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Explaining Germany's Exceptional Recovery

Edited by Dalia Marin



A VoxEU.org Book

CEPR Press

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Centre for Economic Policy Research (CEPR)

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Foreword

Germany's transformation from the 'sick man of Europe' in the 1990s to its world leadership of global exports today is an astounding phenomenon. Intrinsicly linked to the trade liberalisation of Eastern Europe after the fall of communism, Germany's newly decentralised firm structures and labour markets flourished in building production networks that have proven remarkably resilient to international competition.

This eBook explains Germany's extraordinary recovery. The authors' central focus is the transformation of the country's industrial relations, which decentralised wage bargaining and in turn decreased labour costs while increasing competitiveness. Decentralised firm hierarchies improved product quality, which is why wage moderation alone is not a good explanation for Germany's quickly rebounding exports after the Global Crisis.

The eBook also looks at the roles of international production networks (via Eastern Europe's trade liberalisation), the current account surplus, and technology – all of which affected firms' access to and demand for labour. In turn, this has had a lasting effect on Germany's ability to withstand the China shock far better than some other Western economies. Meanwhile, voting patterns and the country's international relations remain affected by the country's historical politics. Finally, the authors draw some policy lessons for economies in which institutions prevent or restrict the decentralisation of wage bargaining, and discuss how the evolution of firm management styles in Germany may not be easily replicable elsewhere.

CEPR is grateful to Dalia Marin for her excellent editorship of this eBook, and to Anil Shamdasani and Sophie Roughton for its production. CEPR, which takes no institutional positions on economic policy matters, is delighted to provide a platform for an exchange of views on this topic.

Tessa Ogden

Chief Executive Officer, CEPR

April 2018

Introduction

Dalia Marin

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What explains Germany's extraordinary recovery from the 'sick man of Europe' in the 2000s to become an economic powerhouse today? This eBook aims to provide an answer to this question.

The institution of labour relations

One leading explanation is the astonishing transformation of Germany's industrial relations from a rigid system of national wage negotiations to a decentralised, flexible system of wage bargaining described in Chapters 1 and 2 of the book. Christian Dustmann, Bernd Fitzenberger, Uta Schoenberg, and Alexandra Spitz-Oener argue in Chapter 1 that the transformation of the German economy was due to an unprecedented process of decentralisation of wage bargaining to the firm level that led to a dramatic decline in unit labour costs, and ultimately to an increase in competitiveness of the German economy. Wage decentralisation was made possible, they claim, by the specific governance structure and autonomy of the German labour market, not rooted in legislation but laid out in contracts and mutual agreements between employer associations, work councils, and trade unions. This decentralisation of the wage-setting process was driven by a sharp decline in the share of workers covered by union agreements and an increase in opening clauses that strengthened the role of firm-based work councils in wage determination relative to trade unions. The decline in union coverage and the increase in opening clauses, in turn, were both triggered by a more competitive global environment. In particular, the new opportunities to move production to the emerging market economies of Eastern Europe changed the power equilibrium between trade unions and employer federations and forced unions and work councils to accept deviations from industry-wide agreements.

Interestingly, Dustman et al. emphasise that the 'Hartz reforms' – commonly viewed in Germany as the critical turning point for the economy – played no essential role. They provide evidence that the timing does not support the Hartz reforms explanation for the resurgence of the German economy. The decentralisation of wage bargaining and the improvement in cost competitiveness of the German economy started in the mid-1990s, nearly a decade before the Hartz reforms were implemented. Moreover, they emphasise that the reforms focused on creating incentives for seeking employment, but did little to support the remarkable wage restraint witnessed since the mid-1990s.

In Chapter 2, Lucio Baccaro agrees with Dustman et al. in his description of the transformation of Germany's industrial relations institutions from the 1990s onwards, but differs in his assessment. After 1990 sectoral bargaining coverage declined in manufacturing (from 80.3% in 1995 to 50.4% in 2013), and in 2005-07 over 20% of the manufacturing establishments covered by sectoral agreements made use of opening clauses. The ability of collective bargaining institutions to redistribute productivity growth across sectors, which was a key feature of the rigid German model of industrial relations, was undermined. As a result, only in two sectors did real wages exceed national productivity – in all other sectors they were well below. Baccaro stresses that the liberalisation of industrial relations and the associated wage moderation has stimulated exports, and depressed imports, through the stagnation of domestic demand contributing to the German current account surplus.

However, citing Streek (1997), Baccaro argues that before the 1990s the ability of firms to adapt wage rates to local labour and product market conditions was constrained by industry-level collective bargaining. He sees these institutional rigidities as acting as 'beneficial constraints' by forcing firms to innovate and upgrade in order to stay competitive in world markets. In this way, institutional rigidities were not a hindrance for competitiveness. Unable to compete on costs due to the presence of strong unions and encompassing industrial relations institutions, firms were encouraged to boost their product quality and productivity levels by investing in worker skills and innovation. Baccaro sees the price for relaxing these 'beneficial constraints' as a possible erosion of product quality and productivity in the future.

Globalisation and technology

In Chapter 3 Dalia Marin digs deeper into the theme of product quality and examines its contribution to Germany's exceptional export performance. After the financial crisis, nominal wages in Germany have increased much faster than in other European countries (16% between 2009 and 2013, compared to 5% in Spain), but Germany's exports rebounded more quickly compared to other European countries. Marin argues, therefore, that wage restraint cannot fully explain why Germany has been so successful in exporting. She identifies two events that have had a profound effect on Germany's way of doing business: the reorganisation of business to a more decentralised style of management, and the rise of Eastern Europe after the fall of communism. She argues that the introduction of decentralised management in German firms provided the incentives for product quality. Workers in the lower levels of the firm hierarchy are better informed about market demands, so giving these workers more power in decision making encourages firms to introduce products that customers appreciate. Indeed, she finds that German firms increase their export market share of top-quality goods by a factor of almost three when they operate with a decentralised, less hierarchical organisation. Moreover, compared to its European peers, Germany is the only country that has increased the market share of export goods with a low vulnerability to prices when firm organisation was decentralised. Decentralisation of decision making in firms thus allowed German exporters to expand the range of high-quality products whose demand responds only little to price changes. Marin's findings suggest that the high-cost industrial labour regime in Germany before 1990, as described by Baccaro, may have had a lasting effect on a business culture of quality ('Made in Germany') that persisted even when the disciplining role of high wages and a strong Deutsche Mark vanished.

The move to decentralised management in Germany was itself triggered by the trade liberalisation of the economies in Eastern Europe after the fall of communism, Marin emphasises. As a neighbouring country, Germany was significantly affected by the opening-up of Eastern Europe. German firms reorganised production and relocated activity to the cheaper Eastern Europe, which was rich in skilled labour and thus offered not only new market opportunities for German firms but also a pool of skilled and inexpensive workers. Marin asserts that the expansion of German value chains

to Eastern Europe after the fall of communism helped Germany to cope with a skill shortage which became particularly acute in the 1990s. It has helped Germany to keep costs down and to win market shares globally. Offshoring to Eastern Europe not only lowered wages through the decentralisation of wage bargaining, as emphasised by Dustmann et al. in their chapter, and lowered production costs by using cheap labour from Eastern Europe as pointed out by Marin, but also led to the decentralisation of firm hierarchies, which empowered workers to improve product quality.

The rise of Eastern Europe was also a driving force behind Germany absorbing the China shock so much better than the US, as Jens Suedekum emphasises in Chapter 4. He calculates that rising import penetration from China following its accession to the WTO in 2001 cost about 540,000 manufacturing jobs in Germany over the period 1990 to 2010. However, these job losses were more than offset by the 980,000 additional manufacturing jobs which were created from rising export opportunities to Eastern Europe. As a result, the share of manufacturing employment of about 30% in 1995 declined only slightly to 25% in 2015. In the US the decline of manufacturing was more pronounced (from 15% in 1995 to 7-8 % in 2015). China's rise had a different effect on Germany than the rise of Eastern Europe because the two trade shocks are quite distinct. Trade with China is of the inter-industry type (trade across sectors), while trade with Eastern Europe takes place within the same sector and within the same multinational firms (intra-industry and intra-firm trade), as Marin emphasises in her chapter.

Besides the China shock, Suedekum also finds that the introduction of robots had a much milder effect on the German labour market than studies typically find for the US. Every industrial robot has replaced two manufacturing jobs on average in Germany, with an overall loss of 275,000 jobs. Acemoglu and Restrepo (2017) calculate that every industrial robot in the US has replaced between three and six jobs on average. What explains this difference? Suedekum stresses that robots have not raised the displacement risks for incumbent workers in Germany. Instead, robots have replaced potential jobs for young labour market entrants. These young entrants started their careers in the service sector instead. The enhanced job stability for insiders comes at the cost of lower wages for medium-skilled workers, who often switched to different occupations inside the same firm. He is not sure whether the German way of coping

with technical change of retaining and retraining incumbents while blocking entry for new and young workers will be sustainable in the future.

In Chapter 5, Dietmar Harhoff and Monika Schnitzer explore the role of science, research, and innovation in Germany's recovery. Germany's loss of scientific excellence during WWII did not create the initial conditions for long-term growth. The loss of human capital and talent during WWII cast a shadow on the country's development. Compared to other countries, Germany was poorly endowed with human capital and its R&D spending was low. Only since 2005 has national R&D started to increase substantially, reaching almost 3% of GDP in 2015. In 2005-06 the government started the Excellence Initiative, which made German universities more attractive to mobile scientific talent. The initiative introduced competition among universities for public funds, which created an incentive for German universities to hire excellent scientific personnel and rejuvenated the universities. But Harhoff and Schnitzer still see overcoming the structural underfunding of Germany's tertiary education institutions as a key challenge for the future. They also identify a lack of entrepreneurial dynamism in the German economy, as R&D activity mainly takes place in large and established firms, in particular in the automotive sector. As a result, the number of startups as a percentage of the total number of companies in Germany is low by international comparison.

The current account surplus

At almost 8% of GDP in 2017, Germany has the largest current account surplus in the world. There has been much debate about the sources of this surplus. One argument is that Germany has a large current account surplus because it is very successful in exporting. This view is supported by Chapters 1 to 3 of the book. Dustman et al. and Baccaro argue in Chapters 1 and 2 that by lowering wages, the move to a decentralised system of wage bargaining has contributed to Germany's export competitiveness. Marin points out in Chapter 3 that the reorganisation of firms in response to the trade liberalisation with Eastern Europe after the fall of communism has lowered costs and improved the quality of Germany's export products, contributing to large gains in export markets.

Another view is that Germany has a large current account surplus because its imports are too low. Guntram Wolff focuses in Chapter 6 on the import side of the current account. From a national accounts perspective, a country will face a current account surplus if its savings exceeds its investments. He looks at the difference between savings and investments for the different sectors of the German economy, and finds that the German current account surplus is mainly driven by the corporate sector, where savings have gone up (by around 3 percentage points of GDP), while corporate investment has been falling (by around 2 percentage points of GDP). He dismisses the argument that the ageing of the population has contributed to the current account surplus, as many observers have argued, as the savings of the household sector have not contributed significantly to savings in the economy. His data show that the corporate sector has been deleveraging for more than 15 years, resulting in lower corporate investment in manufacturing in Germany compared to Italy and France. He concludes by advising that the German government should pay attention to Germany's current account surplus, and suggests that the government should increase public investment (to address the low intangible capital stock that he documents) and encourage private investment.

In Chapter 7 Fabio Ghironi and Benjamin Weigert discuss another possible reason for Germany's current account surplus and its extraordinary economic performance, namely, fiscal devaluation. In a recent paper, Farhi et al. (2014) show that a monetary union can achieve the same outcome in terms of real variables as a depreciation of the exchange rate by adjusting a menu of tax instruments. Absent the ability to devalue the currency in a monetary union, countries may combine an increase in the value-added tax with a decrease in the payroll tax which is equivalent to a depreciation of their currency. In the mid-2000s Germany introduced such a mix of taxes, which may have boosted its external competitiveness. The personal income tax rate was reduced from 57% to 47.5 % in 2008; the corporate tax rate was lowered to 29.4 % in 2009 from 56.8 % in 1995; and the value-added tax rate was increased to 19% in 2008 from 16% in 2001. Ghironi and Weigert ask whether this policy mix really constituted a fiscal devaluation. Their answer is no, because policymakers in Germany did not intend to use the policy mix to change Germany's external competitiveness but rather to address domestic problems (the reduction of distortions in the economy and the need to preserve tax revenue). They also cite Gadatsch et al. (2016), who find that the German tax reforms had a positive effect on output, investment, and consumption in the rest of Europe, with only a minor

positive impact on Germany's external balance. Whatever the intention, relative prices shifted in favour of Germany and the external balance improved persistently. They conclude, however, this may also have happened because Germany's partners failed to address their own combination of problems.

The role of history

Charles Wyplosz examines in Chapter 8 how Germany became the *de facto* leader of the euro area. One of the reasons for the creation of the common currency was to bring the Bundesbank supremacy to an end by melting it into a European central bank. The German condition for entering was that the European monetary union had to resemble Germany with its dedication to low inflation. This then became enshrined in the Maastricht Treaty, which made Germany to the reluctant leader of the euro area. The Maastricht Treaty delivered central bank independence and low inflation compared to the previous postwar years. According to Wyplosz, the German way of monetary policy worked until the financial crisis. In the crisis years, central banks needed to act as lenders of last resort to stop the financial crisis. This required temporarily putting price stability out of sight. An unwillingness to act as a lender of last resort transformed the banking crisis into a public debt crisis, he points out. The controversy over fiscal policy (the accumulation of public debt), the other pillar of macro policy, led to the adoption of the Stability and Growth Pact, which Wyplosz shows did not deliver as public indebtedness continued to rise. The Stability and Growth Pact was designed after the German system of federalism, which was a source of tension because a majority of the Europeans do not see themselves as a member of a common state. Sharing the burden of lending in the last resort by the central bank is easier to accept within a unified state than among independent countries.

In Chapter 9 Harold James focuses on another issue of great importance for Europe – why the French and the Germans do not communicate effectively and misunderstand each other. Most of Europe's problems need a collective response, and this has become even more important since the Trump presidency and Brexit. The two countries have a different understanding of the role of the state. The German vision is based on rules, rigor, and consistency, while the French emphasis is on the need for flexibility, adaptability, and innovation, he points out. The French, drawing on the Anglo-American

Keynesian tradition, see the state as good and large public expenditure as a useful way of getting out of the crisis. The Germans are sceptical about public intervention and are always worried about moral hazard. From a historical perspective, the beliefs in both countries have actually been reversed. In 19th century France, following the economic philosophers Bastiat and Say, *laissez faire* dominated. At the same time, German economists developed cameralism ('*Staatswissenschaft*') as a way to deal with an increasing range of economic and social problems. These older traditions were discredited as a consequence of the Nazi dictatorship and the defeat of France. James asks whether there is a way out. He thinks there is, by sufficiently controlling state intervention to avoid corruption and inefficiencies and by finding ways of bringing in the private sector. A crisis can represent a productive moment for a profound rethinking of old ways of organising European affairs.

In Chapter 10 Davide Cantoni, Felix Hagemester, and Mark Westcott examine the determinants of the electoral success of the populist Alternative für Deutschland (AfD) party in Germany. They find a stunning historical persistence in voting behaviour: municipalities with high vote shares for the Nazi party in the 1920s and 1930s also exhibit higher vote shares for AfD in the 2016/17 state elections. Cantoni et al. point out that this correlation appears only after 2015 – the time when the conservative, anti-immigrant members took over the leadership of the party – and does not show up in the federal election of 2013, when AfD ran merely on a fiscally conservative platform.

The authors rule out other explanations for the vote share of the far right. The major shift in the voting behaviour in 2015 may have had something to do with the inflow of refugees to Germany in 2015 after Germany suspended the Dublin Agreement. However, the timing does not support this interpretation – AfD's nationalist turn occurred months before the inflow of refugees, not as a consequence of it. Moreover, when the authors control for the presence of refugees in a municipality, the historical correlation of the AfD vote remains while the actual presence of asylum seekers is not significant. Dippel et al. (2017) have argued that globalisation and increasing job insecurity have contributed to the rise of the vote for the far right. Cantoni et al. do find that more unemployment at the municipal level increases vote shares for AfD, but the correlation is weak and does not affect the historical persistence of Nazi support.

This is not surprising given the falling unemployment rates during the period 2013-16 and the relatively easy absorption of the China shock in Germany (as discussed by Suedekum in Chapter 4). They conclude that the meteoric success of AfD is better seen as the result of a political supply shock – the entry of a populist, xenophobic party with mass appeal together with a long-lasting historical persistence of far-right attitudes from the Weimar era – rather than a backlash against economic policies.

What can other countries learn from Germany?

Is the German success transferable to other countries? Based on their analysis in Chapter 1, Dustman et al. suggest that there is much less scope in other countries for a decentralisation of wage setting (and other aspects of working conditions) within their systems of industrial relations. They believe that the specific system of governance structure of the German system of industrial relations paved the way for the decentralisation of wage bargaining. Many of the regulations which are determined by labour contracts in Germany are either legally enforced in other countries or nationally implemented and therefore require consent at a much higher level in order to be changed. They dismiss the advice given by economists and policymakers to copy the Hartz reforms in other countries. They recommend a reform that targets the system of industrial relations. They see President Macron's reforms fostering labour market flexibility at the firm level while maintaining, or even strengthening, workers' representation as a promising way forward for France.

Marin asks in Chapter 3 whether the German way of doing business can be copied by other countries. She finds that French exporters decentralise their organisation much less frequently than do German exporters, and when they do decentralise they do not increase their export market share for top-quality goods. The question is why. More autonomy in decision making not only frees up managers to respond to market demands, it also allows them to put their own career interest above the wellbeing of the firm. Germany is a high-trust society, according to the World Value Survey, in which citizens have confidence in one another's behaviour and act accordingly. Germany's culture of quality may have emerged in the years of hard currency policy and centralised wage bargaining in the 1970s to 1980s. Countries which are less able to rely on trust may

have to introduce stronger economic incentives, such as performance pay, to realise improvements in product quality.

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Part I

The institution of industrial relations

1 From sick man of Europe to economic superstar: Germany's resurgence and the lessons for Europe

Christian Dustmann, Bernd Fitzenberger, Uta Schönberg, and Alexandra Spitz-Oener

University College London, CReAM and CEPR; Humboldt University Berlin;
University College London; Humboldt University Berlin

In the late 1990s and into the early 2000s, Germany was seen as ‘the sick man of Europe’. Today, nearly a decade after the Great Recession, Germany is an ‘economic superstar’. The country’s unemployment rate declined from 13% in 2005 to a record low of 6.1% in 2016. Germany is the third largest exporter in the world, with exports of goods and services amounting to €1.6 trillion in 2016, which is about half of the country’s GDP, or 7.7% of world exports.

How did Germany, with the fourth largest GDP in the world (after the US, China, and Japan), transform itself from the sick man of Europe to an economic superstar in less than a decade? In this chapter,¹ we argue that:

- The astonishing transformation of the German economy is due to an unprecedented process of decentralisation of wage bargaining that led to a dramatic decline in unit labour costs and, ultimately, to an increase in competitiveness of the German economy.
- The process of wage decentralisation was made possible by the specific governance structure and autonomy of the German labour market institutions, not rooted in legislation, but laid out in contracts and mutual agreements between employer

¹ Based on Dustmann et al. (2014).

associations, work councils, and trade unions. In times of challenging economic circumstances, Germany's labour market institutions thus proved far more flexible than previously thought.

- The 'Hartz' reforms (2002-05) played **no essential role**. Both the process of decentralisation of wage bargaining and the improvement in competitiveness of German industry started in the mid-1990s, nearly a decade before.

The findings provide a new view on the role of policy in the dramatic resurgence of Germany's economy. We don't believe that the political process alone – had the autonomy of wage bargaining not existed – would have been able to achieve a similar degree of wage decentralisation in Germany, which ultimately led to the significant improvement in competitiveness that we have witnessed.

Our research has important consequences for what southern European countries still suffering from high unemployment can learn from the German experience. Countries such as Italy and France have far more centralised and legally anchored labour market institutions than Germany, and collective bargaining coverage in these countries is much higher (about 80% in Italy and 90% in France). Reforms in these countries have to rely more on the political process. Whether similarly radical changes can be achieved in these countries therefore remains an open question. In France, President Macron plans to undertake some key steps in this direction. A central aspect of his labour market reform proposal in the autumn of 2017 is precisely the decentralisation of wage setting and bargaining that we believe was a main reason for the strong recovery in Germany.² As part of his comprehensive reform proposal, President Macron has already implemented a reduction in severance pay under dismissal and a liberalisation of labour laws, which gives companies greater freedom to hire and fire employees and to agree on working conditions with their workers.³ In 2011, Italy allowed for negotiations to take place at the company level to agree changes on work performance, working time,

2 See [here](#) for information on the institutional situation of industrial relations in France when Macron came into power. For a description of the core components of Macron's reform proposal, see [here](#) and [here](#). The proposal involves a decentralisation of collective bargaining, a liberalisation of employment protection and fixed-term employment contracts, and a simplification of employee representation in a setting where different unions represent different workers in the same firm.

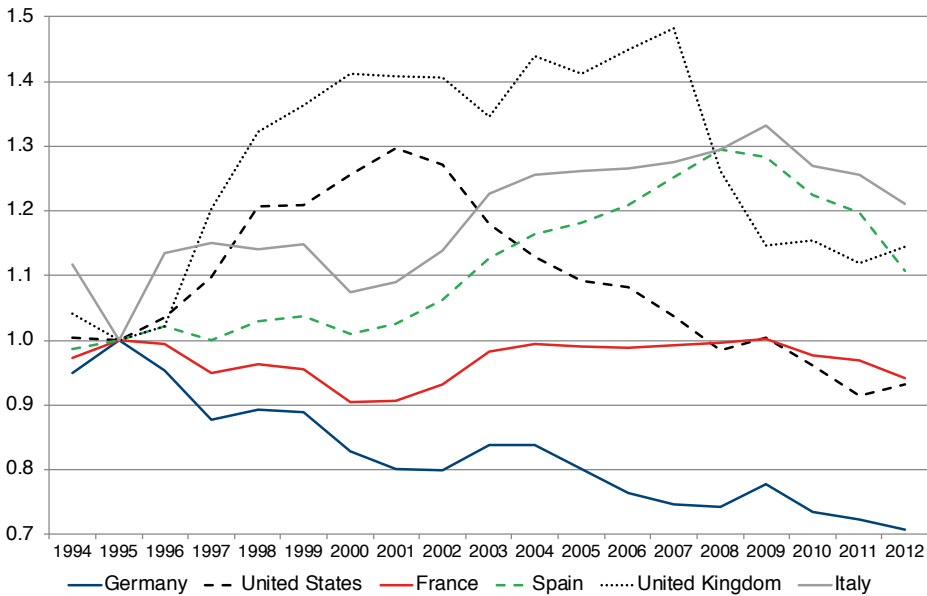
3 See [here](#).

and work organisation, but not on salary. So-called solidarity contracts allow for total working hours and total pay to be reduced in order to avoid mass layoffs, in exchange for hiring younger workers on permanent contracts.⁴

Germany's experience focuses attention on reforms that target the system of industrial relations by decentralising bargaining to the firm level while keeping workers' representatives involved.

How did Germany improve competitiveness?

Figure 1 Evolution of relative unit labour costs, selective countries, 1994-2012



Source: OECD Economic Indicators.

Figure 1 plots the 'relative unit labour costs' for a country's overall economy adjusted for the changing composition of the markets in which it competes, for a selection of countries, in dollar terms (see [Dustmann et al. 2014](#) for details on computation).

4 For further information on Italy, see [here](#). Labour market reforms in Italy in recent years have involved the deregulation of non-standard or atypical employment contracts, while permanent employment contracts were left largely unchanged.

The figure shows that since 1995, Germany's competitive position has persistently improved, while the competitiveness of some of its main European trading partners has deteriorated (Spain and Italy) or remained close to their 1995 position (France).

We argue that in the early- to mid-1990s, the specific governance structure of the German system of industrial relations allowed for an unprecedented increase in the decentralisation (or localisation) of the process that sets wages, hours, and other aspects of working conditions from the industry- and region-wide level to the level of the single firm or even the single worker. This process of wage decentralisation helped to bring down wages, in particular at the lower end of the wage distribution, and ultimately improved the competitiveness of the German economy.

Germany's system of industrial relations is not rooted in legislation and is not governed by the political process, but instead is laid out in contracts and mutual agreements between the three main labour market parties: trade unions, employer associations, and works councils (the worker representatives who are typically present in medium-sized and large firms). This allowed for an unprecedented decentralisation of the wage-setting process, driven by two main developments: first, a sharp decline in the share of workers covered by union agreements; second, an increase in opening clauses that strengthened the role of firm-based works councils in wage determination relative to trade unions.

How much did the 'Hartz' reforms contribute to Germany's economic success?

The so-called Hartz Reforms to labour markets implemented under Chancellor Gerhard Schröder were not central to the process of improving the competitiveness of German industry. The reforms were implemented nearly a decade after the process of decentralisation and the strengthening of competitiveness had begun. Further, while the focus of the reforms was on creating incentives for seeking employment, they did little to support the remarkable wage restraint witnessed since the mid 1990s, which is the key factor in explaining the gain in competitiveness.

Why did the flexibility of the system of industrial relations only become apparent from the mid-1990s onwards?

Why did Germany witness a decline in union coverage and an increase in opening clauses only from the mid 1990s onwards, and not earlier? We argue that the fiscal burden of German reunification, coupled with an immediately more competitive global environment, made it increasingly costly for German firms to pay high union wages. The new opportunities to move production to the emerging market economies of Eastern Europe, while still nearby, changed the power equilibrium between trade unions and employer federations, and forced unions and/or works councils to accept deviations from industry-wide agreements that often resulted in lower wages for workers. Germany's unions and works councils realised that they had to make concessions in order not to be further marginalised, and the specific characteristics of the German system of industrial institutions allowed the trade unions to adapt to the new economic realities and to make these concessions. As a result, the German labour market appeared to be far more flexible than many would ever have expected.

Why did other continental European countries not react in the same way as Germany?

The system of industrial relations in other continental European countries does not allow for the same inherent opportunities of flexible adaptation as the German system. In countries like France and Italy, for example, union wages are often bargained at the national level and apply to all firms in the economy, regardless of whether the firm explicitly recognises the union contract. Coverage by union wage contracts has remained remarkably stable at very high levels (about 90% in France and 80% in Italy) during the 1990s and the 2000s (OECD 2004, 2012, Visser 2013). Furthermore, in contrast to Germany, union wage contracts are typically extended to all workers in an industry (OECD 2004: Table 3.4, Visser 2013: Table 4). More generally, many of the regulations which are determined by labour contracts in Germany are either legally enforced in other countries (such as the minimum wage in France) or nationally implemented (for example, union agreements extend to all firms in the economy), and therefore require consent at a much higher level – nationally, or even at the political level – to be modified and changed. There is much less scope in these countries for a

decentralisation of wage setting (and other aspects of working conditions) within their system of industrial relations.

What are the lessons for Europe?

Although one sometimes hears the argument that other continental European countries should muster the political will to adopt their own version of the Hartz reforms, we believe that such a recommendation may be misleading. In our view, it was the specific governance structure of the German system of industrial relations that – activated under extreme duress – paved the way for the remarkable decentralisation of wage determination from the industry level to the level of the single firm or single worker which, together with a significant increase in productivity, ultimately improved Germany's competitiveness. Whether the political process would have been able to achieve a similar degree of wage decentralisation had the autonomy of wage bargaining not existed in Germany is doubtful.

Based on the German experience, the policy recommendation for the rest of continental Europe should thus not be to copy the Hartz reforms – advice often given by German economists (e.g. Rinne and Zimmermann 2013) or policymakers (e.g. by Chancellor Angela Merkel in a speech given in February 2013)⁵ – but rather to implement reforms that target the system of industrial relations. In particular, this entails, in situations of economic duress, allowing the decentralisation of bargaining to the firm level, while keeping workers' representatives involved to secure that employees benefit when economic conditions improve.

Currently, President Macron is attempting to implement such a reform, fostering labour market flexibility at the firm level while maintaining, or even strengthening, workers' representation. Similar attempts by previous governments in France and Italy have shown little success, due to political constraints and the strong antagonism

⁵ See [here](#).

between employers and workers' representatives.⁶ At this point, it is an open question as to whether the French reforms will be successful. In any case, the huge political effort needed to implement such reforms in countries which lack the autonomy that characterises industrial relations in Germany is well illustrated by the dramatic change in the political landscape in France, after many years of economic hardship, that allowed Macron to take radical steps towards reform.

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6 President Hollande faced fierce public opposition from unions to his reforms to make the labour market more flexible, which were much less ambitious than the reform proposals of President Macron (see [here](#)). Labor market reforms in Italy by the Monti and Renzi governments were restricted to non-standard or atypical employment, while leaving the regulation of existing permanent work contracts unchanged (Eurofound 2014).

He has been President of the European Society of Labour Economists (EALE), and of the European Society for Population Economics (ESPE). Professor Dustmann is an elected Fellow of the British Academy (FBA), the German National Academy of Sciences (Leopoldina), the Academy of Europe (Academia Europaea), and the Society of Labor Economists (SOLE). He is a leading labour economist and his work in areas such as migration, the economics of education, inequality, the economics of crime, and the economics of labour markets have appeared in academic journals including the *Quarterly Journal of Economics*, the *American Economic Review*, the *Journal of Political Economy*, and the *Review of Economic Studies*. He regularly advises government bodies, international organizations, and the media on current policy issues.

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2 The flexibilisation of German industrial relations¹

Lucio Baccaro

Max Planck Institute for the Study of Societies and University of Geneva

Until few years ago, German industrial relations were regarded as a key contributor to the country's seeming ability to reconcile equity and efficiency. They acted, it was argued, as "beneficial constraints" (Streck 1997), by making it difficult for companies to take the low road of cost competition and by forcing them instead – perhaps against their own inclination – to innovate and upgrade.

The argument of this chapter is that from the 1990s onwards, Germany's industrial relations institutions have become much less constraining. In particular, industry-level bargaining, while remaining the prevalent level of bargaining in Germany, has seen a severe erosion of coverage and has become considerably less encompassing and rigid than it was 20 years ago. Simultaneously, union density has declined steadily, and faster than in less institutionally dense English-speaking countries. While the coverage of works councils has held up better than union density, it has become more difficult for unions to control the propensity of workplace representation structures to exchange derogation of industry standards for the promise of employment security.

The flexibilisation of industrial relations institutions has overlapped in time (and plausibly produced) a tendency of real wages to grow more slowly than labour productivity in almost all sectors. Wage moderation, in turn, combined with the inability of Eurozone partners to adjust their nominal exchange rates vis-à-vis Germany, has stimulated exports while simultaneously depressing imports. In other words, the

¹ This chapter draws on two publications, both coauthored with Chiara Benassi: Baccaro and Benassi (2017), Baccaro and Howell (2017: Chapter 5), and on the literature cited therein.

flexibilisation of industrial relations has contributed to the entrenchment of the German export-led growth model in the 15 years before the Global Crisis.

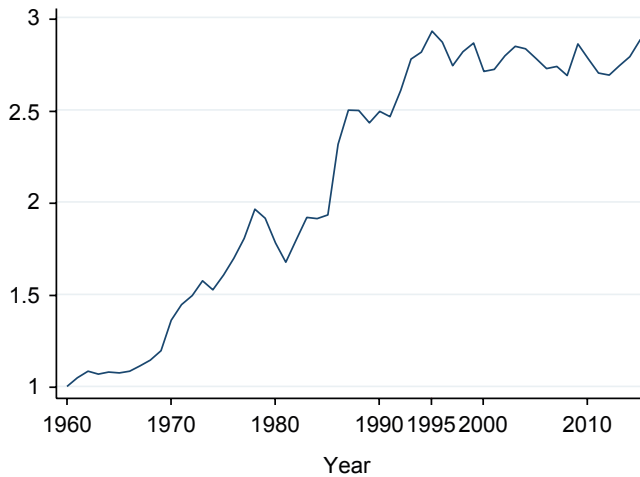
Institutional rigidities

The German model of textbook fame was a fairly rigid system. Employer discretion in hiring and firing was limited by high levels of employment protection. The ability of firms to adapt wage rates to local labour and product market conditions was constrained by industry-level collective bargaining. At the workplace level, every major change had to be negotiated, even though relationships between management and works councils were mostly cooperative.

According to Wolfgang Streeck (1997), Germany's institutional rigidities, far from being a hindrance for firm competitiveness, were a source of dynamic efficiency. Institutions simultaneously constrained and enabled German employers, pushing them towards competitive strategies they may have not adopted if left on their own. Unable to compete on costs due to the presence of strong unions and encompassing industrial relations institutions, firms were encouraged to boost their quality and productivity levels by investing in worker skills, technology, and innovation. This allowed German firms to successfully weather competition from new Asian competitors in the 1980s.

The German production regime, referred to as diversified quality production (DQP) (Sorge and Streeck 1987), depended crucially on employers being unable to escape the regulatory reach of national institutions, and on product demand being only moderately price elastic.

Consistent with DQP upgrading, Figure 1 shows that the ratio of export prices to import prices for German goods increased pretty much continuously from 1960 to 1995. However, the ratio stagnated afterwards. A plausible interpretation is that more intense competition led German export-oriented firms to seek a relaxation of institutional rigidities; this in turn may have reduced firm incentives to move upmarket.

Figure 1 Ratio of exports to import prices for German goods

Source: AMECO database

The trajectory of change

After reunification, German manufacturing firms had a cost problem, which reduced their ability to compete internationally. Foreign producers seemed to have developed an ability to produce with similar levels of quality, but at slightly more convenient prices. In addition, the need to finance the costs of unification had led to increased social security contributions and higher labour costs overall. The response to the cost problem was an employer offensive, which ended up undermining many of DQP's beneficial constraints.

In the 1990s, manufacturing firms (primarily, but not exclusively, those based in the new *Laender*) began leaving the employer association to avoid being bound by the industry-level contract and associated wage provisions. In response, employer associations introduced the option of membership without having to apply the industry contract. This move stemmed the haemorrhage, but reduced employers' capacity for coordination. Additional cost reductions were obtained by outsourcing non-essential services (e.g. janitorial and food services) to firms applying less expensive contracts than the metalworking contract. In addition, large firms used their market power to squeeze the profit margins of domestic suppliers, creating further incentives for these firms to seek respite outside the scope of industry bargaining.

Furthermore, large firms restructured and internationalised their supply chains, offshoring especially (but not exclusively) the more labour-intensive phases, to former communist countries.

Only a minority of German manufacturing companies engaged in offshoring (Kinkel and Lay 2003). Nonetheless, the credible threat of offshoring increased the workers' willingness to make concessions in order to avoid firm relocation. The 1990s and afterwards saw a wave of concessionary bargaining at the workplace level, exchanging 'opening clauses' for the promise of job security.

Attempts were made in 1995 and 1998 to address the cost problem through national-level 'social pacts', but they essentially failed. In response, the government decided to proceed unilaterally. The Hartz reforms worsened the fall-back option for workers in case of redundancies and increased their willingness to make concessions even further (Rebien and Kettner 2011).

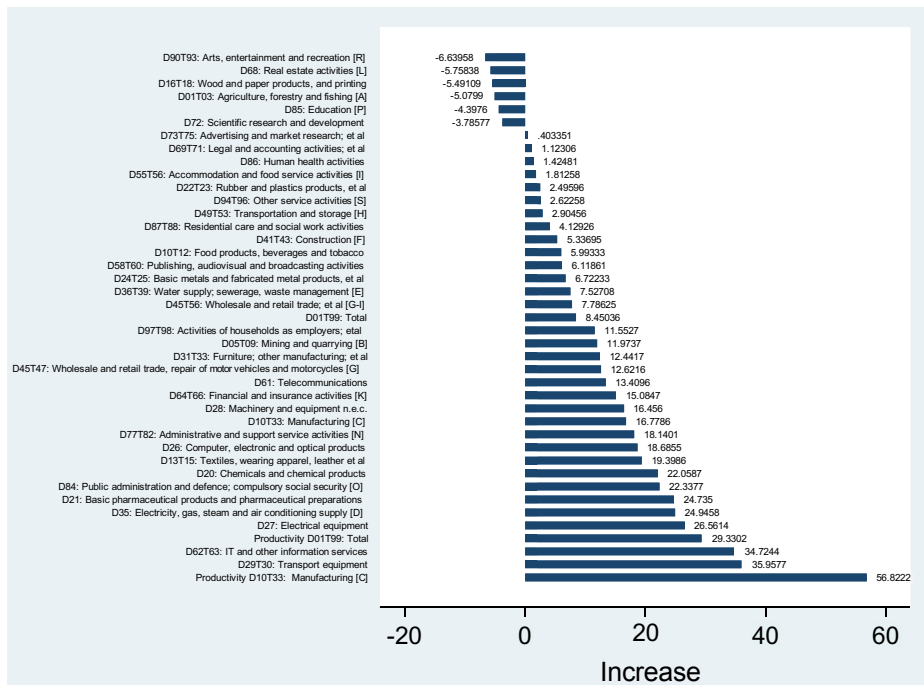
However, the trend of wage moderation had begun before the introduction of the Hartz reforms. Furthermore, wage moderation was not just a peculiarity of the service sector, the sector most affected by the Hartz reforms, but also (albeit to a lesser extent) of the manufacturing sector.

A flexibilised German model

Because of the above trends, sectoral bargaining coverage declined steeply in both manufacturing and services: from 80.3% (1995) to 50.4% (2013) in manufacturing and from 71.1% to 45.2% in services. The decline of industry-level bargaining was not counterbalanced by an increase in company-level agreements. The coverage rate of company bargaining slightly increased in manufacturing but halved in services. The sectoral coverage rate of establishments fell from 63.2% to 26.9% in manufacturing, and from 56.7% to 32.4% in services. Furthermore, between 2005 and 2007 (the two years for which data are available) over 20% of the manufacturing establishments covered by sectoral agreements made use of opening clauses. Overall, industry-level bargaining is still the main type of bargaining in Germany, but is now much less encompassing than in the past.

The softening of industry-level agreement has undermined the ability of collective-bargaining institutions to redistribute productivity gains across sectors. In the heyday of the rigid German model of industrial relations, unions in high-productivity sectors such as metalworking would target the economy-wide rate of productivity growth to allow wages in low-productivity sectors to grow faster than their (stagnant) sectoral productivity. This stimulated household consumption and domestic demand. The collective bargaining system no longer plays this redistributive role, and sectoral differentials have widened. In particular, between 1991 and 2007 real wage growth in manufacturing was much greater than in low-end services such as hotels and restaurants.

Figure 2 Changes in real wages per hour worked by employees and in labour productivity, 1995-2014



Notes: Wages are deflated with the CPI; labour productivity measured by value added volume per hour worked by employees.
Source: OECD STAN Database

Wage moderation has been a generalised phenomenon, cutting across private and public sectors, manufacturing and services. Figure 2 reports real wage increases for a number of sectors, and compares them with productivity increases in the manufacturing sector

and in the economy as a whole. Only in two sectors – transportation equipment and IT and other information services – did real wages exceed national productivity (but not manufacturing productivity, which was much higher); in all other sectors, they were well below. Real wage growth was negative in the education sector, and only marginally positive in the health sector, in the hospitality industry, and in construction.

Based on these trends, it is not surprising that the contribution of household consumption to German growth was negligible between 1994 and 2007. After the crisis, the German growth model rebalanced in part and household consumption became a more important driver of growth. Institutional innovations like the introduction of the minimum wage go in the direction of rebalancing. However, the fundamentally export-led nature of the model did not change, as demonstrated by the very large current account surplus.

Overall, the liberalisation of industrial relations and associated wage moderation seems to have boosted the cost competitiveness of the German economy. This has stimulated exports and, perhaps more importantly, depressed imports through the stagnation of domestic demand.

However, it has also eliminated an important productivity whip, which once forced companies to innovate and upgrade in order to remain competitive. The price for the relaxation of beneficial constraints may have to be paid in the future.

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Part II

Globalisation and technology

3 Global value chains, product quality, and the rise of Eastern Europe

Dalia Marin

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The opening up of Eastern Europe after the fall of communism led to a profound change in Germany's way of doing business. First, German firms expanded production networks to Eastern Europe. This lowered costs and helped to win market shares globally. Second, firms reorganised to a more decentralised, less hierarchical style of management which improved product quality, leading to an increase in export market shares of German firms. These two organisational adjustments may explain Germany's exceptional recovery from the 'sick man of Europe' to a superstar today.

The expansion of production networks to Eastern Europe

Germany exploited the opportunity offered by the opening up of Eastern Europe in the following way. Eastern Europe was rich in skilled labour, and this offered not only new market opportunities for German firms but also a pool of skilled and inexpensive workers. This helped Germany to cope with a skill shortage which became particularly acute in the 1990s. Germany was poorly endowed with human capital compared to Eastern Europe. In 1998, 16% of Central and Eastern Europeans had academic degrees, compared to 15% of Germans. Moreover, the growth of the human capital stock of the German economy slowed down dramatically in the 1990s. Based on estimates of human capital stock by Koman and Marin (2005), Table 1 shows that the annual growth rate of the human capital stock per person declined from 0.75% in the 1980s to 0.18% in the 1990s. Thus, the slowdown in the expansion of human capital stock happened at the same time as Germany was faced with two shocks which put pressure on the

demand for skilled labour: the information technology revolution and the opening up of Eastern Europe.

So, when German firms invested in Eastern Europe they did not just relocate low skilled manufacturing jobs to Eastern Europe, they also offshored the parts of the value chain that required specialised skills and produced valuable research. According to Marin (2006, 2011), from 1990 to 2001, German subsidiaries in Eastern Europe employed three times as many people with academic degrees, as a percentage of employment, as their parent firms did. They also engaged 50% more research personnel in their labs. Thus, the opening up of Eastern Europe, with its large pool of skilled workers, happened just at the time when Germany needed these skills most. Moreover, slicing up the value chain to Eastern Europe has contributed to lowering Germany's unit labour costs. According to Marin (2011), German offshoring to the emerging markets of Eastern Europe boosted the productivity of parent firms in Germany by more than 20%. As a result, relocating production to Eastern Europe made globally competing German firms more efficient, helping them to win market shares in a more competitive world market.

Table 1 Human capital stock per person (annual growth rates in percent)

	Austria	Germany
1960-1980	0.45	0.85
1980-1990	0.37	0.75
1990-1997	0.15	0.18
1960-1997	0.37	0.69

Source: Koman and Marin (2005).

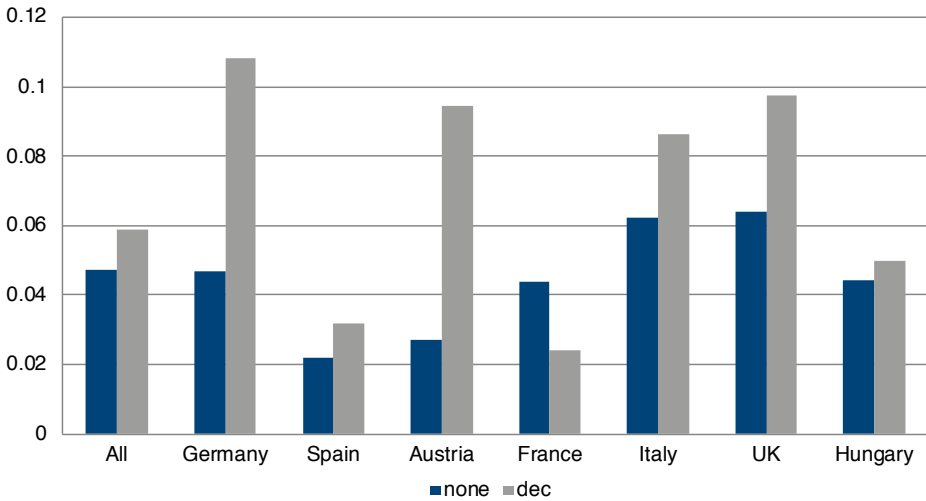
The move to decentralised management

The fall of communism also changed the way German firms organised their business in another way. In Marin and Verdier (2014), my co-author and I show that trade liberalisation with Eastern Europe has led firms to introduce a decentralised, less hierarchical management style. When competition with Eastern Europe intensified, it became more important for firms to generate new ideas for how to survive in this more competitive market environment. As a result, they decentralised decision making from

the CEO to middle management to encourage the initiative of workers lower down in the firm hierarchy. We find that German firms decentralised in particular those decisions for which the initiative of middle management is important, such as R&D and the decision to introduce a new product.

A more decentralised firm organisation can also explain Germany's business culture of quality 'Made in Germany'. In Marin et al. (2015), my co-authors and I show that a more decentralised, less hierarchical style of management has provided workers with incentives for product quality. Workers at lower levels of the firm hierarchy are better informed about market demands. Giving these workers more autonomy in decision making encourages firms to introduce products that customers appreciate. Based on EFIGE firm-level data for 14,000 firms in seven European countries, we construct the firm-level export market share of the median exporter for these seven countries. We then ask how effective decentralised management is in increasing the export market share of the median exporter in each country. We find that German (and Austrian) exporters increase their export market share by a factor of almost three when they operate with a decentralised, less hierarchical organisation ("dec" in Figure 1). French exporters do not increase their export market share when they decentralise their firm organisation (Figure 1). Moreover, compared to its European peers Germany was the only country that increased the market share of export goods with a low vulnerability to prices when firm organisation was decentralised. This way, decentralisation of decision making in firms allowed German exporters to expand the range of high-quality products whose demand responds only little to price changes.

Figure 1 Export market share and decentralised management



Notes: Export Market Share: Median firm's export value/total imports of the world for the firm specific set of industries. "none": neither decentralised nor offshoring, "dec": decentralised firm.

The move to better product quality in response to more decentralised firm organisation may explain why wage moderation cannot account for Germany's more recent success in exporting. After the financial crisis, German exports rebounded more quickly in spite of more rapid increases in wages compared to other European countries. From 2009 to 2013, German nominal wages increased by over 16% compared to 5% in Spain (Italy: 14%, Austria: 13%, France: 12%). During the same period, German and Spanish exports both increased by 25% (and those of other European countries by between 13% to 14 %). Thus, Germany's exceptional export performance is not based solely on price, but to a large part on product quality.

Conclusion

What explains Germany's exceptional export performance relative to other European countries? Germany is among the world champions in exporting because it is a world champion in organising. German firms have very successfully used a business model of decentralised management and of expanding production networks to Eastern Europe to improve product quality and to lower costs. The introduction of this novel business

model of exporting was itself triggered by more competition from the emerging markets of Eastern Europe after the fall of communism.

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4 The China shock and the rise of robots: Why Germany is different

Jens Südekum

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Between 2000 and 2014, the US economy lost roughly five million manufacturing jobs. The two main suspects responsible for this decline are trade and technology. Autor et al. (2013) attribute between one and two million of the losses to rising import penetration from China, following its accession to the WTO in 2001. The remaining three to four million jobs have been wiped out by other causes, most probably by rising automation, digitalisation, or robots.

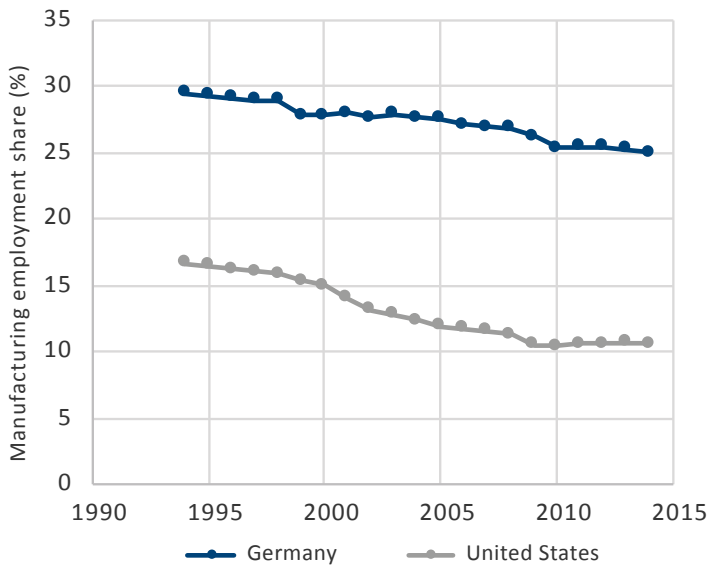
Those losses were at least partly offset by new jobs in the service sector. But manufacturing is still preferred by many middle-class families and is often perceived to offer 'better' jobs. Moreover, the reallocation towards services can be slow and scarring at the individual level, so that some former import-exposed workers suffered from considerable earnings losses. Labour force participation also fell. Acemoglu and Restrepo (2017) argue in a recent study that every newly installed industrial robot reduced total employment in the US by between three and six jobs. Those losses were also concentrated in manufacturing, but extended to other sectors in the economy.

In short, the American labour market does not seem to have digested the recent waves of globalisation and automation particularly well. This has left strong imprints on society, especially in industrial areas like the Rust Belt, and played a major role during the 2016 presidential campaign.

Germany is different

Investigating the impact of the same forces in Germany, the diagnosis looks much friendlier in comparison. The country is among the world's major economic powerhouses, with a much higher manufacturing share that has been declining less over time (see Figure 1).

Figure 1 Manufacturing employment share in Germany and the United States, 1994-2014



In two papers, my co-authors and I study how the ‘China shock’ and rising trade with Eastern Europe have affected the German labour market (Dauth et al. 2014, 2017a). Rising import penetration has led to job losses and individual earnings losses in our case as well. We calculate that roughly 540,000 manufacturing jobs were displaced by imports over the period from 1990 until 2010. Those pains were also locally concentrated, for example in the Ruhr area with its heavy industry specialisation. But the job losses per dollar of imports were smaller in Germany than in the US, and mostly driven by trade with Eastern Europe rather than China (see also Marin 2017).

Importantly, they were more than offset by 980,000 additional manufacturing jobs, which were created in other German industry branches and regions from rising export

opportunities. On net, we conclude that trade with the new markets in ‘the East’ has added some 440,000 full-time manufacturing jobs. The observed decline for Germany in Figure 1, therefore, is not driven by globalisation at all. It is solely due to other forces, such as technological progress.

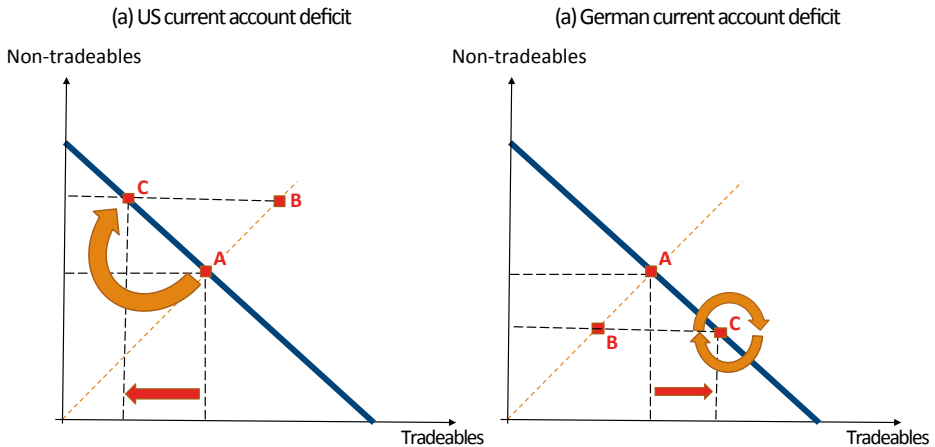
Yet, the impact of robots is milder in Germany as well. In other recent research, my co-authors and I show that each industrial robot replaces only two manufacturing jobs (Dauth et al. 2017b). Since Germany is much more ‘robotised’ than the US, we calculate a sizeable overall effect of 275,000 lost jobs (or 23% of the observed decline) that is attributable to this particular technology. But every manufacturing job that disappeared was offset by a new job elsewhere, mainly in business services. The total effect of robots on jobs in Germany is, thus, zero.

Why is Germany different?

What may explain these stark differences? This question has at least two aspects. First, why have there been more countervailing positive effects to the adversities from import penetration and robots? And second, why have those adversities been weaker in Germany to begin with?

To answer the first question, it is useful to recall the macroeconomic background. Both Germany and the US exhibited a balanced current account in 1990, that is, aggregate domestic consumption equalled production in both countries. The US piled up a persistent trade deficit in the aftermath, mostly fuelled by credit-financed consumption of Chinese goods. In Germany, however, there was no such boom. The economy maintained a relatively high savings rate and ran only a small aggregate deficit during the 1990s that eventually turned into a large surplus. Germany even exhibited a small combined surplus in (non-oil) goods trade with China and Eastern Europe all the time.

Figure 2 Current account imbalance and manufacturing employment share



The causes of those aggregate consumption paths are beyond the scope of this chapter, but Figure 2 illustrates the labour market consequences. As in Krugman (2016), I distinguish tradeable manufacturing products and non-tradeable services and depict a standard production possibility frontier.¹ When the economy consumes more than it produces, as in point B in the left panel, this leads to a lower manufacturing employment share as services must be produced domestically (point C). The opposite happens in the surplus constellation in the right panel. Note that this simple model does *not* say that a trade surplus leads to more jobs overall, nor that it is beneficial in any other sense. But the model does show that trade imbalances affect the *composition* of employment.

In other words, the American experience with the ‘China shock’ may have been less about import penetration per se and more about the consumption boom that led to an excess of imports, with relatively few offsetting job gains in export-oriented industries. The German experience was more balanced, resulting at least partly from prudent macroeconomic savings decisions and from Germany’s effectively undervalued real exchange rate within the Eurozone. But a bit of luck was probably also involved. Germany traditionally has a strong comparative advantage in investment goods, such as special purpose machinery. This type of equipment was exactly what the emerging

1 I assume linear technologies using labour only and constant expenditure shares for both goods.

economies in Eastern Europe and Asia needed for their rapid catch-up growth, besides German luxury cars as status symbols for their upper classes. Arguably this demand structure has boosted German export performance in those destinations, and effectively secured jobs in the respective industry branches.

Industrial relations in the German labour market

The other question is why the negative labour demand shocks – import penetration and robots – had less disruptive effects. Our analysis in Dauth et al. (2017b) sheds light on this issue. There we investigate the detailed impact of robots and imports on individual work biographies. This novel analysis reveals, quite surprisingly, that robots have not raised the displacement risk for incumbent workers. The negative equilibrium effect on manufacturing employment is, instead, solely driven by fewer new jobs for young labour market entrants. Put differently, robots have not destroyed existing jobs; they have replaced ‘potential’ jobs for newcomers. The young entrants started their careers in the service sector instead, which in turn led to an ageing of manufacturing workforces.²

By keeping their incumbent old workers, manufacturing firms have supposedly retained specific human capital. But this enhanced job stability for insiders comes at a cost, namely, lower wages especially for medium-skilled workers. Many of them conduct routine and manual tasks and are thus quite vulnerable to the threat of automation. Our analysis shows that after some initial retraining, they were often repositioned and switched to different occupations inside the same firm. They swallowed wage cuts along the way, but they did not lose their jobs.

These empirical patterns neatly reflect how institutions and industrial relations tend to operate in the German labour market. It has frequently been argued that unions are highly concerned with job stability for insiders (Dustmann et al. 2014). They seem to be more willing than their counterparts in other countries to deviate from collective bargaining agreements, and to accept flexible wage-setting arrangements like opening

2 Imports had similar, though slightly more disruptive, effects on the work biographies of incumbents.

clauses in order to secure jobs in view of adverse labour demand shocks. This response to the threat of automation seems to have, at least so far, largely prevented direct job displacements caused by technology. Those smaller disruptions may, in turn, have led to smaller negative demand spillovers into the local economy, such as reduced spending of displaced workers on restaurants or hairdressers, and the associated local multiplier effects (Moretti 2011). We even obtain evidence for countervailing positive spillovers. Robots increase output, productivity, non-labour income, and wages for highly skilled employees. This seems to create additional demand for specialised local business services, and thereby tends to increase wages in those industries.

It remains to be seen whether the German approach of coping with technological change – retaining and retraining incumbents – is viable in the longer term, especially since it has blocked the entry of ‘fresh blood’ (i.e. young workers) into robot-exposed manufacturing. But at least so far, it may be one important factor why the German labour market has arguably coped better with the rise of the robots than the American labour market. More generally, our evidence suggests that the same trade and technology shocks can have different effects in different countries, given their particular institutional arrangements and their macroeconomic situation.

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5 Science, research, and innovation in Germany: 2000 to 2017

Dietmar Harhoff and **Monika Schnitzer**

Max Planck Institute for Innovation and Competition and CEPR; Ludwig-Maximilians-Universität München and CEPR

Germany was portrayed in the 3 July 1999 edition of *The Economist* as “the sick man of the Euro” – a country with low GDP growth rates, high unemployment, and stagnant export activity. The 2017 version of Germany leads European countries in GDP growth and displays persistently low unemployment rates, especially for individuals entering the labour market. The outstanding export performance and high trade surplus have by now led to heated discussions about imbalances in international trade. The prognosis for 2018 indicates a continuation of these trends. German exports are driven by strong demand – mostly in the BRIC countries and helped by favourable exchange rates – for technologically advanced German investment and consumer goods, allowing the country to maintain a high share of output in manufacturing, by now with strong service components.¹

What contributions did science, research, and innovation (SRI) in Germany make to this amazing turn-around and to the country’s new position as an economic leader? Starting around 2005, major SRI reforms took place, and while their full impact will play out only in the long run, they are indicative of a change of priorities in German SRI policy.

Economic models of growth suggest that the production of scientific knowledge (for example, at universities and in public research organisations) and research and development activities in the private and public sectors should be considered major

¹ The manufacturing share of total value added is 23%, about twice the share in the US and the UK (see <https://data.oecd.org/natincome/value-added-by-activity.htm>).

determinants of productivity growth (Romer 1990, Aghion et al. 1998). Moreover, activities by young firms contributing to Schumpeterian ‘creative destruction’ are deemed important (Schumpeter 1912). To structure the following narrative, we discuss the evolution of German SRI policies and their likely impact by looking at three areas: academic science, innovation in established firms, and entrepreneurial innovation.² We conclude with a summary and an outlook.

Academic science in Germany

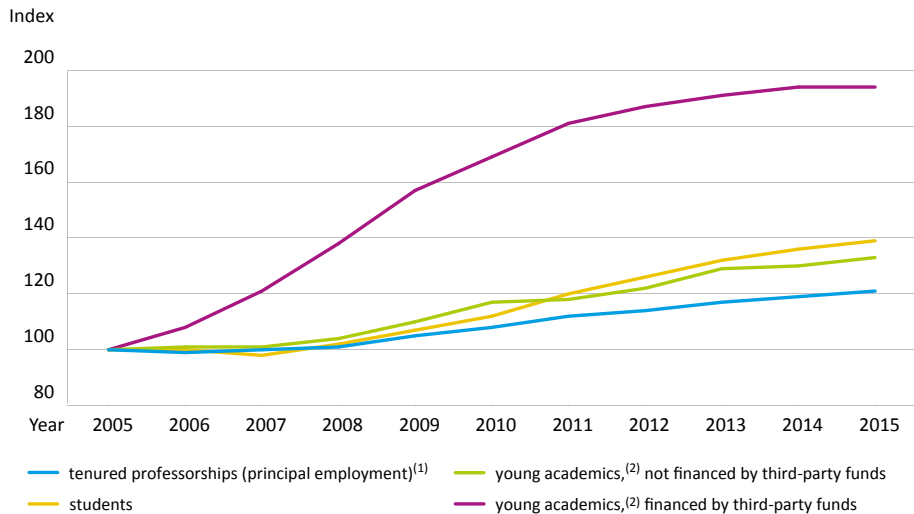
Most of scientific research in Germany is performed in universities and in non-university public research organisations (PROs).³ While post-WWII recovery in the late 1950s and 1960s brought funding levels for universities and public research organisations close to pre-war levels, Germany had lost the scientific excellence of the pre-WWII years in many, if not most fields (e.g. Waldinger 2010, 2012). Student protests in the late 1960s questioned university traditions and led to a weakening of meritocratic structures and processes. Competition between universities for students and faculty was relatively low, reducing incentives for vertical and horizontal differentiation. Plans for a competitive framework in which leading universities could claim a status of excellence and obtain additional funding were being discussed in the early 2000s, and finally introduced in 2005/06 with the Excellence Initiative. In this framework, universities could compete for funding of doctoral schools, collaborative research centres and supplementary institutional funding. In policy terms, these measures were remarkable as the Federalism Reform of 2006 had transferred all policy and financial authority regarding education, and in particular universities, to the Laender.

2 A more detailed look at the evolution of German SRI policies for the time period 2005-2017 is provided in the 2017 report published by the Commission of Experts for Research and Innovation (EFI 2017). Both authors are members of the Commission. When undertaking its 2005-2017 review of SRI policies in Germany, the Commission studied the three mentioned areas and in addition technology and knowledge transfer as well as governance issues. For the sake of brevity, these topics are not being discussed here.

3 The latter typically belong to one of the four large research organisations: the Fraunhofer Society, the Max Planck Society, the Leibniz Association, and the Helmholtz Association.

Public funding for civil research and development (R&D) in Germany grew by more than 60% between 2005 and 2015. This increase was only superseded by Switzerland and Sweden where funding was roughly doubled, and approximately matched by South Korea. Much of the additional funding went into universities and PROs – between 2006 and 2017, funding for young academics (but not for tenured faculty) at universities rose considerably (Figure 1). A separate measure strengthened the PROs with annual budget increases of 5% (EFI 2017: Chapter B1-4). Increases in subsidies for R&D in the private sector were considerably more modest than the ramp-up of funding for academia.

Figure 1 Development of the number of professorships, the number of scientific and artistic staff who can be classified as young scientists, and the number of students at German tertiary education institutions, 2005 to 2015



Notes: Index: 2005 = 100. (1) Tenured (principal employment) professorships do not include temporary professorships paid according to the C2 scale (or equivalent remuneration grades) or junior professorships. (2) Young academics include the following personnel categories: temporary professorships paid according to the C2 scale (or equivalent remuneration grades), junior professorships, lecturers, academic and artistic staff.

Source: Own calculations based on Statistisches Bundesamt (Federal Statistical Office), Fachserie 11, Reihe 4.4 and 4.1. © EFI - Commission of Experts for Research and Innovation 2017.

In the course of these reform measures, Germany has become significantly more attractive as a location for mobile scientific talent (EFI 2017: 47). The Federal Government has substantially increased resources for publicly funded research and has thus made a significant contribution towards achieving the 3-percent target for R&D

relative to GDP. Most observers agree that the Excellence Initiative has strengthened Germany as a location for science.⁴

While the non-university research organisations achieved the budget increases of the last few years via institutional promotion with the Pact for Research and Innovation, a problem in the case of tertiary education institutions (universities and universities of applied sciences) is that a high proportion of the increase in funding has been realised via temporary and earmarked funds. A key challenge in the coming years will be to overcome the structural underfunding of Germany's tertiary education institutions and to further boost their international competitiveness. Given Germany's federal constitutional setup, it is the Laender that have an obligation to invest more in their universities.

Innovation in established firms

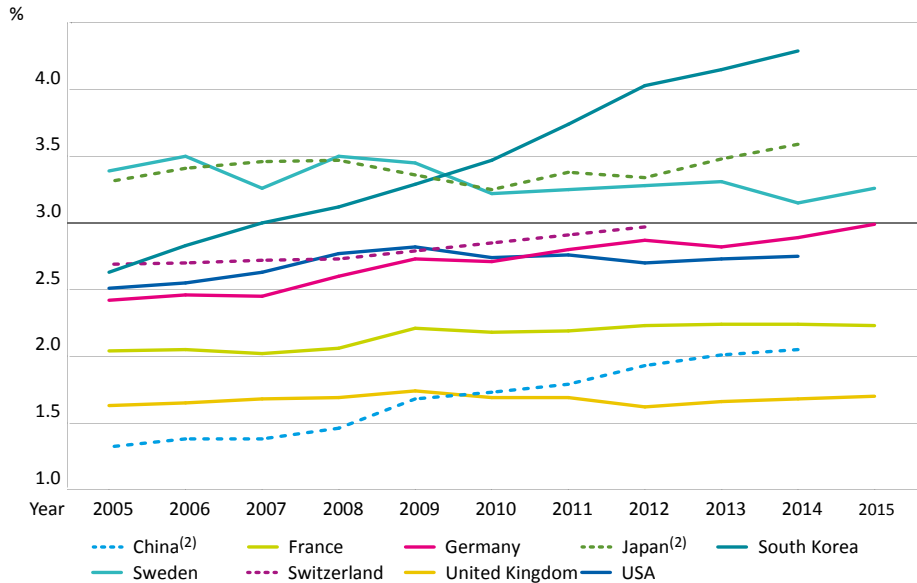
Despite some weaknesses, national R&D intensity (defined as R&D expenditures relative to GDP) is an important indicator of the research and innovation orientation of an economy. R&D in Germany takes place in established (mostly large) firms and in dedicated research institutions and universities. Consistently over the past three decades, about two thirds of all R&D has been performed in the private sector, and mostly in large firms.

German R&D intensity started to decline in the late 1980s and was in a slump after reunification. It increased moderately in the mid-1990s. As shown in Figure 2, between 2005 and 2015, national R&D spending in Germany rose from below 2.5% of GDP to almost 3.0%.⁵ Only a few other countries (Sweden, South Korea, Switzerland) experienced similar growth in R&D spending. It is remarkable that private R&D spending rose in parallel with public spending, although firms are rarely the recipient of state subsidies.

4 See EFI (2017: Chapter B 1-2) for a detailed discussion and further references.

5 See EFI (2017: Chapters B3-2 and C2) for an overview and international comparison.

Figure 2 R&D intensity in selected OECD countries and China, 2000 to 2015 (as percentage)⁽¹⁾



Notes: (1) Gross domestic product based on the methodology of the European System of National and Regional Accounts (ESA 2010). (2) Gross domestic product based on the methodology of the ESA 2005. Some of the data for Switzerland were estimated. Japan 2008, France 2010, South Korea 2007, break in the series in China 2009.

Source: OECD, EUROSTAT. Calculations and estimates by CWS in Schasse (2017). © EFI - Commission of Experts for Research and Innovation 2017.

The impressive growth in R&D spending masks the fact that there is a strong sectoral concentration on the automotive sector, with 36% of all private R&D. The geographical distribution of R&D is concentrated in the southern Laender. The former Eastern states are still struggling to catch up in terms of their R&D and productivity statistics, and convergence has been painstakingly slow.

Entrepreneurial innovation

In most countries, business start-ups contribute significantly to raising productivity and to economic growth. If one were to point to a possible Achilles heel of the German innovation system, it is presumably the weakness in providing supportive framework conditions for start-ups. That has contributed to the sectoral stability of Germany and – as a flipside – to its failure in either adopting or generating new sources of value

creation. As a general rule, innovative products, processes, and business models are often developed and implemented in new companies in particular. Start-ups are often the source of more radical innovation, as young firms are not impeded by cannibalisation problems. But the beneficial effect of start-ups does not stop there. As new competitors, start-ups force established companies to improve their products, services, and processes. Designing a founder-friendly framework must therefore be a key objective of political decision-makers. For a long time, political processes in Germany were more tuned towards supporting established firms and sectors.

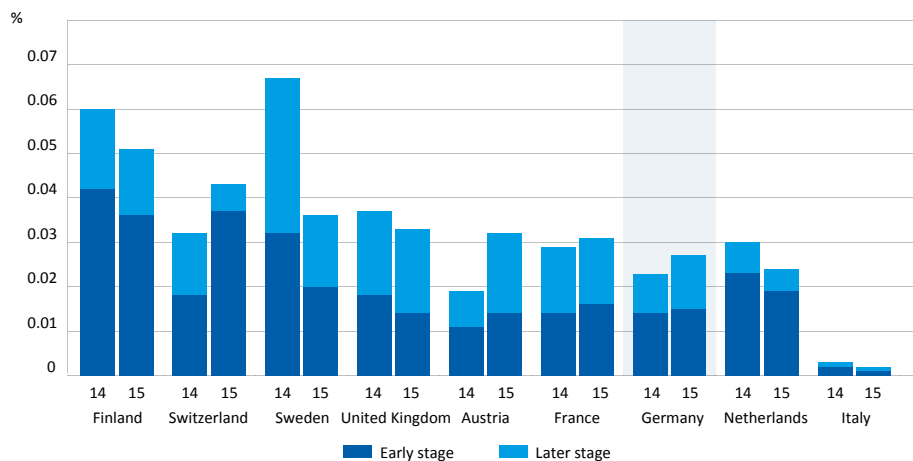
This has not always been the case. After WWII, Germany experienced a start-up boom, but a declining taste for entrepreneurship thereafter. Almost all comparative studies show low entrepreneurial activity. A paucity of equity capital, experienced founders, and exit channels have been named as reasons. Moreover, there have been very few globally successful German start-ups. Contrary to the US stock market where there is considerable churning among top firms, the German DAX30 composition has been astonishingly stable. A flare-up of start-up activity in the late 1990s came to an end in the dot-com crash. The stock market segment then designed for young firms (Neuer Markt) was abandoned. Policies to address institutional and capital market deficiencies were then initiated in the mid-2000s.

The start-up rate – the number of start-up businesses as a percentage of the total number of companies in Germany – is still low by international comparison. In the past five years, the availability of venture capital (VC) as a source of finance for start-ups has been improving, but it is still trailing VC availability in Scandinavian countries, not to speak of the UK or the US (Figure 3). The German tax code (for example, provisions limiting the utilisation of loss-carry forwards in the case of major ownership changes) is still limiting the attractiveness of investing in German start-ups for investors. While cultural propensities at universities and among the public have been tilting towards a positive view of entrepreneurship, policymakers were slow to modify regulation and taxation rules in favour of young firms. But the strong start-up performance of cities such as Berlin has finally impacted the political agenda as well: a reform allowing

investors to profit from loss-carry-forwards was implemented in late 2016. Other measures favouring VC as a source of finance have also been implemented.⁶

Figure 3 Venture capital investment as a percentage of national GDP in 2014 and 2015

Venture capital is defined here as temporary equity investments in young, innovative, non-listed companies



Notes: Investments according to registered office of the portfolio companies. Early stage comprises the seed phase and the start-up phase.

Source: EVCA (2016), Eurostat. Own calculations. © EFI - Commission of Experts for Research and Innovation 2017.

Summary and outlook

To summarise, the period from 2005 to 2017 saw the introduction of a number of successful policies, such as better governance and coordination among major players in the innovation system, vastly improved public funding of universities and public research organisations, quality competition among universities, and new initiatives for public-private R&D partnerships. Strategic programmes in important industrial areas, such as electric cars and digitalisation, fared less well and are still awaiting stronger impact.

⁶ See EFI (2017: Chapter B4) for a detailed discussion and further references.

This brief summary has neglected advances in the governance structures of German R&I policies. These include a shift to mission-oriented R&I policies and improved coordination between ministries which were held – due to coalition governments – by different parties. Whether these collaborative approaches can be maintained in strong political competition is debatable. The positive developments in the German science sector and the continuing strength of its established firms are being tested right now. The automotive industry is under attack from (at least) three directions: the substitution of combustion engines by electric drives, the advent of new ownership and service models requiring a smaller fleet size, and digitalisation which shifts margins and political power to data-oriented actors. Similarly, the remainder of the core of German industry – based very much on the art of mechanical engineering – is seeing changes due to the introduction of machine learning, artificial intelligence, and cloud computing. Digital services are becoming important aspects of firms' offerings, and German Mittelstand firms in particular have a hard time adapting the new approaches. That being said, these firms are also beneficiaries of a highly versatile institution – namely, vocational training – that has allowed German firms in the 1980s to thrive after the first wave of digitalisation and automation as it allowed for relatively rapid updating of skills and human capital.

The remaining bottlenecks are weaknesses in entrepreneurial culture, VC finance, and in digital government services (e-government). In the latter domain, Germany has fared particularly badly and invested little, depriving its IT and software sector of an important source of demand.

The biggest advantage that Germany may be able to utilise in the coming years is the widespread consensus among political parties and the public that science, research, and innovation are essential for growth and for maintaining the country's standard of living. These objectives are starting to compete with other policy goals, but currently they remain at the top of the political agenda.

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Part III

The current account surplus

6 Germany's current account surplus and corporate investment

Guntram B. Wolff

Bruegel

Germany's current account surplus is unusually, and persistently, large. It was above €250 billion euros in 2017, the third consecutive year with a current account surplus above 7.8% of GDP (IMF 2017). To put this into context, of the 193 countries listed in the IMF's *World Economic Outlook* between 1999 and 2017 (totalling some 3,570 available observations of current accounts), there were only 238 episodes of three consecutive surpluses of more than 7.8% of GDP. Among those 238, the vast majority were countries that are either raw material and/or oil producers, with only a handful of countries other than raw material producers.¹

Following the 1990s post-reunification period, during which Germany ran a slightly negative current account, and since the beginning of monetary union, the current account has grown substantially. One difficulty in analysing Germany's current account is that German reunification was a substantial shock that lowered the country's traditional current account surplus as far as into negative territory. The numbers given below start with monetary unification, but also reflect the gradual phasing out of the reunification effects.

1 If one excludes raw material and financial services producers, there are five countries with 3-year current account surplus (>8%) that are not raw materials exporters, mineral fuels exporters or financial hubs: Germany, China, Macao, Botswana, and Suriname. The exclusion criteria are: (1) mineral fuels exports as share of GDP > 10% (OPEC membership for countries with missing data); (2) raw materials exports as share of GDP > 5%, (3) financial services exports as share of GDP > 25%; and (4) financial services exports as share of world trade in financial services > 5% (necessary to exclude Hong Kong)

With persistent large current account surpluses, Germany became a large creditor: its net international investment position is now above 50% of GDP. In the crisis years of 2007-2011, Germany's lost about 15 percentage points of GDP in its external investments, but the position continues to grow nevertheless.²

According to the IMF's External Balance Assessment analysis for 2016, only around half of the current account surplus can be explained by fundamentals such as productivity and an ageing population.³ Although these estimations are controversial, it seems evident that there is a further need to explore the drivers behind Germany's current account surplus.

The corporate sector is behind increase in current account

National accounting allows the current account to be broken down into the difference between the saving and the investment of all domestic sectors of the economy (i.e. the net lending of all domestic sectors). Table 1 breaks down the increase in Germany's net lending from 1999 to 2016.⁴ It increased by more than 9 percentage points of GDP, with by far the largest contribution coming from the non-financial corporate sector, followed by government, and only then by households. Meanwhile, the financial sector itself has turned to a slight borrowing position.

Contrary to often-stated claims, then, it is not German households that have driven the increase in Germany's current account. They have not become even thriftier because of ageing, not least because demographic profiles don't change that much in the course of 18 years. Instead, the dynamics of the current account increase are a reflection of a profound change in the net lending behaviour of companies located in Germany.

2 The number is calculated as the gap between the accumulated current account surpluses and the actual NIIP.

3 For details, see <http://www.imf.org/external/np/res/eba/data/EBA-Tables-2016.pdf>

4 Data for 2017 are not yet available, but the first two quarters of 2017 seem to indicate a decrease in corporate net lending.

Table 1 Net lending or borrowing by sector (% of GDP)

	Total economy	Non-financial corporations	Financial corporations	General government	Households
1998	-0.7%	-1.6%	0.1%	-2.5%	3.4%
2016	8.5%	3.4%	-0.8%	0.8%	5.1%
Delta (2016-1998)	9.2%	5.0%	-0.9%	3.3%	1.7%

Source: Eurostat sectoral accounts

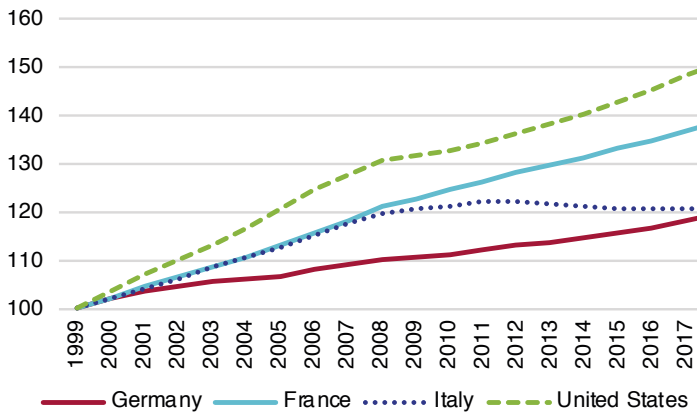
Corporate savings are up...

What, then, is behind this changing behaviour in corporate net lending? National account data show that the 5 percentage point shift in the corporate net lending position is due to both an increase in gross savings (around 3 percentage points of GDP) and a decrease in corporate investments (around 2 percentage points of GDP). The increase in gross savings up to 2007 can be traced back to a fall in the compensation of employees (Ruscher and Wolff 2013). After this, the trend seems to reverse and a lower interest burden on property seems to have increased savings, while employees' compensation has been slowly recovering. The gross operating surplus increased up to 2017, but then reversed to some extent. Overall, the German corporate sector has been deleveraging for more than 15 years.

...and corporate investment is weak

To better understand these macroeconomically significant movements, the figures below put key German developments into perspective with three international peers: France, Italy, and the US. The 2 percentage point fall in corporate investment has had profound effects on Germany's capital stock relative to these peers (Figure 1).

Figure 1 Real net capital stock (index 1999 = 100)

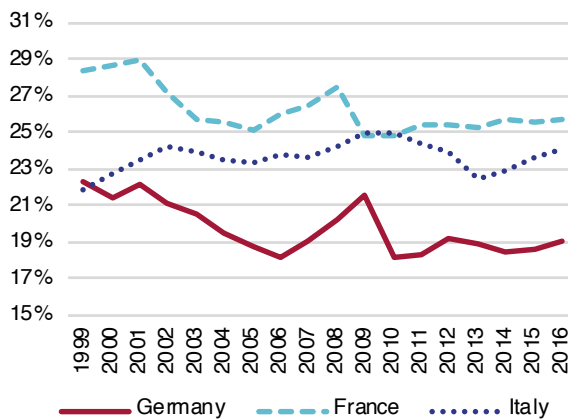


Source: AMECO

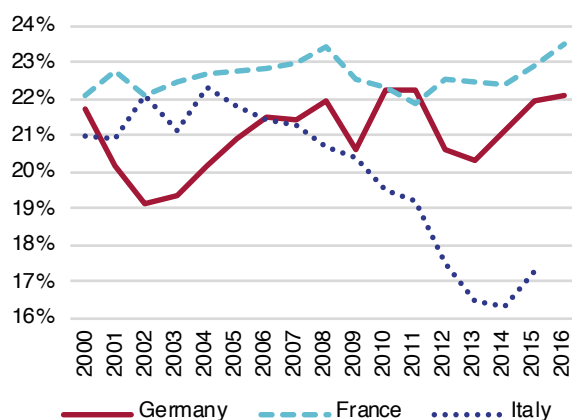
Investment has been disappointing in both the manufacturing and the services sector (Figure 2). It is notable that throughout the monetary union period, Germany has been investing less in manufacturing than both Italy and France. And only with the crisis of 2008 has Italy's investment in the service sector fallen substantially below that of Germany, while France has invested more in the sector than Germany almost continuously throughout monetary union.

Figure 2 Gross fixed capital formation (% of gross value added)

a) Manufacturing



b) Services

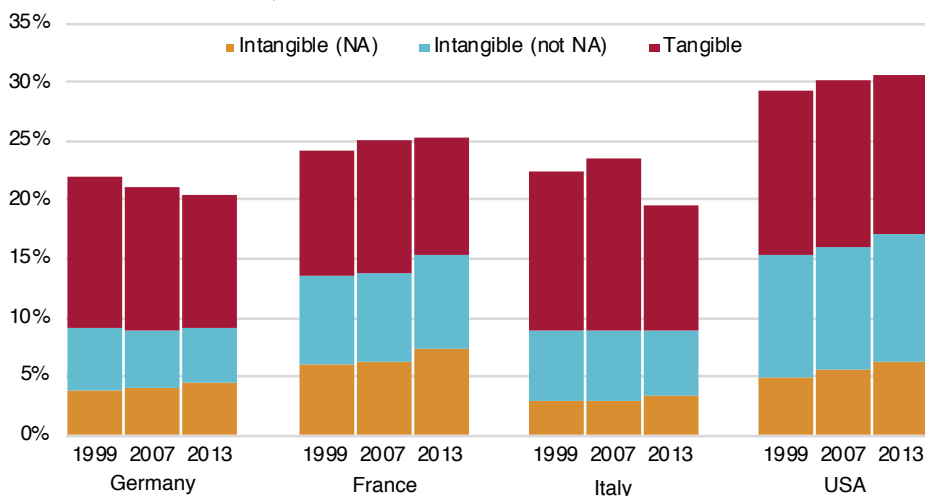


Note: Services comprises NACE sectors J-K and M-N.

Source: Eurostat, national accounts.

In addition to looking at the sectoral decomposition of investment, one can also study the type of investment – i.e. tangible versus intangible. Intangible investment in particular has been weak in Germany compared to France and the US, but even compared to Italy.

Figure 3 Business sector real gross capital formation (% of business sector gross value added)



Source: Bruegel calculations based on INTAN-Invest, Eurostat, and BEA national accounts.

Note: Business sector includes NACE codes A-N (excl L) plus R and S; Intangible (NA) GFCF is intangible investment included in the national accounts (Eurostat and BEA definition = Intellectual property products); Intangible (not NA) comprises intangible GFCF not included in the national accounts and is based on INTAN-Invest estimations.

Meanwhile, German employment has performed extremely well compared to its peers (Figure 4). The end result has been that Germany's capital-to-labour ratio has increased least among all four peers. Compared to the US and France, the gap that has built up amounts to 15-25%.

Figure 4a Employment share of working age population

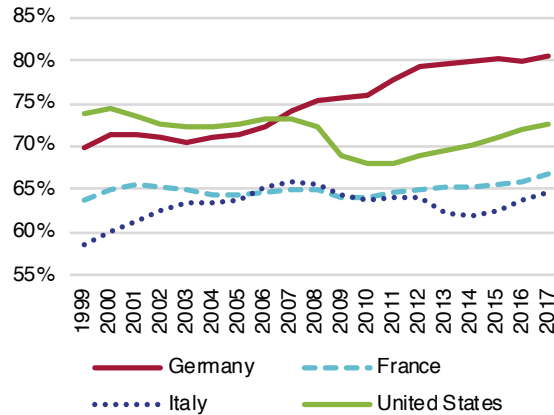
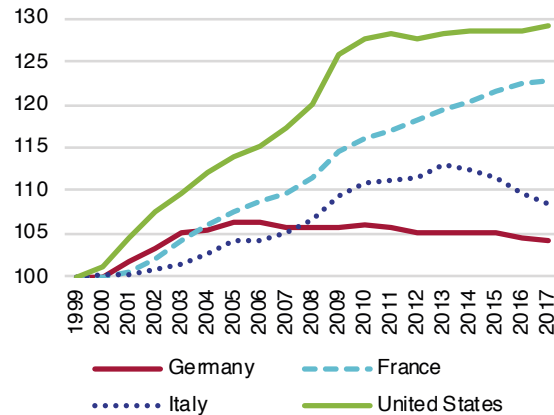


Figure 4b Capital-labour ratio (index 1999=100)



Note: Net capital stock divided by employment (1,000 persons), index 1999=100

Source: AMECO.

Conclusions and policy implications

In this chapter, I have shown that Germany's current account is highly unusual and that it is driven by the corporate sector and, to a certain extent, by the government sector. In the corporate sector, savings have gone up with initially falling labour compensation, while corporate investment has been falling and weak throughout. Three major conclusions can be drawn from this empirical picture.

1. German and European policymakers should pay full attention to Germany's current account. To dismiss it as 'irrelevant' or 'outside the control of policymakers' is to belittle a highly unusual phenomenon that most likely is the result of something going badly wrong.
2. It is important to dismiss outright wrong explanations of the current account. An ageing population cannot explain the massive increase in the current account – the increase has not resulted from the household sector, and nor has the demographic profile changed much. Neither can the decline in corporate investment in Germany be explained by a rise in foreign direct investment, which was 2.4% of GDP in 1999 and 0.7% in 2016, while net FDI into Central and Eastern Europe remained pretty flat at around 0.2% of GDP. Also, references to the common monetary policy and the weak exchange rate are not helpful. While it is true that Germany would have seen the Deutsche Mark appreciate in the current situation, the euro area's monetary policy cannot target Germany's current account. Instead, it would be natural to start by looking at the corporate sector directly.
3. In contrast, the weakness of manufacturing and intangible investment compared to peers is notable. A lack of investment will put the brakes on wage growth if capital and labour are complements, as the empirical literature suggests (Lawrence 2015). Conversely, low wage growth reduces the need to increase capital investments. The increase in German employment, the weakness of investment, and the fall in the labour share are therefore probably connected, as suggested by Berger and Wolff (2017).

This overall picture calls for a detailed and careful policy analysis, which the incoming German government should undertake. A few suggestions can be made. Beyond the need to drive up public investment (see Fratzscher et al. 2016), the German government should put a strong focus on increasing corporate investment. Increasing the currently low intangible capital stock should be a key priority. The data presented here suggest that the political narrative that Germany has missed the Digital Revolution has some truth to it. But regular investment is also weak, as the data on manufacturing investment have shown. To improve investment conditions in Germany, the country could revisit the regulatory toolbox – the lack of any significant supply-side reforms for at least eight years is notable in this regard. Moreover, at a time when the US has just passed a major corporate tax reform, which also increases tax incentives for investment, it is absolutely crucial for Germany to focus on improving tax conditions for investment. In doing so, the capital stock is likely to increase, allowing Germany to catch up to its peers. A higher capital-to-labour ratio should also increase wage growth further. With such policy measures, Germany's current account surplus would be set to fall.

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7 Germany did not pursue fiscal devaluation

Fabio Ghironi and Benjamin Weigert¹

University of Washington and CEPR; Deutsche Bundesbank

The consensus interpretation of Germany's economic success in the last 15 years traces the roots of this success to a combination of labour market reforms (the 'Hartz reforms'), changes in tax policy, and the grand bargain between key stakeholders that was completed with the changes in taxation introduced in 2008. The relative importance of each ingredient of this recipe in ensuring Germany's strong performance - of which Germany's external balance has been both driver and manifestation - is debated, but there is widespread agreement that the policies and social cohesion implemented and achieved between the late 1990s and 2008 laid the foundations for the ongoing success.²

Recent academic literature on the policy options available to members of a monetary union has flashed a bright light on the concept of fiscal devaluation. As shown in an influential *Review of Economic Studies* article by Farhi, Gopinath, and Itskhoki (Farhi et al. 2014), members of a monetary union can still achieve the same outcome in terms of real variables as in the aftermath of an exchange rate devaluation by appropriately adjusting a menu of tax instruments (and, in some scenarios, by defaulting on external

1 We are grateful to Claudia Buch, Oliver Busch, Lars P. Feld, Gernot Müller, and Georg Wamser for giving us very helpful comments and information. All errors are of course ours. The views in this chapter are personal and do not reflect the views or policies of the Deutsche Bundesbank or CEPR.

2 Odendahl (2017) challenges the key role attributed to the Hartz reforms of the German labor market implemented between 2003 and 2005. He points out that wage restraint began as early as 1995 and that the timing of the reforms - i.e. their implementation in a period of global expansion - may have played a crucial role in their success. On the timing of market reforms and their interaction with cyclical conditions and macroeconomic policy, see also Cacciatore et al. (2016, 2017). Dustmann et al. (2014) highlight the governance structure and flexibility of Germany's labour market institutions as more important than legislative changes for the dynamics of German labour costs.

obligations).³ The concept has origins in a series of newspaper articles on the possible role of import tariffs and export subsidies that Keynes wrote in 1931. Participation in the Single Market obviously rules out the tariff-and-subsidy option for members of the euro area, but the broader idea of fiscal devaluation gained traction again as the euro area crisis erupted in 2010 (see Cavallo and Cottani 2010, IMF 2011). Farhi et al. (2014) mention the experience of Germany in the mid-2000s and France in more recent years as examples of the real-world policy relevance of the fiscal devaluation idea. Absent the ability to devalue the currency, fiscal devaluation became a complement and alternative to internal devaluation (accomplished by lowering domestic production costs, most often unit labour costs) to boost external competitiveness and improve economic performance.

But was what German policymakers implemented in the 2000s really a fiscal devaluation? In answering this question, we will take seriously the definition of fiscal devaluation in Farhi et al. (2014) as a policy package explicitly intended to affect international relative prices in a way that boosts external competitiveness and shifts expenditure away from imports, and a policy package that is designed and implemented in non-cooperative fashion across countries. Before delving into the question, however, we will devote a few thoughts to placing the notion of fiscal devaluation as part of the policy arsenal of euro area countries in the context of euro area history and design.

Fiscal devaluation and the roots of EMU

Eichengreen and Ghironi (1996) argue that the 1992-93 crisis of the European Monetary System (EMS) was a catalyst for the eventual adoption of the euro, as the crisis highlighted the threat to stability of the Single Market posed by countries retaining the ability to devalue their currencies. For instance, the devaluation and continued depreciation of the lira gave Italian producers a competitive advantage in French and

3 Specifically, equivalence of outcomes requires either a uniform increase in import tariffs and export subsidies, or a uniform increase in value-added tax (VAT) with border adjustment and decrease in payroll tax. If the devaluation is anticipated, other instruments must be manipulated to ensure full equivalence of allocations, and a partial default is necessary if external debt is denominated in domestic currency.

German markets, which resulted in pressure for the imposition of retaliatory tariffs. This would have run counter the logic of the recently implemented Single Market, potentially derailing the project while still in its infancy.

Ultimately, tariffs on Italian exports were not introduced because it could not be argued that the competitive advantage of Italian producers was the result of policy designed to accomplish that goal. In fact, the Bank of Italy had defended the lira all the way to running out of reserves, and the Bundesbank's use of the Emminger Letter for the first time in the history of the EMS played an important role in the collapse of the lira.⁴ However, the crisis and the pressures that followed heightened the perception of policymakers that the Single Market would be at risk as long as countries retained the mere possibility of acting on their currencies in a pro-competitive fashion. The final push for introduction of the euro followed.

Now consider the logic of fiscal devaluation in the light of this argument. According to its definition, fiscal devaluation is designed to accomplish exactly the type of non-cooperative, competitive boost that the 'founding fathers' of the euro intended the single currency to remove from the arsenal of euro area members. Farhi et al. (2014) analyse fiscal devaluation in a no-retaliation context, in which actions by the domestic economy do not trigger retaliation by its trade partners. The aftermath of the 1992-93 crisis suggests that this is a strong assumption. If we admit, even encourage, countries to pursue fiscal devaluation to boost domestic performance, shouldn't we worry about retaliation? In a potential environment of competitive fiscal devaluations across countries, shouldn't we worry about destabilising consequences for the Single Market exactly as we did when the discussion focused on currency devaluation in the 1990s? Or could it be that we should de-emphasise the notion of 'devaluation' associated with certain policy changes and re-focus their interpretation away from non-cooperative, competitive actions? We will argue below that this is what we should be doing.

4 The Emminger Letter gave the Bundesbank the option of withdrawing from its short-term credit line obligations toward EMS partner central banks if it feared that the use of such credit lines could jeopardise price stability in Germany. Heightened concern for price stability is exactly what the Bundesbank was experiencing in the aftermath of Germany's reunification, given the expansionary fiscal policies implemented by the German government and the one-to-one conversion of Ostmarks (the currency of the former East Germany) into Deutsch Marks that the government forced the Bundesbank to accept.

Was it really a fiscal devaluation?

Between the end of the 1990s and the mid-to-late 2000s, Germany made a series of tax policy adjustments that are broadly viewed as consistent with the fiscal devaluation menu:

- The top personal income tax rate including solidarity surcharge was brought to 47.5% in 2008 after peaking at 57% in 1996 and reaching an all-time low of 44.30% in 2005.
- The corporate tax rate including municipal trade tax and solidarity surcharge was at its peak of 56.80% in 1995, it reached its lowest at 29.40% in 2009 (with the largest reductions in 2001 and 2008), and it stabilised at 29.72% in 2010.
- The value-added tax (VAT) rate was at 16% in 2001, and it was increased to 19% in 2008.
- These changes were broadly consistent with the shift toward indirect taxation that is a key part of the fiscal devaluation recipe.⁵ But did Germany's tax policy actions really constitute a fiscal devaluation?

Taking its definition seriously, we would expect that the changes were intended to boost the German economy by bolstering its external competitiveness, exactly as a currency devaluation would have done. As Homburg (2008) notes, the reduction in corporate taxation was also intended to attract inflow of foreign investment. But a capital inflow would be the mirror of a current account deficit rather than of the surplus the alleged fiscal devaluation should have generated.⁶ Based on Homburg's account of Germany's tax policy changes, the effort to reduce the distortionary impact of taxation on Germany's labour market and on domestic investment, the effort not to lose revenue

5 See Homburg (2000, 2008) for detailed accounts of the changes in German tax policy between 1999 and 2008, or chapter eight of German Council of Economic Experts (2015) discussing German tax policy from 2000 until 2015. de Mooij and Keen (2012) study the role of VAT changes in striking a balance between a "fiscal devaluation goal" and the necessity to meet fiscal consolidation needs in time of difficulty.

6 Germany was both recipient and source of foreign direct investment flows in the relevant period, which of course makes the argument less clear-cut, as we discuss in more detail below.

by broadening tax bases, and political compromise appear to be much more plausible drivers of the German government's decisions with respect to its tax instruments than the goal of changing international relative prices to boost the trade balance.

In fact, the history of Germany's fiscal reforms suggests that fiscal devaluation was not the original intention of policymakers. The main objectives were to reduce unemployment, to overcome the ratchet effect of cyclical fluctuations on structural unemployment (after each business cycle, unemployment ended up at a higher structural level), and to raise potential growth by removing distortions in the tax system and in the social security system. Restoring sustainability of explicit and implicit public debt was another key goal. The financial difficulties of the pension system (besides the mounting deficits in unemployment insurance, health care, and the government budget) were the reason for the 1% increase of the VAT in 1998: the tax revenue was used to keep the pensions contribution rate at 20.3%, forestalling an automatic increase to well above 21% to cover pension payments. Also, in 2003, right after a pension reform in 2001, the increase in the contribution rate was stopped simply by broadening the contribution base to increase revenue. Of course, as any contribution translates into higher claims to the pension system, this was only a temporary stabilisation of the overall balance of the pension system.

With respect to foreign direct investment (FDI) flows, changes in the corporate and income tax code in 2001 removed distortions that made it highly unprofitable for Germans (and in some cases German companies) to invest abroad compared to investing domestically and serving global markets by exporting. In the case of companies, the *pre-reform* system made it preferable to export instead of engaging in FDI: the reason was that when dividends were paid out, to avoid double taxation of corporate profits at the level of the shareholders in Germany, the German personal income tax code allowed shareholders to deduct German corporate taxes (but not corporate taxes paid in other countries on profits of foreign subsidiaries) from the personal income tax to be paid on these dividends.

To understand how the pre-2001 system distorted the choice between FDI and exports in internationally active owner-led companies (*'Mittelstand'*), consider the following example: An owner-led company seeks to expand its international business. It has the choice between investing in Germany and exporting, or investing the same amount

in producing abroad and selling on the local market. Assume that pre-tax profits are exactly the same in both options. While profits from exports are taxed in Germany at the prevailing corporate tax rate, FDI profits are taxed abroad. Abstracting from the many complications of international taxation and assuming the same corporate tax rate at home and abroad, the after-tax profits from FDI are distributed to the German parent company, which does not have to pay additional corporate taxes on the dividends received. Regarding the personal income tax burden of the shareholder, if we compare the taxation of (the additional) dividends paid out to the owner in both cases, it is evident that profits generated from exports are taxed at her/his marginal personal income tax rate (due to full deduction of German corporate taxes), while profits originating from FDI are exposed to double taxation, as the foreign corporate tax is not deductible (Jacobs and Spengel 1992).

As double taxation of corporate profits in Germany was only avoided when the shareholder was German while a deduction of corporate taxes paid abroad (and in particular in EU countries) was not allowed, this was perceived and later considered a violation of the non-discrimination rule, thereby violating the principle of free movement of capital in the European Single Market.⁷ The tax code was changed accordingly in 2001, aligning the personal income tax burden of dividends received from German and foreign companies. The reform in 2001 (which included a reduction in statutory rates but also a broadening of the tax base) likely benefited both the FDI of foreign companies in Germany (due to lower rates) and Germans abroad (due to changes of the personal income tax code). Therefore, gross FDI flows were influenced by the reform, with hard-to-predict effects on net flows (German Council of Economic Experts (2015: Chapter 8).

Historical and institutional details thus make it hard to think that German policymakers were manipulating multiple fiscal instruments with the goal of reproducing an exchange rate devaluation.

⁷ In fact, this view was later confirmed by the European Court of Justice (ECJ): In 2004 the ECJ ruled in a similar case from Finland (Manninen Case Link: <http://curia.europa.eu/juris/document/document.jsf?docid=49454&doclang=en>) that tax credits have to be granted also for corporate taxes paid in other EU countries.

Enlarging a pie versus splitting a pie

The analysis in Gadatsch et al. (2016) suggests another reason to be cautious in interpreting German tax policy in the 2000s through the lens of fiscal devaluation. Gadatsch et al. develop a dynamic, general equilibrium model of a two-country monetary union characterized by labour market frictions and distortionary taxation. They treat the home country in the model as Germany, and the foreign country as the rest of the euro area. They then calibrate the model to match characteristics of Germany and the rest the euro area prior to the Hartz reforms and the changes in German fiscal policy, and they then simulate the consequences of Germany's policy actions domestically and abroad.

The most important result in Gadatsch et al. (2016) is that, all else given, the spillover effects of German economic policy decisions in the 2000s on output, investment, and consumption in the rest of the euro area are positive. Moreover, the simulated impact of the reforms on Germany's external balance is minor. Gadatsch et al. conclude from this that the Hartz reforms and the changes in German tax policy "cannot be held responsible for the observed macroeconomic imbalances in the euro area" and "did not cause harmful 'beggar-thy-neighbour' effects". It is hard to square these findings (and the empirical evidence in Bettendorf and León-Ledesma 2015) with what we would expect from a devaluation (fiscal or not).

This brings us to another important observation: even when it happens, a movement in international relative prices triggered by domestic policy changes that ends up having a beneficial effect on domestic competitiveness should not necessarily be associated with the notion of a beggar-thy-neighbour devaluation. Eichengreen and Sachs (1985) make this point about the experience of devaluations associated with the collapse of the interwar Gold Standard. Their key empirical result is that as long as devaluations were accompanied by domestic policy expansion, the result was an expansion of the overall 'economic pie' with beneficial effects domestically and abroad, not just a redistribution of a given-size 'pie' in favour of the devaluing country.⁸ Taken together, these results and arguments suggest that, in evaluating Germany's economic policies in the 2000s,

⁸ This argument is akin to Obstfeld and Rogoff's (1995) result that a monetary policy expansion that depreciates the domestic currency can be beneficial at home and abroad.

the emphasis should be at least as much on the actual, stated objectives of those policies and on their potential to increase the overall size of the euro area 'economic pie' as on an alleged competitive, beggar-thy-neighbour motive.⁹

Was it Germany's doing or was it someone else's not doing?

Germany was the 'sick man' of Europe between the end of the 1990s and the early 2000s. To address its problems, it took policy actions in the form of the Hartz reforms, changes in tax policy, and a social bargain that led to wage restraint. Reduction of distortions in the economy, the need to preserve tax revenue, and political compromise seem to us much more compelling explanations of the Hartz reforms and the tax policy adjustments than an explicit pursuit of external competitiveness. It seems unlikely that external competitiveness – as opposed to domestic considerations – was the most important driver in the pursuit of wage restraint.

Be that as it may, we did observe a relative price shift in favour of Germany and a persistent improvement of its external balance. But it always takes (at least) two to dance the relative-price and external-balance tango. Germany addressed domestic problems through policies that, based on Gadatsch et al.'s (2016) results, had the potential to be beneficial also for its partners (to expand the overall euro area 'economic pie'). What devaluation and expansion of Germany's external balance happened in response to these policy actions, it happened also because Germany's partners failed to address their own combinations of highly distortionary tax systems, sclerotic labour markets, and similarly rigid product markets. In other words, we must consider the partners' actions (or inactions) before blaming Germany of having acted in the 2000s in the non-cooperative fashion associated with the notion of trade-balance-boosting devaluation. Moreover, we should also consider that German policymakers have been arguing for years that weakly performing euro area partners should implement similar policy actions. When a country devalues its exchange rate to boost its competitiveness, it

⁹ Put differently, the discussion can also be cast in terms of ex ante intent of policy actions versus ex post outcomes. Gadatsch et al.'s (2016) exercise raises doubts on the extent to which outcomes were the result of a beggar-thy-neighbour motive.

usually does not encourage the partners against which it is seeking that competitiveness to do the same – precisely because devaluation by the partners would wipe out any competitiveness gain generated by the first move.

Too much emphasis on a theoretical result?

Finally, it is worth observing that the notion of fiscal devaluation is intriguing, but it places very strong requirements on what a policymaker should be able to accomplish. In essence, fiscal devaluation requires the policymaker to have access to a sufficiently large menu of independent instruments such that policy can act on all the relevant margins of adjustment to cause them to move exactly as they would after an exchange rate devaluation. This is reminiscent of Jan Tinbergen's insights on the importance of the relation between number of instruments (in this case, mostly tax rates) and objectives (in this case, adjustment margins to be acted upon) in order to accomplish the desired goals. The question, however, is when do we cross the line into assuming that policymakers can have access to so many instruments and they can act on so many margins that they can get the economy to do whatever they want to do? Reality is about costly trade-offs and frictions in taking decisions and deploying policy instruments (Dixit 1997). It is about acting on tax policies to preserve sustainability of government finances. In principle, in the euro area, it is also about fulfilling the constraints imposed by the Stability and Growth Pact (more recently, the Fiscal Compact) – even if Germany itself deviated from it at various points, including 2002-05. Given all these real-world constraints on the making of fiscal policy in the euro area, the notion that German policymakers acted on a wide array of instruments to deliver the same outcome as under an exchange rate devaluation strikes us as a stretch.¹⁰

¹⁰ In today's world of value chains in which German firms are highly integrated, it is hard to predict how the trade balance will be affected by exchange rate movements, let alone movements in a wide array of fiscal instruments.

Conclusion

The literature on fiscal devaluation has argued that appropriate fiscal policy actions under a fixed exchange rate can reproduce the response of the economy to asymmetric shocks that would be observed under a flexible exchange rate. But the intentional devaluation of an otherwise fixed exchange rate is a different policy concept from an equal-size, equal-direction response of a flexible exchange rate to shocks (or to other policy actions). The non-cooperative nature of a devaluation and the implications of this nature must be taken into account. This leads us to conclude that the case for fiscal devaluation risks being overstated. Doing so can lead to inaccurate interpretation of historical events. It can lead policymakers across the euro area to be tempted to pursue non-cooperative actions that may end up having destabilising effects. Rather than thinking in terms of (fiscal) devaluation, it seems to us more productive to focus on the removal of distortions that German economic policies accomplished and on the lack of similar distortion-reducing actions abroad as the key drivers of Germany's success and its external balance. The pursuit of productive efficiency and the failure of partners to do the same – not beggar-thy-neighbour competitive action – was at the heart of Germany's success. The difference may appear subtle, but it can have very substantial consequences for policy debates in the euro area.

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Part IV

The role of history

8 Germany: The reluctant leader of the euro area

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The emergence of Germany as the *de facto* leader of the euro area, and in many ways in the European Union, is generally acknowledged. As its largest member, this seems natural, but there is much more to it and it goes way back. Germany's ascent started in the troubled 1980s, survived its reunification shock, and fully blossomed during the euro area crisis. In addition to size, it is the result of many factors, including strong monetary performance, a consistent if simplistic vision, and the absence of any meaningful challenge.

When, how, and why Germany took over

Germany emerged as the low-inflation country in Europe after the 1973 oil shock. While its inflation rate increased significantly in 1973 and 1974 to 7%, it then promptly declined. Meanwhile, inflation soared to double-digit numbers in many other European countries, where it remained elevated well into the 1980s. During that period, the Deutsche Mark was repeatedly appreciated. With no systematic differences in terms of growth performance, it became clear that the 'German way' was better. One by one, all the other European central banks went on to emulate the Bundesbank. The whole of Europe, with a few exceptions like the UK, became a Greater Deutsche Mark area (Giavazzi and Giovannini 1987). Generalised disinflation, the key policy objective in most countries, took nearly a decade. Meanwhile, currency crises occurred at a high frequency, further humbling member countries of the European Monetary System, which occasionally went hat in hand to Frankfurt to ask for Bundesbank support.

One of the reasons for the creation of the common currency was to bring the Bundesbank supremacy to an end, simply by melting it into a European central bank. Germany reluctantly went along, but on its own terms. The European monetary union would have to resemble Germany, with a central bank single-mindedly dedicated to low inflation while the other policies would have to adopt the German over-riding emphasis on price stability (Issing 2001). Eager to create a common currency, the other countries accepted the deal, which became enshrined in the Maastricht Treaty. This is when Germany reluctantly became the undisputed leader of the euro area.

The deal would have vast and deep implications that the other countries arguably failed to grasp all at the time. In a way, what has happened since then can be seen as their gradual realisation that 'stability-oriented' policies go far beyond what they thought that they had signed on for. Harnessed by Germany's continuing insistence that *pactae sunt servandae*, the other countries have adopted willy-nilly the German model. This is partly for the common good, but some aspects of this model are not well adapted to the complexities of a multi-national currency and have become outdated in a world of globalised finance.

Limits to the German view on monetary policy

A key benefit of the Maastricht Treaty was the prescription that the common central bank – more precisely, the European System of Central Banks, or Eurosystem – be fully independent from the political authorities and, more widely, from the whims of public opinions. While this may seem obvious now, back then in many countries, central banks were little more than a department of the treasury under the direct control of the finance minister. Central bank independence has delivered: everywhere euro area inflation has been lower than it was during the previous postwar era, including in Germany. This performance is also directly related to the Eurosystem's narrow mandate to deliver price stability, which was a key requirement of Germany.

Unfortunately, the world is more complicated. Central banks are understood to act as lenders of last resort to stop a financial crisis. This concerns lending to failing banks and to governments that face a run on their debts. To do so, central banks must temporarily put the price stability objective on the back burner and reach agreement

with their governments about the funding of potential losses. The stark simplicity of the Eurosystem mandate leaves little room for lending in the last resort. During the crisis, the German government was openly hostile to creating any room for manoeuvre. Absent lending in the last resort to banks in Ireland, Spain and Cyprus forced governments to borrow to keep their banking systems afloat. The result was a ‘doom loop’ that morphed a bank crisis into a public debt crisis (Farhi and Tirole 2015). Absent lending in last resort to governments forced hasty arrangements to collectively provide loans to distressed governments such as Greece and Portugal.

It is widely accepted that a central bank mandate cannot be limited to price stability under each and every circumstance. In practice, central banks never fully disregard other developments, in particular growth and unemployment. As it turns out, away from the interest rate zero lower bound, the Eurosystem’s actions are reasonably well described by the Taylor rule (e.g. Gorter et al. 2008, Bletzinger and Wieland 2017). Yet, this view is looked upon with considerable scepticism in Germany, because it is seen as incompatible with its vaunted ‘culture of stability’ (Issing 2003).

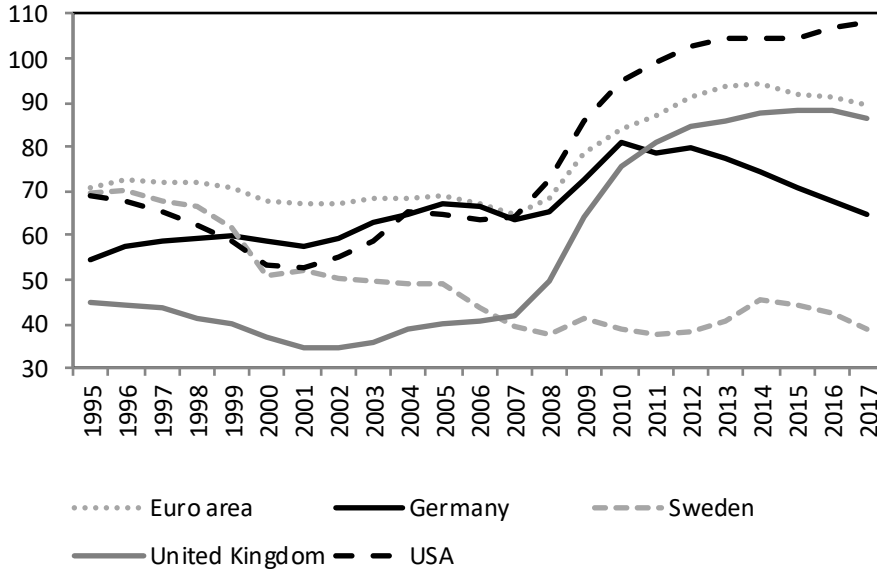
The Stability and Growth Pact

The other classic macroeconomic instrument – fiscal policy – is the object of a similar controversy, for the same reason. Counter-cyclical fiscal policy is criticised from two angles. First, its effects are seen as short-lived, at best. Second, political failures mean that temporary budget deficits enacted in cyclical downturns tend not be reversed in the following upturns. This deficit bias results in constantly rising public debts. Matched with the fact that high inflation is the most likely way chosen to erode the size of the debt, the unmistakable conclusion is that, in a world of stability-oriented policies, fiscal policy should be aiming at keeping public debt low.

These assertions are valid and have justified the German requirement that the euro area adopt what has become the Stability and Growth Pact (SGP). The debt crisis, however, suggests that the Pact has not delivered. Figure 1 shows that public indebtedness did not decline in the euro area, including in Germany, during the good years (1999-2007). The increase during the crisis is marginally smaller than in the UK and the US, but considerably larger than in Sweden, for example. During that period, the German debt

has declined – which means that the increase in the rest of the euro area is much larger than for the region as a whole – largely because Germany enjoyed sustained growth.

Figure 1 Gross public debts (% of GDP)



Source: AMECO on line

There are many reasons why the SGP has not delivered. The original targets (debt ratios) were unrealistic and the focus on not cyclically adjusted deficits was bound to lead to pro-cyclical policies. When this was recognised, subsequent attempts at improvement have piled on more targets (cyclically-adjusted deficits, multi-year plans, spending paths, structural economic reforms, and more), adding complexity that opened the door more widely to politicisation. In addition, the notion that member governments could be instructed what to do stands in contradiction to the sovereignty of national parliaments in deciding on fiscal policy. The response has been to seek to improve national ownership of the Pact (through the European Semester Spring Package and parliamentary debates). This attempt at hardening soft power is unlikely to break the inherent contradiction of the pact.

Federalism

The paradox is that the German view of macroeconomic stability is broadly correct, and yet it does not work. There is a deep reason. We are often reminded that the EU is not a federal system. That is undeniable, but the monetary union has the characteristics of a federal system. The ECB and the national governments have well-defined separate powers and are not subordinate to each other. As a federal state, Germany has developed much expertise in organising power and, quite understandably, tends to advance proposals that match its own experience. This tendency lies at the roots of the problems described above because a majority Europeans do not see themselves as members of a common state, or at least not to the same extent as Germans do within Germany.

Sharing the burden of lending in last resort by the central bank is naturally much easier to accept within a unified state than among the independent countries of the euro area. This is presumably why Germany and other countries likely to be called upon to shoulder losses have insisted on a narrow mandate for the ECB. There is a strong moral hazard case for the narrow mandate and, indeed, most central banks have long asserted that they are not committed to act as lenders of last resort. Yet, whenever a serious crisis unfolds, they ‘exceptionally’ do it. In the case of the ECB, much time has been lost, at considerable cost, rejecting unavoidable interventions and building up the European Stability Mechanism (ESM). The ESM is designed to substitute for the central bank, but it is a much less efficient arrangement. Its role bears some resemblance to the obligation of the German federal government to bail out Laender that face acute financing needs, but the Maastricht Treaty was meant to strictly prohibit the bailing out of member states precisely because the euro area is not a federation.

Similarly, the Stability and Growth Pact instructs the Commission to monitor and, when needed, guide member states. It has been inspired by the German arrangement that gives the federal government the responsibility to oversee the budgets of the Laender. It is acceptable for the Laender to comply, not so for euro area member countries.

Thus German leadership has led to the adoption in the euro area of federal arrangements that simply cannot work at this stage. Yet, Germany alone cannot be blamed. The official purpose of the Maastricht Treaty was to create a European Economic *and Political* Union, the political part being insisted upon by Germany. While the monetary union

was precisely described, the political union was loosely defined and never really acted upon. The federation model implicit in the Treaty was accepted to convince Germany to give up the Deutsche Mark but it was never really accepted.

The leader's responsibilities

When the crisis hit the euro area, there was no provision for emergency management and, as explained above, Germany filled the void. It deserves gratitude for having stepped in but, as deeply buried inconsistencies of the euro area architecture came to the surface, the results have been poor, to put it mildly. At each turn, decisions had to be made urgently. A troubling feature of these decisions is that they reflected Germany's interests (Young 2014). As a large creditor to Greece and Spain, with weak banks in the wake of the subprime crisis, Germany did its utmost to limit its own exposure, in effect concentrating the burden on the crisis countries (Wyplosz 2014).

Of course, one cannot summarily blame a government for protecting its taxpayers. Yet, leadership implies responsibilities. Officially, Germany insisted on upholding all commitments and requiring countries that failed to do so to face the consequences. At the same time, it promoted a number of serious changes (Banking Union, EMS, the Stability and Growth Pact) that challenge previously accepted rules. Even so, these changes were tailored to its own interests, for example by exempting its regional banks from European supervision. This peculiar combination of selective rigidity and flexibility indicates that the reluctant leader has not fully accepted its responsibilities.

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9 The Franco-German relationship

Harold James

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The European tragedy is a tale of misunderstanding and miscommunication. French and German people literally don't understand each other, they don't speak each other's language. That's not just a linguistic issue, and it appears in every political and economic discussion. It follows that politicians and central banks talk about economics in English – a foreign language – and ordinary people feel lost.

The question Europe currently faces is what kind of a shock is needed to get France and German to start communicating effectively. There are plenty of bad events they might and should respond to collectively – from energy and the environment through refugees to terrorist threats. Brexit and the tension in the transatlantic relationship originating from the Trump presidency have increased the incentives to cooperate in Europe.

In the past, the root of the tension between Paris and Berlin has lain in different understandings of economics and politics. They think about the state in contrasting ways. The clash was beneath the surface while there was economic growth, but it erupted into the open during the European debt crisis.

The essence of each national position is easily described. The German (or perhaps more accurately, northern European) vision is about rules, rigor, and consistency, while the southern emphasis is on the need for flexibility, adaptability, and innovation. It is Kant versus Machiavelli. Economists have long been familiar with this kind of debate, and refer to it as rules versus discretion.

In the French account, the state is good and large-scale public expenditure is a useful way of getting out of crises. The French vision likes to draw on the Anglo-American Keynesian tradition, in which state activity is the great stabiliser. By contrast, Germany is sceptical about public interventions, and is always worried about moral hazard issues.

Some more specific policy preferences follow from the general orientation: the rules-based approach worries a great deal about the destruction of value and insolvency, and about avoiding bailouts that will set a bad example and encourage inadequate behaviour among other actors (economists call this the moral hazard problem). In contrast, the discretionary approach sees many economic issues as temporary liquidity problems that can be solved easily with an injection of new lending, liquidity. From this point of view, the provision of liquidity is costless: there is no bailout, no incurred loss, and in fact the knock-on effects make everyone better off. There are, in this vision, multiple possible states of the world, multiple equilibria, and the benign action of government and monetary authorities can shift the whole polity and economy from a bad situation into a good one. The ECB should do more and more. To this, adherents of the moral hazard view point out the costs that will pile up in the future from the bad example that has just been set: the ECB's activism is destroying Europe, generating an ephemeral and false prosperity while removing incentives to fix the underlying problems.

The German vision of order included both a system of general rules and a mechanism by which those rules define the liability (or responsibility) of individuals, and of economic agents. The system depended fundamentally on the accountability of market participants. Any measure limiting accountability or responsibility and promising some sort of contingent rescue would create destructive incentives producing an accumulation of unfulfillable expectations on behalf of the economic actors, and unfulfillable liabilities on the part of the government as the ultimate insurer.

Even today, German discussion is filled with instances of large-scale public projects that turned into fiscal disasters. Three of the biggest infrastructure projects pushed by Länder (German states) have turned into costly white elephants: the Berlin-Brandenburg International Airport, which should have opened in 2013 but whose opening is constantly delayed; an extravagant concert hall and theatre complex in Hamburg (the Elbphilharmonie); and a new and apparently unnecessary railway station in Stuttgart. Against this background, it is not surprising that Germans are suspicious of ambitious plans for European infrastructure investment from Brussels or Frankfurt.

A historical reflection however shows that these modern German and French beliefs are not, as many people like to imagine, the outcome of an inevitable destiny or long-term

historical trends. The modern stance is actually a reversal of the dominant beliefs of the two countries prevailing until the middle of the 20th century.

Nineteenth century France had an economic philosophy largely dominated by *laissez faire*, as brilliantly expounded by Frédéric Bastiat and Léon Say. At the same time, German economists developed cameralism, or *Staatswissenschaft*, and applied it to an increasing range of economic and social problems.

Then something dramatic happened. In both countries both the older traditions were discredited as a consequence of the Nazi dictatorship and then of the defeat of France. The extent of the catastrophe, on both sides of the Rhine, indicated the necessity of a basic change of course.

The makers of postwar Germany, above all Economics Minister Ludwig Erhard, saw Nazism as the outcome of the older German tradition of thinking. They wanted to fix rules in order to curb not only abusive state power, but any concentration of power.

By contrast, younger French thinkers blamed the do nothing non-interventionism of the traditional liberal school for sluggish economic growth, but also specifically for the failure to coordinate a viable defence economy in the 1930s. Thus, after WWII, France emphasised the desirability of systematic planning and came to detest liberalism (or as they termed it, ultra-liberalism); and Germans recoiled from the idea of the state because its actions were arbitrary.

The spectacularly successful statesmen of Europe's postwar order, Konrad Adenauer and Charles de Gaulle, thought of crises as a moment of possibility of transformation.

By contrast, modern Europe has a quite different sense of what crisis does and what opportunities it provides. In the mindset of the modern EU establishment tradition of European integration as laid out by Jean Monnet, crises are simply opportunities for a central bureaucracy to produce a new tweaking of a technocratic plan. In another sense – one that was familiar in the pre-1914 Habsburg empire – a crisis simply is a constant sense of hopelessness and the impossibility of effective reform. Neither of these approaches to crisis is constructive or helpful.

The deeper question that both the French and German traditions pose is whether it is possible to think of a better way. Can effective state interventions be sufficiently controlled and monitored so as to ensure that they are not simply the breeding ground of new corruption and inefficiency? In what ways can the private sector be brought in? There are clearly important public goods that could be realised, and gains that could be reaped. One obvious one is the integration of the flow of refugees, where too the precedents lie in moments of deep crisis, Germany in the aftermath of 1945, or France in the wake of decolonisation, when millions of newcomers generated prosperity and dynamism.

There is an old problem about constructing politics on the basis of rules, one that was already identified by Aristotle. In the *Nicomachean Ethics* (Chapter 5, Section x), he set out the logic of looking for a malleable rule. He thought as an analogy of the flexible lead (rather than rigid iron) rule that sculptors on the island of Lesbos used to cut curved lines in stone. Sometimes, the legislator had made a statement that was over-simple, and that needed to be reinterpreted in the light of changing circumstances. The careful negotiation of sustainable flexibility – Aristotle's Lesbian rule – can offer a way out of traps that are constituted by rules that have become too rigid.

Some Germans realised the same point. Richard Wagner's *Mastersingers of Nuremberg* is a satire on a late medieval merchant community that took rules too seriously and consequently stifled innovation. His answer was that rules needed to be tested by popular consent.

The default mode of modern politics is to think of pragmatism, and to follow up with broken promises. Europe styles itself as being a postmodern construct, but one of the features of postmodernism is the reduction of political life to the playing out of cosmetically charged narratives, or to listening to constantly changing focus groups.

The malleable and changeable sense of reality of modern politics is a stark contrast with the Europe of Winston Churchill, Konrad Adenauer, Charles de Gaulle, Alcide de Gasperi or even Jacques Delors; they all believed something. They were also full of all kinds of political trickery, but it was the bedrock of an overall conviction that allowed the trickery to be effective.

Europeans need to learn how productive – intellectually but perhaps also materially – a crisis can be. Crises should not be opportunities for new technical tweaks or moments of intellectual despair. They should rather be moments of profound rethinking.

About the author

Harold James is Professor of History and International Affairs and the Claude and Lore Kelly Professor of European Studies at Princeton University. He was educated at Cambridge University. His books include *The German Slump* (1986); *A German Identity 1770-1990* (1989) and *International Monetary Cooperation Since Bretton Woods* (1996). More recently he has written *The End of Globalization: Lessons from the Great Depression* (2001), and *Europe Reborn: A History 1914-2000* (2003); *The Roman Predicament: How the Rules of International Order Create the Politics of Empire* (2006); *Family Capitalism: Wendels, Haniels and Falcks* (2006); *The Creation and Destruction of Value: The Globalization Cycle* (2009); and *Making the European Monetary Union* (2012). In 2004 he was awarded the Helmut Schmidt Prize for Economic History, and in 2005 the Ludwig Erhard Prize for writing about economics. He has an honorary doctorate from the University of Lucerne, and writes regularly for Project Syndicate.

10 Voting for the far right in Germany

Davide Cantoni, Felix Hagemeister and Mark Westcott

University of Munich; University of Munich; Vivid Economics

A popular notion is that Germany, under the historical legacy of Nazism and WWII, has been successful in preventing the emergence of a far-right movement, or even of a populist/nationalist conservative party. For several decades, the only major party on the right, the only party able to gain representation in the Bundestag (the German Parliament) and the federal states' assemblies, has been the CDU/CSU, a moderately conservative party in the Western European tradition of Christian democracy. In fact, the famous quip by the CSU's longstanding leader Franz Josef Strauss that "*there shall not be a democratically legitimate party to the right of the CDU/CSU*" had become both a mainstay of the CDU/CSU's policy and an accurate description of facts.

Still, this optimistic picture is not entirely accurate. First, throughout the history of the Federal Republic of Germany there have been moderately successful far-right movements. Although they have never entered the Bundestag, their successes have certainly shaped the positioning of the other parties along the political spectrum. Besides, they have passed the 5% threshold to enter the states' legislative assemblies on several occasions. Second, the right-wing populist *Alternative für Deutschland* (AfD) has recently emerged as the third biggest force in the Bundestag after the election of September 2017, with 12.6% of the vote. It surpassed the vote shares of the established Greens (8.9%) and the free-market, liberal FDP (10.7%).

The AfD's recent results appear to be emblematic of a wave of populism that is currently sweeping across Europe and the globe, from Viktor Orbán in Hungary to the FPÖ in Austria, from Marine Le Pen in France to the Brexit movement – and, of course, to Donald Trump. In this chapter, we will shed light on some of the determinants of the AfD's electoral success. However, before doing so, we will discuss what explains

the (comparatively poor) electoral performance of other far-right parties in Germany before the recent rise of the AfD, and why Germany might differ from other countries.

Economic motives and far-right voting

Apart from denazification, a major factor determining the low prevalence of far-right voting in postwar Germany was a provision in the Basic Law (the constitution of the Federal Republic of Germany) that enabled the Constitutional Court to disband extremist parties on the left and the right. Article 21.2 of the Basic Law states that “[p]arties that, by reason of their aims or the behaviour of their adherents, seek to undermine or abolish the free democratic basic order or to endanger the existence of the Federal Republic of Germany shall be unconstitutional.” This article was invoked with success to outlaw the Sozialistische Reichspartei (SRP), a party that had an openly neo-Fascist agenda and recruited former Nazi functionaries.

However, other parties have participated in several elections and managed to avoid being outlawed by the Constitutional Court while maintaining a strongly conservative, even far-right agenda. Most notably, the National Democratic Party (NDP) was founded in 1964 and by 1968 was elected into seven state parliaments; in 1969 it only narrowly missed the 5% threshold to enter the Bundestag. At the turn of the century, the NPD escaped a formal ban by the Constitutional Court twice and witnessed a resurgence, especially in East Germany, where it won parliamentary seats in two state assemblies (Saxony and Mecklenburg, with a maximum of 9.2% of the vote in Saxony in 2004). Similarly, another far-right outlet, the Republikaner, enjoyed electoral successes in some federal states in the 1980s and 1990s, with a maximum of 10.9% of the vote in Baden-Württemberg in 1992. In 1989, the party entered the European Parliament with more than 7% of the vote.

In recent research, Dippel et al. (2017) show that the vote share of far-right parties (especially the NPD and the Republikaner) increased with import competition. Using formal mediation analysis, they show that the effect is entirely driven by labour market disturbances and the reactions of low-skilled workers employed in manufacturing. This is in line with other studies analysing the impact of import competition – as determined most notably by the accession of China to the WTO – on political outcomes (e.g. Autor

et al. 2017 on political polarisation in the US, or Malgouyres 2017 on votes for the National Front in France).

Exploiting regional variation in industry composition across German counties, Dippel et al. (2017) are able to map trade shocks from China and Eastern Europe to the German geography. They find that between 1987 and 2009, a one standard deviation increase in net exposure (defined as import exposure minus export access) increases the extreme-right vote share by 0.12 percentage points, amounting to roughly 28% of the average per-decade increase (Dippel et al. 2017: 14). The authors attribute the small absolute effect to the fact that “Germany did not have a populist leader (or party) with broad appeal during [their] study period” (p.16). The vote shares of other parties remain unaffected.

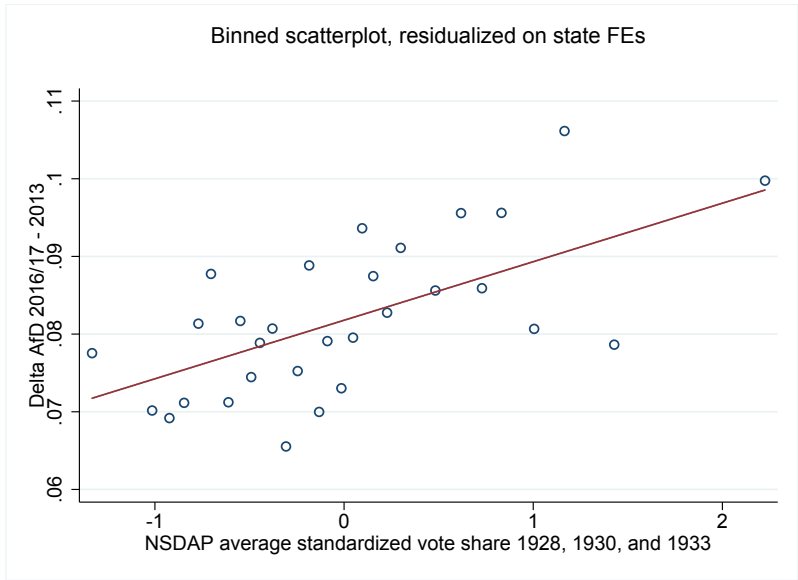
Cultural motives and persistence: The rise of AfD

The German political landscape changed dramatically after 2015, when the AfD, founded as a monothematic, anti-euro and anti-Greek bailout party in 2013, turned into a more traditional xenophobic, anti-immigrant right-wing party, in line with similar movements in other European countries. With its new, conservative rhetoric, the AfD sailed to considerable successes in the subsequent elections to state assemblies held in 2016/17, reaching up to 24.3% at the state level (Saxony-Anhalt). With a programme that espouses staunchly conservative values (law and order, traditional family values) but also less established views (climate change denial, scepticism of mainstream media) and borders on outright xenophobia (calling for a stop to immigration, especially of asylum seekers and family reunification, limiting access of immigrants to social security, and demanding German values rather than a multicultural society), the AfD gained 92 seats (12.7% of the vote) in the recent federal election in September 2017.

In recent research, we investigate the rise of the AfD (Cantoni et al. 2017). We find a stunning historical persistence: municipalities with high vote shares for the Nazi party in the late 1920s/early 1930s had also higher vote shares for the AfD in the 2016/17 state elections. Interestingly, this relationship only appears after 2015 – the time when the conservative, anti-immigrant members took over the leadership of the party – and

does not show up in the federal election of 2013, when the AfD ran merely on a fiscally conservative platform. Figure 1 shows this correlation graphically.

Figure 1 Persistence in right-wing voting: Difference 2016/17 to 2013



The correlation is positive, strong, and significant. In quantitative terms, a one standard deviation increase in historical support for the Nazi party is associated with a 0.15 standard deviations larger change in votes towards the AfD. Instead, in 2013 the AfD's vote shares are less correlated with historical Nazi support: the estimated coefficient (standardised) is only one third as large, and not significant.

Of course, a major political shift that occurred concurrently in 2015, which had the potential to ignite protest vote for far-right parties, was the sudden inflow of hundreds of thousands of Syrian refugees after Germany's decision to suspend the Dublin agreement. Still, we do not think that this political event can explain away our findings. First, the AfD's nationalist turn occurred *months before* the inflow of refugees (actually, at the peak of the Greek bailout crisis), not as a consequence of it. Second, we can explicitly control for the presence of refugees in a municipality: the actual presence of asylum seekers does not sway voters (in fact, a higher density of refugees is correlated with fewer votes for the AfD, albeit not significantly), and controlling for refugees does not affect the historical correlation of the AfD's vote share with Nazi support.

We can also rule out other hypotheses. In particular, while the work by Dippel et al. (2017) discussed previously stresses the role of globalisation and increasing job insecurity, especially in the manufacturing sector, in explaining votes for the far right, Germany hardly seems a case in point in recent years, as in the time period considered (2013 to 2016) unemployment rates actually went down. Indeed, when we control for local changes in unemployment (at the municipal level), we find that increases in unemployment increase vote shares for the AfD. This correlation, however, is only weak and does not affect the historical persistence of Nazi support.

Conclusion

The interaction of a long-lasting historical persistence together with a major shift in the German political landscape – the entry of a populist, xenophobic party with mass appeal – can explain the recent rise of far-right populism in Germany. While economic factors may explain some part of the popularity of extreme-right voting (NPD, Republikaner) throughout the past decades, the meteoric success of the AfD is better seen as the result of a political supply shock rather than a backlash against economic policies. Attitudes in Germany, as in most other European countries, have moved more slowly than the swing of the political pendulum may suggest (Bartels 2017). Granted, the persistence of far-right attitudes from the Weimar era to the present is worrying; and yet, the silver lining is that the history of the Federal Republic of Germany has shown how these instincts can be kept at bay or channelled into constructive political debate.

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What explains Germany's exceptional recovery from the 'sick man of Europe' in the 1990s to the powerhouse of today?

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