INDUSTRY OVERVIEW
The Pharmaceutical Industry in Germany

ISSUE 2017/2018
An Ideal Location for Research, Production and Sales

Germany offers the perfect location for the development, production and sale of world-class pharmaceuticals. The country benefits from cutting-edge research, a long production tradition and immediate market access to pharmaceuticals. Global demand for pharmaceuticals is growing continuously as the result of a growing world population and demographic change. Together with significant research advances, especially in the field of medical biotechnology, these developments are providing a spur to the pharmaceutical industry worldwide. The healthcare industry has evolved to become one of the most important global growth markets, with the pharmaceutical industry in Germany already a significant global industry player. Germany is home to Europe’s largest – and the world’s fourth largest – pharmaceuticals market. A highly attractive R&D location, the country ranks first and second in clinical trial terms in Europe and the world respectively. Having established itself as the “world’s pharmacy” as part of a tradition of medical innovation, Germany is also the world’s leading medical biopharmaceuticals producer – second only to the USA.
In 2014, healthcare spending in Germany totaled EUR 328 billion (more than four percent increase compared to 2013). This equates to 11.2 percent of German GDP (EUR 4,050 per capita). Of this sum, 14 percent is spent on pharmaceutical products. Increased demand for medicines and the introduction of new drugs onto the market are the main drivers of spending growth according to the OECD.

With its domestic pharmaceutical industry consisting of companies such as Bayer, BASF and Hoechst, Germany has a historical reputation as the world’s pharmacy. The sector enjoys market stability. In 2014, the pharmaceutical industry consisted of more than 640 companies, employing a workforce of 112,500. Pharmaceutical companies can be found in all parts of Germany, with higher concentrations around the cities of Hamburg, Berlin, Cologne, Frankfurt, and Munich. With revenue of EUR 38 billion in 2015, Germany is the world’s fourth-largest pharmaceuticals market. Germany’s share of the global pharmaceutical market remained at around 13.5 percent. The pharmaceutical industry in Germany imported pharmaceuticals to the value of almost EUR 41 billion in 2015 and recorded an export rate of nearly 66 percent in 2014.

Pharmaceutical spending in the statutory health insurance sector reached a new high of EUR 37 billion in 2015, recording an annual spending increase of 4.3 percent or more than EUR 1.5 billion. The number of packages sold in the German pharmacy market increased three percent from 1.43 billion in 2014 to 1.47 billion in 2015.

The annual increase in the German pharmacy market – both in euro and unit transaction volumes – was largely achieved through prescription drugs and pharmacy medicine. Generic medicines considerably contribute to European drug supply. Germany aims to balance between rewarding innovations through attractive pricing while, at the same time, fostering generics. In most European countries, the market share of generic medicines in volume terms exceeds 40 percent of generics-eligible segments.

In Germany the generic volume share is much higher, having reached 77 percent in 2015 with a value of more than EUR 2 billion. Beyond conventional medicines, natural medicines have gained a significant share of the German pharmaceuticals market. Herbals and homeopathic medicines play an increasingly significant role, particularly in the self-medication market.
Largest Health Economy

**Growing Market**
Catering to the largest population in Europe (81 million), Germany’s healthcare sector is a highly attractive market with significant growth opportunities. A steady increase in life expectancy levels has led to a rise of chronic and age-related illnesses. Improved health awareness has further increased consumer demand for medicinal products and therapies. In 2014, healthcare spending in Germany exceeded EUR 328 billion, not including out-of-pocket expenditure for healthcare (equivalent to 11.2 percent of GDP).

**Health Insurance Opportunities**
Germany provides ready access to a stable market of healthcare consumers with a clear and adequately distributed expenditure system. The German healthcare system is funded by government and private contributions. The public system is largely financed by members’ contributions as payroll taxes by the employer and employed, with the rest coming from government subsidies. With around 88 percent of the German population enrolled in a public health insurance plan, the public health insurance system plays the major role in the allocation of healthcare funds. An additional eleven percent of the population opts for private health insurance. Germany’s 123 public health insurance providers covered EUR 213.7 billion of total healthcare expenses in 2015. Private health insurance companies reimbursed an additional EUR 23.2 billion of medical expenses. The remaining amount is covered by government budgets, state-mandated long-term care insurers, the social pension fund, state-mandated accident insurance providers, employers, and private households. More than 20 percent of the publicly insured population has an additional private health insurance policy to supplement their basic healthcare provision. A recent development has been the trend amongst private individuals to spend more money on out-of-pocket medicine and therapy purchases. Most out-of-pocket payments are made to purchase over-the-counter (OTC) drugs and in the form of co-payments for prescribed drugs.

**Demographic Change**
Longer life expectancy levels and declining fertility rates mean that older people account for a larger proportion of the population in Germany. At least one quarter of the population will be over 65 years of age in 2050. The proportion of the population aged over 80 is expected to almost triple between 2010 and 2050 (rising from 5 percent to 15 percent). Accelerating urbanization and more sedentary lifestyles lead to higher obesity rates and chronic diseases such as diabetes. According to the World Health Organization, worldwide chronic disease prevalence is expected to rise by 57 percent by the year 2020. Increased demand made on healthcare systems due to noncommunicable disease has become a major concern.

### Pharmaceutical Market Share Differentiation

<table>
<thead>
<tr>
<th>Prescription status</th>
<th>Product type</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Over-the-counter</td>
<td>12%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Homeopthics</td>
<td>1%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herbal medicines</td>
<td>2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription only</td>
<td>75%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Biotech</td>
<td>19%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chemical products</td>
<td>65%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prescription status</td>
<td>Product type</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IMS Health Report 2016
Production Location

High Production Standards
Germany is an ideal production location for research-intensive, high-grade products. It places a high value on technology; this stemming from the country’s long history of developing and manufacturing high-quality pharmaceutical products. The country’s particular strength lies in producing complex products where containment and sterile environments are critical. Hundreds of thousands of highly skilled employees in medical-technical, pharmaceutical-technical and engineering backgrounds enable companies to utilize efficient and complex production processes.

Major Production Location
Germany counts among the world’s top five pharmaceutical production locations, with a production volume of EUR 30.4 billion in 2014 (equivalent to an almost five percent increase over 2013). Within the European Union, no other country produces more drugs than Germany. Internationally, Germany also has the largest fermentation capacities – second only to the USA – and is home to the very latest facilities for biomanufacturing. Pharmaceutical companies in Germany also benefit from close proximity to leading machinery and equipment manufacturers, ensuring continuous production and minimal downtimes.

Contract Manufacturing Organizations (CMOs)
Germany is also home to many strong and competent contract-manufacturing cooperation partners. International and national clients can obtain all of the services they require – from initial product idea to the final product – at moderate cost. Boehringer Ingelheim, for example, is the only company in the world that is active across the entire biopharmaceutical process chain. This enables faster timelines and simpler coordination of processes worldwide. The Federal Ministry for Economic Affairs and Energy’s “Health – Made in Germany” initiative implemented by GTAI can help identify possible partners. Its “German Biomanufacturing Guide” provides a comprehensive overview of biomanufacturing companies currently active in Germany.

Chemical Industry Strength
Pharmaceutical companies also benefit from the strong international position of the German chemical industry. As a location for the production of chemicals, Germany places first in Europe and third globally – accounting for a quarter of European chemical production in 2015. A number of outstanding chemical parks in Germany offer specific infrastructural benefits to potential pharmaceutical industry investors.

EU Pharmaceutical Industry Production 2014
in EUR billion

<table>
<thead>
<tr>
<th>Country</th>
<th>Production Value (EUR billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>30.4</td>
</tr>
<tr>
<td>Italy</td>
<td>29.0</td>
</tr>
<tr>
<td>France</td>
<td>21.0</td>
</tr>
<tr>
<td>Ireland</td>
<td>19.3</td>
</tr>
<tr>
<td>UK</td>
<td>17.5</td>
</tr>
<tr>
<td>Spain</td>
<td>13.9</td>
</tr>
</tbody>
</table>

Source: EFPIA 2016

Pharmaceutical Production Value in Germany
in EUR billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Production Value (EUR billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>26.9</td>
</tr>
<tr>
<td>2011</td>
<td>26.9</td>
</tr>
<tr>
<td>2012</td>
<td>27.7</td>
</tr>
<tr>
<td>2013</td>
<td>29.0</td>
</tr>
<tr>
<td>2014</td>
<td>30.4</td>
</tr>
</tbody>
</table>

Source: BPI, VfA 2016

MARKET OPPORTUNITIES

R&D Excellence and Support

Innovation Leader Germany
German patent figures pay testimony to the innovation work done in German science and industry. Germany ranks fourth globally in the application of patents in all industrial fields. In 2015, the European Patent Office received 1,183 patent applications in the field of biotechnology and pharmaceuticals from Germany – only US companies had a higher application rate. The life science industry benefits from the output of patents developed by scientific groups like the Max Planck-Society; whether by in-licensing or by building new ventures. International companies find a tradition of collaborative research in Germany that allows them to improve their own technology, become integrated in national value chains, and enjoy international visibility and global access.

Pharma R&D
The success of the German pharma industry stems from a highly innovative environment that places considerable value on technology and research resources. In 2014, German pharmaceutical companies spent a record EUR 6 billion in R&D. As such, investment in R&D is equivalent to 13 percent of revenue – more than any other industry sector in Germany. Nearly eight percent of all employees in the pharmaceutical industry work in research and development. Internationally renowned R&D institutions are embedded in a well-appointed research environment with extremely high standards.

Pharma and Biotech Clusters
Non-university research institutes, universities and companies all work together in numerous clusters throughout the country to improve or invent new products and processes. Germany’s “BioRegions,” regional initiatives for the advancement of modern life sciences, play a key role in maintaining the stable and innovation-friendly environment. Over the past three decades, these biotechnology clusters have developed into some of Europe’s leading R&D hubs. Each region specializes in specific areas and facilitates collaboration between universities, R&D institutes and private sector companies. Around 30 BioRegions are active members of AK BioRegio (“The Council of German BioRegions”), which aims to advance the German life science sector by coordinating and promoting local activities. AK BioRegio also coordinates regional initiatives and advises political decision makers. The BioRegions also include technology parks (commonly known as “BioParks”) that offer an ideal infrastructure – including lab and suitable storage space as well as a range of administrative and technical services – for both start-ups and established companies.

Pharmaceutical Industry R&D Expenditure in Selected European Countries 2014
in EUR billion

<table>
<thead>
<tr>
<th>Country</th>
<th>R&amp;D Expenditure EUR billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>5.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>5.3</td>
</tr>
<tr>
<td>UK</td>
<td>4.9</td>
</tr>
<tr>
<td>France</td>
<td>4.6</td>
</tr>
</tbody>
</table>

Source: EFPIA 2016

European Patent Applications 2015: Biotechnology & Pharmaceuticals

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>1,183</td>
</tr>
<tr>
<td>France</td>
<td>888</td>
</tr>
<tr>
<td>Netherlands</td>
<td>773</td>
</tr>
<tr>
<td>Switzerland</td>
<td>762</td>
</tr>
<tr>
<td>UK</td>
<td>364</td>
</tr>
</tbody>
</table>

Source: EPO 2016
Investing in Innovation

Innovation does not exist in splendid isolation for German companies. Non-university research institutes, universities and companies all work together in numerous clusters throughout the country to improve or invent new products, services, and processes. To this end, the German Federal Government has been providing targeted financial support for over 20 years. Universities and non-university research institutions also serve as innovative partners to industry.

According to the German Federal Statistical Office, universities invested approximately EUR 14.3 billion in R&D in 2014. Germany’s four globally renowned non-university research foundations – the Max Planck Society, Fraunhofer Gesellschaft, Helmholtz Association and Leibniz Association – provided an increased overall research budget of EUR 9.5 billion for the same year. With almost 75,000 full-time equivalent research personnel working at more than 250 institutes, these organizations are involved in a broad spectrum of research projects; covering everything from fundamental to applied science.

Public R&D Support

There are a number of different public funding programs at different levels for life-science research and development projects. Looking beyond the European Horizon 2020 program, a number of the German Federal Government’s “High-Tech Strategy” programs also include healthcare as a major focal point. A number of federal programs, including the Central Innovation Programme (Zentrales Innovationsprogramm Mittelstand – ZIM), promote cooperation between research institutions and the private sector.

ZIM is a funding program for small and medium-sized enterprises (SMEs) with business operations in Germany that seek to develop new or significantly improve existing products, processes or technical services. Public and private non-profit research and technology organizations acting as SME cooperation partners are also eligible for ZIM funding. ZIM has been providing a reliable source of support for innovation efforts since 2008. In addition to the aforementioned federal initiative, the federal states also provide several funding programs to support German life science companies, generally targeted at SMEs.

Clinical Trials

Germany offers excellent conditions for clinical trials. According to clinicaltrials.gov and the Association of Research-Based Pharmaceutical Companies (VfA), Germany’s 655 studies make it the world’s number two in terms of number of clinical trials conducted. Geographically located at the heart of the EU and in close proximity to other European countries, Germany allows easy integration and management of study centers in the surrounding country markets. Germany enjoys a reputation as a credible and serious clinical study location for realizing high-quality data.

Contract Research Organizations (CROs)

Many biotechnology companies in Germany have been serving the pharmaceutical industry from the outset. Rather than developing their own products, these companies provide contract research services along the entire value chain for the creation of new therapeutic entities. However, finding the right partner with the right skills can be a challenging task – especially for foreign companies seeking to have some of the development work carried out in Germany. The GTAI initiative “Health – Made in Germany” provides an overview of possible partners.


Institutional Funding in Germany

<table>
<thead>
<tr>
<th>Applied research</th>
<th>Industrial Research Associations (AIF)</th>
<th>Companies/Industrial Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Länder-Institutions</td>
<td>Fraunhofer-Gesellschaft</td>
<td>Networks and Clusters</td>
</tr>
<tr>
<td>Universities</td>
<td>Helmholtz Association</td>
<td></td>
</tr>
<tr>
<td>Federal Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max-Planck-Gesellschaft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Research Infrastructures</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Public funding | Private funding

Source: DAAD, Research in Germany
MARKET SPOTLIGHT

Over-the-Counter (OTC) Market

Over-the-counter (OTC) medicines are used to prevent and treat relatively minor ailments. As populations increase and age there is a growing push to be able to license OTC medicines for treating chronic conditions. The OTC market is divided into four categories: pharmacy only, non-prescription drugs, OTC drugs, and the group of health products that includes nutritional supplements and dietary food for special medical purposes. In Germany an aging population, alongside a growing awareness of health and fitness, continues to drive sales in the consumer health sector. Around seven percent of total health expenditure was spent out-of-pocket in 2015. The German OTC pharmaceuticals market generated total revenues of EUR 6 billion in 2015.

In 2020, the German OTC pharmaceuticals market is forecast to have a value of EUR 6.1 billion, an increase of 2.4 percent on 2015 levels. The compound annual growth rate of the market during the period 2015–2020 is expected to be 0.5 percent according to Marketline. Growth is being driven by a growing willingness to invest in self-medication and measures to improve health, well-being and fitness. Innovation and new product launches also supported this positive performance, exceeding the average growth seen in recent years.

Special indications – including analgesics, colds, influenza and gastrointestinal viruses – drive value growth, but products intended to boost the immune system have also led to growth in relevant categories (e.g. vitamins and natural products).

In 2015, analgesics registered the highest sales value in the OTC pharmaceuticals market, with 21 percent of market share. Sales of cough and cold preparations reached 16.7 percent of market share. Consumer health in Germany is largely in domestic hands. Bayer AG is the leading player in the German OTC pharmaceuticals market, accounting for more than 10 percent share of total market value. German companies, including MCM Klosterfrau Vertriebsgesellschaft and Boehringer Ingelheim Pharma, also ranked among the top five consumer health companies in 2015.

According to a Marketline report, drug stores and pharmacies form the leading distribution channel in the OTC pharmaceuticals market, accounting for an 82.6 percent share of the total market value in 2015. Hypermarkets and supermarkets account for a further 9.7 percent of the market.
Biopharmaceuticals

Big pharmaceutical and smaller biotechnology companies alike are focusing on drug discovery and development of medicines produced by biotechnological processes. Small molecules are moving to the background in medicine development as the result of a major paradigm shift to biopharmaceuticals. This trend is based, among other things, on the increasing development of personalized therapies and medicines. For patients, medical science, industry and government alike, the notion of a “customized pill” promises a new world of health and prosperity. Finding and providing the best cure on an individual patient basis not only helps restore patients to health more quickly and effectively, but also represents a substantial cost saving for health care systems. Biopharmaceuticals play a major role in personalized medicine. This is reflected by the increasing sales of biopharmaceutical products worldwide.

According to a report by Boston Consulting Group and the Association of Research-Based Pharmaceutical Companies (VfA), sales of biopharmaceuticals in Germany increased to EUR 8.2 billion in 2015 (growth of nearly 10 percent compared to 2014). The share of biopharmaceuticals in the total pharmaceutical market (i.e. pharmacy and hospital market) increased from 22 percent to almost 23 percent over the same period. Growth was seen in nearly all fields of application, particularly in drugs treating immunological (e.g. rheumatic) diseases and cancer.

The clinical development pipeline has shown continuous growth over the past years, demonstrating accelerated progress in both the discovery as well as the development of drug candidates. The number of biopharmaceuticals in clinical development increased by four percent from 604 to 627 in 2015, reflecting continued high investment in the biopharmaceutical pipeline. With 50 new drugs approved, the approval rate was the highest in more than 10 years and also included a record 15 biopharmaceuticals (30 percent of total). By the end of 2015, a total of 240 biopharmaceutical drugs were approved for the German market – more than ever before. Nearly 80 percent of these drugs are drugs and vaccines produced by biotechnological procedures.

This means an increase of six percent compared to the previous year. Divided into pharmacological classes, 60 vaccines account for the majority of all products (25 percent), followed by the 43 monoclonal antibodies.

### New Drug Approvals

<table>
<thead>
<tr>
<th>Year</th>
<th>Biopharmaceuticals</th>
<th>Other Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>2013</td>
<td>14</td>
<td>35</td>
</tr>
<tr>
<td>2014</td>
<td>14</td>
<td>33</td>
</tr>
<tr>
<td>2015</td>
<td>15</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: Federal Statistical Office 2015

### Biopharmaceuticals Value Growth Rate in percent

<table>
<thead>
<tr>
<th>Year</th>
<th>Biopharmaceuticals</th>
<th>Other Drugs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>22</td>
<td>78</td>
</tr>
<tr>
<td>2015</td>
<td>22.9</td>
<td>22.9</td>
</tr>
</tbody>
</table>

Source: IMS Health, Boston Consulting Group 2016

This means an increase of six percent compared to the previous year. Divided into pharmacological classes, 60 vaccines account for the majority of all products (25 percent), followed by the 43 monoclonal antibodies.
Business Location Germany

Free and Open Markets
Germany has a welcoming attitude towards foreign direct investment (FDI). The German market is open for investment in practically all industry sectors, and business activities are free from regulations restricting day-to-day business. German law makes no distinction between Germans and foreign nationals regarding investments or the establishment of companies. The legal framework for FDI in Germany favors the principle of freedom of foreign trade and payment. There are no restrictions or barriers to capital transactions or currency transfers, real estate purchases, repatriation of profits, or access to foreign exchanges.

Stable Economy
Germany is widely considered to be the economic stabilizing force in Europe – particularly within the Eurozone. Between 2010 and 2015, EU-28 real GDP grew at around one percent. During the same period, the German economy grew at a rate of around two percent, with Germany’s real GDP growth rate higher than that of France and Italy. The German government expects an upswing of 1.7 percent in 2016.

Sound and Secure Legal Framework
According to the World Economic Forum (WEF), Germany is one of the world’s best locations in terms of planning and operating security. Germany is also one of the world’s leading nations in terms of intellectual property protection and protection from organized crime. German regulatory authorities are highly professional in their operations. The German legal system also counts as one of the world’s most efficient and independent. Social, economic, and political stability provides a solid base for corporate investment projects. Contractual agreements are secure and intellectual property is strictly protected in Germany.

Business-friendly Tax Conditions
Germany offers one of the most competitive tax systems of the big industrialized countries. The average overall tax burden for corporations is just below 30 percent. Significantly lower rates are available in certain German municipalities – up to eight percentage points less – with the overall corporate tax burden as low as 22.3 percent in some cases. Moreover, Germany provides an extensive network of double taxation agreements (DTAs) ensuring that double taxation is ruled out, e.g. when dividends are transferred from a German subsidiary company to the foreign parent company.

Competitive Labor Costs
High productivity rates and steady wage levels make Germany an attractive investment location. Since 2004, wages have risen in most European countries (EU-28), with the growth rate averaging three percent. While some countries – particularly those in eastern Europe – experienced an increase of close to or more than five percent, Germany recorded the lowest labor cost growth within the EU at just two percent.

Highly Skilled Workforce
Germany’s excellent workforce is decisive to the country’s high productivity rates. It comprises over 43 million people – making it the largest pool of ready labor in the EU. Germany’s world-class education system ensures that the highest standards are always met. More than 80 percent of the German workforce has received formal vocational training or is in possession of an academic degree.
Dual Education System

Germany provides direct access to a highly qualified and flexible labor pool. The country’s dual education system – unique in combining the benefits of classroom-based and on-the-job training over a period of two to three years – is specifically geared to meet industry needs. In close cooperation with industry and the government, the German Chambers of Industry and Commerce (IHKs) and the German Confederation of Skilled Crafts (ZDH) ensure that exacting standards are adhered to, guaranteeing the quality of training provided across Germany.

Motivated and Dependable Employees

German labor flexibility is reflected in higher than average employee motivation levels – exceeding those of most leading industrialized nations. According to the IMD World Competitiveness Yearbook 2016, German employee motivation levels are greater than those of their counterparts in the USA, China, Russia, Poland, France, and the UK. This can be related to the fact that Germans work more than their international peers (41.2 hours per week) and lose less days per annum to strike action than other European nations (significantly below the EU-28 average according to Eurofound).

Quality of Infrastructure 2016

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Germany</td>
</tr>
<tr>
<td>2</td>
<td>Luxembourg</td>
</tr>
<tr>
<td>3</td>
<td>Sweden</td>
</tr>
<tr>
<td>4</td>
<td>Netherlands</td>
</tr>
<tr>
<td>5</td>
<td>Singapore</td>
</tr>
<tr>
<td>6</td>
<td>Belgium</td>
</tr>
<tr>
<td>7</td>
<td>Austria</td>
</tr>
<tr>
<td>8</td>
<td>UK</td>
</tr>
<tr>
<td>9</td>
<td>Hong Kong</td>
</tr>
<tr>
<td>10</td>
<td>USA</td>
</tr>
</tbody>
</table>


Workforce in Germany by Level of Professional Education 2014

<table>
<thead>
<tr>
<th>percent of total workforce</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unskilled 17</td>
</tr>
<tr>
<td>Vocational college graduates 10</td>
</tr>
<tr>
<td>University graduates 19</td>
</tr>
<tr>
<td>Skilled craftsmen (dual education apprentices) 54</td>
</tr>
</tbody>
</table>


Europe’s Global Logistics Hub

With state-of-the-art transportation networks (road, rail, sea, and inland waterways) as well as a dense network of national and international airports, Germany provides easy access to domestic and international markets. As a truly global logistics hub, more goods pass through Germany than any other country in Europe. Its approximately one quarter share of the European logistics market (EU-28, Norway and Switzerland) reflects Germany’s role as the major player in the continent’s economy.

World Class Transport Infrastructure

Germany’s infrastructure excellence is confirmed by a number of recent studies including the Swiss IMD’s World Competitiveness Yearbook and various investor surveys conducted by institutions including the World Economic Forum (WEF) and Ernst & Young. The 2016 Logistics Performance Index of the World Bank ranked Germany first worldwide for its logistic proficiency; singling out Germany’s quality of trade and transport infrastructure. Accumulated in this score for Germany are high marks for the quality of roads and air transport, excellent railroads and port infrastructure, as well as its information infrastructure.
Financing & Incentives in Germany

Incentives programs in Germany are available through different public funding instruments and for different funding purposes. The individual funding requirements may, for example, result from investment projects, research and development activities, personnel recruitment, working capital needs or other specific purposes. The different incentives instruments including grants, loans and guarantees are generally available for all funding purposes and can ordinarily be combined; thus matching the different business activity needs at different development stages of the company.

**Investment Project Financing by Private Equity**

Technologically innovative start-ups in particular have to rely solely on financing through equity such as venture capital (VC). In Germany, appropriate VC partners can be found through the Bundesverband Deutscher Kapitalbeteiligungs-gesellschaften e.V. (BVK – German Private Equity and Venture Capital Association). Special conferences and events like the Deutsches Eigenkapital-forum (German Equity Forum) provide another opportunity for young enterprises to come into direct contact with potential VC partners. Public institutions such as development banks (publicly owned and organized banks which exist at the national and state level) and public VC companies may also offer partnership programs at this development stage.

**Investment Project Financing by Bank Loans**

Debt financing is a central financing resource and the classic supplement to equity financing in Germany. It is available to companies with a continuous cash flow. Loans can be provided to finance long-term investments, working capital and operational costs (R&D, personnel) and for bridging temporary financial gaps. Besides offers from commercial banks, investors can access publicly subsidized loan programs in Germany. These programs usually offer loans at attractive interest rates in combination with repayment-free startup years, particularly for small and medium-sized companies. These loans are provided by the KfW federal development bank and also by regional development banks.

**Investment and R&D Incentives**

When it comes to setting up production and service facilities, investors can count on a number of different public funding programs. These programs complement investment project financing. Most important are cash incentives provided in the form of non-repayable grants applicable to co-finance investment-related expenditures such as new buildings, equipment and machinery. R&D project funding is made available through a number of different incentives programs targeted at reducing the operating costs of R&D projects. Programs operate at the regional, national, and European level and are wholly independent from investment incentives. At the national level, all R&D project funding has been concentrated in the High-Tech Strategy to push the development of cutting-edge technologies. Substantial annual funding budgets are available for diverse R&D projects.

**Labor-related Incentives**

After the location-based investment has been initiated or realized, companies can receive further subsidies for building up a workforce or the implementation of R&D projects. Labor-related incentives play a significant role in reducing the operational costs incurred by new businesses. The range of programs offered can be classified into three main groups: programs focusing on recruitment support, training support, and wage subsidies respectively.
Industry Associations

Germany Trade & Invest works closely together with the respective German industry associations to provide support to international pharmaceutical companies seeking to settle in Germany.

BAH – German Medicines Manufacturers’ Association
The Bundesverband der Arzneimittel-Hersteller e.V. (BAH) represents the interests of the pharmaceutical industry in Germany comprising international companies as well as local small and medium-sized enterprises (SMEs). BAH covers the entire range of the industrial landscape from self-medication medicines (OTC) through to prescription drugs (Rx) and medical devices. BAH advocates for secure and responsible self-medication through professional medical and pharmaceutical advice. Therefore, BAH strongly supports the statutory protection of the owner-operated pharmacy as primary institution for distribution. BAH actively takes part in public health policy discussion. BAH represents its members on European level through the Brussels-based AESGP, the association of the European Self-Medication Industry. Furthermore BAH is associated with WSMI, the World Self-Medication Industry, a federation of over 50 member associations in all continents.

www.bah-bonn.de

BPI – German Pharmaceutical Industry Association
Founded in 1951 and thus with 65 years of experience in drug research, development, authorisation, manufacturing and marketing, BPI is the only national trade association which represents the pharmaceutical industry with all its variety. Our membership consists of 240 companies that cover classic pharmaceutical companies, businesses from biotechnology, phytopharmacy and homeopathy as well as companies with a small generic portfolio. The majority of our membership is family owned businesses and small and medium-sized enterprises that represent more than 11 percent of the pharmaceutical industry workforce in Europe. As an association representing the whole section of the pharmaceutical industry BPI’s goal is to ensure that patients receive the care and medicines they need. BPI is a political partner for decision-makers which contributes to the ongoing dialogue about the sustainability of healthcare systems.

www.bpi.de

VfA – Association of Research based Pharmaceutical Companies
The vfa, the Association of Research based Pharmaceutical Companies, is the trade organization of research based pharmaceutical companies in Germany. Forty-three leading research-based pharmaceutical companies are organized in the vfa. Together with their more than 100 subsidiaries and affiliated companies, they employ nearly 76,000 people in Germany. The vfa member companies are among the leading research-based pharmaceutical companies worldwide. They guarantee therapeutic progress in pharmaceuticals and ensure high-quality pharmaceutical therapy. In Germany more than 16,000 of their employees work in the field of research and development of pharmaceuticals. Here, the research-based pharmaceutical companies invest EUR 4 billion per year in pharmaceutical research. The Association of Research-based Pharmaceutical Companies represents a German high-tech industry that is competitive in the international markets.

www.vfa.de
OUR SERVICES

Germany Trade & Invest Helps You

Germany Trade & Invest’s teams of industry experts will assist you in setting up your operations in Germany. We support your project management activities from the earliest stages of your expansion strategy.

We provide you with all of the industry information you need – covering everything from key markets and related supply and application sectors to the R&D landscape. Foreign companies profit from our rich experience in identifying the business locations which best meet their specific investment criteria. We help turn your requirements into concrete investment site proposals; providing consulting services to ensure you make the right location decision. We coordinate site visits, meetings with potential partners, universities, and other institutes active in the industry. Our team of consultants is at hand to provide you with the relevant background information on Germany’s tax and legal system, industry regulations, and the domestic labor market. Germany Trade & Invest’s experts help you create the appropriate financial package for your investment and put you in contact with suitable financial partners. Our incentives specialists provide you with detailed information about available incentives, support you with the application process, and arrange contacts with local economic development corporations.

All of our investor-related services are treated with the utmost confidentiality and provided free of charge.

Our support services for your investment project

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Evaluation</th>
<th>Decision &amp; Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business opportunity analysis and market research</td>
<td>Market entry strategy support</td>
<td>Project partner identification and contact</td>
</tr>
<tr>
<td>Joint project management with regional development agency</td>
<td>Coordination and support of negotiations with local authorities</td>
<td></td>
</tr>
</tbody>
</table>

Location consulting/Site evaluation

| Identification of project-specific location factors | Cost factor analysis | Site preselection | Site visit organization | Final site decision support |

Support services

| Identification of relevant tax and legal issues | Project-related financing and incentives consultancy | Organization of meetings with legal advisors and financial partners | Administrative affairs support | Accompanying incentives application and establishment formalities |
Dr. Sandra M. Bütow is the senior manager responsible for the biotechnology and pharmaceutical industry in Germany Trade & Invest's Investor Consulting division. Dr. Bütow's considerable experience in academic, cluster management and investment consultancy environments provide a significant advantage to international companies seeking to set up their business operations in Germany.

For questions on how to establish your business in Germany, please contact Dr. Sandra M. Bütow at sandra.buetow@gtai.com

For more information about the pharmaceuticals industry in Germany, please visit our website: www.gtai.com/pharma

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About Us
Germany Trade & Invest (GTAI) is the economic development agency of the Federal Republic of Germany. The company helps create and secure extra employment opportunities, strengthening Germany as a business location. With more than 50 offices in Germany and abroad and its network of partners throughout the world, GTAi supports German companies setting up in foreign markets, promotes Germany as a business location and assists foreign companies setting up in Germany. All investment services and related publications are free of charge.

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