Industrial Development: France and Germany Drifting Apart

by Karl Brenke

The significance of the manufacturing sector for the economies of both the European Union and the euro area has declined dramatically over the past ten years. However, development varied between the individual member states, which is particularly evident in a comparison between France and Germany. The manufacturing industry in Germany was able to maintain its position within the national economy, halting the structural change towards the service sector. Conversely, there has been rapid deindustrialization in France: here, value added from the manufacturing sector as a percentage of the overall economy is now even lower than in eastern Germany.

Within the German industrial sector, the manufacture of technically complex goods has continued to gain ground. In France, on the other hand, the production of such goods has always been relatively insignificant and, over the last decade, has become even less important. The gap between these two countries is also widening with regard to wage development as well as price competitiveness: in Germany, wage growth has lagged behind increases in production, whereas in France salaries have increased at a much faster pace than production. German manufacturing was, therefore, able to expand substantially into foreign markets, while the French industrial sector is the poorest performing in the EU. If national currencies had been retained, the ramifications of such diverging developments would have been mitigated through exchange rate adjustments. Meanwhile, a currency union requires responsible policies—this also applies to wage development.

The euro area is in deep crisis. Harmonization of monetary policy was accompanied by a massive cut in interest rates in southern European countries. With an enormous influx of capital at the same time, this led to the formation of various bubbles in the region—there was a consumption bubble in Greece and overheating of the property market in Spain and Ireland. There was also a collapse of the largely unregulated financial sector in Ireland, where companies began to founder as a result of highly speculative transactions during the global financial crisis. All these problems came to light because the mistakes resulted in a crash and the countries affected are now heavily reliant on aid.

Moreover, the introduction of the euro also brought the risk of divergence in terms of competitiveness because, before the monetary union, it used to be possible to offset different developments in productivity and costs by adjusting the exchange rates. The currencies of countries lagging behind depreciated and those of countries in a stronger competitive position appreciated. However, this mechanism no longer exists.

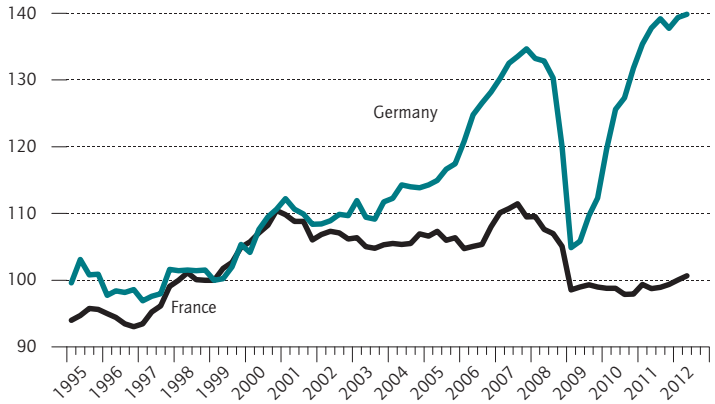
Although only part of the economy of a country is directly exposed to international competition, the ability to finance imports is dependent on this part. Some countries or regions finance their imports through the export of raw materials or through tourism. In developed countries, the manufacturing industry is still the cornerstone of the export base, however, and for emerging markets it is the engine that drives the catch-up process.

The EU Commission recently presented a strategy paper attributing key importance to the economic performance of the European Union to the manufacturing industry.[1] The reason for this was the disparate and generally rather disappointing industrial development in Europe. This will be outlined below. Particular attenti-

1 EU Commission: «Industrial revolution brings back industry to Europe.« Press release of October 10, 2012 (IP/12/1085).

Figure 1

Nominal Gross Value Added of the Manufacturing Industry[1]
Index for 1st quarter of 1999 = 100



1 Adjusted for seasonal and working day effects.
Source: Eurostat, calculations by DIW Berlin.

While there was significant growth in output in Germany, it dropped to the 1998 level in France.

on will be devoted to the manufacturing industries of the two largest member states: France and Germany.[2] Here the development gaps are especially apparent. The present study is essentially based on the internationally comparable data of the statistical office of the EU (Eurostat). The focus is primarily on the period from 2001 to 2011—both are years that saw an economic upswing in many parts of the EU.

Strong Growth of Industrial Output in Germany

Manufacturing has traditionally played a more important role in Germany than in other countries. In the early 1970s, this sector accounted for 37 percent of the total value added; it was just under one-third in the UK and only one-quarter in France. In the course of the sectoral transition towards the services industry, this sector subsequently lost significance in all developed countries. In 1990, manufacturing in West Germany only accounted for 30 percent of total economic output, while it was still 18 percent in France.

After the temporary boom that followed reunification came to an end in the mid-1990s, manufacturing in Germany virtually stagnated for a few years (see Figure 1). The global economic slowdown at the time also had a dampening effect on the development of the sector. This changed shortly before the turn of the millennium with the global economic recovery, which gave German manufacturing a major boost up until 2001. As a result of the ensuing general economic slowdown, industrial output stagnated up until early 2004. When the global economic climate then improved again, output increased significantly, however. There was then a massive slump from the end of 2008 due to the financial crisis. But recovery set in very quickly so the decline turned out to be short-lived. The value added contributed by the manufacturing sector is now slightly higher than it was before the financial crisis.

Industrial output in France took a different course. In the second half of the 1990s, it developed somewhat more positively than in Germany. After peaking in 2001, it also stagnated, but the slowdown lasted until 2006, i.e., considerably longer than in Germany. It was not until 2007 that French industry benefited slightly from the global economic upturn. It was also affected by the shocks resulting from the financial crisis, although the slump was not as dramatic as in German manufacturing. Unlike Germany, France did not make a strong recovery, however.

Overall, industrial output in 2011—calculated on the basis of current prices[3]—was at the same level as at the end of the 1990s in France, while in Germany, on the other hand, it had increased by 40 percent. It has also become apparent that German manufacturing reacts much more sensitively than French manufacturing to fluctuations of the global economy; this was not yet the case ten years ago.

Deindustrialization in France

Owing to the largely positive development of industrial output, the overall economic significance of the manufacturing sector in Germany did not further decrease in the last decade—which bucks the trend of the EU as a whole (see Table 1). The sectoral transition towards the services industry was therefore halted. Here, regional differences are also apparent: in eastern Germany, manufacturing continued to gain ground significantly while in western Germany it lost momentum slightly.

2 This study is a substantially revised version (abridged in some places and expanded in others) of an article recently published in France. See K. Brenke, »Production industrielle: comparaison France-Allemagne,« Recards sur L'Economie Allemande, no. 106 (2012).

3 Since it is primarily a question of competitiveness, as far as available data allows, an analysis of the production output at current prices is used because ultimately it is crucial what prices can be implemented on the market.

In 2011, manufacturing accounted for 23 percent of the total gross value added in Germany as a whole—which is slightly more than ten years previously.

Conversely, some other EU member states have undergone real deindustrialization. Not only has the share of the manufacturing sector in total economic value added declined in these countries, but even the economic output of the manufacturing industry—calculated per capita—has fallen. This group includes states where manufacturing still plays an above-average role—such as Ireland, Finland, and Italy as well as countries that were already less industrialized such as Denmark, Portugal, the UK, and France. Particularly in the latter two countries, manufacturing has lost considerable ground over the past ten years and now only accounts for around one-tenth of total economic output. Otherwise,—apart from small countries such as Luxembourg or Cyprus—only in Greece does the sector account for a similarly low share. Calculated in terms of purchasing power parity, almost all Eastern European countries now have a higher industrial output per capita than France. Even in the structurally weak eastern Germany, the level of industrialization is significantly higher than in France.

Table 1

Significance of the Manufacturing Industry in EU Member States
Gross value added

	Share in the total gross value added, in percent		Per capita in euros		Per capita in purchasing power parities	
	2001	2011	2001	2011	2001	2011
Ireland	27.3	21.7	7,394	6,878	6,392	6,289
Germany	22.1	22.6	5,070	6,412	4,555	6,133
Western Germany[1]	24.3	23.0	6,031	6,848		
Eastern Germany[1]	14.5	16.3	2,422	3,448		
Austria	20.0	18.7	4,822	6,045	4,512	5,473
Sweden	20.1	16.8	5,020	6,042	4,266	4,679
Czech Republic	25.9	23.8	1,656	3,195	3,405	4,347
Finland	25.2	17.3	5,917	5,232	5,021	4,299
Euro area	**18.7**	**16.0**	**3,766**	**4,083**	**3,716**	**3,909**
Netherlands	13.9	12.9	3,442	4,171	3,260	3,801
Slovenia	24.5	20.3	2,462	3,110	3,400	3,766
Belgium	18.0	13.8	4,065	4,138	3,940	3,663
Italy	19.6	16.0	3,878	3,713	4,121	3,608
Slovakia	24.4	21.1	967	2,438	2,288	3,540
EU overall	**18.0**	**15.5**	**3,185**	**3,480**	**3,185**	**3,480**
Hungary	22.2	22.9	1,106	1,945	2,202	3,191
Lithuania	19.3	20.6	674	1,885	1,418	3,074
Spain	17.4	13.5	2,645	2,860	3,069	3,064
Denmark	15.1	10.8	4,348	4,021	3,285	2,940
UK	14.8	10.8	3,636	2,672	3,097	2,624
Estonia	17.7	17.3	807	1,792	1,453	2,530
Poland	15.8	17.6	781	1,481	1,322	2,501
France	14.7	10.1	3,223	2,771	3,012	2,438
Portugal	16.6	13.1	1,903	1,845	2,314	2,235
Latvia	14.4	14.1	509	1,243	984	1,868
Greece	10.6	9.2	1,251	1,487	1,600	1,616

1 Figures for 2001 before the ongoing revision.
Sources: Eurostat; Regional Accounts (VGRdL, Arbeitskreis Volkswirtschaftliche Gesamtrechnungen der Länder), calculations by DIW Berlin.

Manufacturing in France is still of minor significance.

Strong Growth of Exports in Germany

German manufacturing has been heavily engaged in export for a long time.[4] According to the national accounts, the value of exports of goods was over 40 percent of the total GDP in 2011 (see Figure 2). Only in much smaller EU member states with a correspondingly small domestic market is this percentage even higher. The corresponding figure for large countries such as France, Italy, Spain, and the UK, on the other hand, is only around 20 percent. These countries' economies are therefore quite strongly focused on domestic sales, which, in turn, contributes to the much lower level of industrialization in comparison to Germany.

According to statistics on international trade in goods, Germany's exports expanded by 66 percent from 2001 to 2011 (see Table 2).[5] Although growth here was only slightly stronger that the EU average (58 percent), this is primarily linked to the catch-up process of the new member states which joined the EU in 2004 and were then able to increase their exports dramatically. Some of the »old« EU countries such as the Netherlands, Bel-

4 There are different statistical sources available on export activity. In addition to the national accounts data, there are foreign trade statistics which provide information about the trading of goods with foreign countries. However, the trade of goods also includes goods which are not of industrial origin, for example, unprocessed products from the mining industry (raw materials) or agriculture. Overall, these products only account for a relatively small share of the trade in goods in EU countries. For instance, agricultural goods are generally only brought to the market after industrial processing; the same applies to goods from the mining industry. Although the data from the national accounts and the foreign trade statistics do not reflect industrial exports exactly, both sets of statistics are still good indicators of the structure and development of industrial goods exports of EU member states. In addition, information on export sales is available from the relevant surveys of industrial companies. In the European reporting system, only index values are shown, illustrating the general development. However, there is no information on the absolute volume of exports or the share of export sales in total sales, such as that provided by the German Federal Statistical Office, for example.

5 From 2001 to 2006, manufacturing exports increased by 33 percent, while growth in domestic sales was only nine percent. This applies to companies with 20 employees or more. For the subsequent period, data are only available for companies with 50 employees or more. For these, in the period from 2006 to 2011, domestic sales rose by 15 percent and foreign sales by 30 percent.

Table 2

Goods Exports from EU Member States to Various Target Markets in 2011

Change compared to 2001, in percent

	Total	To other EU member states	To countries outside the EU
Austria	61.8	52.4	89.9
Belgium	61.1	49.0	103.9
Bulgaria	254.0	264.8	237.3
Cyprus	169.8	231.6	93.1
Czech Republic	213.3	200.6	294.5
Denmark	41.1	33.4	58.7
Estonia	225.2	164.5	489.4
Finland	17.4	7.9	32.0
France	18.6	12.8	29.1
Germany	65.7	54.5	85.4
Greece	77.1	37.7	147.7
Hungary	137.2	115.0	251.5
Ireland	-1.4	-10.8	15.3
Italy	37.7	26.3	55.5
Latvia	322.4	254.6	570.6
Lithuania	321.9	253.3	510.5
Luxembourg	43.6	31.7	133.6
Malta	54.9	21.1	92.3
Netherlands	84.2	75.4	123.2
Poland	234.9	221.0	295.3
Portugal	57.5	43.6	117.8
Romania	254.0	234.6	312.8
Slovakia	305.1	278.6	560.9
Slovenia	141.3	142.3	138.7
Spain	69.0	51.1	120.9
Sweden	59.2	51.5	70.4
UK	18.7	0.1	46.4
EU overall	**58.0**	**49.7**	**75.6**

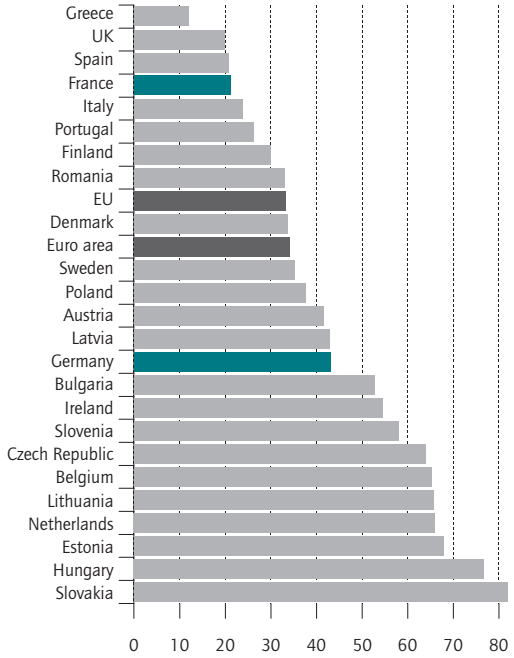
Source: Eurostat, calculations by DIW Berlin.

There has been particularly strong growth in exports to countries outside the EU, but France is one of the weakest exporting nations.

Figure 2

Exports of Goods in Relation to GDP in 2011

In percent



Source: Eurostat, calculations by DIW Berlin.

Germany is a strong player in the export business and France plays a more minor role.

gium, Austria, Sweden, Spain, and Portugal also show strong export growth. Conversely, some others of the large »old« EU member states such as France and the UK are lagging behind as far as exports are concerned; both countries only saw an increase in exports of just under 20 percent from 2001 to 2011.

Moreover, in general—in the case of virtually all European states—exports to regions outside the EU have grown faster than cross-border trade within the Community. German exports to third countries have risen by 85 percent since 2001, compared to growth in exports to other EU member states of only 54 percent. This pattern also applies to France, albeit to a lesser extent. It increased its exports within the EU by 13 percent and outside the EU by 29 percent; the growth rate for exports to third countries is lower than in any other country in the EU—with the sole exception of Ireland. French exports to the new EU member states as well as to Russia and to China have increased relatively significantly—albeit to a much lesser extent than German exports (see Table 3). On the other hand, development of exports by French manufacturers to the »old« EU countries has been sluggish, and there has even been a decline in exports to the US.

It is striking that exports from France to Germany have increased at an above-average rate—i.e., Germany has gained significance as a recipient. One-sixth of French exports go to this market. However, there has been an even more dramatic increase in German exports to France. Since the increase was even higher with regard to exports to other countries, however, France has lost importance for German exporters.

Development of Almost All Branches of Industry Less Favorable In France

There are also considerable differences between France and Germany in terms of the industry structure of the manufacturing industry and the development of its individual branches. Capital goods sectors are of great importance in Germany; these accounted for over half of the total industrial value added in 2010. The most significant was manufacture of machinery and equipment, which made up one-seventh of the total industrial output, followed by the automotive industry (see Table 4). The manufacture of metal products and electrical equipment is also of considerable importance. Major sectors outside the capital goods industry include, in particular, the manufacture of chemical products and the food and beverage industries.

In France, the capital goods industries play a much more minor role than in Germany. Overall, they only account for slightly more than one-third of France's industrial value added. This is primarily because mechanical engineering and the automotive industry play a lesser role in France; production of electrical equipment is also relatively insignificant compared to in Germany. On the other hand, other vehicle construction (for instance, aircraft, trains, and ships) are more significant in France. Above all, however, the structure of the industry there is influenced to a greater extent by the manufacture of consumer goods, particularly food products.

In the period from 2001 to 2010,[6] almost all branches of industry in Germany were able to increase their value added—apart from several consumer-oriented segments, some of which have already been declining for a long time (textiles, clothing, shoes, wooden articles, etc.) and printing, paper manufacture, and refined petroleum products. During this time, growth was driven primarily by capital goods manufacturers—and in particular by manufacture of machinery and equipment, the different electrical engineering branches, manufacture of metal products, and the automotive industry. This was accompanied by strong growth of metal production and of chemical and pharmaceutical products.

Conversely, the development of French manufacturing was much less favorable in every sector. As in Germany, here, too, between 2001 and 2010, production slowed down in some consumer-oriented branches, in some cases more dramatically—for instance, the manufacture of textiles, clothing, shoes, and printed products. Within the capital goods sector, a mixed picture emerges: in contrast to the development in Germany, there were drastic cut-backs in the manufacture of motor vehicles, and also in the manufacture of electrical goods. There was also a decline in the growth of manufacture of machinery. Conversely, repairs, installations of equipment and manufacture of other vehicles developed relatively favorably. The same applies to metal production. In France, growth in production in the chemical industry was also considerably slower, and the manufacture of pharmaceuticals even decreased. Moreover, the output of the French foodstuffs industry also fell slightly.

As is to be expected, the different trends of the individual branches of industry are generally also reflected in exports. Nevertheless, there are similarities between France and Germany. In both countries, exports increased in the period from 2001 to 2011 for almost all product groups (see Table 5). In Germany, the growth of exports was consistently much stronger than in France, however. The picture is very different with regard to machinery and vehicles: here, there has been a significant decline in France since the beginning of the last decade, while Germany was able to considerably expand exports in these significant sectors.

France shows a high deficit in its balance of trade with Germany. This was also the case ten years ago but the deficit has further increased over the past few years. In

Table 3

Goods Exports from Germany and France to Various Markets
In percent

	Germany			France		
	Change in 2011 compared to 2001	Structure		Change in 2011 compared to 2001	Structure	
		2001	2011		2001	2011
EU-15	43.8	55	48	9.2	61	56
Germany				30.7	15	16
France	45.9	11	10			
New EU member states	123.3	9	11	75.5	3	5
Extra-EU	85.4	36	41	29.1	36	39
Of which:						
Switzerland	72.1	4	4	3.2	4	3
Russia	234.3	2	3	205.5	1	2
China	433.2	2	6	281.1	1	3
Japan	14.7	2	1	19.6	2	2
US	7.6	11	7	–23.8	9	6
Total	**65.7**	**100**	**100**	**18.6**	**100**	**100**

Source: Eurostat, calculations by DIW Berlin.

On almost all major markets, German exports are increasing at a faster rate than French ones.

6 The relevant figures for Germany are currently only available for up until 2010.

Table 4

Gross Value Added[1] in the Manufacturing Industry by Sector
In percent

	Germany			France		
	Structure		Change in 2010 compared to 2001	Structure		Change in 2010 compared to 2001
	2001	2010		2001	2010	
Manufacture of food products; beverages, tobacco products	8.9	7.9	3.5	15.6	16.8	–2.3
Manufacture of textiles, clothing, leather, and shoes	2.1	1.4	–20.4	4.4	3.0	–38.0
Manufacture of wood, cork, and wickerwork products	1.6	1.3	–7.5	1.8	1.8	–7.6
Manufacture of pulp, paper and paper products	2.5	2.0	–6.3	3.0	2.4	–27.1
Manufacture of printed products; reprography	2.6	1.8	–23.3	2.6	2.3	–21.1
Coke and refined petroleum products	1.7	1.2	–22.8	0.6	1.4	100.0
Manufacture of chemical products	7.7	8.0	20.3	6.5	7.2	1.4
Manufacture of pharmaceutical products	2.3	3.4	71.3	4.5	4.1	–17.4
Manufacture of rubber and plastic products	4.8	4.8	14.6	6.1	5.7	–14.9
Manufacture of glass and glassware, ceramics, non-metallic mineral products	3.6	2.9	–7.0	3.9	3.7	–12.6
Metal production and processing	4.1	3.6	1.3	2.9	3.5	8.5
Manufacture of metal products	9.4	9.3	14.5	10.7	11.3	–4.1
Manufacture of data processing equipment, electronic and optical products	5.0	5.2	18.3	5.7	3.3	–46.4
Manufacture of electrical equipment	7.4	8.0	25.7	4.3	3.6	–22.8
Manufacture of machines and equipment	14.6	15.3	20.8	6.4	6.4	–9.5
Manufacture of motor vehicles and motor vehicle components	13.3	14.8	28.4	6.6	5.1	–29.2
Other vehicle manufacture	1.9	2.0	26.5	3.3	4.6	25.8
Manufacture of furniture and other goods	4.2	4.3	16.9	4.1	4.0	–11.2
Repairs and installation of machinery and equipment	2.2	2.7	40.1	7.0	9.7	27.5
Manufacturing overall	**100**	**100**	**15.4**	**100**	**100**	**–9.0**
Of which: R&D intensive branches	52.2	56.8	25.5	37.2	34.4	–16.0

1 At current prices.
Sources: Eurostat, German Federal Statistical Office, calculations by DIW Berlin.

German manufacturing concentrates more heavily on research-intensive goods than French manufacturing.

2011, French companies were only able to record surpluses for relatively technically simple goods (beverages, minerals and fuels, raw materials, animal and vegetable oils), whereas the balance was negative for capital goods, finished products, and chemical products—in other words, for more technically complex goods. For foodstuffs, too, France's balance shows a deficit.

Research-Intensive Manufacturing: Strong Growth in Germany

It is standard practice in innovation research to categorize the branch of industry according to its research and knowledge intensity so as to be able to draw conclusions about international competitiveness.[7] It is assumed that providers of research-intensive products normally have an advantage because not only is price decisive for the market position of their products as with mass production, but also qualitative aspects such as technical complexity. Consequently, such providers operate in other market segments than, for instance, companies from emerging economies.

If the branches of industry are classified according to their research intensity, over half of industrial value added in Germany in 2010 was generated by research-intensive manufacturing (see Table 4).[8] Compared to

7 H. Belitz, M. Gornig, F. Mölders, and A. Schiersch, »FuE-intensive Industrien und wissensintensive Dienstleistungen im internationalen Wettbewerb,« Studien zum deutschen Innovationssystem, no. 12, (2012). Commission of Experts for Research and Innovation (ed.), Berlin.

8 If, as in this case, information is only available about the branch of industry according to a rough, two-digit classification of economic activities, the research-intensive branches include the chemical industry, the pharmaceutical industry, manufacture of data processing equipment, electronic and optical products, manufacture of electrical equipment, mechanical engineering, manufacture of motor vehicles and other vehicles. See B. Gehrke, C. Rammer, R. Frietsch and P. Neuhäusler, »Listen wissens- und technologieintensiver Güter und Wirtschaftszweige. Zwischenbericht zu den NIW/ISI/ZEW-Listen 2010/2011,« Studien zum deutschen Innovationssystem, no. 19 (2010).

Table 5

Export of Goods by Product Group in 2011

	Germany			France		
	In billion euros	Structure in percent	Change compared to 2001 in percent	In billion euros	Structure in percent	Change compared to 2001 in percent
Food, beverages, tobacco	54.6	5.2	97.7	51.7	12.1	50.9
Raw materials	24.7	2.3	153.4	13.4	3.1	103.6
Mineral fuels and lubricants	26.8	2.5	306.4	20.5	4.8	146.0
Chemical products	162.2	15.3	98.6	78.1	18.2	51.0
Other manufactured articles	257.5	24.3	70.6	98.0	22.9	24.2
Machinery and vehicles	507.8	48.0	49.4	158.4	37.0	–10.7
Other goods and exports	24.1	2.3	10.4	8.1	1.9	107.0
Total	**1,057.7**	**100**	**65.7**	**428.2**	**100**	**18.6**

Source: Eurostat, calculations by DIW Berlin.

In almost all product groups, growth of German exports was stronger than that of French exports.

2001, this share has grown by more than four percentage points. On the other hand, in France in 2010, all the research-intensive branches together accounted for only around one-third of the industrial value added—and here the share has shrunk by almost three percentage points as compared to 2001.

One crucial factor is that manufacture of machinery and the automotive industry are much less significant in France than in Germany and development here has been rather weak. The same applies to the various branches of electrical engineering and the optics industry as well as to the chemical and pharmaceutical industries. Within the German manufacturing sector, however, all these branches of industry have been able to increase their production at an above-average rate.

French Industry Characterized by Small Enterprises

Sometimes the strong position of manufacturing in Germany is attributed to the fact that it has a very broad base of small and medium-sized enterprises (SMEs). This argument is also used in French politics.[9] SMEs are generally understood to mean individual responsibility and liability for a business as well as long-term entrepreneurial activities, which are regarded as more sustainable than corporate goals geared towards making fast profits, as is often the case particularly in large joint stock companies. However, it is not that easy to establish to what extent German manufacturing is characterized by SMEs on the basis of the information available.[10]

At first glance, the number of companies seems to indicate that the German manufacturing industry is not particularly SME-oriented. According to Eurostat's most recent available data, there were 180,000 manufacturing companies in 2009; in France, on the other hand, the corresponding figure was 207,000—and the manufacturing sector plays a much smaller role here. This means that the structure of German manufacturing is nowhere near as small-scale as in France. This is also connected with the fact that in Germany the branches of industry that are particularly dominated by large companies (such as automobile construction), play a much larger role than in France. Conversely, branches where a large number of smaller companies are generally to be found (such as in the food industry and other consumer goods industries) are underrepresented in Germany. But also in virtually all other sectors, the significance of small businesses is greater in France than in Germany (see Table 6). Here, companies with fewer than 50 employees only accounted for one-fifth of all employees, compared to one-third in France. As far as companies with

9 See, for example, M. A. Chatillon, (rapporteur): Rapport d'information fait au nom de la mission commune d'information (1) sur la désindustrialisation des territoires. Ordinary Session of the Senate, 2010-2011, no. 408 (2011).

10 Although data on the legal form of the companies are available, this says little about the owners and their influence on the companies. In any case, according to Eurostat, the share of joint stock companies (including those that are not listed on the stock exchange) of all industrial companies in 2009, the year for which the most recent information is available, was 15 percent in Germany. The share was exactly the same in France. It is, however, not possible to determine how many of these joint stock companies are run by entrepreneurs who have a significant share in ownership and a decisive influence on business activities.

Table 6

Companies in the Various Branches of the Manufacturing Industry by Number of Employees in 2009
Shares, in percent

	Germany				France			
	Companies with ... employees				Companies with ... employees			
	Up to 9	10 to 49	50 to 249	250 or more	Up to 9	10 to 49	50 to 249	250 or more
Manufacture of foodstuffs and animal feed	5	21	32	42	27	19	21	33
Manufacture of beverages	5	19	30	46	10	21	25	44
Tobacco products			5	93				
Manufacture of textiles			49	22			41	
Manufacture of clothing	8	20	38	33	15	27	31	27
Manufacture of leather, leather goods, shoes	8	24	45	23	8	18	41	34
Manufacture of wood, cork and wickerwork products	15	33	29	22	23	38	28	11
Manufacture of pulp, paper and paper products	1	9	36	54	3	18	34	45
Manufacture of printed products; reprography	13	33	33	21	25	39	29	7
Coke and refined petroleum products			11	86			7	90
Manufacture of chemical products	1	6	20	73	3	10	23	64
Manufacture of pharmaceutical products	1	3	12	84	1	4	16	80
Manufacture of rubber and plastic products	3	16	36	46	5	18	30	47
Manufacture of glass and glassware, ceramics, etc.	9	17	33	42	9	18	23	50
Metal production and processing	2	6	21	72	2	8	25	64
Manufacture of metal products	7	31	34	28	14	38	29	19
Manufacture of data processing equipment, electronic and optical products	5	14	26	55	3	9	18	69
Manufacture of electrical equipment	2	8	20	70	3	10	20	67
Manufacture of machines and equipment	2	11	27	61	5	18	29	48
Manufacture of motor vehicles and motor vehicle components	0	2	7	90	1	5	9	85
Other vehicle manufacture	1	4	11	85	1	3	8	88
Manufacture of furniture	7	24	35	34	18	29	29	24
Manufacture of other goods	14	30	24	32	25	24	23	28
Repairs and installation of machinery and equipment	8	25	25	42	23	29	20	28
Manufacturing overall	**4**	**15**	**26**	**55**	**12**	**19**	**23**	**46**

Source: Eurostat, calculations by DIW Berlin.

The structure of French manufacturing enterprises is relatively small-scale.

50 to 249 employees are concerned, the picture is mixed. While in the chemical industry, the pharmaceutical industry, mechanical engineering, or automobile production, the proportion of companies of this size is higher in France than in Germany, those engaged in, for instance, the manufacture of data processing equipment, electronic and optical products, other vehicle construction, or the manufacture of metal products, play a more significant role in Germany.

Conversely, there is a higher number of larger companies with 250 or more employees in Germany (55 percent) than in France (46 percent). However, this category is not broken down further in the system of European statistics,[11] which is also due to the fact that, in accordance with the European Convention, all companies with 250 employees or more are no longer considered to be SMEs. But this definition can be somewhat misleading. One example that illustrates this point is manufacture of machinery in Germany, generally regarded as a typical sector with SMEs, since it included virtually no large corporations with a wide distribution of shareholder ownership. According to the German Federal Statistical Office, there were around 500 companies with 250 to 500 employees in this branch of industry in 2011, employing a good sixth of all those working in the sector,

11 The German Federal Statistical Office shows a more detailed breakdown for Germany, but no corresponding figures for France are published by the statistical office there (INSEE).

and 336 companies with over 500 employees, which accounted for half of all employees. This sector is therefore clearly dependent on larger companies—many of which would still be classified as SMEs, however.

Overall, French manufacturing is more dependent on small and micro-enterprises than German manufacturing, and this is only partly due to the sectoral structure. Medium-sized enterprises play a greater role in Germany.

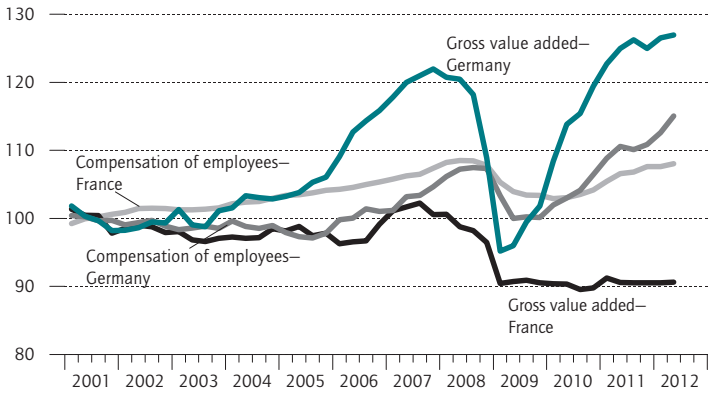
Weak Wage Growth in Germany

In Germany and abroad, the favorable development of German manufacturing is also repeatedly attributed to wage development. This assessment is accompanied by criticism of wage policy, which has intensified since the crisis in the euro area flared up. Former French Finance Minister Christine Lagarde demanded stronger wage growth in Germany in order to curb export surpluses and to expand imports by strengthening domestic demand.[12] Her reasoning was that as a result of insufficient wage increases in Germany, manufacturing in other countries is put under pressure and becomes less competitive.

Figure 3

Nominal Gross Value Added and Wages in the Manufacturing Industry[1]

Index for 2001 = 100



1 Adjusted for seasonal and working day effects; gross value added reduced by an assumed amount to take into account the self-employed.
Source: Eurostat, calculations by DIW Berlin.

Wage growth in Germany is too weak–but too strong in France.

Industrial wages in Germany have indeed only increased slightly. According to Eurostat data, gross hourly earnings increased by 23 percent in total from 2001 to 2011. Taking into consideration the change in consumer prices, this equates to an increase of only 4.1 percent for the entire period or of 0.4 percent per annum. In France, on the other hand, gross hourly earnings in the same period increased nominally by 38 percent and by 14 percent when price adjusted (annual average of 1.3 percent).

It is not just a question of wage development, however, but also the relationship between increases in wages and output. In Germany, pay in the last ten years has significantly lagged behind the economic output of manufacturing. Since 2002 the gap has widened more and more, so that up until 2007 the wage bill grew at a much slower rate than the gross value added (see Figure 3). Only with the onset of the global financial crisis was there a counter movement. Economic output dropped, wages also fell but not as much as output. This turned out to be just a temporary situation because when the value added expanded dramatically again as of 2010, wages then lagged a long way behind. Only recently were they able to catch up to some extent. This is not so much due to wages increasing, but primarily because the output declined as a result of the economic situation. In German manufacturing, the available margin of distribution was therefore far from being fully utilized in the last decade, meaning that companies were able to gain a considerable edge in terms of price competition as a result of the restrained wage policy.

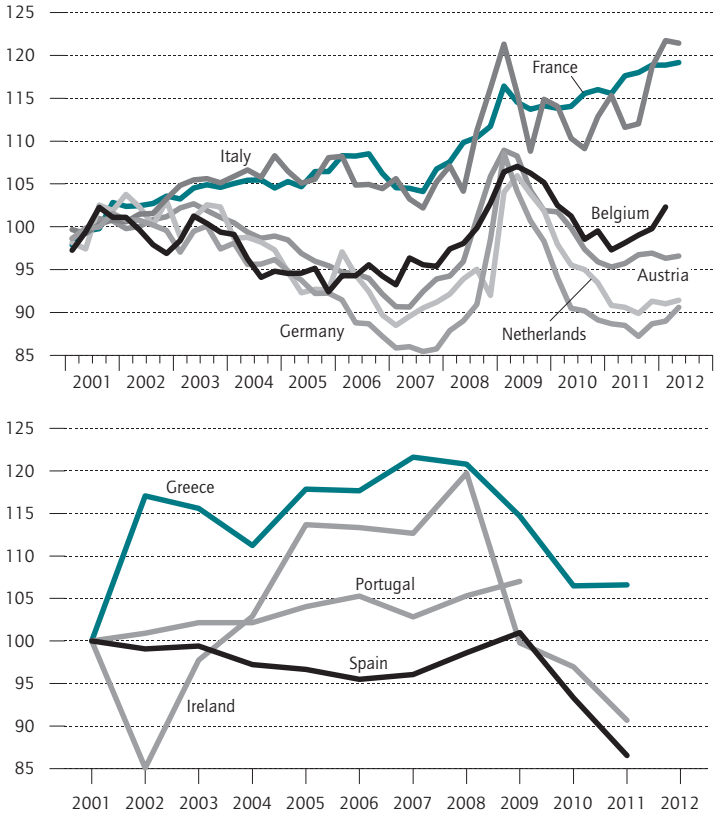
In French manufacturing, the opposite occurred. Up until 2007, wages increased considerably faster than output. When output decreased as a result of the crisis, wages only followed gradually—as in Germany. Since 2010, wages have been rising, although industrial value added has only stagnated since then. In France, the margin of distribution was also not adhered to, but unlike in Germany, there was an excessive wage increase. This led to a decline in price competitiveness.

Overall, wages in German manufacturing are still higher than in French manufacturing. According to Eurostat, the hourly wage in 2011 amounted to 33.82 euros and the gross wage to 24.90 euros, while in France's manufacturing industry it was 32.23 euros and 21.25 euros, respectively. The hourly output in German manufacturing is also higher, however, and significantly so. Here, the ratio is 50.30 euros to 41.60 euros. In other words, unlike French manufacturing, German industry can afford the higher wages.

12 See »Frankreich kritisiert Deutschland – Lagardes Logik,« Süddeutsche Zeitung, March 15, 2010.

Figure 4

Unit Labor Costs[1] in the Manufacturing Industry
Index for 2001 = 100



1 Adjusted for seasonal and working day effects; wages in relation to gross value added reduced by an assumed amount to take into account the self-employed.
Source: Eurostat, calculations by DIW Berlin.

Germany is not the only member state where wages are lagging behind productivity.

Diverging Development of Unit Labor Costs Also Evident in Other Countries

The problem of diverging developments in unit labor costs is not unique to Germany and France in the euro area, however. Wages have also increased much faster than industrial value added in Italy, while unit labor costs have fallen in Austria and in the Netherlands (see Figure 4) in line with the general trend—i.e., leaving aside the unusual development in the wake of the global financial crisis.[13] For a long time, Belgium experienced the same development but here unit labor costs have recently increased significantly. In no other country in the euro area has the development of unit labor costs been as weak as in Germany.

A different picture emerges when it comes to the crisis countries on the periphery of the euro area. Wages have considerably outrun productivity in Greece and in Ireland. This was also the case in Portugal, albeit not to the same extent. Wages in the Spanish manufacturing industry increased at approximately the same rate as economic output, however; here, there was consequently no deterioration in the price competitiveness of the manufacturing industry. Unit labor costs have fallen dramatically in all of these countries since the outbreak of their own individual crises.[14]

Conclusion

The EU is far from being one of the fastest growing regions in the world as was heralded in the Lisbon Treaties. A sufficient export base is required in order to be able to compete in the international division of labor. In a largely resource-poor region such as the EU, the only possible foundation for this is the manufacturing industry. The significance of this sector has declined considerably over the past decade in most member states, however. Some countries have even experienced a real deindustrialization, a process which was particularly rapid in France. Although the manufacturing industry in Germany was not able to expand its position within the national economy, it was able to maintain it, so that the structural change towards tertiarization was averted.

In view of the development in Europe, it is an important signal that the EU Commission has now begun to pay more attention to the manufacturing industry. However, it still remains to be seen how growth will actually be fostered. This cannot be done by announcing a »New Industrial Revolution« nor by pumping in more money, since ultimately subsidies lead to market distortions and deadweight effects, but, more importantly, are associated with the risk of false incentives and misallocations.

Since the problems are at national level, the individual member states in particular are called upon to act. This is especially evident from the wage development. Wages in the French manufacturing industry have increased excessively, resulting in a decline in price competitiveness. Consequently, development in this country can in no way serve as an example for Germany, as

13 Corresponding data are only available for some of the EU member states.

14 In the case of Portugal, this can only be assumed since no current data are available.

is sometimes claimed.[15] The question as to what extent the wage development has contributed to deindustrialization in France cannot be satisfactorily answered here. In any case, a departure from the current wage policy is essential. Wage cuts would be counterproductive, however, since that would curb domestic demand and hence slow down already weak economic growth. Experts appointed by the French prime minister have recently drawn up a National Pact for Growth, Competitiveness and Employment.[16]

As well as various other measures, there are also plans to cut labor costs—by reducing social security contributions, which are to be financed increasingly through indirect taxes. It is beyond the scope of the present article to analyze a transition from contribution-based to tax-based funding. It would be problematic, however, if, increasingly and in other countries, too, it became standard practice to rely on state intervention to help companies foot their wage bills. This tendency also exists in Germany, as is currently evident from unemployment insurance, the financing of which is only geared towards times of economic stability. In addition to the existing race to have the lowest taxes on income and earnings, this might also lead to a contest for the lowest social security contributions.

Wages are not the only problem facing the French manufacturing industry, however. As is evident from the development of the value added in the individual sectors, their capacity to produce technically more complex products, particularly capital goods, has decreased. However, this type of production is essential for a high-wage country to be able to compete internationally. France needs to reindustrialize, and, as experience of the reconstruction of eastern Germany has shown, a process like this takes time. The need to change tack seems to have been recognized at least at the political level, however.

Conversely, the German manufacturing industry has become more competitive. This development was aided by the production structure with its strong focus on capital goods, since these are precisely what are in demand on the rapidly expanding emerging markets. There is also an increasingly strong drive for innovation.[17] A major role is also played by wage development, which has put German companies at an advantage. The wage policy has led to a margin of distribution not fully utilized. The other side of the coin is high foreign trade surpluses and low consumer spending on the domestic market. Such a development could only have been possible in a monetary union because without the euro there would have been an upward revaluation of the national currency, which would have eroded away at the competitive edge resulting from wage restraint. Within a monetary union, a strategy of excessive loan restraint can lead to tensions as much as a situation where wages have outrun productivity.

Within the euro area, there is therefore an urgent need for action with a stronger focus on the specific requirements of a monetary union. If a further divergence in competitiveness is not rectified, there may well be an even greater threat to the future existence of the monetary union than that already posed by the crises in parts of southern Europe.

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15 See G. Horn, H. Joebges, and R. Zwiener, »Einseitige Exportentwicklung belastet Wachstum – Frankreich besser als Deutschland,« IMK Policy Brief (March 2010).

16 Premier Ministre: Pacte national pour la croissance, la compétitivité et l'emploi. November 6, 2012.

17 See A. Eickelpasch, »Research-Based Companies Perform Better,« Economic Bulletin, no. 10 (2012).

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