the appropriate policy adjustments and to get it back to a growth trajectory.[2] The various mechanisms are examined in some detail, since it helps to shed light on particular country episodes.

The systematic exploration of how countries (fail to) respond to economic crises started with the confluence of two strands of literature. First, there was the attempt to understand why governments in many developing countries failed to reform policies and institutions, despite low growth, stagnation and overall inefficiency (Rodrik, 1996). Second, there were new developments in the study of political economy. In particular, there was a growing recognition of the power of the public choice critique of traditional policy analysis pioneered by Buchanan and Tullock (1962). This literature emphasised that a policymaker's preferences may be quite distinct from a social planner's and result in inefficient policy choices, i.e. government failure. Therefore, a policymaker's choices may be driven by a desire to stay in office, or giving a very different weight to the preferences of certain individuals (or groups) than a social planner. However, the

2 Much of the discussion in this section closely follows Mukand (2008).

insights from the public choice tradition were not explicitly grounded in a rational choice framework. This is where the literature on time-inconsistency played a crucial role, thanks to the classic contribution of Kydland and Prescott (1977). This literature demonstrated the importance of clearly specifying the policymaker's objectives and accounting for constraints within a framework of optimisation. However, the study of the political underpinnings of policy reform really took off when insights from this new political economy were used to deepen our understanding of economic crises, poverty traps and institutional inefficiencies in developing and transition economies.

Policy reform generally is difficult to achieve. Indeed, understanding the persistence of inefficient policy choices has been one of the central themes of much of the literature on policy reform. It is possible to delineate the mechanisms described in the literature by focusing on two kinds of conflicts that make all policy reform more or less difficult. The first is the distributional conflict between different groups of citizens and individuals, be it as a result of differences in income, occupation, ethnicity or even religion. Given that much of policymaking is an attempt to balance these competing interests, the ability of a society to resolve this conflict is likely to affect its ability to reform. Second, the ability of a society to reform a policy that has failed may be the result of a conflict of interest between politicians and/or policymakers and the public.

2.1 Distributional conflicts and policy inefficiency

During the 1980s Latin America witnessed a number of macroeconomic crises caused by delays in enacting a stabilisation policy (Rodrik, 1996). The puzzle is, why were these stabilisation policies delayed? In a near classic in this field, Alesina and Drazen (1991) addressed this issue, highlighting the fact that policy reform can be delayed owing to a "war of attrition" between two groups.

Given the uncertainty about the other group's willingness to bear a disproportionate burden of the adjustment costs, each group delays adjustment measures in the hope that the other group caves in first. As a result, the economic crisis worsens before one of the two sides gives in and reform takes place. At its broadest level, the inefficiency in policymaking in democracies generally arises from a commitment problem. Governments which are vulnerable to losing power are often unable to commit to future policy outcomes. This failure to commit can result in inefficient policy choices for a variety of reasons (see Besley and Coate, 1998). In particular, most policy reforms have distributional consequences, resulting in winners and losers. However, there is a time-inconsistency problem with promises of future compensation, as Acemoglu (2003) and Robinson (1996) point out. Therefore, what is key is the inability of a government credibly to commit to compensate losers from economic reform. Not surprisingly, if losers are in a majority (or politically influential), they will be not only be opposed to policy reform, but will be in a position to prevent the implementation of such measures, even if they are efficient. Now, if a government through some form of taxation and transfers could credibly commit to compensate losers for their losses, then policy reform would be much easier to achieve. In part, the difficulty in making credible promises to compensate losers is that the gains and losses from policy choices are spread out over time, while the winners may not have enough resources to compensate the losers up front for their subsequent losses (see Dixit and Londegran, 1996).

However, the inability to compensate losers is not in itself sufficient to explain the failure to introduce policy reforms. If individuals are risk-neutral, then they may well be willing to adopt a policy that results in winners and losers. For

example, consider an economy where 100 risk-neutral voters face the prospect of voting for or against policy reform. If enacted, this policy reform will result in 51 winners, each of whom stands to gain $5, and 49 losers, each of whom stands to lose $1. One might assume that since (in expected terms) all individuals stand to gain from the adoption of this reform, it will always be enacted – regardless of whether the winners compensate the losers or not. However, in an important contribution Fernandez and Rodrik (1991) suggest that this is not the case. They argue that even in a world with risk-neutral agents, individual-specific uncertainty about the identity of winners and losers from a reform may prove to be crucial. In particular, to continue with this example, consider the case where the identity of 49 of the 51 winners is common knowledge. In this case, there is individual-specific uncertainty among the remaining majority about their identity as a winner or a loser. This uncertain majority now has a negative expected payoff from the reform and will vote it down. Therefore, in cases of individual-specific uncertainty, a majority may well vote against a policy, despite the fact that a majority stands to benefit from it.[3] Extending this example still further, Jain and Mukand (2003) show that policy reform may fail to get enacted, despite the existence of tax-transfer compensation instruments. Social conflict across groups, coupled with the failure of a credible and efficient means of conflict resolution, can result in the persistence of inefficient policies.

2.2 Political losers, agency and policy inefficiency

Once in power, politicians reap both economic and non-economic benefits. As such, there may be a failure to enact a policy reform if it adversely affects the rents earned by the incumbent politician. A number of mechanisms have been studied. The prospect of earning rents from a status quo policy can make the adoption of policy reform by the politician much more difficult. Coate and Morris (1999) show that the mere introduction of a policy encourages the affected parties to make investments that increase their willingness to pay for retaining these policies in the future.[4] If, in the period ahead, the efficient policy is no longer the status quo policy, then there may be a problem. Any government attempting to reform the status quo policy is likely to be vulnerable to lobbying by the now entrenched firms.

Indeed, in the presence of policy choice uncertainty, this inefficiency is exacerbated. For instance, many commentators have questioned why US president Lyndon B. Johnson persisted with military escalation in the Vietnam war, even though it was apparent to him (and most others) that such a policy was unlikely to work. Similarly, many analysts have been puzzled by the persistence of policymakers in many Latin American countries to pursue extreme neo-liberal policies, despite the fact that they do not seem to work. Majumdar and Mukand (2004) suggest the reason may be reputational. In particular, suppose that the initial policy choice is a function of the policymaker's ability. In this case, even if the policy seems to be failing, the policymaker may persist with it despite the fact it is not efficient to do so. This is because a policy reversal by the incumbent will call into question his or her competence for choosing such a course of action in

3 Fernandez and Rodrik (1991) argue that this mechanism throws light on the experience of Taiwan and South Korea in the 1970s, and Turkey in the early 1980s. In each case, there was a considerable segment of the population that was opposed to reform before it was enacted. However, once it was introduced, a majority came to back the same reform they had opposed.

4 Coate and Morris (1999) help to throw light on the experience of many countries in the developing world, where tariffs remained in place long after they had been discredited as an effective type of economic policy.

the first place. It is fear of the adverse reputational (and electoral) consequence brought about by such a policy reversal that results in continuing stubbornly with an inefficient policy.

2.3 Lobbying and economic reform

In today's world it is difficult to articulate policies that have not been influenced by special interest groups. Such lobbying can have an important effect on the trajectory of economic adjustment. The importance of lobbying in economic policymaking has long been recognised (see Olson, 1965; Grossman and Helpman, 2002). Suppose that a government is trying to implement a reform package in order to help adjust to a negative economic shock. In this case, firms that stand to benefit are likely to organise themselves and lobby in an attempt to mitigate any adverse effects of these reforms. Such lobbying may slow or derail any attempts at economic reform and prevent a successful adjustment. While plausible, it should be recognised that this argument is incomplete. As observed by Becker (1983), the fact that lobbying exists does not necessarily mean that policy choices will be inefficient. After all, any economic reform that takes place in response to an economic crisis will result in winners and losers. A priori, it is not at all clear why the winners from such reform will not counter-lobby as effectively as the losers. However, as first observed by Grossman and Helpman (2002), economic reform in response to an economic crisis is not only likely to have distributional effects. In fact, there is likely to be an asymmetry in the identity of the winners and losers. The firms that stand to lose from economic reform are likely to be well aware of this. In contrast, in a world with a free entry of firms, many of the future winners do not yet know who they are. Moreover, their rents are likely to be earned in the future, which thus drives a wedge between the effectiveness of the lobby winner (as opposed to the loser), thereby skewing the lobbying process.

2.4 The persistence of beliefs and policies

There is yet another behavioural bias that makes the policy response to a crisis even more sluggish. Agents (be they politicians or citizen voters) do not process information efficiently. So, a priori, one can expect that a crisis produces information for voters and policymakers that calls into question the wisdom of prevailing policies and results in a policy adjustment. Furthermore, citizen voters and governments may not always process information in a rational manner. Information processing may be distorted by a variety of behavioral biases that can cause individuals either to ignore relevant information or, in other instances, put too much weight on this knowledge.[5] There may be a self-confirmatory bias (Rabin and Schrag, 1999), whereby individuals choose only to process information that conforms to their prior beliefs. Alternatively, they may suffer from self-serving biases, whereby information processing is distorted in a systematic manner. These behavioural biases in information processing can add considerable inertia in policy adjustment and help to explain the persistence of policy inefficiency.

5 Kaplan and Mukand (2011) compared the political allegiances of Californians who turned 18 just before and after the September 11th 2001 attacks on the United States, which caused a national shift to the right. They found that voters with birthdays in September were more likely to register as Republicans than voters with birthdays in August. These voters then continued to register as Republicans at higher rates in subsequent elections. It would seem that individuals did not shift their political allegiance in response to new information. Apparently, once a registered Republican, always a Republican.

2.5 Adjustment and institutions

The preceding discussion has outlined a variety of channels that make it difficult for governments to respond quickly to an economic crisis. However, there is an important category of mechanisms that make it difficult for a policymaker to react quickly to a crisis – namely, the role of institutions. For instance, differences in institutional arrangements allow a new prime minister in the United Kingdom to change the course of fiscal policymaking much more quickly than a newly elected president in the United States, where all economic policies have to be ratified by Congress. However, when comparing economic decision-making in the eurozone with the process in the United States, it is striking that the latter moved with considerable alacrity in responding to the banking crises of 2008, compared with the dangerously sluggish response by European policymakers in dealing with the ongoing sovereign debt crisis.

More generally, one of the key differences in the nature of political institutions is that they embody very different checks and balances. As a rule, it can be argued that autocracies have fewer checks and balances than corresponding democracies. Therefore, it is certainly possible that an autocratic regime will make a much quicker policy adjustment in the face of a crisis than a country with more democratic political institutions. This seems to suggest that authoritarian political systems have an inherent structural advantage that makes it much easier for them to respond to sudden economic shocks, but this advantage has to be balanced against two counter-arguments. First, autocracies lack a smooth political mechanism to replace "bad" leaders. As a result, even if an economic crisis was caused in the first place by the poor policy choices of the leader, the autocrat is unlikely to be pushed out of office. In democracies, by comparison, elections are likely to result in a change of government. Policy persistence for reputational reasons (see Majumdar and Mukand, 2004) is likely to be mitigated as a result of electoral turnover in democracies.

Second, while autocracies may change the direction of policy more quickly, the relevant question is: in what direction? Typically, there is a menu of policy choices available to governments, and they have to select among them. Lacking active and free media as well as an active political opposition, there is no decentralised way to acquire reliable information. Indeed, as Sen (1980) and Besley and Burgess (2002) have pointed out, the availability of information can make democracies more effective in dealing with crises.

Lastly, in can be argued that political constraints themselves play an informational role. The absence of political constraints in an autocratic regime makes it difficult for policymakers to know whether the policy is likely to work and to make the appropriate adjustments in mid-stream. Such course corrections are ubiquitous in democracies.

3. Globalisation, governance and economic adjustment

This section takes a brief look at some prominent episodes of economic adjustment. Each episode is singled out to illustrate some of the key themes of this chapter. The aim is to emphasise the importance of the global context in which these shocks have occurred as well as the role of adaptability of local-level political institutions.

3.1 Response to global economic shocks: through the looking glass

Economic shocks, of course, can have very different origins. These can range from a sharp drop in the price of a country's primary export commodity (such as oil in Mexico in the early 1980s), a banking failure (in the 2008 crisis) or even a political revolution (the collapse of the Soviet Union). These economic shocks reveal imbalances and contradictions underlying the prevailing economic system that might have been easy to paper over and ignore in ordinary times. However, while citizens and policymakers may understand that some adjustment is required to recover from a sudden and sharp shock to the economic system, it is far less clear that they learn the same lesson. In most cases, what these shocks do is increase the likelihood of a shift in the prevailing political equilibrium. Not surprisingly, conflict often ensues. Countries that have been relatively well equipped with good institutions of conflict resolution are much better able to agree on a post-crisis path forward and to take the necessary corrective measures. In the absence of such automatic "institutional" stabilisers, one can expect much greater economic volatility and political paralysis going forward.

Although the primary focus of this section is to examine how global shocks affect domestic politics and serve as a catalyst for institutional change, it is also worth taking note of their impact on multilateral negotiations and bargaining between nations. A brief look at prominent episodes from history is instructive.

a) The Great Depression and the politics of adjustment during the inter-war period

This is the classic example of how inappropriate policy responses at the country level led to a very bad economic shock that could have been restricted to a few countries, but instead evolved into a global depression.

Many of the developments that took place in the German economy during the inter-war period can be traced to the politico-economic dynamic that was triggered by the fiscal burden of paying for war reparations (Ritschl, 2012). Reparations were politically unpopular from the very beginning. In the 1920s Germany was a country where "weak governments had to pay reparations to the victorious belligerents, finance reconstruction, and satisfy massive social demands" (Frieden, 2009). There was no political constituency defending the making of these payments, and the fact that these payments had to be made provided individuals with a convenient excuse not to pay taxes, thereby putting additional pressure on the country's public finances. Unsurprisingly, tax revenues collapsed and the government adopted an increasingly hostile stance to reparations. This made the German economy quite dependent on capital inflows from the United States. However, in 1929 global economic uncertainties caused these capital inflows to dry up and forced Germany, under international pressure, to agree to the Young Plan on reparation payments.

Table 1: The start of the Great Depression and the start of recovery (year/quarter)

Country	Depression Began	Recovery Began
United States	1929:3	1933:2
Great Britain	1930:1	1932:4
Germany	1928:1	1932:3
France	1930:2	1932:3
Canada	1929:2	1933:2
Switzerland	1929:4	1933:1
Italy	1929:3	1933:1
Belgium	1929:3	1932:4
Netherlands	1929:4	1933:2
Sweden	1930:2	1932:3
Denmark	1930:4	1933:2
Poland	1929:1	1933:2
Argentina	1929:2	1932:1
Brazil	1928:3	1931:4
Japan	1930:1	1932:3
India	1929:4	1931:4
South Africa	1930:1	1933:1

Source: Romer (2003).

Between the signing of the Young Plan and its adoption came the Wall Street crash of 1929 (see Ritschl, 2012, for a detailed discussion). This was equivalent to a major fiscal contraction taking place as underlying political tensions came to a head. There was a "war of attrition" between the various socio-political groups, and within a year the finance minister, the governor of the central bank and finally the government had all been pushed out. The only way Germany had been able to paper over the underlying social tensions was by borrowing money from abroad (largely the United States) to finance a consumption boom. When the recession hit Western economies in 1929, this inherent imbalance was no longer sustainable and became a victim to policy errors, which compounded banking failure and the shock to aggregate demand. The degree of recovery and adjustment, however, was quite different across countries. For example, Great Britain experienced a substantial recession in the early 1930s, but in Germany and the United States real GDP fell by almost 25% between 1929 and 1932 (Crafts and Fearon, 2012). While initial conditions across countries were very different, so too were the policy responses and the recovery, as highlighted in Table 1.

In one of the more egregious instances of a wrong-headed policy response, decision-makers in the United States turned inward and enacted the infamous Smoot-Hawley tariffs of 1930. This had a cascading effect, with protectionist barriers going up across much of the world and leading to a collapse in global trade (especially in primary commodities). It not only worsened the crisis in Europe and the United States, but helped spread it to parts of Asia, Africa and Latin America.

Arguably, the policy that was most responsible for impeding a quicker recovery was the reluctance of policymakers to abandon the Gold Standard. As Crafts and Fearon (2012) point out, the recession shock was exacerbated by policymakers' insistence on maintaining high interest rates in Britain in order to safeguard Gold

Standard membership at pre-war parity rates. This was a poor decision to begin with, since it completely ignored the inflation that had taken place in Britain during the intervening period, contributed to the overvaluation (and trade deficits) during the 1920s, and subsequently gave the government much less room for manoeuvre when the crisis hit. Wolf (2008) econometrically studied the reasons why certain countries adhered to the Gold Standard longer than others and argued that those with more democratic institutions were more likely to exit faster since it was politically very costly to go through a painful domestic adjustment.[6]

As Eichengreen and Sachs (1986) conclude, countries that persisted with the Gold Standard had a much slower recovery than others. For instance, Britain abandoned the Gold Standard relatively early (in 1931) and began its recovery much faster than the United States, which devalued its currency two years later. Similarly, Belgium and France were slow to devalue and took more time to recover, while Latin American countries devalued immediately and recovered much faster. Moreover, those countries that remained longer in the Gold Standard also persisted with protectionist barriers. Similarly, there were differences across countries in their willingness to service debt payments. Sovereign default was common throughout the 1930s, and often countries that were quicker to default recovered faster.

There are two aspects of policymaking in the 1930s that are particularly striking. First, many of the policymakers displayed a number of the classic pathologies associated with inefficient policymaking outlined earlier. For instance, there was the classic "war of attrition" between right-wing and left-wing groups over which one would bear the bulk of the burden of fiscal adjustment. Indeed, as argued by Eichengreen (1992), this conflict was particularly acute in the high-inflation countries of the day, such as France and Germany. Reputational factors are also likely to have made some policymakers "invested" in certain policies particularly reluctant to change course in the light of dispiriting economic news (Majumdar and Mukand, 2004).

Second, equally striking is the absence of intermediating institutions that could have helped resolve some of the political economy problems faced by policymakers. There was no independent central bank, no unemployment insurance or stockmarket regulation; banking regulation (or deposit insurance) was inappropriate; and there was absolutely no social security, nor indeed the concept of a welfare state. In fact, many of these were introduced as a result of the overall institutional failure of key economies during this period. It should therefore not be too surprising that social and political conflict worsened at that time and that there was a reactionary turn in a number of countries (see Table 2).

Bromhead et al. (2012) document the dramatic increase in the share of votes (and seats) for anti-system parties in the aftermath of the crisis of 1929. Most dramatic perhaps was the shift in Germany, where the share of the vote going to protest parties more than quadrupled over the 1928-32 period. This increase in the share of the vote of fascist parties on the right and communist parties on the left holds useful cautionary lessons for developing countries, which are typically characterised by weak institutions of conflict resolution and few adequate safety nets. A negative economic shock in this context can cause economic insecurity and unemployment. Normally one might expect that this would result in the removal of the political party in government that was responsible for the mess, but the experience in Europe during the inter-war period demonstrates that

6 See Box 2 in Chapter 1 for a more complete discussion of the role of the Gold Standard.

Table 2: The rise of the extreme left and fascist right

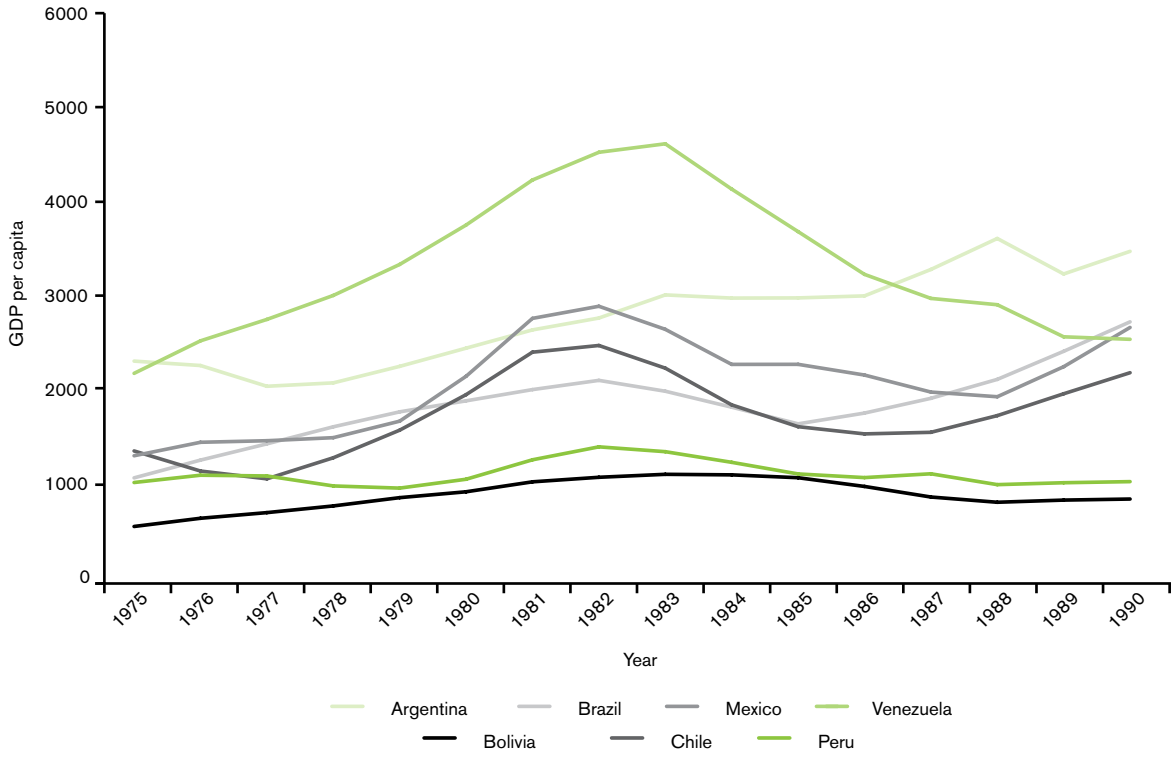
	Last Pre 1929			Peak Post 1929			Coup/End Demo		% Change	% Change
	% seats	% votes	Year	% seats	% votes	Year	(post-1929)	Year	seats	votes
Argentina	0	0	1928	0	0.5	1930	YES	1930	0	0.5
Australia	0	0	1929	0	1.3	1934	NO	–	0	1.3
Austria	7.2	8.5	*	10.8	9.8	1930	YES	1933	3.6	1.4
Belgium	6.4	8.2	1929	22.8	24.7	1936	NO	–	16.4	16.5
Bulgaria	0	2.5	1927	11.4	13	1931	YES	1934	11.4	10.5
Canada	0	0	1926	0	0.7	1935	NO	–	0	0.7
Chile	0	0	1925	8.2	7.7	1937	NO	–	8.2	7.7
Czechoslovakia	16		1929	32.4	25.5	1935	NO	–	16.4	NA
Denmark	0	0.3	1929	2.7	4.2	1939	NO	–	2.7	3.9
Finland	25.5	28	1929	21	19	1930	NO	–	-4.5	-9
France	8.9		1928	19.8	–	1936	NO	–	10.9	–
Germany	13.4	13.2	1928	59.6	58.3	1932	YES	1933	46.2	45.1
Greece	0.4	6.7	1928	7.3	9.7	1936	YES	1936	6.9	3
Hungary	0.8	3.8	1926	17.4	22.8	1939	NO	–	16.6	19
Ireland	0.7	1.1	1927	0	0.1	1932	NO	–	-0.7	-1
Italy	11	6.2	1921	NA	NA		YES	–	NA	NA
The Netherlands	2	2	1929	7	7.8	1937	NO	–	5	5.6
New Zealand	0	0	1928	0	0.1	1935	NO	–	0	0.1
Norway	2	4	1927	0	4	1933	NO	–	-2	0
Poland	1.1	1.9	1928	NA	NA		NO	–	NA	NA
Romania	0	1.2	1928	27.2	25.1	1937	YES	1938	27.2	23.9
Spain	–	–		16.2	–	1936	YES	1936	NA	NA
Sweden	3.5	6.4	1928	3.5	8.9	1932	NO	–	0	2.5
Switzerland	1	1.8	1928	2.1	2.6	1939	NO	–	1.1	0.8
United Kingdom	0	0.2	1929	0.2	0.1	1935	NO	–	0.2	-0.1
United States	0	0	1928	0	0		NO	–	0	0
Uruguay	0.8	1.3	1928	1.6	2	1931	YES	1933	0.8	0.7
Yugoslavia	0	0	1927	NA	NA		NO	–	NA	NA
MEAN	**3.73**	**3.89**		**10.85**	**10.77**				**7.43**	**6.77**
MEDIAN	**0.8**	**1.8**		**7**	**7.6**				**2.7**	**1.4**

Notes: * Last votes data are for 1923, last seats data for 1927. "Pre-1929" elections include those held in 1929. Coup/End Demo refers to any suspension of democracy, be it by physical force or by peaceful takeover by an authoritarian regime.
Source: Bromhead et al. (2012).

something much more pernicious occurred. It is not just that the incumbent party was replaced by the opposition. Voters instead gravitated towards extremist political parties.

The rise of extreme left-wing parties in Venezuela, Ecuador and Bolivia in the past decade, as well as the rise of nationalist sentiment in China, suggests that this analysis is of contemporary relevance. Glaeser (2004) argues that this rise in extremism is particularly likely in countries where the media are tightly controlled, democratic institutions are weak and inequality and social cleavages are significant. In these circumstances two kinds of political competition are possible: competition within the class dimension (rich versus poor) or social conflict (ethnic/religious/racial). In order to keep taxes low, however, the rich are likely to subsidise and encourage political

Figure 1: GDP per capita (current US$), 1979-87



Source: World Development Indicators CD-ROM, World Bank (2011).

competition on the social dimension. As a result, during periods of high uncertainty, and in the absence of free media and adequate social safety nets, a country's body politic is particularly vulnerable to indoctrination and extremist politics.

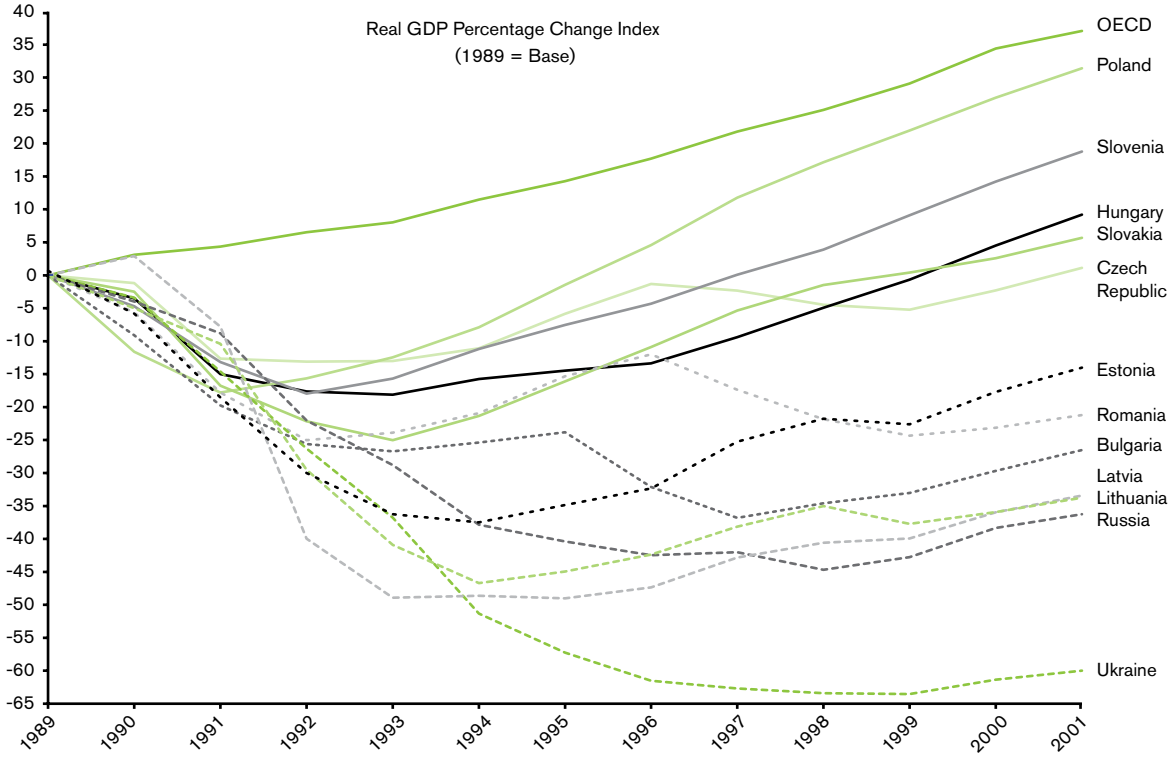
b) Growth and the politics of adjustment in developing and transition economies

Despite the significant differences in the nature of "shocks" and the considerable heterogeneity among developing and transition economies, in this context it is nonetheless appropriate to examine them together because there are some common lessons to be drawn, beginning with a brief description of the Latin American debt crisis, followed by a look at growth and recovery in the transition economies in the aftermath of the collapse of the Soviet Union in 1991, and finally the post-1998 currency crisis in Asia. This will highlight some of the common themes that emerge from these three very different types of crisis.

Much of the investment in Latin America in the 1970s and early 1980s had been facilitated by borrowing money from international capital markets. Compounding the risks involved was the fact that many of these Latin American countries had run up large trade and fiscal deficits during the 1970s. However, the crisis was really triggered by the Volcker shock of 1979, when the United States raised its interest rates. What might well have been simply a significant recession instead became a full-blown economic implosion that resulted in a lost decade for much of the continent (see Figure 1).

As Diaz-Alejandro (1988) argues, the magnitude of the crisis could not be attributed merely to the size of the external shock; its interaction with the "risky or faulty domestic policies led to a crisis of severe depth and length, one that neither shocks nor bad policy alone could have generated". So why did so many countries enact policies that were unlikely to spur an economic recovery?

Figure 2: Collapse and recovery in Eastern Europe



Note: Graph plots percentage changes in the real GDP index over time.
Source: Svejnar (2001).

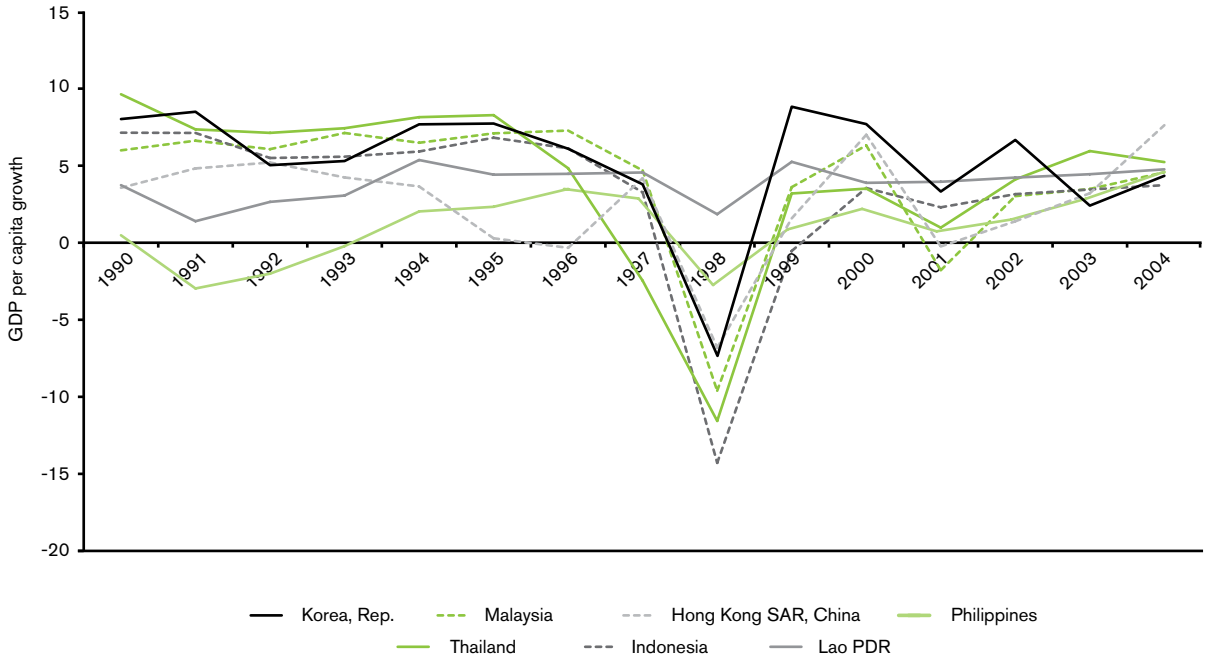
A similar question can be asked when it comes to the experience of the transition economies. The sudden unravelling and collapse of the Soviet Union in 1991 was a large negative economic shock to the former Socialist countries of Europe. Output declined in each of these countries, and in some instances precipitously so. For example, output in Moldova, Ukraine, Armenia, Azerbaijan and Georgia declined by more than 60% within a few years. Indeed, adjustment and recovery were so slow that even a decade later virtually all of these countries had yet to rebound to their pre-crisis levels of per-capita income (see Figure 2).

Here again there were major differences in the ability of these countries to adjust and get their economic recovery back on track. In the aftermath of the collapse of the socialist experiment all these countries were now searching for new policies and institutions. Why is it that only a few of them succeeded in choosing the appropriate set of policies and institutions?

Perhaps the greatest variance in the recovery from an economic shock is illustrated by the experience of Asian countries in the aftermath of the 1997-98 currency crisis. The decision to float the Thai baht in 1997 triggered capital flight and a severe currency crisis throughout the region, with nominal exchange-rate depreciation exceeding 50% in South Korea, Indonesia, Malaysia, the Philippines and Thailand. As Figure 3 reveals, growth recovered relatively quickly in most countries of the region, but why were there such differences in the rate of growth?

The sudden collapse in growth following the onset of the Asian currency crisis had immediate political ramifications in South Korea, with voters electing a long-time dissident, Kim Dae-jung, as president within a month of the outbreak of the crisis. Similarly, the crisis resulted in the electoral defeat of the ruling party in Thailand. Indonesia, meanwhile, suffered a very different fate. The absence of

Figure 3: Annual per-capita growth, 1990-2004 (%)



Source: World Development Indicators CD-ROM, World Bank (2011).

democratic institutions to manage socio-economic conflict meant that Indonesia's severe economic contraction had a major distributional impact. Not only was the population divided along ethnic and regional lines, but even the political elite was fractured. The resulting political revolution brought about the collapse of the 31-year regime of President Suharto and his authoritarian single-party system.

The failure of adjustment policies and measures to promote growth and economic recovery in Latin America, the transition economies and parts of Asia points to some general lessons. But first, it is instructive to illustrate this puzzle by examining the data in Table 3.

Table 3: Summary indicators for per-capita GDP growth, by decade

	1960s	1970s	1980s	1990s
	All available countries			
Mean (unweighted)	2.96%	2.16%	0.73%	0.38%
Standard deviation	2.45%	2.58%	2.46%	3.13%
Co efficient of variation	0.83	1.20	3.35	8.33
No. of countries	90	100	109	130
	Constant sample of countries			
Mean (unweighted)	2.82%	2.30%	0.81%	1.20%
Mean (population-weighted)	2.10%	2.45%	3.45%	3.84%
Standard deviation	2.08%	2.43%	2.47%	2.26%
Co efficient of variation	0.74	1.06	3.05	1.88
No. of countries	87	87	87	87

Source: World Development Indicators CD-ROM, World Bank (2011).

During the heyday of the "Washington Consensus" in the 1980s and 1990s there was considerable agreement (at least in the policymaking community) about what were appropriate economic policies.[7] However, these decades actually witnessed only modest growth levels and greater growth heterogeneity. Therefore the question is: why was growth so disappointing and more uneven (in contrast to the 1960s and 1970s) in a period when policymakers and economists were seemingly on the same page when it came to fostering economic convergence?

One explanation is that divergence took place because countries, in fact, did not converge in terms of the policies they enacted. While possible, this seems unlikely. Several empirical studies have shown that there has been greater convergence in policies pursued across countries (especially in Latin America) in recent decades. Furthermore, the two countries that blatantly ignored the Washington Consensus policy recommendations are the two that have grown the fastest, namely China and India. Hence, something else has clearly been at work, and indeed adjustment and growth across countries has differed for very much the same reasons.

(i) History and local institutions matter

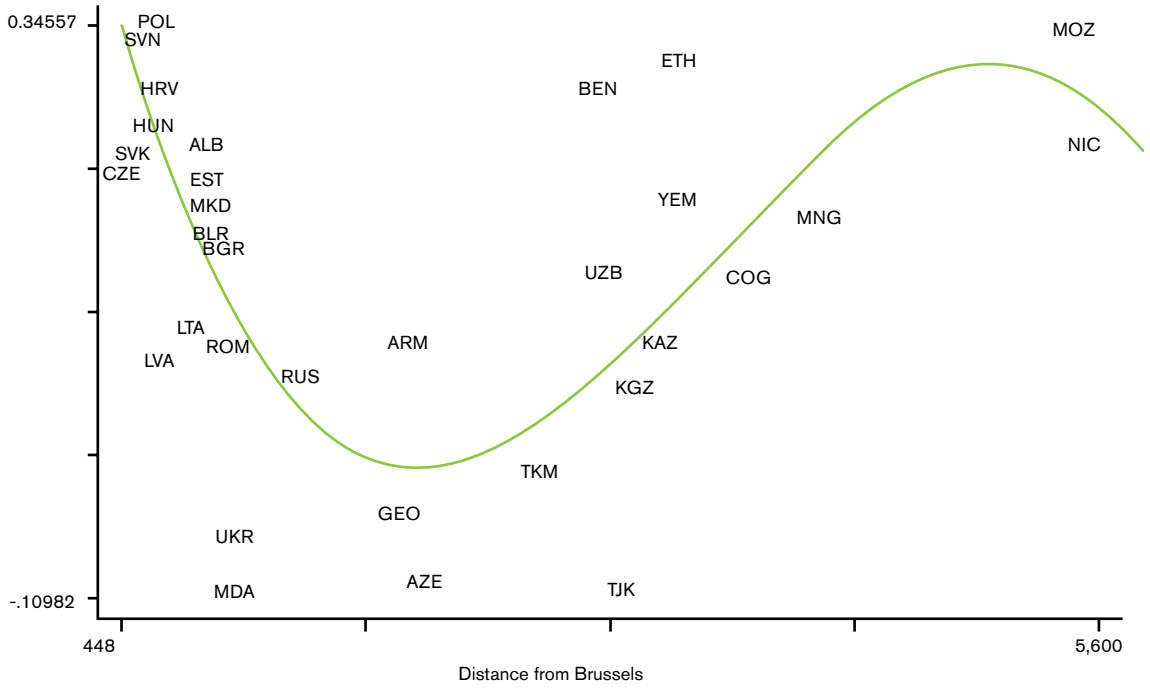
One of the striking aspects of many countries' adjustment and growth experiences is that they adopted policies for recovery that did not account for the underlying differences in their institutions, culture or environment. Even if economic principles are universal, their implementation is intermediated through local institutions – which are themselves a product of particular political institutions and a country-specific history and culture. These local differences mean that the task of economic policymaking is much more difficult than it may seem at first glance. In other words, policies themselves have to be adapted to the local context.

Therefore, even if policymakers react to shocks by mechanically following the policy recommendations of the IMF or the World Bank, there will be considerable heterogeneity in their success or failure. This becomes evident when looking at the experience of the transition economies in the aftermath of the Soviet Union's collapse in 1991. With socialism discredited, all the countries of the former Soviet Union were now searching for an appropriate set of policies and institutions suited to the new political and economic dispensation. Mukand and Rodrik (2005) argue that in order to facilitate a recovery in economic growth, these transition countries chose to imitate the policies and institutions of successful countries nearby, namely those in Western Europe. However, while countries in the near periphery (such as Hungary and the Czech Republic) made efficient policy choices by imitating West European-style policies and institutions to facilitate their growth and recovery, this was not the case with countries in the intermediate periphery of Eastern Europe (such as Moldova and Georgia).

Mukand and Rodrik (2005) argue that countries such as Moldova and Ukraine will have a political imperative to inefficiently ignore their local context and history and blindly imitate West European policies and institutions without adapting them to the local context. In contrast, countries in the far periphery (most of the Central Asian Republics) are outside this area of influence and will feel no such political compulsion to inefficiently imitate the West European model – given their history, culture and institutional tradition, this would be "a bridge too far". They will thus experiment and adapt – sometimes with spectacular results, and at

7 The term was coined by Williamson (1990) to encapsulate the set of neo-liberal economic policies that were being promoted by the World Bank and the IMF during this period: privatisation, market fundamentalism and trade and financial liberalisation.

Figure 4: Economic recovery in transition economies



Note: The vertical axis is the average growth rate over the period 1991-2001. The horizontal axis is the distance from Brussels (in miles).
Source: Mukand and Rodrik (2005).

other times with disastrous outcomes. In effect, recovery and adjustment will have a U-shaped relationship in distance from a successful leader, in this case Western Europe. Figure 4 provides evidence in support of this mechanism. Countries in the neighbourhood of Western Europe perform well, as do countries in the far periphery, but those countries at an intermediate distance (Moldova, Azerbaijan, Georgia) do particularly badly.

The lesson that countries should adopt policies and institutions that are of relevance to their local institutional context and history is pertinent to Latin American and Asian countries as well. In both cases, politicians and policymakers acquiesced to the wishes of the international capital markets or the diktat of the IMF. This resulted in ignoring their own local context and inefficiently pursuing policies that "the market wants to see", rather than policies that had the greatest chance of success in spurring an economic recovery (Krugman, 2000; Mukand 2006).

(ii) Institutions to manage conflict

Economic shocks have distributional effects and may trigger latent conflict among socio-economic groups in a society. Recovery from a severe economic shock requires time for the requisite structural adjustments to take place, and then for firms to start investing and growing. However, equally importantly, politicians and policymakers should be aware that they have time to implement the appropriate set of policies to generate a recovery. The optimal policy will be difficult to implement if the time horizon required for it to generate a recovery is longer than the political time horizon available (i.e. the next election). It is precisely here that a country's institutions of conflict management become important. If a country lacks an adequate safety net, then even a modest rise in unemployment can be politically costly to the incumbent. Social unrest, strikes and political

protest are likely to make accommodation and compromise particularly difficult. This makes incumbent policymakers prone to adopting quick-fix solutions that paper over problems rather than produce genuine and lasting reforms.

The importance of having good institutions of conflict management is exemplified by the case of Latin America, both during the debt crisis of the 1980s and after. In the debt crisis that began in 1982 the decline in incomes was steep (around 20%) in Argentina, Mexico and Venezuela, and more than 10% in Brazil. It was only in Peru that drops in real income approached those of the Great Depression in the United States. However, the recovery in Brazil was much more gradual. While per-capita income in the United States recovered to pre-crisis levels within a decade, it took Argentina close to 13 years, and Mexico, Brazil and Venezuela even longer. What is striking is not just that it took much longer for these countries to adjust, but how different the Latin American policy response was to that of the United States. The Great Depression resulted in major institutional innovations that expanded the role of government, from social security through to public works, unemployment insurance and banking regulation. In Latin America, not only was there no such expansion of government, but it led to another cycle of austerity and low growth in the 1990s, followed by deficits, growth and inflation – and more recently the prospect of economic collapse.

What accounts for this very different policy response to an economic crisis in Latin America on the one hand, and the Asian response to the currency crisis or that of the United States after the Great Depression on the other? A key factor is the underlying structural inequality in Latin America, which is over 2.5 times higher than in Asia, with the average ratio between the highest and lowest quintile more than 21 in Latin America and closer to 9 in East Asia. This income inequality is further reinforced by sectoral antagonisms in Latin America, with politically powerful oligarchies resisting land reform.

In sharp contrast, in East Asia (especially Japan, Taiwan and parts of South Korea) there had been major land reform that broke up old oligarchies (Kaufman and Stallings, 1991). In Latin America, the wealthy in the agricultural sector and the industrial sector could lobby jointly to prevent high effective rates of taxation, either through lower tax rates or lax enforcement by government. This made it much more difficult for governments to have a sufficiently wide tax base to financially underwrite institutional innovations such as unemployment insurance, social security and worker retraining that would have made it much easier for the populace to overcome the effects of external economic shocks (Dornbusch and Edwards, 1990). It is this absence of a social compact among contending political and economic groups that has made it much harder for Latin America to insulate its population from economic shocks.[8] Furthermore, most Latin American countries (with the partial exception of Colombia) are relatively nascent democracies with inadequate levels of political participation. This is of relevance, because there is strong econometric evidence to suggest that lack of adequate political participation is correlated with volatility in growth and inflation (Rodrik, 1998b).[9]

8 Political competition within groups in Brazil has often had an ethnic and class dimension that has limited their ability to achieve a compromise and make appropriate adjustments in the face of an external shock (Rodrik, 1998a). Therefore, numerous plans to stabilise the Brazilian economy during the 1980s were only tried half-heartedly as a political "war of attrition" resulted in successively higher inflation until it topped 2,000% in 1990.

9 Acemoglu et al. (2003) show that countries with imperfect political institutions are often plagued by much more volatile economic policies.

The contrasting experiences of South Korea and Indonesia tell a similar story. South Korea is a relatively egalitarian society with few regional or ethnic cleavages and with a well-established (if small) safety net. In contrast, in the 1990s Indonesia was an ethnically and geographically diverse country with few institutions of conflict management, either at the political level (being an authoritarian one-party state) or at the economic level (no de facto safety net). Not surprisingly, Indonesia suffered through a political revolution, while South Korea managed to adapt and prosper.

More recently, the ongoing Greek debt crisis also suggests that a country's institutions of conflict management are important. Kollintzas and Vassilatos (2012) argue that there are fundamental fissures in Greek society, not only between the elite (the "insiders" in their terminology) and the populace (the "outsiders"), but also within the elite itself. Eurozone membership resulted in greater access to capital and funds for Greece. The way these conflicts were resolved was through the political parties, unions and bureaucracy by increasing wages and hiring in the public sector. As Kollintzas and Vassilatos point out, wages in the government sector in Greece were 60% higher than the euro area average and more than twice the country's private-sector wage rate. The cost of high wages was exacerbated by the fact that the Greek public sector witnessed a significant rise in employment, so that on the eve of the crisis its relative size was much greater than in the rest of Europe. This lack of institutional checks and balances on the expenditure side was compounded by poor accountability and a lack of effort on the revenue side.

Kollintzas and Vassilatos (2012) argue that the effective tax rate in Greece is half that of the rest of Europe. The absence of effective institutions for conflict management ensured that when the fiscal situation changed and the government was forced to cut subsidies and limit public-sector handouts there was a political crisis, with no government capable of getting the squabbling political factions to agree to a deal. As a result, Greece has since suffered through government turnover, political and social unrest and a rise in ultra-nationalist and anti-immigrant political parties, such as Golden Dawn.

3.2 Globalisation, growth and governance

Globalisation is a double-edged sword. It can help or hinder a country's prospects of adjustment and recovery from an economic shock. Of course, the impact will depend not only on the nature of globalisation (in trade, capital flows, migration and so on), but also on the specific mix of local and global factors that can drive recovery and growth within a country.

On the one hand, globalisation makes a country vulnerable to terms-of-trade shocks. Similarly, an unexpected rise in interest rates or a banking crisis in the United States, for example, can trigger capital flight into or out of a country. Hence, a country that is better integrated into the world economy is more vulnerable to the transmission of international shocks. However, if the country is suffering, in particular, from economic problems whose origins are domestic, then a globalised economy is at a considerable advantage. Indeed, China can take advantage of strong global demand for its products even when the domestic economy is in a slump. Therefore, whether a country recovers and adjusts relatively fast or not depends (in part) on the global context, namely whether the recession is local or global. During the Asian currency crisis, for example, South Korea found it relatively easy to adjust and recover since there was a strong global demand for its exports.

The relationship between the forces of globalisation and governance has been the focus of considerable attention in recent years. One view (Summers, 2000; Obstfeld, 1998) is that globalisation has a positive impact on governance. Proponents of this view argue that in a globalising world where information is freely available and capital is mobile, governments are forced to be more disciplined and governance is improved. In essence, this is the moral hazard argument. The threat of capital flight can act as a stick, forcing governments to improve budgetary discipline and improve governance. Indeed, recent empirical work by Kose et al. (2006) and Mishkin (2007) suggests that the main benefits from the globalisation of capital flows are "collateral", such as improved market discipline and good governance.

In contrast, a more skeptical view regarding the impact of globalisation on governance is held by Rodrik and Subramaniam (2009), Stiglitz (2010) and Krugman (2000). They argue that the globalisation of capital flows can provide the wrong incentives to governments and actually result in indiscipline and (mis)governance. These two sharply differing views on the incentive effects of globalisation are difficult to reconcile. In part this is because the relationship between globalisation and good governance is a complex one and the empirical evidence on this issue, in so far as it exists, is rather mixed. In this context, an issue of interest is whether globalisation and the threat of capital flight can "discipline" countries and promote "good" governance. This question is raised by Blouin et al. (2011), who develop a conceptual framework to address this issue.

The theoretical framework has two key features. First, it allows for a country's institutions of governance to be imperfect. Besley and Persson (2011) identify an inefficiency that lies at the heart of all decision-making within government – an inability by governmental actors to pre-commit to enacting efficient policies. However, the framework also allows for another commitment problem – this time with respect to investors. In particular, it assumes that investors are unable to pre-commit to retaining investment in the host country. In other words, in the light of new information investors may either keep their investment or engage in capital flight. The framework then analyses the impact on governance of the globalisation of capital in the context of these twin commitment problems.

In this framework, the globalisation of capital (driven by the lower costs of international capital mobility) can exacerbate the threat of capital flight. It demonstrates that the key relationship to be analysed is how this increased threat of capital flight affects the incentive problem that plagues much of governmental decision-making. On the one hand, it shows that the exacerbated threat of capital flight may constrain the set of actions taken by the government. Indeed, in doing so, the globalisation of capital may shackle governments in a "golden straitjacket" and have a positive "incentive" effect on decision-making within government. This suggests that the standard view about the disciplining role of globalisation may indeed be correct.

On the other hand, it seems a more nuanced view is also in order. It is not merely the increased threat of capital flight which accompanies the globalisation of capital that is of relevance. Rather, the impact of globalisation on incentives within government depends on the structure of the country's economy. If a country has strong economic fundamentals (for example, a structurally diversified export sector) and is less sensitive to random shocks in the global economy, then globalisation is likely to have a positive incentive effect.

The globalisation of capital works as a "discipline" device so long as capital flight is mainly triggered by actions within government and is not caused by the volatility of the global economy. In contrast, if random changes in the external environment have the potential to provoke capital flight, then this may have perverse effects. In this case, the threat of capital flight overly disciplines governments, resulting in a negative incentive "effect" and (mis)governance. This is key, since it suggests that the impact of globalisation on governance can go either way.

Blouin et al. (2011) further analyse the predictions of the framework using the 1994 Mexican currency crisis, which resulted in an increase in uncertainty in international financial markets. They find evidence to support the prediction that the impact of this uncertainty on governance would be highest for those countries that are perceived to be "similar" to Mexico and have relatively weak institutional "state capacity".

The extent to which capital controls are appropriate has been central to the debate on the design of the international financial architecture. The position of the IMF for most of the past two decades has been clear: a country can only reap the gains of financial globalisation if capital controls are reduced or scrapped. This view has been echoed by many economists, including Edwards (1999) and Dornbusch and Edwards (1998). In contrast, Rodrik (1998a), Bhagwati (1998) and Eichengreen (2001) are much more sympathetic to the idea of imposing restrictions on capital mobility. More recently, an IMF Staff Position Paper (2010) suggested an evolution in the Fund's thinking, arguing that under some conditions capital controls can well be part of a policymaker's toolkit. This picture is further muddied by the fact that the empirical evidence does not offer a clear answer. Blouin et al. (2011) argue that the absence of consensus (at a theoretical as well as an empirical level) on the usefulness of capital controls is understandable, as arguments made by both sides of the debate may be of relevance. Two factors are important: the quality of a country's institutional state capacity and the overall uncertainty in the external economic environment. Arguments for controls are strongest perhaps when a country's institutional state capacity is relatively weak and the country is vulnerable to capital flight arising from an uncertain and volatile global economic environment. As a result, the adoption of capital controls is recommended in a specific set of circumstances.

4. Political mechanism design and institutional reform

What institutional and policy innovations will facilitate recovery in the face of a negative shock? An important message of this chapter is that all policy recommendations should have two dimensions. The first is the policy recommendation that describes the first-best policy on an explicit normative criterion. However, any such policy should be extended to account explicitly for existing political constraints. There is, of course, a view held by many in the Chicago school of economics (see Stigler, 1971) that if there was a politically feasible welfare-enhancing policy, it would already be in place, but this is questionable. Indeed, there are low-hanging fruits to be picked, and the role of economists should be to help policymakers find them and assist with institutional design, aiming to reduce (but *not* eliminate) existing political constraints. It is in this spirit that the following general observations about the art (and science) of policymaking and institutional design are made.

Policy adjustment and reform are particularly difficult in periods of economic crisis. First, national income declines, and this results in much greater competition for dividing up a smaller pie. In addition, economic reform creates winners and losers, and the distributional implications engender conflict and political impediments. Potential losers from reform will vote and lobby to prevent reform being enacted. At first glance, therefore, one may presume that the institutions best suited for an efficient response to an economic crisis are those that enable political actors to circumvent these political constraints, but that would be a mistake. Political institutions that enable the credible compensation of losers by the winners of reforms would not just be efficient but also Pareto improving.

However, there are a variety of factors that make it difficult for policymakers to achieve the Pareto outcome. First, the challenge faced by policymakers is how to design a credible tax-transfer mechanism when they lack adequate information. In particular, it may be difficult to gauge the size of the gains or losses that an individual experiences. If government cannot easily evaluate the size of the gains or losses, it becomes impossible to design an efficient tax-transfer mechanism to ensure that the winners compensate the losers. This is because the winners will have an incentive to hide their winnings and losers will tend to exaggerate their losses. Second, it is particularly difficult for the policymaker credibly to promise that the winners will compensate the losers and not attempt to lobby or influence the political process in their favour.

However, the challenge faced by policymakers extends beyond the adequate design of compensatory transfers. In particular, policymaking is by its very nature rife with uncertainty. A priori, it may not be clear whether the policy is efficient in the first place. If policymakers are able to use institutional procedures to sidestep political constraints, then it may result in the implementation of inefficient policies. After all, an authoritarian ruler can enact policies (including reform) without any political resistance. Political constraints serve an important informational purpose, providing information to policymakers that the reform is inefficient – that there will be too many losers, or that the losers will not be compensated. For example, the military draft in the Unite States was eliminated after the Vietnam war because it made it politically difficult to wage war – especially in those places where the national interest was not self-evident. This is because the draft forced ordinary citizens to learn about how the war was progressing and to assess how appropriate it was. Indeed, in the absence of a draft, the general public can easily insulate itself from the costs of a military conflict, and this makes it easier for governments to wage wars, even if they are inefficient. The absence of institutional checks and balances, therefore, can be politically costly (Acemoglu, Robinson and Torvik, 2011).

Arguably, the adoption of the European Constitution has been engineered by an elite determined to circumvent political resistance to aspects of the EU project at the country-wide level. This may have been helpful politically for the elite, but it resulted in a European project that was sometimes lacking in popular legitimacy. The absence of political constraints may well have exacerbated the European crisis and made it more difficult for member countries to reform. At the same time, political constraints are generally possible to overcome, and losers should not have complete veto power. The president of the United States cannot enact policy without the consent of Congress. As the wrangle in Congress over the budget deficit showed in August and September 2012, political constraints that are too high result in the opposite problem – it

becomes too difficult to enact reform. Ideally, therefore, institutions should be designed to ensure that political constraints are neither too high nor too low.

So, how can the design of institutions facilitate the introduction of economic reforms? The most fundamental challenge is one of commitment of compensation. Of course, a first-order institutional innovation that provides some degree of commitment is provided by the introduction of democracy itself. As Acemoglu and Robinson (2000) have argued, democracies are political institutions that ensure that the median voter's tax-transfer preferences are implemented.

It is much more difficult to ensure that a political leader in an authoritarian country can be induced to implement economic reforms. One strategy is the use of network externalities. For example, in the case of the EU, the main advantage of becoming a member is a reduction in the transaction costs of trade and investment. The main benefit of staying outside the EU is the ability of a country to conduct an independent monetary and fiscal policy. As more countries join the EU, the direct benefit of membership goes up, since it provides access to a potentially larger market. However, what is striking is that even if these benefits were negligible, there may be a greater incentive to join the EU for countries outside the bloc, since joiners can transmit larger common shocks to non-member countries. As the EU becomes larger, it becomes increasingly costly to remain outside, and political leaders may feel trapped into joining an institution such as the EU, even though, initially, it may not have been in the country's interest.

A second strategy is to take advantage of an authoritarian leader's (shorter) time horizon, especially if it is in a period of political uncertainty. It may then be possible to get the leader to agree to a policy change well into the future in exchange for a monetary or political bribe today. The question, however, is how to ensure that the political leader does not change his or her mind in the future. The example of a political leader who has promised to support a future environmental treaty can be instructive. If in exchange for an incentive by, say, the World Bank the leader changes the legislation to make it easier for companies to operate in the "green" sector, firms will enter this sector and grow and become economically powerful. In future, if the political leader then decides not to support the environmental legislation, he or she can be lobbied by the green sector in the country to adhere to earlier promises.

In the context of democratic institutions, there are a few general strategies to increase political support for economic reform. First, the sequencing of reforms can be important. Typically, most economic reforms are a number of policies that have been bundled together. For instance, the initial success of a reform programme can either strengthen or weaken the support for its continuation (Roland, 2000; Jain et al., 2011). In this case, it is important that leaders build on the success of the initial phase to generate political support for subsequent stages of the reform package. Second, it helps if governments can design reform in a way so as to ensure that rents are preserved for those who are already in the system. This helps to diffuse political opposition and, indeed, is the strategy pursued by China with regard to the agricultural sector. China was successful in reforming the agricultural sector by introducing dual-track reform. Rents were preserved under the old system, but reforms were introduced for new entrants, and this "grandfathering" of individuals earning rents helped to diffuse political resistance to the reform and made it politically sustainable.

5. Policy conclusions

- The global financial crisis of 2008 had a dramatic and adverse impact on economic growth across the developed world. The response in the developing world was quite heterogeneous, with some emerging-market countries recovering relatively quickly and others suffering from a prolonged recession. However, even in the more successful countries it has been increasingly difficult to sustain high growth rates. As this chapter has emphasised, a country's policy response is driven by the nature of the political institutions that underpin economic policymaking and how the crisis affects the underlying political equilibrium. Given the heterogeneity in the factors that underpin the political equilibrium as well as the intensity of economic shocks, it is not surprising that economic recovery has varied greatly across countries.
- It is important to stress, therefore, that there are no one-size-fits-all recipes that can be suitable for every developing country. Indeed, the appropriate policy response to an economic crisis is unlikely to be identical across countries. This is because countries' institutions, culture and social norms inevitably differ a great deal. Even though economic principles are uniform, the "appropriate" policy is intermediated through these local institutional realities. As a result, it is essential to treat policy recommendations and diktat for institutional reform from the IMF or others with some caution. Countries will have to continue to experiment, and it is only through trial and error that it will be possible to know with absolute certainty what is the appropriate policy response. However, it is clear that countries need time, and policymakers need political space to experiment and to work out the most appropriate way forward. It is important, therefore, that countries develop good institutions of conflict resolution, as these will help leaders to buy time to experiment and to avoid taking a myopic view when crafting the optimal policy response to an economic shock.

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6 / The Design of Pro-poor Policies

Sayantan Ghosal

1. Introduction

According to recent World Bank estimates, the key Millennium Development Goal of halving extreme poverty, defined as the number of people worldwide living on less than $1.25 per day (at 2005 prices), was already attained in 2010. Closer inspection of the data, however, reveals that if China is excluded, the global picture is actually quite different. Indeed, the number of people worldwide (excluding China) earning less than $1.25 per day (at 2005 prices) fell only marginally between 1990 and 2008, from 1.23 billion to 1.12 billion (World Bank, 2012).

The picture is even bleaker when one considers the number of people living on less than $2 per day (at 2005 prices). Once China is excluded, that number has actually risen from 1.53 billion in 1990 to 1.82 billion in 2008.[1] The bulk of the really poor live in South Asia (specifically India) and Sub-Saharan Africa.

Given the amount of official aid that has been disbursed, why are there still so many people living in poverty worldwide? At a time of austerity in the aftermath of the 2008 global financial crisis, this matter is a key policy concern in the UK, especially in view of the commitment, supported by all major political parties, to increase aid as a percentage of GDP to 0.7% in 2013-14, from an estimated 0.56% of GDP in 2011.

But how does aid impact on poverty alleviation, and what determines its effectiveness? And equally important, how should projects supported by aid be designed to maximise its efficacy? Such evidence as there is on the impact of aid on poverty alleviation paints a mixed picture. Macro-level studies (Burnside and Dollar, 2000; Collier and Dollar, 2002; Rajan and Subramanian, 2008) which have examined the impact of aid on growth (and presumably, on poverty alleviation via growth) suggest that aid (to be precise, official development assistance) has had little or no impact on growth. Although there are other studies (Arndt et al., 2009) which point to a different conclusion – that aid has a positive impact on growth – it is fair to say that even a cursory reading of the literature suggests the evidence is, at best, mixed on this matter.

In contrast, micro-level studies convey a different image. For example, the evaluation of World Bank-funded projects by the Independent Evaluation Group (IEG) of the World Bank shows that those funded by official development assistance have had a positive impact on poverty alleviation. Mosley (1987) was among the first to draw attention to the differences in micro- and macro-level analysis of the impact of aid on poverty alleviation.

How should development practitioners (whether academics, third-sector professionals or policymakers) react to the mixed and contradictory nature of the evidence on the impact of aid on poverty alleviation? First, some of the estimation techniques used in studies which establish that aid has had little or no effect on

1 This calculation was made using publicly available data from the World Bank (http://iresearch.worldbank.org/PovcalNet/). The figure used was $61 per month (at 2005 prices), which works out at just above $2 per day.

growth are not robust – see, for example, Arndt et al. (2009), who discuss a number of papers making this point. Second, perhaps more interestingly, aid impacts on poverty alleviation via a variety of different micro- and macro-level channels, and these work in opposite directions. Hence, it could be entirely consistent that a specific aid-funded project works at the micro level, but that aid has a negligible impact on growth at the macro level because fiscal resources freed up as a result of aid are appropriated by rent-seeking decision-makers in privately beneficial, but socially unproductive, activities. Mosley (1987) examines this point in greater detail.

In this chapter, the issue of aid-funded projects is re-examined from a different angle. The focus is on the micro-level impact of aid-funded projects and how the design of such projects can maximise their impact on poverty alleviation.

In much of the existing work on the micro-level impact of aid, the starting point is the assumption that the primary channel through which aid affects poverty is by relaxing an external resource constraint. Such a view is wedded to the classical view of poverty traps being caused by external resource constraints. A different strand of research (e.g. Appadurai, 2004), however, suggests that poverty traps could also be driven by constraints internal to the individual (e.g. lack of hope and/or self-confidence, a sense of shame, aspirations failure etc).[2] Addressing these concerns requires a new analysis of the origins of self-reinforcing mechanisms, or "poverty traps", which cause poverty to persist.

This chapter focuses on research that goes beyond conventional accounts of deprivation and disadvantage at both a conceptual and a theoretical level. The analysis formalises the notion of an aspirations failure as an explanation of a poverty trap (Dalton et al., 2012). The research focuses on how aspirations adapt to the external circumstances of an individual and become an internal constraint with a bigger impact on poor individuals than on wealthier individuals. Evidence for such an effect is presented and then critically analysed.

The key implication for the design of pro-poor policies is that they need to address simultaneously the sources of external disadvantage, while also attempting to alter the internal constraints (such as aspirations failure) of poor, marginalised individuals in order to maximise their impact on poverty alleviation. Results from ongoing field work are included to provide evidence about the impact of raising aspirations on a marginalised, stigmatised community of sex workers in Kolkata, India.

2. Poverty traps: going beyond external constraints

2.1 Poverty traps and internal constraints

In contrast to transient poverty, chronic poverty is not just a snapshot of those who are poor now, but a condition which implies an understanding of multi-dimensional processes that make people poor and keep them poor. Chronic poverty, as defined by the incapability to fulfil basic needs during a period of more than five years, is one of the longest-standing problems faced by humanity.[3] More than 300 million people worldwide lived in chronic poverty in the late 1990s (*Chronic Poverty Report 2004-05*). The report estimates that 40% of the poverty in Sub-Saharan Africa is chronic (see Table 1).

2 Where relevant, this point is discussed in greater detail below.

3 For evidence of chronic poverty, see Jalan and Ravallion (1998); Fouarge and Layte (2003); Biewen (2003); Duncan et al. (1993), among others.

Table 1: Documenting chronic poverty

Approximate probabilities of staying poor over a 5-year period in selected countries		Average proportion of poor who are chronically poor over a 5-year period	
	Probability of staying poor	Sub-Saharan	40%
India	35%	East Asia and Pacific	27%
China	25%	South Asia	35%
Bangladesh	35%	Rest of the world	32%
Ethiopia	40%		
Pakistan	35%		
Indonesia	30%		
Vietnam	50%		
Philippines	40%		

Source: *Chronic Poverty Report 2004-05.*

The economics literature itself offers a significant amount of research which studies the origins of self-reinforcing mechanisms or "poverty traps" that cause poverty to persist.[4] It is widely argued that poverty traps are caused by people's external constraints, such as market imperfections, coordination problems or institutional failures, or by other factors such as neighbourhood effects (Durlauf, 2003), fertility decisions (Nelson, 1956) or malnutrition (Dasgupta and Ray, 1986). Some scholars argue that poverty traps are the result of credit or insurance market imperfections (Loury, 1981; Galor and Zeira, 1993; Banerjee and Newman, 1991, 1993; Torvik, 1993). Others claim that coordination problems or other mechanisms which reinforce the status quo are mainly responsible for preventing economies from adopting modern production technologies (see Da Rin and Hellman, 2002; Kremer, 1993, among others). "Bad institutions" are also thought to be a source of a bad equilibrium persistence. One of the more salient examples of this type of "institution failure" is government corruption (see, for instance, Bardhan, 1997).

Although empirical evidence has not shifted the balance decisively in favour of any of these specific arguments,[5] it is not the purpose of this chapter to explore the methodological problems that may have arisen when testing each model. Empirical problems aside, all of these models, with some exceptions, look for the causes of persistent poverty on people's external constraints: market or institutional failure. As a result, they disregard the endogenous psycho-social constraints that are inherent in the condition of chronic poverty. Inner problems, such as lack of self-confidence and lack of aspiration, are particularly well documented in the literature of psychology, sociology and anthropology. Disregarding these psycho-social endogenous constraints does not just imply the existence of a theoretical gap in the economic literature, but also a "real world" problem when it comes to developing anti-poverty policies.

4 See, for example, Azariadis and Stachurski (2004) or Azariadis (2004) for a literature review on poverty traps.

5 As Azariadis and Stachurski (2004, p.43) make clear, "poverty traps models tend to be lacking in testable quantitative implications". The empirical study by Bloom et al. (2003), for example, supports the existence of poverty traps, although as Azariadis and Stachurski (2004) point out, the evidence "gives no indication as to their source, or to the appropriate framework for formulating them as models". Graham and Temple (2006) test for a particular inertial self-reinforcement model, in which there is a traditional agricultural sector characterised by decreasing returns in production and a modern sector with increasing social returns owing to technological externalities. Although they can explain some income differences between poor, low middle income and agrarian economies, they cannot account for the huge differences between the very poorest nations and the rich industrialised countries.

Poverty, together with social exclusion, leads to detrimental self-reinforcing effects on self-perception, self-confidence and lack of aspirations. As Robert Walker (1997) argues: "When poverty predominantly occurs in long spells [...] the poor have virtually no chance of escaping from poverty and, therefore, little allegiance to the wider community ... In such a scenario the experience of poverty comes very close to that of social exclusion." (Cited in Atkinson, 1998). Mookherjee (2003) adds that "long-run poverty is fundamentally self-perpetuating [and] the entrapment goes hand in hand with [...] lack of hope". This link between social exclusion and "lack of hope or aspirations" is also highlighted by Atkinson (1998). He argues that social exclusion is, first, a relative concept – people are excluded from a particular society at a given place and time; second, an issue of agency – people are excluded or exclude themselves; and, third, related not only to present exclusion, but also to future hopes and expectations. People are excluded not just because they are currently without a job or income, but because they have few prospects for the future.

Atkinson's argument is also shared by the anthropologist Arjun Appadurai (2004), who argues that the poor may lack the capacity to aspire to "contest and alter the conditions of their own poverty". For Appadurai, the "capacity to aspire" is a navigational capacity, not only an ability to set goals, but also knowing how to achieve goals. Therefore, the "capacity to aspire" combines goal-setting with a navigational capability. Empowerment is interpreted here as consisting of both opportunity and the "capacity to aspire".

In the words of Bandura (1991): "People's beliefs in their efficacy influence the choices they make, their aspirations, how much effort they mobilise in a given endeavour, how long they persevere in the face of difficulties and setbacks ..." Appadurai (2004) notes that poor people may lack the capacity to aspire "to contest and alter the conditions of their own poverty".

However, unlike with external constraints, it is not clear whether such internal constraints are the cause of poverty – or its consequence. Do the poor remain deprived because they lack hope, motivation and aspirations or, as Bernard et al. (2011) claim, is it that "the poor may exhibit the same basic weaknesses and biases as do people from other walks of life, except that in poverty ... the same behaviours ... lead to worse outcomes"?

2.2 Internal constraints, aspirations and disadvantage

Chronic poverty generally comes together with social exclusion, and this combination leads to detrimental self-reinforcing effects on self-perception, self-confidence and lack of aspirations.

Likewise, Stern et al. (2005) refer to this issue, arguing that individuals "can be constrained by their aspirations and perceptions of their role, so that development depends on relaxing these constraints". They then add: "To understand [the] path out of poverty, we have to focus not only on the growth of opportunity but also on [...] internal constraint[s] on aspirations and behaviour [...] that limit poor people's ability to participate."

Ray (2003) argues that poverty and failure of aspirations may be reciprocally linked in a self-sustaining trap. Indeed, "poverty stifles dreams, or at least the process of attaining dreams". He also combines a discussion about the way aspirations may be formed and the way they may affect behaviour. Moreover, by providing a story in which individuals choose a level of effort to minimise their aspirations gap, Ray intuitively suggests that individual investment efforts should be minimal for both high and low aspiration gaps.

The work of the renowned sociologist William Julius Wilson offers clear evidence of the "social exclusion-lack of aspirations-poverty" link that was first observed in urban ghettos in the United States in 1970. Wilson (1987) makes the case that the increasing "social isolation" of the poor, especially the black poor, has greatly contributed to their poverty. "Out of sight, out of mind" allowed most of the non-poor either to deny or forget the conditions in the ghetto. Moreover, Wilson argues that causality can also go in the other direction: poverty also implies exclusion. He claims that a concentration of poverty results in the isolation of the poor from the middle class and its corresponding role models, resources and job networks. In effect, he concludes that being poor in a mixed-income neighbourhood is less damaging than being poor in a high-poverty neighbourhood.

Moreira (2003) argues that this lack of hope, together with low self-esteem, is also a common characteristic observed in the personality of Brazilians living in the north-east of the country. "As the poor lose their values, they no longer believe in themselves. They go through a process of Nihilism [denial of hope]." She claims that the greatest part of the poor population has these nihilistic characteristics, and they submit themselves to the destiny that is given by God.

The lack of confidence and hope suggests that there is a problem with the use of subjective wellbeing data as a measure of deprivation and disadvantage. In general, there is considerable evidence that there might be a "*satisfaction paradox*" (Sen, 1999), i.e. self-reported, subjective wellbeing among the poor may be no different from the population as a whole. This point is made forcefully by Rojas (2004). He reports results from a survey that was conducted in five states of central and southern Mexico as well as in the Federal District (Mexico City) during October and November 2001.[6] Almost 90% of respondents in the survey declared that they were either happy or very happy with their lives. This finding, together with the fact that more than 50% of the people in the survey could be considered poor according to their household income, suggests that the relationship between income (a conventional indicator of poverty) and subjective wellbeing (an indicator of human wellbeing) is not strong.

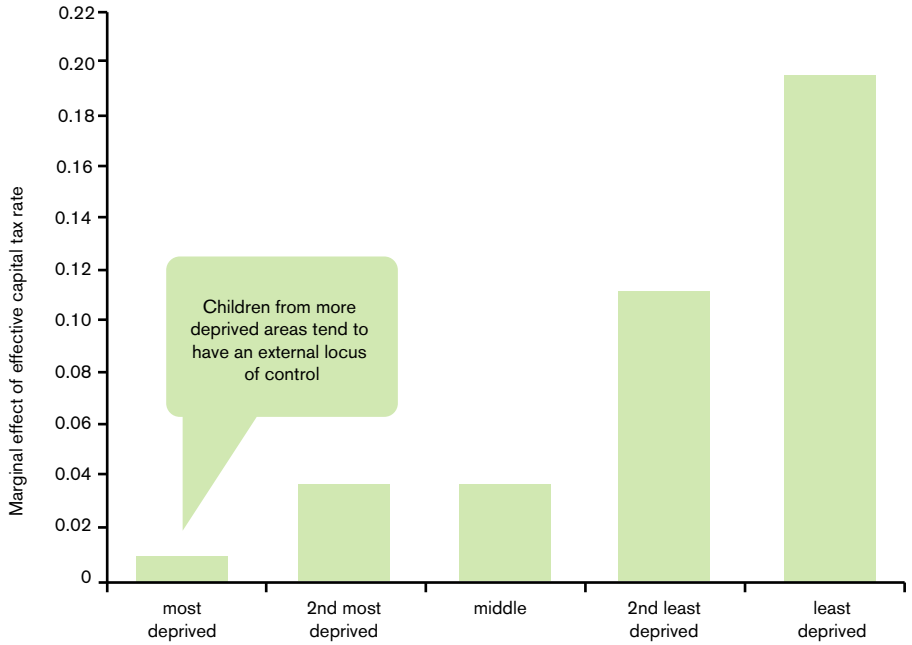
2.3 Patterns of persistent poverty and evidence of aspirations failure

If hard work is an important ingredient for success, an individual's beliefs about the role of hard work (versus luck or other external circumstances) in influencing life outcomes is an important factor that will shape his or her efforts, goals and outcomes. A poor person's belief on this matter may be quite different from that of a richer person. Figure 1, for instance, reflects such differences based on data from the Longitudinal Study of Young People in England (LSYPE 2006).

It shows that young people from deprived backgrounds believe that external factors have a bigger role to play in their life outcomes than their own efforts. This is consistent with other evidence, which shows that lower socio-economic status is typically associated with putting greater weight on the role of external circumstances in determining life outcomes (Schultz and Schultz, 2004).

6 A stratified-random survey was designed to collect information from a sample of persons. The survey was controlled by household income, gender and urban-rural areas. Rojas (2004) points out that the sample size was acceptable for inference in central Mexico; 1,540 questionnaires were properly completed.

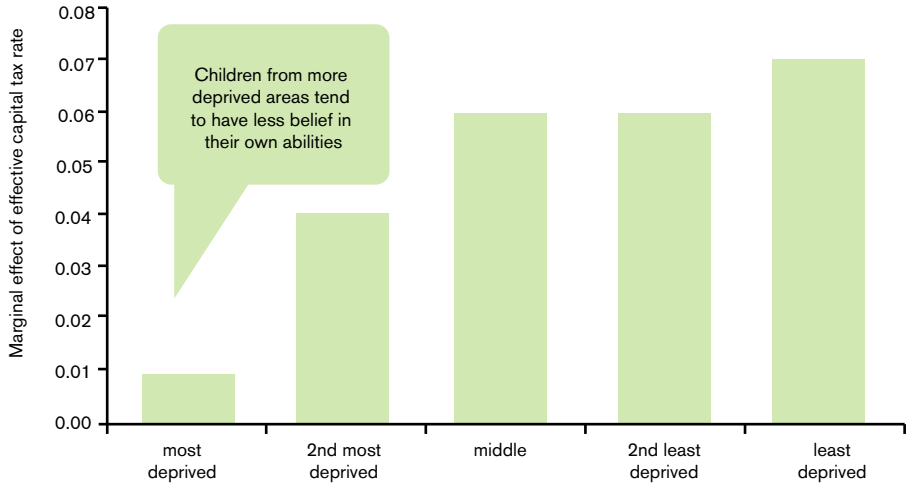
Figure 1: Locus of control, belief in own ability and deprivation



LOCUS OF CONTROL:
Young people's beliefs about whether outcomes are determined by oneself or external forces.

Locus of control scale measured at ages 8 / 14

ALSPAC by indices of multiple deprivation



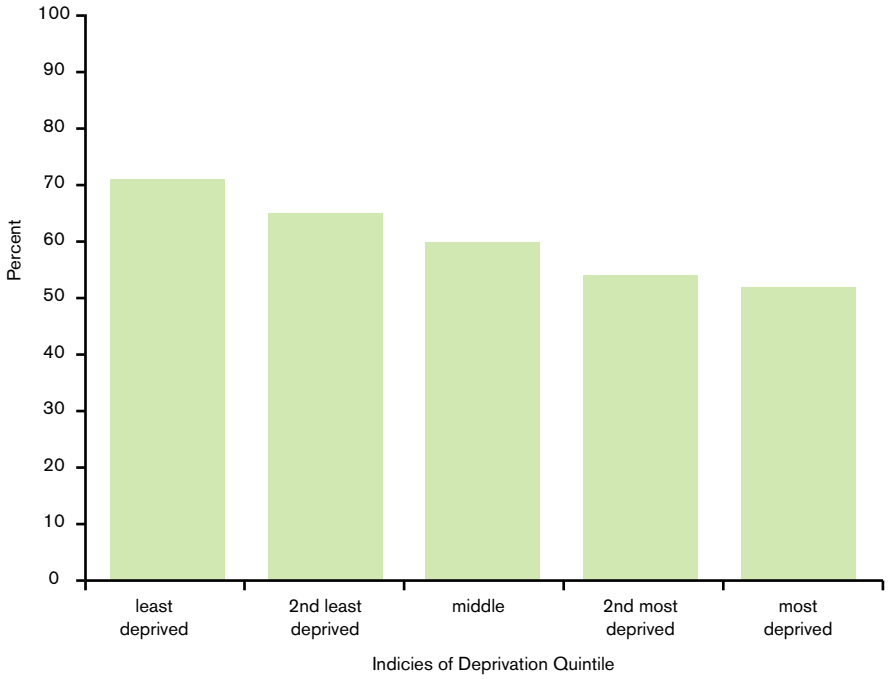
BELIEF IN ABILITIES:
Young people's beliefs about how clever, and how good at school work.

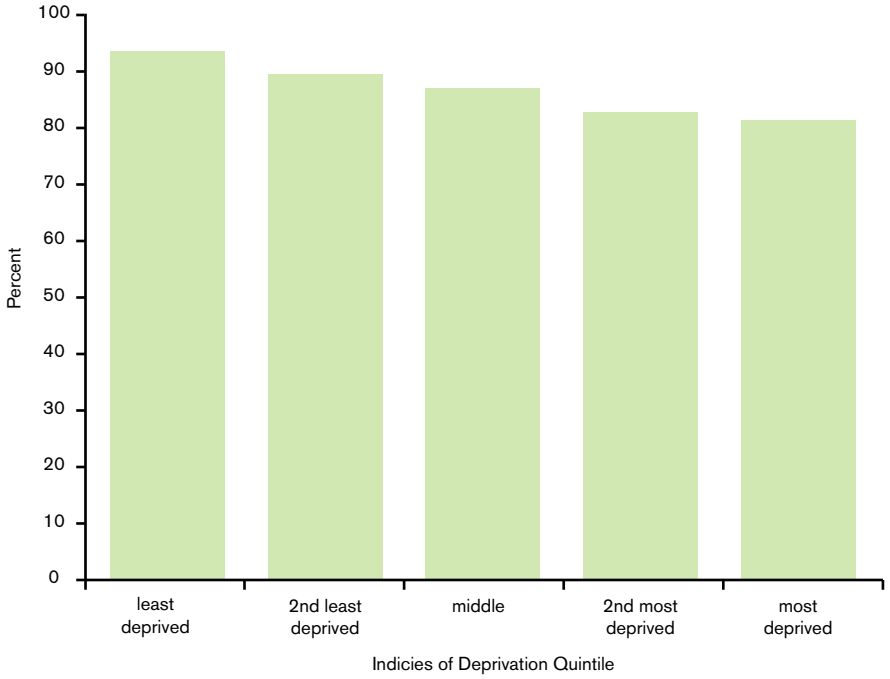
Abilities belief scale measured at ages 8 / 13

Avon longitudinal study of parents and children by indices of multiple deprivation

Source: Longitudinal Study of Young People in England (LSYPE 2006).

Figure 2: Education and deprivation





Source: Longitudinal Study of Young People in England (LSYPE 2006).

Youth in the LSYPE also demonstrate less faith in their own academic abilities or overall intelligence. As Figure 2 reveals, deprived youth in the LSYPE study had the lowest academic aspirations across all income quintiles. It is plausible that these beliefs and the low aspirations associated with them arise from the reality that people see in their own lives and in the lives of those around them. No doubt, the process of aspiration formation is very much influenced by a person's social environment. In this sense, poverty and deprivation cause people to develop lower aspirations owing to an *informational* disadvantage: they witness too few success stories in their social milieu to learn what matters for success.

However, there is considerable evidence to show that external constraints also create internal responses that *compound the negative impact of adverse external factors*. For instance, the work on "stereotype threat" by the social psychologist Claude Steele (2010) and others provides experimental evidence that invoking racial/gender identity results in weaker performances in higher education among African-Americans and women respectively.

To take another case, the Dunedin Longitudinal Study in New Zealand showed that pessimistic expectations significantly increased the likelihood of frequent smoking and less frequent exercise (Clark et al., 2003) – suggesting *a feedback effect from low aspirations to low effort*, even in matters such as health, where individual motivations need not be driven by market returns alone.[7]

On the flip side, there is evidence available which points to the effects of higher "reference points" (or goals) on performance outcomes. Laboratory experimental work by Falk et al. (2011) shows that when subjects have higher reference points for earnings, they persevere longer at the experimental task. In as much as aspirations may be regarded as "reference points for life goals", this evidence underscores how higher goals can affect people's life outcomes.

In real life, such reference points emerge from the social setting that people inhabit. One important issue here is to separate two distinct effects of a poor person's social milieu on his or her choices and outcomes. One is the *information* transmission effects of a person's social milieu; the other is the set of values, beliefs and preferences that affect his or her aspirations.

Two recent papers by Jensen (2010) and Jensen and Oster (2009) provide some suggestive evidence that addresses this issue. Jensen (2010) reports the results of a field experiment in the Dominican Republic, where students were informed about the actual return differential between primary and secondary/tertiary education, which they had previously underestimated. There was a substantial increase in *perceived* returns from education – *but almost no discernible effect on the actual rates of completing secondary schooling*. This suggests, at best, a modest effect of the *informational* role of the social environment on a person's aspirations, especially among the poor.

In contrast, Jensen and Oster (2009) report substantial changes in beliefs and attitudes on a variety of gender-related issues in India as a result of being exposed to cable television programmes with inspiring female protagonists. For example, women in villages with cable television reported a lower tolerance of domestic violence and weaker preference for sons, as well as increases in autonomy and declines in fertility. The authors also find an increase in school enrolment for girls in villages where cable television arrived earlier.

7 Pessimistic expectations were themselves inversely correlated with wealth levels, broadly defined to include liquid assets, but also non-pecuniary wealth, such as family and social cohesion, health, and social status.

The contrast between the modest effects of information in the Dominican Republic and the significant effects of characters in a soap opera on gender-related beliefs and outcomes in India is striking. It suggests that a woman's social environment has a distinct *aspirational* effect on her beliefs and goals, independent of the information transmitted through the life experiences of others.

3. Behavioural poverty traps: a theoretical framework

The theoretical framework,[8] which examines the link between internal constraints and poverty traps, is developed by Dalton et al. (2012). To understand the psychology of poverty and low aspirations, a key behavioural bias (or "internal constraint") that individuals suffer from in setting life goals or aspirations is explicitly modelled. In other words, individuals underestimate how their aspirations evolve over their lifetime as a consequence of their effort.[9]

Both the rich and the poor suffer from this bias. However, poverty imposes an additional constraint on the poor: they face much greater downside risk in their lives.[10] Such risk greatly exacerbates the adverse effects of the behavioural bias in setting aspirations. By affecting the effort choices of the poor, it makes them more susceptible to an aspirations failure, i.e. a failure to aspire to, and achieve, their own best possible outcome.

Typically, in the ladder of their life's aspirations, most people are able to visualise only one rung above at a time – and not the entire pathway of how far they can travel. This bias does not operate very differently among the poor, at their own level. However, greater downside risk lowers their expected benefit of investing effort into any goal: when you are worried about whether you will get a good crop in order to have enough to eat or your child is performing at a mediocre level in school, it makes you think twice about whether it is worth hiring a remedial teacher. Lower effort increases the odds of low performance and feeds into lower aspiration and achievement in the long run.

As Banerjee and Duflo (2011) put it, referring to the reasons for poor education outcomes in developing countries: "... the teacher ignores the children who have fallen behind and the parent stops taking interest in their education. But this behaviour creates a poverty trap even where none exists in the first place. If they give up, they will never find out that perhaps the child could have made it. And in contrast, families that assume that their children can make it, or families that don't want to accept that a child of theirs will remain uneducated, which tend to be, for historical reasons, more elite families, end up confirmed in their 'high' hopes."

The theoretical formulation rests on the premise that a person's aspirations level is a reference point:[11] other things being equal, a (higher) aspirations level (adversely) affects the satisfaction a person receives from a particular

8 Ray (2003) provides a non-mathematical exposition of how socially determined aspirations contribute to poverty persistence. Closely related papers on aspirations include Bogliacino and Ortoleva (2011), Genicot and Ray (2011) and Stark (2006), all of which have a more macro focus. Banerjee and Mullainathan (2010) provide a model to understand how poverty may persist owing to different behavioural constraints – a lack of self-control in the consumption of certain goods.

9 Survey evidence: people underestimate how preferences evolve as their income changes over their lifetime (Easterlin, 2001); migrants underestimate how their preferences adapt with their location – ending up less happy than rural and urban non-migrants (Knight and Gunatilaka, 2008).

10 As Banerjee and Duflo (2011) put it: "Risk is a central fact of life for the poor, who often run small business or farms or work as casual laborers, with no assurance of regular employment. In such lives, a bad break can have disastrous consequences."

11 This idea dates back to Simon (1955), and more recently Selten (1998).

Table 2: Actions, aspirations and payoffs

	Low aspirations	High Aspirations
Perpetuate status quo	0+0	0-2
Change status quo	(1-c)+1	(1-c)+0

outcome.[12] Conversely, higher aspirations also spur greater effort (see Section 4 for systematic evidence of this).

The burden of greater downside risk that the poor face makes them more susceptible to an aspirations failure. The intuition underlying this result is as follows: take two individuals, one rich and the other poor, who have the same initial aspiration level. At this given aspiration level, the poor person would optimally choose a lower effort level than the rich one, owing to a lower expected marginal benefit from effort driven by risk. However, the feedback from effort to aspiration implies that the lower effort of the poor person will cause his aspiration level to diverge from that of the rich person. Therefore, the poor person has two reasons to put in a low effort: not only are the expected net benefits lower, but aspiration levels – the reference point which determines a marginal benefit of effort – are endogenously lower as well.

Two types of poverty traps emerge: standard traps that are driven by external (resource) constraints, and behavioural ones characterised by low effort, low aspirations and pessimistic beliefs. While external constraints imposed by poverty are a trigger for internal constraints, the latter can become an independent source of disadvantage in behavioural poverty traps. Therefore, policy approaches that influence beliefs and aspirations among the poor are essential to break this latter kind of trap.

It is possible to illustrate how a behavioural poverty trap works by using the following example. Consider a poor individual whose decision-making problem involves choosing between low effort that maintains the status quo and high effort that changes the status quo (working harder at school or undertaking additional training, embarking on a new project, changing the neighbourhood etc.) at an extra cost c>0. The individual can have "high aspirations" or "low aspirations". Table 2 provides a quick summary of the decision problem.

In this example, the payoffs are an additive function of two components: (a) an action-based payoff, and (b) a psychological state-based payoff which reflects gains and losses relative to a reference point defined by the aspiration level of the individual. The first component in the payoff table above refers to the action-based payoff, while the second component refers to the psychological state-based payoff. For simplicity's sake, it is assumed that (a) choosing the action "perpetuate status quo" results in the individual being stuck in the status quo, caught in a poverty trap with certainty, while (b) choosing the action "change status quo" results in the individual exiting the poverty trap with certainty.[13] Moreover, it is assumed that "low aspirations" goes with the agent being stuck in the status quo, and "high aspirations" goes with the agent exiting the poverty trap.

The action-based payoff of "perpetuating the status quo" (i.e. being stuck in a poverty trap) is normalised to 0 (0 benefit + 0 effort cost); the action "change the

12 See, for instance, Medvec et al. (1995), who study the expectations and emotions of Olympic athletes and find that bronze medal winners tend to have a higher level of satisfaction than silver medal winners.

13 Alternatively one could assume the agent exits with a high probability when he chooses the action "change status quo": this would alter the precise computations reported here, but yield qualitatively similar results.

status quo" results in an action-based payoff of 1-c, where 1 is the payoff gain from exiting the poverty trap and c is the effort cost involved. Perpetuating the status quo when the reference point is "low aspirations" generates a psychological payoff of 0 (no loss or gain relative to the reference point); changing the status quo when the reference point is "low aspirations" generates a psychological payoff of 1 (a gain relative to the reference point).

Perpetuating the status quo when the reference point is "high aspirations" generates a psychological loss of -2 (that the psychological loss is greater than the psychological gain reflects loss aversion when aspirations act as a reference point); changing the status quo when the reference point is already "high aspirations" is psychologically neutral (no payoff loss or gain).

The agent mistakenly does not internalise the fact that there is a feedback from actions to aspirations. Consequently, the behavioural agent with "low aspirations" will perpetuate the status quo whenever $2-c<0$ (equivalent to $2<c$) and ends up stuck in a poverty trap. However, if the initial aspirations of the behavioural agent could, by a suitable intervention (discussed in Section 4 below), be altered to "high aspirations", then the behavioural agent will choose to change the status quo as long as $-2<1-c$ (equivalent to $c<3$). Therefore, whenever $2<c<3$, the behavioural agent is stuck in a behavioural poverty trap. Clearly, the way out of such a trap is to raise the aspirations of the individual.

4. Behavioural poverty traps: fieldwork in Kolkata, India

If aspirations failure could emerge endogenously as an adaptive response to extrinsic disadvantage and, over time, become an additional source of disadvantage for poor individuals, it is instructive to examine what empirical evidence there is for this. Recent empirical work (Miguel and Kremer, 2004; Duflo, 2003; Jensen, 2010; Cole et al., 2009) has shown that enhancing the opportunity sets of individuals and the availability of payoff-relevant information on their own may have limited impact.[14] Could other constraints, such as those internal to an individual or a community caught in a poverty trap, have a role to play? Based on available evidence, there is a paucity of empirical studies using a randomised control trial methodology that aim to examine the impact of directly raising aspirations and mitigating internal constraints on decision-making and economic outcomes.

In ongoing research,[15] a new micro-level empirical analysis in Kolkata, India is being carried out. The main focus of the investigation is on whether a programme that aims to raise the aspirations of a marginalised group in society, sex workers, can have a positive impact on aspirations and self-perception (as measured by self-efficacy and locus of control) and, in turn, on actions (e.g. savings behaviour) to improve their own wellbeing.

14 For example, Miguel and Kremer (2004) report that only 57% of a sample of villagers in Kenya picked up free deworming pills, which were shown to greatly improve children's health and performance. Cole et al. (2009) report that financial literacy training had a negligible impact on the actual likelihood of opening a bank account.

15 This section reports data collected in the course of a pilot study carried out by Sanchari Roy, Anandi Mani and Sayantan Ghosal (all CAGE researchers) in collaboration with Dr Smarajit Jana (of Durbar). The pilot study has been scaled up to 600 participants, and at the time of completing this chapter data collection was in its second phase. The pilot project has been completed and the full-scale study is due to be concluded in May 2013.

The training programme, called "Dream Building", will be carried out in collaboration with the Durbar Foundation, a non-governmental organisation working with sex workers in Kolkata. It will consist of eight sessions, during which experienced trainers associated with Durbar will attempt to lift the aspirations of the participating sex workers through novel methods of discussion and engagement. Given the social stigma attached to the sex trade, particularly in India, many workers in this profession suffer from a loss of hope and a sense of defeat.

The programme aims to give sex workers a renewed sense that they are entitled to have hopes and aspirations (just like any other person in mainstream society), to teach them how to work towards realising these aspirations and to develop a positive, pro-active outlook regarding their future. It is also interesting to note that some of the trainers in this programme are themselves former sex workers who have now successfully reinvented their lives and careers and can thus serve as role models for the participants to make the programme even more effective.

Between February and July 2011 data were collected in a small-scale pilot study. A sample of 34 sex workers was randomly selected for the study in the localities of Khidirpore (18) and Kalighat (16). Baseline interviews were carried out with these women in February-March 2011, weekly "dream-building" workshops were held during April-May, and an end-line interview took place in July. In addition to the original group of 34, a further eight women (four in each locality) were interviewed (only once) as part of a control group in June 2011, i.e. they were not exposed to the dream-building workshops. For the purposes of the pilot scheme, the set of outcome variables the researchers focused on related mostly to behavioural and psychological measures, including opinion about oneself, sense of shame (due to the association with sex work as a profession), feeling of discrimination, locus of control, decision-making, mobility, etc.

(i) Pre- versus post-analysis

Two sets of analyses have been conducted. First, a simple pre-post analysis was carried out of the 34 women who constituted the original sample, all of whom were exposed to the dream-building workshops. The regression equation is as follows:

$$y_{ilt} = a_0 + \beta . kali_l + \gamma . post_t + \delta . kali_l * post_t + X_{ilt} + \varepsilon_{ilt} \quad (1)$$

Where y_{ilt} denotes the relevant outcome variable for individual i in location l at time t, $kali_l$ captures if the individual lived in Kalighat or Khidirpore (fixed effect for Kalighat), $post_t$ denotes post-intervention period and X_{ilt} denotes individual level controls.[16] The coefficient of interest is γ. It should be reiterated here that the "dream building" intervention was rolled out in both localities, so γ essentially estimates the difference between pre-intervention and post-intervention outcomes for the treatment group alone, but the interaction term with Kalighat is thrown in to check if there were any differential effects based on locality.

As previously mentioned, the relevant outcome variables are opinion about oneself, sense of shame (due to the association with sex work as a profession), feeling of discrimination, self-confidence, locus of control, decision-making and mobility. Each is constructed to be a binary variable based on a series of questions that were asked in surveys relating to the issue in question. For example, regarding

16 The constant term a_0 captures the level of the relevant outcome variable in Khidirpore pre-intervention, while the coefficient β on $kali_l$ captures the differential effect in Kalighat, also pre-intervention.

Table 3: Pre- versus post-analysis of "Dream Building" intervention on outcomes

	Opinion about self	Shame	Discri-mination	Self-confidence	Locus of control	Decision-making	Mobility
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kali	-0.24	0.17	0.13	0.14	0.34***	-0.01	-0.21*
	(0.16)	(0.14)	(0.13)	(0.16)	(0.12)	(0.09)	(0.12)
Post-intervention	0.29**	-0.29**	0.28**	0.39**	0.83***	0.06	0.22**
	(0.14)	(0.14)	(0.12)	(0.15)	(0.11)	(0.09)	(0.11)
Kali*post-intervention	0.28	0.08	-0.16	-0.05	-0.30*	-0.24*	0.21
	(0.21)	(0.20)	(0.18)	(0.22)	(0.17)	(0.13)	(0.16)
Constant	0.60***	0.29***	0.00	0.39***	0.06	0.94***	0.78***
	(0.10)	(0.10)	(0.09)	(0.11)	(0.08)	(0.07)	(0.08)
Adj. R-sq	0.20	0.11	0.05	0.12	0.54	0.07	0.19
No. of observations	60	66	67	67	67	68	66

Note: "***" (1%), "**" (5%), and "*" (10%) statistical significance.

opinion about oneself, the question asked was: "What is your opinion about yourself?", and the answer options were: "I am a bad woman", "I am a fallen woman", "I have no future", "I am somehow living my life", "I am committing a crime", "I am committing a sin", "I have no opinion", "I am a service provider/ entertainment worker" and "I do it to feed myself and there is nothing wrong with it". For the last two answers, the corresponding binary variable "opinself" is assigned the value 1, and 0 otherwise.[17]

Table 3 presents the results of this analysis. Being exposed to the dream-building workshop improves the sense of self-worth in treated women – they are 0.29 percentage points more likely to think of themselves as being no different from any other informal sector worker in India, and less likely to think of themselves as being a fallen woman or a sinner (column 1). They are also 0.29 percentage points less likely to feel ashamed of their occupation (column 2). Column 3 indicates that post-intervention, these women are also 0.28 percentage points more likely to feel discriminated against, which might be reflective of their heightened sense of self-worth that is consistent with the result in column 1. There does not appear to be any differential impact of the treatment across the two localities for these three outcomes.

Being exposed to the aspiration-developing workshops also improved the self-confidence of these women (column 4) and strengthened their belief that their life was under their control (column 5). Self-confidence is measured using a binary variable based on a series of seven questions, including whether the respondent is comfortable about speaking out and being seen in public, interacting with outsiders such as police officers, discussing her profession with her children, neighbours etc. The binary variable takes the value 1 if a respondent answered yes to four out of these seven questions, and 0 otherwise. Post-intervention, women in the sample were 0.39 percentage points more likely to be self-confident. Again, no differential impact of the treatment is observed for the women living in Kalighat.

Locus of control, on the other hand, is measured using a series of eight questions, including whether the respondent feels she can resolve problems with the police, landlord, local people, goons, pimps and clients, as well as handle

17 More details on the survey questionnaire are available on request.

sudden crises in her life. The measure takes value 1 if the respondent answered yes to five out of these eight questions (taken to denote crudely an "internal" locus of control) and 0 otherwise. Post-intervention, women in the sample were 0.83 percentage points more likely to display internal locus of control (column 5). However, among the group of sample women in Kalighat, 0.30 percentage points were less likely than their Khidirpore counterparts to do so, although the coefficient is only marginally significant.

Column 6 indicates that the intervention is found to have no significant effect on their decision-making measured in the context of financial matters, the future of their children, personal purchases, health, condom usage, etc. This should perhaps not be too surprising, given that even before this intervention was carried out, a very high proportion of sample women were already making a majority of their decisions on their own, as indicated by the constant term whose magnitude is 0.94, which is highly significant. Finally, there appears to be a positive and significant impact of the intervention on the mobility of these women (column 7). Post-treatment, these women were 0.22 percentage points more likely to attend social functions, travel alone, etc.

(ii) Treatment- versus control-analysis

In a treatment-control analysis, the outcomes between the treatment group of 34 women who were exposed to the intervention and a control group of eight women who were not, but who were interviewed after the completion of the intervention, can be compared. The regression equation is as follows:

$$y_{il} = a'_0 + \beta'.\, kali_l + \gamma'.treat_i + \delta'.\, kali_l * treat_i + X_{il} + \varepsilon_{ii} \quad (2)$$

Where the variables depict the same as in equation 1 above, and $treat_i$ denotes if the woman was assigned to the treatment group or not.[18] Table 4 presents the results. The impact on self-worth, self-confidence, locus of control, decision-making and mobility is qualitatively similar to the results obtained in the pre-post analysis of Table 3. In the case of shame, the coefficient is very similar and insignificant. In the case of discrimination, the treated women are less likely to feel discriminated against, but the coefficient is also insignificant. The other point to note is that in this treatment-control analysis it was found that for some of the outcome variables, such as self-worth, decision-making and mobility, women in Kalighat benefited less from participating in the dream-building workshops than those in Khidirpore.

18 In this regression equation, the constant term a'_0 denotes the level of the relevant outcome variable in the control group of women in Khidirpore, while the coefficient β' on $kali_l$ denotes the same for those in Kalighat.

Table 4: Treatment-versus-control analysis of "Dream Building" intervention on outcomes

	Opinion about self	Shame	Discri-mination	Self-confidence	Locus of control	Decision-making	Mobility
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Kali	0.67***	0.25	-0.03	0.50*	0.42	0.25	0.75***
	(0.23)	(0.25)	(0.16)	(0.29)	(0.26)	(0.22)	(0.10)
Treatment	0.89***	-0.25	-0.72	0.53**	0.56**	0.25	1.00***
	(0.17)	(0.20)	(0.47)	(0.23)	(0.21)	(0.17)	(0.08)
Kali*Treatment	-0.62**	0.00	(dropped)	-0.40	-0.37	-0.50**	-0.75***
	(0.25)	(0.28)		(0.32)	(0.28)	(0.25)	(0.11)
Constant	-0.00	0.25	1.00***	0.25	0.33*	0.75***	0.00
	(0.15)	(0.18)	(0.45)	(0.20)	(0.19)	(0.16)	(0.07)
Adj. R-sq	0.43	0.12	0.02	0.10	0.13	0.08	0.82
No. of observations	41	42	35	42	41	42	42

Note: "***" (1%), "**" (5%), and "*" (10%) statistical significance.

5. Designing pro-poor interventions

Taken together, the theoretical and empirical analysis of behavioural poverty traps implies that anti-poverty initiatives aiming to tackle persistent poverty need to be mindful of two important issues:

i. the need to reshape beliefs among the poor, in addition to providing resources; and
ii. the importance the poor attach to similarity in forming their beliefs.

As Bandura (2009) puts it: "Failure to address the psychosocial determinants of human behaviour is often the weakest link in social policy initiatives. Simply providing ready access to resources does not mean that people will take advantage of them."[19]

Pro-poor policy interventions need to alter internal constraints (such as aspirations), in addition to relaxing external constraints. Changing beliefs is important to break aspiration failure driven by poverty traps. This could be achieved by changing the initial aspirations of parents.

Bandura cites the case of a national literacy programme in Mexico, in which people who were skilled at reading were urged to organise small self-study groups to teach others how to read. Although it was a good idea, there were few takers. Upon conducting a survey, Bandura's team identified three beliefs among poor illiterate persons that impeded their participation: that reading is learnable only when one is young, that they lacked the ability to master such a complex skill, and that an educated person would not be interested in devoting his or her time to them. In collaboration with the Population Media Centre (PMC), Bandura developed a soap opera that worked to allay these specific misbeliefs,[20] which resulted in a dramatic increase in the take-up rates for the programme.

19 This quote and the material below are based on a lecture by Alberto Bandura to the British Psychological Society. An edited version was published in *The Psychologist* (2009).

20 In the drama, a popular star played the role of the literate person to whom various illiterate characters voice their self-doubts, and the instructor corrects their misbeliefs and persuades them that they have the ability to succeed.

Soap operas have thus been created to tackle beliefs and social issues among the poor in a number of developing countries such as Sudan (forced marriage, genital mutilation), Kenya (property rights for women), India (gender inequality in child-rearing, education for girls) and Tanzania (family planning, HIV/AIDS). These soap operas emphasise the similarity between their target audience and the life experiences of the soap opera characters. Bandura argues that it is this kind of similarity that has allowed the target audience to identify with the drama characters over the course of the series, resulting in a significant change in aspirations and effort.

6. Policy conclusions

- A key policy concern in emerging-market economies is the appropriate design of pro-poor policy interventions to maximise their impact on alleviating poverty. Addressing such policy concerns requires analysing the origins of self-reinforcing mechanisms, or "poverty traps", that cause poverty to persist. Within economics, a significant strand of research focuses on the role of external constraints, such as market imperfections, coordination problems or institutional failures in perpetuating poverty traps. Policy organisations such as the UK Department for International Development (DFID), the World Bank and numerous non-governmental organisations working in developing countries tend to focus mainly on relaxing external constraints instead of focusing on altering internal constraints.
- However, there is a growing and increasingly influential body of work that emphasises the role of endogenous internal constraints (e.g. learned helplessness, pessimistic beliefs and an external locus of control) which adapt to the condition of chronic poverty and become, over time, an independent source of disadvantage for poor individuals in their own right.
- Pro-poor policies that take into account the need to alter internal constraints (e.g. raise aspirations) among the poor will have a greater impact on poverty alleviation than policies that address external constraints alone. For example, ongoing CAGE fieldwork documents the impact of "dream-building" sessions (pioneered by the Durbar Foundation) to empower and alter the behaviour of a marginalised, stigmatised community of sex workers in Kolkata. Results from initial, small-scale work provide suggestive evidence of the potential impact of interventions that raise aspirations (usually internal constraints) on the psychological constraints.

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About CAGE

Established in January 2010, CAGE is a research centre in the Department of Economics at the University of Warwick. Funded by the Economic and Social Research Council (ESRC), CAGE is carrying out a five-year programme of innovative research.

The Centre's research programme is focused on how countries succeed in achieving key economic objectives, such as improving living standards, raising productivity and maintaining international competitiveness, which are central to the economic well-being of their citizens.

CAGE's research analyses the reasons for economic outcomes both in developed economies such as the UK and emerging economies such as China and India. The Centre aims to develop a better understanding of how to promote institutions and policies that are conducive to successful economic performance and endeavours to draw lessons for policy-makers from economic history as well as the contemporary world.