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German SMEs' foreign trade

– economic impact of coronavirus
crisis eclipses concern over trade
conflicts



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German SMEs' foreign trade – economic impact of coronavirus crisis eclipses concern over trade conflicts

The coronavirus crisis has hit the export-oriented German economy at a time when political and economic developments were already weighing on global trade in goods and services. The growth of German exports slowed considerably in the past three years. Growing tension in international trade relations and protracted uncertainty over Brexit also affected the German small and medium-sized enterprise sector, whose international turnover in 2018 grew by only around EUR 18 billion or 3.1%, down from 5.5% in 2017. The share of foreign turnover in total turnover of internationally active businesses fell moderately to 28.2% in 2018. In the face of persistently negative export expectations, international turnovers of small and medium-sized enterprises are likely to have been even weaker in 2019.

The rapid spread of the coronavirus to an increasing number of countries is set to hit German SMEs hard, creating serious problems for the approximately 800,000 or 21% of them that trade across borders. They will experience a significant drop in international turnover in addition to a slump in domestic turnover, especially since their most important export markets are in Europe. In 2018, Europe accounted for some EUR 402 billion - more than two thirds - of German SMEs' total international turnover. Austria, Switzerland, the Benelux states, France and Italy are among their most important export countries. However, Germany's SME sector is closely integrated into Europe not just on the sales side but on the procurement side as well. Manufacturing SMEs source nearly 70% of their international purchases from Europe, the SME service sector a good 60%.

For some SMEs, financing international activities remains a challenge, among other things because assessing political and economic risks requires great effort that is rewarded with relatively low returns on a small volume of exports and finance. Enterprises that trade outside Germany fail more often in their loan negotiations than those with purely domestic business. In 2018, more than one third of internationally active SMEs deferred, abandoned or at least partly reduced planned investments compared to only one quarter of domestically active SMEs.

Small and medium-sized enterprises worry not just about structural problems such as financing barriers but also about current trade conflicts, which are likely to weigh on international value chains even after the coronavirus crisis has ended. One in three SMEs expect a further escalation of the US-EU tariff dispute to adversely impact their business, especially as a result of possible economic consequences. What is more, of those SMEs that do business in the US – nearly one in five enterprises – more than 60% expect negative impacts on their operations should the transatlantic trade dispute continue to escalate.

Germany's exports and, hence, international turnovers of SMEs are therefore likely to remain in a difficult environment even when the coronavirus crisis has been overcome and they could be affected for a long time by the experience which SMEs in global value chains are gathering in the current situation. The fact is that the coronavirus crisis highlights yet again the fragility and complexity of global value chains and it may prompt some to stop participating in the international division of labour. However, it also illustrates that the free movement of goods and services is a key element of the European economy and that greater diversification of sales and procurement markets may help to better mitigate regional demand and supply shocks.

German export growth is weakening – in the SME sector as well

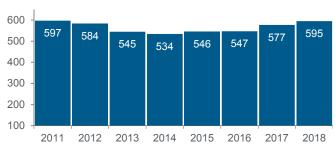
Growing tensions in international trade relations, a worsening global economy and ongoing uncertainty over the exit of the United Kingdom from the EU – in the course of 2018, all of these factors created increasing headwinds for the German export industry which hardly subsided in 2019. Goods exports in 2018 totalled EUR 1,318 billion, again exceeding previous years' levels. Compared with the year 2017, however, export growth slowed considerably from 6.2 to 3% – a trend that continued in 2019, when Germany's goods exports grew by a mere 0.8%. Service exports also grew at a slower rate in 2018 than in the previous year. With just under EUR 291 billion, they made up nearly one fifth of Germany's total exports.

The global economic development is also affecting German SMEs. In 2018 the sector was able to increase its international turnover by around EUR 18 billion to EUR 595 billion (Figure 1). But here as well growth was lower than in the previous year, based on findings of the KfW SME Panel. Foreign turnovers of small and medium-sized enterprises still grew by around

EUR 30 billion in 2017. No figures are yet available for SMEs for 2019. Nevertheless, the KfW ifo Export Expectations of small and medium-sized manufacturing enterprises were consistently negative in all months of the past year (Figure 2). SMEs' export turnovers are therefore likely to have grown at a rather weaker rate in 2019 than in the two previous years. Amid the current coronavirus crisis, Germany's export weakness is not likely to be overcome in the year 2020 either. Rather, export turnovers are likely to drop very significantly, including in the German SME sector.

Figure 1: International turnover of the German SME sector

In EUR billion



Note: Values extrapolated on basis of the number of employees.

Source: KfW SME Panel 2012-2019

Impact of the coronavirus crisis on the SME sector as a part of global value chains

At the beginning of 2020 the coronavirus SARS-CoV-2 began to spread rapidly in China. A fastgrowing number of infections has now been recorded in Japan, South Korea, the US and many European countries. In Germany, as of April 14 in 2020, more than 125,098 persons have so far tested positive for coronavirus and more than 2,969 patients have already died from COVID-19, the disease it causes.³ In order to protect the population that has not yet developed immunity and to prevent the health system becoming overwhelmed, far-reaching social distancing measures were introduced in Germany as well. Schools, kindergartens and a vast portion of shops and restaurants were closed, events and trade fairs cancelled and travel warnings issued. Despite extensive monetary and fiscal-policy stabilisation measures, the pandemic has clearly affected the German economy, which is hit particularly hard because of its close integration into international value chains. This also applies to small and mediumsized enterprises, some of which are facing drastic turnover losses from restrictions imposed within Germany alone.

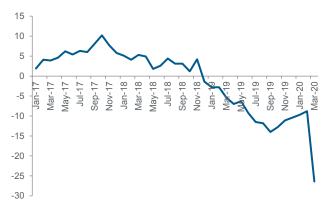
Large SMEs with 50 and more employees in Ger-

many are likely to be hit hardest by the demand shock in China. Although they account for fewer than 2% of all small and medium-sized enterprises, they employ more than 15 million of the approx. 45 million workers in Germany. Half of them do business outside Germany and one in three generate turnover in China. With some delay, disruptions to global value chains are also likely to affect small SMEs, which often export indirectly as suppliers for heavily exportoriented large enterprises, for instance in the automotive, pharmaceutical and electronics industry. In the coming weeks, production losses in China are also expected to pose enormous challenges for SMEs that have limited inventories.

The broad SME sector is being much more adversely affected by the rapid spread of the coronavirus in Europe, as this is where the main sales markets of small and medium-sized enterprises are located. Almost all internationally active SMEs also do business in Europe, where more than two thirds of total international turnover of SMEs is generated (see page 4). However, Germany's SME sector is closely integrated into Europe not just on the sales side but on the procurement side as well. Manufacturing SMEs source nearly 70% of their international purchases from Europe, the SME service sector a good 60%.4 In addition to declines in demand and production shortfalls, increased controls at internal EU borders are hampering the free movement of goods, posing an additional burden on the supply chains of small and medium-sized enterprises.

The business climate in the German SME sector has turned negative as a result. According to recent figures of the KfW-ifo SME Barometer, the business expectations of small and medium-sized enterprises in particular nosedived from February to March 2020 by 27.5 points to a balance of -35.3 points. The moderate upward trend of February 2020 thus came to an abrupt halt. SME retailers and wholesalers as well as service providers are particularly pessimistic about the coming six months. The growing spread of the coronavirus in important international markets of SMEs in Europe and around the world is mainly reflected in the export expectations of the manufacturing sector. In March 2020 they dropped by 17.6 points to a balance of -24.6 points (Figure 2). Export expectations have not been more pessimistic since the height of the financial crisis in winter of 2008/2009.⁵ In the current crisis, however, further drops must be expected.

Figure 2: KfW ifo Export Expectations of the SME manufacturing sector



Note: Balance (in percentage points) of percentages of positive and negative responses on export expectations for the coming three months (seasonally and mean adjusted). Enterprises are generally classed as small to medium-sized if they employ a workforce of not more than 500 and record an annual turnover not exceeding EUR 50 million.

Source: KfW Research, ifo Institute

Growing number of internationally active enterprises ...

The growth of SMEs' total international turnover in 2018 is primarily the result of a higher number of companies doing business in other countries. In 2018, approximately 800,000 SMEs generated part of their turnover abroad, around 20,000 more than the year before. As the number of small and medium-sized enterprises in Germany has increased overall, the share of internationally active SMEs remained stable at 21% (Figure 3). While the share of internationally active enterprises has fallen in the size class of 5 to 49 employees, it increased slightly from 18.5 to 19% among companies with fewer than five employees, which represent four in five German SMEs.

Figure 3: Share of SMEs with international business

In per cent 20 Fewer than 5 --- 5 to 9 10 to 49

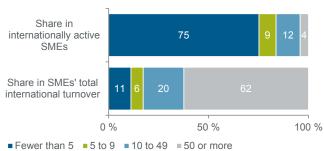
Note: Size classes by number of full-time equivalent employees. Values extrapolated on basis of the number of enterprises.

Source: KfW SME Panel 2011-2019.

What is true of the German economy as a whole – that a few large corporations account for a significant portion of exports – is also the case on a smaller scale in the SME sector. So while small and medium-sized enterprises with 50 and more employees account for a mere 4% of all internationally active businesses, they generate nearly two thirds of SMEs' total international turnover (Figure 4). By contrast, the smallest businesses with fewer than five employees, which make up three quarters of all internationally active firms, contribute only 11% of SMEs' total international turnover.

Figure 4: A small number of large SMEs drive international turnover

In per cent



Note: Size classes by number of full-time equivalent employees. Values extrapolated on basis of the number of enterprises and employees, respectively. Data for the year 2018.

Source: KfW SME Panel 2019.

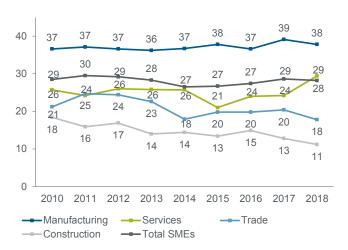
... but little growth of mean international turnover

Average foreign turnover, on the other hand, hardly increased in 2018. The share of foreign turnover in overall turnover of internationally active businesses was around 28%, even slightly below the previous year's level (Figure 5).

What is interesting here is the shift between sectors. While the share of international turnover in overall turnover of internationally active businesses in 2018 increased in the service sector, it fell in all others – in manufacturing, trade and construction. This also applies to the share of internationally active enterprises.

Figure 5: Share of international turnover in overall turnover

In per cent



Note: Only internationally active enterprises. Values extrapolated fon basis of the number of employees.

Source: KfW SME Panel 2011-2019.

Service enterprises have picked up

At around EUR 210 billion, service providers accounted for more than two thirds of SMEs' international turnover in 2018, including law firms, tax consultancies, management consulting firms, architecture and engineering firms, as well as IT service providers. That was an increase of more than EUR 60 billion on the previous year (Figure 6). At the same time, manufacturers' international turnover declined. For one thing, this reflects structural change. Services have become relatively more important in Germany and around the world and are being traded more and more intensely. Since the year 2000 the share of services in German exports has grown from just under 14% to more than 18%. ⁷ For another, it is likely also an expression of cyclical effects. Orders received by the manufacturing sector were weak, particularly towards the end of the year 2018. Developments in the automotive industry have surely had an adverse impact as well, as it has many small and medium-sized manufacturing suppliers.

Europe is SMEs' most important target region

In 2018, small and medium-sized enterprises generated just over two thirds of their international turnover – EUR 402 billion – in Europe (Figure 7). That makes Europe a key sales market for the products and services of internationally active SMEs. The ongoing uncertainty over Brexit led to a renewed decline in German exports to the United Kingdom of around 4% in 2018. Overall, however, the economic development of the European Union was relatively robust despite slowing growth, which is also reflected in SMEs' international turnovers.

Figure 6: Total international turnover of SMEs by sector

Total international turnover in EUR billions (cumulative)

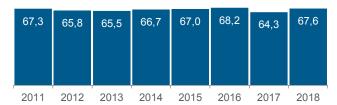


Note: Values extrapolated on basis of the number of employees.

Source: KfW SME Panel 2012-2019.

Figure 7: Europe's share in SMEs' total international turnover

In per cent



Note: Values extrapolated on basis of the number of employees.

Source: KfW SME Panel 2012-2019

The most important foreign markets of small and medium-sized enterprises lie in neighbouring countries. Roughly six in ten internationally active SMEs generate turnover in Austria or Switzerland, four in ten export to the Benelux countries and three in ten sell products or services in France. Around one quarter of Germany's internationally active SMEs have customers in Italy, Spain or Portugal. In the year 2018, 92% of internationally active SMEs sold their products or services in other European countries. The turnover they generated there accounted for nearly 20% of their total turnover. Countries outside Europe, by contrast, were targeted by only 39% of internationally active SMEs, accounting for just under 16% of their total turnover (Figures 8 and 9).

Figure 8: Target regions of internationally active SMEs



Note: Values extrapolated on basis of the number of enterprises. Data for the year 2018

Source: KfW SME Panel 2019

Costs play a larger role in exports to countries outside Europe

Not least, this is because exporting involves additional costs associated with tapping into the market and setting up an international distribution network, adapting products and meeting legal requirements, costs of tariffs, import licences and transporting goods. And these costs are much higher in trade with countries outside the European Union. For example, the cost of adapting product quality plays a major role for 25% of SMEs that trade outside Europe additionally or exclusively but for only 10% of SMEs that trade exclusively within the countries of the European Union (Figure 10).

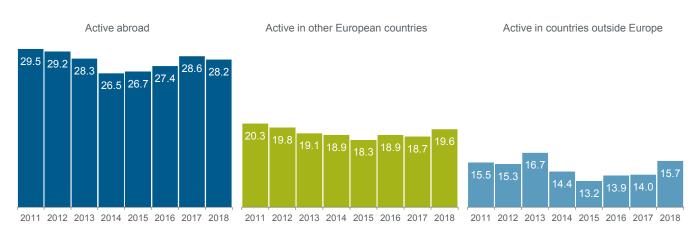
The same applies to other factors as well. By contrast, there is hardly a difference in the cost of financing, handling payments and hedging export activities, all of which play only a moderate role for internationally active SMEs. This is likely because many of these tools are hardly used. Only 6% of exporters make use of project financing schemes, buyer loans or private and public credit insurance policies. Only bank overdraft facilities are used more frequently by some 38% of internationally active SMEs.9 Companies use own funds to finance a large portion of international business, both exports and foreign investments. 10 Much indicates that the less frequent use of bank loans in international business is also due to the supply side and that financing constraints might be a barrier for exports and foreign investment in the SME sector.

Risks of international projects make financing harder for banks

International business activities come with particular political and economic risks that need to be assessed by the financing banks to comply with regulatory requirements and this assessment is often very costly. From the banks' point of view, small-scale export projects and low financing volumes are hardly worth the effort. When banks do present a financing offer, the conditions tend to be hardly attractive for enterprises. Furthermore, financing projects abroad requires local expertise which banks have to maintain through own branch offices abroad or through a global network of cooperation partners. They cannot always generate the minimum returns to cover this administrative expenditure. ¹¹

Figure 9: Share of international in total turnover by sales region

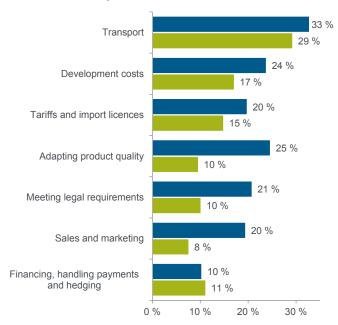




Note: The values shown refer to those enterprises that generated international turnover in the corresponding region. The individual values for SMEs active in other European countries and for those active in countries outside Europe therefore do not add up to the figure for all enterprises active abroad.

Source: KfW SME Panel 2012-2019

Figure 10: Cost drivers in international business inside and outside Europe



• Also or only active abroad outside Europe
• Only active abroad in Europe
Note: Share of internationally active enterprises for whose international business the respective cost type plays a large or very large role. Data for the year 2015. Figures extrapolated on basis of the number of enterprises.

Source: KfW SME Panel 2016

Lack of financing options hampers SMEs' international business

Against this background, business associations have repeatedly pointed out that many German banks have withdrawn from export finance and that it is hard to obtain debt capital particularly for smaller-scale export projects with an order volume of up to EUR 5 million. They argue that this puts German enterprises at a disadvantage in global competition. ¹²

Some of the enterprises regard the funding situation as problematic for international business too. A study conducted by IW Consult on behalf of KfW Research found that around 14% of SMEs see a lack of financing options as a major barrier to expanding business in other European countries. ¹³ A representative survey by the European Commission yielded similar findings. Some 15% of German SMEs that already have experience with exports rate the necessary financial investment as a significant obstacle. ¹⁴

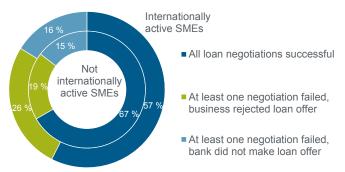
Empirical estimates based on survey data show that enterprises rate access to credit as difficult with a probability of 18% where the financing of projects abroad is concerned. The probability is significantly lower for other investments such as machinery, property or participations. ¹⁵ The results of the European SME Survey, in which more than 2,500 small and medium-

sized enterprises in five countries were interviewed in 2019, point in the same direction. On average, 15% of SMEs with cross-border business activities reported difficulties in accessing external finance – compared with only 7% of enterprises that operate exclusively in their domestic market. ¹⁶

Loan negotiations of internationally active businesses are more likely to fail ...

Failed loan negotiations reflect the financing difficulties perceived by SMEs. In the year 2018, some 500,000 small and medium-sized enterprises conducted loan negotiations with banks and savings banks to finance investment projects. Among them, the approximately 140,000 internationally active businesses were less successful overall. Only for 57% of internationally active SMEs did all negotiations end in a loan agreement. The success quota for SMEs that do not operate internationally was a significantly higher 67% (Figure 11).

Figure 11: Loan negotiations of internationally active SMEs were less successful



Note: Enterprises with successful loan negotiations as a percentage of all enterprises that conducted loan negotiations to finance planned or carried out investments in 2018 depending on whether they generated international turnover in 2018. Values extrapolated on basis of the number of enterprises.

Source: KfW SME Panel 2019

However, loan negotiations of internationally active SMEs are not much more likely to fail than those of other businesses because banks or savings bank deny them any request for credit. Rather, what is more common is for banks to present a loan offer the businesses then refuse because of unattractive terms and conditions. That is why the loan negotiations end unsuccessfully for around 26% of internationally active SMEs compared with 19% of businesses that trade exclusively in the domestic market.

... and so are their investment plans

At the same time, it can be observed that internationally active SMEs adapt their investment plans slightly more often than other businesses (Figure 12). Around 13% of them had planned investments in 2018 but eventually abandoned them. A further 23% of inter-

nationally active SMEs postponed, abandoned or at least partly reduced planned investments. Thus, more than one third of enterprises with international operations revised their investment plans but less than one quarter with solely domestic activities. It can be assumed that the investment projects of internationally active SMEs are more likely than average to be of relevance to their international business and that unsuccessful loan negotiations are one of the reasons for reducing, postponing or abandoning them. ¹⁷

Figure 12: Investment plans of internationally active SMEs are more likely to fail



Note: Enterprises that fully or partly reduced, postponed or abandoned planned investments as a percentage of all enterprises that planned investments in the year 2018 depending on whether they generated international turnover in 2018. Values extrapolated on basis of the number of enterprises.

Source: KfW SME Panel 2019

Economic risks from global trade conflicts and protectionism

In addition to structural problems such as financing barriers, the international business activities of German SMEs are also facing current challenges. Most recently, some 49% of small and medium-sized enterprises regarded growing protectionism and global trade conflicts as one of the main economic risks. Thus, SMEs are similarly concerned about the possible adverse impacts of rising trade barriers on the German economy as they are about the growing skills shortage, which 47% believe to be one of the most significant risks to growth and prosperity in Germany.

At present, the coronavirus and the measures adopted to slow the spread are likely to be seen as the key risk for the economy. Current forecasts assume a clearly negative impact on economic growth in Germany this year. However, that does not mean that global trade conflicts have been resolved and they will likely remain detrimental to international value chains in the future as well. For example, the partial agreement reached in the trade dispute between the US and China in mid-January leaves important questions unanswered, such as the subsidisation of Chinese state-owned enterpris-

es, which drew criticism from the US. These issues are to be addressed only in the next rounds of negotiations. And already the first partial agreement might end in failure if China is unable to fulfil its pledge to increase its imports from the US by USD 200 billion in the next two years because of travel and transport restrictions aimed at containing the coronavirus.

US-EU trade relations remain tense

The trade conflict between the US and the EU is still simmering. The EU responded to the tariffs imposed by the US on steel and aluminium imports from the EU in July 2018 with retaliatory tariffs on various products from the US. Since then, the US has threatened new tariffs on car imports from the EU. This is compounded by the dispute over state subsidies to the aircraft manufacturers Airbus and Boeing which has been ongoing at the WTO for some time. The US increased tariffs on aircraft from the EU from 10 to 15% as recently as in mid-March. Despite making some progress, the US-EU trade talks have not yet led to an agreement.

An escalation of the trade conflict with the US would also hit the German economy

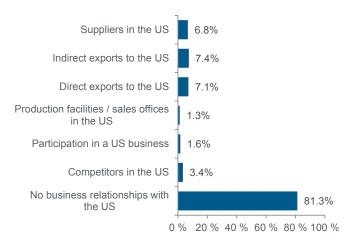
If the tariff dispute escalates further and trade relations between the US and the EU remain tense over a prolonged period of time, this is also likely to impact on export-oriented German industry. This would be all the more the case if the US were to impose further tariffs on car imports. With an export volume of some EUR 223 billion, automobiles and parts were the most important German export goods in 2019, EUR 27 billion of which was exports to the US. Simulation calculations suggest that an escalation of the US-EU trade conflict would cause Germany's gross domestic product to contract by as much as 0.7% compared with a situation without a trade dispute. Here, the growing economic uncertainty plays a major role as it adversely impacts businesses' investment activity. ¹⁹

One in five small and medium-sized enterprises do business in the US

Small and medium-sized enterprises could also be hit by the consequences of an escalating trade conflict. One in five of them have business relations in the US (Figure 13). Slightly more than 7% of the 3.81 million SMEs have customers there, meaning they export their goods and services directly to the US. Depending on which products are to be subject to a higher US tariff, they could be directly affected. Almost as high is the percentage of small and medium-sized enterprises that export their goods or services to the US indirectly through their customers in Germany and other EU countries. If export demand falls in the US as a result of a continued tariff dispute, this could also adversely im-

pact on demand for the inputs they generate through their value chain. Moreover, nearly 7% of Germany's SMEs have suppliers in the US. They could be hit by possible retaliatory EU tariffs in particular. Significantly fewer small and medium-sized enterprises maintain own production facilities or sales offices in the US or hold a participation in an enterprise in the US. For them, inputs imported from Germany or other EU countries could become more expensive if the tariff spiral should continue turning.

Figure 13: One in five German SMEs do business in the US



Note: Enterprises that do business in the US as a percentage of all enterprises. Multiple responses were possible. Figures extrapolated on basis of the number of enterprises.

Source: Special survey conducted as part of the KfW SME Panel in September 2019.

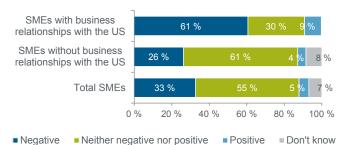
The share of German SMEs with business relations in the US is high particularly among large enterprises with 50 and more employees. Roughly 40 per cent of these enterprises have suppliers, customers or competitors there. Differences also exist between individual sectors. While a mere 1% of construction firms and 13% of wholesalers and retailers maintain business relations in the US, this is true of one in five enterprises in the service sector and one in four manufacturing firms.

One in three SMEs fear negative consequences of an escalating trade dispute

The SMEs most concerned about the possible escalation of the trade conflict between the US and the EU are indeed the ones that do business in the US. Around 61% expect adverse impacts on their business from an escalating tariff dispute (Figure 14). Only 30% expect their business operations to remain unaffected. However, a small proportion of SMEs even believe an escalation of the trade dispute can have a positive effect on their business. They mostly include SMEs whose main competitors are located in the US. If the EU extends the import tariffs it introduced as a retaliatory measure

in June 2018 to further products from the US, ²⁰ German manufacturers of such products could benefit from reduced competitive pressure.

Figure 14: Consequences of an escalating US-EU trade conflict



Note: Percentage of enterprises expecting an escalating US-EU trade conflict to have negative or positive consequences for their company depending on whether they have business relations with the US. Values extrapolated on basis of the number of enterprises.

Source: Special survey conducted as part of the KfW SME Panel in September 2019

However, one quarter of SMEs that have no customers or suppliers in the US also expect an escalating trade dispute to have negative impacts on their company. Their concern is likely to be driven primarily by the possible economic consequences of such a scenario. Six in ten SMEs without business relations in the US, on the other hand, do not expect any tangible consequences. So the overall picture is not exactly encouraging. A significant 33% of the approximately 3.81 million SMEs in Germany could be negatively impacted by an escalating US-EU trade conflict.

Outlook

The growth of German exports has weakened considerably since 2017 and is thus following a global trend. International turnovers of small and medium-sized enterprises have recently also grown less dynamically than in the previous years. Among other factors, this is due to uncertainty over Brexit and growing global trade conflicts that are having an impact even on the German SME sector.²¹

Given the global spread of the coronavirus, the outlook for global trade in the year 2020 is profoundly negative. China's exports plummeted by 17.2% in January and February 2020 on the first two months of the previous year as a result of the far-reaching measures adopted by the government to contain the spread of the coronavirus and imports declined by 4%. Even if the country appears to have passed the peak of the epidemic and many businesses are slowly resuming operations, the economic recovery is likely to take many more months.

At this stage, it is very hard to predict how long the

coronavirus crisis will continue in Germany and how severe the economic consequences will be. But there is a high probability of a deep recession in 2020 which will be on a par with that of the financial crisis of 2009. The decline in exports is likely to be significant around the world as a result of the shock-induced collapse in supply and demand. Just recently, the German Institute for Economic Research had forecast export growth of -0.7% in Germany for the year 2020 but this now appears much too optimistic given the spread of infections since then and tough containment measures adopted in many countries of Europe and around the world. In its Special Report, which was published at the end of March, the German Council of Economic Experts expects negative export growth of -4.4% in 2020, while the Spring Joint Economic Forecast of Germany's economic research institutes even predicts a drop of -10.9%.²²

Beyond its short-term impact, the coronavirus crisis could also transform international trade relations on a lasting basis. It is revealing the complexity and fragility of international value chains for many enterprises. If China experiences production shortfalls, this affects German SMEs, if not directly then at least indirectly and with a delay. However, a greater focus on regional value chains does not necessarily make enterprises more resilient. The growing spread of the coronavirus in Germany and Europe is also making this clear. Rather, broad geographic diversification is one of the main reasons that export-oriented enterprises in particular are more likely to survive in the long term. 23 But tapping into additional target markets involves high costs, as does greater geographic diversification in procurement and production. Even under the most favourable free trade and financing conditions, this is unlikely to be an alternative for many enterprises, especially for small businesses.

KfW SME Panel

The KfW SME Panel (KfW-Mittelstandspanel) has been conducted since 2003 as a recurring postal survey of small and medium-sized enterprises in Germany with annual turnover of up to EUR 500 million.

With data based on up to 15,000 companies a year, the KfW SME Panel is the only representative survey of the German SME sector, making it the most important source of data on issues relevant to the SME sector. As it is representative of all SMEs of all sizes and across all branches in Germany, the KfW SME Panel offers projections for even the smallest companies with fewer than five employees. A total of 10,222 SMEs took part in the current wave

Analyses of long-term structural developments in the SME sector are performed on the basis of the KfW SME Panel. It gives a representative picture of the current situation and the needs and plans of SMEs in Germany. It focuses on annually recurring information on companies' performance, investment activity and financing structure. This tool is the only way to determine quantitative key figures for SMEs such as investment spending, loan demand and equity ratios.

The basic population used for the KfW SME Panel comprises all SMEs in Germany. This includes private-sector companies from all industries with annual turnovers of up to EUR 500 million. The population does not include the public sector, banks or non-profit organisations. Currently there are no official statistics providing adequate information on the number of SMEs or the number of people they employ. In order to determine the population of SMEs for 2018 and the population of employees at SMEs in 2018, the German Company Register (Unternehmensregister) and the official employment statistics (Erwerbstätigenrechnung) were used as a starting point for the 2019 survey.

The KfW SME Panel sample is designed in such a way that it can generate representative and reliable data. The sample is split into four groups: type of promotion, branches, firm size as measured by the number of employees, and region. In order to draw conclusions on the basic population based on the sample, the results of the survey are weighted/extrapolated. The four main group characteristics are used to determine the extrapolation factors. These factors set the distribution of the net sample (in accordance with the four group characteristics) in relation to their distribution in the parent population. Two extrapolation factors are determined in total: an unlinked factor for extrapolation of qualitative parameters based on the number of SMEs in Germany, and a linked factor for the extrapolation factors of quantitative parameters based on the number of employees in SMEs in Germany.

The survey is conducted by the Financial Services Division of GfK SE on behalf of KfW Group. The project received expert advice from the Leibnitz Centre for European Economic Research (ZEW) in Mannheim. The main survey of the 17th wave was conducted in the period from 11 February 2019 to 21 June 2019.

You can find further information about the KfW SME Panel here.

¹ Cf. Borger, K. (2019): KfW-ifo SME Barometer 12/2019: **Despite minor bright spots at the end of the year, the road to a rebound is a long one**, KfW Research.

² For more on the export weakness in the euro area see also Schönwald, S. (2020): **Export weakness under the microscope: Where are the headwinds in the euro area coming from?**, Economics in Brief No. 192, KfW Research

³ Figures published by the Robert Koch Institute, retrieved on 14 April 2020, https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Fallzahlen.html.

⁴ Cf. Abel-Koch, J. (2016): **SMEs' value chains are becoming more international – Europe remains key**, Focus on Economics No. 137, KfW Research, and IW Consult (2016): Mittelständische Unternehmen in europäischen Wertschöpfungsketten (*SMEs in European value chains* – our title translation, in German only), study conducted on behalf of KfW Group, Cologne. This study covers small and medium-sized manufacturing businesses and business-related service providers with 20 to 499 employees.

- ⁵ For further information on the construction and interpretation of the KfW-ifo SME Barometer go to https://www.kfw.de/KfW-Group/Service/Download-Center/Research-(EN)/KfW-ifo-SME-Barometer-(EN)/. The overall indicator for March 2020 is expected to be published in April 2020.
- ⁶ Cf. Schwartz, M. (2018): KfW SME Panel 2018: No sign of letting up: SMEs are on a path of growth in Germany and abroad, KfW Research.
- ⁷ Cf. Abel-Koch, J. (2018): International trade in services German SMEs are active too, Focus on Economics No. 212, KfW Research.
- ⁸ Cf. Abel-Koch, J. (2017): **The world is not a village geographic proximity to export markets is crucial to SMEs**, Focus on Economics No. 182, KfW Research.
- ⁹ Cf. ibid.
- ¹⁰ Cf. Abel-Koch, J. (2017): **The happy few: German SMEs investing abroad**, Focus No. 183, KfW Research.
- ¹¹ Cf. Heismann, G. (2018): Mittelständler kommen nur schwer an Exportkredite (*SMEs have difficulty accessing export loans* our title translation, in German only), in Markt und Mittelstand, edition 02/2018.
- ¹² See inter alia Heismann, G. (2018): Mittelständler kommen nur schwer an Exportkredite (*SMEs have difficulty accessing export loans* our title translation, in German only), in Markt und Mittelstand, edition 02/2018, and Wocher, M. (2017): Kein Geld für Exporteure ('*No money for exporters'* in German only), Handelsblatt edition of 25 August 2017, p. 20–21.
- ¹³ Cf. IW Consult (2016): Mittelständische Unternehmen in europäischen Wertschöpfungsketten (*SMEs in European value chains* our title translation, in German only) loc cit. and Abel-Koch, J. (2016): SMEs' value chains are becoming more international Europe remains key, loc cit
- ¹⁴ On average across Europe, the share of small and medium-sized enterprises with experience in exports that rate the amount of financial investment necessary for exporting as a major obstacle is even 20%. See European Commission (2015): Internationalisation of small and medium-sized enterprises, Flash Eurobarometer 421.
- ¹⁵ Cf. Zimmermann, V. (2016): Business Survey 2016: **Financing climate better than ever financing purpose is major determinant of credit access**, KfW Research.
- ¹⁶ Cf. Abel-Koch, J., L. Al Obaidi, S. El Kasmi, M. Fernández Acevedo, L. Morin and Topczewska, A. (2019): **European SME Survey 2019: Going digital the challenges facing European SMEs**.
- ¹⁷ A causal relationship between credit rationing and export activities was established inter alia by Minetti and Zhu (2011). On the basis of survey data from Italian businesses, they used an instrumental variables approach to identify that credit rationed businesses are 39% less likely to export and that, under otherwise identical conditions, their export turnovers are around 38% lower than those of non-rationed businesses. See Minetti, R. and Zhu, S. C. (2011): Credit constraints and firm export: microeconomic evidence from Italy, Journal of International Economics, Vol. 83, p. 109–125. For a broad overview of empirical literature on the relationship between financing restrictions and exports see Wagner, J. (2013): Credit constraints and exports: a survey of empirical studies using firm level Data, University of Lüneburg Working Paper No. 287.
- ¹⁸ The German Institute for Economic Research recently forecast GDP growth of -0.1% for the year 2020, see Michelsen, C., Clemens, M., Hanisch, M., Junker, S., Kholodilin, K. and Schlaak, T. (2020): Deutsche Wirtschaft: Corona-Virus stürzt deutsche Wirtschaft in eine Rezession (*German economy: coronavirus pushes German economy into recession* our title translation, in German only), in DIW Wochenbericht 12/2020. This forecast is likely to be obsolete now. In a scenario calculation, the ifo Institute determined that the coronavirus crisis would cost the economy between EUR 255 billion and EUR 495 billion and reduce GDP growth by 7.2 to 11.2 percentage points if the German economy were to be shut down for two months.
- Cf. Dorn, F., Fuest, C., Göttert, M., Krolage, C., Lautenbacher, S., Link, S., Peichl, A., Sauer, S., Stöckli, M., Wohlrabe, K. and Wollmershäuser, T. (2020): Die volkswirtschaftlichen Kosten des Corona-Shutdown für Deutschland: Eine Szenarienrechnung (*The economic cost of the coronavirus shutdown for Germany: a scenario calculation* our title translation, in German only), ifo Schnelldienst 4/2020. In its Special Report, which was published at the end of March 2020, the German Council of Economic Experts expects GDP to contract by -2.8% on average across 2020, or by as much as -5.4% in the event of production shutdowns on a broad front or extended restrictive measures. Cf. German Council of Economic Experts (2020): Die gesamtwirtschaftliche Lage angesichts der Corona-Pandemie Sondergutachten (*The economic situation in the face of the coronavirus pandemic* our title translation, in German only).
- ¹⁹ Cf. Dullien, S., Stephan, S. and Theobald, T. (2019): Vom Zollscharmützel zum Handelskrieg Wieviel transatlantische Eskalation verträgt die deutsche Wirtschaft? (*From tariff tussle to trade war how much transatlantic escalation can the German economy take? –* our title translation, in German only) IMK Report 151. November 2019
- $^{20}\,\text{Vgl.}$ https://ec.europa.eu/germany/news/20180606-ausgleichszoelle_de.
- ²¹ Cf. Abel-Koch, J. (2019): **German SMEs divided over possible consequences of a hard Brexit**, Economics in Brief No. 185, KfW Research.
- ²² Cf. Michelsen, C., Clemens, M., Hanisch, M., Junker, S., Kholodilin, K. and Schlaak, T. (2020): Deutsche Wirtschaft: Corona-Virus stürzt deutsche Wirtschaft in eine Rezession (German economy: coronavirus pushes German economy into recession our title translation, in German only), loc. cit. German Council of Economic Experts (2020): Die gesamtwirtschaftliche Lage angesichts der Corona-Pandemie Sondergutachten (*The economic situation in the face of the coronavirus pandemic* our title translation, in German only) Joint Economic Forecast (2020). Wirtschaft unter Schock Finanzpolitik hält dagegen (*Economy under shock fiscal policy to the rescue* our title translation, in German only, Gemeinschaftsdiagnose 1/2020.
- ²³ For a discussion of this argument and a summary of the relevant empirical literature, see also Wagner, J (2011): Exports, imports and firm survival: first evidence for manufacturing enterprises in Germany, IZA Discussion Paper 5924.