



Europe's re-industrialisation

The gulf between aspiration and reality

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In late 2012 the EU Commission set the target of increasing the industrial sector's share of the European economy from 16% to 20% by 2020. This target constitutes a response to the fact that manufacturing in the European Union has declined in relative importance over the past decade.

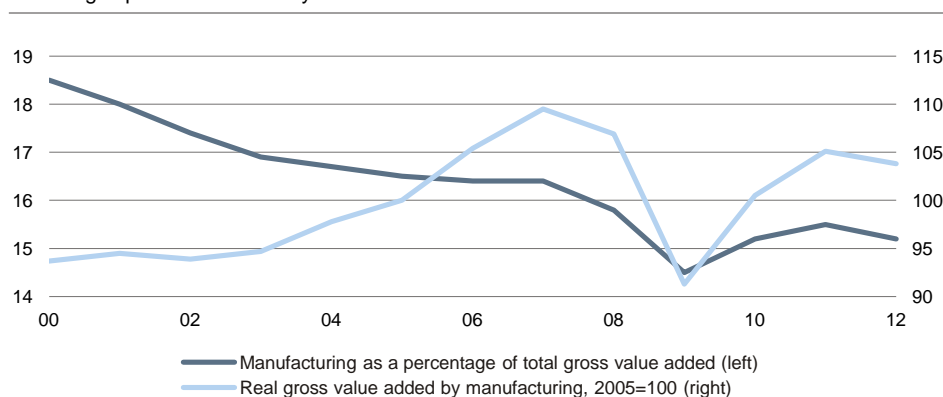
The industrial sector's share of gross value added has decreased in virtually all western European countries since 2000. The only exception is Germany, where this proportion has remained more or less unchanged. However, there are large differences within the EU. Whereas the Czech Republic (industry share of 24.7%), Ireland (23.3%), Hungary (22.7%) and Germany (22.4%) have all managed to retain a broad industrial base, manufacturing currently accounts for only around 10% of economic output in Greece, France and the UK.

Although the declining importance of industry can be explained by the stronger growth of the service sector, in some countries this trend can also be attributed to their deteriorating international competitiveness. While Germany and the Scandinavian countries, for example, remain highly competitive, other EU countries have fallen behind. This concerns both price-related factors and the efficiency of institutions, financial markets, product markets and labour markets.

Because vibrant industries need conditions that have gradually evolved over time, there is not much point in trying to replicate certain industrial models. Rather than focusing on industry-specific measures, the attainment of this goal requires supportive conditions for companies – those from both industry and services – to ensure that they can compete against non-European rivals. This will necessitate investment in education, research and infrastructure as well as an investment-friendly climate, affordable energy and intelligent regulation.

The target set by the EU Commission is overambitious and cannot be achieved in the foreseeable future. Nonetheless, it sends out the right signal that industry will remain highly important for Europe going forward.

Declining importance of industry in the EU



Source: Eurostat



1. Introduction: growing appreciation of the importance of industry

How does the EU plan to raise industry's share of output back up to 20%?

1

The European Commission has identified four priority areas where action is needed in order to increase the industrial sector's share of the European economy:

Investment in new technologies: These include 'green' production technologies and motor vehicles, bio-based fuels and chemicals, intelligent networks and key technologies such as microelectronics, nanoelectronics, material sciences and industrial biotechnology. The markets for these technologies will generate disproportionately strong growth over the long term. The Commission has suggested that the EU member states should step up their marketing and use of these technologies. The Commission itself plans to ensure that standards for new products are more swiftly devised and internationally recognised in future, and it intends to encourage public-private partnerships.

Improved single market for goods: In addition to simplifying the legal framework, the Commission plans to integrate goods in the areas of defence and security more effectively into the single market. The Commission has also presented an action plan of measures aimed at encouraging entrepreneurship and, in particular, promoting entrepreneurship education. Furthermore, small and medium-sized enterprises (SMEs) are to be given better support in protecting their intellectual property in non-EU countries and using the World Trade Organization's Technical Barriers to Trade (TBT) procedure.

Improved access to finance for SMEs: The lending capacity of the European Investment Bank (EIB) has been increased for this purpose. In addition, the Commission has set up a standard internet portal that provides companies with information on the financing options available under EU programmes.

More investment in human capital: The conversion of the EURES job mobility portal into a European recruitment and work placement portal is designed to improve the information available on working abroad and to help increase labour mobility. The Commission also plans to draw up a quality framework for traineeships and to encourage the establishment of sectoral knowledge alliances.

As Europe's financial, economic and sovereign debt crisis has dragged on, a much greater appreciation of the importance of industry has become evident both in the political debate and in the public perception. Politicians of all stripes have in recent years stressed the significance of manufacturing for Europe, arguing that its industrial sector should be strengthened. As part of its Europe 2020 strategy, for example, the EU Commission intends to work "to establish an industrial policy creating the best environment to maintain and develop a strong, competitive and diversified industrial base in Europe [...]".¹ EU industry commissioner Antonio Tajani has been quoted as saying: "Industry is at the heart of Europe and indispensable for finding solutions to the challenges of our society, today and in the future."² A communication published by the EU Commission in the autumn of 2012 states that "the Commission seeks to reverse the declining role of industry in Europe from its current level of around 16% of GDP to as much as 20% by 2020".³

There are many reasons for wishing to bring about an industrial renaissance

Industry is therefore currently enjoying a form of renaissance in terms of its public perception after the transition to a service economy had for a long time been heavily promoted in many EU countries, especially by politicians. One reason for this change of heart is that Germany has been more successful than other EU countries at dealing with the fallout from the financial and economic crisis – partly thanks to the international competitiveness of its industry. Whereas only ten years ago Germany was widely regarded as the 'sick man of Europe', its current economic prowess has garnered respect from many quarters. What's more, national governments reckon that the strengthening of their industrial bases will have a benign impact on their respective countries' research activities and labour markets. This is because the manufacturing sector usually accounts for more than 60% – and in some cases much more than that – of a country's total (private-sector) R&D spending.⁴ Consequently, a strong industrial base requires highly skilled workers and supports the labour markets in other sectors as well through the demand that it generates for business-related and other services. What this trend ultimately demonstrates is that 'industry' is no longer synonymous with smoking chimneys: instead, it increasingly involves research-intensive activities and cutting-edge, environmentally friendly production. Another reason for strengthening industry is that it opens up new export channels. Manufacturing exports on average account for well over 50% of total exports in western Europe.⁵ The hope is that a strong industrial base will enable these countries to benefit more from the high growth rates being achieved by regions such as Asia.

Some EU countries have therefore recently been discussing the question of what measures they could take to strengthen their own industry and how some

¹ EU Commission (2010). Europe 2020: A strategy for smart, sustainable and inclusive growth. Brussels.

² The original English quote can be found on the internet at http://ec.europa.eu/enterprise/policies/industrial-competitiveness/industrial-policy/index_en.htm

³ EU Commission (2012). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.

A Stronger European Industry for Growth and Economic Recovery. Brussels.

⁴ See Kroker, Ralf and Karl Lichtblau (2013). 'Industrieland Europa': die europäische Industrie im internationalen Vergleich. In: Cologne Institute for Economic Research (publisher, 2013). Die Zukunft der Industrie in Deutschland und Europa. IW-Analysen No. 88. Cologne.

⁵ See Kroker, Ralf and Karl Lichtblau (2013). Loc. cit.

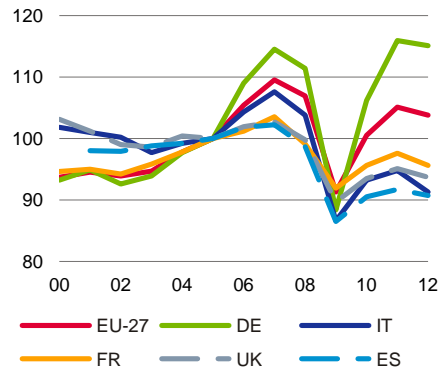


Europe's re-industrialisation

Germany raises EU average

2

Real gross value added by manufacturing, 2005=100



Source: Eurostat

of the factors behind the current success of the German model might be replicated in these countries' own economies. Their interest often focuses on the reasons for the strength of German industry and on the highly successful labour market reforms implemented by the SPD-Green German coalition government at the time as part of its Agenda 2010 programme. The ultimate political objective in the EU and its member states is, understandably, to improve the operating environment for industrial companies so that Europe can, to a certain extent, be 're-industrialised'.

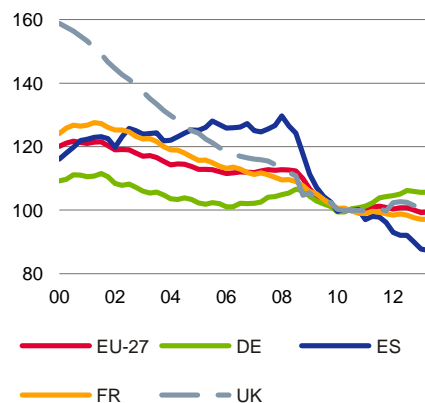
Procedural methods of analysis

In this report we set out to examine how the objective of strengthening the EU's industrial base could be realised and what obstacles would need to be overcome in order to achieve this goal. To this end we will outline what political courses of action are available. Our aim in this report is not to discuss each individual measure in detail. The report is merely intended to provide an overview. This analysis is first preceded in the second chapter below by a data-based review of the role of industry in the EU and then, in the third chapter, by a comparative analysis of the competitiveness of various industrial and newly industrialising countries.

Industrial employment in Europe stabilised recently

3

Number of manufacturing jobs, 2010=100



* No data available for Italy

Source: Eurostat

2. Review: importance of industry is declining

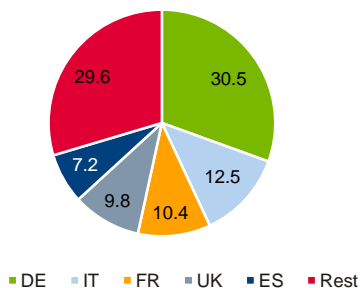
The importance of industry in the euro area⁶ has declined in recent years. Manufacturing accounted for 19.1% of the gross value added in 2000. By 2012, however, this figure had fallen to just 15.8%. This trend hit a low of 14.8% during the recession of 2009, when the value added in industry contracted much more sharply than in the service sector. Although the proportion of the gross value added by industry bounced back in 2010 and 2011, this recovery did not continue in 2012. The trend was very similar throughout the EU, with industry accounting for 15.2% of the total gross value added in 2012 compared with 18.5% in 2000.

There are considerable differences between the western European countries in terms of the importance of industry. The country whose industrial sector accounted for the largest share of economic output in 2012 was Ireland (23.3%). It was followed by Germany (22.4%) and – some way behind – Austria (18.2%). Some eastern European countries are among the leaders here: the Czech Republic is actually the top country in the entire EU because its industry accounts for 24.7% of gross value added, while Hungary (22.7%) and Slovakia (22.1%) also have significant industrial sectors. Italy (15.6%) and Spain (13.3%) have moderately large industrial sectors by European standards. At the lower end of the scale are Greece (9.7%), France (10%), the United Kingdom (UK, 10%) and Denmark (10.7%), where the share of economic output generated by industry is therefore less than half that in Germany.⁷

Germany dominant

4

Individual countries' share of industrial gross value added in the EU in 2012, %



Source: Eurostat

Germany was by far the most important industrial nation in the European Union in 2012, generating 30.5% of the total industrial gross value added in this region. Some way behind were Italy (12.5%), France (10.4%), the United Kingdom (9.8%) and Spain (7.2%). The five largest European economies together therefore accounted for more than 70% of the total industrial value added in the EU in 2012 (2000: over 75%).

⁶ Whenever the term 'industry' is used in this report, it refers to the manufacturing sector (NACE code C). The terms 'manufacturing' and 'industry' are used synonymously.

⁷ The industrial sector's share of gross value added is even smaller in Luxembourg (5.3%) and Cyprus (5.7%).

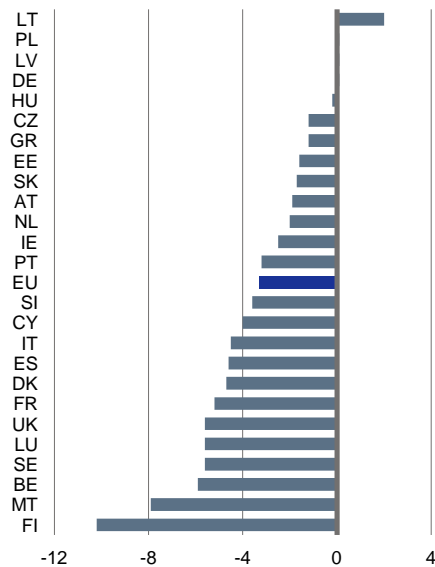


Europe's re-industrialisation

Industrial share of economy growing in only a few countries

5

Change in manufacturing sector's share of total gross value added, 2012 versus 2000, %-points



Source: Eurostat

Industrial share of economy has fallen sharply in Finland, Belgium, UK and Sweden

Rather than just comparing the latest data available, it is also instructive to examine historical trends. This analysis reveals that Germany was the only western European country where the industrial share of gross value added was larger in 2012 than it had been in 2000, even if the increase over this period was a tiny 0.1 percentage points. By implication, therefore, industry's relative contribution to economic output declined in all other western European countries.

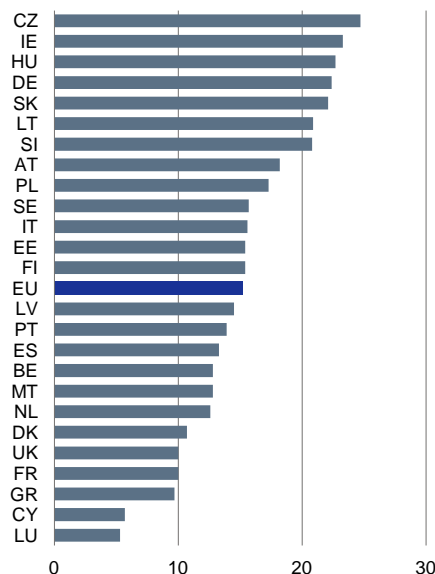
Finland recorded by far the largest decrease in western Europe (measured in percentage points): its industrial sector's share of gross value added fell by 10.2 percentage points between 2000 and 2012. Substantial declines were also reported by Belgium (5.9 percentage points), the United Kingdom (5.6 percentage points), Sweden (5.6 percentage points) and France (5.2 percentage points). Denmark (4.7 percentage points), Spain (4.6 percentage points) and Italy (4.5 percentage points) likewise saw the industrial share of their economies contract significantly. In some of the countries mentioned – especially the United Kingdom – this gradual decline started as far back as the second half of the 1990s. The Netherlands and Austria saw only below-average decreases in their industrial shares of gross value added (2 and 1.9 percentage points respectively). As an EU average, the manufacturing sector's share of GDP fell by 3.3 percentage points over the period 2000 to 2012.

The importance of industry continued to decline in Greece as well. Starting from what had already been the lowest percentage in the EU, the industrial sector's share of gross value added shrank by a further 1.2 percentage points. Industry thus did not play a significant role in Greece even before the financial and economic crisis, and it was not much more seriously affected by the crisis than were the other sectors of the economy. This was a fundamentally different situation from that in the UK and France, which had previously had very strong industrial bases that were hugely weakened over the years. The UK, for example, had in 2000 generated almost 15% of the total gross value added by manufacturing in the EU (compared with less than 10% in 2012).

Industrial share of economy is highest in Czech Republic

6

Manufacturing sector's share of total gross value added, 2012, %



Source: Eurostat

If we compare the trend in western Europe with that in the eastern European EU countries we can see that the industrial sector's share of the gross value added in eastern Europe has fallen much less significantly and, in some cases (including Poland), has actually increased.

A proportionately large industrial sector is not synonymous with a successful economy

The net result of this analysis is that the statistics present a mixed picture. The countries whose industrial sector's share of economic output has declined the most include both southern EU peripheral states that have had to contend with the most serious economic problems since the outbreak of the crisis as well as central and northern European countries whose economies have performed slightly more stably in recent years. Clearly, therefore, neither the absolute importance of industry nor its performance in recent years can adequately explain the relative success or failure of Europe's national economies. At any rate, the generalisation that a proportionately large industrial sector is synonymous with a successful economy is demonstrably not true.



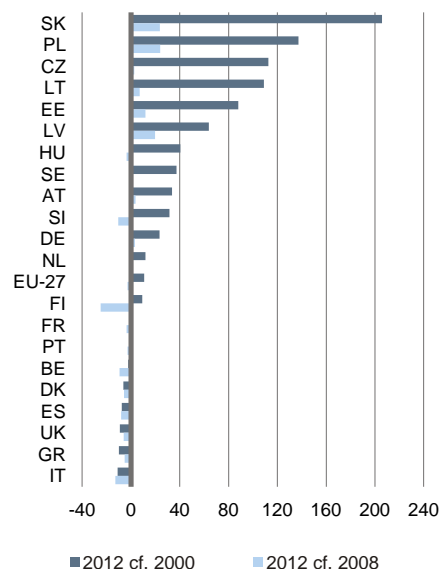
Europe's re-industrialisation

Eastern Europeans leading

7

Real gross value added in eastern Europe grows way above average

Change in real gross value added by manufacturing, %



Source: Eurostat

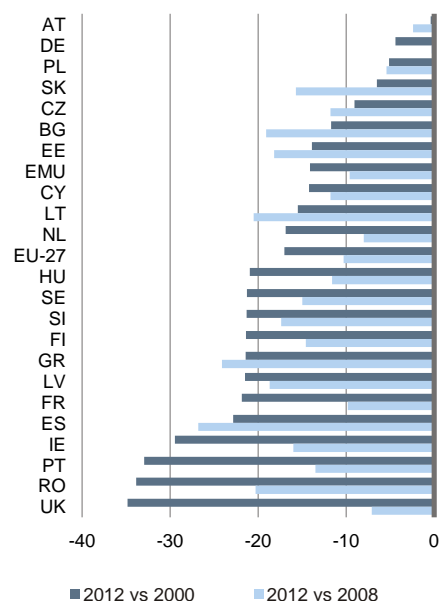
If, instead of analysing the industrial sector's share of economic output, we examine the development of the real gross value added in the manufacturing sector, it immediately becomes evident that the industrial gross value added since 2000 has risen particularly sharply in the eastern European countries. For example, the real gross value added by manufacturing from 2000 to 2012 grew by 206% in Slovakia, by 137% in Poland and by 113% in the Czech Republic. Industry in the western and northern European countries significantly increased its gross value added during this period in Sweden (37.3%), Austria (33.6%) and Germany (23.5%). Especially marked absolute decreases in the industrial gross value added since 2000 were reported by Italy (11.1%), Greece (10%), the United Kingdom (9.1%) and Spain (7.4%). The average real gross value added by manufacturing in the EU-27 countries between 2000 and 2012 rose by almost 11%. It is interesting to note that Finland also posted an absolute increase in the real gross value added by manufacturing (9.1%) despite the fact that – as mentioned above – its industrial sector's share of the total gross value added during this period fell sharply. The decrease in this share in the case of Finland can be explained by the fact that the gross value added by its service sectors grew even more strongly.

A similar picture emerges if we select the pre-crisis year of 2008 as our baseline instead of 2000. Significant absolute increases in the real gross value added by industry are only reported for a few eastern European countries. Of the EU-15 countries, only Austria (3.6%), Germany (3.3%) and Sweden (1.5%) achieved moderate growth. Finland – which constitutes a special case – appears right at the bottom of the scale because the real gross value added by its industrial sector from 2008 to 2012 fell by almost a quarter. This country is characterised by the unusual situation that its industrial gross value added from 2000 to 2007 experienced a very strong expansion before contracting very sharply. The increase in the real gross value added by its industrial sector between 2000 and 2012, as described in the previous paragraph, was therefore wholly attributable to the growth achieved during the first seven years of that period. Further substantial declines in the real gross value added by manufacturing since 2008 were reported for Italy (12.8%), Slovenia (10.5%), Belgium (9.3%) and Spain (8.1%). The real gross value added by industry in the EU-27 countries collectively since 2008 decreased by 2.9%.

No country has increased industrial employment

8

Change in number of manufacturing jobs, %



Source: Eurostat

Decreasing number of industrial jobs, especially in southern Europe

The declining overall importance of industry is also reflected in the labour market. The number of people employed in manufacturing in the EU-15 countries fell by 17.6% between 2000 and 2012. Just over half of this decline was attributable to the period from 2008 to 2012. What is noticeable here is that the number of industrial jobs has not risen in any of the countries being analysed compared with the year 2000. The lowest decreases between 2000 and 2012 were registered in Austria (0.4%) and Germany (4.4%). By contrast, the largest numbers of manufacturing jobs lost in western Europe were in the United Kingdom (34.9%), Portugal (32.9%), Ireland (29.4%), Spain (22.8%) and France (22%).

One interesting point to note is that the trends observed in individual countries have followed quite different patterns. In the UK, for example, industrial employment has fallen fairly steadily since as far back as 2000. This means that the economic crisis in Europe cannot have been the main driver here. On the contrary: the number of manufacturing jobs in the UK has actually stabilised since early 2010. The numbers of those working in industry in countries such as France, Portugal and Ireland were also already on the decline throughout the



past decade – i.e. even before the financial crisis. By contrast, the level of industrial employment in Spain increased until the beginning of 2008. Even in Greece the numbers of manufacturing jobs remained relatively stable until the second half of 2008. However, the outbreak of the financial crisis in 2008 hit the labour markets of Spain, Ireland and Greece particularly hard. These are the western European countries that have suffered the most industrial job losses since 2008. Whereas this downward trend is only now gradually petering out in Spain, Portugal and Greece, there are already tentative signs that the labour market in Ireland is starting to pick up. Germany and Austria are the only western European economies in which the numbers of industrial workers have risen significantly in the last few years: according to the most recently available data, both countries have seen increases of around 6% each since the beginning of 2010.⁸

Substantial productivity gains in eastern Europe

It is also worth comparing the changing levels of industrial employment in western Europe over time with those in the eastern European EU countries. As in the EU-15 states, not one single nation saw its number of manufacturing workers increase between 2000 and 2012. Having said that, the declines witnessed in many eastern European countries were much lower than those in southern Europe. These losses were relatively moderate in Poland (5.1%), Slovakia (6.5%) and the Czech Republic (9.1%). Of the larger countries, Hungary (20.9%), Slovenia (21.3%) and Romania (33.9%) suffered more substantial decreases. What is notable here – as discussed above – is that the real gross value added by manufacturing has at the same time risen sharply in all eastern European countries since 2000 despite the numbers of jobs lost in this sector. This suggests that there have been considerable productivity gains here.

Similarly to western Europe, there are a few eastern European EU countries where industrial employment levels have remained fairly stable despite the financial crisis. This is especially true of the region's three largest economies of Poland, the Czech Republic and Hungary, where manufacturing employment has actually increased slightly since 2009. The Baltic States, Romania and Bulgaria all saw an above-average fall in their numbers of industrial workers during the financial crisis.

Many reasons for the declining importance of industry

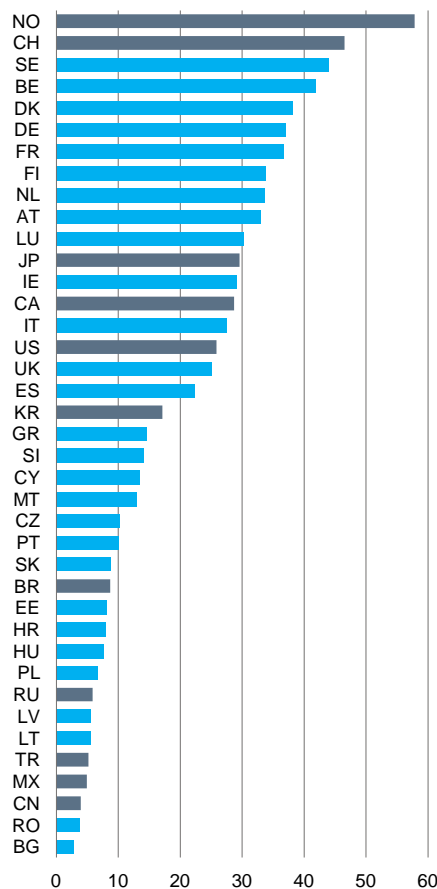
There are many reasons why the importance of industry in the EU has declined in relative and – in some cases – absolute terms. An important contributing factor here has been divergent trends in the price competitiveness of individual EU countries (please also refer to chapter 3). In recent years – in western Europe, at least – there has been a close (negative) correlation between a country's real gross value added and its unit labour costs (both in the industrial sector and throughout the economy as a whole). Accordingly, the gross value added since 2000 has tended to perform better in those countries where unit labour costs have risen at below-average rates.

It is interesting to note that this correlation does not apply to eastern Europe, because in several of these countries both their real gross value added and their unit labour costs have risen – substantially in some cases. It is, of course, worth pointing out that the average industrial wages available in eastern Europe –

Huge variation in manufacturing labour costs

9

EUR per hour worked, 2012



Source: IW Köln

⁸ No figures on the numbers of industrial employees are available for Italy. If, instead, we simply look at the number of people working in industry (i.e. including the self-employed), we can see that there was a decrease of 7.5% in Italy between 2000 and 2011, although this decline was much less pronounced than in other peripheral EU countries.

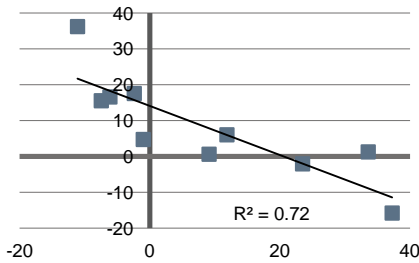


Europe's re-industrialisation

Close correlation between unit labour costs and gross value added by industry in western Europe*

10

X axis: unit labour costs, 2012 versus 2000, %
Y axis: real gross value added by industry, %



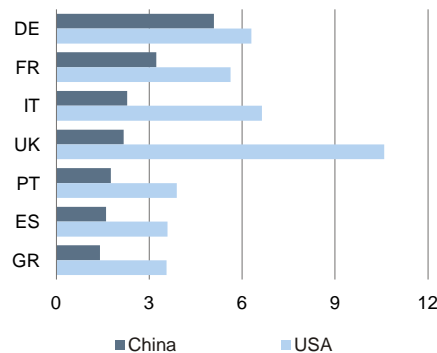
* Based on all western European countries for which data is available

Sources: OECD, German Federal Statistical Office, DB Research

Exports to China still fairly insignificant in many countries

11

Percentage of goods exported by selected countries to China and USA, 2012, %



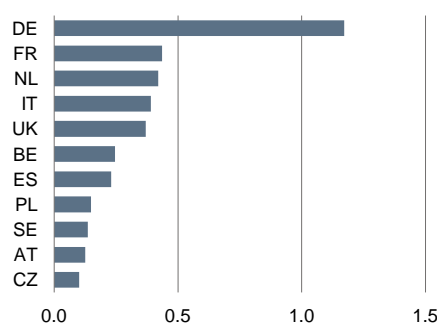
* These figures are not consistent with the German Federal Statistical Office's data on German exports of goods, which calculates that 7.9% of all German goods exported in 2012 went to the US and 6.1% went to China.

Source: IMF

Export nation Germany

12

Goods exported, 2012, EUR bn



Source: Eurostat

despite the pay increases of recent years – are still below the wage levels in most western European countries. The Cologne Institute for Economic Research (IW) has calculated, for example, that the labour costs per employee per hour worked in 2012 were just over EUR 10 in the Czech Republic and as low as EUR 6.65 in Poland. In Germany, on the other hand, average labour costs amounted to almost EUR 37 per hour. On the whole, therefore, unit labour costs in eastern Europe have increased from a lower level. Moreover, not just unit labour costs but also average labour productivity in most eastern European countries has risen more sharply than in western Europe; this has (at least partly) compensated for the higher growth in unit labour costs. This situation demonstrates that although unit labour costs are clearly an important factor in explaining divergent trends in the gross value added by manufacturing in individual countries, they alone are not the decisive factor. What the figures outlined here ultimately indicate is that the gains accruing to industry in eastern Europe have been at the expense of western and, specifically, southern European countries. It is, of course, true that the process of globalisation has intensified competition with industrial locations outside Europe, causing some production to be shifted to regions such as Asia. This is illustrated by the fact that the proportion of global industrial gross value added by the major Asian emerging economies grew from 9.5% in 1995 to 29.1% in 2011, while Europe's corresponding share declined from 35.3% to 28.9% over this period.⁹

Many EU countries' exports to emerging markets remain insignificant

Another likely reason for the declining importance of industry in EU countries – especially in southern Europe – is that their exports have traditionally been strongly focused on the European continent, which has grown very little in recent years. At the same time, their exports to the United States and key emerging markets such as China are often still fairly insignificant. By contrast, the goods exported by Germany, for example, are more diversified beyond Europe's borders, which is why this country is benefiting from the stronger economic growth in regions such as Asia. One competitive advantage that German companies enjoy here is that they are especially well positioned in export sectors whose products are needed to satisfy pent-up demand in emerging economies and are highly desirable for these countries' growing middle classes (e.g. machinery and vehicles). The huge popularity of many German products abroad has thus enabled Germany to increase its industrial value added despite the fact that it remains a high-wage economy. This is one of the main reasons why Germany is the EU's largest exporter of goods in absolute terms.

Country-specific factors are important

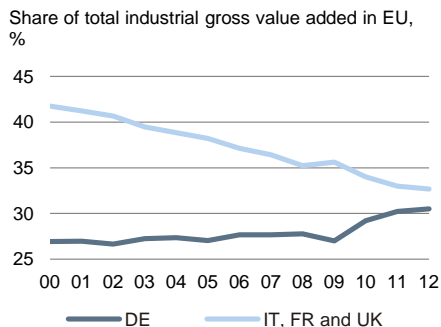
A few country-specific factors are also important in explaining the widely varying levels of industrial gross value added across the European Union. In the UK, for example, the public and political esteem in which industry is held has been in decline since as far back as the 1980s, when politicians made no secret of their desire to transform the economy into a service society as quickly as possible (at the expense of coal-mining and manufacturing). Only since the outbreak of the financial crisis has industry been enjoying a form of renaissance in the UK's public discourse. France's fairly rigid labour market and rising wage costs as well as aspects of its industrial policy are likely to have dented French companies' international competitiveness to some extent. These policies include a high level of government influence over a few large industrial enterprises

⁹ See Kroker, Ralf and Karl Lichtblau (2013). Loc. cit. The definition used by the authors includes South Africa in the group of Asian emerging economies, while Europe includes Russia and Turkey.



Europe's re-industrialisation

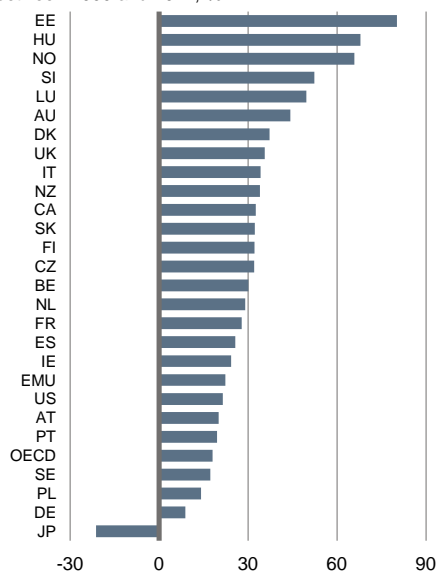
Italy, France and the UK becoming less important 13



Source: Eurostat

Huge variations in unit labour costs 14

Change in unit labour costs (economy as a whole) between 2000 and 2012, %



Source: OECD

(affecting, for example, their decisions on locational and employment issues) as well as various measures aimed at reducing the impact of international competition on domestic companies.¹⁰ Ultimately, however, these policies are likely to have given some firms a false sense of security and prevented them from trying to improve their innovation and productivity.

On the other hand, the above-mentioned changes in the levels of industrial gross value added in Finland over time (sharp rise followed by a sharp decline) are probably closely linked to the financial performance of a major Finnish company from the telecommunications sector. The levels of gross value added throughout Finnish industry are closely correlated with those in the electrical engineering sector (NACE codes 26 and 27). Electrical engineering's share of the gross value added by manufacturing rose from just over 12% in 1995 to as much as 26% in 2007 before falling back to 8.5% at present.

It should be noted, however, that the relative decline in the importance of industry in some countries is caused by a statistical effect. In many cases the manufacturing sector's share of the total gross value added has only fallen because the gross value added in other sectors (especially services) has grown more strongly in absolute terms. These intersectoral shifts between industry and services need to be factored into the formulation of political objectives, because industry's share of the economy can also be increased by contracting the service sector. What we are really aiming for here, however, is above-average growth in manufacturing which, given the huge expansion in services in recent years, is an ambitious goal.

There is also another statistical effect that needs to be considered here. Many industrial companies have in the past outsourced parts of their own value creation process to upstream or downstream firms or sectors. If these firms belong to the service sector, then – for statistical purposes – added value migrates from industry to the service sector although hardly anything has changed in terms of the actual processes involved. This case occurs, for example, if an industrial company has previously handled its own logistics activities but then outsources them to external providers. This trend towards outsourcing has not yet come to an end.

Sectoral breakdown varies from country to country

NACE codes for industrial sectors 15

NACE-Code	Sector
C	Manufacturing
10	Food
11	Beverage productions
12	Tobacco processing
13	Textiles
14	Clothing
17	Paper
19	Coking and oil refining
20	Chemicals
21	Pharmaceuticals
22	Rubber and plastics
23	Construction materials
24	Metal production and metalwork.
25	Metal products
26	Data processing equipment
27	Electrical equipment
28	Mechanical engineering
29	Automotives
30	Other vehicle manufacturing

Source: German Federal Statistical Office

We will now complete this review section by examining the importance of individual industrial sectors in the various western European countries. What is immediately striking is that the various sectors' respective shares of the total gross value added by manufacturing vary substantially from country to country. The most important industrial sectors in Germany are mechanical engineering and automotives, which each generated roughly 16% of the gross value added by manufacturing in 2011; both sectors have high export ratios (62.4% and 64% respectively in 2012) and in recent years have continued to increase their importance for Germany as an industrial location. In no other western European country do these two industrial sectors – which are so typical of Germany – account for anywhere near this large a share of the gross value added by manufacturing. This fact alone strongly suggests that it will not be easy for other EU countries to replicate the 'German model'. This is especially true if one considers that many German firms in the aforementioned sectors can look back on a successful track record spanning several decades. What's more, they maintain close relationships with suppliers, equipment providers and research institutions and are well positioned in international markets, despite the fact that their corporate culture is often that of a medium-sized enterprise and their

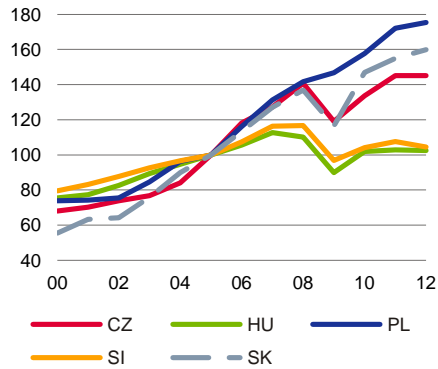
¹⁰ See, for example, Kopp, Reinhold et al. (2009). Europäische Industriepolitik – Zwischen Wettbewerb und Interventionismus. Also: Uterwedde, Henrik (2012). Zeit für Reformen: Frankreichs Wirtschaft im Wahljahr. DGAPanalyse April 2012, no. 5. Berlin.



Europe's re-industrialisation

Especially strong growth in Poland 16

Real gross value added by manufacturing, 2005=100



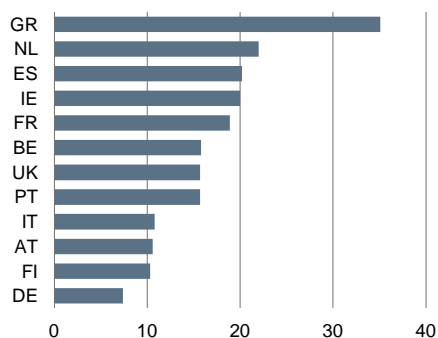
Source: Eurostat

ownership is dominated by families. It is hardly surprising that these two sectors are followed by the metal industry (13.5% share of gross value added; NACE codes 24 and 25), which is a major supplier to the aforementioned capital goods sectors. The fourth and fifth-largest industries in Germany are electrical engineering (12.9%) and chemicals (7.5%), which are closely linked to the mechanical engineering and automotive sectors and also have export ratios in excess of 50%.

The predominant sectors in Italy, which is the second-largest industrial country in the EU, are the metal industry and mechanical engineering, which account for 16.9% and 13.7% of gross value added respectively. They are followed by the food industry (which includes beverage production and tobacco processing; NACE codes 10 to 12) and by the textile and clothing industry (which includes the manufacture of leather goods and shoes; NACE codes 13 to 15), which account for 10.8% and 10.5% of gross value added respectively. Although innovative products are becoming increasingly important in the textile industry in particular (e.g. technical textiles, despite the fact that this field is largely the domain of Germany companies), the potential for innovation in these two sectors – compared, for example, with the mechanical engineering and automotive industries – is, on the whole, much smaller. It is interesting to note that the automotive sector does not play much of a role in Italy, generating only 3.7% of the gross value added by manufacturing.

Food* is a key industry in the EU 17

Food industry's share of gross value added by manufacturing industry, 2012**, %



* NACE codes 10 to 12
** Or most recently available figure

Source: Eurostat

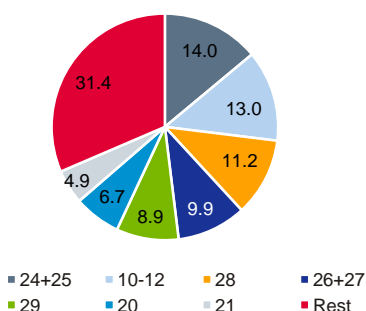
The food sector is the largest industry in France and in recent years has actually managed to increase its share of the country's industrial value added (to 18.9% in 2012). It is followed by the metal and chemical sectors (14.2% and 8.4% respectively). As in Italy, the automotive industry is of minor importance, generating only 4.5% of the gross value added by manufacturing in 2012. However, the current public debate about the crisis affecting the automotive industry in both countries often creates the impression that this sector is much more important than it actually is, although this attitude does contain a certain amount of truth because the automotive industry is a key customer for other sectors of the economy.

Food industry comes top in many countries

Food is one of the most important industrial sectors not just in France but in many other EU countries, coming top in the United Kingdom, Spain, the Netherlands, Portugal and Greece; in Greece the food industry accounts for more than 35% of the gross value added by manufacturing (a proportion that has been rising since the outbreak of the economic crisis). It is therefore hardly surprising that the food industry turns out to be the second-largest industrial sector in the European Union, accounting for 13% of the gross value added by manufacturing in 2011. It is only just beaten by the metal industry (14%), which is therefore the largest industrial sector in the EU. In helping to spearhead Europe's industrial offensive, the food industry thus offers on the one hand the advantages that it is largely independent of economic cycles and generates moderate but fairly stable growth. On the other hand, it exhibits a below-average export ratio, is less innovative than technology-intensive sectors and – not least owing to demographic trends in the EU and quantitative saturation tendencies affecting many sector products – offers little growth potential. Politicians need to consider these factors when formulating political objectives aimed at increasing the industrial sector's share of the economy.

Metal and food industry come top 18

Industrial sector's share (by NACE code) of GVA by manufacturing in the EU, 2011, %



Source: Eurostat

As an average across the EU, the metal and food industries are followed by mechanical engineering (11.2% share of industrial gross value added in 2011) and automotives (8.9%). Some sectors that are fairly insignificant on an EU average account for a substantial proportion of the gross value added by manufacturing in certain countries. The chemical industry, for example, plays a

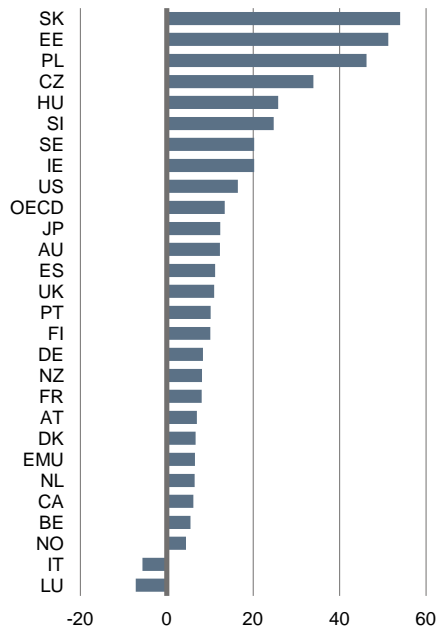


Europe's re-industrialisation

Eastern Europe has become much more productive

19

Change in labour productivity (economy as a whole) between 2000 and 2012, %



Source: OECD

significant role in the Netherlands and Belgium, representing a share of around 15.5% in each of these countries in 2012. The pharmaceutical sector occupies a dominant position in Ireland (2012: 39%). The textile and clothing industry is very important in Portugal (2011: 15.6%); coking and oil refining account for an above-average proportion in Greece (2011: 12.3%); while the paper industry, which is fairly insignificant on an EU average, generated 11% of the gross value added by manufacturing in Finland in 2011, having accounted for more than 20% in 1995.

Industrial clusters are of significant regional importance

The averages mentioned thus far, which relate to countries and industrial sectors, ignore the fact that within individual states there are often highly regional sectoral clusters that are characterised by the geographical proximity of certain industrial sectors, their suppliers, service providers and relevant research organisations. It is therefore sometimes the case that although a certain sector does not account for a particularly large proportion of the total gross value added on average within a country, it may be especially important for the local labour market and value creation in a specific region of the country. There are large clusters of classic industries in areas such as southern and western Germany, northern Italy, the south of England, the region in and around Paris, and in eastern Spain.¹¹ Young industries that are only gradually growing out of their niche are frequently also characterised by regional cluster structures.

3. How competitive is Europe as an industrial location?

We have already explained further above that the relative decline in the importance of manufacturing in western Europe is partly the consequence of a sectoral shift towards newly emerging and fast-growing areas of the service sector. However, this trend may also reflect a loss of international competitiveness, which makes it less profitable to manufacture industrial goods in Europe than it is to produce them outside Europe. This chapter focuses on Europe's competitiveness as an industrial location over time.

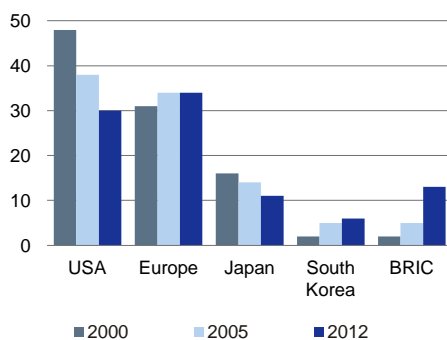
A key factor in European companies' competitiveness is the EU's Single Market, which is the world's largest common economic area and generates some 23% of global GDP. The free movement of goods and services within this market has enabled firms to establish production networks throughout Europe and reap economies of scale. The internal market has also helped to make the EU more attractive for foreign direct investment.¹²

European companies have managed to defend their strong market positions against their international competitors despite the generally declining importance of industry and the current economic crisis. One especially noteworthy fact is that the number of EU-based firms that are among the world's 100 largest industrial companies in terms of revenue has actually increased slightly since 2000. The global importance of firms from South Korea and the BRIC countries (Brazil, Russia, India and China) grew over the same period – mainly at the expense of American and Japanese companies. Large corporations were able to compensate for the sluggish demand in Europe by increasing their revenue in other parts of the world. However, this was far more

The 100 largest manufacturing companies: Europe remains strong

20

Revenue, USD bn



Source: Industryweek

¹¹ For further information on the subject of clusters see Röhl, Klaus-Heiner (2013). Industriecenter in Europa. In: Cologne Institute for Economic Research (publisher, 2013). Loc. cit.

¹² See Eich, Theresa and Stefan Vetter (2013). The Single European Market 20 years on. Achievements, unfulfilled expectations & further potential. Deutsche Bank Research. EU Monitor. Frankfurt am Main



Europe's re-industrialisation

difficult for small and medium-sized enterprises, which tend to be much less export-driven.

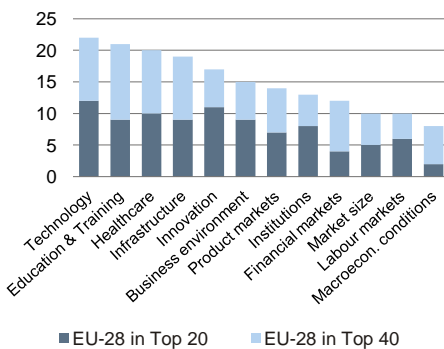
Companies' competitiveness is also affected by sector-specific factors. For example, productivity levels and costs can vary enormously from one sector and country to another purely for technological reasons or as a result of the legal framework. A case in point is that higher energy costs in one country put companies in energy-intensive sectors at a considerable disadvantage compared with their competitors in other countries, whereas this factor is hardly relevant in less energy-intensive industries.

As the single European market has gradually been liberalised, issues of regulation and competition policy have increasingly been resolved at EU level. This means that the EU Commission now wields much more influence than in the past. Restrictions imposed on companies for reasons of environmental or consumer protection can, however, place these firms at a cost disadvantage compared with non-European rivals.

Where is the EU competitive?

21

Number of EU countries among the top 20/top 40 by sub-category



Source: WEF Global Competitiveness Index 2013/2014

Competitiveness rankings: Europe is losing ground

Because the indices used to measure international competitiveness are based on a range of methods and in some cases cover different aspects, they can occasionally deliver contradictory results. What they all have in common, however, is that they do not paint a particularly rosy picture of European countries' competitiveness over the past decade. Far from being a purely crisis-related phenomenon, this is also a consequence of structural problems.

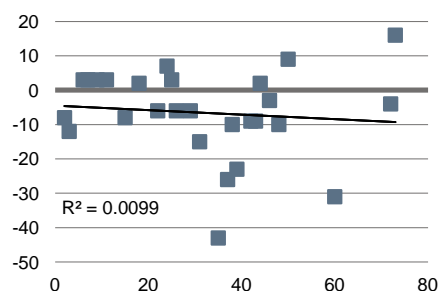
The Global Competitiveness Index compiled by the World Economic Forum (WEF) provides a fairly comprehensive annual snapshot of each country's competitiveness based on a number of categories: quality of institutions and infrastructure; macroeconomic conditions; healthcare and education systems; efficiency of product markets, financial markets and labour markets; market size; and the level of technology and innovation. A few findings in respect of the EU countries are especially noteworthy:

- The level of competitiveness varies enormously from one EU country to another. The WEF's index ranks eight EU countries among the top 20 worldwide. France, Ireland and Spain plus the more successful of the new EU member states (Estonia and the Czech Republic) are moderately competitive by European standards. By contrast, Italy, Portugal and most south-eastern European countries perform relatively poorly. Slovakia, which was ranked an impressive 36th in 2006, has slid 43 places since then and now joins the EU's other stragglers Romania and Greece roughly on a par with Cambodia and Guatemala.
- Some EU countries still perform poorly even if we exclude those categories over which governments have little control (e.g. market size) or which are affected by the current crisis (e.g. macroeconomic conditions). Greece, Romania, Slovakia, Bulgaria and even Italy perform particularly badly in terms of the quality of their public and private institutions as well as the efficiency of their product markets and labour markets, despite the fact that these are all areas in which national governments can take effective action.
- The process of convergence within the EU has recently ground to a halt. Instead of narrowing the gap, many of the lower-ranked EU countries have become less competitive over the past few years. Most of the new members that joined the EU during its enlargement rounds of 2004 and 2007 – and which had mainly performed well since the late 1990s – have recently started to fall back again.

No convergence in competitiveness

22

X axis: ranking in 2006 WEF index
Y axis: change between 2006 and 2013



Source: WEF



Europe's re-industrialisation

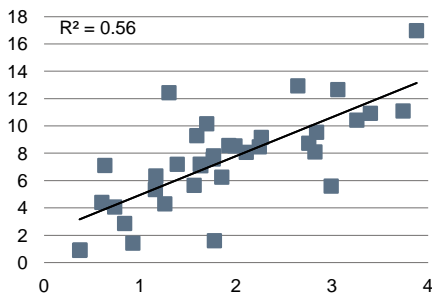
Differences between northern and southern Europe reaffirmed by other rankings

Because the areas of economic specialisation vary from country to country, general assessments of competitiveness cannot necessarily be usefully applied to the industrial sector. However, the Global Manufacturing Competitiveness Index, for example – which focuses specifically on industry and is based on a survey of CEOs from multinational industrial companies – does not cast Europe in a more favourable light either.¹³ Germany is the only EU country ranked in the top ten by this index, while Poland, the UK and the Czech Republic are the only other EU member states to figure in the top 20. A second index that looks at the level of competitiveness expected in five years' time reveals even more sobering findings for Europe because it suggests that Ireland and Spain will be the only EU countries to have improved by then compared with other parts of the world. The highest level of future competitiveness is attributed to the three major emerging markets of China, India and Brazil, which are followed by the traditional industrial nations Germany and the United States as well as the rising economic power South Korea. Industrial nations can therefore continue to pursue widely differing models in their quest for success: a more cost-driven model that offers considerable market sales potential (India and Brazil), a technology- and knowledge-intensive model (Germany, United States and South Korea), and the Chinese model, which successfully combines elements of the other two.

High R&D intensity boosts employment

23

X axis: R&D spending as % of GDP*
Y axis: R&D staff per 1,000 employees*



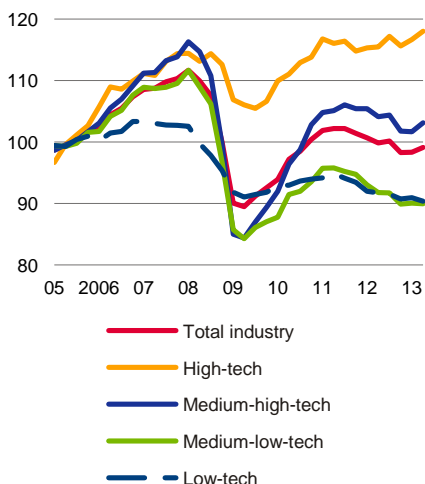
* 2010 or most recently available figure

Source: OECD

High-tech industry continues to grow

24

Real industrial output in the EU, 2005=100



Source: Eurostat

An index of the quality of industrial locations compiled by the Cologne Institute for Economic Research (IW) ranks the United States, Sweden, Denmark, Switzerland and Germany as the top countries.¹⁴ The Netherlands, Finland and Austria also figure among the twelve most attractive locations. Of the major EU member states, Spain is ranked 26th, Italy 34th and Poland 35th among the 45 countries analysed. Only Malta (38th), Greece (39th), Romania (41st) and Bulgaria (44th) perform even worse within the EU.

When looking at how the quality of these industrial locations has changed since 1995, five of the six best countries are new EU member states (Estonia, Latvia, Lithuania, Bulgaria and Slovakia). The only non-European country to make it into this select group is South Korea (ranked fourth), with China following right behind in seventh place.

Even if such indices only provide a picture that is painted in very broad brush strokes, they do at least point up pertinent strengths and weaknesses. Europe's comparative advantages are clearly the availability of skilled workers, the quality of infrastructure, the large single market and an extensive network of suppliers. Its drawbacks, on the other hand, are high energy costs, comparatively high business taxes and relatively low labour market flexibility.

Competitiveness in technology-intensive areas is key

The pace of innovation is a key factor determining the potential of industries that are intensive in both technology and human capital and which play a significant role in Europe. After all, just over 30% of all industrial workers in Europe on average are employed in medium-tech or high-tech sectors, and this figure exceeds 40% in Germany, Sweden, the UK, Ireland and France. What's more, technology-intensive industries have been the most important drivers of Europe's growth in recent years. Despite the economic crisis, the manufacture of high-tech products in Europe has increased by 26% since 2005. The medium-high-tech sector managed to achieve growth of 7%. Low-tech

¹³ See Deloitte (2012). Global Manufacturing Competitiveness Index 2013.

¹⁴ See Cologne Institute for Economic Research (2013). Industrielle Standortqualität: Wo steht Deutschland im internationalen Vergleich. Cologne. The 45 countries analysed include all OECD and EU members as well as Brazil, China, India, Russia and South Africa.

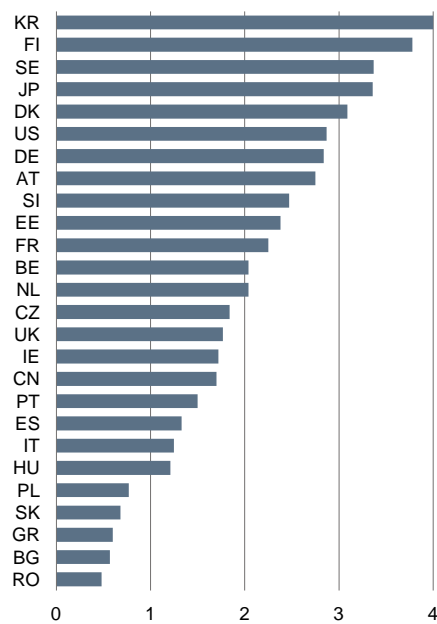


Europe's re-industrialisation

Considerable variations in R&D intensity

25

R&D spending in 2011, % of GDP



Source: Eurostat

industries, by contrast, have contracted by 6% since 2005 and by more than 10% since 2008. The high-tech segment and the medium-high-tech segment together generate almost half of the industrial gross value added (12% and 35% of the total respectively). What is especially remarkable is that although total industrial output in mid-2013 was still some 11 percentage points below the figure reached in early 2008, high-tech production had already regained its pre-crisis level by 2011.

A crucial factor for technology-intensive sectors is public and private spending on research and development (R&D). The countries with the world's highest R&D intensity (R&D expenditure as a percentage of GDP) are Korea and Finland, where corporate and government spending on research and development amounts to roughly 4% of GDP. Of the other EU countries, only Sweden and Denmark exceed the "Europe 2020" target of 3%, while Germany and Austria both fall just short of it. The current average R&D intensity in the EU is around just 2%, while in five EU countries it is actually less than 1%.

Most studies examining the relationship between public and private R&D expenditure come to the conclusion that government research spending has a slightly positive impact on corporate R&D.¹⁵ Irrespective of whether innovation is primarily funded by public or private investment, it is desirable for countries to have a high R&D intensity because technology-intensive economies can achieve higher productivity gains and create better-quality jobs over the long term. Many EU countries therefore need to increase their R&D spending.

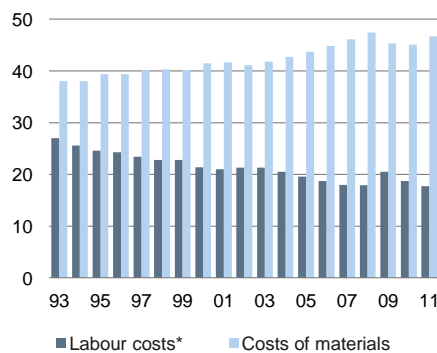
The level of private-sector R&D spending is a reliable indicator of the competitiveness and innovative strength of a country's technology-intensive industrial and service sectors. In most industrialised nations the privately funded R&D intensity is more than 60%, while in Japan, Korea and China it exceeds 70%. If the corporate sector invests relatively little in R&D, however, the government cannot make up the shortfall. The fact that countries such as the United Kingdom and the Netherlands have R&D intensities of less than 2% of their GDP is primarily attributable to the relatively low proportion funded by the private sector.

Importance of labour costs remains high but is declining

German industry: importance of labour costs declining

26

Share of gross production value in German manufacturing, %



* Including costs for contract staff

Sources: German Federal Statistical Office, Wuppertal Institute

Although labour costs remain a key factor in industrial competitiveness, their importance is gradually declining in most sectors. In 2003, 87% of German industrial companies that had relocated their production to other countries cited lower labour costs as one of the main reasons for this decision.¹⁶ Although this proportion had fallen to 71% by 2012, labour costs remained by far the most important motive for such relocations and were mentioned much more frequently than other reasons such as better market development potential (28%) and greater proximity to customers (26%).

There are essentially two reasons for the modest decline in the importance of staff costs. Firstly, labour costs as a proportion of total industrial costs have fallen continuously in recent decades as a result of increasing automation. This trend has been observed in virtually all sectors. And secondly, most activities that are especially labour intensive have already been relocated to countries where wage levels are lower. For example, whereas staff costs (including the cost of temporary workers) in Germany accounted for 24.6% of companies' gross output in 1995, they amounted to only 17.7% in 2011.

However, labour costs are also a significant factor in competition between industrialised nations, i.e. within Europe or compared with the United States,

¹⁵ See, for example, David, Paul A., et al. (2000). Research Policy, Vol. 29 (4-5), pp. 497-529.

¹⁶ The corresponding proportion was similar for firms from other European countries (88% in the United Kingdom, 83% in Austria and 82% in France).

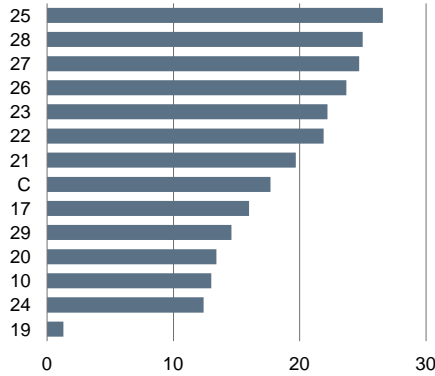


Europe's re-industrialisation

Relative importance of labour costs varies according to sector

27

Staff costs* as % of gross production value by NACE code in Germany, 2011



* Including costs for contract workers

Source: German Federal Statistical Office

Japan and Korea. Effective labour costs in Europe still vary enormously even between neighbouring countries (e.g. between France and Spain, or between Germany and the Czech Republic or Poland). This is particularly relevant because labour-cost-intensive sectors are found not just in low-tech segments but also in strategically and technologically important industries. The mechanical engineering sector in Germany, for example, is one of the industries in which staff costs are especially significant, amounting to almost 25% of total revenue.

To summarise, we can say that the EU countries have become less competitive over the last decade compared with the United States and the emerging economies. Although Europe offers less long-term growth potential than Asia, it still has a sizeable market with high average incomes, a largely reliable infrastructure and a huge pool of skilled workers. The observed trend is therefore not irreversible, and some countries that were faced with a sharply declining industrial base (e.g. Portugal and Spain) are now heading in the right direction, having introduced structural reforms and reduced their unit labour costs.

4. Political courses of action available

In the following chapter we will be examining a few political spheres of activity which, at the level of the EU and/or national governments, are likely to be of key importance for the development of the economy and, consequently, for any re-industrialisation of Europe. First, however, we will look at recent industrial trends in the United States and ask whether they could also apply to the EU.

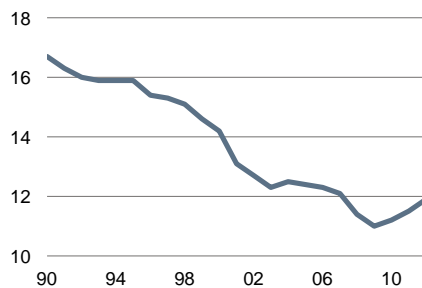
The political objective of strengthening the industrial base has recently been on the agenda not just in Europe. The manufacturing sector in the United States had also become less important in relative terms during the period up to 2009, with its share of GDP falling from just under 17% in 1990 to 11% in 2009. The industrial sector's declining share of the US economy and the loss of local manufacturing jobs are mainly a result of the fact that production has been relocated to emerging markets. Over the past three years, however, the industrial sector has managed to reverse this trend, raising its share of GDP to 11.9% in 2012.

Offshoring versus re-shoring: just how realistic is re-industrialisation?

US industry recently on the increase again

28

Manufacturing as % of GDP



Source: Bureau of Economic Analysis

Many commentators have recently been expressing the view that the United States is about to undergo a lasting industrial renaissance.¹⁷ The logic underlying this argument is that if we continue to see robust growth in demand for industrial products in China (and other emerging markets, which in recent years have attracted industrial production from the United States), then the production facilities currently located in China will primarily be used to supply local markets. When decisions have to be made as to where to build additional manufacturing capacity, the United States is rapidly regaining comparative cost advantages. Although wages in China are still far lower than in the US, these pay differentials are narrowing more quickly than the productivity gap. Whereas China's average industrial wage in 2000 was only 3% of average US pay, it is expected to be around 15% by 2015. Also energy and property prices in China's boom regions are in some cases now higher than those in the United States, especially as energy prices in the US have come under pressure in recent years owing to the exploitation of unconventional gas and oil reserves. Because production costs on their own are still far lower in the emerging markets, local

¹⁷ Boston Consulting Group (2011). Made in America, Again. Why Manufacturing Will Return to the U.S.



Europe's re-industrialisation

Cost differentials between the US and China are decreasing

demand will continue to be met from this region. However, this scenario might not apply to goods re-imported into the United States, because re-imports incur additional charges (mainly transport costs and customs duties). The *Economist* magazine reports, for example, that some companies' production costs in California are now only 10% higher than those in China if transport costs and customs duties are included.¹⁸ Further factors to consider here are the superior quality and greater flexibility of manufacturing in the United States. It might therefore become increasingly profitable for American companies to supply at least some of the domestic demand from local production facilities and to create new capacity in the US.

Will industry return to Europe?

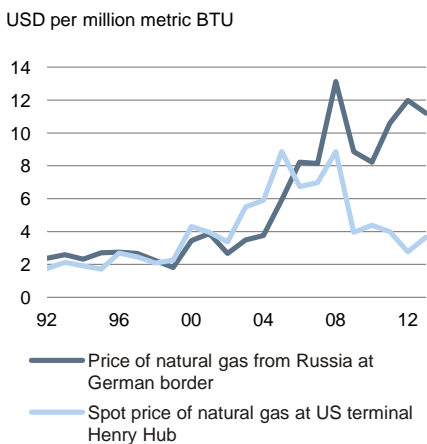
It is debatable whether this scenario of a lasting process of re-industrialisation in the United States will actually materialise. What we do know, however, is that wages in emerging economies that are rapidly catching up with the West will rise much more sharply over the medium term than wages in currently more advanced industrialised nations. The cost differentials in labour-intensive sectors will remain high enough that the scenario outlined above could only materialise in those industrial sectors in which labour costs account for only a fairly small proportion of the total costs. However, this scenario would be difficult to replicate fully in Europe where, for a number of reasons, the underlying trends and operating environment are less supportive than in the United States.

Most relocation of European firms' production to date has been within the EU

Whereas the majority of the production capacity relocated from the United States has been moved to Mexico, China, India or other Asian countries, most relocation of European firms' production has taken place within the EU. The Single Market has enabled companies from western EU member states to manufacture much more cheaply in eastern European countries without having to contend with trade barriers (customs duties, differing standards, problems obtaining residence permits for employees). In 2012, for example, German companies that maintain production capacity of their own abroad still manufactured 61% of their total output in Germany, a further 21% in other EU countries and only 8% in Asia.¹⁹ Most of the manufacturing that has been relocated in order to cut costs has therefore not left Europe. This means that it will not be possible to significantly increase the industrial sector's share of the European economy simply by re-shoring production capacity from non-EU countries, especially as the main reason for locating production facilities in Asia (especially in China) is in many sectors to meet local demand.

Natural gas much cheaper in the US than in Europe

29



Source: IMF

EU companies' cost base also differs from that in the United States. For a start, productivity growth in the US has been higher in recent years than in most European countries. Labour costs in some core western European countries are often higher than in the United States, although these cost levels vary considerably from one EU country to another. The situation is similar in the case of energy supply. The electricity costs paid by industry in most European countries are roughly twice as high as in the US, and the difference in gas costs is even greater. Consequently, there appear to be very few cases where Europe has managed to improve its cost competitiveness compared with production sites outside the EU (either compared with industrialised nations such as the US and Korea or compared with the emerging Asian markets).

Given the current crisis, there is a huge question mark over when Europe will start to regain some of its importance as a market into which European industry can sell its products. EU manufacturing growth is currently being largely driven by exports to emerging economies outside Europe. What's more, it is not yet

¹⁸ The Economist (2013). Coming home: Reshoring manufacturing. 19 January 2013.

¹⁹ Fraunhofer ISI (2013). Globale Produktion von einer starken Heimatbasis aus. Modernisierung der Produktion. Bulletins from ISI survey no. 63. Karlsruhe.



Europe's re-industrialisation

clear whether the consolidation phase has run its course. Some key European sectors, such as the automotive industry, are still suffering from huge excess capacity which is unlikely to be fully utilised any time soon even if we see a lasting improvement in domestic demand. Several plant closures have therefore been announced for this sector in recent months.

Less production has been relocated from Europe in recent years

Relocation trend has plateaued

Nonetheless, the trend towards moving production out of Europe appears to have abated in recent years. In 2006, for example, 15% of German manufacturing companies stated that they had relocated at least some of their production abroad over the previous two years. By 2012, however, this figure had fallen to just 8%. This trend is even more distinct in sectors that have traditionally witnessed above-average levels of production relocation. In the metal and electrical engineering industries, for example, only 11% of all companies moved at least some of their production out of Germany in 2010 and 2011. This proportion had exceeded 25% in most of the two-year periods between the mid-1990s and the early 2000s. There is, however, no evidence to suggest that the re-shoring of manufacturing increased during this period.²⁰

Consequently, the ongoing debate in the United States about a sustained revitalisation of industry cannot simply be translated into a European context. The hope that multinational companies are about to start boosting their European production capacity again merely in order to meet local demand is unlikely to be fulfilled any time soon. A lot more therefore needs to happen before Europe experiences an industrial renaissance.

The following section outlines a few (political) courses of action that could potentially help to reinvigorate European industry.

Attract more FDI – but how?

Even though studies examining the importance of foreign direct investment (FDI) can produce contradictory findings in some cases, most empirical evidence suggests that such inward investment boosts growth. There are a number of reasons why companies engage in foreign direct investment: to gain access to new markets (market-seeking) or resources (resource-seeking), to relocate some of their production to countries that are either more technologically advanced or have a substantial pool of skilled workers (strategic asset-seeking), or to reap cost and specialisation benefits (efficiency-seeking).

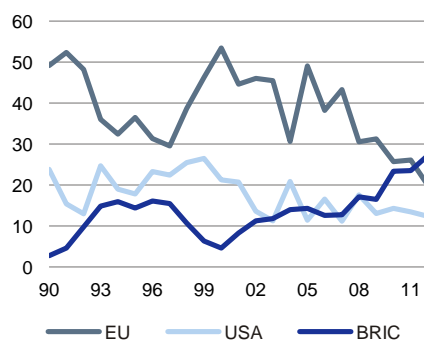
Compared with other regions of the world, the EU member states were extremely successful at attracting foreign direct investment in the 1990s and 2000s. In most of these years the EU received over 40% of global FDI flows, which on average was roughly twice as much as the United States attracted. Over time, however, the BRIC countries have become increasingly important and have now overtaken the EU. Given the strong growth of the emerging markets and the cost advantages that they enjoy, this shift in importance is hardly surprising. The market development incentive played a key role in Europe after the Single Market was opened and the EU was enlarged to the east, but it now applies more to major emerging economies such as China, Brazil, India and the ASEAN countries.

There is, at least, a generally benign regulatory environment for foreign investors in Europe. The Regulatory Restrictiveness Index compiled by the OECD shows that most EU countries have very few serious restrictions on FDI

BRICs have caught up

30

Share of global FDI-inflows, %



Source: OECD

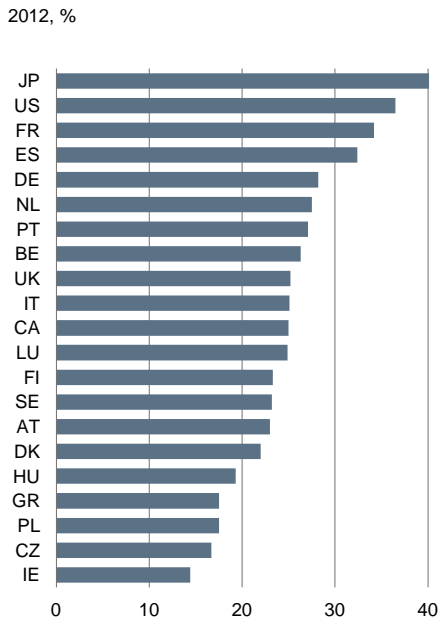
²⁰ Fraunhofer ISI (2013). Loc. cit.



Europe's re-industrialisation

Huge variations in effective tax rate payable by limited companies

31



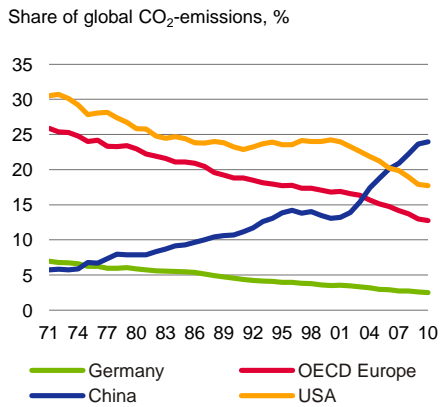
Source: Federation of German Industries (BDI)

compared with most other OECD countries or China and India.²¹ In Europe, however, there appears to be no direct correlation between regulatory barriers and the actual stock of investment. Ireland and Belgium are among the countries with the highest levels of foreign direct investment in relation to their GDP, and they are followed mainly by eastern European countries. The United Kingdom comes top in absolute terms and in 2012 accounted for some 19% of the total stock of FDI in the EU.

What Europe needs in order to attract more FDI is not so much specific individual measures but rather an attractive overall package. This should include additional spending on R&D, workforce training and skills, high-quality infrastructure, political and macroeconomic stability, and the containment of unit labour costs. A country can, of course, make itself an attractive location for foreign companies by lowering its tax rates (the 'Irish model'), although a 'race to the bottom' is not what Europe needs here. Thus, a valid question in this context is whether it is really desirable to have business tax rates that vary hugely from one European country to another. The effective tax rate payable by limited companies in Ireland is only 14.4%, which is almost 20 percentage points lower than in France (34.2%). Neither of these extremes appears to be particularly desirable – the French model because of its impact on the country's appeal as a business location, and the Irish model partly because of its effect on the country's long-term fiscal stability.

Changing relative importance over time

32

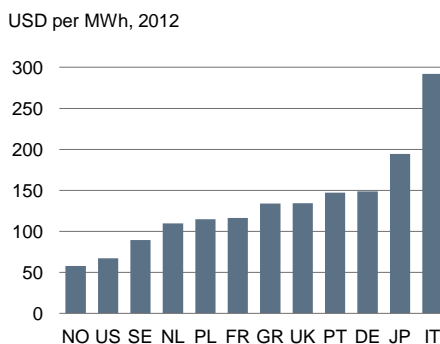


Source: IEA

Policies on energy and climate change are currently among the most important political tools that have a bearing on the future prospects of industry at both national and EU level. The EU has set itself the target of cutting its CO₂ emissions by 20% by the year 2020 compared with their level in 1990. Even if some political parties and non-governmental organisations (NGOs) are calling for this target to be raised, it should be pointed out that the EU is the world's only economic area – with the exception of Australia and a few other European countries (e.g. Norway and Switzerland) – that is pursuing absolute, quantitative emission reduction targets and – partly due to the economic crisis – is actually likely to meet them. All other countries – especially China and the United States, which are the two largest emitters of greenhouse gases – have so far failed to set any such targets. It is therefore hardly surprising that the European OECD countries' share of global CO₂ emissions has fallen in the past and was only around 13% in 2010 after it had averaged 18% in the 1990s.

Substantial variations in cost of electricity for industry

33



Source: IEA

Acting partly in response to European climate change policies, the EU has to date introduced several measures that affect the energy sector and – directly or indirectly – many industrial sectors. One of these measures is the EU's carbon trading scheme although, admittedly, this does not currently constitute much of a burden for the participating companies because carbon certificate prices have fallen in recent months. These measures also include the EU's goal of increasing the proportion of energy supplied by renewables, the EU Energy Efficiency Directive, and limits on the levels of CO₂ emitted by cars. The priorities set by policies on energy and climate change vary considerably from one EU country to another. Some countries are even following a separate path; Germany's fundamental shift in energy policy (the 'Energiewende') is a case in point, although we would have preferred to see other European countries being more closely involved in this project.

The aforementioned measures go at least some of the way to explaining why Europe's energy prices are often higher than those in other parts of the world.

²¹ Such barriers include restrictions on foreigners' ability to acquire equity stakes in domestic firms, complex approval procedures, restrictions on the employment of foreigners, and other operational restrictions on foreign companies.

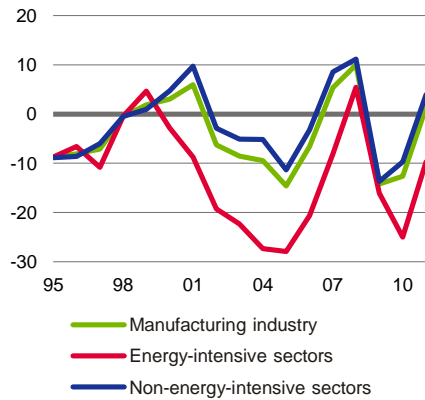


Europe's re-industrialisation

Energy-intensive sectors investing less in plant maintenance

34

Net investment in plant and equipment as % of gross investment in plant and equipment



Source: German Federal Statistical Office

Energy in the EU is, on average, more expensive than in the United States in particular, which is attributable to lower taxes and – especially in recent years – the exploitation of unconventional gas and oil reserves in the US. Another striking aspect is that energy prices vary significantly even within the EU.

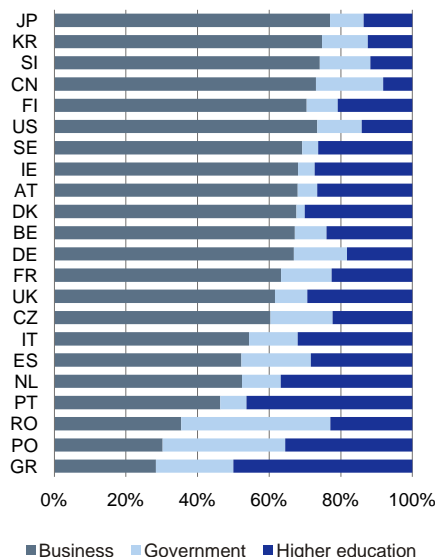
At this juncture we do not propose to present a root-and-branch critique of European policies on energy and climate change. Anyone who takes the problem of climate change seriously and recognises that fossil fuels are a finite resource has to accept the need to take measures that address these issues. Moreover, all industrial sectors, households and even governments offer considerable energy-saving potential that can be reaped at a reasonable cost. Price signals are important here, especially as energy-efficient manufacturing processes and products are increasingly becoming a key factor in international competition. Nonetheless, EU policies on climate change must take account of the fact that other countries may be reluctant, less enthusiastic or totally unwilling to follow Europe's example. Given this situation, any policies that caused energy prices in the EU to rise at above-average rates would make neither ecological nor economic sense because energy-intensive sectors and prolific emitters of greenhouse gases, when having to decide where to invest, would simply factor in expected energy price rises and then – all other things being equal – would increasingly opt to locate outside the EU in future. The fact that this is more than just a purely hypothetical scenario is illustrated by the example of Germany, where energy-intensive industries have invested much less in the maintenance of their plant and equipment in recent years than the non-energy-intensive sectors have. Since the mid-1990s there have only been two years in which energy-intensive industries' net capital spending on plant and equipment was in positive territory.

What is ultimately clear is that the European Union needs to maintain the 'right' sense of proportion when making policy decisions on energy and climate change. The EU communication published in the autumn of 2012 on the subject of strengthening the industrial sector stresses the importance of energy prices. At any rate, the single European market needs to take effect more quickly in the energy sector. Power grids need to be expanded across national borders so that, for example, the fluctuating levels of renewable energies generated can be efficiently utilised and competition in the energy market can be intensified. It would also make ecological and economic sense for renewable energies generated within the European grid to be 'harvested' wherever the best climatic, natural and/or topographical conditions exist in each case. What we therefore need in the energy sector is not many countries 'going it alone' but more European coordination, which is, of course, a big task in political terms.

Private R&D spending predominant

35

Sector's share of total R&D spending, 2011



Source: Eurostat

More investment in human capital will boost growth

A major locational advantage enjoyed by European industry is the human capital that is available. What EU manufacturing needs in order to ensure that it remains competitive in medium-tech and high-tech segments in particular is a comprehensive strategy and more spending on education and research to improve national training and education systems, increase workforce potential in key vocational areas and, at the same time, help create greater flexibility and equal opportunities in the labour market. These tasks largely fall within the remit of national politics.

The findings of past PISA studies have shown that the quality of school education in most EU countries is mediocre at best. When the most recent survey was conducted in 2009, only Finland was shown to be one of the best along with South Korea, Japan and Canada. Otherwise, only the Netherlands and Estonia made it into the top five in a few categories. However, many European countries also reveal significant room for improvement when it comes

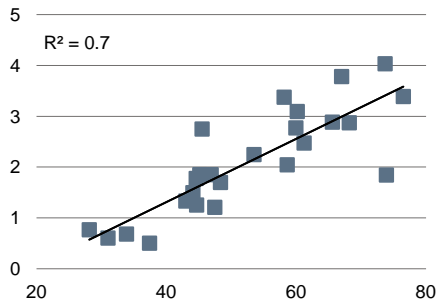


Europe's re-industrialisation

High correlation between private and total R&D spending

36

X axis: corporate share of R&D spending
Y axis: total R&D spending, % of GDP



Source: OECD

to the transition from school to employment. Public spending on education by EU countries averaged 5.4% of GDP in 2010, which was slightly above the long-term average. In addition, the private sector spent the equivalent of 0.8% of GDP on educational institutions. In this respect, more commitment from both the public and private sectors is needed.

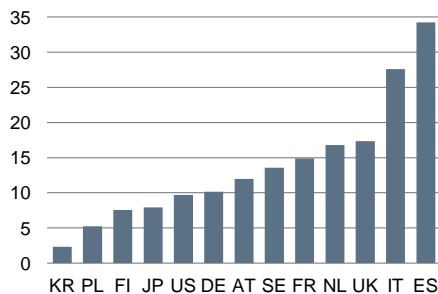
A skilled workforce is essential for any country that wants to consistently develop high-quality and innovative products (and services). Specifically in the case of industry this applies not just to engineers and other university graduates but also to master craftsmen, technicians and similar skilled workers. Consequently, the prime political objective should not be to achieve the highest possible percentage of people studying at university. Instead, politicians should be focusing on the question of what sort of training and education can best equip young people for the workplace. In some countries, the objective should be to improve the offer of intermediate-level training and apprenticeships coupled with opportunities for continuing professional development. The highly successful German and Austrian system of dual vocational training could also help in other countries to provide school-leavers with the qualifications that they need for the workplace and to reduce unemployment among young people.

One critical drawback at EU level (not only) in this respect is that spending tends to focus mainly on maintaining existing structures, a case in point being the expenditure on agriculture, which still accounts for 39% of the budget set in the EU's long-term financial framework covering the period from 2014 to 2020. These funds are therefore not available for areas such as education and research. Improvements in the conditions for conducting research in new technologies would be equally desirable. A prime example here is biotechnology, where the research climate prevailing in the United States is certainly better than that in Europe, which is why this sector is substantially larger overseas.²²

Spain and Italy with high share of low-qualified workers

37

25- to 34- year-olds without vocational training or upper secondary education, % of total age group



Source: OECD

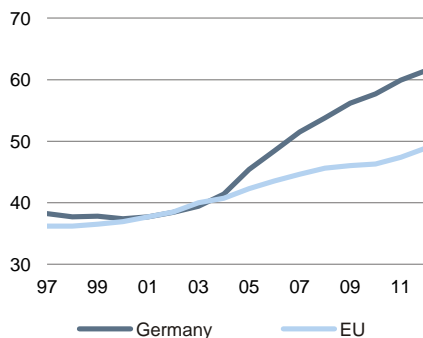
Greater mobility and flexibility needed in labour markets

Another key objective is to improve the mobility of workers within the EU. At present only around 3% of all EU citizens work in another EU country. Typical obstacles to mobility are lack of professional qualifications and language skills, insufficient knowledge about the career opportunities available in other EU countries, and problems with the recognition of professional qualifications and the transferability of pension entitlements. Increasing labour mobility is especially important because it helps companies to recruit skilled workers and enables employees to take advantage of better career prospects abroad. This concerns not just university graduates but also intermediate-level skilled industrial workers. In some of these vocational fields there is already a shortage of labour, which is often limited to specific regions. This is partly because the obstacles to mobility are usually higher for workers without a university degree – not least owing to language barriers.

Mature workers more active in labour market

38

Employment rate of 55- to 64- year-olds, %



Sources: Eurostat, German Federal Statistical Office

Making labour markets more flexible and strengthening the incentives to work (as with Germany's Agenda 2010) can boost job creation. Given the current demographic trends, it is essential to better accommodate more mature workers in the labour market, for example by using flexible working-time models. Further increasing the percentage of those aged over 55 who are working is also an effective way of mitigating the shortage of skilled workers. Germany has already made good progress in this respect. For example, the proportion of 55- to 64-year-olds in employment has risen from 38.1% in 1997 to 61.5% now.

²² See Ernst & Young (2013). Biotechnology Industry Report 2013.



More free trade would be beneficial for industrial companies in Europe

One key policy area that is the exclusive responsibility of the EU is the issue of international trade relations. The progress made in advancing the cause of international free trade under the umbrella of the WTO negotiations (Doha round) has been inadequate in recent years. This has increased the importance of bilateral talks in the past few years. The EU too has either already completed or initiated a number of negotiations with other countries on the issue of bilateral free trade agreements.²³

EU is already a relatively open economic area

More free trade will generally be beneficial for Europe as an industrial and manufacturing location. One of the reasons why companies relocate their production abroad is because the export of certain goods is made more expensive by import tariffs levied by the destination countries or is impeded by non-tariff trade barriers. Moreover, local-content agreements may often require local production. The EU is generally a more open economic area than most developing and emerging economies, which means that in many cases the EU levies lower tariffs on other countries than its trading partners do. This imbalance can hinder bilateral negotiations because the EU has less bargaining power than emerging markets if it already levies low tariffs. Nonetheless, many trading partners are attracted merely by the prospect of easier access to the substantial single European market.

Providing support for SMEs' exports might be helpful

The EU should continue to encourage more free trade. In doing so, it should try to convince other countries of this cause, including major trading partners such as the United States²⁴ and China as well as emerging trading nations such as India, the ASEAN states and the MERCOSUR countries. One inevitable consequence is that bilateral agreements impose higher transaction costs on companies than multilateral agreements under the auspices of the WTO.

Because small and medium-sized enterprises (SMEs) often still generate a fairly small proportion of their revenue from non-European exports, it might also be helpful to provide these firms with more support in penetrating new markets. It would therefore make sense to pursue a coordinated policy of promoting SMEs' exports. This policy should include export credit insurance as well as better cooperation between national export development institutions in the destination countries.

Tax policy: avoid huge variations in business tax rates

High tax rates deter companies – low tax rates pose fiscal risks

Decisions on direct taxes fall largely within EU countries' national sovereignty. As outlined above in the chapter on FDI, corporate tax rates are an especially important factor in determining a country's appeal as a business location. It might make sense to offer greater tax incentives that specifically encourage research and development. However, there is no sign of any one-size-fits-all solution to the question of what constitutes the 'optimum' tax rate. Such a solution would be difficult to find anyway because tax legislation varies significantly from country to country to take account of the different corporate legal forms in each jurisdiction. And each country will likely have a different answer to the question of how the tax burden should be distributed between businesses and households. What is clear, however, is that excessively high tax rates will not attract companies, while excessively low tax rates pose fiscal risks, as illustrated by a few examples from within the EU. Moreover, at a time when the EU member states are becoming more closely financially integrated there is likely to be greater pressure exerted on countries that pursue an explicit policy

²³ An overview of the current status of these negotiations is provided by the EU Commission (2013). The EU's bilateral trade and investment agreements – where are we? Brussels.

²⁴ See Deutsch, Klaus (2013). Atlantic unity in global competition: T-TIP in perspective. Deutsche Bank Research. EU Monitor. Frankfurt am Main.



of attracting companies by offering low tax rates but, at the same time, are unable to reduce their public deficits. In this respect the EU could do more to avoid excessive variations in tax rates within the Community. There have already been proposals, for example, to introduce a minimum tax rate in the form of a common corporate tax base. In addition, the EU should work closely with other major economic powers to increase tax fairness by restricting companies' ability to pursue aggressive tax avoidance strategies that involve shifting their profits abroad. These policies have a significant impact on multinational corporations' competitiveness. This will require sweeping changes to both international taxation procedures and national taxation systems, although this should not increase the double taxation of cross-border activities.²⁵

Infrastructure policy: scarce resources need to be prioritised

Key locational advantage should not be jeopardised

Efficient infrastructure is one of the major factors that determine where companies locate. As already mentioned above, Europe still performs fairly well in this respect. Nonetheless, there is a danger that public spending on infrastructure might be neglected partly in response to the high levels of government debt. A case in point is transport infrastructure, where the OECD reckons that spending – most of it provided by central government – as a proportion of GDP fell from more than 1% in 1995 to only 0.85% in 2011.²⁶ The basic principle applied to infrastructure at both EU and national level should ultimately be the tried-and-tested formula that these scarce resources should increasingly be allocated to those areas that offer the greatest value for money. The resources provided by the EU's various structural funds are often used for projects that promote regional development rather than helping to relieve infrastructure bottlenecks in the economically vibrant regions. The closer involvement of the private sector in the planning, construction, operation and funding of infrastructure could help to realise desirable and economically beneficial projects more quickly.²⁷

Measures recommended by the EU still fairly vague

The communication published by the EU Commission in the autumn of 2012, which stated the objective of increasing the industrial sector's share of economic output, addresses some of the initiatives outlined here and recommends that the member states take certain measures. However, these recommendations often remain fairly vague. Moreover, the Commission's communication does not say enough about what action the EU itself can take in order to improve its attractiveness as a business location. Future communications should define more clearly how the relevant political responsibilities are divided between the EU and the nation states and should lead to specific measures being taken.

5. Conclusion and outlook

Structural and cyclical factors present obstacles to raising industry's share of economy

The EU Commission's stated aim of increasing the industrial sector's share of gross value added in the European Union to 20% is extremely ambitious and, in our view, cannot be achieved in the foreseeable future. The only way in which the manufacturing sector's share of the economy can ultimately be increased is if it achieves faster sustainable growth than the other sectors (especially

²⁵ See Zipfel, Frank (2013). Savings Tax, Administrative Cooperation and Co.: Exchange of tax information taking root. Deutsche Bank Research. EU Monitor. Frankfurt am Main.

²⁶ See OECD International Transport Forum (2013). Spending on Transport Infrastructure. Trends, Policies, Data. Paris.

²⁷ See Heymann, Eric (2013). Project Bond Initiative: Project selection the key to success. Deutsche Bank Research. EU Monitor. Frankfurt am Main.



services). We believe there are essentially two reasons why this is unlikely. The first reason is structural. Many service sectors have greater growth potential than mature industrial sectors. This will make it more difficult for industry to catch up.

The second reason is cyclical. Many industrial sectors in Europe are currently suffering from overcapacity (e.g. steel and automotives) and are still at the consolidation stage. What's more, the latest economic forecasts are not predicting a strong recovery in the EU, although at least the recession should come to an end in 2014. Given these operating conditions, many companies are likely to be reluctant to invest (in Europe) for the time being. This will probably also constrain industry's ability to grow faster than other sectors of the economy.

Country-specific diagnosis and remedies needed

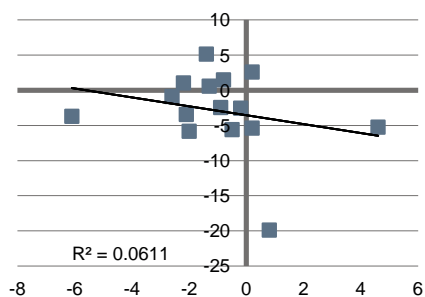
Wide diversity of business models used within the EU

Any overarching target that is set for a specific average industrial sector share of the EU economy will not take sufficient account of the wide diversity of business models in individual EU countries. The political message behind this target is probably more important than the ability to achieve it in operational terms in each of the member states. This reasonable message states that manufacturing is highly important for Europe's future. It is doubtful, however, whether it actually makes sense for all EU countries to aim to increase the industrial sector's share of their economy at all costs. Many countries have their core competences in the service sector and should therefore focus their efforts on improving the quality and quantity of this offering in order to add value locally. If, in doing so, they managed to maintain the industrial sector's share of their economy at its existing level, then that in itself would be a considerable achievement.

No correlation between industry share and GDP growth

39

X: change* in industry's share in VA**, %-points
Y: change in real GDP, 2012 vs. 2008, %



* 2012 vs. 2008

** Gross value added

Sources: Eurostat, DB Research

Any sustainable economic recovery in Europe will not depend solely on the performance of the industrial sector. And, anyway, it will take another few years until we finally emerge from the current crisis, especially as with structural reforms there is always a time lag between political measures and their economic impact. The ultimate objective for the EU countries, however, should not be to try to replicate the model of the most successful economy at the time. These countries' industrial strengths and weaknesses vary too much for this strategy to work and, in any case, industries that are successful in the long term can only be created in conditions that have gradually evolved over time. During the crisis (and already before) a high industry share alone was no guarantee for higher growth. Each country therefore needs to analyse its own specific problems and take the appropriate course of action. The most important thing is to create an environment in which companies – those from both the industrial and service sectors – are able to operate in the right conditions so that they can compete successfully against non-European countries. This will require investment in education, research and infrastructure as well as a benign investment climate, affordable energy prices and intelligent regulation.

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