Europa

The Importance of the German Economy for Europe

vbw

Study
Last update: April 2019

A vbw study prepared by Prognos AG

Die bayerische Wirtschaft

Note

Foreword

A strong German economy creates value added and employment in Europe

In 2018 Germany recorded a balance of payments surplus of some 233 billion euros, just under seven per cent of gross domestic product. While the surplus is 14 billion euros down on the figure for 2017, the German business model again attracted criticism, not least from the EU and several Member States. The export successes of the Germany economy – so it is claimed – came at the expense of other states, particularly our EU partners. Some critics even go so far as to demand that Germany deliberately weaken its competitiveness in order to benefit its European partners.

Such an argument is absurd. Weakening German industry would make no economic sense at all – especially from the point of view of the other EU states. Germany is the most important or second most important export market for almost all EU countries. Demand from Germany ensures value added and employment throughout Europe, as the study we commissioned from Prognos AG shows: five million jobs in the other EU states depend directly on Germany's thirst for goods. The demand from German industry for intermediate and capital goods alone safeguards 3.3 million jobs for our European partners.

Scenario projections in this study demonstrate that any economic stagnation in Germany, like any deterioration in the competitiveness of our economy, would damage the economies of other countries across Europe. It would, therefore, be fatal to deviate from our successful model of internationalisation. This would be damaging not only to the German economy, but to the European economy as a whole.

A strong EU needs strong Member States; a strong EU needs a strong Germany.

Bertram Brossardt
2 April 2019

Contents

1 Executive Summary

EU states profit from competitive partner countries

The general economic situation in Europe has returned to stability in the recent past, although there are still sometimes significant differences between individual Member States of the European Union in respect of their particular growth rates and competitiveness. The German economy especially has been on a robust growth trajectory for some considerable time. German industry is characterised by high competitiveness at both price and non-price level, whereas other countries such as Italy, for example, are experiencing ongoing economic difficulties. Some critics suggest that the high efficiency of German industry is acting to the detriment of the development of the manufacturing industry in other countries of the European Union that are closely intertwined with Germany.

However, the results of this study demonstrate that a high growth rate in one country does not mean disadvantages for its economic partner countries. Indeed, economically intertwined countries actually profit from the dynamic development of the economy in the other.

The economies of highly developed countries in particular exhibit very close commercial ties. In Europe, the creation of the European Single Market over the last few decades has resulted in a fully differentiated international division of labour and, concomitantly, an intensive exchange of goods. As a result of these closely intertwined relationships, economic developments in one country radiate out onto the other countries.

This is particularly the case for Germany as the largest national economy within the EU. That much is evident from an analysis of German imports from European partner countries. In the Czech Republic, Slovakia, the Netherlands and Austria, German demand for imported goods induces between just under 7 and more than 8 per cent of overall economic gross value added. That is associated with several hundred thousand jobs in each of those countries. Across the EU, German import demand is estimated to keep 5 million people in employment. Of greatest significance is the demand from German industry for intermediate and capital goods, with 3.3 million people working in their manufacture in the partner states.

The national economies in eastern Europe that are very closely intertwined with Germany benefit particularly from this, as do Germany's smaller western neighbours. The demand effects in southern European countries, on the other hand, are less pronounced. In addition to their greater geographical distance, this is also due to the weakness or absence of an industrial base in those countries.

A German economy enjoying dynamic growth thus stimulates growth in linked countries. This is demonstrated by a scenario in which domestic demand in Germany is in decline until 2021 and gross domestic product is stagnating: in this case the overall economic out-

put of the other countries of the European Union would be 26 billion euros below the baseline forecast.

Another scenario projection shows that a deterioration in the price competitiveness of the German economy does not bring any benefits. If the relative price competitiveness of the German economy deteriorates as a result of upward pressure on wages, the growth rate is lower both in Germany and in the European Union as a whole.

These results highlight the supreme importance of the German economy for the other countries of the EU and confirm that a strong growth rate in German industry does not entail any disadvantage for the EU partner states. Rather, the intensive trade relationships between the EU states allow the European trading partners to profit from the positive development of the German economy.

2 Background

Responses to the criticism of the German balance of payments surplus

The economic situation in Europe has returned to stability in the last few years. Just recently employment in the European Union and the eurozone was reported to have reached record levels, although there continue to be sometimes significant differences between individual Member States in respect of their particular growth rates and competitiveness. The German economy especially has been on a robust growth trajectory for some considerable time and enjoys high surpluses on its balance of trade and balance of payments. German industry in particular is characterised by high competitiveness at both price and non-price level, whereas other countries such as Italy, for example, are experiencing ongoing economic difficulties.

Some critics hold the view that the high efficiency of German industry, and especially the export surpluses of the German economy, are acting to the detriment of economic development in other countries of the European Union that are closely intertwined with Germany. International organisations such as the OECD, the IMF and the European Commission, too, are already criticising the German surpluses and pressing for a reduction. The American president continues to threaten trade restrictions in order to scale down the imbalances. Protectionist voices are growing louder in other countries as well.

That is the background against which this study seeks to examine the importance that German industry has for its partner countries in the European Union, and the influence that economic development in Germany has on them. The Prognos global trade model is first used to demonstrate the extent to which the Member States of the European Union export which goods to Germany. An input-output analysis then shows how the manufacture in the relevant countries of origin of the goods exported to Germany is associated with value added and employment. Finally, a graph illustrates which European countries profit directly and to what extent from German import demand.

A scenario analysis shows what consequences a German economy stagnating until 2021 alongside declining domestic demand has for the other European countries. The result indicates the extent to which the favourable development of Germany's economy has a positive impact on the EU. In a further scenario analysis, the consequences of a deterioration in the price competitiveness of the German economy for economic growth in the European Union are analysed.

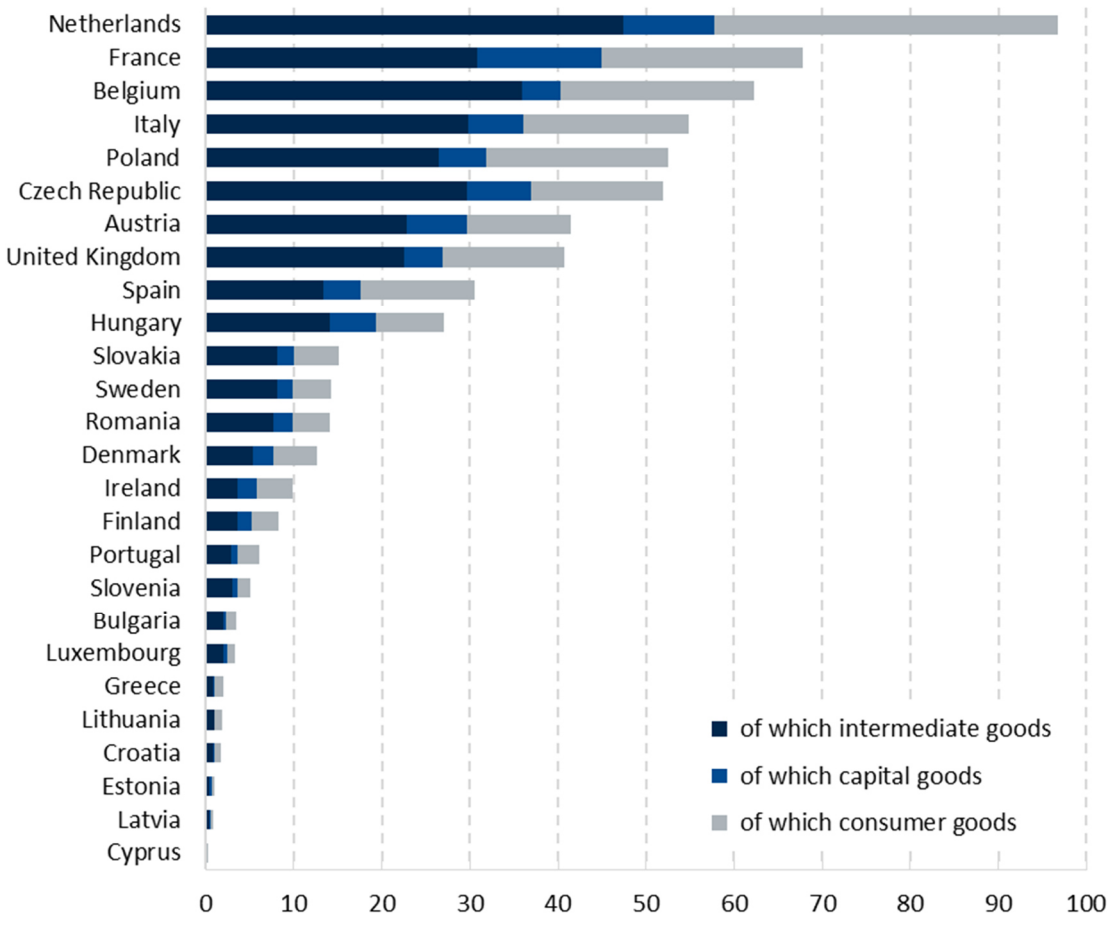
3 The Importance of German Demand for Import Goods for the Rest of Europe

Germany is a key sales market for EU states

Germany imports a huge amount of goods from abroad, with Europe the preferred source of supply. In 2017, 56 per cent of goods imported by Germany came from the other countries of the European Union. At the top of the most important supplier countries is the Netherlands: in 2017 it exported goods to a value of just under 100 billion euros to Germany (Figure 1).

Figure 1

German goods imports from the EU by country of origin and use, 2017, in billions of euros



Source: Prognos global trade model / UN Comtrade 2019

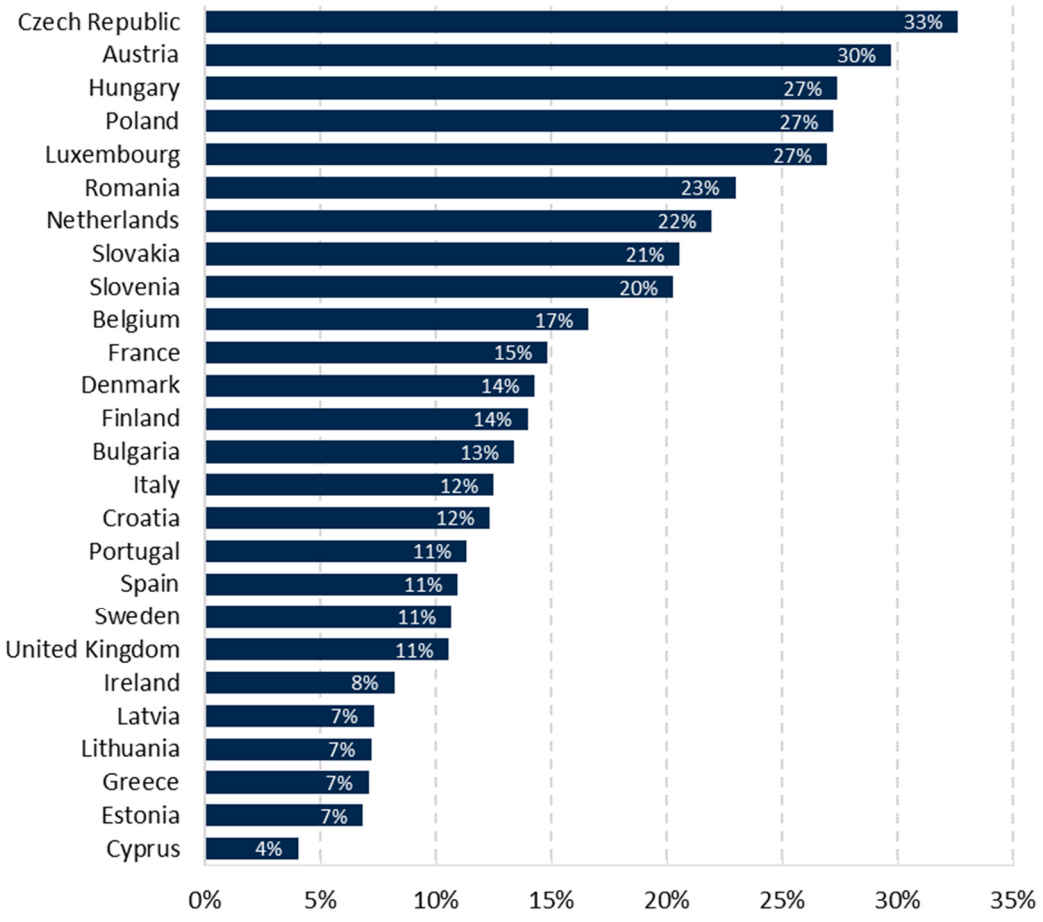
In places two to four are France, Belgium and Italy, three other western European economies. They are followed by two eastern European countries, Poland and the Czech Republic.

More than half the German imports from the other countries of the European Union are intermediate goods which are then finished in the production processes of German industry. Almost a sixth are capital goods such as machinery, technical plant and vehicles that form part of the production equipment of businesses. Only a good one third of German import demand is for consumer goods for private use or consumption.

For some countries Germany enjoys a leading role as an export market. About one third of Czech exports, for instance, go into the federal republic (Figure 2).

Figure 2

Share of exports to Germany in total exports of the countries considered, 2017, in per cent



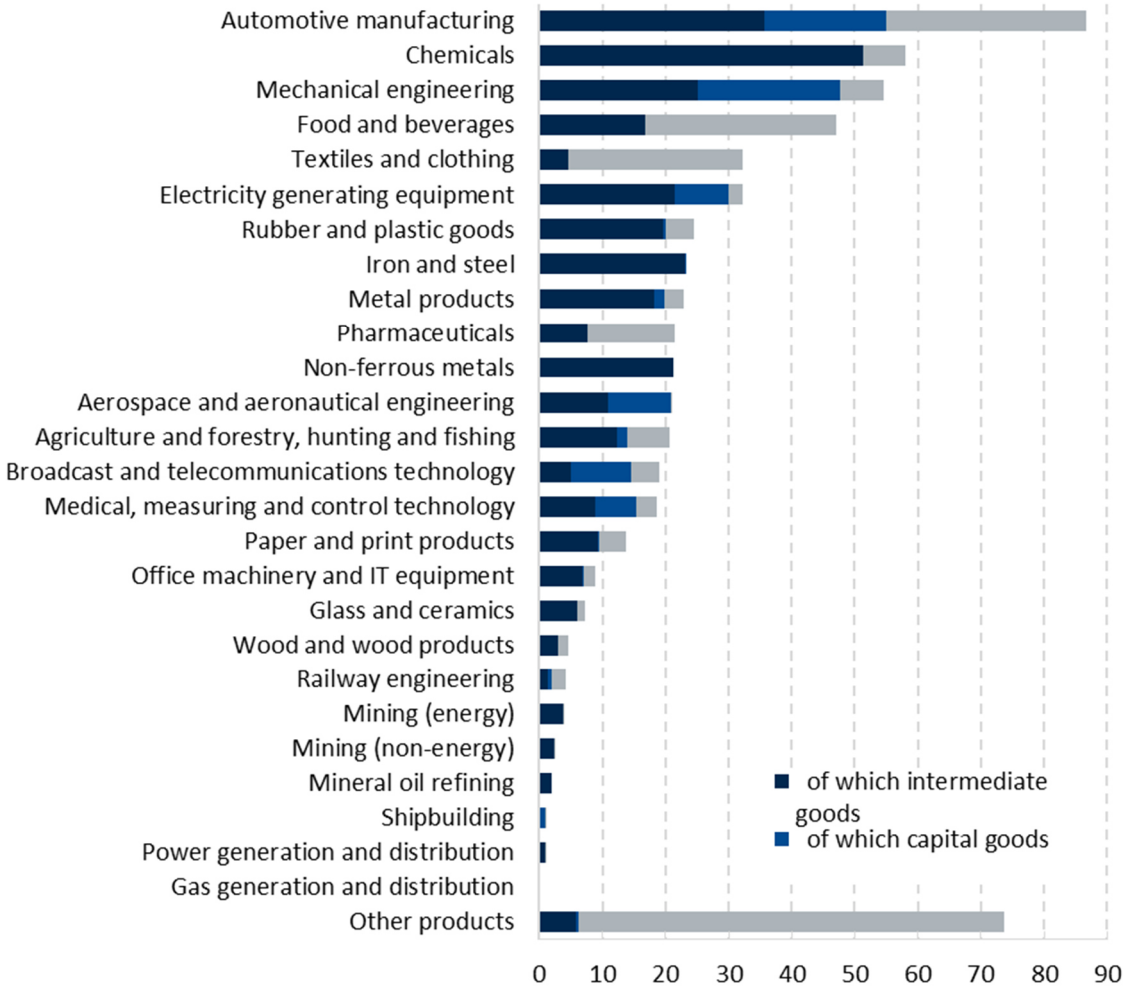
Source: Prognos global trade model / UN Comtrade 2019

The German sales market has a similarly great importance for the export sector in many other countries immediately neighbouring the federal republic. It is noticeable that eastern European economies in particular are very closely intertwined with Germany in terms of exports.

Motor vehicle manufacturing is Germany's main sector of industry, and this is also evident when it comes to foreign trade. In 2017, Germany imported vehicles and vehicle parts to the value of almost 90 billion euros from the other EU countries (Figure 3). They were followed by import goods for the chemical industry and mechanical engineering.

Figure 3

German goods imports from the EU by industry and use, 2017, in billions of euros



Source: Prognos global trade model / UN Comtrade 2019

4 Value Added and Employment Effects of German Import Demand

German imports safeguard value added and employment in Europe

Manufacture of the goods imported by Germany generates value added in the relevant source countries, thereby safeguarding employment. The value added is calculated at individual sector level by means of input/output tables specific to each country. When combined with similarly country-specific productivity ratios, this allows the number of people gainfully employed in such manufacturing to be estimated, highlighting the economic importance of German demand for goods for the other countries of the European Union.

4.1 Value added effects

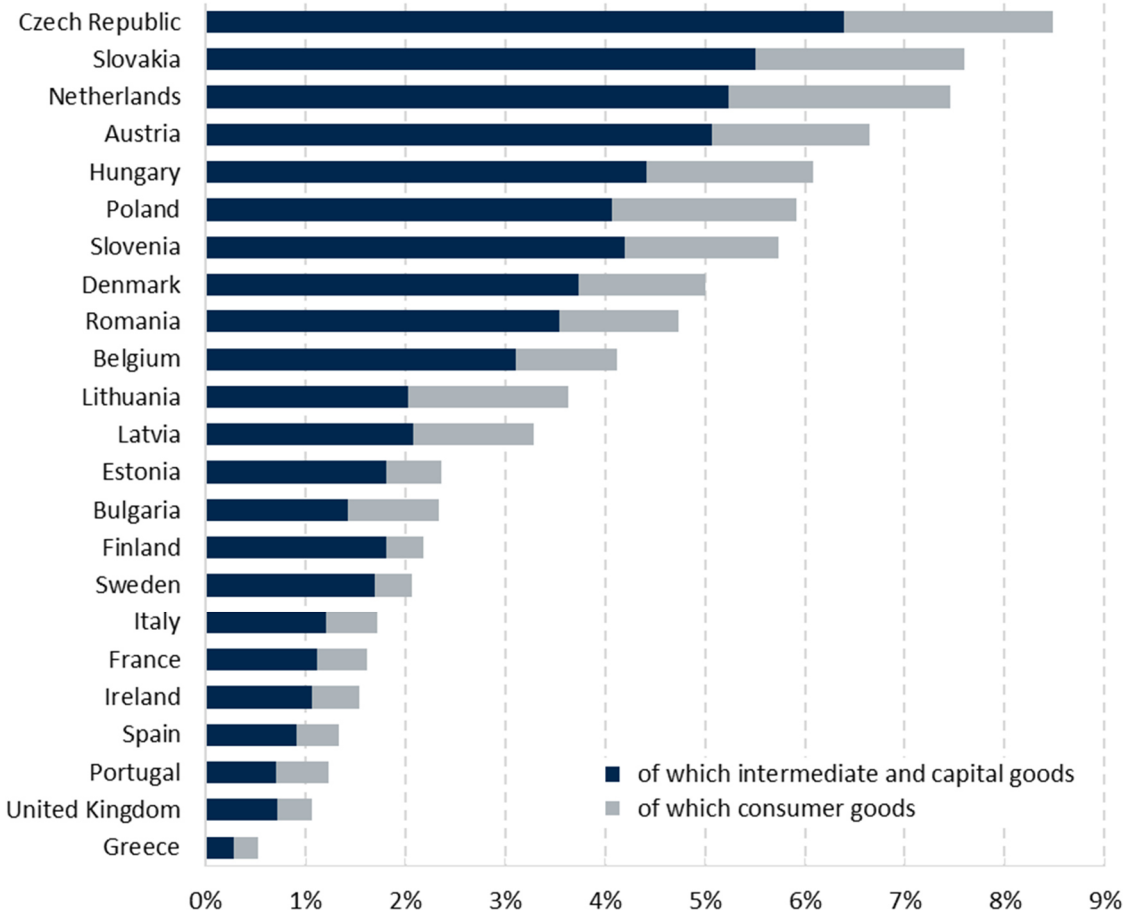
Only part of the production value of the manufactured goods can be attributed to the value added of the relevant sectors and countries; the rest is based on intermediate services that are performed in other sectors of industry (or even outside industry) in the actual country or from other countries. This aspect is explicitly factored in to the calculation of the gross value added. This can be done based on the input/output tables that underlie the calculations and in which the country-specific structural relationships are presented statistically. The relevant value added for each country and sector of industry can be determined with the aid of this information and on the basis of the recorded intermediate services. The relationship between the intermediate service purchased and the value added created as a result differs markedly from one country and one sector to another.

The calculations show that in the Czech Republic some 8.5 per cent of total domestic economic output arises from the demand from Germany for goods, making this country the one that benefits the most economically from Germany's demand for goods (Figure 4). The figure for Slovakia and the Netherlands is also quite high at around 7.5 per cent.

Taking the average of the countries under consideration, about 70 per cent of total gross value added associated with imports into Germany stems from the demand for intermediate and capital goods that are used in the production processes of German industry. At 83 and 82 per cent of induced gross value added respectively, the two heavily industrialised Scandinavian countries of Finland and Sweden have the highest shares. However, there are also countries for which exports of consumer goods to Germany play a more important role. This is particularly true for Greece and Lithuania, countries with a comparatively small industrial sector, in each of which consumer goods account for around 45 per cent of induced gross value added.

Figure 4

Share of gross value added induced by the export of goods to Germany in total gross value added by country, 2017, in per cent



Source: Prognos 2019

The share of gross value added induced by the export of goods to Germany depends on the size of the economy in the particular country. In larger economies that share tends to be lower, standing at only 1.6 and 1.7 per cent in France and Italy respectively. Nevertheless, these countries are among Germany's main trading partners in terms of the absolute value of exports to Germany (Figure 1). Alongside the size of these economies, the relatively small export ratio is another reason for the comparatively low dependence on German import demand. The export ratio expresses the proportion of exports to gross domestic product. In France it is only in the region of 30 per cent, whereas in the Czech Republic it is considerably higher at 81 per cent. The reason is that the export ratio is generally much higher in smaller, open economies with a strong industrial sector. This results in a stronger (both positive and negative) dependence on foreign demand. The trading partner structure of the specific country also plays a key role in the extent of the induced effects.

In the case of the Czech Republic, around one third of total exports go to Germany, so it has a very strong orientation to the German sales market. While it is likewise important for France, where the share is 15 per cent, the French sales markets are more heavily diversified.

In terms of absolute gross value added induced by exports to Germany, the Netherlands shows the greatest effect, at 46 billion euros, followed by France (31 billion euros) and Italy (25 billion euros). In total, the gross value added induced by the export of goods to Germany by all countries of the European Union comes to some 255 billion euros, or 2.6 per cent of total gross value added. The demand for intermediate and capital goods accounts for about 181 billion euros (1.9 per cent) of this amount.

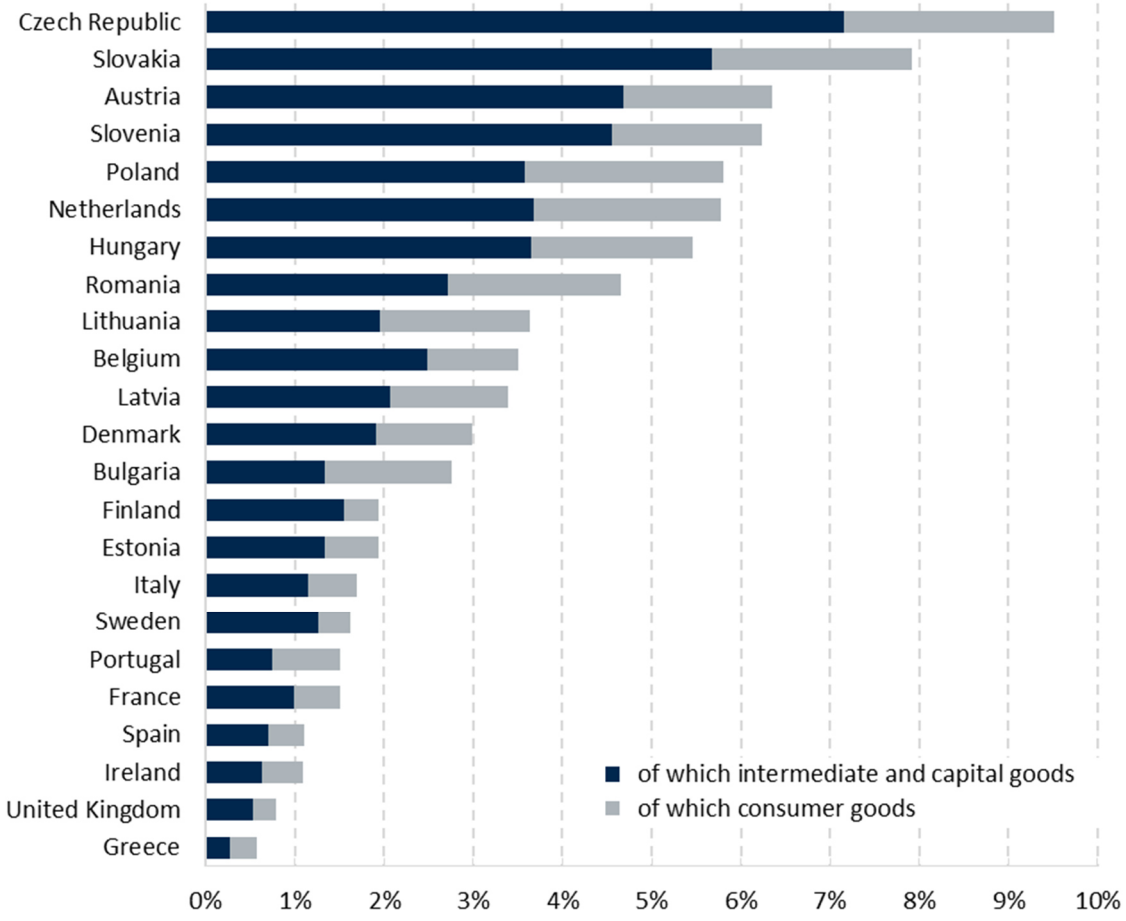
4.2 Employment effects

The value added in the countries considered goes hand in hand with positive employment effects. The extent of these can similarly be estimated with input/output tables for the specific countries. Since the sector and country-specific productivity figures are stored in the tables, the corresponding employment can be derived from the value added effects already determined. As productivity differs from one country to another, value added and employment effects are not in fixed proportion to each other. The employment effect associated with the German demand for goods is all the greater the more employment-intensive production in a sector or country is.

In relative terms, the employment effect of Germany's demand for goods is at its greatest in the Czech Republic. Some 9.5 per cent of all those gainfully employed in the Czech Republic are accordingly directly or indirectly involved in the production of goods that are exported to Germany (Figure 5). In Slovakia the relevance of German demand for goods is also very high, accounting for just under 8 per cent. Austria, Slovenia, Poland, the Netherlands and Hungary also have shares in excess of 5 per cent. Regarding the main types of goods, the structure in the individual countries is similar to that for gross value added. The greatest part of the employment effects arises from demand for intermediate and capital goods.

Figure 5

Share of employment induced by the export of goods to Germany in total employment by country, 2017, in per cent



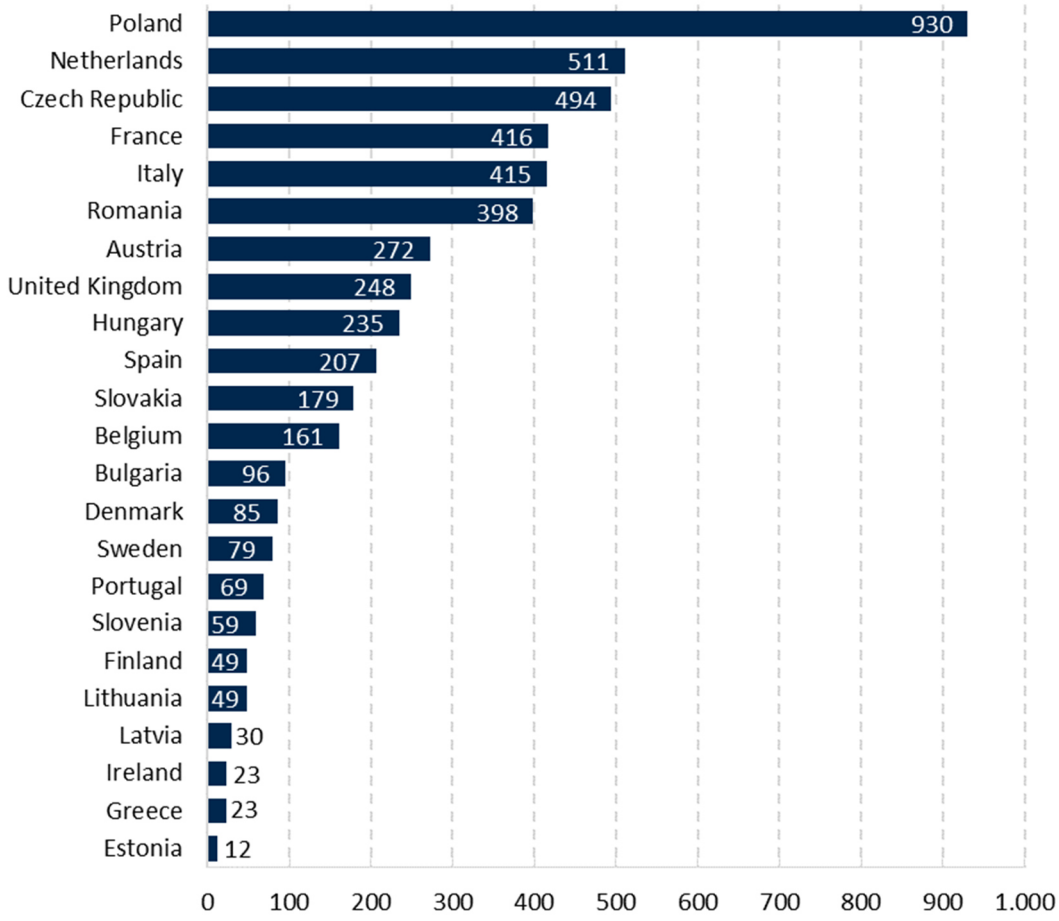
Source: Prognos 2019

In terms of the absolute number of jobs directly or indirectly associated with the German demand for goods, Poland is in first place with about 930,000 workers (Figure 6). The Netherlands and the Czech Republic are a long way behind in the next places, but still with very high figures of around 511,000 and 494,000 workers respectively. In France, Italy and Romania some 400,000 jobs depend directly or indirectly on exports to Germany.

In total, imports into Germany are reckoned to safeguard 5.0 million jobs, or 2.7 per cent of total people in employment, in the other countries of the European Union. Demand from German industry for intermediate and capital goods accounts for about 3.3 million workers of that total, or 1.8 per cent of people in employment.

Figure 6

Share of employment induced by the export of goods to Germany by country, 2017, in thousands



Source: Prognos 2019

5 The German Economy as a Driver of Growth and Employment in Europe

Stagnation in Germany hits growth in the EU

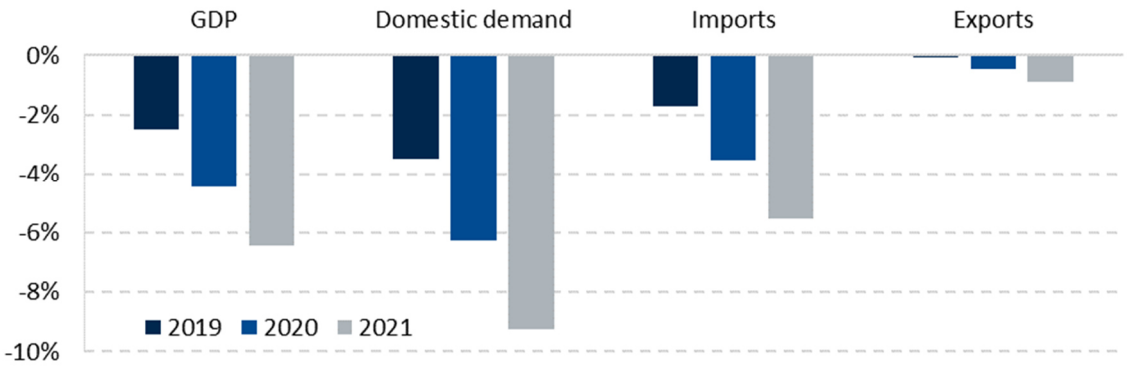
The previous section illustrates the extent to which import demand from the German economy has generated value added and employment in the other European countries over the past few years. This statistical perspective is supplemented below by simulation projections that highlight the consequences of weaker growth momentum in Germany for the other European countries. For this purpose two scenarios are created and contrasted by means of Prognos' VIEW global economic model.

– The reference scenario corresponds to the current baseline forecast by Prognos for Germany and the other 41 countries included in VIEW. The baseline forecast reflects what we believe to be the likeliest economic development over the coming years (as at summer 2018). In this scenario the German economy will grow by a little less than 2 per cent a year until 2021.

– In the alternative "stagnation" scenario, on the other hand, German gross domestic product remains at its 2018 level until 2021. This scenario is realised in the model by dampening domestic demand in Germany accordingly, i.e. private and public-sector consumption as well as investment demand.

The impact of this intervention on the German economy and that of the other European countries is that German domestic demand slackens, leading to a decline in the import demand of Germany industry. In 2021 the corresponding deviations between the reference and the alternative scenario are -9 per cent for German domestic demand and -6 per cent for import demand (Figure 7). The other countries included in VIEW export less to Germany, which dampens their economic output and hence their own import demand. This feedback effect ultimately dampens German exports, although the minus here is, at 1 per cent, much less than that suffered by German domestic demand, the result of which is an increase in the German export and balance of payments surplus. Overall, German gross domestic product in 2021 is more than 6 per cent, or a good 200 billion euros, lower in the alternative scenario than at the reference level. In the model, the European Central Bank responds to the lower utilisation of production capacities in the countries of the eurozone by cutting the base rate, which will itself have a stimulating effect on private capital expenditure in particular.

Figure 7
Deviation of real expenditure breakdowns in Germany in the “stagnation” scenario compared with the baseline forecast, 2019 to 2021, in per cent

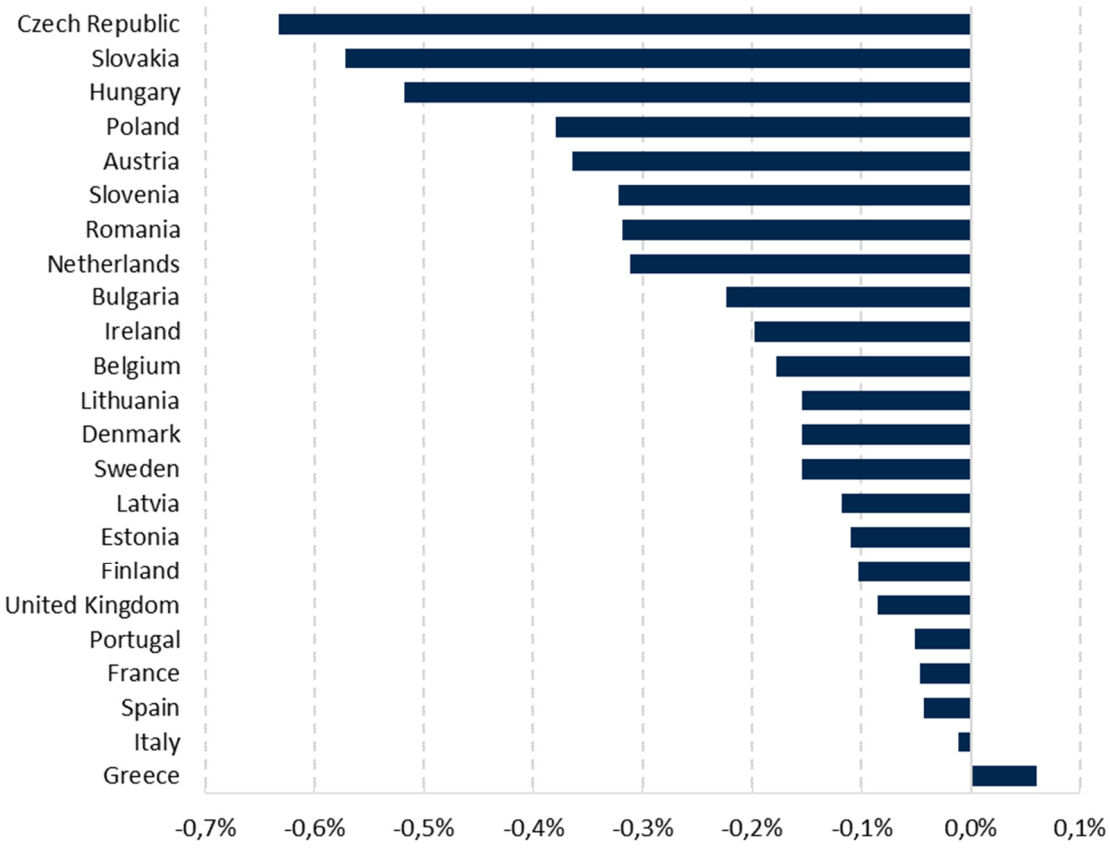


Source: Prognos 2019

In VIEW all countries are systematically linked to each other through exports, imports, exchange rates, etc. The respective importance of export business with Germany and the responsiveness of expenditure (and other factors specific to countries) to interest rates ultimately determine whether the negative export effect or the stimulating interest rate effect in an EU country prevails. With the exception of Greece, the negative trading effect prevails. In total, gross domestic product in the European Union (excluding Germany) is a good 26 billion euros or 0.2 per cent lower in the alternative scenario than in the reference scenario. In the other 18 countries included in VIEW, gross domestic product is likewise below the reference level (-23 billion euros or 0.1 per cent).

The extent of the effects on the various countries of the European Union depends primarily on the relative importance of Germany for the total exports of the relevant countries: if a country exports a particularly high amount of goods to Germany, it is disproportionately affected by any slowdown in the German economy. It is apparent that the export-oriented countries of eastern Europe especially, such as the Czech Republic, Slovakia and Hungary, will suffer the greatest relative losses in the alternative scenario (Figure 8). The large western European economies such as France, Spain and Italy, on the other hand, will be less badly affected. In Greece the positive interest rate effect more than makes up for the negative trading effect.

Figure 8
Deviation of real GDP in the “stagnation” scenario compared with the baseline forecast, 2021, in per cent



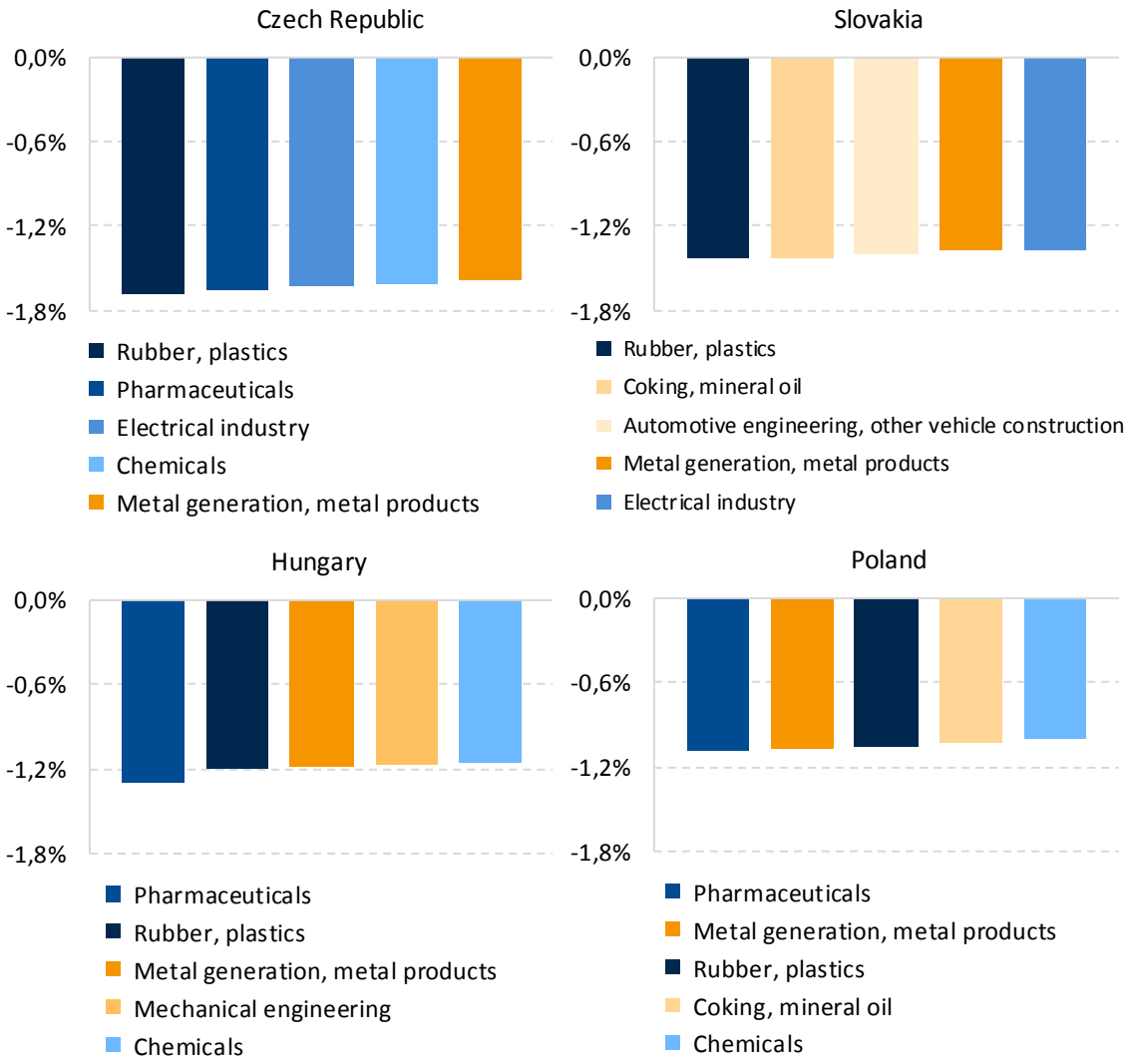
Source: Prognos 2019

The impact of a lack of momentum in German growth varies according to the individual sectors. Given its very closely intertwined value added chains across Europe, the manufacturing sector in particular will be hit disproportionately. A glance at the most heavily affected countries, Slovakia, the Czech Republic, Hungary and Poland, reveals that across the countries considered it is the rubber/plastics industry, pharmaceuticals and the metal industry especially that will have to absorb tangible losses (Figure 9).

The service sectors will share in the suffering to a lesser extent, as they tend on average to be very much less integrated into international value added chains. In services it will be mainly second-round effects resulting from the decline in demand across the entire economy that are felt.

Figure 9

Deviation in real gross value added in the “stagnation” scenario in the most heavily affected countries and sectors, 2021, in per cent



Source: Prognos 2019

6 The Importance of the Price Competitiveness of the German Economy

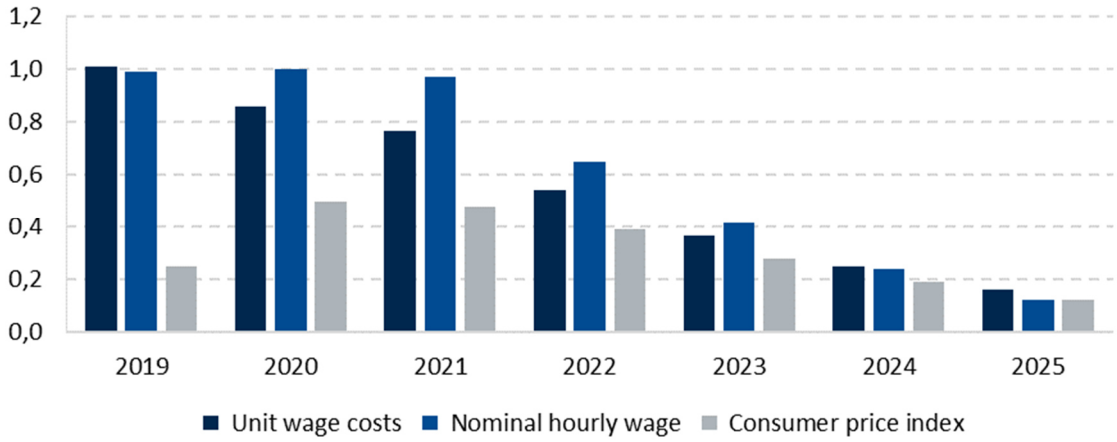
Excessive pay rises in Germany would harm the EU

The German economy has been growing very dynamically for almost a decade – particularly relative to the economies of the other European countries. Over this period, net exports from the German economy and the balance of payments surplus have risen sharply both in absolute terms and relative to gross domestic product. While the balance of payments was level around the turn of the millennium, the surplus currently stands at approx. 8 per cent (relative to GDP).

Some critics of the German balance of payments surplus claim that the also relatively low growth rate of German unit wage costs is a central cause of the surplus, so they demand greater wage growth in Germany. Unit wage costs are defined as the relationship between nominal hourly wages and real labour productivity. Their development reflects those cost changes of businesses that can be attributed to labour as a production factor. In a further scenario comparison, we investigate the effects that higher wage growth has for the German economy and neighbouring European countries.

For this purpose we assumed in the alternative “higher wage growth” scenario that the nominal hourly wage in the period 2019 to 2021 grows by one percentage point more in each year than in the reference scenario. The unit wage costs largely follow this stimulus (Figure 10). After 2021 no further stimuli are set and wage growth then returns to the reference level.

Figure 10
Deviation in the growth in hourly wages, unit wage costs and the inflation rate in the “higher wage growth” scenario in Germany compared with the baseline scenario, 2019 to 2025, in percentage points



Source: Prognos 2019

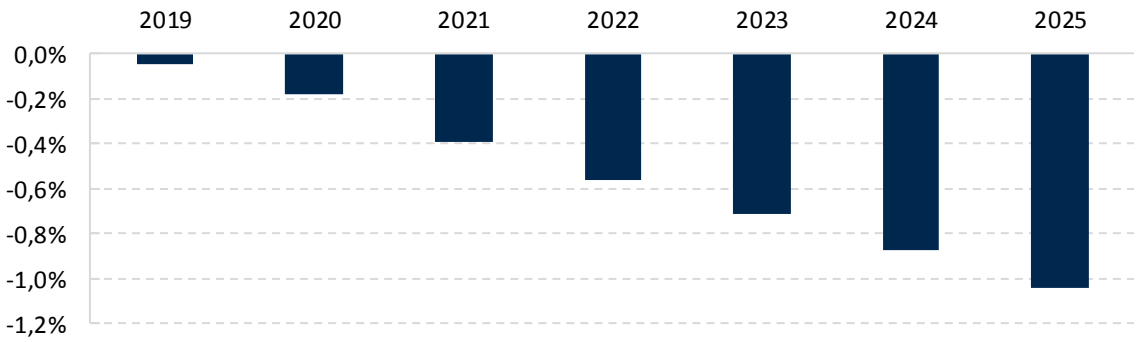
In the VIEW model wage growth has the following additional effects:

- German exports suffer a slowdown due to the now lower price competitiveness. The relative price competitiveness of the other countries improves.
- German import demand is dampened. Germany’s trading partners are accordingly unable to perform as well on the German sales market than in the baseline scenario.
- In Germany, unit wage costs and hence prices also are above the reference level. Imports from Germany become more expensive in the other countries, and the inflation rates there also rise. Overall, this results in accelerated price growth in the eurozone. Interest rates rise in response, dampening expenditure in the eurozone.

In general, the economy in Germany reacts negatively to higher wage growth. In 2025 economic output in the alternative scenario is just under 1.0 per cent below the level of the reference scenario (Figure 11). German exports especially suffer a sharp downturn due to the wage cost shock. The higher interest rate level resulting from the now accelerated growth in prices also ensures that expenditure and public-sector consumption are tangibly lower when compared with the baseline scenario. The higher unit wage cost growth has little effect on the development of private consumption and import momentum. While this enables private consumption from wage income to profit from the wage stimulus, consumer spending from profit income is hit by the shift in primary income distribution and, like transfer income, also suffers from the higher inflation rate. Net exports decline by about 0.3 percentage points (relative to GDP) in the alternative scenario compared with

the reference scenario. The balance of payments surplus in the alternative scenario also falls accordingly.

Figure 11
Deviation in real GDP in the “higher wage growth” scenario compared with the baseline scenario in Germany, 2019 to 2025, in per cent

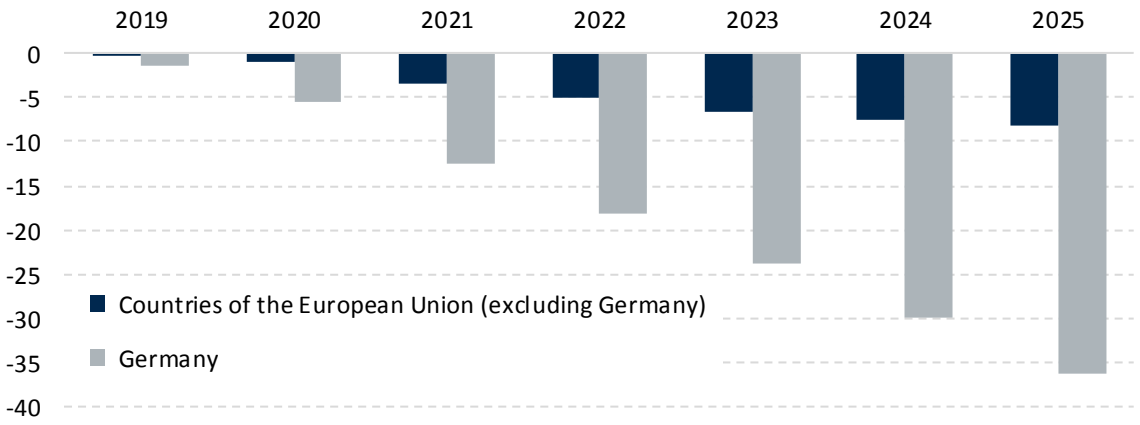


Source: Prognos 2019

As explained above, the higher German unit wage costs have different and also contrary consequences for the other countries of the European Union. On the one hand, German exports fall back, enabling the other countries to win market share in third markets at Germany’s expense. On the other, German import demand falls, which has a negative effect on exports to Germany. In addition, imports from Germany become more expensive in the other countries. Prices and interest rates rise as a result, dampening growth in expenditure.

Across all countries of the European Union (excluding Germany), economic output in the “higher wage growth” scenario is 8 billion euros less in 2025 than in the baseline scenario. For Germany, the negative impact is even higher than 36 billion euros (Figure 12). The scenario thus shows that the isolated acceleration of German wage growth is not a useful measure in terms of cutting German net exports: while the latter are reduced by the higher wage growth, this comes at the price of weakening growth rates in Germany and the European Union.

Figure 12
Deviation in GDP in the “higher wage growth” scenario compared with the baseline scenario, 2019 to 2025, in billions of euros



Source: Prognos 2019

Overall, the results of the study highlight the significant interdependence of the economically closely intertwined Member States of the European Union. The regional divergence of growth momentum in the Union that has been evident for some years should also not obscure the fact that the positive development of the economy in one country will also be to the profit of its partner countries. As a result of these closely intertwined relationships, economic developments in one country radiate out onto the other countries. This is particularly the case for Germany as the largest national economy within the EU. German demand for import goods, for instance, induces between just under 7 and more than 8 per cent of total gross value added in some neighbouring countries, hence safeguarding hundreds of thousands of jobs. A first scenario shows that the dynamic development of the German economy also delivers growth stimuli in the other countries of the EU. Another scenario projection shows that a deterioration in the price competitiveness of the German economy does not bring any benefits for the rest of the EU. If the relative price competitiveness of the German economy deteriorates as a result of upward pressure on wages, the growth rate is lower both in Germany and in the European Union as a whole.

Appendix

The VIEW model

VIEW is a comprehensive macroeconomic model that covers 42 countries and hence more than 90 per cent of the global economy. It considers the labour market and public finances in addition to the manufacture and use of the goods and services produced, systematically linking all participating countries via exports, imports, exchange rates, etc. This global forecasting and simulation model allows the future development of the global economy and individual national economies to be presented consistently and in detail. The model explicitly records and maps interactions and feedback between individual countries. Its analytical usefulness thus extends far beyond that of isolated country models with exogenously defined global economic parameters.

Contact / Imprint

Volker Leinweber
Chief Economist

Tel. no. 089-551 78-133
Fax no. 089-551 78-294
volker.leinweber@vbw-bayern.de

Imprint

All information provided in this publication is in principle applicable to both men and women. For ease of legibility, the additional use of the feminine form has been dispensed with.

Publisher

vbw
Vereinigung der Bayerischen
Wirtschaft e. V.

Max-Joseph-Straße 5
80333 Munich

www.vbw-bayern.de

Other participants

Dr. Michael Schlesinger
Director, Prognos AG

+41 61 3273 385
michael.schlesinger@
prognos.com