Germany’s stability in the financial turmoil of recent years has coined a new word in the dictionary of global perception: “The German Mittelstand (SMEs)”. It means that German industry has proven to be a reliable partner and bastion of calm in view of the myriad challenges facing the world. This is due especially to the companies which have grown into “world market leaders” through business acumen, innovative power and a global market presence. Most of these are SMEs owned by families which are rather unknown to the general public. Often these companies are highly specialised technology leaders only familiar to industry insiders. It is a great distinction to be a world market leader. However, this distinction also comes with the challenge to maintain this standard. The companies take on this challenge with long-term strategies, they rely on proximity to customers and the quality of their products, and they take care of their employees.

For the first time, Deutsche Standards EDITIONEN is now presenting one hundred select German enterprises, which claim to be world market leaders, to its international readership in English. The choice is representative of successful, responsible entrepreneurship and enables an exclusive insight into the German corporate landscape, the width and depth of which is unique in the world. The goal of this book is to put the SMEs which have been able to assert themselves as “the best of the best” in their market segment in the world market into the international spotlight. By doing so, it also intends to contribute new models and orientation to the discussion of a sustainable world economy.

The Best of German Mittelstand
THE WORLD MARKET LEADERS
Edited by Florian Langenscheidt and Bernd Venohr
Germany Mittelstand – The world market leaders.

Prof. Dr. Bernd Venohr, Prof. Dr. Jeffrey Fear, Dr. Alessa Witt

Strong Export Performance

China’s entry into the global market over the last 20 years has greatly altered the balance of global trade. Since 1995, the proportion of Germany’s share as a percentage of world exports has quadrupled four times, whilst the trade output of other established trade nations gradually declined. While the decline among established economies is significant, Germany’s share of global trade has remained largely intact since 2000. Germany is the only established industrial nation to hold its proportion of world trade at roughly 8 per cent while the market share of the USA or Japan has shrunk considerably since 2000 (DeStatis, 2015; WTO Press Release, 2013).

Between 2003 and 2008 Germany was the world leader in terms of merchandise trade exports, and continues to compete with the USA for the number two position behind China (World Bank, 2015), despite Germany being a much smaller country when compared to China and the USA.

There are numerous explanations for Germany’s strong export performance over the last decade, which range from the structure of world demand, especially the strong demand growth in numerous investment goods and durable consumer product market segments. This supply profile fits very well with the demand profile of the so-called BRIC countries (Brazil, Russia, India, China) as well as other fast-growing emerging markets. Germany has reaped a disproportionate “globalisation dividend” because these countries are investing heavily in new industrial capacity, infrastructure such as energy supply, urban construction, and transport systems. Finally, since 1995, rising living standards, increased disposable income, and rapid growth of a new middle and upper class created demand for German premium-priced consumer products in sectors such as automotive and appliances. China, for instance, has become the world’s largest automobile market and German automotive manufacturers dominate the premium market there.

While Germany stands as a successful export economy, there are increasing signs that the “business model of Germany” (Wittenstein, 2012), which is based on exports, may be reaching its limits. On the one hand, the high growth rates of emerging markets are beginning to falter, in part due to a general economic slowdown in growth (China, Brazil) and continuing uncertainty in critical regions (Russia and the Middle East) (Pritchett & Summers, 2013). On the other hand, new local competitors are emerging, particularly in China, due to the growing domestic market and export success, and are beginning to erode German firms’ market share from below with lower price points and even increasing product quality (Berthold, 2012). Numerous international institutions such as the IMF and the European Commission have all criticised Germany’s consistent account surplus, reaching 7.4 per cent of GDP and amounting to 215.3 billion Euros in 2014. This vastly exceeds the 176.7 billion Euros surplus of China and contributes to global and Eurozone macroeconomic imbalances. German politicians and decision-makers are encouraged to shift their attention to boosting domestic demand instead of promoting exports (Bloombberg, 2015; Berthold, 2012).

Over the last decades many traditional German Mittelstand firms have reoriented themselves to global markets with the ambition to become world market leaders, and have quite often become “Mini-Multinationals” in this process. Here we present the management practices of such successful Mittelstand companies, explaining the sources of their sustained success, and highlighting that the Mittelstand management practices represent a distinct model, which is globally not very well understood yet. However, we will argue that there is no “secret” behind these practices, many of these practices are essentially just doing good business.

The Best of the German Mittelstand

This volume presents detailed profiles of about 100 firms as part of a broader database of 1,620 leading global German firms. Each firm selected is a world market leader holding one of the top three industry positions in its respective market segment measured by the size of its revenues (see Database of Deutsche Weltmarktführer, 2014). The entire group of 1,620 firms generated a total revenue of roughly 2 billion Euros and employed about 8.1 million people (estimated on the basis of most recent company data). The selected 100 Mittelstand firms presented here are representative of some of the best and most successful Mittelstand firms among a broader array of Germany’s world-class firms dominating global markets. Some are well-known brands (ANDREAS STIHL AG & Co. KG – chainsaws and other hand-held power equipment, Privatbrauerei Erdinger Wolfsbrun – wheat beer, or Miele & Cie. KG – premium white goods), others are invisible to the general public (hawo GmbH – packaging and sealing solutions specifically for hospitals and the medical industry; Pfitz GmbH & Co. KG – supplier of complete automation solutions with the core competency of safety). Some are enduring firms with a century of history (G. Siempelkamp GmbH & Co. KG – a diversified industrial firm with a global leadership position as systems supplier of press lines and complete plants for the wood-based panel industry or Maurer AG – leader in structural protection systems for bridges). Others have only recently emerged into world-class firms (ifm electronic GmbH – sensors, controllers and systems for industrial automation or Plasmatreat GmbH – offering atmospheric plasma solutions for surface pretreatment on all types of materials). All offer insights into the global success of the Mittelstand model.

An important aspect of German export success is that it does not only lie with the large well-known multinationals, but also with many Mittelstand firms. The term Mittelstand is quite often used as a statistical category, to classify all small and medium-sized enterprises (SMEs), with annual revenues up to 50 million Euros and a maximum of 499 employees (IM Bonn, 2015). However, many larger and mostly family-owned companies claim to be part of the Mittelstand, based on the Mittelstand’s positive connotations such as nimbleness, flexibility, innovativeness, customer focus, social responsibility, a family-like corporate culture, and long-term policies.

Ludwig Erhardt, the former Economics Minister who crafted the post-war (West) Germany “economic miracle” (Wirtschaftswunder) warned not to reduce the Mittelstand term to a mere quantitative and revenue-based classification but instead emphasised more qualitative characteristics that embody the Mittelstand, as it is “...much more of an ethos and a fundamental disposition of how one acts and behaves in society” (Erhardt, 1956).

In German linguistic usage, the term Mittelstand applies mostly to mid-sized and privately held firms as opposed to very large listed companies; but more importantly all Mittelstand companies are characterised by a common set of values and management practices. These companies are predominantly run by classic “owner-entrepreneurial families” (Unternehmerfamilien) seeking to sustain the business by instituting a core ideology of longevity, conservative long-term financing, and operating practices. Most Mittelstand companies are privately held, often under 3rd-5th family generation ownership and
control. Going public is the exception, not the rule. Further qualitative characteristics bind and unite such a Mittelstand mentality together. In spite of their relatively smaller size and often small town origins, many companies, especially the larger ones, act globally, while staying remarkably rooted in their region. They focus on the company independence, quality products, longstanding anchoring in local communities, and sustainable consensus-oriented relationships with their most important stakeholders including employees, customers, suppliers, and banks (see Welter, 2013; Berghoff, 2004). First (2012), Welter & Carr, 2014; Fear, 2014, Witt & Carr, 2014; Fear, 2014, Witt, 2015). The concept of the Mittelstand company represents an alternative management model to the mainstream company model of the typical Anglo-Saxon publicly-listed corporation with its dispersed investor base. Mittelstand core values represent a sharp counterpoint to a singular focus on shareholder value in favour of long-term survival based on enduring relationships with key company stakeholders, combined with a commitment to excellent products and services. To better analyse Germany’s company “landscape,” we divide companies into three distinct categories, the first category consists of the majority of German firms (more than 99 per cent), which are “classic” SME-type Mittelstand firms (revenues below 50 million Euros). The second group of German firms are “upper” sized Mittelstand firms (revenues of €100–250 million), with annual revenues between 50 million Euros and 1 billion Euros. Although these companies are much larger than the “classic” SME, the overriding majority are still family-owned and espouse typical Mittelstand values. The third and final category are Germany’s well-known large corporations with annual revenues of more than 1 billion Euros, including the DAX 30 companies, the largest publicly listed enterprises in Germany, such as Volkswagen, BASF and Siemens. Our analysis of Germany’s export statistics illustrates that both the “classic” and “upper” Mittelstand companies account for 68 per cent of Germany’s total exports when compared to 32 per cent generated by Germany’s large corporates. If we use the above statistical definition of Mittelstand firms, both Mittelstand categories account for about 1,400 of Germany’s 1,620 world market leading companies in our database (see Database of Deutsche Weltmarktführer, 2014). Both groups of Mittelstand companies are elite subgroups of the larger “average” Mittelstand. We call these Mittelstand companies with a leading global position in their market segment “Mittelstand Champions.” Especially the upper-sized Mittelstand firms are a unique and distinctive group. As a group they are the most important force behind the German export prowess. In addition, they grew much faster than Germany’s classic Mittelstand companies and the large corporations (see, e.g. Wicker et al., 2014). Due to their strength in innovation, remarkable global footprint and orientation to fast-growing emerging markets, they benefitted most from globalisation trends. Most of the companies included in this volume are part of this group. The existence of so many strong export-oriented, mid-sized industrial firms is, in our opinion, unique within a global perspective, although comparable figures are unfortunately lacking. What is even more remarkable is that these firms are more or less evenly spread throughout Germany, except in the former communist eastern areas. Successful Mittelstand firms have found access to global markets from all over Germany, even though 71 per cent of Mittelstand Champions are located in so-called peripheral areas and small towns (cities below 100,000 people) (see Venohr, 2014). For instance, the European Commission recently awarded the new Type 2 standard for charging coupler plugs for electric cars to a design of the firm MENNEKES Elektrotechnik GmbH & Co. KG, located in Kirchhundem, a small town 130 kilometres east of Cologne. Even firms in small towns can set global standards. Globalisation is often associated with the rise of inequality, but geographical spread also ensures that gains from globalisation are more evenly distributed across Germany compared to countries with large corporations concentrated in a few regions and globally non-competitive and regionally-oriented small- and mid-sized businesses dominating the rest of the country. A particular strength of the German Mittelstand landscape is the average size of the companies. A firm-level comparison across the European Union (EU) shows that the average “classic” German Mittelstand company has annual revenues of 36 million Euros and is 1.5 to 4 times bigger than the average SME in EU countries such as Italy, Spain, France, and Great Britain (Arrighetti et al., 2012). The same study also demonstrated that size and increasing scale is generally correlated with higher productivity, innovation potential, and degree of internationalisation – all factors that are outstanding features of the German Mittelstand. The reasons for Germany’s export strength in high-value added industrial products are not sufficiently researched, but prior research has highlighted that it rests in part on its industrial history, technical innovation system, and geostategic place in Europe (see Simon, 2012; Albichauzer, 2003; Keck, 2013; Fear, 1993). Germany was not a unified nation-state, but a collection of small states that form the basis of German federalism today. Everyone entrepreneur that wanted to grow had to “internationalize.” Germany’s industrial growth occurred after the First World War, in particular during the wave of globalisation between the 1890s and the First World War, when German industrial goods first challenged British goods on world markets as well as its military power – much like rising China today with the USA. Indeed, the trademark “Made in Germany,” which has become a symbol for German quality and reliability, was a result of the British passing the Merchandise Marks Act of 1857 that was designed to label allegedly inferior German goods. It backfired: “The last democracy” (see, e.g. Wicker et al., 2014). Due to their strength in innovation, remarkable global footprint and orientation to fast-growing emerging markets, they benefitted most from globalisation trends. 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action was the development of the so-called Haber-Bosch process, still today the main industrial procedure for the production of ammo-
nia for nitrogen-based products such as fertiliser and chemical feedstocks. The fundamental technology was developed by the German university professor Fritz Haber. BASF bought the tech-
nology in 1909 and assigned one of its employees, Carl Bosch, to the task of scaling up Haber’s tablet machine to industrial-level production. Industrial-scale level production as started in 1913. Both Haber and Bosch received the Nobel Prize in Chemistry for their production. Industrial scale level production as started in 1913. Both Haber and Bosch received the Nobel Prize in Chemistry for their work (Murrmann, 2007). The roots of German export competitiveness lie well before the First World War, and many of the strengths of the German economy still rest on these sectors. Wars and political upheaval wrecked the German economy until after the Second World War when traditional patterns reasserted themselves. Indeed a significant percentage of German world market leaders (32.5 per cent) were founded prior to 1914 and demonstrate how these firms successfully managed the great turmoils of the 20th century.

The mix of industrial sectors

### GERMAN WORLD MARKET LEADERS BY INDUSTRY SECTOR

<table>
<thead>
<tr>
<th>Industry Sector</th>
<th>Example Companies</th>
</tr>
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<tbody>
<tr>
<td>Food and Beverages</td>
<td>3B Scientific, STAEDTLER Mars GmbH &amp; Co. KG</td>
</tr>
<tr>
<td>Retailing and Wholesaling</td>
<td>Rational AG, STAEDTLER Mars GmbH &amp; Co. KG</td>
</tr>
<tr>
<td>Industrial Products</td>
<td>Rational AG, STAEDTLER Mars GmbH &amp; Co. KG</td>
</tr>
<tr>
<td>Chemical Products</td>
<td>BASF, Merck KGaA</td>
</tr>
<tr>
<td>Building Products</td>
<td>GRAF, BOOS &amp; Partner AG</td>
</tr>
<tr>
<td>Electrical Engineering</td>
<td>ABB, Siemens</td>
</tr>
<tr>
<td>Mechanical Engineering</td>
<td>Siemens, Bosch</td>
</tr>
<tr>
<td>Media, Telecommunication &amp; Software</td>
<td>Deutsche Telekom, SAP AG</td>
</tr>
<tr>
<td>Transport, Logistics and other Services</td>
<td>Daimler, Volkswagen</td>
</tr>
<tr>
<td>Commodities &amp; Natural Resources</td>
<td>Völkner Resources Group, SGS AG</td>
</tr>
<tr>
<td>Mechanical &amp; Electrical Machinery</td>
<td>ABB, Bosch</td>
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German Mittelstand companies tend to have a particularly strong presence in two types of markets: in a large number of business-to-business markets (B2B) and in the premium segment of many durable consumer goods markets. The B2B sector overall accounts for approximately 75% of the sales of German Mittelstand companies; 3B Scientific makes realistic anatomical models for the training of physicians and surgeons; and the engineering and architectural firm STAEDELTER Mars GmbH & Co. KG, which is a high-end leader in designing automotive race tracks. The second focus area for German companies is the premium segment in large-volume consumer mass markets, particularly for durable goods. With a combined global market share of about 90 per cent, the four major German premium car producers – BMW AG, Daimler AG, Volkswagen AG and Porsche AG – generate more than half of the revenue of the German automotive industry. German Mittelstand companies are leaders in this segment globally. Strong market positions can also be found in premium segments of many other durable consumer goods markets, from household appliances (Miele & Cie. KG, BSH Hausgeräte GmbH) to clothing (Adidas AG and Paul & Shark) and sports shoes for the entire market in the world (Adidas AG and Nike). These segments have very specific needs best served by specialised companies with a significant global market share in their respective niches (a focus on long-term customer relationships rather than competing transactionally at arm’s length in anonymous markets; the overriding company objective driven by family ownership is long-term survival, instead of short-term maximisation of company value (see Kormann, 2005)).

**Strategy: Global niche dominance**

Mittelstand Champions dominate niche market segments worldwide. They develop products and services of high quality, from machine tools to kitchen appliances and computer software. Many companies, particularly the smaller family controlled SMEs, pursue distinct niche strategies (Simon, 2007: 85–105). They focus on narrowly defined submarkets and cater to specific groups of customers with high-quality products and services tailored to their needs. Typical “German strengths” – performance, reliability, safety, durability and design – bolster acceptance of these products in the global market. This winning strategy is rooted in the prize pricing. For instance, Rational AG, a typical Mittelstand Champion, studied compared branded consumer durables products and discovered that simply by using the trademark “Made in Germany” German products could command a price markup of up to 20 per cent over functionally comparable products from other countries (Feige et al., 2014).

**MANAGEMENT MODEL “MADE IN GERMANY”**

These German Mittelstand Champions have a distinct management model that deviates strategy, leadership and governance principles, with core processes in a unique blend, creating a finely tuned whole. We argue: the worldwide success of German Mittelstand companies is not only a result of outstanding products and services, but it also rests on a very specific management model. In many aspects, this model is a counter-example to the US-dominated mainstream model of management taught in business schools worldwide. It differs in two core elements:

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**Family-owned companies lack access to capital markets and typically avoid markets that require high levels of capital and/or competition against large publicly held corporations rich in capital. They often cater to small market segments they do so worldwide. The global market approach makes small markets big (the “two-pillar strategy,” Simon, 2007: 85–105) (10). The maxim is: “We concentrate on the things we do best – worldwide!” These companies enjoy an average market share of around 50 per cent (with a median deviation of 20 per cent around the average). In some cases, particularly in tiny niche markets, the companies are essentially “quasi-monopolists.”

This “two-pillar strategy” is rooted in the fact that in many narrowly defined market segments, especially in B2B sectors, customer needs tend to be fairly homogeneous across national boundaries. The most successful Mittelstand companies view themselves as specialists providing a high-quality solution and very specific products. Most of their companies’ entire business model is geared to the needs of their target group. What they deliver is not just a product, but very often a total solution to a customer need. These companies act as “full-solution providers.”

A typical case in point is Rational AG, the world’s leading provider of products and services for thermal food preparation in commercial kitchens. They consciously omit the much larger market for home cooking appliances. The needs of their target group – professional chefs in canteen and commercial kitchens – are the same worldwide: to prepare a large number of omelettes very different meals in a very short period of time while ensuring quality of the meals. Rational AG offers innovative appliances for this target group, such as a computer-controlled cooker (Self-Cooking Center) that can cook to precise specifications. The chef no longer needs to tend to the cooking procedure and can focus on selecting ingredients and creating meals. The appliances also offer other features that bring marked improvements to the work processes in canteen kitchens (space-saving design and easy cleaning, for example). The company defines itself as the “Chef’s Company” and has 200 chefs of its own staff as sales representatives, making it a “system provider” of solutions for the “cookinglogik” problems professional chefs face.

An interdisciplinary research and development (R&D) department with about 80 employees consisting of physicists, engineers, nutritionists and others plus 30 in-house chefs develops new products and solutions for this target group on an ongoing basis (see Rational Website, 2015).

**Focus on customer loyalty, not competitive dominance**

Focusing on niches means catering to the specialised needs of a tar-
got group of customers and entails a different view toward competition. In many ways, what guides the US school of corporate strategy is an orientation toward competitive domination (see Kormann, 2005: 20–25). The goal is to outperform the competition – through aggres-
sive actions, if need be – to achieve market dominance and in typical scale-driven markets above-average profitability. The model pursued by a company, which has access to a pool of ultimately anonymous customers, in which a company can become either a cost- or a quality leader (through product differen-
tiation). Yet, as already indicated, most German Mittelstand Cham-
ions operate in niche B2B markets, whose distinctive features call for a different strategic focus (Kormann, 2005: 70–95):

- **B2B products and services are quite often “mission-critical”** for customers. This is particularly evident in the high indirect costs incurred if a component or piece of equipment should fail. Bargain
prices achieved at the cost of product performance are not a winning sales argument. For instance, the packaging machines used for pharmaceutical or food products often provide a very high throughput of finished products. Interruptions in production are very costly, since prices achieved at the cost of product performance are not a winning sales argument. For instance, the packaging machines used for pharmaceutical or food products often provide a very high throughput of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products. Interruptions in production are very costly, since packaging failures, such as those leading to impurities, can trigger the recall of finished products.
might not do enough to factor real customer needs into product development and find itself working too far ‘ahead of the market.’

A strong customer orientation does not mean to simply fulfill current customers’ demands but above all to innovate on their behalf. Technology leadership is a key factor of success. Leadership in world markets naturally entails worldwide presence. Many medium-sized businesses represent another key factor of success. Leadership in world markets also means close customer ties through worldwide presence (Porter, 1998). Along with innovative strength, worldwide sales and service networks are an essential source for innovations. Companies with activities “on location” have a far better sense for market-specific customer requirements and can react more quickly and flexibly to changes in target markets abroad. In many industries, worldwide service networks also permit the offering of complementary services to enhance customer loyalty. In addition, new sources of revenue in the near future promise high growth rates for the production-specificities of target markets abroad. In many industries, worldwide service networks also permit the offering of complementary services to enhance customer loyalty. In addition, new sources of revenue in the near future promise high growth rates for the production-specificities of target markets abroad.

Typical Mittelstand characteristics such as flat hierarchies, leadership with deep domain knowledge in key technologies and a superior understanding of customer needs and well-educated employees with a long tenure in the company and the industry, are essential ingredients for driving innovative strength. For their technology leadership, Mittelstand firms maintain a high degree of cross-functional cooperation in interdisciplinary project teams from development, production and marketing and sales. These companies also benefit from the longstanding, close collaboration with high-performing suppliers and demanding customers in the German economy (Porter, 1998). Technology leadership requires substantial investments. For example, the average R&D expenditure of Mittelstand Champions is estimated at 7.2 per cent of total revenues, well above the average R&D expenditures for all German industrial firms of 3.5 per cent of revenues (Wissenschaftsstatistik, 2012: 10). German Mittelstand Champions spend about twice as much on R&D (as a per centage of revenues) as their international rivals in the same industry sector (ten ‘industrials’ in Strategy&, 2013). Another indicator of their technology leadership is the number of patents they hold compared to their industry peers from other countries (Simon, 2007: 195–205). By this indicator, many Mittelstand firms are at the top of their respective industry sector.

Close customer ties through worldwide presence

Along with innovative strength, worldwide sales and service networks represent another key factor of success. Leadership in world markets naturally entails worldwide presence. Many medium-sized global market leaders have strongly internationalised their operations in recent years and are represented in all of the key markets with subsidiaries of their own. The average share of revenues earned abroad among the Mittelstand Champions stands at 66 per cent and their products are sold in about 72 countries (see Database of Deutsche Weltmarktführer 2018).

Many of these Mittelstand Champions are represented abroad through their own sales and service subsidiaries and production operations and have in fact become “Mittelstand-Multinationals” (Fears, 2013). Whenever possible, management of the customer relationship is not left to third parties such as distributors and sales agents. This ensures top service across a product’s lifecycle and is an essential source for innovations. Companies with activities “on location” have a far better sense for market-specific customer requirements and can react more quickly and flexibly to changes in target markets abroad. In many industries, worldwide service networks also permit the offering of complementary services to enhance customer loyalty. In addition, new sources of revenue in the near future promise high growth rates for the production-specificities of target markets abroad.

Most of the Mittelstand Champions studied here still view their in-house manufacturing operations in Germany as a “strategic asset” that must be preserved. However, they also see their ability to supply customers worldwide as a key competitive advantage. Many Mittelstand Champions have already established or are planning to establish production activities in countries with low labour costs, whether in the company’s own located operations in a town called Taicang near Shanghai (Matthes & Eisert, 2014), and reshaped the city so much so that it has become known as “Little Swabia” (Ewing, 2014: 87). While core competences in the region can be developed and dependency on a more cyclical equipment market will lead to a growing need to establish fully localised value chain operations in a town called Taicang near Shanghai (Matthes & Eisert, 2014), and reshaped the city so much so that it has become known as “Little Swabia” (Ewing, 2014: 87). While core competences in the region can be developed and dependency on a more cyclical equipment market will lead to a growing need to establish fully localised value chain operations, firms may need to establish a second “home base” in the medium- to long-term future, firms may need to establish a second “home base” in the medium- to long-term future.
many companies, based on state-of-the-art manufacturing equipment as well as innovative organisational models. Under this approach, a company produces only what is immediately required by custom-
erers. Customised products of high quality that can be quickly deliv-
ered to customers are a key competitive advantage of many German companies. In addition, overproduction and warehousing of stock can be avoided, significantly reducing working capital needs.

Those highly flexible production systems are very much supported by company-specific working-time models that provide a high degree of flexibility. The past few decades have seen broad implementation of so-called “company level pacts for employment and competitiv-
- ness” (betriebliche Bündnisse zur Beschäftigungs- und Wettbe-
werbs sicherung). German companies are allowed, in consultation with local works councils, to tailor the provisions of collective indus-
try-wide agreements to their specific company situation. In terms of working time, for example, works councils are usually open to agree to company-specific deviations from industry-level contracts as long as they are of the same flexibility. In exchange for longer term employment guarantees or investment programmes to improve the company’s competitiveness.

All of these measures combined have helped to keep Germany competitive as a manufacturing base. Still, German companies face ongoing challenges to stay competitive globally. Ger-
man industry, led by industrial associations (BITKOM, VDMA, ZVEI) and supported by the high-tech strategy of the German government and numerous firms and research institutions, started a whole host of projects and initiatives to create fully digital value chains (Kagermann et al., 2013). Those initiatives are summarised under the heading “Industry 4.0.” Industry 4.0 refers to the coming “fourth industrial revolution” and will allow for a new way of organ-
ising industry production. By using integrated computing power to connect machines, warehousing systems and goods, smart produc-
tion (Industry 4.0) is an integral part of this corporate culture and forms the basis of a distinct learning and innovation orientation. Continuous improvements of all core processes

Overall there are a number of parallels between the corporate cul-
ture of many successful German companies and the culture of top industrial companies worldwide, such as Toyota. Continuous improve-
- ment (kaizen) is an integral part of this corporate culture and forms the basis of a distinct learning and innovation orientation. Enlightened family capitalism

Besides the two factors of “strategy” and “processes,” a third key success consists of the leadership and governance model and the associated ownership structure. About 70 per cent of all German Mittelstand Champions are family-owned, with the controlling inter-
- est at and times management responsibility in the hands of one or
-more family members. Long-term success: shareholder value

The US governance model gives priority to the interests of company shareholders and its overriding objective is to increase shareholder value. In theory, the concept of shareholder value is not necessarily

inimical to a long-term oriented approach to management, since the shareholder value of a company should equal the net present value of all future cash flows that the company is expected to generate over its lifetime. In practice, however, increasingly short-term centred stock markets (in the US the average holding period of shares has gone from several years to less than a year) combined with incentive schemes for managers based on short-term share price appreciation, leads to a focus on short-term objectives and away from long-term goals. This may be made to balance the interests of all parties vital to the success of the company. Corporate policy revolves around creating sustainable and trust-based relationships with all key company stakeholders (owners, employees, customers, suppliers, local community). In place of short-term profit maximisation, top priority is given to achieving reasonable profits alongside sustainable growth in company value. Despite significant structural differences between family-run compa-
nies and listed corporations, the situation should not be viewed in black-and-white terms. Both company forms share many features and constraints as a result of market forces, technological changes, regu-
lations and company size. Where family-run companies and listed stock companies are the same scale and operate in the same market with the same degree of globalisation, we see a certain conver-
gence in return targets between the two types. The “difference which makes a difference”, however, is the independence of the non-listed family members from the shareholding outside ownership (Venohr & Meyer, 2007). Their main objective is not to maximise profits but to secure the company’s existence for the next generation. Firms are designed to stay independent and their corporate policy is geared to the long-
term preservation of the firm, aiming to achieve multigenerational continuity (Venohr & Meyer, 2007).

This long-term orientation permeates all parts of a family business. It becomes especially marked by higher equity ratios (versus companies of comparable size). According to our calculations, large German family enterprises have an equity ratio of 43.5 per cent on average versus 37.6 per cent for listed German firms. Higher equity ratios provide financial stability and in particular, when the company form is family-owned, the assets of the family can be used as a buffer. Long term horizon can also be discerned by an anti-cyclical pattern of invest-
ments. Despite a pronounced sales slump during the crisis years of 2008/2009, mid-sized champions kept investments into R&D fairly constant. In contrast, listed companies, which operate in volatile and unpredictable market environments. A long-
term preservation of the firm, aiming to achieve multigenerational continuity (Venohr & Meyer, 2007).

The continuity of ownership and the absence of stock-market driven, short-term financial pressures creates a supportive environment for ownership and management. This ownership structure shapes their business policies and the corporate culture. It is stressed by family business researchers that family businesses are a unique form of business organisation, which involves the overlap of two distinct systems; the business, mostly structured on rational economic principles, and the family, mostly based on emotional ties (Schippl et al., 2009). Many issues emerge from this fundamental difference. Both the family and the business are seen to be equal and overlapping systems that are bound together. The success in one system often leads to success in another, whereas problems in one lead to problems in another. Family ownership sets the tone for these companies’ policies, culture and values. Company owners can project their own personal values and convictions upon company policy. One possible aspect is the long-term orientation of most family businesses. Unlike listed cor-
porations with widely distributed and short-term focused investors, many family businesses can act with a long-term view. The history of many of these companies often dates back generations and the objective is to secure the survival of the company for generations to come. Research has shown that owners of family companies tend to be driven not only by financial motivations, but also non-financial aspects such as: the family’s affective needs, the ability to exercise family in-
fluence, and the perpetuation of the family dynasty. These motives are summarised under the heading of “socioemotional wealth” (Zellweger & Dehlen, 2012). Owners are often emotionally attached to their firm, which is typically an integral part of their self-fulfilment and self-actualisation. Their main objective is not to maximise profits but to secure the company’s existence for the next generation. Firms are designed to stay independent and their corporate policy is geared to the long-
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The effects of this different orientation of family-run businesses can also be observed in other aspects. A family business usually reflects the family behind the business. Many companies pursue a substantive mission, quite often rooted in the values of the founder. Part of this special value system is quite often a high degree of loyalty to the town
or region in which the company was founded. As mentioned above, more than 70 per cent of Mittelstand Champions are located in rural areas, rooted deeply in the local economy and operating with an overall sense of obligation to the workforce and the region. Owners, managers, and employees often feel embedded in their communities. The market leader has a high degree of mutual trust and loyalty among the family, management, and employees leading to an implicit “life-long” contract.

However, family ownership also has well-documented drawbacks. Many family-owned companies have failed due to family conflicts. The strong emotional ties a family often feels toward the company often prevents decisions that are economically necessary yet socially difficult. Another well-known problem area is the selection of the company management. If only family members are considered for executive positions, the company has a very small pool of expertise. The rapid disposal of this pool results in a corresponding low likelihood of finding the best candidate for a new position.

Extensive research on family firms could therefore not confirm that family-run family run non-family businesses. In contrast, family-run companies in particular publically-listed corporations (see Schlippe et al., 2009 and Klein, 2010). It has been observed that the performance differences among family businesses are much bigger than among publicly-listed companies. Among other things, this is due to the fact that owners can often decide quickly, free of lengthy decision-making processes typical for large corporations that often fail to improve the quality of the decision and instead serve as a career hedge for decision-makers. Unconventional decisions are more common in family firms. If the decision that follows, the family company emerges as a public company. These firms tend to be characterised by a strong continuity in its personnel and controlling. Today, thanks to effective governance systems, the larger family-owned companies in particular are managed with a high degree of professionalism and transparency that is comparable to listed stock companies.

Traditional virtues combined with a high degree of professionalisation

Many Mittelstand Champions combine the traditional virtues of family capitalism with a high degree of professionalisation. Successful family businesses have developed distinctive governance systems and processes for critical decision areas such as the intergenerational transfer of ownership and leadership within the family to prevent potential threats to the company by the family (May, 2012).

An Achilles’ heel of the “classic” family-run company is succession. The next generation is not necessarily imbued with the same level of entrepreneurial competences as the founder. This poses a potentially great risk to the future success of a family business. A key challenge therefore is to integrate non-family members into the management of a family business.

From the second generation on, many successful medium-sized and family-owned German enterprises are (co-)managed by executives from outside the family. Models with a family/non-family management blend are quite prevalent: external managers take over day-to-day business operations while the family concentrates on an active ownership role. Our analysis of family-owned world market leaders found that 28 per cent of the companies were led by family members only and 24 per cent were led exclusively by outside executives. About 48 per cent of the companies employed both outside professional managers and family members in leadership positions. International comparisons tend to confirm these results. A study of management practices comparing medium-sized manufacturing firms in the USA, Great Britain, France, and Germany showed that German family firms are considerably more likely to employ outside professional managers in leadership positions than companies in the other countries analysed. The same study demonstrated that “primogeniture family firms,” i.e. those that pass management on to the eldest son, are significantly less well managed than those led by the founder or by professionally trained board members. The German family companies with a mixed model of corporate leadership tended to have the best results as measured by indicators such as firm productivity. One possible explanation is that this “mixed leadership model” combines the best of both worlds: family control ensures a long-term investment horizon and a balanced stakeholder perspective, while professional managers introduce state-of-the-art management practices.

The management culture of these globally successful companies is characterised by a healthy blend of the “classic virtues” of medium-sized enterprises, such as close proximity to customers and the workforce, flat hierarchies, and informal communication channels that lead to a high degree of flexibility, combined with professional management expertise. The firms’ leaders are passionate about taking effective control and risk-management systems, the larger family-owned companies in particular are managed with a high degree of professionalism and transparency that is comparable to listed stock companies.

Among larger and older family-held global market leaders in particular, there are effective governance systems in place to ensure family cohesion and the successful interplay of family and business. The purpose of these systems is to resolve tensions between the company and the family, and within the family, by providing a clear code of values, legal agreements, and rules for decision-making by the company’s owners, supervisory boards, and management committees (Simon et al., 2005; Hennekens, 2004; May, 2012; Kormann, 2011).

These firms tend to be characterised by a strong continuity in its management. According to our data, the average tenure for managing directors is approximately 20 years, compared with an average leadership term of just under 7 years for chief executives at German publicly-listed companies (Strategy&, 2014). Management continuity is cultivated by providing ample scope for internal development opportunities for mid-level managers to become senior executives.

And it is also expected that the next generation of owners profession- alises themselves with either technical or managerial training, and to combine this training with years of hands-on experience outside as well as inside the family business before moving into a senior role in the family business.

A high degree of trust as the foundation for innovation leadership

Studies have shown that a high degree of trust increases the innovative capacity of companies (Covey & Merril, 2006, Notebook, 2013) as well as that of countries (Doh & Acs, 2009). The best companies manage to set up an organisation “built on trust.” Innovations need a number of important organisational and cultural factors to flourish, including information sharing, a sense of collective responsibility with an awareness of caring about who gets credit, a willingness to take risks, the safety to make mistakes, and the ability to collaborate. All these corporate traits managers (Blass, 2015) in such an environment, a high workforce satisfaction and accordingly low rates of attrition (Covey & Merril, 2006).

Company loyalty to employees and employee loyalty to the company are pronounced in Mittelstand Champions. On the one hand, many medium-sized global market leaders are the largest employers in their localities, so employees have few alternatives. On the other hand, these large companies also have a smaller pool of candidates than in a major city. The result is mutual dependence that grows even more critical where profound staff expertise is required. Such firms lay off workers reluctantly not only for reasons of communal commitment, but also because the loss of skilled workers would be disastrous.

HR policies overall are characterised by stability and long-term ori- entation. Employees are held in high esteem. Firms provide attractive systems of incentives, training and career-development opportunities, and very low turnover rates that provide for a pleasant working environment. Employee profit-sharing is also more frequent among successful companies. Conversely, there is considerable employee loyalty to the company, exemplified by an average employee attrition rate of just 2.8 per cent annually, according to our data.

An important source for Mittelstand Champions located in rural areas to recruit future managers is so-called dual study programmes offered at Universities of Cooperative Education (OHE). These are state-run educational institutions that offer three-year academic pro- grammes leading to a Bachelor’s degree. A key characteristic of these programmes is that theoretical studies and practical apprenticeship training at a sponsoring company are alternated with one another. Academic programmes usually focus on the specific needs of the businesses in the region.

An important characteristic of Mittelstand Champions is that the rate of attrition also help prevent the loss of vital company expertise. Stability in personnel policy is also fostered through flexible working-time models that permit temporary adjustments in workforce capacities to buffer fluctuations in orders received. Based on stable employment relationships, specific product and process expertise can be taken root within the company over the years and decades. Innovative and thus often extremely costly R&D projects are thus not exposed to the same kind of decision-making risk as in many among groups and functional divisions. The informality and long-standing teamwork at these Mittelstand firms enhance commu- nication and sharing of knowledge. Core elements of this culture trust are (see Kalverkamp, 2009).

• Leaders who serve as role models based on their character traits, their commitment to the business and its employees, and their in-depth understanding of the business. Naturally, managerial styles vary considerably, but in most cases senior leaders have decade-long experience in the industry. Leaders have thorough domain knowl- edge, a profound appreciation for their industry, the company and its products, its services and core technologies and especially its people.

• Technical education is valued. Engineers and scientists populate the senior levels at many successful Mittelstand Champions. The edu- cation of the best technical professionals from Mittelstand and world market leaders is quite different from the typical profile of “profes- sional managers” as preferred by large corporations. In Germany, very few MBA programs exist. Business Administration as an aca- demic discipline is almost nonexistent. Management education at Mittelstand Champions are mostly based on technical education.

Young graduates join companies in their area of technological expertise, i.e. mechanical engineers join machine equipment com- panies. Career progress is then based on success “in the field.” Acadratic degrees (usually a BA and even PhDs), 23 per cent have an economics or management degree, and 32 per cent have other types of education. Among the DAX 30 firms, the typical board member profile is somewhat different: about 45 per cent have an economics or management background, about 35 per cent have an engineering or scientific degree; 20 per cent have other degrees (Roland Berger, 2012: 9).

Management behaviour is characterised by an orientation towards basic values such as honesty, reliability, respect and mutual esteem – behaviours that help employees find their permanent “home” within the company. On the other hand, ambitious goals and a determination to dominate an area are important for these firms to play a very important role. To attain and sustain global leadership requires, amongst other traits, a strong sense of mission and ambi- tious goals, as well as a restlessness in pursuing this mission (see Witt, 2015). Successful Mittelstand Champions have executives who can navigate these tensions while establishing a relationship of personal trust with the workforce.

• Distinctly decentralised organisational structures. Teams and indi- vidual employees on site have considerable decision-making freedoms. Hierarchies are much flatter than in large corporations, communi-
cations paths shorter and more direct; functional silos and hierar-
chical barriers are kept to a minimum with interdisciplinary teams
favoured. Company politics and power struggles are largely elimi-
nated, or else they are quickly identified, actively discussed and
agreed to. This promotes flexibility that is more flexible than those found
in major corporations, and each employee can play a greater role in
shaping his or her own working environment.

- Transparency: Business strategy and goals are broadly anchored
within the public communication about successes and failures ("genuine communication"). A great effort is made to foster
quick and comprehensive information sharing.

GERMANY AS A WORLD-CLASS LOCATION FOR
"HIGH VALUE-ADDED MANUFACTURING"

An important basis for the global success of many German firms
is Germany-specific institutions that are designed to promote long-term
cooperation within and between companies. Such institutions reinforce
the strong link between large and medium-sized companies and their
affiliates, and help explain why Germany has proven to be a key
exporter of high-growth firms, such as BMW or Volkswagen. These
companies have a unique national innovation system, with a particular
strength in 

- High-value-added manufacturing;
- Business-to-business (B2B) networking;
- Supply chain excellence;
- High productivity;
- Long-term business relationships;
- Strong work ethics;
- Strong brand loyalty;
- High respect for intellectual property rights.

In Germany, industry is seen as a strategic asset, not just in terms of
the economic benefits it brings, but also in terms of the social
benefits it provides. This is reflected in the way that German firms
are structured, with a strong emphasis on cooperation and teamwork
among employees.

- Decentralized corporate governance;
- Co-determination (mitbestimmung);
- Shareholder rights;
- Employee involvement.

In addition, German firms are also strong advocates of lifelong
learning and training, with a strong emphasis on developing the
skills and competencies of employees. This is reflected in the way
that German firms are structured, with a strong emphasis on cooperation
and teamwork among employees.

- Strong work ethics;
- High respect for intellectual property rights;
- Strong brand loyalty;
- High productivity;
- Long-term business relationships;
- Supply chain excellence;
- High-value-added manufacturing;
- Business-to-business (B2B) networking.

In addition to this, German firms are also strong advocates of
diversity and inclusion, with a strong emphasis on developing the
skills and competencies of employees from all backgrounds.

- Strong work ethics;
- High respect for intellectual property rights;
- Strong brand loyalty;
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- Supply chain excellence;
- High-value-added manufacturing;
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Finally, German firms are also strong advocates of sustainable
development, with a strong emphasis on developing the
skills and competencies of employees from all backgrounds.

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IN CONCLUSION

We have sketched here the German way of doing business with a
distinct “Mittelstand” management model that has generated a
disproportionate number of world market leading Mittelstand
firms, pioneering and dominating many market segments worldwide.

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Finally, the outstanding international orientation of German firms
is supported by a worldwide network of the Foreign Chambers of Com-
merce, which has at the moment over 130 locations in 90 different
countries (see AHK Website, 2014). Globally there are over 44,000
participating fee-paying member firms. Along with embassies and
consulates, they represent the interest of German firms vis-à-vis
governments and the civil service of the respective host country. But
most importantly, they provide consulting and other services for firms
for a fee and act as a local hub for German firms abroad, supporting
them through myriad activities.

Many German technical universities, such as the Technical
University of Munich, have a strong focus on engineering and
innovation, with a particular emphasis on developing the
skills and competencies of employees from all backgrounds.

- Strong work ethics;
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