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Introduction

The German American Chambers of Commerce (GACCs) and KPMG in Germany approached German subsidiaries in the US who are members of the GACCs to survey how they assess their current businesses, their opportunities and challenges and their future expectations in the US. The survey was conducted between October 30, 2019, and November 18, 2019, with a total of 177 companies taking part.

The United States of America and Germany are linked through close economic ties and strong bilateral cooperation. The US is the most important investment destination for German companies and will likely remain so in the coming years. It is also not surprising that the US market represents the biggest source of net sales and profits for German companies, exceeding even the Chinese market. It is thus of crucial importance to both countries that they work together to keep this close relationship healthy.

A positive growth trend is expected to continue into the new fiscal year: 96% of German companies anticipate growth for their own business in 2020 up from 91% of respondents in the previous year; 38% (prior year 39%) expect growth of more than 3%. However, German companies still face challenges regarding availability of skilled workers and digitalization progress. The impact on all aspects of their business is getting stronger. German companies will more than likely continue to invest more in research & development (R&D) in their US operations and particularly in start-ups.

German businesses remain essential players in the US market, functioning as a significant growth motor for many industries ranging from automotive to wind energy. Additionally, German companies employ almost 700,000 workers and have invested almost half a trillion USD in the United States to date.

We would like to thank the participating German companies for sharing their views for this year's German American Business Outlook (GABO) and hope that this report assists you in growing your business.

Yours sincerely,

Peter Riehle

Chairman, GACCs

Andreas Glunz

Managing Partner, International Business, KPMG in Germany

Executive Summary



Growth expectations

In last year's German American Business Outlook, an impressive 91% of companies surveyed reported that they expected their business to grow in the following year. This year, the figure increased even more, with 96% now expecting growth in the next year. This optimism is based on a solid US economy and the positive outlook of German businesses in the US (Figure 10).



US market matters

More than one out of three German companies surveyed (38%) reported that their US operations generate more than 20% of their group sales and 20% of their total group profits after taxes (33%). More than one-fifth (21%) reported that their US operations account for even more than 50% of group sales and profits. US operations are, therefore, extremely important for German companies (Figure 3).



Profitable businesses

93% of respondents reported generating positive profits after taxes, while 25% reported that they generated more than 10% profit after taxes in relation to net sales in the US (Figure 8).



Diverse views on future investment plans

More than one fifth of all German companies surveyed (21%) intend to invest more than 10 million USD over the next three years, while nearly half intend to invest less than 1 million USD (34%) or nothing (15%) (Figure 14). Two main reasons for investments in the US are to better meet customer demand and to improve proximity to their customer base (Figure 16).



Focus on organic growth

More than four out of five German subsidiaries surveyed (81%) are focused primarily on organic growth in their existing locations and business fields to expand their business. This has remained nearly unchanged in comparison to their 2019 forecast. More than one-third (36%) plan to enter into new business fields, and even fewer (23%) plan to enter into new countries, whereas only 14% intend to pursue mergers and acquisitions (Figure 17).



Availability of skilled workers limits growth plans

A lack of skilled workers is the number one overall economic challenge for 56% of all respondents. The situation will become increasingly acute, as 51% of companies surveyed intend to increase their workforce by at least 5% in 2020 and 86% intend to do so by 2025 (Figures 18-20).



Increased R&D in the US yet hesitant reliance on start-ups

An inspiring 41% of German companies will increase their US R&D in 2020, up from 29% last year. But only 30% use start-ups in the US as accelerators for their business. If companies do use start-ups, they usually have fewer than 3 investments in start-ups. More than half of the German companies (52%) follow established ways and collaborate with universities (Figure 22-24).



Digitalization changes everything

The impact of digitalization is being felt in all aspects of business. The surveyed companies responded overwhelmingly that digitalization has greatly or to some extent impacted their internal processes (77%), customer offerings (74%), interactions with suppliers and service partners (69%) and employees (66%) as well as their entire business models (63%) (Figure 25).



Digital innovation not yet widely in use

Although cloud computing is being utilized widely by German subsidiaries in the US (67% of surveyed companies), virtual reality (32%), Industry 4.0 (31%) and artificial intelligence (21%) lag far behind (Figure 27).



Data protection as key challenge of digitalization

Data protection is the the number one challenge caused by digitalization for 57% of surveyed German subsidiaries in the US (Figure 28).



German headquarters grant comprehensive decision-making rights to their US subsidiaries

Decision-making in all operative matters, i.e., distribution, HR, sales planning, tax optimization and production, is predominantly conducted locally. The German headquarters of companies operating in the US remain involved in strategic topics, investment planning and to some extent compliance issues (Figure 11).



The US as base for North America

About half of the respondents use their US base to serve Canada (58%) and Mexico (42%). However, only 13% and 9% use their US subsidiary to serve the two largest South American countries, Brazil and Argentina, respectively (Figure 12).

01 Fconomic Relations between Germany and the US

Key economic figures

Germany and the US are important players in terms of global economic performance, accounting for almost 30% of global gross domestic product (GDP) and almost 20% of global trade. The economic growth of both nations has continued for years. This – coupled with lively trade relations between these two powerhouses - has contributed significantly to the high standard of living enjoyed in both countries.



Economic growth in Germany is declining. The 2018 figure for GDP growth in the US of 2.9% clearly exceeded that of Europe and Germany at 2.2% and 1.5%, resp. The German government, via the Macroeconomic Policy Institute (IMK), forecasts a further decline of between 0.5% and 1% for 2019. Nevertheless, economic growth in 2020 is currently expected to range between 1.3% and 1.8%.



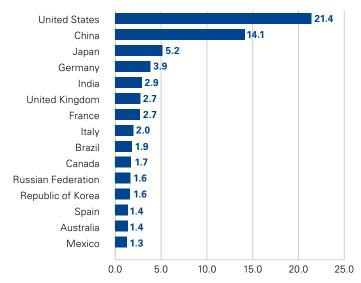
German foreign trade is heavily dependent on the US. In 2018, Germany imported about half as many goods from the US as it exported across the Atlantic. This puts Germany in fifth place among the most important US sales markets, while the US continues to be the most important sales market for German products.

Source: Bundesbank: IWH (Halle Institute for Economic Research)

Germany and the US as drivers of the global economy

With a GDP of just over 21 trillion USD, the US is by far the world's largest economic power, with China trailing far behind at 14.1 trillion USD.1 America's growth rate in 2018 of 2.9% surpasses that of the EU. In the EU-27 (excluding the UK), this rate was only 2.2% in 2018. In particular, the service sector has been an enormous driver behind the dynamic development of US GDP, accounting for approx. 80% of this figure, while the industrial sector makes up a comparatively small share at only 20%.2

Figure 1: **GDP in 2018**



Source: IMF; World Economic Outlook (October 2019); figures in trillion USD.

Key US economic data - historical and outlook

Capital: Washington, D.C. Total area: 9,833,520 km² Population: 327,167,434

The table shows an overview of key economic data for the US. It includes both actuals for 2018 and the US economic forecast for 2019 and 2020. It is published by the Congressional Budget Office.

	2018	2019 Forecast	2020 Forecast
Real GDP (in USD bn)	18,567	19,043	19,446
Real GDP Growth (%)	2.9	2.6	2.1
Unemployment Rate (%)	3.9	3.7	3.7
Employment Cost Index (ECI), Private Wages and Salaries (Index: December 2005=100)	133.4	137.6	142.4
Population, 16 years or older (in millions)	257.8	259.1	261.2
10-Year Treasury Note (in %)	2.9	2.3	2.2

Source: Congressional Budget Office (CBO), August 2019.

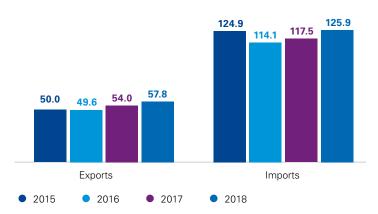
¹World Bank.

²German Federal Statistical Office (Statistisches Bundesamt), 2019.

Exports from Germany to the US

As a net exporter dominated by industry, Germany plays an important role in US trade and was the fifth most important supplier to the North American economy in 2018 after China, Mexico, Canada, and Japan. German vehicles, machinery, and chemical products, in particular, are imported into the US in significant numbers. In 2018, the US imported a total volume of 125.9 billion USD from Germany3, which equals about a guarter of that imported from China, the biggest exporter to the US. The import volume from Germany continues its upward trend of the past few years.

Figure 2: **US trade in goods with Germany**



Source: United States Census Bureau; Foreign Trade; figures in billion USD.

German imports from the US

In 2018, at 58 billion USD, the volume of US goods and services imported by Germany is well under half that of goods and services that are exported from Germany to the US. In contrast, Germany imports 106 billion euros worth of goods from China.

In an EU comparison of the most important sales markets for US goods and services. Germany ranks second behind the United Kingdom (UK)⁴ and sixth worldwide (behind Canada, Mexico, China, Japan and the UK). The US is the fourth largest supplier of goods to Germany after China, the Netherlands and France.⁵

^{3,4,5} German Federal Statistical Office (Statistisches Bundesamt), 2019.

02 Investment Status

By the end of 2017, nearly 4,600 companies with German majority shareholders were located in the US and realized a total revenue of over 480,000 million EUR in that fiscal year. In other words, 15.7% of all German entities in foreign countries were located in the US and responsible for 20.5% of revenue realized by German entities in foreign countries worldwide. This underlines once again the particularly important role of the US market for German companies.

Number and revenues of German entities in foreign countries

Number of companies	2014	2015	2016	2017
US	4,010	4,568	4,577	4,586
United Kingdom	1,710	1,767	1,763	1,726
France	1,835	1,845	1,848	1,722
PR China ⁶	1,547	1,646	1,688	1,716
Netherlands	1,373	1,374	1,489	1,499
Total	27,547	28,528	28,952	29,143
Total sales	2014	2015	2016	2017
US	430,921	502,145	518,706	482,495
United Kingdom	178,902	193,667	219,422	228,125
PR China ⁷	151,442	162,245	170,874	185,804
France	122,057	127,440	132,368	137,979
Italy	77,394	79,738	84,459	87,109
Total	2,020,515	2,162,166	2,313,211	2,350,217

Source: Deutsche Bundesbank (central bank of the Federal Republic of Germany), outward foreign affiliates statistics (outward FATS), November 2019; figures in million EUR. 6,7 excluding Hong Kong.

German companies are strongly present in the US market, and they continue to invest in their US subsidiaries. Foreign direct investment (FDI) is a key indicator of this fact. German FDI in the US was at 26.8 billion USD in 2018 - the highest amount since 2014. By the end of 2018, the steadily growing number of German subsidiaries in the US had invested a

cumulative total of 474 billion USD, which makes the US the second most important destination for German FDI. Most FDI goes into the manufacturing industry and small- and medium-sized enterprises. German FDI accounts for 10.9% of all foreign direct investment in the US, making Germany the United States' fourth largest source of FDI in 2018.8

German FDI in the US9

	2014	2015	2016	2017	2018
Position	327,995	356,982	371,148	405,552	474,472
Flow	37,121	25,353	14,931	11,899	26,795

^{8,9} Bureau of Economic Analysis, July 2019; figures in million USD.

Note:

Position - Snapshot of cumulative FDI taken at year end by the ultimate beneficial owner (i.e., entity at the top of an affiliate's ownership chain). Flow – FDI coming into country for the financial year from January 1 to December 31.

German FDI in selected countries worldwide, 2018¹¹

Biggest sources of FDI in the US, 2018¹⁰

Position 2018 Share Rank Flow 2018 Rank Market Country ot total 1 United Kingdom 13.7% 1 27.329 597.219 Netherlands 2 2 **USA** Canada 588,399 13.5% 20,424 3 11.2% 3 Ireland 19,584 488,714 Japan 4 Germany 474,472 10.9% 4 Luxembourg 15,338 5 Ireland 385,322 8.9% 5 Spain 6,699 6 Sweden 6 France 326,437 7.5% 5,568 7 Netherlands 7 288,144 5.3% Austria 4,950 8 Switzerland 222,491 5.1% 8 France 3,850 9 Belgium 84,661 1.9% 9 Italy 3,713 Russian Federation 10 Spain 76,380 1.8% 10 3,265 11 Australia 71,460 1.6% 11 Switzerland 3,104 12 Bermuda 60,750 1.4% 12 Czech Republic 2,228 13 China 60,182 1.4% 13 Belgium 1,883 South Korea 14 1.3% 14 Poland 1.824 57.623 15 Sweden 55.424 1.3% 15 Mexico 1.616

Source: Bureau of Economic Analysis, July 2019; figures in million USD.

Position - Snapshot of cumulative FDI taken at year end by the ultimate beneficial owner (i.e., entity at the top of an affiliate's ownership chain).

Source: Deutsche Bundesbank (central bank of the Federal Republic of Germany), July 2019; figures in million EUR.

Flow – FDI coming into country for the financial year from January 1 to December 31.

¹⁰ Note:

German companies are indicating their willingness to invest in the US by not only expanding and strengthening existing operations, but also by establishing new locations, sales and service offices or manufacturing facilities. In a 2018 nation-by-

nation comparison, German companies initiated the secondhighest number of projects (after the United Kingdom), spent the highest capex and created the most additional jobs (over 18,000) through greenfield investments in the US.

2018 Greenfield investments in the US by selected countries worldwide

Source Country	Projects	Сарех	Capex avg.	Jobs created	Avg. jobs	Companies
United Kingdom	271	6,553.1	24.2	17,592	64	225
Germany	207	7,907.0	38.2	18,108	87	157
Japan	146	7,175.5	49.1	17,234	118	125
France	120	5,415.9	45.1	12,408	103	95
Canada	112	4,739.8	42.3	9,478	84	96
China	112	6,338.3	56.6	13,567	121	88
Switzerland	75	1,195.1	15.9	3,964	52	43
Spain	56	3,403.5	60.8	3,681	65	45
Netherlands	52	1,593.3	30.6	4,147	79	40
India	51	2,425.5	47.6	10,206	200	43

Source: fDi Markets, from the Financial Times Ltd, November 2019, Data for companies investing in the US between January 2018 and December 2018, Capex figures in million USD.

German companies ranked well compared to other significant economies in the world in terms of large M&A deals. Particularly noteworthy were the acquisition of Monsanto by Bayer in September 2016, the takeover of software company Qualtrics by SAP, and the acquisition of building materials manufacturer USG Corp. by Gebr. Knauf KG, both occurring in 2018. The biggest deal in 2019¹² was German Merck's acquisition of chemical company Versum Materials, Inc.

Major acquisitions of US companies by German companies¹³

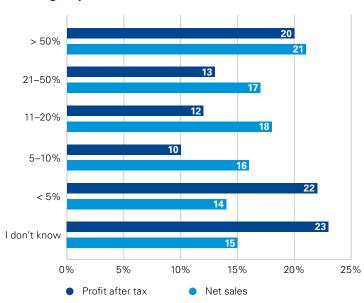
	2016	2017	2018	2019*
Number of deals	6	18	15	19
Deal value	67.7	5.2	15.9	10.8

Source: ThomsonOne, November 2019, deal value in billion USD, classified by the announced date, transactions are considered that were announced before November 28, 2019.

As the world's largest economy, the US plays a major role for the surveyed German groups with subsidiaries in the US. US operations generate more than 20% of total group sales for 38% of the German companies surveyed, and US operations generate more than 20% of total group profit after taxes for 33% of respondents. Even more significant, for more than

one fifth (21%) of companies surveyed, US operations account for more than 50% of total group net sales and total group profit after taxes (20%). It's clear that German companies consider the US to be one of their most important markets.

Figure 3: What is the percentage of net sales and profit after tax generated by your US operation for the overall group?



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=147.

^{12, 13} Note: "Major acquisitions" is defined as completed M&A deals with a published and minimum deal value of 5 million USD.

In comparing the US with China, the second most significant region for German groups globally, a recent survey conducted by KPMG in Germany and the German Chamber of Commerce in China (German Business in China – Business Confidence Survey 2019/20) revealed that net sales and profit after taxes generated from German companies' US operations far exceed those from their respective Chinese operations.

When comparing these survey results of German companies in the US with a recent survey of US companies in Germany done by KPMG in Germany (US-Business in Germany 2020), one sees that each country considers the other country's market as having equal importance.

The previous comparisons demonstrate that the US, Chinese and German economies are closely linked, dominate industries worldwide and now, more than ever, power global markets.

Figure 4: What is the percentage of net sales and profit after tax generated by your China operation for the overall group?

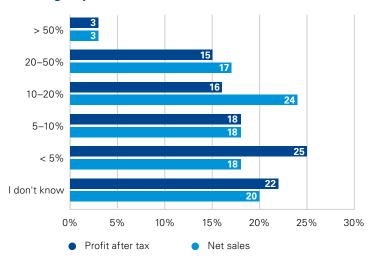
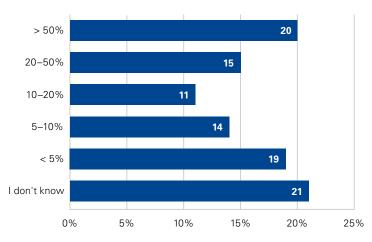


Figure 5: Percentage of net sales generated by German operations for the total US group



Source: KPMG in Germany and German Chamber of Commerce in China 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=453.

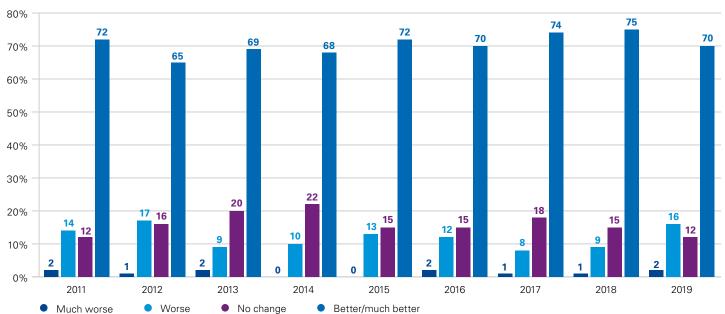
Source: KPMG in Germany, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=100.

03 Business Conditions and Development

With a projected real GDP growth of 2.1% in 2019 and 2.1% in 2020, the US is outperforming the EU (1.1% in 2019 and 1.2% in 2020).14 The US continues to offer German companies solid growth opportunities for 2020.

The projected growth in sales of our surveyed companies was not, however, as positive as the projected economic growth for the US as a whole. After three years of steady increases in the number of respondents reporting revenue growth, the survey results for 2019 showed that this number is returning to its long-term average. The percentage of companies with increasing sales volumes decreased from 75% in 2018 to 70% in 2019. The share of companies surveyed with declining sales volumes in 2019 in comparison to 2018 almost doubled from 10% in 2018 to 18% in 2019. This development indicates that the overall economic situation of German companies in the US has deteriorated - at least it has for some individual industries.

Figure 6: Sales volume development

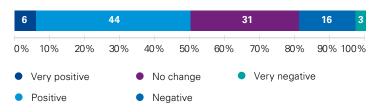


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=165.

¹⁴ Congressional Budget Office (CBO), August 2019/European Commission, November 2019.

Not every company surveyed was able to convert revenue growth into increased profitability after taxes. 50% of the participants reported positive or even very positive development in profitability in 2019 when compared to 2018. On the other hand, almost every fifth company (19%) posted a decline in its profit after tax.

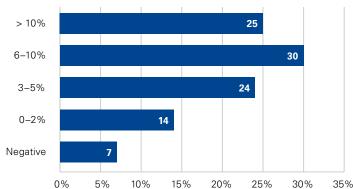
Figure 7: Change of profit after taxes 2019 vs. 2018



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=133.

Nevertheless, the levels of profitability that were achieved are noteworthy, as 93% of companies surveyed stated they generated profits after taxes, with one-fourth of all surveyed companies reporting a ratio of profit after taxes in relation to net sales of more than 10%. However, this in turn has left 7% of companies surveyed reporting negative margins.

Figure 8: Level of profit after taxes in relation to net sales in the US

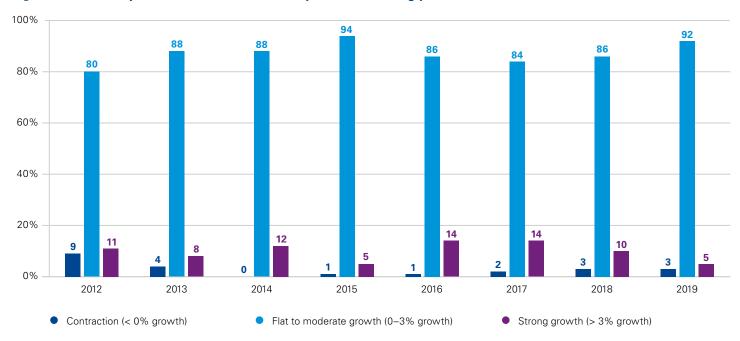


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=116.

As was the case in the 2018 outlook for the following year, German subsidiaries now have similarly positive expectations for growth for 2020. This year, an impressive 97% of companies surveyed anticipate flat to strong growth for the US economy in 2020. However, the percentage of companies expecting strong growth of more than 3% for the following year has halved from

10% in 2018 to 5% in 2019. Unchanged from the previous year, only 3% of the companies surveyed are expecting a contraction of the US economy. Our detailed analysis of the results show that 77% of participants with a moderate growth expectation for 2020 of between 1-3% actually reached the forecasted real GDP growth of 2.1% for 2020.

Figure 9: Growth expectation for the US economy for the following year

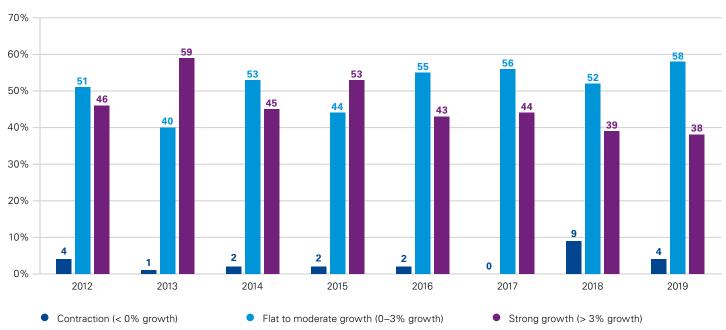


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=173.

The companies surveyed this year have higher expectations for growth for their businesses in 2020 than they did in 2018 with respect to the following year. While the percentage of German companies expecting strong growth of more than 3% remained at an almost unchanged level of 38% (prior year

39%), more companies are expecting flat to moderate growth of up to 3% (58% in 2019 versus 52% in the previous year), whereas the percentage of companies expecting their business to contract has more than halved from 9% in 2018 to just 4% in 2019.

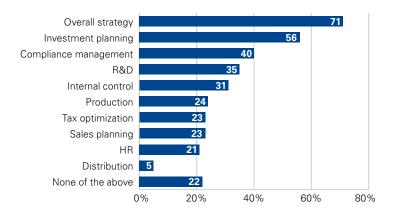
Figure 10: General expectation for own business in the following year



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=172.

Corporate headquarters in Germany appear to give their US-based subsidiaries a relatively high degree of freedom in decision-making and action with respect to their operating processes. German headquarters are seldom involved in distribution (5%), HR (21%), sales planning (23%), tax optimization due to local regulations (23%) and production (24%). The German headquarters are, however, more actively involved in compliance topics (40%) and internal control (31%) of their US operations. Moreover, 71% of German headquarters maintain most of the control over strategic decision-making, and 56% maintain control over investment planning, with one-third of corporate HQs involved in R&D (35%) due to its strategic relevance.

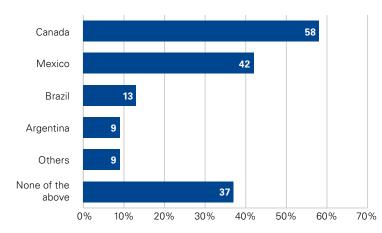
Figure 11: Involvement of German headquarters in business decisions of US operations



Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, n=141.

Our survey shows that German companies predominantly use their US presence as their strategic base for the NAFTA region, with 58% using their US operations to serve markets in Canada and 42% to serve Mexico. Brazil and Argentina follow far behind with 13% and 9% of surveyed companies serving these countries via their US operations. It is noteworthy that 37% of the US subsidiaries surveyed are responsible for the US market only.

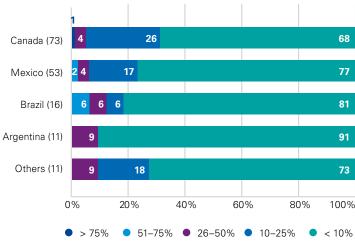
Figure 12: For which countries in North/South America are your US operations responsible?



Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, n=132.

These US operations account for a share of sales in these other countries that is far below the amounts that are generated in the US.

Figure 13: Share of overall net sales in those countries

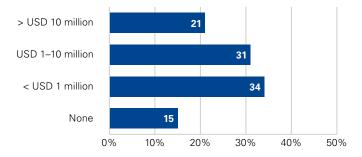


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, "n" is shown individually by country.

04 Investment Plans

Our survey shows that 21% of respondents are planning investment in the US market of more than 10 million USD over the next three years. However, 34% of the German companies reported that they intend to invest amounts of less than 1 million USD or even nothing at all (15%) over the next three years.

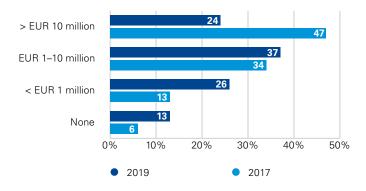
Figure 14: Amount of planned investment by German companies in the US over the next three years



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=146.

Another KPMG in Germany survey, conducted in 2019, indicates in turn that one-fourth of US subsidiaries in Germany intend to spend more than 10 million EUR in Germany over the following three years, which is a sharp decline in willingness indicated in responses received in 2017.

Figure 15: Amount of planned investment by US companies in Germany over the next three years

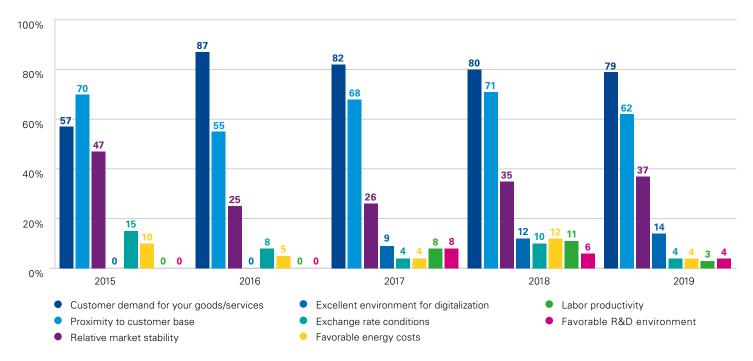


Source: KPMG in Germany 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=46 (2019); n=32 (2017).

Investment reasons

Almost four out of five companies (79%) state that meeting "customer demand" is the primary reason for their US investment. "Customer proximity" was ranked second (62% of companies), decreasing in importance for the first time since 2016. Apart from these two customer-driven investment reasons, "market stability" gained in importance, with 37% of companies reporting this as a reason for investment, up 2% from 2018. 12% of companies chose "favorable environment for digitalization" in the US as their reason to invest in 2018, and 14% stated this in 2019. All other reasons were of limited relevance.

Figure 16: Top reasons for current and future investment in the US relative to other world markets



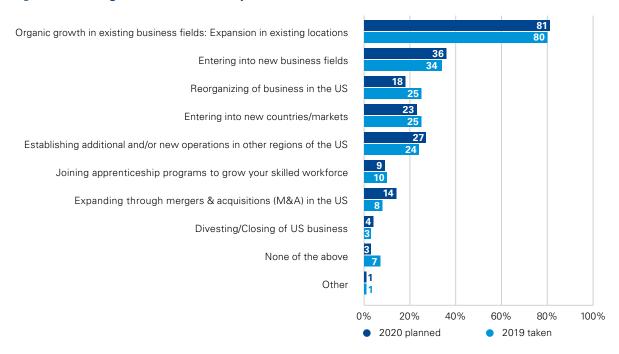
Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, n=139.

Investment areas

Four out of five German companies in the US are focusing on organic growth in their existing locations in order to achieve their goals in 2020. In 2019, 80% of all respondents focused on organic growth as their main strategic action, and 81% plan to do so for 2020 to encourage growth in their companies. Every third company (34%) entered into new business fields in 2019.

and 36% have plans to do so in 2020. Roughly one out of five companies surveyed intend to reorganize their US businesses (18%) in 2020, and one out of four (23%) intend to enter into new countries and/or markets or establish operations in other US regions (27%). Just 14% of the German subsidiaries surveyed plan to expand through mergers & acquisitions (M&A).

Figure 17: Strategic actions taken and planned



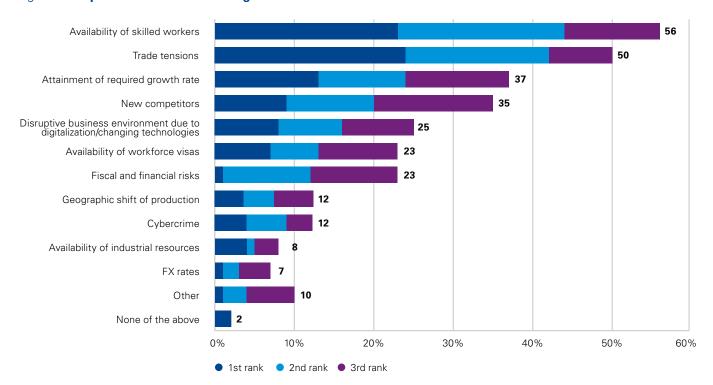
Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, n=159.

05 Economic Challenges

The surveyed companies reported that the biggest economic challenges facing their businesses in 2020 are the availability of skilled workers and trade tensions, with 56% and 50% respectively. Roughly one-third named reaching their growth

targets (37%) and the appearance of new competitors (35%) as one of their three biggest challenges in 2020, one-fourth (25%) reporting the disruptive business environment caused by digitalization.

Figure 18: Top three economic challenges to business in 2020

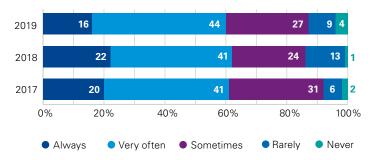


Source: KPMG in Germany and GACCs, 2019, figures in percent, ranking question, n=139.

06 Availability of Skilled Workers

Each month, the US economy creates thousands of jobs, continuing a recovery that began more than 100 months ago. The unemployment rate has fallen to the historic low of 3.5-3.6%. Generally, job creation of 100,000 a month is sufficient to keep pace with population growth. The US labor market is evolving from an employer market to a labor market. This makes the increasing challenge of finding skilled workers even more pressing. The approx. 700,000 US workers that are employed by US affiliates of majority German-owned companies comprise almost 10% of all US workers employed by foreign-owned companies.15

Figure 19: Frequency of difficulty in attracting skilled labor

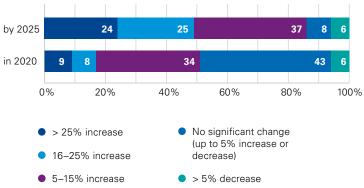


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=124.

Finding skilled workers is the biggest economic challenge for German companies in the US. Despite continuous efforts in workforce development, only 13% of companies surveyed stated that they never or rarely face difficulties in attracting qualified US talent to fill vacancies, which is consistent with 2017 and 2018. This underscores the continued need to create pipelines of qualified employees, particularly through apprenticeship programs, an activity the US market in general is increasingly pursuing to ease this skills bottleneck.

Positive sales developments in recent years and ambitious growth targets have resulted in additional demand for a qualified workforce. In 2020, more than every second company surveyed (51%) plans to increase its workforce by at least 5%. By 2025, well more than four in five (86%) expect this increase in their number of employees. As such, this challenge is expected to continue in the coming years.

Figure 20: Change in number of employees expected in 2020 and by 2025



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=125 for 2020; n= 126 for 2025.

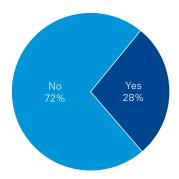
¹⁵ Bureau of Economic Analysis (BEA), 2019.

"Apprenticeship programs, such as MAT² in Michigan, not only help us to grow our workforce and face the transformation of automotive manufacturing in North America as well as tackle the challenges of the Fourth Industrial Revolution (4IR), but also have proven to be an inspiration for our employees. They enable our young employees, as they enter the workforce, to learn and create a foundation for their career in an inspiring setting such as our apprenticeship center. At the same time, our current employees are able to pass on their experience and knowledge to the next generation."

Arnd Herwig

Vice President Development/ Brose North America, Inc. In order to close the skills gap, 28% of German companies surveyed have started apprenticeship programs to create a pipeline of qualified workers. For smaller and medium-sized enterprises, in particular, so-called "consortiumstyle programs" offer cost-effective ways to grow their own workforce. Together with local community colleges, companies are training apprentices in company-specific tasks to meet international industry standards, saving on recruitment costs and increasing employee retention. The GACCs offer full apprenticeship programs to German, US and international companies as well as targeted consulting and certification services at German industry standards.

Figure 21: Does your business currently participate in/offer any dual education or apprenticeship programs in the US?



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=124.

07 Research & Development: Innovation through Cooperation

According to the UNESCO Institute for Statistics (UIS), both the US and German economies belong to the Top 10 R&D spenders in the world, with Germany ranking ninth at 2.9% of GDP, one position ahead of the US at 2.7% of GDP spent on R&D. Foreign-owned subsidiaries make up just under one fifth of total R&D expenditure in the US. German subsidiaries in the US have around 29,000 employees in R&D and budgets of 7.8 bn USD for R&D. This accounts for nearly 13% of all R&D spending by foreign-owned companies in the US.¹⁶

Although R&D is a key activity of each group's headquarters, companies are increasingly investing in additional R&D departments in their respective local markets. 41% of the surveyed German companies state that they conduct R&D in the US, a sharp rise from the 29% reported in the previous year.

Cooperation with external parties provides an additional opportunity to foster innovation and acquire new technologies for German firms in the US. Quite similar to 2018, most of the 41% of the companies conducting R&D in the US collaborate with universities and colleges (52%), start-ups (30%) and large tech companies (20%) in their efforts to innovate. However, 26% (2018, 22%) of all companies doing R&D in the US still do not collaborate with partners at all. Other partners include institutes, suppliers, vendors and customers.

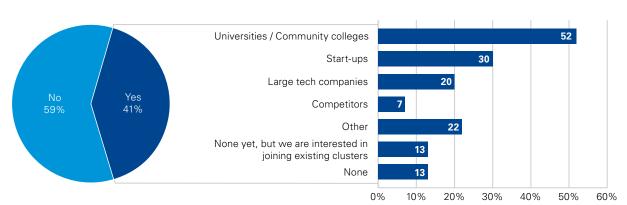


Figure 22: R&D activities in the US and collaboration with external parties

Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, "n=113 having answered re "Conducting R&D in the US; n= 46 having answered re "Collaboration Partner".

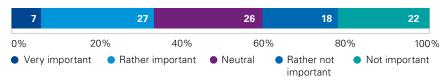
¹⁶ Bureau of Economic Analysis (BEA), 2019.

"Digital transformation will change all our industries more in the next five years than in the past five decades. The flexibility and resources of the US market make it a prime location to test new business models for reaching customers based on their changing preferences. Whatever the technological path, the guiding star for success in this environment will always be the customer experience."

Klaus Zellmer President & CEO, Porsche Cars North America, Inc.

Businesses are faced with constant evolution and disruption due to significant changes in customer behavior, technology and processes. To overcome this, more companies are establishing corporate innovation groups and seeking new paths to innovate and commercialize, both internally and across company borders. Approximately one third (34%) of the subsidiaries surveyed consider start-ups an important accelerator for their businesses. In stark contrast, however, 40% of German subsidiaries still consider start-ups in the US to be of minor importance for sparking innovation and fostering commercial success.

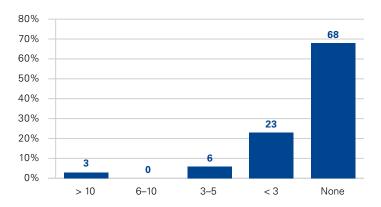
Figure 23: Importance of start-ups in the US as an accelerator for business



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=114.

One in every three German companies (32%) holds at least one investment in a US start-up, while the majority of companies have fewer than three such investments. Only a small group of participants (3%) have investment in more than 10 start-ups.

Figure 24: Number of investments in start-ups in the US



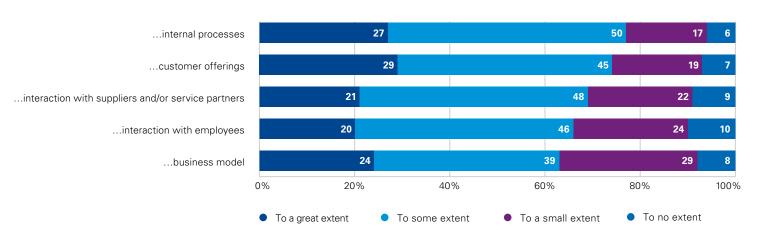
Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=104.

18 Digitalization: Shaping the Digital Transformation

The world is increasingly digitized. Digitalization no longer affects only traditional IT companies; it affects companies across all industries and sectors. Technological developments are fast-paced and transforming the way decisions are made, how goods are constructed and produced, and how products and services reach the market. While digital transformation is creating new products and services, it is also disrupting traditional market logic. As the impact of digitalization on companies and their everyday business continues to increase, no company can escape its reach.

The companies surveyed are aware of the impact on all core aspects of their business. Digital transformation has had a great or some impact on the internal processes of three out of four (77%) German companies surveyed, and 74% reported it affected the manner in which customer offers are made. More than two out of three reported that digitalization was affecting interaction with suppliers and/or service partners and interaction with employees (69% and 66% respectively). Last but not least, 63% stated that it was affecting their company's entire business model.

Figure 25: Impact of digitalization on the company's

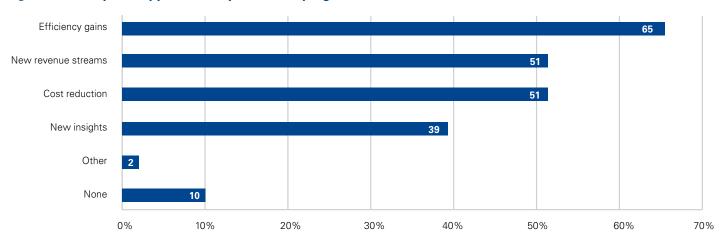


Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, "internal processes" n=121; "customer offerings" n= 124; "interaction with suppliers and/or service partners" n= 123; "interaction with your employees" n= 123; "business model" n= 123.

In order to better understand the impact of digital transformation, we asked the participants which opportunities they anticipate as a result of it. Almost two out of three German companies surveyed (65%) reported that they expect gains in efficiency from digitalization projects. More than every second respondent anticipates new revenue streams (51%) and cost reductions (51%), and 39% expect promising new insights through data analysis and algorithm use. However, it should not be overlooked that 10% of the companies surveyed still see no opportunities in digitalization.

A significant majority of the German companies in the US (67%) are already using cloud computing applications and almost one in five (18%) expect to adopt their use within the next five years. Nevertheless, use of other digital innovations appears to be less frequent. Just one out of three respondents use virtual reality applications (32%) and Industry 4.0 technologies (31%) such as IoT-driven technologies, augmented decision making and advanced automation, while a mere one out of five (21%) use artificial intelligence applications.

Figure 26: Anticipated opportunities presented by digitalization



Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, n=136.

Cloud Computing Virtual Reality 32 15 31 Industry 4.0 Artificial Intelligence (AI) 21 15 38 40% 60% 0% 20% 80% 100% In use today Expected adoption in 1-2 years Expected adoption in 3-5 years Not planned yet

Figure 27: What digital innovations apply to your company?

Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, "Cloud Computing" n=123; "Virtual Reality" n= 115; "Industry 4.0" n=97; "Artificial Intelligence" n= 110.

Artificial Intelligence in Germany

The fact that the predominant number of patent applications in Germany relate to AI technologies shows how essential this field of research has become to German industry. In a 2019 survey, 75% of companies in Germany stated that AI will be the most important technological trend for years to come. According to a survey by the industry association Bitkom, one in every eight of the 555 German industrial companies surveyed already use Al applications as part of Industry 4.0. 28% found Germany to be second behind the US in terms of expanding Industry 4.0, putting Germany ahead of world leaders in Al like Japan, China and South Korea.² Our survey "US-Business

in Germany 2020"3 published in December 2019, shows, however, that German subsidiaries with a US parent see investing in the use of data & analytics or artificial intelligence over the next three years as only a medium priority. On a scale from 0 (no priority) to 10 (extremely urgent), the average amongst these companies was only 4.4. Moreover, 24% indicated that they gave no or very little priority to investment in AI and large-scale data analysis.

¹ Survey on technological trends in retail in Germany 2019, EHI Retail Institute.

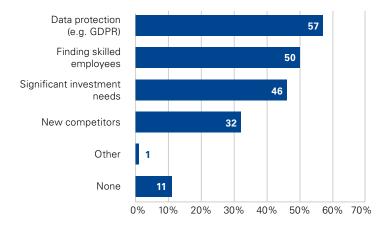
²Bitkom Study 2019 Industry 4.0, CIOf.

³ Please download report under: www.kpmg.de/usbusiness-ger.

There are legitimate reasons for some companies not jumping on the digital bandwagon, as every transformation brings opportunities as well as challenges. The advantages and opportunities of digitalization can, however, outweigh the challenges.

With growing digital use comes an increasing need for more data protection. Our survey reveals that 57% of the respondents anticipate data protection to be the number one challenge of digitalization. Many companies are concerned about data protection when working with sensitive data collected and held by innovative data & analysis tools. Legal restrictions regarding the use of personal data and data security issues are of particular concern. For every second company (50%), finding skilled workers to plan, implement and control digitalization projects is a challenge. Almost half of the surveyed companies (46%) assess investment needs for digital projects as another significant challenge.

Figure 28: Expected challenges of digitalization



Source: KPMG in Germany and GACCs, 2019, figures in percent, multiple choice question, **n=136**.

About GDPR

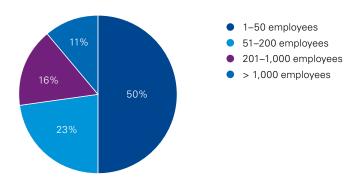
The EU put new regulations for data protection into effect on May 25, 2018, by means of the General Data Protection Regulation (GDPR). It forces a completely revised data protection regime and specifies the implementation of a data protection management system in terms of re-evaluating previous responsibilities, processes and measures with a specific emphasis on risk analysis, conception and transparency.

09 Survey Methodology and Profile of Surveyed Companies

The German American Chambers of Commerce (GACCs) and KPMG in Germany approached German subsidiaries in the US from the GACCs network for this survey. The survey was conducted between October 30, 2019 and November 18, 2019, with a total of 177 companies taking part. Some companies who participated did not complete

the questionnaire. We used the maximum evaluable database and have individually named the underlying database (n) used with respect to each concept. The survey focuses on the economic outlook of German companies in the US. as well as on respective challenges and opportunities growing their business in the US.

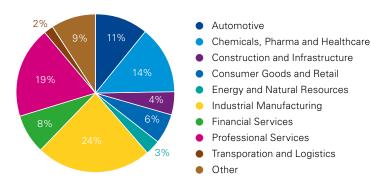
Figure 29: Participating companies by number of employees



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, n=129.

The German American Business Outlook (GABO) benchmarks the success and satisfaction of German companies in the US. While the survey's focus changes from year to year, a number of core questions have remained constant. This allows a set of long-term comparative data to be analyzed, thereby providing a unique view and understanding of the economic success of German subsidiaries in the United States.

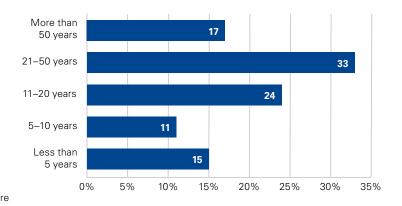
Figure 30: Participating companies by sector



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, **n=131**.

Half of the companies surveyed (50%) have had operations in the US for at least 20 years, while 17% have even been in the States for over 50 years. The percentage of companies that have been present in the US for less than five years is 15% of the companies surveyed.

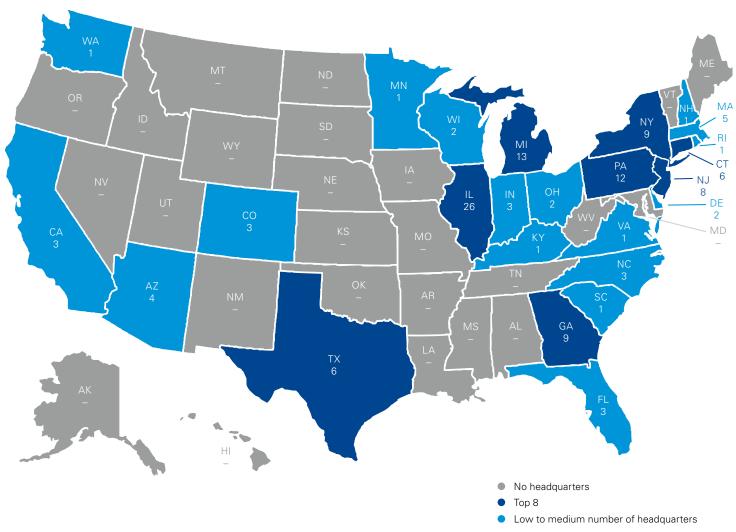
Figure 31: How long has your group had operations in the US?



Source: KPMG in Germany and GACCs, 2019, figures in percent, deviations from 100 percent are due to rounding differences, **n=132**.

70% of companies surveyed have their US headquarters based in one of eight states. Illinois is the preferred HQ location for 20% of the participants. The majority of German companies surveyed are based on the East Coast and areas near the Great Lakes in the northern Midwest.

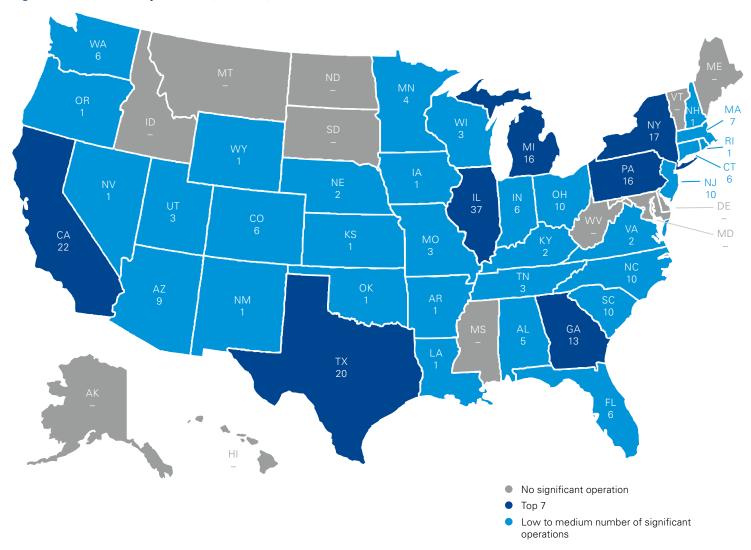
Figure 32: Location of US headquarters (US state)



Source: KPMG in Germany and GACCs, 2019, Information in absolute numbers, n=127.

Approximately 50% of the companies surveyed have significant operations concentrated in seven large US states -Illinois, California, Texas, New York, Michigan, Pennsylvania and Georgia. Those states account for half of named locations of significant operations (141 out of 283).

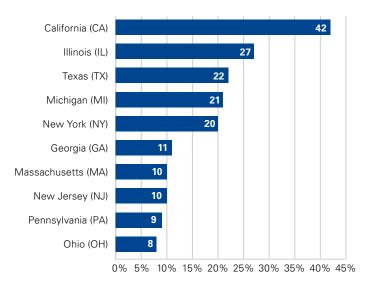
Figure 33: Location of operations (US state)



Source: KPMG in Germany and GACCs, 2019, Multiple choice question, n=131; total=283.

Out of all US states, California, Illinois, Texas, Michigan and New York are the top five most important markets by state for the German companies surveyed.

Figure 34: Most important markets by state for German **businesses**



Source: KPMG in Germany and GACCs, 2019, multiple choice question, n=130; total = 337.

10 About Us

GACCs

The German American Chambers of Commerce (GACCs) in Atlanta, Chicago, Detroit, Houston, New York, Philadelphia, and Pittsburgh all work together under the network of the DIHK (AHKs). With approximately 2,500 members and an extensive national and international business network, the GACCs offer a broad spectrum of activities and services. Other German-American organizations and chapters are affiliated with the GACCs.

Globally Connected

AHKs provide experience, connections, and services world-wide through 140 locations in 92 countries. The service portfolio of the AHKs is unified worldwide under the brand name DE International. The AHKs cooperate closely with the foreign trade and inward investment agency of the Federal Republic of Germany—Germany Trade & Invest (GTAI).

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KPMG in Germany

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KPMG in Germany has established Country Practices for business corridors between Germany and other key industries or regions. They are staffed by country experts familiar with the particularities and regulatory environment of these markets. Our International Business experts work regularly in these countries and advise German, international and multinational companies on country- and corridor-related matters on a daily basis.

KPMG in Germany's Country Practice USA has a bilingual team that serves US clients of all sizes and sectors in Germany. Its close connection with KPMG in the US enables unparalleled cross-border service both for local management in Germany and for group management in the US.

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Contact

KPMG in Germany

Andreas Glunz

Managing Partner, International Business T +49 211 475-7127 aglunz@kpmg.com

Warren Marine

Partner, Head of Country Practice USA T +49 711 8060-41300 warrenmarine@kpmg.com

GACC Midwest

Mark Tomkins

President & CEO T +1 312 494-2172 tomkins@gaccmidwest.org

GACC New York

Dietmar Rieg

President & CEO T +1 212 974-8848 drieg@gaccny.com

GACC South

Stefanie Ziska

President & CEO T +1 404 586-6815 sziska@gaccsouth.com

www.kpmg.de

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