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MASTER'S THESIS

GERMAN BUSINESS MODEL "MITTELSTAND": AN
ASSESSMENT ON GERMAN-TURKISH
BUSINESS RELATIONS

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İZMİR-2016

DECLARATION

I hereby declare that this master's thesis titled as "German Business Model in a Changing Global Economy: An Assessment on German-Turkish Business Relations" has been written by myself in accordance with the academic rules and ethical conduct. I also declare that all materials benefited in this thesis consist of the mentioned resources in the reference list. I verify all these with my honour.

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ABSTRACT

Master's Thesis

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German economy proved its resilience even after the turbulent conditions of the 2008 global economic crisis. Its strong position, particularly in export, attracted attention of numerous researchers and journalists. Thus, Germany's performance in coping with the challenges of globalization needs to be studied particularly. It seems that German business model, represented primarily by the so-called Mittelstand companies has a specific role in this performance. Recently, this model, referred to as the backbone of the German economy, has started to be studied in detail. Central and Eastern European countries, South Korea and China have tried to constitute the same business environment, in which these mid-sized enterprises could flourish. Along with the globalization, Mittelstand companies have also experienced a transformation to adapt themselves to the new highly internationalized business environment. The main aim of this study is to explain the transformation process of these companies as well as its impact on German-Turkish business relations.

For this purpose, upon explaining the cultural and historical background, transformation of Mittelstand model throughout the last couple of decades has been analysed. This analysis was based on the relevant literature in German and English. In order to explain the effects of the transformation process of German Mittelstand companies on German-Turkish business environment, the list of partly

or fully foreign-owned companies in Turkey as of 31.12.2015 was used, which were listed by Turkish Ministry of Economy. Among a total of 6.434 German companies, 4.306 from manufacturing economy branches were detected. Then 62 fully-owned and family-led German Mittelstand firms, which have manufacturing plants in Turkey were identified by searching each of 4.306 German firms on internet. Additionally, activities of a German-Turkish intermediary organization, German-Turkish Chamber of Commerce and Industry, were reviewed in order to draw attention on the vital role of the intermediary organizations in German business environment.

Keywords: Mittelstand companies, Globalization, Business culture, German-Turkish business relations.

ÖZET

Yüksek Lisans Tezi

Alman İşletme Modeli “Mittelstand”: Alman-Türk İş İlişkileri
Üzerine Bir Değerlendirme
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Alman ekonomisi 2008 küresel ekonomik krizinden sonraki çalkantılı durumda bile direncini kanıtladı. Alman ekonomisinin özellikle ihracattaki güçlü duruşu çok sayıda araştırmacı ve gazetecinin ilgisini çekti. Bu sebeple, Almanya'nın küreselleşmenin getirdiği zorluklarla mücadele etmedeki performansı özellikle çalışılmalıdır. Görünüyor ki Alman işletme modelinin öncelikli temsilcileri olan Mittelstand şirketlerinin bu performansta büyük bir rolü vardır. Alman ekonomisinin omurgası olarak adlandırılan bu model son zamanlarda detaylı olarak çalışılmaya başlanmıştır. Merkezi ve Doğu Avrupa ülkeleri, Güney Kore ve Çin, kendi ülkelerinde orta ölçekli şirketlerin geliştirdiği bu işletme ortamını inşa etmeye çalışmışlardır. Küreselleşmeyle birlikte Mittelstand şirketleri kendilerini bu hayli uluslararasılaşmış sisteme uyumlaştırmak için bir dönüşüm süreci yaşamışlardır. Bu çalışmanın temel amacı bu şirketlerin dönüşüm sürecini ve bu sürecin Alman-Türk iş ilişkileri üzerine etkilerini açıklamaktır.

Bu amaçla, kültürel ve tarihsel arka plan açıklandıktan sonra, Mittelstand modelinin son birkaç on yıl içinde yaşadığı dönüşüm analiz edilmiştir. Bu analiz ilgili Almanca ve İngilizce kaynaklara dayanmaktadır. Alman Mittelstand şirketlerinin dönüşüm sürecinin Alman-Türk iş ortamına yansımalarını açıklamak için Türkiye Cumhuriyeti Ekonomi Bakanlığı'nın 31.12.2015 tarihi itibarıyla Türkiye'de faaliyet gösteren yabancı şirketler listesi kullanılmıştır. Toplam 6.434 şirket içinden üretim sektörlerinde faaliyet gösteren 4.306 şirket bulunmuştur.

Daha sonra 4.306 şirket internet üzerinden taranarak Türkiye’de üretim tesisi bulunan 62 yüzde yüz Alman sermayeli ve aile tarafından yönetilen Alman Mittelstand şirketine ulaşılmıştır. Ek olarak, aracı kuruluşların Alman iş ortamındaki hayati rolüne dikkat çekmek için bir Alman-Türk aracı kuruluşu olan Alman-Türk Ticaret ve Sanayi Odası’nın faaliyetleri incelenmiştir.

Anahtar Kelimeler: Mittelstand şirketleri, Küreselleşme, İşletme kültürü, Alman-Türk iş ilişkileri.



**GERMAN BUSINESS MODEL “MITTELSTAND”: AN
ASSESSMENT ON GERMAN-TURKISH
BUSINESS RELATIONS**

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ABBREVIATIONS

DIHK	German Chambers of Commerce and Industry
DTR-IHK	German-Turkish Chamber of Commerce and Industry
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Trade and Tariffs
IfM Bonn	Institute for Mittelstand Research Bonn
IHK	German Chamber of Commerce and Industry
IMF	International Monetary Fund
KfW	Bank for Reconstruction
R&D	Research and Development
SME	Small and Medium-Sized Enterprise
TOBB	Türkiye Odalar ve Borsalar Birliği
WTO	World Trade Organization
ZIM	Central Innovation Programme for Mittelstand

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INTRODUCTION

Germany is referred to as “economic superstar” of Europe due to its strong performance, even after the global economic crisis of 2008. Today it is commonly approved that German economy is the engine of European economy. However, in the late 1990s and early 2000s Germany was called as “the sick man of Europe”. German economy has also experienced turbulent periods especially after the reunification of West and East Germany in 1990. Therefore, it is essential especially for developing countries to study how Germans established this well-functioning economic order.

The economic system that exists in Germany is called as “German style capitalism” in the relevant literature. Historical roots of this system date back to the establishment era of German state. Initially, Germany has emerged as a rival to Great Britain as stated by Rosser and Rosser (2004). In the first decades of the new German state, nationality and industrial power had been combined in order to outperform Great Britain economically (Hampden–Turner and Trompenaars, 1995: 180). After two destructive world wars, Germans established a distinctive form of capitalist economy in West Germany, which offers high living standards and low income inequality (Streeck, 1997: 237).

German business model stands on the traditionally family-owned and family-led companies. In German language these family-owned and family-led companies are called as “Mittelstand”. Independent from their sizes, these companies possess some distinctive characteristics. Recently, Mittelstand companies were under the spotlight of English-language newspapers and economy magazines. The term “Mittelstand” is directly used in English language even without any translation. Sunderland (2010), Blackstone and Fuhrmans (2011), Frangoul (2014) and Rattner (2011) introduced German Mittelstand companies as driving force behind the well-functioning German economy and its high performance in foreign trade. In English, Mittelstand is often translated as small and medium-sized enterprises (SMEs) from Germany. However, according to the commonly approved definition of the Institute for Mittelstand Research Bonn (IfM Bonn), a Mittelstand is a family company, in which the ownership and

management lay in the hands of the owner or owner family. Therefore family-led large enterprises can also be counted as Mittelstand. Mittelstand companies' contribution to German economy is significant in job creating and exporting. German SMEs employ 60.2% of employees subject to social security contributions in Germany (Arentz and Münstermann, 2013: 625). 19% of the total exports of German companies were made by Mittelstand companies (Federal Ministry of Economics and Technology, 2013: 9). In order to maintain this performance, more than 1.000 organizations support SMEs in Germany as stated by Meyer-Stamer and Wältring (2000).

German Mittelstand companies have entered into a transformation process especially after the collapse of the communist regimes in Central and Eastern Europe. These countries' geographical proximity and investment environment made them ideal investment destinations for German Mittelstand firms. Compared to East Asian countries, transportation costs were low and control of quality was easier in these countries as stated by Brenken (2006). Moreover, German language was widely spoken in these countries and the vocational education systems were similar to the one in Germany. As a result of the globalization process, traditional characteristics of German Mittelstand companies started to change (Berghoff, 2006). Foreign managers started to be hired by Mittelstand firms. Joint ventures and strategic alliances emerged as new options for them.

Share of the exporter Mittelstand companies increase in line with the company size. 80% of large German enterprises exported in 2010, while the same ratio was almost 50% for small enterprises in the same year (Hoffmann, Holz and Kranzusch, 2013: 5). The most important export destination for German Mittelstand companies is Western Europe, followed by Central and Eastern European countries. However, they are increasingly active in East Asia as well, especially in China. German Mittelstand companies that have profound export experience are active in foreign direct investment (FDI) activities. From 1986 to 2005, 2.300 Mittelstand companies invested directly in 85 different countries (Brenken, 2006: 19). Western Europe, Central and Eastern Europe as well as China are the most popular FDI destinations for German Mittelstand firms. Among these internationally active German Mittelstand enterprises emerged many

“hidden champions”. The term “hidden champions” was coined by Hermann Simon in the 1980s. According to Simon (2009), many German Mittelstand companies achieved world market leadership without being popular in economy magazines, by focusing on their core competencies. Approximately 1.400 German Mittelstand companies are hidden champions as stated by Holz (2013). Business strategies of these successful companies are getting more attractive than large enterprises for researchers day by day.

The principal aim of this study is to explain the transformation process of Mittelstand companies as well as its impact on German-Turkish business relations. For this purpose, upon explaining the cultural and historical background, transformation of Mittelstand model throughout the last couple of decades will be assessed, with reference to the relevant literature in German and English. Then, reflections of German Mittelstand companies’ transformation process on German-Turkish business environment will be reviewed. For this purpose, firstly, manufacturing activities of German Mittelstand companies in Turkey will be introduced. In order to detect the fully-owned and family-led German Mittelstand companies which have production facilities in Turkey, the list of companies partly or fully-owned by foreigners as of 31.12.2015 was used. These data are based on the official sources, i.e. Turkish Ministry of Economy. Among a total of 6.434 German companies, 4.306 from manufacturing economy branches were detected. After an internet search for every single German firm from manufacturing economy branches, 62 German Mittelstand enterprises were found, which have production facilities in Turkey. Secondly, activities of a German-Turkish intermediary organization, German-Turkish Chamber of Commerce and Industry (DTR-IHK), were assessed, in order to measure its effect on promoting Turkey as an investment location for German companies. The relevant data covered by the magazine of this organization, “ODA”, were analysed in this phase of the research. Thus, the methodology of the study included following phases: historical analysis, cultural analysis, review of the recent literature and data analysis based on official and business resources.

Upon this background, the study consists of three chapters. In the first chapter, historical roots of German economic system and German companies will be introduced.

Then, peculiarities of German style capitalism and the effects of German culture on German business model will be explained. In the second part, the term Mittelstand will be discussed. Then Mittelstand companies as the backbone of German business model will be explained. In the second chapter, transformation process of German Mittelstand companies will be discussed within the context of globalization, especially after the World War II. Then export and FDI activities of German Mittelstand companies will be analyzed. In the last section of the second part, hidden champion Mittelstand companies' business strategies will be explained. In the third chapter, reflections of the transformation process of German Mittelstand companies on German-Turkish business relations will be explained in detail.

CHAPTER ONE

ESSENTIALS OF GERMAN BUSINESS MODEL

German business model stems from a business environment which consists of traditional family-owned enterprises, the agencies and regulations of German state and a wide range of intermediary organizations. It is essential to know the German style capitalism in order to understand the historical roots of German business model. As it is stated by Hampden–Turner and Trompenaars (1995), German style capitalism is not only geographically but also ideologically and psychologically close to the old communist world. Government, unions and industrial groups participate in taking economic decisions. Therefore, Germany with a trade surplus of 20 billion dollars even after the reunification in 1991 was seen as the financier of development and a model for old Soviet nations of Central and Eastern European countries, rather than the United States with a trade deficit of 75 billion dollars. According to Bartold Witte from Ministry of Foreign Affairs in those days, newly independent Central and Eastern European states have seen Germany as a model not only because of close cultural and linguistic relations but also because of Germany’s success in establishing a third choice for them in terms of an economic order beyond Anglo–American capitalism (Hampden-Turner and Trompenaars, 1995: 179-180). But how did Germans establish this peculiar form of capitalism that was seen as a model for newly independent states of old communist Central and Eastern Europe?

In this chapter, first of all historical roots of German economic, social and educational systems together with historical roots of large enterprises and SMEs will be explained. In the second part of this chapter, the term *Mittelstand* (German SMEs) will be introduced. Finally, German *Mittelstand* companies’ contribution to German economy will be explained.

1.1. HISTORICAL AND CULTURAL BACKGROUND

Germany has founded its first textile factories seventy-five years later than England and around half a century later than the United States. In the middle of the nineteenth century, German states were economically underdeveloped and they were still feudal in many respects (Hampden-Turner and Trompenaars, 1995: 180). Entrepreneurial tradition was not well-established in the German-speaking lands like in the United States and England, except for Prussia and the Hanseatic cities of German origin. Actually, these cities had already been involved into a long and deeply-rooted tradition of trade and entrepreneurship from the middle-ages onwards. According to Weber (1992), within the Hanseatic trade system, there were no fundamental difference of character between the English and German at the end of the middle ages. English and the Hanseatic merchants were similar of characters (Weber, 1992: 47).

German economy was growing rapidly during and the fifteenth and sixteenth century since it was a trade route in Central Europe and a centre of innovation such as the printing press of Gutenberg. However, first half of the seventeenth century was a stage for Protestantism and Catholicism war. As a result of Thirty Years War (1618-1648) Germany lost one third of its population and became religiously divided until 1871. After the victory of Prussia against France in 1871, the German state has emerged. Bismarck from Prussia, the most industrialized German land in those years, led the unified German Empire in Franco-Prussian War. Between 1871 and World War I, Germany industrialized and emerged as a rival to Great Britain. Before World War I its steel production was more than Great Britain's production (Rosser and Rosser, 2004: 235). Industrial power and nationality has been combined gradually. In the first ten years of the twentieth century, Germany has outperformed England economically. Then in 1918 Germany was defeated at the end of the World War I. Until the World War II recovery had been completed but there was a disaster again during and at the end of the war. After the World War II, Germany economically outperformed England in 1950 again. At the end of the 1950s Germany was the leader of the Common Market

economies of Europe and their economy was growing 8% in a year (Hampden-Turner and Trompenaars, 1995: 180-181).

Germany was a successful example of late industrialism. They had inspected the existing industries of England and the United States, and then they have copied and continuously improved them. Bankers, politicians, engineers and unions cooperated in order to overcome their rivals. The establishing of the Deutsche Bank in 1870, one year earlier than the foundation of Germany, was a distinctive sign of the importance of financing for the initial strategy of the Germans. Credits with low interest rates were offered to entrepreneurs by banks during this period (Hampden-Turner and Trompenaars, 1995: 182-183). Large portions of the stock of major corporations were held by German banking sector. Protectionism and cartelization of industry were encouraged by banks during the late nineteenth century (Rosser and Rosser, 2004: 232). Furthermore, Germans have reduced the protection periods of patents, in order to spread of innovative practices through the relevant industries. In contrast to English-speaking countries, Germans have founded many intermediary institutions to prevent the conflicts between the state and private sector (Hampden-Turner and Trompenaars, 1995: 183-185).

Rosser and Rosser (2004) argue that the term “social market economy” was invented in West Germany after World War II (Rosser and Rosser, 2004: 232). Streeck (1997) also states that German capitalism as a distinctive kind of capitalist economy was constituted in West German society between the end of the World War II and the reunification of Germany in 1990. Its characteristics are high living standards, low inequality of incomes and high wages. Germany had more export revenues than Japan and the United States at the time of the reunification. Germany acquired this export performance in spite of higher levels of wages than those in Japan and the United States. During the 1980s the gap between high and average wages in all the other industrialized countries increased except for West Germany. A distinctive set of socioeconomic institutions enabled Germany to achieve high export performance accompanied by a narrower gap between high and average wages (Streeck, 1997: 237-238).

After the defeat of World War II German economy was collapsed and a divided Germany emerged. West Germany adopted a market capitalist economic system. There was an economic miracle which was called *Wirtschaftswunder* (Rosser and Rosser, 2004: 231). A complex historical compromise between liberal capitalism and social democracy took place in West Germany. There were many traditionalist revivals such as the *Mittelstand* and labour unions. Protective institutions of artisanal firms were defended by the old middle classes, which were constituted by supporters of Christian Democratic Party. Moreover German state rebuilt the divided socialist and Catholic unions as *Einheitsgewerkschaften* after the war. This increased the productivity of workers. The emerging system was a capitalist market economy, organized and regulated by a variety of institutions. Therefore German workers were able to build a stronger position in that case of free market economy in comparison to other major capitalist countries. German state governs the wide areas of social life like health care, education and social insurance without reference to market principles. However, competitive markets exist within this social welfare economy (Streeck, 1997: 238-241).

German state was described as an *enabling state* in the postwar era as stated by Streeck (1997). It stands between the two approaches qualified as *laissez-faire* and *étatiste*. Within this system, vertically and horizontally fragmented sovereignty reduces the public authorities' capacity of intervention in the economy. Vertically, the presence of the federal government and the *Länder* limits political authorities. Horizontally, there are a variety of independent organizations that cannot be managed by federal government. Bundesbank, and Federal Cartel Office, for instance are the leading ones among these independent authorities (Streeck, 1997: 241-242). Bundesbank is one of the most independent central banks of the world. Consistent low inflation in Germany is a result of its careful monetary policy (Rosser and Rosser, 2004: 233). Moreover, there are strong constitutional protections in order to enable the labour unions and employer associations to regulate working conditions and wages without government interference. As a result, government policies are predictable and economic agents can pursue long-term objectives. Lasting business relations could be built in that environment (Streeck, 1997: 242).

High public spending on research and development and on social protection is another characteristic of German economy. Cooperative research and technology transfer are organized by relevant public authorities. High quality standards are enforced by German business associations. Industrial workers unions negotiate high labour standards together with price bargaining (Streeck, 1997: 242-243). Germany has codetermination (Mitbestimmung) instead of corporatist centralized wage bargaining. It enables labour leaders sit on supervisory boards of corporations. Therefore a labour – management cooperation has emerged in Germany (Rosser and Rosser, 2004: 232).

1.1.1. Historical Roots of Large and Mittelstand Companies in Germany

Rosser and Rosser (2004) argue that Germany's success in general science and technology enabled its impressive economic growth. Between the mid-nineteenth century and the World War I there were strong ties between German science, politics and business circles. By the help of these intertwined relations, large German enterprises such as Siemens, Krupp and Zeiss had emerged and prospered. At the end of the nineteenth century, Germany was evolving from an agricultural country to an industrial country. Agriculture, fishing and forestry were being replaced by industry. The details of the cases of Siemens, Zeiss and Krupp illustrate this process of transformation as it is mentioned below (Watson, 2011: 379-380).

Werner Siemens was one of the fourteen children in a farmer family near Hanover. He had to quit Gymnasium in 1834 because of the financial situation of his family. He joined the Prussian army and gained experience of engineering there. He spent three years in Berlin Artillery and Engineering School where he started to produce his first inventions. In 1847 he produced a pointer telegraph. He founded Siemens & Halske Telegraph Construction Company with his friend Johann Georg Halske. The first long subterranean wire was laid by Werner Siemens from Berlin to Grossbeeren. The next subterranean line was between Berlin and Frankfurt. His company was continuously introducing inventions and applications for electrical industry. Among them: in 1879 they presented the first electric railway and electric street lights in Berlin;

in 1880 they built the first electric elevator in Mannheim; in 1886 they presented the first electric trolley bus, and in 1891 they made the first electric drill. The German word *Elektrotechnik* was coined by Werner Siemens and became synonymous with the name of Siemens. He became a member of Berlin Academy of Science without a PhD in 1874. In 1879 Electrical Engineering Society was founded by the help of Werner Siemens. This Society aimed at opening of new faculties of electrical engineering at the polytechnics (Watson, 2011: 355-356). After the Werner's retirement from active management, the company was reformed as a stock corporation in 1897 due to its expanding capital requirement. During the World War I Siemens' domestic markets were collapsed and its foreign subsidiaries were expropriated. After the war Werner's youngest son took over the management until his death in 1941. During the war Siemens lost 40% of its capital as stated in the web site of the company. After the war the company was reformed and in 1930s a unified advertising approach was developed within the whole group. From 1933 to 1939 German companies were integrated into military preparations by National Socialist regime. Siemens had put 50.000 people to work against their will in 1944. German economy was dependent on forced labour due to the war conditions. Allied forces destroyed plants and factories of Siemens during the final years of the war. Four-fifth of Siemens' total assets was lost during World War II. After the war Siemens reconstructed itself again. In 1956 a power plant was completed in Argentina. Its former strong position in world markets was achieved again in 1960s. During 1960s and 1970s Siemens cooperated with Bosch to produce home appliances and with AEG in power plant business. After the reunification of Germany, Siemens expanded through Central and Eastern European countries. In 1990s Siemens cooperated with Nixdorf and Fujitsu in the field of information technology¹. Today Siemens operates in more than 200 countries with around 348.000 employees and in the 2015 fiscal year €75.6 billion revenues were generated as it is stated on its web site.

Alfred Krupp had to leave school due to financial problems like Werner Siemens. In 1811 his father founded the steel company one year before his birth. Gradual formation of the customs union of German states (*Zollverein*), which facilitated business

¹ For detailed information see: <http://www.siemens.com/about/en/history.htm>, (14.03.2016).

between German-speaking lands, enabled Krupp to improve its performance. Krupp started to produce armaments in 1843. Between 1848 and 1871 German states were in turmoil. This environment paved the way for the high sales of Krupp's the first mild-steel musket barrels ever produced. Krupp produced the first weldless steel railway tire as well. American railroad companies have bought huge numbers of steel rails from Krupp. In a way he was similar to Bismarck who was Prussia's prime minister between 1862 and 1871 and Germany's chancellor until 1890. They both have been perceived in Anglo-Saxon world as aggressive and destructive. In 1864 Bismarck visited Krupp in Essen. Krupp guns were being used in war against Napoleon III's France. Krupp and Bismarck were so eager in bombarding Paris that they became the most hated men in France (Watson, 2011: 369-375). Throughout twentieth century, history of Krupp went hand-in-hand with German political life. Alfred Krupp's son Friedrich Alfred Krupp expanded the company vertically and horizontally as stated in the web site of ThyssenKrupp. A ship producer in Kiel was acquired and iron and steel mill in Rheinhausen was expanded during his management period. After his death, the eldest daughter of him, Bertha Krupp took the helm. In 1903 the company turned into a stock corporation. However the heiress held the whole shares except for four shares required by law. During the World War I armament production increased to more than five times pre-war level due to the German government orders. After the war production of the armaments was forbidden with reference to the Treaty of Versailles. Political and economic situation such as occupation of Ruhr and high inflation caused problems for the company. Then Krupp started the production of locomotives, agricultural machinery and excavators. During the National Socialist regime Krupp was closely dependent on the policies of German state. Therefore after 1933 construction of locomotives, trucks and ships increased and Krupp began to produce arms again. After World War II, Allies sequestered the steel mills and mines of Krupp. Since the company has lost its raw materials and steel base Krupp began to differentiate its operations. In 1961 Krupp opened a plant in Brazil to supply automotive industry. Between 1980 and 1983 company restructured as a purely management holding company. On March 1999 Krupp merged with another steel giant Thyssen and the name of the company turned into

ThyssenKrupp². As it is stated on its web site, today the group employs about 155.000 people in nearly 80 countries and in fiscal year 2014/2015 they generated €43 billion sales revenues.

History of Siemens and Krupp represent the close contact with public authorities and entrepreneurs, while Zeiss is a prominent example of the collaboration of science and business circles. Carl Zeiss studied mathematics, physics and optics at the University of Jena. He opened his own shop in 1846 and produced one thousand instruments in the field of optics. Then he collaborated with a lecturer in mathematics and physics at Jena. They found Zeiss Optical Works and produced an illumination device which provides lightning for the things under examination. Zeiss also contributed the endeavour of production of binocular telescopes and prism binoculars, which proved improved depth perception (Watson, 2011: 365-366). The first low-power Zeiss microscope was produced in 1847. Then Zeiss microscopes which were produced by Carl Zeiss and physicist Ernst Abbe from University of Jena enjoyed international recognition in 1870s. One year after the death of Carl Zeiss, Ernst Abbe founded Carl Zeiss Foundation in 1889 and transferred his own share and the assets of the company to this foundation in 1891. Professorships were supported and research projects were promoted with the funds of the foundation. At the beginning of the twentieth century Zeiss differentiated its product portfolio with the photo-optics, binoculars and optical measuring devices for food industry and medicine. During the World War I Zeiss was focused on instruments for military use. During the dictatorship of Nazis Zeiss was the supplier of German Army for airplanes, submarines, tanks and guns. After war, Zeiss scientists were moved to West Germany by the Americans and Soviet Army took the equipments and staff to the USSR. During the Cold War two Zeiss companies, one in the West and the other in the East Germany, claimed that they were the owner of the name and the patents of the company. In the 1960s Zeiss started to produce optical instruments related with electronics and information technology in West Germany. After the reunification two Zeiss companies also reunified. In the 1990s Zeiss was re-designed

² For detailed information see: https://www.thyssenkrupp.com/en/konzern/geschichte_konzern.html, (14.03.2016).

and its activities were limited. Today Zeiss technologies are used in cell phones, flat TVs, computers and navigation devices³. During the 2014/2015 fiscal year Zeiss generated €4.51 billion and employed almost 25.000 people as it is stated on its web site.

As it is mentioned above family companies are among the important constituents of German style capitalism. Private entrepreneurs and public authorities had always been in close contact in the aforementioned cases of huge German corporations such as Siemens, Krupp and Zeiss. Historical roots of family companies trace back to the initial phases of industrialization, which ends in around 1870s. That was the formation period of family companies. Companies and families were highly intertwined and mutually interrelated. They were leading figures of the industrialization process (Sachse, 1991: 12). Furthermore, as it is stated by Streeck (1997), German companies are matter of public interest. They are not only the properties of their shareholders. Companies are subject to large-scale regulations of state and different organizations. Capital and labour take part in the management of the company in the case of large German firms. Moreover, it is hard to dismiss labour for German employers due to collective bargaining agreements and legal regulations. Consequently, Germans work in the same workplace longer than the Americans (Streeck, 1997: 241). Decisions are negotiated with managers and labour. Therefore on the one hand, it takes longer to take a decision but on the other hand it is easier to implement the decision. Shares of German companies do not change hands frequently. Many of them are privately held. Only a small proportion of the productive capital is subject to transactions in stock exchanges. Long term bank credits are more popular than equities among companies.

German firms strove to maintain their survival by concentrating on quality-competitive production because the socially-circumscribed labour markets had excluded the price-competitive production. Quality-competitive production enabled them to become more specialized. Since the wages of the workers among different firms are similar to each other, firms and workers' unions concentrated on work organization, technology and products (Streeck, 1997: 244). Weissman and Schultheiss (2006) argue

³ For detailed information see: http://www.zeiss.com/corporate/en_de/history/company%20history/at-a-glance.html#1846--1884, (15.03.2016).

that profitability and growth are not the only important determinants for German family companies. Equity ratio, asset average ratio and independence from banks are important criteria of stability. Family company owners' behaviours differ from the behaviours of shareholders of corporate groups. Short-term gains are important for shareholders while family company owners value long-term, sustainable increase of assets and safety of survival capabilities. Three-month periods are important time spans for corporate groups while family companies think over generations and decades. In addition to their capitalist value orientations they also have social value orientations. They feel responsible for their employees and regions. Therefore taking decisions on the subjects such as partial sale or production shifting take longer time (Weissman and Schultheiss, 2006: 75-77).

According to Weissman and Schultheiss (2006) the differences between German family companies and publicly held corporations are the determinants of the success of family companies. Factors such as focusing on specific products, short decision-making procedures, high customer orientation, less transparency and limited access to capital interact together in functioning German family companies. Their long term targets enable the actors that are in relationship with these companies to make more precise predictions. The decisive difference between the family companies and publicly held corporate groups is that the ownership of the family companies lies in the hands of a person or a family. The owner takes decision and has the last word in the company. Therefore family companies do not suffer from the long decision making procedures of corporate groups. They have a limited access to capital since they are not part of the global capital flows between institutional investors and large multinational enterprises. Owner family finances the investments of the company often with its own resources. Therefore the existence of the family companies in markets requiring high capital had been threatened through history. For instance Daimler, Thyssen, Krupp and Siemens families have lost their power on their companies because of the high need of capital (Weissman and Schultheiss, 2006: 73-74). It is also stated by Sachse (1991) that in 1870s market conditions and legal structures changed especially in electrical engineering, chemistry and coal and steel industries. Financing of these branches has

shifted toward banks rather than own capital. Educated employees and managers began to constitute higher shares in job market. As a result, the role of the family in the management of these companies started to diminish. Large family companies such as Krupp, Stinnes, Braun, Thyssen were in retreat especially in the first half of the twentieth century. They were not free from the dark phases of the German history. They were seen as a counter-model for anonymous capital corporations. However, family companies proved their resistance, innovativeness and vividness especially in form of *Mittelstand*. At the end of the 1930s, 120 of the 4200 companies in the field of machine manufacturing were older than 100 years and almost half of them were standing in the ownership of the founder family (Sachse, 1991: 17-19).

The term *Mittelstand* refers to German SMEs at first glance. As it is stated by Hampden–Turner and Trompenaars (1995) abundance of family owned and managed SMEs are another extraordinary aspect of German business culture. Their export performance is under the lights of the researchers from all over the world. The most interesting point about these companies is that they steer for the small but profitable niche markets (Hampden–Turner and Trompenaars, 1995: 202). In the second part of this chapter it will be analyzed in detail what kind of enterprises the term *Mittelstand* includes. In accordance with the scope of this part, its historical roots and relevance with German business model will be explained here.

Historically the term *Mittelstand* traces back to the Medieval Ages. *Mittelstand* had evolved from the rich and educated people who stood between the nobility and the clergy on one side and unfree rural population on the other side. This perspective is today valid and *Mittelstand* is perceived as the group of society which lies between rich upper class and lower-income class (Welter, May-Strobl, Wolter and Güntenberg, 2014: 5). It is stated by Berghoff (2006) that a strong defensive connotation exists in the notion of *Mittelstand*. In that sense, it is not only a word which refers to the owners of the small and medium sized enterprises. The term indicates the “middle rank” or “golden middle” which stands between poverty and “immoral richness”. The *Mittelstand* concept possesses an appealing sense in itself. *Mittelstand* entrepreneurs are generally accepted as the owner of a legitimate and strong wealth (Berghoff, 2006: 264). The term

Mittelstand is closely linked with social market economy since these two concepts stayed together for the economic development in post war era in Germany. Mittelstand and the social market economy embodied the German Economic Model together (Arentz and Münstermann, 2013: 622). Strothmann (2006) argues that guilds of craftsmen are the historical core of the strong SMEs of Germany. Thus the formation of large enterprises by SMEs in Germany was less frequent than it was in France and the United Kingdom (Strothmann, 2006: 90). In the eighteenth and early nineteenth centuries Mittelstand companies emerged as a 'decentralized industrial order'. Skilled artisanal works stemmed from small agricultural companies. Among these skilled companies emerged the highly specialized SMEs. As can be seen below in the second part of this chapter, regional banks and associations strengthened the Mittelstand. Training and research institutions were established by federal states. Export links provided by the help of the state. Since these companies were integrated into regional networks, it was unnecessary to internalize the production of different components. Therefore they have specialized in their core businesses and became internationally competitive (Berghoff, 2006: 268).

A small political party, Wirtschaftspartei, was founded in Weimar Republic period (1919-1933) claiming to represent the Mittelstand. It was supported mainly by artisans and shopkeepers. In terms of political economy, this party was asserting that the Mittelstand was under the risk of distinction due to the policies in favour of big businesses and socialism. Today and then, different constituents of society such as farmers, landlords and wealthy businessmen claimed to be the part of the Mittelstand (Berghoff, 2006: 264-265). Holz (2013) argues that many German Mittelstand firms favoured the disastrous era of post World War II period since the production facilities of a great number of large companies were dismantled and their enterprises were separated in small business units (Holz, 2013: 148).

1.1.2. Effects of German Culture and Education System

Together with aforementioned historical truths, German way of thinking and their generous culture affect their attitudes toward business. As it is stated by Hampden-Turner and Trompenaars (1995), for Germans all is more important than the integral parts. Parts are just the components of the all. If somebody wants to understand something, he should perceive the all initially, then he can discover the parts. As a result, 59% of German managers think that a company is a group, in which people work together in constant communication rather than an organization, which consists of functions, tasks, persons, machines and wages as 74% of the American managers think. Furthermore, Germans deny more frequently than Americans that the profit is the only real aim of the company. According to Germans aims should be more complicated and gracious (Hampden–Turner and Trompenaars, 1995: 187-188).

According to Hampden – Turner and Trompenaars (1995) Germans have a *calling* instead of a *job* (Hampden–Turner and Trompenaars, 1995: 189). In this respect Weber (1992) argues that the German word *Beruf* and English “calling” contain a task conception which is set by God. Accordingly, perception of the calling as a lifelong task and as a definite field of work has especially been the case for Protestant segments of German society. This concept of calling was also used in this sense in the Bible translation of Luther. A person who wants to live acceptably to God had to fulfil his obligations imposed upon him through the *calling*. This idea was a product of Reformation which stemmed in Germany (Weber, 1992: 39-40). Thus, addiction of Germans towards their professions should have originated from this conception.

After the Napoleonic wars, many institutions were abolished since they were rotten and modern German universities were found in Berlin and Bonn. According to the supporters of the new *Wissenschaftsideologie* (ideology of science), universities had to offer more than schools. Critical thinking started to take root in German universities during this period. In contrast to universities where students were equipped with critical and independent thinking, they were only given basic information at school. Since every student was not suitable for the complex education of German universities, a concept of

Brotstudium (bread studies) has emerged. Sufficient education for gaining a job is provided by bread studies. This concept of education is the core of the so-called dual vocational education system of Germany as stated in detail in the second part of this chapter. According to Kantian and Post – Kantian philosophical systems, the concept of “being” comprises of real and ideal. Schelling claims that science is to know the absolute unity existing between the real and ideal. From this point of view, science is not stable. As it is constantly changing, also the concept of *Bildung* (education), which was drawn from idealist philosophy, changes over time. When it was understood that research had to be at the heart of the universities, the concept of polytechnics has emerged. In these schools, only technical education is provided (Watson, 2011: 227-235). The structure of secondary education reflects this peculiarity of the German education system. As of today, more than 90% of the German children enrol in the elementary schools of state. Upon completing the elementary education, they enrol in Gymnasium, Realschule or Hauptschule in respect to their academic abilities. Hauptschule students have the less academic ability while Gymnasium students have it at most. Hauptschule students have a chance to choose a vocational training field in around 260 different job branches. A brief comparison with England reflects the role of this system in German labour market. Accordingly, around 30% of the workers in England have vocational training, while the same ratio is around 70% for German workers. The attitude of Germans towards vocational education differs from the attitude of English-speaking countries in two ways. First, Germans try to educate and train everyone in order to avoid from failure, which might stem from lack of talent. Second, vocational training in Germany is quite comprehensive (Hampden–Turner and Trompenaars, 1995: 204-205).

Admiration of organised systems and integrity pave the way for Germans to concentrate on manufacturing, engineering and mechanization (Hampden–Turner and Trompenaars, 1995: 188). Germany has also a good reputation as country of “tinkerers”. Around 3.300 private inventors meet regularly in around 133 renowned inventors clubs across Germany (Holz, 2013: 157). Another reason why Germans are so keen on engineering and applied sciences is that they do not separate the art and science in

contrast to British and Northern Americans. Germans do not separate the science and technique either. They value improving the technique by the help of the science. Therefore, in order to improve the management of the companies, academics and other experts are invited frequently to enterprises to be consulted with (Hampden–Turner and Trompenaars, 1995: 206). German economic culture is often traditionalist as stated by Streeck (1997). Trust is an important factor and speculation is not valued by them. Long-term orientations and commitments are respectable for Germans. Superior technical knowledge is the main determinant of the authority at the workplace. Discipline and collectivism are core cultural values (Streeck, 1997: 243).

According to Holz (2013) *Streitkultur* (arguing culture) is a prominent characteristic of the work culture in German Mittelstand enterprises. This culture values the exchange of different ideas in order to find the best solution (Holz, 2013: 153-154). Parallel to this, as stated by Hampden–Turner and Trompenaars (1995) Germans believe that discussion in workplace is precious since it reflects different ideas and their roles on the production process. This cultural background brought about a legal framework in due course of time. Actually, *Mitbestimmung* (workers' participation to administration) has been a popular issue for Germans since 1976, when the Codetermination Act entered into force. Accordingly, companies with more than 2000 workers have to establish a management council which consists of the representatives of workers and representatives of shareholders. These councils generally focus on human resources issues. Another council related with workers is the works council, which has to exist in every company with more than 5 employees. By the help of these councils, companies monitor the motivation of workers and their ideas about productivity on a daily basis (Hampden–Turner and Trompenaars, 1995: 199). Works councils are also powerful institutions since they have easy access to labour courts which try to retain social cooperation in Germany. Foundation of works councils dates back to Works Councils Act of 1920 (Du Plessis, Großfeld, Luttermann, Saenger and Sandrock, 2007: 112-113).

Cooperation between workers and managers exists between the workers unions and employers as well. As reported by Hampden–Turner and Trompenaars (1995) a German workers' union manager states that the best way of ensuring better wages and

working conditions is not arguing with employers but cooperating with them. He believes that their ethical responsibility do not only cover employees but also the whole German society. He states that they do not want to destroy capitalism. They only want to make some reforms towards a social market economy. He believes that they have completed the phase of the clashes of the social classes as British and French unions still consist in. He believes that workers should help their companies in making profit (Hampden–Turner and Trompenaars, 1995: 196).

1.2. MITTELSTAND AS THE BACKBONE OF GERMAN BUSINESS MODEL

Mittelstand can simply be defined as SMEs of Germany. Before going in details about the definition and the scope of the Mittelstand, it is better to unveil how the Mittelstand is perceived in the world and especially in the English-speaking countries. First of all, *German Mittelstand* is directly used in English language to describe German SMEs without any translation. This trait is a sign of the peculiarity of German Mittelstand and the significance of it for German economy.

The leading role of Germany in European economy has turned the attentions of a variety of English-language newspapers and magazines to the concept of Mittelstand recently. It is in this context that Sunderland (2010) refers to Mittelstand as the backbone of the German economy. Accordingly, many of them have proven their resilience and potential, as stated by Sunderland in her report on The Guardian. Upon emphasizing the will of Mittelstand companies to create 100.000 jobs in 2010, she recommends to ask from Germans about their business culture. In another article from The Economist (2014), it is stated again that Mittelstand is the backbone of the German economy. Among the traits of Mittelstand some are noted such as being owned by a family, located in small towns and their fame in the relevant business circles. It is argued that German Mittelstand could be a cure for the problems of the capitalist system, such as excessive accumulation of economic activity in some large companies and around a few megacities, as well as youth unemployment. Mittelstand offers solutions not only for big cities and industrial agglomerations but also for peripheral and even rural areas. What is

more, this model generates training and entrepreneurship opportunities especially for young people. It is for this reason that some countries such as South Korea and China drew lessons from the benefits of this model. Accordingly, South Koreans are eager to build the same model and they set up German style schools while Chinese capitalists tend to buy a Mittelstand firm in order to learn how these companies work as stated by The Economist (2014).

It is claimed that the success of the Mittelstand companies stands on the relationships between the capital and labour as well as between the schools and companies. Frangoul (2014) notes that Mittelstand firms generate nearly 52% of the Germany's total economic output and they employ more than 15 million people. He draws attention on the export-oriented characteristic of Mittelstand by stating the fact that their offices and subsidiaries are scattered across the globe. According to the author, the traits such as taking rapid decisions of investment and devoting higher proportions on research and development stem from the family-owned structure of the Mittelstand. Loyalty of the employees to their company comes from the fact that Mittelstand offers them a perfect vocational training and a steady job as claimed by Frangoul. It is stated in the report of Frangoul for CNBC that Mittelstand has brought economic strength to Germany and stability to the German labour. In the article of the Rattner (2011), it is stated that Mittelstand focuses on producing sophisticated goods that cannot be replicated by emerging markets. It is claimed that Mittelstand value employing Germans more than publicly traded multinational giants. According to Rattner, Mittelstand concentrate on long-term growth, since they are family-owned. Accordingly, on the one hand, Mittelstand companies that heavily produce sophisticated machine tools, and on the other hand, the major auto brands such as BMW, Daimler and Porsche, form the two main pillars of manufacturing sector in Germany (Rattner, 2011). By the same token, Blackstone and Fuhrmans (2011) state in their article on Wall Street Journal that Mittelstand has powered Germany's export-oriented economy for more than a century. Accordingly, the fact that each Mittelstand company exports to 16 different countries on average, shows the openness of these firms to foreign markets.

As can be seen from aforementioned article and reports, the German Mittelstand is on the focus of economic researchers. Its importance for German economy, especially its role in job creation and its export performance is under the spotlights of researchers from all over the world. The Mittelstand occupy a broad place in newspapers and economy magazines with changing market conditions and economic frameworks. Scientifically, the Mittelstand remains as a focus for researchers from several institutes and chairs in universities. IfM Bonn and Institute for Mittelstand Research Mannheim at University of Mannheim constantly produce empirical studies in quantitative and qualitative perspectives. In 2000, a Mittelstand University of Applied Sciences was established in Bielefeld and today it serves in 8 different campuses (Krüger, 2006: 15-16).

1.2.1. Definition of Mittelstand

The definition of Mittelstand is developed by IfM Bonn and it is commonly approved by researchers in this field. According to this definition, a Mittelstand is a family company in which the ownership and management lay in the hands of the owner or owner family. Almost every single article which deals with the Mittelstand, refers to the Mittelstand definition of IfM Bonn. This institute was established in 1957 by Federal Republic of Germany and Federal State of North Rhine-Westphalia. The main task of the institute is to analyse the status-quo and the problems of SMEs in Germany and to develop recommendations for SME policies and to conduct research about SMEs as it is stated on its web site.

The Mittelstand definition of IfM Bonn includes a qualitative criterion but not a quantitative one. The unity of the ownership and management is the one and the only qualitative criterion of the Mittelstand according to IfM Bonn. Accordingly, the ownership and management must be in the hands of the owners in a Mittelstand company. The owner of the Mittelstand takes the management and responsibility tasks in the company alone or together with a manageable number of his/her family members. Private assets are directly connected to the both positive and negative business

circumstances. However, the unity of the ownership and management does not require that every single decision must be taken by the owner manager. The important point is, the owner takes the strategic decisions alone (Welter et al., 2014: 6). In a Mittelstand company, business activities such as management, decision making, control and taking on the responsibility converge in the personality of businessman. The effect of the owner is noticeable in every branch of the company. Owner decides the manner of the relationship between the management and the employees, determines the type of financing and the legal form of the company (Kayser, 2006: 35). Therefore, independency is the determinant qualitative characteristic of the Mittelstand. It is connected with the way of taking strategic decisions. In independent companies, decisions are taken by focusing on the requirements of the company. On the other hand, decisions in dependent companies are taken by regarding the requirements of the group of companies, where it belongs to (Welter et al., 2014: 8). Therefore companies such as sister companies, that are members of a group of companies are not regarded as Mittelstand.

Since the aforementioned criterion is hard to be measured by means of the statistical data provided by state agencies, some quantitative criteria are used in order to draw proper borders of the Mittelstand. For that reason, the definition of SMEs that nationally recognized for decades in Germany is employed by IfM Bonn (Welter et al., 2014: 4). According to IfM Bonn, an SME has fewer than 500 employees and has less than €50 million annual turnover. This definition differs from the definition of the European Union Commission, which limits an SME with fewer than 250 employees and either with an annual turnover less than €50 million or with an annual balance sheet total less than €43 million (European Commission, 2015: 10). According to IfM Bonn, this difference stems from the truth that Germany hosts relatively large number of larger Mittelstand companies with 250-500 employees which show typical characteristics of family-owned enterprises that differ from large shareholder-owned corporations. German Federal Ministry of Economy and Energy states that 17% of German SMEs have at least 10 employees whereas the average of the 27 European Union (EU) member

countries for the same ratio is 8% (Bundesministerium für Wirtschaft und Energie, 2014: 2).

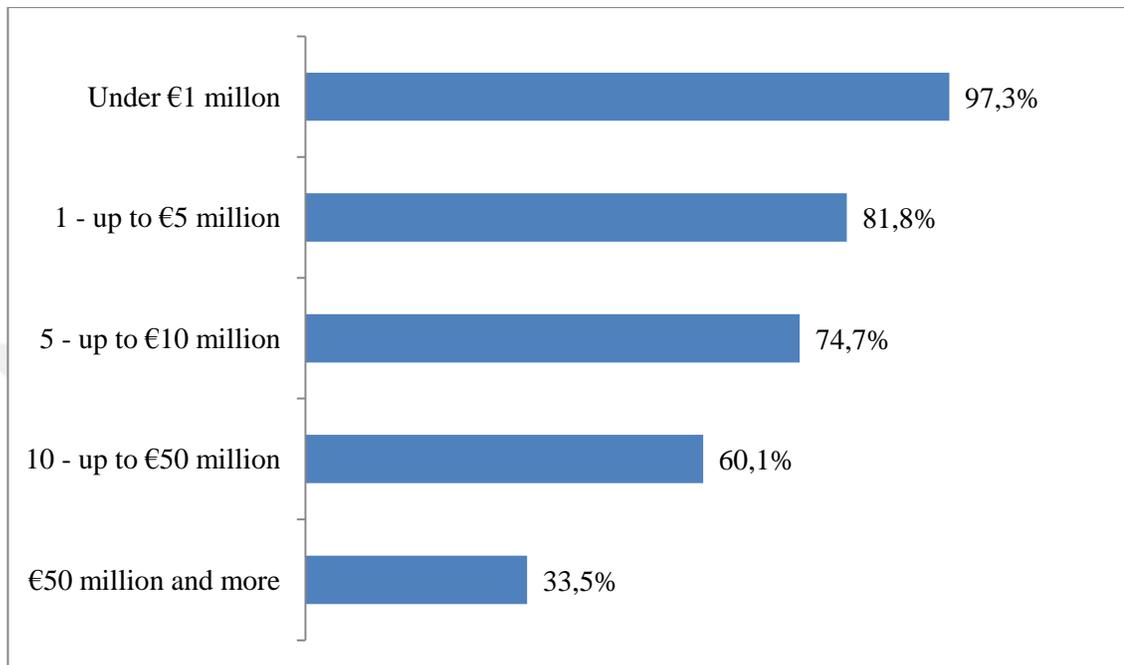
Table 1: Definition of SMEs by IfM Bonn and EU

	Employees	Turnover	Balance Sheet Total
IfM Bonn	< 500	< €50 million	-
EU	< 250	≤ €50 million	≤ €43 million

Source: Welter et al., 2014: 5.

In accordance with the definition of IfM Bonn, 99.6% of all German companies belong to the SME population (Arentz and Münstermann, 2013: 625). IfM Bonn conducted a research about SMEs and Mittelstand in 2006 and found out that 95.3% of SMEs are Mittelstand (Welter et al., 2014: 17). However, IfM Bonn does not limit the Mittelstand to the scope of SMEs. In some large companies with respect to employee number and yearly turnover, owner family has a significant effect on the management, despite the existence of external managers. This kind of large companies show Mittelstand characteristic in terms of qualitative criterion, while exceeding the limits of quantitative criteria. IfM Bonn categorizes these companies as Mittelstand-characterized large companies (Welter et al., 2014: 7). Mittelstand-characterized large companies are also counted as Mittelstand by IfM Bonn. As can be seen on Figure 1, they constitute more than a third of the large enterprises in Germany.

Figure 1: Share of Mittelstand Companies by Different Turnover Levels



Source: Welter et al., 2014: 15.

As a result, Mittelstand is neither defined by the employee number nor by yearly turnover level of the company, but rather by the ownership and management structure of the company. SMEs almost totally belong to the Mittelstand. However, as stated above, the Mittelstand is not limited to the SMEs. It consists of SMEs and Mittelstand-characterized large companies. (Welter et al., 2014: 17).

Berghoff (2006) names a Mittelstand company as *classic* Mittelstand if it is both family run and family owned. Then he claims that the classic Mittelstand companies have six characteristic traits. First, in a Mittelstand company the control of capital holdings and management is held by the owner or shared by a group of relatives. Second, Mittelstand companies avoid diversification and concentrate on their core competencies. Aggressive growth strategies and short-term financial objects are not preferred by them. Third, Mittelstand entrepreneurs identify strongly with their firms. They are emotionally attached to their companies. Their firms are more than a financial investment for such businessmen and businesswomen. Mittelstand entrepreneurs feel

themselves responsible for the family heritage. Their main goal is securing the company's existence for the next generations rather than maximizing short term profits. Therefore, they reinvest the profits and not spend on personal consumption. Fourth characteristic is the generational continuity. Traditionally, Mittelstand companies are handed over to sons. However, brothers, cousins and sons-in-law can also succeed the Mittelstand entrepreneurs. Wives and daughters rarely become the successors. Fifth is the patriarchal culture and informality. A patriarchal company culture and a strong internal unity draw attention Mittelstand firms. The owner perceives all groups within the company as a kind of extended family. An informal cooperation culture is organized between the owner and the staff. Mutual trust and loyalty between the management and staff leads to a great flexibility and also to a disdain for formalities such as financial reporting and cost accounting. Better-paid jobs are refused by workers and they are eager to work for their companies for their entire working life. Top management consists of family members. Middle management is recruited from long-serving members of staff. Mittelstand businessmen cooperate with local banks as providers of loans and financial advisors. However, the bankers are not expected to take part in making strategic decisions. Sixth and the last characteristic of the classic Mittelstand is the independence. Mittelstand firms prefer to finance themselves rather than looking for external financing. Cooperation in product development is generally refused. However, vertical alliances are stronger than horizontal cooperation. For example, Daimler-Benz has many of suppliers around its factory in Stuttgart. SMEs and Daimler-Benz constitute a long-lasting alliance in the fields of electrical and mechanical engineering (Berghoff, 2006: 272-275).

Welter, Brink, Kriwoluzky and Malsche (2013) argue that German Mittelstand is not only defined by annual turnover and employee number, but also by strong ties between the owner and the company. Again, according to them, long term strategies and continuity are the two critical characteristics for Mittelstand. They are generally family-led companies which have regional roots. Thus, a Mittelstand feels itself responsible for community (Welter et al., 2013: 8). These family-owned companies are strong elements

of German society. They support many local art and sports organizations (Krüger, 2006: 15-16).

1.2.2. Mittelstand's Contribution to German Economy

Economic performance of the Mittelstand companies for German economy is highly prominent in three fields. First, the turnover generated by German SMEs is equal to 37.1% of the total turnover generated by German companies in accordance with the SME definition of IfM Bonn. Second one is related with its performance in creating job and vocational training. 60.2% of employees subject to social security contributions work for German SMEs (Arentz and Münstermann, 2013: 625). 83.2% of vocational training positions for young people in Germany are created by the Mittelstand companies. Third, the German Mittelstand's exports account for around 19% of the total exports of German companies (Federal Ministry of Economics and Technology, 2013: 4-9).

Around 15.5 million people work for the Mittelstand companies as stated by Federal Ministry of Economics and Technology (2013). Additionally, between 2001 and 2005 SMEs expanded their employment in Germany by 2.5% while large enterprises expanded only by 0.5% (Holz, 2013: 147). Thus Mittelstand firms' role in job creation is outstanding. On the other hand working in small or large companies affects wages of German labour less than their counterparts in other industrialized countries. This is an important trait of German economy in favour of German SMEs. Both the Mittelstand and large companies are affected by the constraints of government, which regulate the remuneration, use and dismissal of labour. By the help of the binding collective wage bargaining agreements there is less wage differentiation between SMEs and large enterprises in Germany than in the United Kingdom, France and the United States. In Germany, wages are 10-15% lower in small companies than in large companies. Same ratio is 20-25% in France and United Kingdom, 30% in the United States (Meyer-Stamer and Wältring, 2000: 21).

The training opportunities provided by the Mittelstand companies help to keep youth unemployment level relatively low in Germany (Federal Ministry of Economics and Technology, 2013: 3). According to the World Bank, youth unemployment is the share of the labour force between the ages of 15-24 without work but available for and seeking employment. Large economies of Europe suffer from high young unemployment rates in contrast to Germany. Youth unemployment percentages for large economies of Europe in 2014 were as follows according to the World Bank: Germany 7.6%, France 23.9%, United Kingdom 16.7%, Italy 44.1% and Spain 57.9%⁴.

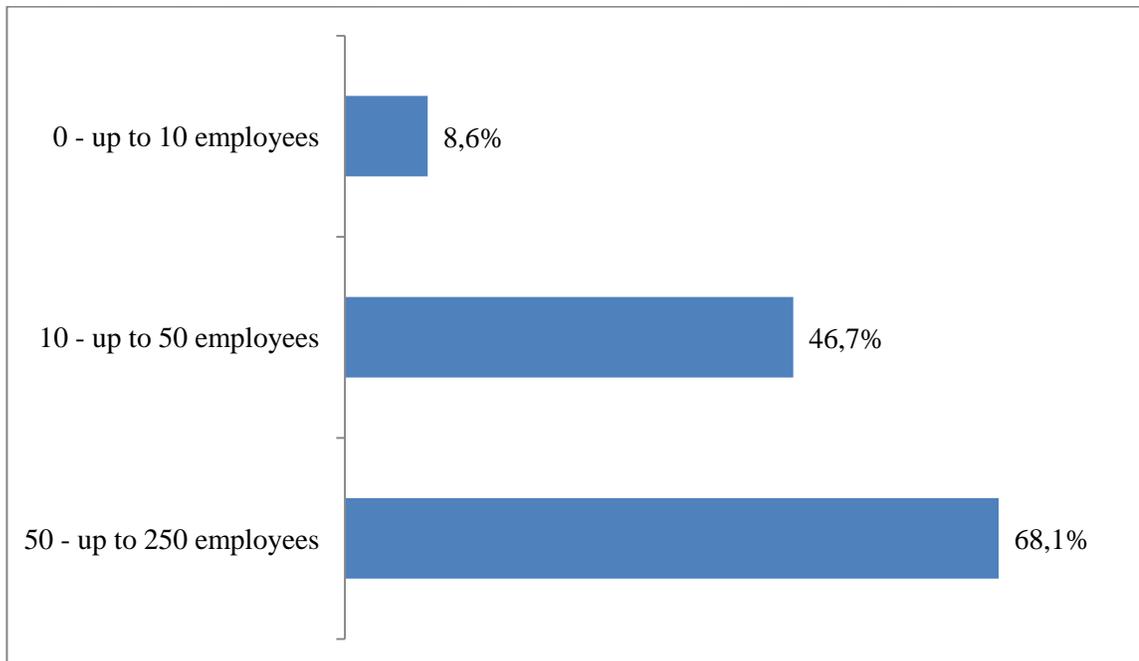
Skilled workers who educated in the dual-training system of Germany are recognized as the basis for the high quality manufactured goods. Dual-system encompasses both theoretical and practical training. 70% of German youth with an age of 15 to 20 enrol this system. After ten years of schooling around 85% of these young people decide to enter the apprenticeship and 15% prefer taking part in education in universities. Employers, trade unions and government cooperate in order to maintain dual vocational system. Supervisor of the system is chambers. The state supports the new openings of external training centres which offer training modules that some companies cannot provide (Meyer-Stamer and Wältring, 2000: 23-24). Holz (2013) argues that the dual-training system, that lasts two or three years and contains both practical training on the job in enterprises and theoretical training in vocational schools, facilitates the close cooperation between research and development experts and middle management and production workers (Holz, 2013: 153). Moreover, Schweinsberg (2006) argues that vocational training is traditionally important for Mittelstand entrepreneurs. Half of the decision makers have at least a practical training in his/her respective field. A quarter of the decision makers has master craftsman certificate. Every fifth of them are graduated from technical colleges. In 2005, university graduates constituted 32% of all decision makers in German Mittelstand (Schweinsberg, 2006: 64).

German Mittelstand exhibits a considerable performance in exports of Germany. Recently, export performance of German SMEs scrutinized in the light of the categorization of the EU in a study of IfM Bonn. EU limits the SMEs with an employee

⁴ For detailed information see: <http://data.worldbank.org/indicator/SL.UEM.1524.ZS>, (10.02.2016).

number of 250 as it is mentioned above. Furthermore EU divides SMEs into three different groups. Enterprises with less than 10 employees are categorized as micro enterprises. Enterprises that employ 10 to fewer than 50 persons are small enterprises. Finally any enterprise with 50 to fewer than 250 employees is categorized as medium-sized enterprise (European Commission, 2015: 11). As stated by Hoffmann et al. (2013), 8.6% of micro enterprises in Germany are exporter. In line with the increasing enterprise size, 46.7% of small enterprises and 68.1% of medium-sized enterprises are exporters as can be seen on Figure 2. Moreover, 80.4% of the large enterprises are exporters. Large enterprises generated 80.7% of total export revenues of German enterprises in 2010 while their number accounted for 2.4% of all exporters. SMEs, on the other hand, generated 19.3% of all export revenues of German enterprises (Hoffmann et al., 2013: 5).

Figure 2: Share of the Exporter SMEs by Employee Number



Source: Hoffmann et al., 2013: 5.

Among SMEs, the most export-oriented branch is the manufacturing industry. Almost 30% of all manufacturing industry enterprises are exporter. Trade is the second export-oriented branch of German SMEs. 23% of all trade enterprises are exporters. Transportation and storage follows manufacturing and trade with an exporter ratio of 16.6% (Hoffmann et al., 2013: 7). According to Meyer-Stamer and Wältring (2000) specialized information about foreign markets provided by the Federal Agency for Foreign Trade Information contributed to this performance. Moreover, public banks offer credits to SMEs when they want to invest abroad, like acquisitions of foreign enterprises or purchasing shares in a foreign enterprise (Meyer-Stamer and Wältring, 2000: 47).

Thus, the Mittelstand model appears to be the backbone of the German business and industrial system. It is upon this background that Buchanan (2014) argues on the February 2014 issue of Inc. Magazine that the Mittelstand companies are at the core of the growth of German economy for centuries. Buchanan tries to deduce lessons from the success of the Mittelstand companies. Then she determines five lessons, which are related to German business culture. In the first lesson she emphasizes on the narrow horizons of Mittelstand companies. She refers to the term *Hidden Champions* which was coined by Hermann Simon with reference to the preference of the Mittelstand companies for keeping low profile outside their industries. This decision stems from their cultural background and strategic decisions. Below in the second chapter hidden champions will be analyzed in detail. According to the approach explained here, depth is chosen over width by the Mittelstand. Thus, in a way, although they are oriented towards a narrow horizon, as stated by Buchanan (2014), they do not set limits to it in terms of market and technology leadership at global scale. Many of their products disappear into another company's product. They focus on their products and avoid from distraction by another market. Second lesson drawn by Buchanan with reference to the overall performance of Mittelstand is going global. It is with reference to this point that we refer to their horizons as "limitless". As will be seen below under the relevant title, an average hidden champion holds more than half the market share at global scale. German companies are accustomed to international trade since the country was consisting of different states

until the end of the nineteenth century. Third lesson is about innovation. According to Peter Englisch, Ernst & Young's global leader for family business, Mittelstand companies continuously improve existing products rather than inventing radically new ones. For example organ producer Klais from Bonn developed a new stop for its organ inspired by the sound of a traditional flute of New Zealand. Lesson four is about customer relationships. Mittelstand companies have very close relationships with their customers, since their products are generally complex and require consultation and customization. Fifth and the last lesson is the long-term orientation. Accordingly, the average Mittelstand CEO tenure is 20 years as stated by Buchanan (2014). Some of the Mittelstand companies are over 200 years old. Owner's extra dedication and passion stem from the fact that they build the company for future generations. As a result, a conservative approach to finance is showed by Mittelstand. More than 80% of investments are funded by equity and bank loans. 54% of investments are financed by their own equity. The reflection of the responsibility of the Mittelstand for its employees played an important role during the reduced demand period after the global financial crisis of 2008. Together with the help of the federal state they did not dismiss employees but they reduced their working hours as stated by Buchanan (2014).

1.2.3. The Institutional Environment Supporting Mittelstand

In the lights of the above mentioned role of the Mittelstand firms they contribute outstandingly to well-functioning German economy. Germany was named as the "sick man of Europe" during the 1990s and early 2000s. However as stated by Holz (2013) German economy could renew itself with the help of the Mittelstand and large companies. Below the role of the supporting institutional environment that favoured the outstanding performance of the Mittelstand companies and characteristics of German Mittelstand entrepreneurs will be explained.

As stated by Finanzgruppe Deutscher Sparkassen- und Giroverband (2015) German Mittelstand and public saving banks with regional structures are two sides of the same coin. One of the important components of the success story of German SMEs is

the close relationship between them and regional public saving banks. During the heights of the financial crisis in 2008 and 2009, SMEs were less affected than large enterprises because of the banks' restrictive lending. The ongoing relations between regional public savings banks and Mittelstand companies were the main reason of it. Close relationship between regional banks and SMEs stem from the high level of staff continuity in these banks, which ensure long-term customer relations. Precise knowledge about business and their clients made regional public savings banks take quick decisions in response to requests of clients for credit. On the other hand highly centralized decision making and process standardization of large multi-branch banks make regional public savings banks more reasonable for Mittelstand companies (Finanzgruppe Deutscher Sparkassen- und Giroverband, 2015: 27-28). Meyer-Stamer and Wältring (2000) state that large banks like Deutsche Bank mainly serve large enterprises rather than SMEs. However, Mittelstand is supported by public savings banks (Sparkassen) and credit cooperatives (Volksbanken und Raiffeisenkassen) at the local and regional level. At the state level, Bank for Reconstruction (KfW) and the Deutsche Ausgleichsbank serve for the Mittelstand firms. KfW and Deutsche Ausgleichsbank are backing credits for local banks in favour of SMEs. Public savings banks operate as intermediaries between companies and the guarantee banks such as KfW and Deutsche Ausgleichsbank. These two government-owned credit guarantee banks enable Mittelstand to reach financial support from local commercial banks (Meyer-Stamer and Wältring, 2000: 32).

Apart from the aforementioned financial institutions, Germany has plenty of organizations and institutions that support SMEs at different levels. More than 1000 organizations support SMEs economically and hundreds of SME support programs have been launched in last decades (Meyer-Stamer and Wältring, 2000: 21). Among them market-driven innovations of German SMEs are supported by the Central Innovation Programme for Mittelstand (ZIM) of Federal Ministry of Economic Affairs and Technology since July 2008. SMEs apply ZIM in order to gain non-repayable grants for their application-oriented research and development (R&D) projects. Until January 2012 ZIM supported 69.5% of its 23.342 applicants with a total of €2.04 billion. 75% of its

grants were received by small enterprises with less than 50 employees (Holz, 2013: 164-165).

As stated by Holz (2013) the strong R&D system in Germany is highly facilitated by four public research institutions branches of which are scattered around the whole country. They are Max-Planck-Gesellschaft, Helmholtz-Gesellschaft, Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz and Fraunhofer Gesellschaft. These institutions take part both in basic research and applied research in cooperation with companies. They employ around 73.300 people in 242 institutions across Germany. All of them are funded by German state with respect to the Federal Government's Pact for Research and Innovation, in order to increase the cooperation between enterprises and universities. In particular Fraunhofer Gesellschaft is dedicated to transform scientific research into new products or applications (Holz, 2013: 158). Meyer-Stamer and Wältring (2000) argue that these organizations play an important role between the state and Mittelstand companies in the fields of R&D, financing and export orientation in order to further push the Mittelstand companies. Max Planck institutes are located all over the Germany in order to support and conduct research projects in selected areas of natural science, law, social science and arts. Fraunhofer Gesellschaft also operates across the country for conducting applied research projects. This organization offers services to companies in the areas of microelectronics, process engineering, health and environment (Meyer-Stamer and Wältring, 2000: 26).

German Research Council promotes and organizes science and research activities. It is the advisor to the German state for policy making in science. It supports research projects and junior researchers. Apart from aforementioned institutions, Working Group of Industrial Research is an umbrella organization which consists of different industry associations. It generally supports applied research projects in favour of SMEs in Germany. Steinbeis Foundation in Baden-Württemberg is a successful example of organizations which connect SMEs to universities and research organizations. Companies apply to this foundation in order to solve their business-related problems. Foundation helps them to work with researchers from universities or research institutes. It reflects an intermediary characteristic, connecting industry on the

one side and universities on the other side. Since 1971 SMEs apply them to optimize their business organization and to consult all kind of business-related issues (Meyer-Stamer and Wältring, 2000: 27-29). Particularly in export business, while developing their first international business, German SMEs are supported by several German Chamber of Commerce and Industry (IHK) along with IHK-company pool programme. Around fifteen German SMEs from different economy branches constitute a company pool, where they regularly meet in order to share their experiences in respective foreign countries especially from emerging markets (Holz, 2013: 163). Thus, the favourable environment affecting the performance of Mittelstand companies is characterised above all by a constant and effective interaction – if not mutual dependence – among the aforementioned research institutions and these companies.

In addition to the aforementioned supporting environment, entrepreneurship profiles of German Mittelstand businessmen also contribute to the strong performance of these firms. In this respect, *Mittelstand in Deutschland* research was conducted with 1.622 decision makers from German Mittelstand companies, in order to analyze entrepreneurial characteristics of 1.6 million Mittelstand decision makers. Accordingly, there are four types of entrepreneurs on the basis of management style, targets and planning. These are: strategist, maker, pragmatic and patriarch. Their shares in total entrepreneurship environment are as follows: strategists (21.8%), makers (26.5%), pragmatics (28.6%) and patriarchs (23.1%). Strategists are well educated and they are active especially in industry and services sectors. They established their company since they had an idea to invest in. Additionally they are always in search of market niches and they try to develop new foreign markets for their products. They believe in professional management. Decisions must be taken rapid in order to benefit from the chances. Moreover, strategists are generally optimist and they believe in their own competencies. Makers generally work in technical business sectors. More than a third of them have master craftsman certificate. A quarter of them have completed a study. Makers are also optimist and they see economic growth as a chance for their company. They are eager to ask for professional advice for managerial issues. Pragmatics are the biggest part of Mittelstand entrepreneurs. They generally work in traditional sectors and

in small companies. Many of the pragmatics are between 40 and 50 years old and a quarter of them are woman. Furthermore, they are not interested in big investments and fast growth. Patriarchs, on the other hand, generally take over their businesses from their parents. They work in preserved businesses for years and they are classical businessmen. Patriarchs take important decisions alone and usually make investments with their own money. More than a fifth of patriarchs are over 60 years old (Schweinsberg, 2006: 65-68).

As a result, according to Rickes and von Hassell (2008), there are five steps which move Mittelstand to success. These are extracted from success and failure stories. These five steps consist of: (1) detecting the own interests and the interests of employees, suppliers and customers, (2) bundling these interests towards a common target, (3) deriving a common plan to determine how to reach to this target, (4) following the plan carefully in order to reach the target, (5) learning after reaching the target for the next challenges (Rickes and von Hassell, 2008: 28). It is not beyond question that every successful Mittelstand firm has followed these steps. However it is certain that Mittelstand exhibits a success story to the world as Germany has many more niche market leaders than any other country has in the world as will be explained in detail in the second chapter.

CHAPTER TWO

TRANSFORMATION OF GERMAN BUSINESS MODEL

The last phase of globalization has started from the mid-twentieth century onwards, being marked by ever-intensifying trade and investment flows, as well as movements of labour. This phase of globalization could be divided roughly into two periods as far as the case of Germany is concerned. Needless to say, the first period covers the Cold War period and the second one corresponds to the period following the end of the Cold War and German reunification. Thus, in order to shed light on this process, we will firstly deal with how Germany recovered after World War II and how it adapted itself to the changing global economic environment. Germany was collapsed after the war, as most of the German cities were extensively damaged by bombings. As far as the aforementioned second period is concerned, the effects of the liberalization process of the Central and Eastern European countries on German business model will be explained, with particular focus on the role of Mittelstand firms. After the reunification of Germany in 1990, and the formal collapse of communism in 1991, German economy entered into a highly dynamic phase of transformation. This process has two main aspects, namely the reunification of East and West Germany, and the expansion of German firms towards former communist countries of Central and Eastern Europe. A third aspect might also be added with reference to the expansion towards East Asian countries. Some believe that Germany's trade with Asian countries was the main contributor of its fast recovery after 2008 global economic crisis. However it is hard to analyze this process since it is still ongoing and there is no sufficient research about it.

In this chapter, principal research subject is the globalization process of the German Mittelstand companies. Firstly, historical developments that paved the way for the globalization of German Mittelstand companies will be explained. Subsequently, export and FDI activities of German Mittelstand enterprises will be analyzed in the first part. Second part of this chapter will cover hidden champion companies which often emerge from Germany.

2.1. GLOBALIZATION OF MITTELSTAND

Molle (2003) defines globalization as the continuous evolvement of the economic activities that expand national borders. He adds that decrease of the costs of communication and transport, and the liberalization of international transactions are two major facilitators of the globalization of the companies (Molle, 2003: 9-10). Brutscher, Raschen, Schwartz and Zimmermann (2012) argue that internationalization enabled firms to develop or extend sales and procurement markets. These markets were developing countries of Asia, South America and transforming states of Central and Eastern Europe, which are referred to as “emerging markets”. Globalization enabled firms to link national value chains to the international ones especially to access raw materials and intermediate products. Home market oriented firms began to feel high pressure of internationalization in terms of increasing price, quality and skilled worker competition (Brutscher et al., 2012: 5).

Together with the trade liberalization process, institutionalization after World War II also played a role in improvement of international trade. International Monetary Fund (IMF) and General Agreement on Trade and Tariffs (GATT) were among prominent institutions, which provided safe conditions for international trade. According to Molle (2003) during the world wars and in interwar period, it became clear that some fundamental conditions had to be fulfilled in order to govern international relations. As a result, after World War II, development of international economic institutions has gained pace. Among them, GATT was cultivated in the foundation of World Trade Organization (WTO) that aims to liberalization of international trade (Molle, 2003: 33).

Berghoff (2006) argues that the German Mittelstand survived relatively unharmed in the political and economic crises of the first half of the twentieth century. Among them, hyper inflation, the Great Depression, and post-war collapse were the three major factors. Furthermore, Germany was a stage for succession of four political systems between 1900 and 1950. After World War II the classic Mittelstand revived in the West Germany (Berghoff, 2006: 275-277). As known, throughout the two decades following the World War II, European countries experienced an exceptional economic

growth. In those years state was highly attendant in the economic affairs in Western Europe. First, government expenditures were so high, which affected the amount of demand. Second, state felt responsible for retaining high employment and growth rates (Aldcroft, 1993: 154). Therefore interventions of West German government into economic affairs favoured the flourishing of Mittelstand companies in the successive years of World War II.

After World War II American technology has been transferred to Western European countries. It enabled these countries to evolve their production into scientific research and their investments in capital rather than natural resources. The efforts in easing exchange of information and studying abroad helped to the application of these new technologies. Improvements in communications and liberalization of trade throughout the world also contributed to the technology transfer (Maddison, 1991: 152). According to Berghoff (2006) together with the process of economic reconstruction, emergence of increasingly liberalized markets has also favoured the growth of Mittelstand in post-war Germany. The emergence of new industrial nations like Japan, the four Asian tigers (Hong Kong, Singapore, South Korea and Taiwan) and then China as well as India has paved the way for the transformation of the world's industrial markets. This process has in turn triggered the transformation of Mittelstand. Production, communication and logistics have been transformed by technological progress and digital revolution. Competitive pressures have increased, product life cycles have been shortened and the need for innovation has escalated. Multinational large enterprises have curtailed their reliance on domestic suppliers. Global sourcing has increased. As a result, Mittelstand firms have faced fierce competition of new producers in a variety of industrial branches, mostly of East Asian origin. It is in such an environment that some of them could not react swiftly to changing market conditions because of their conservative company culture and long-term perspectives as it is stated above (Berghoff, 2006: 281-284).

As it is mentioned above, after World War II the classic Mittelstand revived in the West Germany while centrally planned socialist East German economy eradicated the Mittelstand. There, Mittelstand firms were transformed into state-owned enterprises.

Similar conditions applied to the Mittelstand companies of pre-war Eastern Europe. Over ten million ethnic Germans migrated from Eastern Europe since the region came under Russian, Czech and Polish rule by the late 1940s. Their companies had been expropriated by new governments. Therefore they fled to West Germany and contributed to the economic miracle of West Germany only with their intellectual property, social capital and personal skills. After the reunification of Germany in 1990, the confiscated properties of East German Mittelstand firms have been recovered by their owners or heirs (Berghoff, 2006: 277-278). Besides, most of the formerly nationalized companies were sold to investors from West Germany. By September 1994, over 8.000 firms from East Germany were privatized (Gros and Steinherr, 2004: 175). According to Sinn (2002) the political unification of Germany went smoothly. Two parts of Germany reunified after 45 years with an outstanding speed. However economic unification was harder. Initially, many of the East German cities and their infrastructures had been renovated as a result of a building boom after the reunification in 1990. The major advantage of East Germany over the other old communist countries was the implementation of the well-functioning legal system of West Germany throughout the reunification process (Sinn, 2002: 113).

Dustmann, Fitzenberger, Schönberg and Spitz-Oener (2014) argue that the poor performance of the German economy in 1990s and early 2000s resulted from the burden of the reunification. From 1991 to 2003, it is estimated by the German Council of Economic Experts that €900 billion were transferred from West to East Germany (Dustmann, Fitzenberger, Schönberg and Spitz-Oener, 2014: 182). In 1998 public per capita expenditure in East German Länder was 19% more than in the West, while per capita tax revenue was 26% less. West Germany was the source of every third deutschmark spent in East Germany in 1999 (Sinn, 2002: 116). On the other hand, as Schlögel (2008) argues, after the transformation process of Eastern Europe, Germany could establish the same proximity with its Eastern neighbours as it already had with its Western ones. Moreover, after the collapse of the Eastern Bloc there was no obligation to manage political relationships between the East and West, but rather the problems of economy, culture and transportation (Schlögel, 2008: 234-235).

The milestone of the globalization process for German Mittelstand enterprises was the collapse of communist systems in Central and Eastern Europe. Central and Eastern European countries were ideal investment areas with their geographical proximity and investment environment. According to Brenken (2006) outsourcing from these countries was also favourable for Mittelstand, since the logistic problems were low and the control of quality was easier compared to far Asian countries. Offshoring (establishing a production plant in cost-effective countries) became an increasing choice among Mittelstand enterprises with sinking transportation and communication costs (Brenken, 2006: 7-8). Dustmann et al. (2014) argue that these countries had similar systems of industry and education with Germany. They had a long trade history with Germany as well. Moreover German was widely spoken there. Vocational training was also an important factor, which is part of the national education system in Hungary and Poland (Dustmann et al., 2014: 182).

Brenken (2006) argues that the liberalization process of Central and Eastern European countries constitute a structural break for German Mittelstand. The internationalization potential of Mittelstand expanded since these countries offered cost-effective and lucrative facility opportunities to Mittelstand firms. On the other hand the change has been shaped by the exodus of the large customers of Mittelstand. Relocation of the production facilities of primary and intermediary goods of large corporations deteriorated the sales opportunities of Mittelstand. Fixed-costs of direct investments and market entrance barriers diminished by the help of the technical progress and sinking communication and transportation costs. Thus the step in foreign countries for SMEs with relatively low investment volumes became easier. First, shift of production or sales to abroad have emerged as an option for them. Additionally, weak internal market in comparison with foreign markets raised the attraction of foreign markets for German SMEs (Brenken, 2006: 2). Kannegiesser (2006) also states that Mittelstand firms experienced globalization especially after the liberalization of the Central and Eastern European countries. These countries offered cost-effective manufacturing alternatives in a relative language and culture area. Due to their strong ties and responsibility towards their regions, Mittelstand companies reserved their option to shift production abroad.

They were in an intertwined regional network together with other Mittelstand firms. Foreign markets were only export targets. Internationalization strategies of Mittelstand have changed since the middle of the 1990s. They have invested abroad and founded subsidiary companies. They were, as suppliers, forced to follow their customers in foreign markets. Automobile industry suppliers had to establish production facilities abroad close to the plants of their large customers. By this way, they both ensured the on time delivery of the products and saved money. It was valid for many manufacturing branches besides automobile industry. The collapse of communism and the opening of Chinese and Indian markets brought 3 billion people to world markets. It has created huge sales and procurement markets. In this changing global economy, Mittelstand had to reconsider its production processes (Kannegiesser, 2006: 381-383).

Technological environment of business and competition in inner and foreign markets were affected by the globalization process. Mittelstand was not immune from these changes. New sales markets and competitors arose by the help of the liberalization. Initially, import competition was felt by the emergence of cheap suppliers. Sales opportunities of Mittelstand decreased as large corporations preferred these cheap suppliers. Moreover, many large customers of Mittelstand shifted their production facilities to abroad. On the other hand emergence of new sales markets was in favour of Mittelstand since it was highly inner market oriented. More than 80% of the revenues of Mittelstand firms were generated by domestic sales. Therefore Mittelstand was suffering from low growth rates of German economy. Additionally, sinking transaction and communication costs made it easier to develop new sales markets from far continents (Brenken, 2006: 6). For instance, recently China was listed among the top three foreign markets of 27.4% of large German family enterprises with a yearly turnover of more than €50 million (Holz, 2013: 155). Parallel to this, in 2015, China was the fifth popular export destination for German products. Services and goods worth of around €71 billion was sent to China in 2015 (Statistisches Bundesamt, 2016: 2).

As a result of aforementioned global changes, many traditional traits of Mittelstand firms began to change. According to Berghoff (2006) by the help of the following changes Mittelstand has gained strength and left behind its historical baggage.

Basel II risk rating standardization process for banks forced Mittelstand to be more transparent in financial reporting. Foreign managers have started to be hired by Mittelstand since their access to external capital is easier. German Mittelstand became attractive to foreign investors due to its proximity to growing markets. Thus more and more German SMEs were sold. With the increasing number of external managers, principal-agent problem emerged for Mittelstand firms. By the help of the sharp decrease of transportation costs and differences in international wage levels, many of them were forced to relocate their production facilities. Since the innovation and R&D were more important than they were before, strategic alliances, joint ventures and cooperation networks became popular among them. Finally, the succession problem arose for the Mittelstand. Many times the potential successors had not adequate qualifications for management or many of the owner families remained childless (Berghoff, 2006: 287-291). Between 2002 and 2008 approx. 8.600 Mittelstand enterprises, with an employee number between 40 and 5.000, experienced generation change in their management. That number accounted for 23% of the 38.000 Mittelstand companies in line with respective criterion (Gottschalk, Höwer, Licht, Niefert, Hauer, Keese, Woywode and Ahrens, 2010: 16).

Initially, Mittelstand reacted aforementioned structural changes with exporting since outsourcing and FDI activities are more complex forms of internationalization than exporting. As known, Germany was called “the sick man of Europe” during the late 1990s and the early 2000s, since its economic growth rates were averaged at about 1.2% per year between 1998 and 2005, and its increasing unemployment rate from 9.2% in 1998 to 11.1% in 2005. However, recently Germany has performed outstandingly especially after the recent global economic crisis. Its exports accounted for \$1.738 trillion in 2011 as a peak point and it has experienced almost no increase of unemployment rate during these crisis years. As a result “economic superstar” replaced “the sick man of Europe” (Dustmann et al., 2014: 167). Below it will be explained how German Mittelstand firms contributed to this performance in terms of export and FDI activities. Then, it will be concluded with the promotion of the renowned *hidden*

champion world market leader companies as a special successful species which are often emerged among German Mittelstand firms.

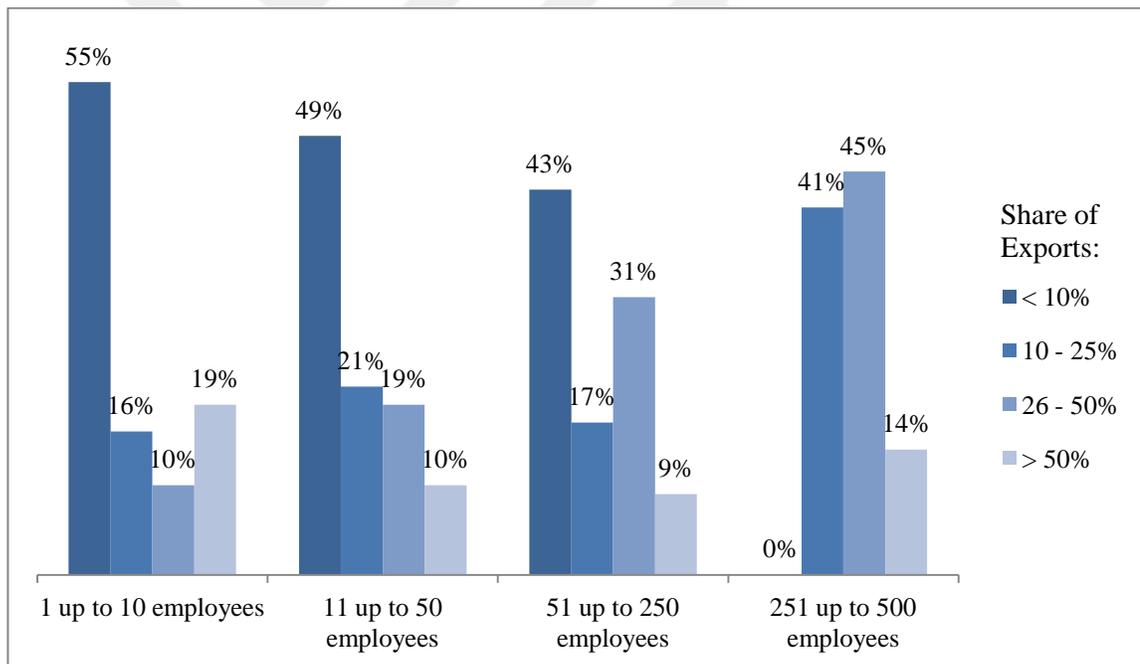
2.1.1. Export Performance of Mittelstand

Since the reunification of Germany in 1990, Germany has been ranking one of the first three places on the list of top exporter countries. Therefore export plays an important role in German economy in terms of growth, employment and prosperity. Mittelstand firms contribute to this strong performance substantially (Hoffmann et al., 2013: 1). Brutscher et al. (2012) argues that often the first step into internationalization of Mittelstand is export, since this international business activity can be performed with relatively low capital expenditure. Export of goods and services for many Mittelstand firms is normal since it requires limited foreign market knowledge and human resources (Brutscher et al., 2012: 9). Brenken (2006) also states that export is traditionally the most frequent form of internationalization for every size of companies. Actually, export is the only way of international engagement for many Mittelstand companies (Brenken, 2006: 9).

Number of the German exporters was increased by 10.7% from 2000 to 2010. There was a decline in the number of the exporter firms only between 2007 and 2009 due to global economic crisis. 364.000 exporters in 2007 declined gradually to 361.000 in 2008 and 349.000 in 2009 (Hoffmann et al., 2013: 11-12). During the same time period, between 2000 and 2010, number of the exporter large enterprises was increased by 37.5% from 6.114 to 8.404. Hoffman et al. (2013) argue that successful exporter SMEs turned into large enterprises due to their strong export performance and therefore contributed that increase in the number of exporter large enterprises. Thus, it is a sign of the competition ability and dynamic development of internationally oriented medium-sized German enterprises (Hoffmann et al., 2013: 13). As stated by Brenken (2006), 24% of all Mittelstand firms, companies with a yearly turnover less than €500 million in this study, were exporting. 21% of the Mittelstand firms with maximum 10 employees were exporters and their export revenues constituted 16% of their total revenues. 43% of

the Mittelstand companies with 11 to 50 employees were exporters and their export revenues constituted 14% of their total revenues. On the other hand 62% of the Mittelstand companies with 51 to 500 employees were exporting and their export revenues accounted for 21% of their total revenues (Brenken, 2006: 10-11). Exporter Mittelstand companies by employee numbers, and share of their export revenues in their total revenues are shown on Figure 3. Accordingly, 55% of the Mittelstand companies which employ 1 – 10 people generated less than 10% of their revenues from export as can be seen below on Figure 3.

Figure 3: Share of Exports in Total Revenues of Mittelstand by Employee Number



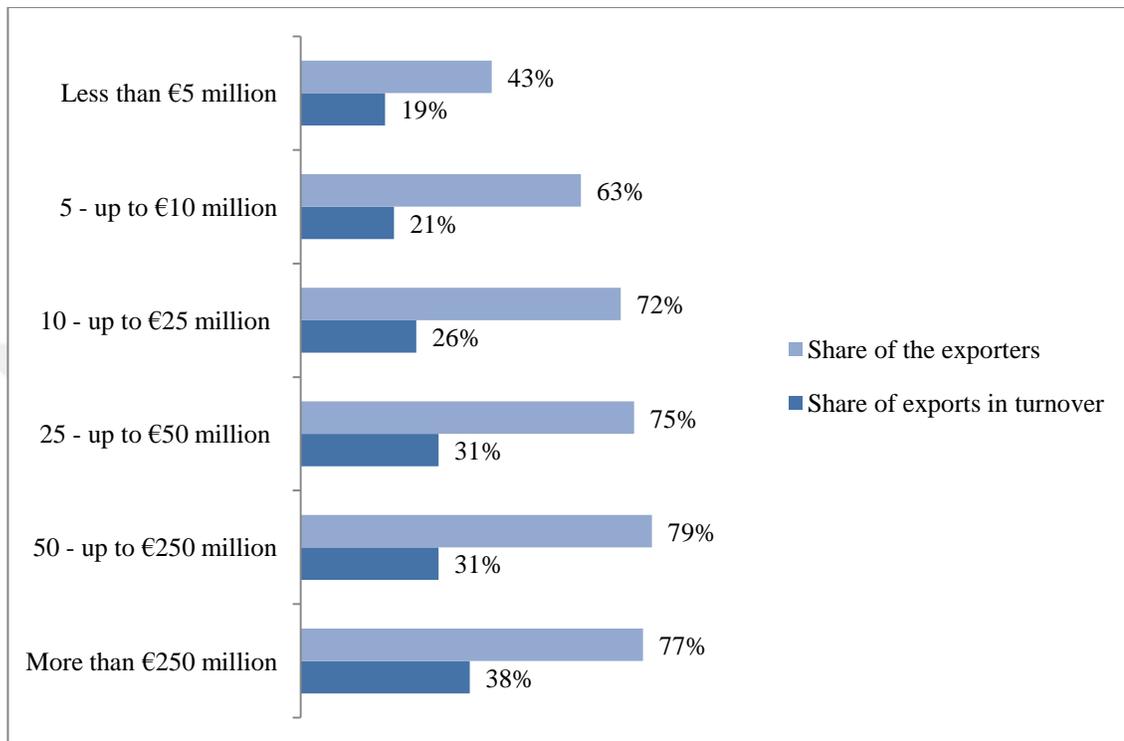
Source: Brenken, 2006: 11.

Creditreform conducted a research about the internationalization process of Mittelstand companies in 2012. Accordingly, 3.594 companies responded the survey and Brutscher et al. (2012) have written an article with the findings. Their dispersion in terms of yearly turnover was as follows: 23% of participants with fewer than €5 million; 27% of participants with €5 - 10 million; 24% of participants with €10 - 25 million; 12%

of participants €25 - 50 million, and 15% of participants with more than €50 million turnover. Manufacturing, construction, retail, wholesale, services and various industry members were among the participants. According to this survey, 65% of Mittelstand firms are exporter. More than a quarter of exporter firms' revenues were generated from foreign market sales. 96% of the active exporters have been exporting at least for two years (Brutscher et al., 2012: 9). In another research, which was referred to above in the first chapter, Hoffmann et al. (2013) analyze internationalization process of German SMEs with regard to the SME definition of the EU. According to this research, 353.556 German companies performed an export activity in 2010 and 97.6% (345.152) of them were SMEs. 72.3% (255.478) of the exporters were micro enterprises, while 2.4% (8.404) of them were large enterprises (Hoffmann et al., 2013: 4).

Share of the exporters increase in line with the company size, as shown below on Figure 4. Larger Mittelstand firms are more active in export. Fixed costs, efficiency and specialization advantages play a crucial role in better export performance of larger firms, while limited access to external financing and limited human resources hinder the export performance of smaller firms (Brutscher et al., 2012: 9). As stated also by Hoffmann et al. (2013), with enlarging company size share of the exporters increase. Only 8.6% of the micro enterprises were active in export in 2010, while 46.7% of the small enterprises, 68.1% of the medium-sized enterprises and 80.4% of the large enterprises involved in an export activity in the same year (Hoffmann et al., 2013: 5).

Figure 4: Share of the Exporters and Their Export Revenues by Turnover Levels



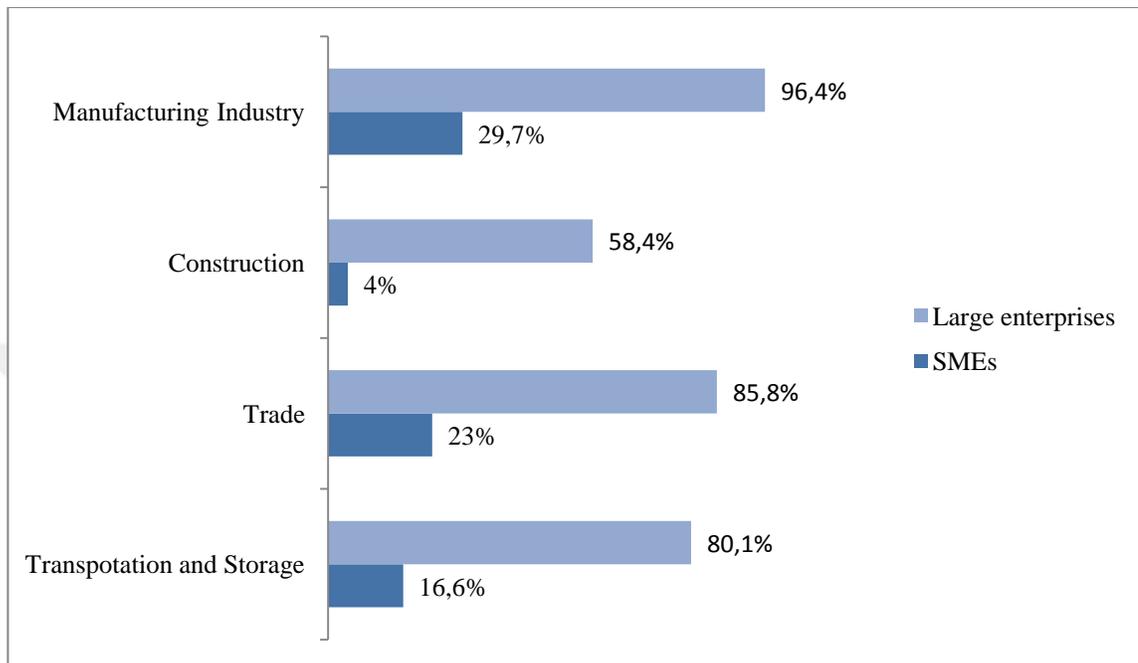
Source: Brutscher et al., 2012: 9.

80.7% of the total export revenues of German enterprises were generated by large enterprises in 2010. SMEs, on the other hand, generated remaining 19.3% of total export revenues. As for the total domestic revenues of all German enterprises, share of SMEs accounted for 42%. Thus, German SMEs are more domestic market oriented than large German enterprises. Additionally, share of export revenues in total revenues increase in line with the company size. Export revenues of micro enterprises constituted 2.9% of their total revenues. Same ratio was 9% for small, 16% for medium-sized and 23.9% for large enterprises. When it comes to share of the export revenues in total revenues for only exporter companies, large enterprises ranked first place with 27.1%. Same ratio was 15.1% for micro, 17.9% for small, and 22.8% for medium-sized enterprises. As for total export revenues, large enterprises generated €93 million on

average from foreign sales, while micro enterprises generated €78.000 on average from foreign sales (Hoffmann et al., 2013: 8).

Brenken (2006) argues that besides the size of the company, economy branches are also important determinant in export business. Manufacturing industry and trade branches are more integrated in international markets than construction industry and services sector, since the tradability of their products are higher (Brenken, 2006: 11). In 2010, 42.7% of the exporters were from trade branch, 30% of them were service providers and 20.9% of them were from manufacturing industry. Among SMEs, the most export-oriented industry was manufacturing. 30% of manufacturers were active in export in 2010. Trade industry ranks second place with 23%, and 16.6% of the transportation and storage industry members are exporters as seen on Figure 5 (Hoffmann et al., 2013: 6). Manufacturing industry and wholesale trade companies are more active in export than construction industry and retailers. Brutscher et al. (2012) argue that intensive R&D activities increase the orientation towards export. 86% of the manufacturing industry firms and 75% of the wholesale traders are exporters, while 33% of the construction industry and 38% of the retailers are exporters. Additionally 43% of the enterprises from services industry are active in exporting (Brutscher et al., 2012: 10).

Figure 5: Exporter Mittelstand Companies by Economy Branches



Source: Hoffmann et al., 2013: 7.

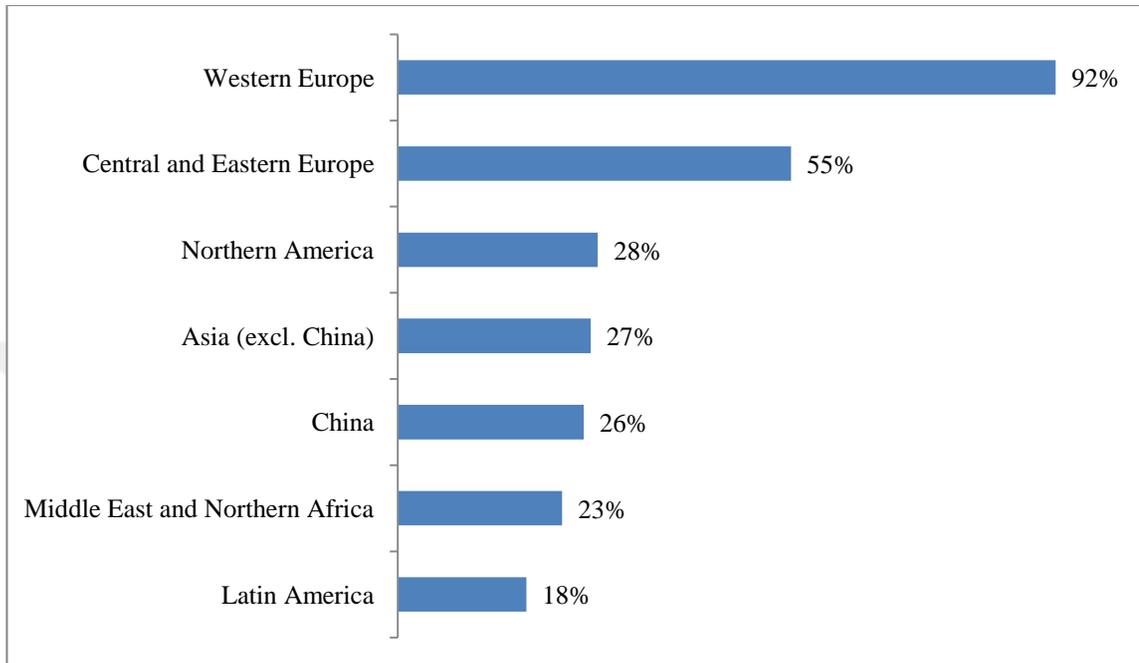
Brutscher et al. (2012) state that the most exported product group is capital goods. Services, consumer goods and intermediate goods follow it. 42% of the exporters generated revenues from the sales of capital goods. On the other hand 30% of the exporters generated revenues from services, 28% of them from consumer goods and 21% of them from intermediate goods. 66% of the construction industry firms generated revenues from services, such as designing and consultancy. Capital goods require more intensive R&D activities. Therefore 51% of the manufacturing industry firms generated revenues from the sales of capital goods (Brutscher et al., 2012: 10-11).

There are two main ways of exporting: direct and indirect. Accordingly, in the case of indirect export, another German company sells the goods of indirect exporter to foreign countries. It requires less capital expenditure since there is no need for storage and market research for potential customers. On the other hand, direct exporter takes over the whole process in exporting. Thus, it requires more capital expenditure. 32% of the active exporters prefer indirect export, while 97% of them prefer direct export. As

could be inferred from these data, around one third of active exporters involve both in direct and indirect export. While half of the exporters sell their products to a foreign wholesaler, 11% of them are active in e-commerce (Brutscher et al., 2012: 11).

The most important export destination for German merchandise trade is EU countries. 59.2% of the total exports of Germany headed to these countries in 2011 (Hoffmann et al., 2013: 28). Brenken (2006) argues that due to their geographical proximity, strong integration of markets and similar income levels, EU countries are the most important export destination for German enterprises (Brenken, 2006: 14). Western Europe (Austria, Switzerland, Benelux countries, France, Italy, Great Britain and Ireland, Spain, Portugal and Scandinavian countries) is the dominant export target for German Mittelstand. Geographical proximity and familiarity of customer preferences, business procedures and language are among driving forces behind this fact. 92% of all active exporters have at least one trade partner from Western Europe. 77% of the German Mittelstand exporters have a trade partner either from Austria or from Switzerland, which especially implies the importance of linguistic affinity. Benelux countries follow them with 64%, while France ranks third place with 57%. In 2011, Mittelstand enterprises exported products worth of approx. €278 billion to Western European countries, which accounted for 47% of total export revenues of the Mittelstand. 55% of the exporting Mittelstand firms have a trade partner from Central and Eastern European countries. Following popular export destinations are North America, Asia (including China), Middle East and Northern Africa as well as Latin America. Details of these target markets can be seen below on Figure 6 (Brutscher et al., 2012: 12-14).

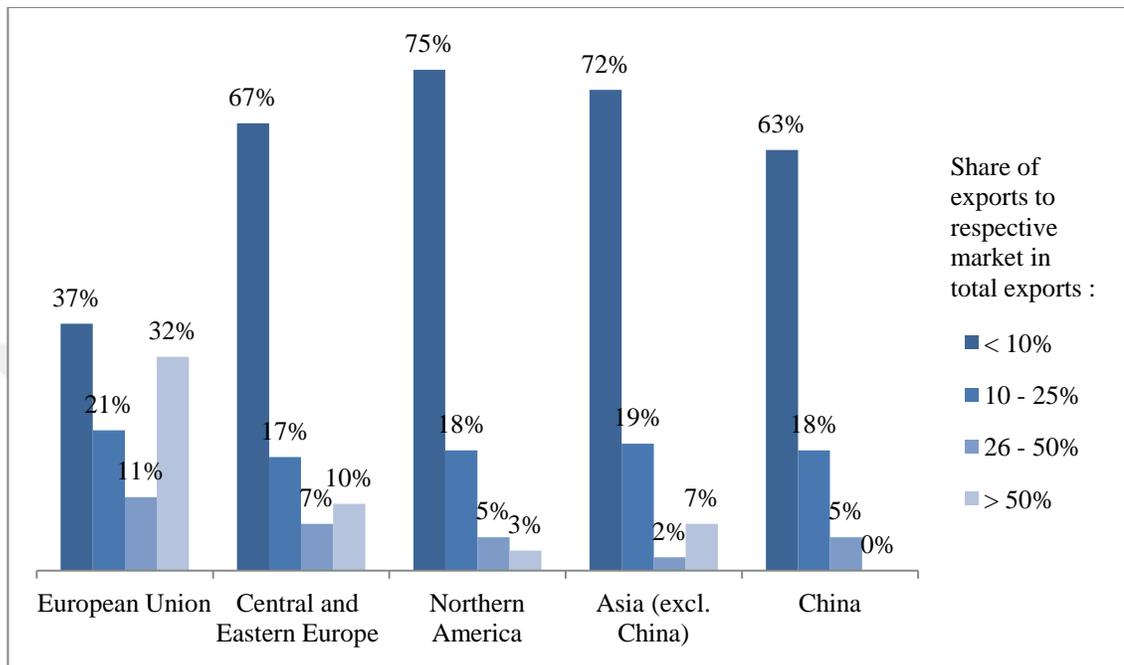
Figure 6: Export Destinations of Exporting Mittelstand Companies



Source: Brutscher et al., 2012: 13.

As stated by Brenken (2006), 32% of the Mittelstand companies which export to EU countries, generated more than 50% of their total export revenues from these countries as can be seen below on Figure 7. However, Mittelstand firms were not as active in Asia as they were in Europe. 72% of the Mittelstand companies which export to Asia (excl. China), generated less than 10% of their total export revenues from this market. However it is assumed by Brenken (2006) that German Mittelstand companies are increasingly active in Asia like they were in Central and Eastern Europe (Brenken, 2006: 15).

Figure 7: Share of the Export Revenues of Mittelstand Companies by Export Destinations



Source: Brenken, 2006: 16.

10.111 micro enterprises, 9.165 small and 6.764 medium-sized enterprises with respect to employee numbers exported to Asia in 2011. Among them roughly 3.000 micro enterprises, 4.000 small and 4.000 medium-sized enterprises supplied their Chinese customers. Around 2.000 and 3.000 of them exported to India and Japan (Hoffmann et al., 2013: 33). These figures show that German SMEs are active players in geographically far countries like rapid-growing Asian countries. According to Brutscher et al. (2012) increasing experience and consolidated business relations with foreign partners enable firms to expand their export regions from geographically and culturally close countries to far countries. A determinant factor for further expansion is the export activities in Western Europe. Only 5% of the active exporter Mittelstand companies that have trade links with North America, Latin America or Asia do not have a trade partner from Western European countries. 85% of the small enterprises with a yearly turnover of less than €5 million export to a maximum of three foreign markets and only 3% of them export to more than six foreign markets. 26% of the large enterprises with a yearly

turnover of more than €50 million export to more than six foreign markets and 48% of them export to a maximum of three foreign markets as shown on Table 2 (Brutscher et al., 2012: 14-15).

Table 2: Number of Export Markets by Turnover Levels

Number of Export Markets	Share of the Exporters by Yearly Turnovers				
	Under €5 million	€5 – 10 million	€10 – 25 million	€25 – 50 million	More than €50 million
Up to 3	85%	71%	57%	57%	48%
3 – up to 6	12%	22%	26%	28%	26%
More than 6	3%	8%	13%	15%	26%

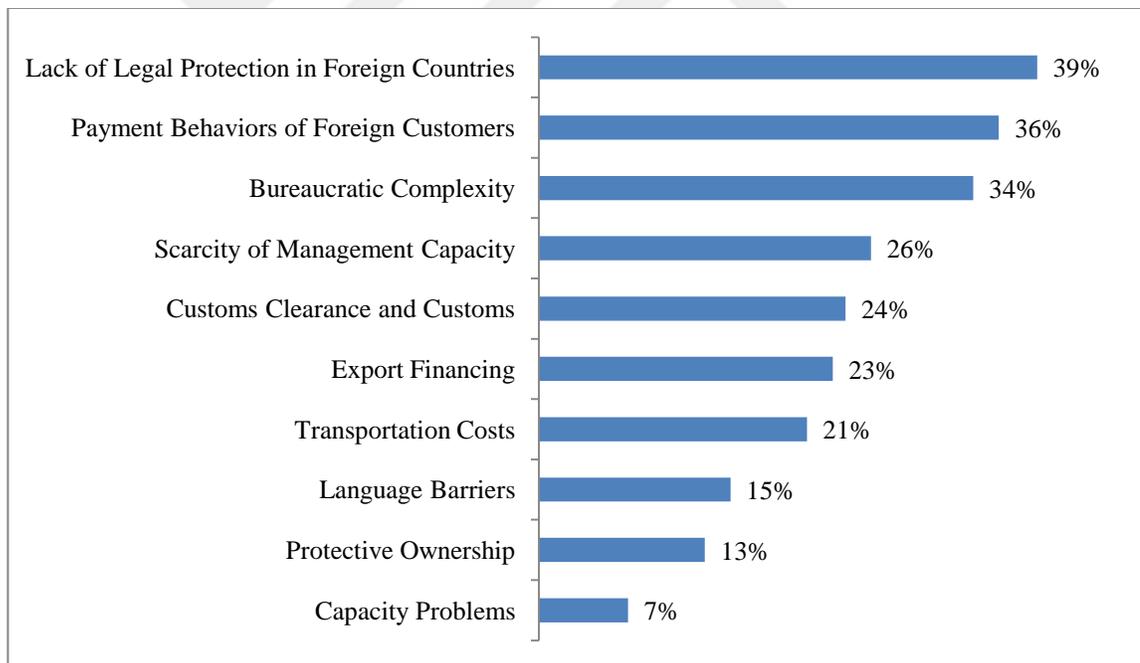
Source: Brutscher et al., 2012: 15.

64% of the respondents were planning to improve their export volume until 2015 when they were asked in 2012. 43% of them were planning to keep their export volume stable. Only 2% of them had an intention to decrease their export volume. Intention of export volume expansion increases in line with the company size. 58% of the exporters with a yearly turnover of less than €5 million wanted to expand their export volume until 2015, while the same ratio was 70% for the companies that have a yearly turnover more than €50 million. 72% of the exporters that have an export partner from China and 73% of the exporters that have an export partner from Asia (excl. China) want to expand their export volume. This is a sign of the increasing presence of German Mittelstand companies in Asia (Brutscher et al., 2012: 15-17).

39% of the exporters see lack of legal protection in foreign countries as an obstacle in export business. Payment behaviour of foreign customers follows it with 36%. 34% of the active exporters believe that bureaucratic complexity constitutes a difficulty while exporting. 24% of them regard customs and customs clearance as an obstacle to exports. Company-related obstacles follow these general problems. These are scarcity of management capacity, export financing, cost of transportation, language barriers, protective ownership and capacity problems as can be seen on Figure 8.

Surprisingly, one third (33%) of the large enterprises with more than €50 million annual turnover believe that management capacity is an obstacle to exports, while in the case of small enterprises with a yearly turnover of less than €5 million this rate is at 22%. This difference may be related with the higher number of foreign markets that large enterprises conduct business than small enterprises as we mentioned above. Lack of legal protection in foreign countries was mostly referred to by medium-sized enterprises. Large enterprises regarded lack of legal protection less than medium-sized enterprises as an obstacle probably because of the higher numbers of specialists in legal fields employed by them (Brutscher et al., 2012: 20-22).

Figure 8: Obstacles in Export According to German Mittelstand Companies



Source: Brutscher et al., 2012: 20.

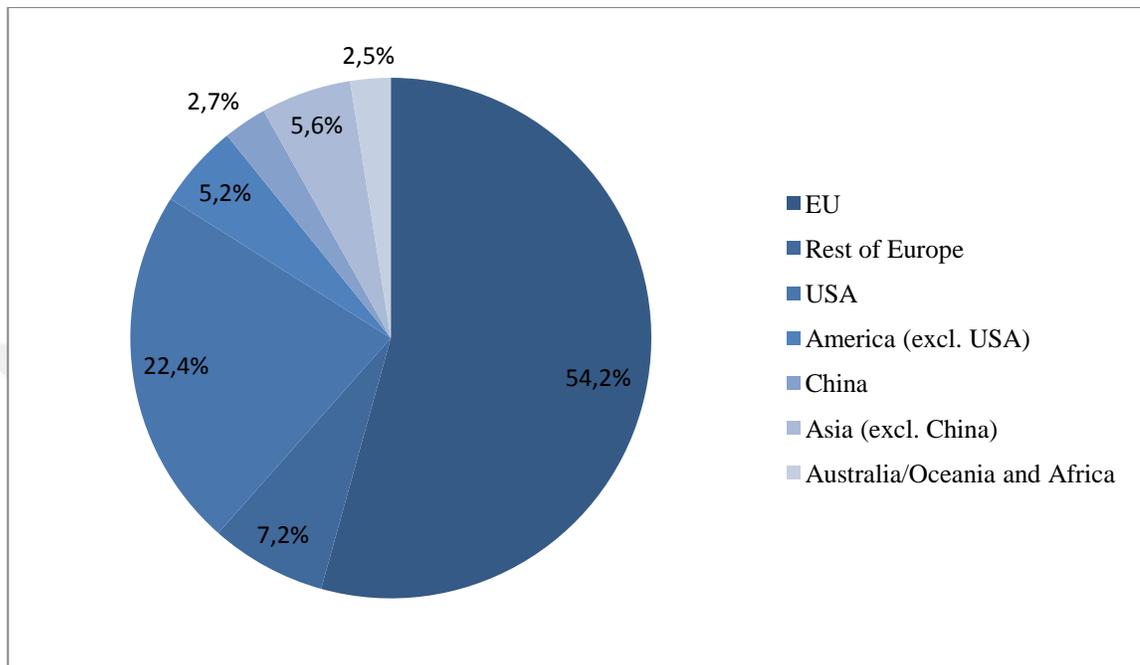
2.1.2. FDI Activities of Mittelstand

Companies that have profound export experience and knowledge engage in FDI activities abroad as stated by Brutscher et al. (2012). These activities require more effort

and contain more risk than export activities. Longer capital commitment and higher capital expenditure are required. High transportation costs, volatile exchange rates, high export volumes and remaining obstacles in export can be the triggers for FDIs. Therefore FDI activities constitute a further step after export for highly internationally linked companies in their globalization process (Brutscher et al., 2012: 27). Brenken (2006) argues that within the context of globalization, FDI activities turned out to be more important. More specifically, Central and Eastern European and Asian countries came into prominence (Brenken, 2006: 20).

Before analyzing the FDI activities of German Mittelstand it might be helpful to shed light on total German FDI activities in order to understand the general patterns. In 2010, 5.760 foreign direct investors from Germany invested in 32.366 objects worth of €1.070 billion (Hoffmann et al., 2013: 51). As can be seen below on Figure 9, 54.2% of the total direct investments of German enterprises headed to EU countries in 2010. EU countries remain the principle destination for German FDIs. USA, on the other hand, seems to have lost its significance as an FDI destination especially throughout the last couple of decades. In 2001 share of the USA was 41% while in 2010 the same ratio was 22.4%. Additionally, share of the Asian countries, including China, increased to 8.4% in 2010 from 6.2% in 2001 (Hoffmann et al., 2013: 55).

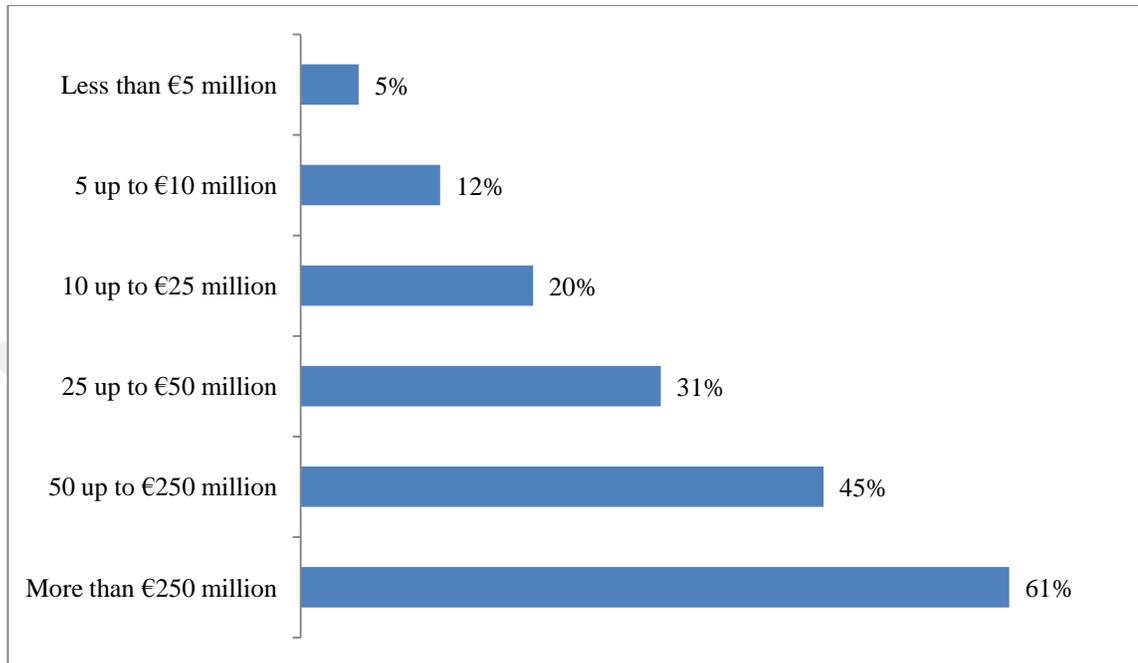
Figure 9: German FDI Destinations in General



Source: Hoffmann et al., 2013: 55.

Brutscher et al. (2012) argue that there is a positive relationship between the company size and direct investment activities abroad. Larger Mittelstand firms are more active than smaller ones as can be seen on Figure 10 (Brutscher et al., 2012: 28). Brenken (2006) also lays emphasis on the positive relationship between the company size and FDI volume. According to the results of the FDI support program of KfW, companies with a yearly turnover of less than €2.5 million had direct investments abroad worth of €1.1 million on average, while companies with a yearly turnover of more than €50 million had direct investments abroad worth of €5.7 million on average (Brenken, 2006: 22). However, according to Hoffmann et al. (2013), SMEs improve their international engagement abilities as they add new sales partners from different countries to their lists. From 2000 to 2010 roughly 2.300 SMEs turned into large enterprises due to their strong performance in foreign markets (Hoffmann et al., 2013: 62).

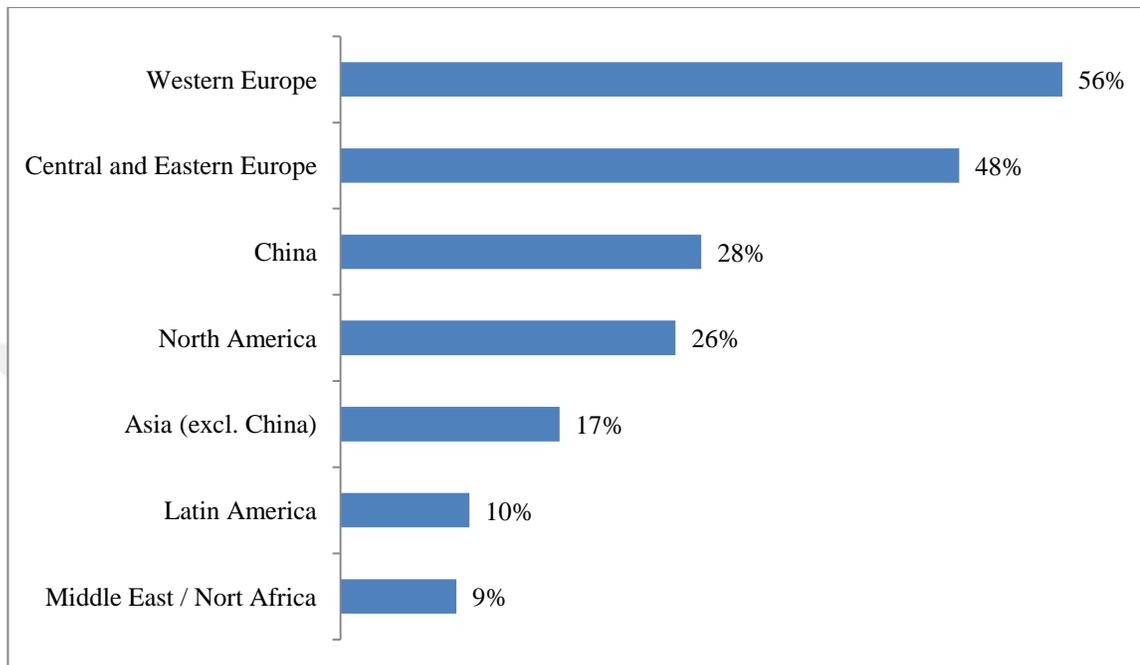
Figure 10: Share of Foreign Direct Investor Companies by Turnover Levels



Source: Brutscher et al., 2012: 28.

Brenken (2006) reported that, 2300 direct investment owner Mittelstand firms invested in 85 different countries from 1986 to 2005. Their total direct investments accounted for a total of €2.7 billion (Brenken, 2006: 19). Within the scope of KfW support program, from 1986 to 2005, 45.5% of the total investments headed to EU-15, excluding the states of the 2004 enlargement of EU. On the other hand, in the same period, 29.2% of the total direct investments headed to Central and Eastern European countries (Brenken, 2006: 23). Recently, as stated by Brutscher et al. (2012) Western European countries are the most popular FDI destinations for German Mittelstand firms. 56% of the active direct investors made an investment in those countries. Similarity of language, business processes or preferences are among drivers of this popularity. Additionally, higher legal security and political stability in those countries are probably determinant factors (Brutscher et al., 2012: 32). Central and Eastern European countries follow Western Europe with 48% as shown on Figure 11. China ranks third, while North America and Asia (excl. China) follow it.

Figure 11: FDI Destinations of Mittelstand Companies



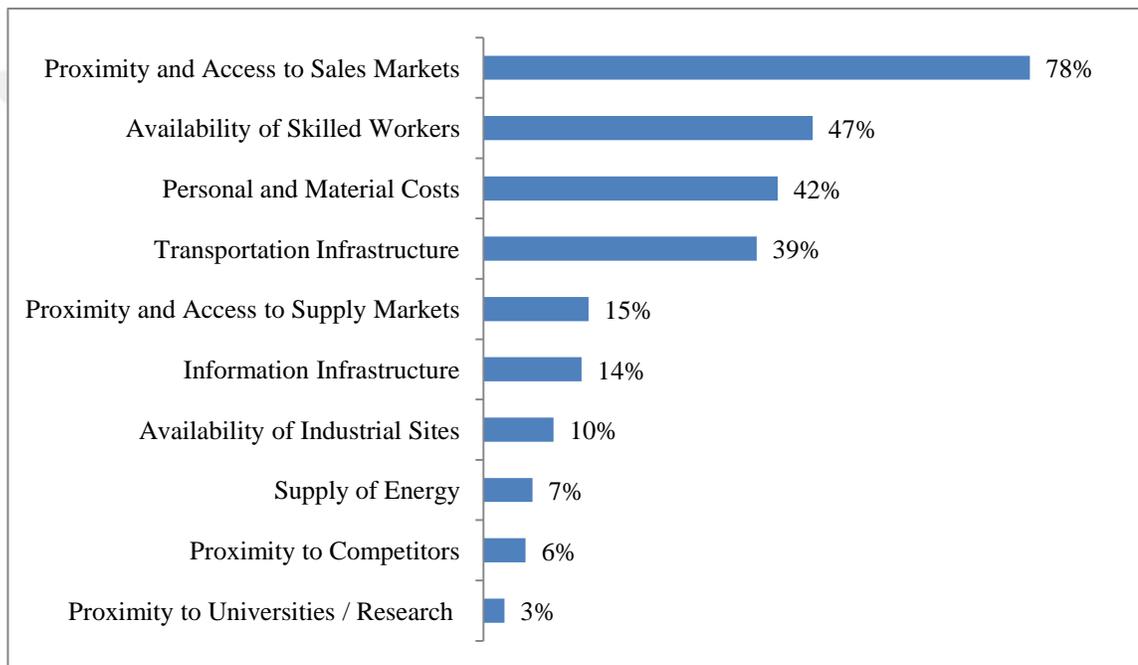
Source: Brutscher et al., 2012: 32.

The most preferred FDI form for Mittelstand is establishing a subsidiary abroad. 78% of the active direct investor Mittelstand firms have established one or more subsidiaries abroad. 37% of them have representative or sales subsidiary in foreign countries. 24% of the Mittelstand firms are part of a joint venture abroad. 58% of the companies with less than €5 million yearly turnover have a subsidiary abroad, while the same ratio is 90% for Mittelstand firms with a yearly turnover of more than €50 million (Brutscher et al., 2012: 29-30).

Mittelstand companies that plan a FDI activity in the future were asked in *Creditreform* survey. As reported by Brenken (2006), 44% of them wanted to invest in EU-15 countries at most, while new 8 EU member countries ranked second place with 23%. Asia (excl. China) (14%), China (11%) and North America (9%) followed EU countries (Brenken, 2006: 32). But what do the Mittelstand firms care about choosing the right country to invest in? 78% of the Mittelstand firms grade “proximity and access to sales markets” as an important factor while deciding on the country to invest in as can

be seen below on Figure 12. Cost related factors play a subordinate role for Mittelstand firms. Proximity to universities and research institutions is chosen only by 3% of the Mittelstand companies. According to Brutscher et al. (2012), it is a sign that the management and R&D functions stay in Germany.

Figure 12: Important Factors While Deciding on FDI Location



Source: Brutscher et al., 2012: 31.

Deciding on true location for FDI is crucial, because every year some 15-30% of the German manufacturing companies that have FDI for production repatriate their activities back to Germany, as stated by Holz (2013). Main reason behind this fact is German companies' dedication to product quality. While they were asked about reasons of their repatriation, 68% of them specify problems about achieving and maintaining high quality standards as a reason. Problems related with just-in-time delivery (43%), an unexpected escalation in labour costs (33%) and underestimated transport and logistical costs (32%) are following popular reasons of repatriating production back to Germany (Holz, 2013: 156). Nevertheless, 42% of the active foreign direct investors were

planning to expand their investments until 2015 as reported by Brutscher et al (2012). 47% of them were planning to keep their investments stable, while 12% of them were planning to decrease their volume of FDI until 2015. A total of 89% of the active foreign direct investors either want to expand or keep stable their FDI's (Brutscher et al., 2012: 33). 47% of the active foreign direct investors want to expand their investments in Central and Eastern European countries. Western Europe ranks second place with 38%, while China follows it with 32% (Brutscher et al., 2012: 35). These figures show the increasing importance of Central and Eastern Europe and China for German Mittelstand companies.

2.2. HIDDEN CHAMPIONS

German Mittelstand companies contain many world market leaders in their respective market, and as such they fall under the category of hidden champions. Within this scope, under this part of chapter two, business strategies of German Mittelstand world market leaders in terms of globalization, innovation and financing will be explained. As it was mentioned above, the term "hidden champions" was coined by Hermann Simon at the end of the 1980s in order to indicate these world market leaders. These companies were scattered across the world. However he believes that 80% of the hidden champions are from German-Scandinavian region. Simon (2009) argues that the strong export performances of German speaking and Scandinavian countries stem from the success of their SMEs. These companies were out of interest of researchers since they were seen as archaic and close to transformation because of their sizes. It was assumed that at the age of the globalization and diversification of large enterprises they were forced to die. However Simon (2009) shows us that by focusing on niche markets in contrast to diversification, these mid-sized enterprises have survived. They demonstrate a success story of globalization age beyond the attractive multinational large enterprises.

2.2.1. Definition of Hidden Champions and Their Markets

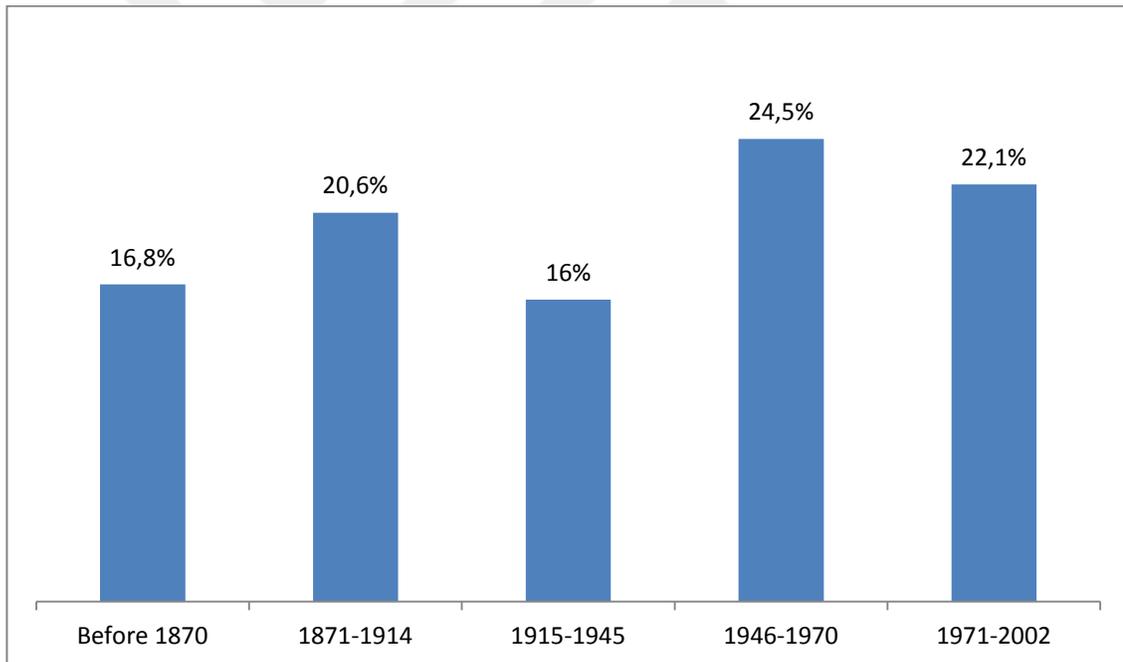
There are three conditions to be counted as a hidden champion. First, a hidden champion must be in the first, second or third place in the global market or first one on its continent. Second, it must have yearly revenue of lower than \$4 billion. Third, it has to have a low level of public awareness. Hidden champions employ 2.037 people on average. Therefore they can be described as mid-sized. They can be found everywhere in the world. However as a result of Germany's great success in export, two thirds of Simon's global list of hidden champions comes from German speaking area which consists of Germany, Austria and Switzerland. This list is collected by Simon over 20 years and includes about 2.000 companies. 1.174 of them are from Germany, 61 of them are from Austria and 81 of them are from Switzerland (Simon, 2009: 15-18). Parallel to this, as stated by Holz (2013), it is estimated that 1400 German Mittelstand companies are world market leaders. In other words they lay on the top three sales positions in their relevant market (Holz, 2013: 150).

On average, hidden champions are more than two times bigger in size than their closest competitor. Plenty of them have a global market share of at least 50%. Despite their immense success they are only known to some of experts, researchers and journalists and therefore they are named "hidden" (Simon, 2009: 1). The reason why hidden champions remain hidden is related with many reasons. First, their large number of products is not consumer goods but rather inseparable parts of the final goods or services. Second, managers of hidden champions prefer not to draw attention on their companies. CEOs and owners of these companies are not so eager to meet researchers and journalists, as it was also experienced in this study while trying to arrange meeting with managing directors of three of them which are located in Izmir / Turkey. Simon (2009) claims that staying at backstage helps these companies in focusing on their business. They determine benchmarks of their businesses and they enjoy reputation in that niche markets (Simon, 2009: 13-14). Generally their products are not sold to final customers since approx. 80% of German Mittelstand world market leaders are active in

business-to-business segment. As a result they remain as “Hidden Champions” in the eye of the final customers (Holz, 2013: 150).

69.1% of the hidden champions produce industrial goods, 20.1% of them sell consumer goods and 10.8% of them are service provider. The oldest hidden champion Achenbach Buschhütten, aluminium roller mills producer from Germany, was founded in 1452. Additionally, 32.1% of hidden champions are older than 100 years. As can be seen below on Figure 13, 16.8% of them were founded before 1870 (Simon, 2009: 21-22).

Figure 13: Founding Years of Hidden Champions



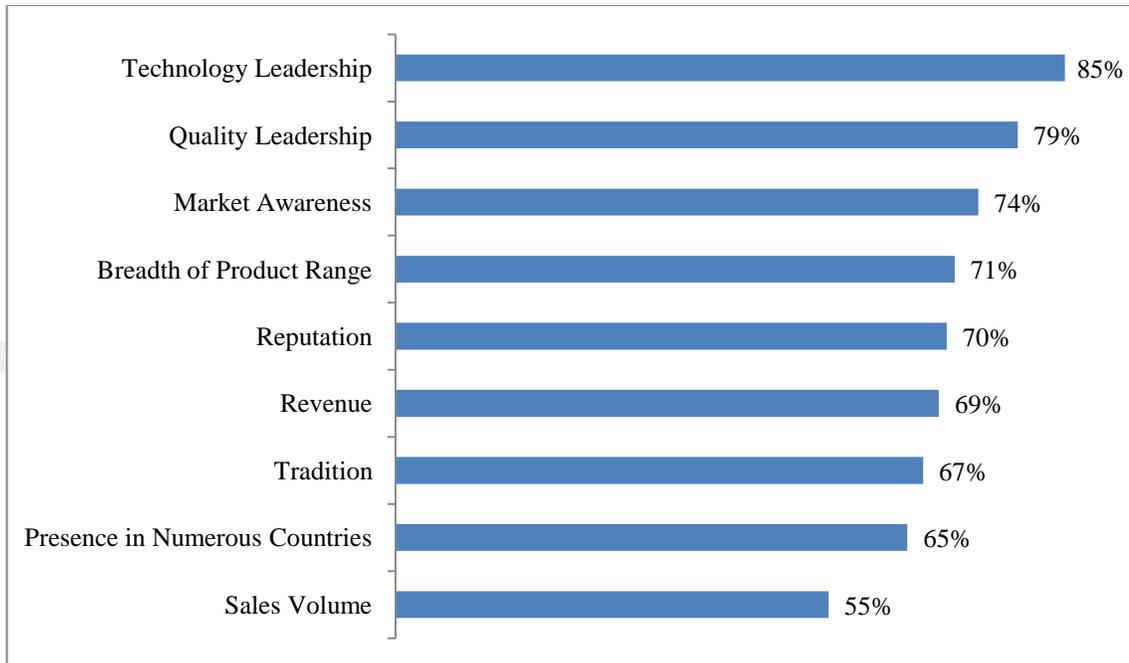
Source: Simon, 2009: 21.

Some of the hidden champions of ten years ago were no longer hidden champions in 2009, since their revenues exceeded \$4 billion threshold. Former hidden champions SAP, Fresenius Medical Care and Würth from Germany had more than \$10 billion revenues. SAP and Fresenius Medical Care are among the list of top stock market index of Germany while Würth is a family-owned enterprise (Simon, 2009: 32). Almost

200 companies from German speaking area exceeded \$1 billion revenue threshold during previous ten years by 2009. These new large enterprises have grown 11.6% on average in the same period (Simon, 2009: 35). For example, wind tribunes producer Enercon from Germany, had less than \$200 million revenues in 1995 while its yearly revenues in 2007 were more than \$4 billion (Simon, 2009: 38).

Hidden champions do not conceive market leadership only in terms of biggest sales volume or highest revenues. Technology and quality leadership are important attributes of the market leadership concept of them. 85% of the hidden champions believe that technology leadership is one of the attributes of their global market leadership as shown below on Figure 14. 65.9% of them are global market leaders. Average global market share of a hidden champion is 33% (Simon, 2009: 49-51). The reason behind their market leadership is not low and aggressive prices. Reputation, quality, technology and innovation are among the drivers of market leadership. By the help of their strong performances, higher prices than their competitors are charged by hidden champions. Simon estimates that the price premium of a hidden champion versus the average of its market is 10%-15%. Thus their market leadership is earned by performance rather than low prices (Simon, 2009: 54).

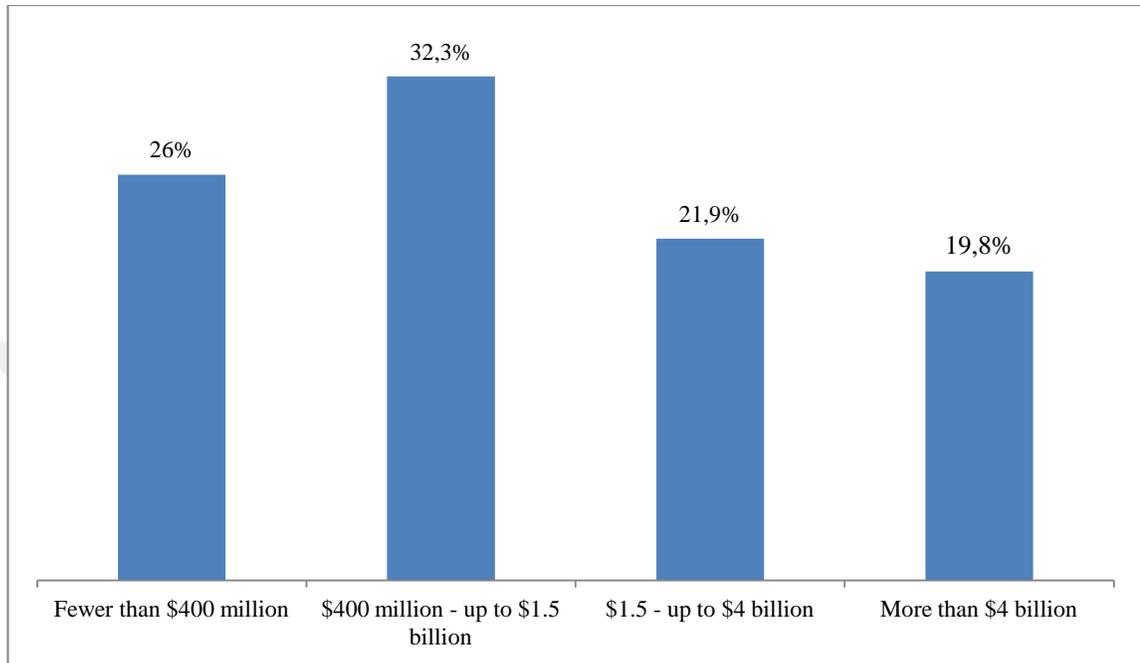
Figure 14: Constituents of Market Leadership According to Hidden Champions



Source: Simon, 2009: 50.

The average market size of a hidden champion is \$1.09 billion. Ten years before 2009 it was \$489 million. 26% of the hidden champions operate in markets with a volume of less than \$400 million as can be seen below on Figure 15. 10 years before 2009, 50% of them were operating in this segment. 19.8% of them operate in markets with a volume of more than \$4 billion (Simon, 2009: 61). They produce highly specialized products on a global scale. Thus they are not keen on operating in standardized goods markets (Holz, 2013: 151). Hidden champions generally operate in oligopolistic markets. It means they have a limited number of competitors and the competition is fierce. 59.8% of the hidden champions have less than 10 competitors globally while 12.8% of them have more than 20 competitors (Simon, 2009: 191-192).

Figure 15: Size of the World Markets of the Hidden Champions



Source: Simon, 2009: 61.

According to Simon (2009) when a crisis occurs in the niche markets of hidden champions it constitutes a great risk since they operate in a single market. On the other hand their strong focus on their markets enables them to make innovations and react swiftly to the needs of customers. Since the narrow markets and high market shares restrict growth chances of hidden champions they began to diversification. Risk diversification and overcoming growth barriers are two main goals of diversification. Another motive is better exploitation of existing competencies and know-how potentials. Simon (2009) names the diversification of many hidden champions as *soft diversification*. In soft diversification, new units close to the traditional business stay together both in terms of technology and market (Simon, 2009: 75-79).

2.2.2. Drivers of Growth: Globalization and Innovation

According to Simon (2009) globalization is the second pillar of the hidden champions' strategy besides focus. By the help of the globalization they could broaden their narrowly defined markets. They added Eastern Europe and Asia to their main markets of Western Europe and North America. 74.4% of the hidden champions reported that they started exporting at the beginning foundation of the company. Today they have 24 subsidiaries on average out of their home markets. On average 8 of these subsidiaries are both for manufacturing and sales, 16 of them are for sales and service organizations. For example Kärcher, world market leader in high-pressure cleaning equipment from Germany, opened its first foreign subsidiary in 1962 in France. They had 44 fully-owned subsidiaries globally by the end of 2008. Hidden champions do not prefer to cooperate with a domestic partner while entering the relevant market. 77.1% of them conduct this process alone (Simon, 2009: 91-94). German Mittelstand world market leaders often prefer to build their own subsidiaries in foreign countries with their own staff rather than external agents. As a result, they can ensure a global assistance for their products in terms of services and application (Holz, 2013: 151).

Independent from their sizes hidden champions are enthusiastic global players. In addition to having fully-owned foreign subsidiaries globally, establishing global brands is another indicator of globalization. Hidden champions from narrow global markets such as the automotive and aircraft industry establish their global brands easier than hidden champions operating in larger mass markets to fragmented target groups. For example Miele, leading producer of high class appliances from Germany, achieved the worldwide synonym for high-end products by standing for quality and status according to their Co-CEO (Simon, 2009: 95-97).

Venohr and Meyer (2007) argue that globalization has enhanced the opportunities for global niche market players in terms of outsourcing by the help of the decreasing transportation and communication costs. It became easier to control the quality of the production in foreign countries even for small enterprises (Venohr and Meyer, 2007: 12). However, 42.4% of hidden champions are against heavy outsourcing.

Almost a quarter of them have a vertical integration, the share of manufacturing done within the company is more than 70%. In contrast to large corporations they prefer to produce things themselves. They do not want to lose their high quality in core competencies with outsourcing. For example, Enercon has a vertical integration more than 75%. They produce towers and rotor blades in house and they even have their own ships for transportation. However in noncore competencies hidden champions are eager to outsource. (Simon, 2009: 238-240).

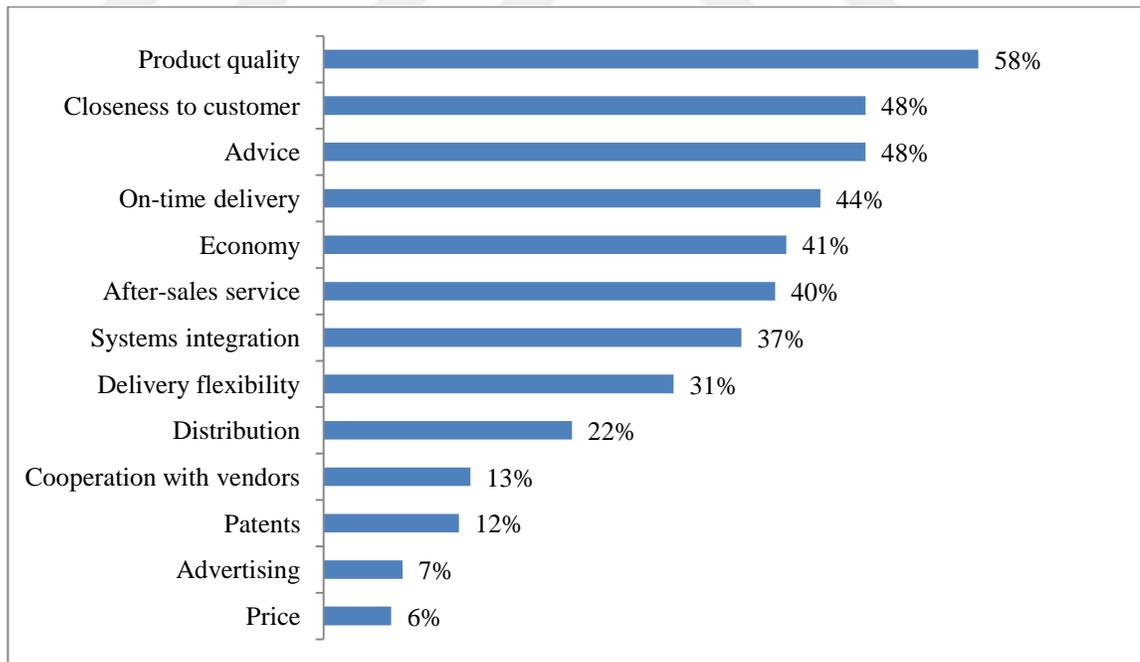
1.316 hidden champions from German speaking area generated \$361.4 billion from their exports which accounts for 26.8% of the total exports of Germany, Austria and Switzerland (Simon, 2009: 100). In 2009 sales to Western Europe and USA constituted 68.1% of the total sales of hidden champions. Ten years before same ratio was 76.8%. These figures indicate the increasing importance of Asia and Eastern Europe for hidden champions. 16.1% of the sales came from Asia in 2009 same ratio was 10.1% ten years ago. China is a special destination for many hidden champions. Many of them have production plants there (Simon, 2009: 101).

Hidden champions have close relationships with their customers since they offer complex product and service programs as stated by Simon (2009). 82.6% of the hidden champions sell their products directly while 29.5% of them sell via intermediaries. Some of them prefer both ways as can be deduced from the sum of the percentages. Roughly 70% of them prefer only direct sales (Simon, 2009: 130). Holz (2013) argues that German hidden champions obtained the “problem solver” title by the help of their close relations with customers. These close relations also enable them to develop innovations in response to the problems of the customers (Holz, 2013: 151).

In large corporations between 5 to 10% of the employees have regular customer contact while the same ratio is between 25 to 50% in hidden champions (Simon, 2009: 132). Their closeness to customers is firstly related with their manageable sizes. However in addition to their relatively smaller sizes, hidden champions use a wide range of organizational, procedural and cultural instruments to maintain this closeness according to Simon (2009). As a result, closeness to customer ranks second place after product quality in the list of the competitive advantages of the hidden champions as

shown on Figure 16. Decentralization is a decisive organizational characteristic. Many smaller departments and even independent firms serve their special customer segments (Simon, 2009: 139). Holz (2013) also argues that competitive advantage of German Mittelstand world market leaders lies in the superior value of their products rather than lower prices. These products solve the key problems of the customers and hard to be imitated by competitors from emerging economies (Holz, 2013: 151). A hidden champion generally operates in one market with one product. Therefore many of them have a classical functional organization in which a clear allocation of responsibilities exists. They implement decentralized and customer-oriented organization forms. By the help of decentralization hidden champions can retain their traditional strengths such as closeness to customer in spite of soft diversification policies (Simon, 2009: 228-229).

Figure 16: Competitive Advantages of the Hidden Champions



Source: Simon, 2009: 198.

German Mittelstand world market leaders often develop innovations in cooperation with their suppliers, universities and research institutions (Holz, 2013: 152).

According to Simon (2009) innovation is an important driving force for the market leadership of the hidden champions. They show an outstanding performance in terms of R&D intensity, revenues coming from new products and number of patents in spite of their limited resources. Moreover they show innovative characteristics both in products and in processes, marketing and services. As it is mentioned above 85% of the hidden champions see themselves as technology leader in their market. Fischer, globally leading wall plug producer from Germany, has more than 2000 patents. Process innovation is also important for hidden champions since it contributes to cost reduction. For example Würth's core competency is its innovative sales and logistics system which is called ORSYMAT (order, system and automation). It connects the local branches of Würth and its large customers in order to ease the orders and deliveries (Simon, 2009: 159-160).

Hidden champions spend 5.9% of their revenues on R&D on average. R&D intensity is more than 9% for one fifth of them (Simon, 2009: 164). R&D expenditures of world market leaders are approx. 2-3 times higher than their rivals (Holz, 2013: 152). For example Claas, the harvester hidden champion from Germany, has applied for one patent every week since the company was founded in 1913. Enercon, technology leader in wind power generation from Germany, holds more than 40% of the global patents in wind power generation. Its licenses are used by giants like Siemens and General Electric. In 2005, 12 of the 50 largest patent applicants at the German Patent and Trademark Office were hidden champions. 85% of the Kärcher's revenues are generated from products that are less than four years old. 80% of the revenues of the Putzmeister, German world market leader in concrete pumps, are generated from products that are less than five years old (Simon, 2009: 167-169).

Taking part in innovation processes is an important characteristic of the owners and top managers of the hidden champions. Their detailed knowledge about business enables them to involve in these processes. Since there is no strict division of labour between departments at hidden champions it is easier to concentrate on the innovation process for all departments. Therefore CEOs of the hidden champions continuously emphasize on cooperation between R&D and other business departments for the success of innovation process (Simon, 2009: 179- 183).

2.2.3. Financing, Organization, Leaders and Employees

Hidden champions differ from the well-known large publicly-traded enterprises in terms of organizational cultures and ownership and management structure. They resemble SMEs more than large enterprises (Venohr and Meyer, 2007: 6). As a result, self-financing is common among them. Hidden champions' average equity ratio is 41.9%. That means on average 41.9% of a hidden champion's assets are owned by shareholders and not by creditors. 35.1% of them have more than 50% equity ratio while only 6.3% of them have less than 20% equity ratio. During previous ten years until 2009 57.9% of the hidden champions reported that their equity ratio have increased while 12.4% of them reported a decrease for the same period (Simon, 2009: 224).

German Mittelstand world market leaders are long-term oriented and they are not eager to benefit only from short-term profits as a result of their family-owned structure (Holz, 2013: 152). Hidden champions regard self-financing as the most important source of financing. Capital market sources such as going public and bonds are increasingly popular financing factors for hidden champions. Traditional bank loans lose their importance on the other hand. Private equity also loses its power since the short term exit strategies of private equity investors cause problems between longer-term oriented family enterprises and investors. Going public is still a controversial subject. With respect to their sectors hidden champions are eager or reluctant for going public. First, they are not willing to report their financial situation as a requirement of publicity obligations. Second, they do not operate in sectors that investors are concentrating on. Many of them operate in niche markets that not stand under the spotlights such as solar energy market (Simon, 2009: 226-227).

German hidden champions have created more jobs abroad than they have created in their home market. In 2009, 51% of their employees were in home market while ten year before 2009 the same ratio was 63%. Simon (2009) argues that their 80-90% of revenues comes from foreign markets and they employ 50% of their workforce abroad. As a result of the globalization process share of the employees abroad is expected to increase (Simon, 2009: 258). Many hidden champions employ German dual-vocational

training system abroad as well. Stihl, German world market leader in chainsaws, employs it in USA and Brazil. Kern-Liebers, German world market leader for springs in safety belts, and Fischerwerke, German hidden champion for dowels, together established a training centre in China (Simon, 2009: 276-277). Holz (2013) argues that skilled employees who educated in dual training system are at the core of the success of the German Mittelstand world market leaders. Experienced production workers are later employed in management positions in order to facilitate information flow between R&D experts and production workers (Holz, 2013: 153).

Employee related characteristics such as employee loyalty, qualifications and employee motivation constitute strengths for the hidden champions. Another indicator is sickness rates. Sickness rate for all German companies was 4.2% on average between 1999 and 2009 while the same ratio was 3.2% for the hidden champions. Moreover hidden champions have less turnover rates than other companies. Long term turnover rate of hidden champions is 2.7% on average. The same ratio was 5% on average for German speaking countries. Low turnover rates enable hidden champions to invest less in finding, hiring and training new employees (Simon, 2009: 262-263). There is a high degree of mutual trust between German Mittelstand world market leaders and their employees. Employees are linked to their companies with “implicit” life-long work contracts (Holz, 2013: 152).

About two thirds of the headquarters of the hidden champions are in rural locations. Therefore these companies are often the biggest employer in their cities and regions. As a result, close relationships between employer and employees have emerged. There are fewer distractions in rural areas than in cities. However it is hard to attract people from large cities as employees (Simon, 2009: 272-274). Parallel to this, approx. 70% of German Mittelstand world market leaders are not located in big cities, rather they prefer rural areas. As a result they pay lower real estate prices. Additionally, since Germany is a decentralized country with many industrial areas that connected with a developed transport infrastructure, they are not get stuck in these small cities (Holz, 2013: 150).

According to Simon (2009) the most important driver of the outstanding success of the hidden champions is the personalities of the top managers. Although the importance of the family member managers is declining, about two thirds of the hidden champions are run by owner families. In 63.3% of the hidden champions, majority share are held by family members. These companies are therefore controlled by the owner family. However the share of the family-member managed hidden champions have falling. 51.8% of the hidden champions are owned and managed by the same family. Ten years before 2009 the same ratio accounted for almost two thirds of the hidden champions (Simon, 2009: 285-286). Effect of the owner-managers on the success of the German Mittelstand world market leaders is important. Many of the owners of these companies are enthusiastic engineers. As a result, their dedication to work, especially to developing new solutions, influences the whole employees and work atmosphere (Holz, 2013: 153). 55.7% of the hidden champions' leaders have a business education while 53.4% of them received a technical education. Almost 20% of the leaders received an education usually both in business administration and in technology. Many of the founder generation have no university degree. These leaders managed their companies usually from post-war years until 1990s. Among them Reinhold Würth (founder of Würth), Reinhard Wirtgen (founder of Wirtgen street-recycling machines) and Heinz Hankammer (founder of Brita filters) are prominent. Following generation members all have university degrees and have experience abroad. For example, Dr. Aloys Wobben has studied electrical engineering and founded Enercon in 1984; Norbert Nold has studied economics and founded Omicron, tunnel microscope manufacturer; Dr. Hans J. Langer was working for Max Planck Institute for Plasma Physics before he founded EOS (Simon, 2009: 287).

CHAPTER THREE

REFLECTIONS ON GERMAN-TURKISH BUSINESS RELATIONS

Germany and Turkey have had strong economic relations since the unification of Germany in the nineteenth century. Then Prussia and Ottoman Empire were linked with economic, political and military relations⁵. Since 1961, when the “Labour Recruitment Agreement” was signed by Germany and Turkey, relations between these two countries have been further flourishing. Especially after 1980, German FDI inflows to Turkey have gained pace. More than \$7 billion was invested in Turkey by Germany since 1980 (Kuştepelı, Balkır, Akgüngör, Gülcan, Beyzatlar and Gündüz Kalaycıođlu, 2013: 28). As a result of these close trade relationships, German Chamber of Industry and Commerce has been represented in Turkey since 1984. Then, The Union of Chambers and Commodity Exchanges of Turkey (TOBB) and German Chambers of Commerce and Industry (DIHK) established DTR-IHK in 1994⁶. Promoting economic relations between Turkish and German businessmen is the principal purpose of DTR-IHK.

As of 2015, Germany exported products worth of around €22 billion to Turkey. Accordingly, Turkey ranked fourteen on the list of Germany’s export partners. On the other hand, in the same year, Germany imported products worth of around €14 billion from Turkey which, made it to stay on seventeenth place on the list of Germany’s import partners (Statistisches Bundesamt, 2016: 2). The same statistics made Germany Turkey’s top export partner and top second import partner after China according to Turkish Statistical Institute’s data⁷. These data show clearly the crucial place of Germany as a foreign trade partner of Turkey.

With respect to FDI activities in Turkey, Germany’s activities are in an increasing trend after the 2008 global economic crisis. According to OECD statistics, Germany’s FDIs in Turkey increased to more than \$2 billion in 2013 from \$591 million

⁵ For details see: İlber Ortaylı, **Osmanlı İmparatorluğu’nda Alman Nüfuzu**, Timaş Yayınları, İstanbul, 2014.

⁶ For detailed information see: <http://www.dtr-ihk.de/tr/odamiz-hakkinda/ahk-tuerkiyenin-tarihcesi/>, (29.04.2016).

⁷ For detailed information see: http://www.turkstat.gov.tr/PreTablo.do?alt_id=1046, (29.04.2016).

in 2009⁸. According to the annual FDI Report of Turkish Ministry of Economy, 6.070 partly or fully-owned German companies operated in Turkey in 2014. England and Netherlands-originated companies follow German companies in Turkey as shown on Table 3.

Table 3: Foreign-owned Companies in Turkey by Countries and Years

Countries	2011	2012	2013	2014	Total (1954-2014)
Germany	592	484	417	380	6.070
Netherlands	183	172	158	139	2.453
England	184	173	163	138	2.781
Italy	112	107	101	98	1.222
USA	160	114	104	92	1.512
China	53	55	72	96	663

Source: Türkiye Cumhuriyeti Ekonomi Bakanlığı, 2015: 22.

In this chapter, the reflections of the above-explained structural changes and the transformation process of German Mittelstand companies on German-Turkish business environment will be explained. Then the results of the research conducted to identify German Mittelstand companies, which have production facilities in Turkey will be given. In the second part of this chapter, operations of these companies in Turkey will be explained. In the third part, in order to explain the structural condition in Turkey, the results of the research on DTR-IHK's role as an intermediary organization in Turkey

⁸ For detailed information see: https://stats.oecd.org/Index.aspx?DataSetCode=FDI_FLOW_PARTNER, (29.04.2016).

will be assessed. Last part of this chapter will cover the general overview of the German Mittelstand firms in Turkey.

3. 1. MANUFACTURER GERMAN MITTELSTAND FIRMS IN TURKEY

Upon the above-explained background, the effects of aforementioned transformation process of German Mittelstand companies on German-Turkish business environment will be explained under this and following parts of this chapter. Initially, it was planned to visit three German Mittelstand companies which have production plants in Izmir / Turkey. By doing so, it was aimed to gain first-hand and detailed information from semi-structured interviews with managers of these companies. However, German Mittelstand companies were reluctant to open their doors to researchers. Around 10 of them in Izmir were e-mailed or telephoned. None of them accepted the interview request due to their company policies. As it is mentioned above, especially hidden champions are not eager to stand under the lights of the media and researchers. Therefore it was not surprising to be refused by three German hidden champions, which have production plants in Izmir. As a result, it is decided to change the research method covering the all partly or fully-owned German firms in Turkey as of 31.12.2015 based on list of the Turkish Ministry of Economy⁹.

Of this list, firstly, other countries' companies except Germany was eliminated and a total of 6.434 companies that partly or fully-owned by Germans were detected. Second, the list was re-organized by economy branches. Then the services branches were eliminated in order to reach manufacturer economy branches and a list of 4.306 firms was uncovered. Subsequently, each of these companies was checked by their names on their official websites, in order to identify fully-owned German Mittelstand companies, which have production plants in Turkey. As a result, 62 fully-owned German

⁹ The full list can be viewed on:

http://www.ekonomi.gov.tr/portal/faces/home/yatirim/uluslararasiYatirim/uluslararasi-dogrudan-yatirim?_afzLoop=86600044835849&_afzWindowMode=0&_afzWindowId=famost25p_164#!%40%40%3F_afzWindowId%3Dfamost25p_164%26_afzLoop%3D86600044835849%26_afzWindowMode%3D0%26_adf.ctrl-state%3Dfamost25p_218, (31.05.2016).

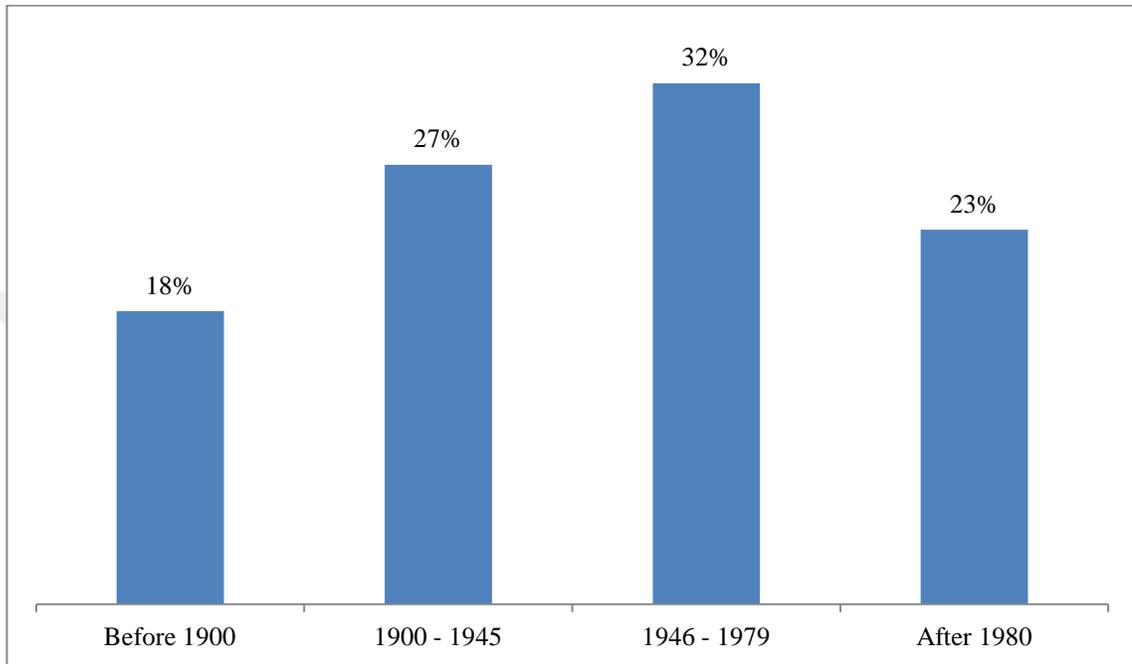
Mittelstand companies, which have production plants in Turkey, were identified. The full list of these 62 companies can be seen below in Appendix.

Principal purpose of this research was to investigate the manufacturer German Mittelstand companies in Turkey. As it is mentioned above, these companies contribute to German economy by their success particularly in export and job creating. Therefore, manufacturer German Mittelstand firms in Turkey were taken as the basis for the research. All of these 62 companies are owned and managed by the owner family independent from their sizes. Therefore, these companies can be counted as Mittelstand, in line with the definition given above.

3.1.1. Founding Years

With respect to their establishment years in Germany, the oldest manufacturer German Mittelstand in Turkey, lock producer GTV, was founded in 1780. On the other hand the youngest one, aluminium tube producer ESA-Rohr, was founded in 2007. It is also the only German Mittelstand company that was established in 2000s which have production plant in Turkey. Among 62 manufacturer Mittelstand companies, 10 of them were founded in the nineteenth century. 17 of them were founded between 1900 and 1945. Between 1946 and 1979, 20 German Mittelstand companies which have production plants in Turkey were founded. From 1980 until 1999, 13 of them were created in Germany. Below on Figure 17 their dispersion by founding years can be seen.

Figure 17: Founding Years of Manufacturer German Mittelstand Companies Operating in Turkey



In the nineteenth century automotive industry suppliers Optibelt (1872), drive belts producer, and BPW (1898), wheel axle producer, were founded. Additionally, chemistry companies Veritas (1849), Baerlocher (1823) and Zeller+Gmelin (1866) are among the Mittelstand companies in Turkey, which were founded in the nineteenth century. Moreover, metal goods producers Oschatz (1849), Maurer Söhne (1876) and Gühring (1898) were also founded in the same period. Netzch (1873), electrical machinery manufacturer and BWF (1892), filter media producer, are remaining two companies, which were founded in the nineteenth century.

Four automotive industry suppliers: Krone (1906), trailer manufacturer; AKG (1919), cooling systems producer; Mekra-Lang (1932), mirror manufacturer, and air and liquid filter systems manufacturer Mann+Hummel (1941) were founded between 1900 and 1945. Metal goods producers Renztürk (1908), Dorma (1908) and Rifis (1934) were also founded in the same period. Electrical machinery firms Viessmann, heating systems manufacturer, was founded in 1917 and Sew Eurodrive, drive engineering company, was

founded in 1931. Moreover, Knauf (1932) and Siegenia-Aubi (1914) from construction industry were also founded between 1900 and 1945.

Most of the manufacturer Mittelstand companies in Turkey were founded between 1946 and 1979. Machinery and equipments manufacturers Schnee (1946), Spinner (1949), Gerd Wolff (1954), Konvekta (1957), Püschel Automation (1969) are among them. Additionally, cable producer for automotive industry Forschner (1948), polymer producer C.F. Maier (1960) and Farhym (1962) were founded during the same period. Between 1946 and 1979, Woco (1956), plastics and rubber manufacturer; Cellofoam (1963), insulation materials manufacturer; Remmers (1949), chemistry producer, and plastics producer Jokey (1968) were also founded in Germany.

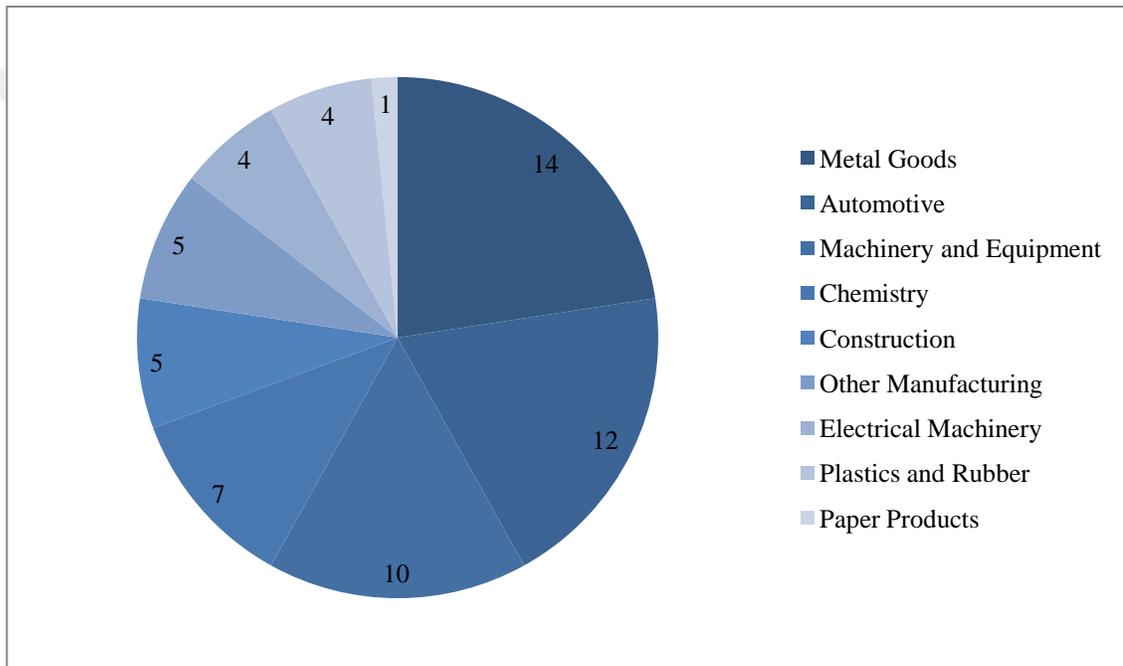
After 1980, three automotive industry suppliers Sand Profile (1986), SCT (1993) and ESA-Rohr (2007) were founded. Moreover, Köster, chemistry producer, F.EE, industrial automation manufacturer, and Flammastek, metal goods producer were founded in 1982. Enercon, wind tribunes manufacturer, was founded in 1984 while Schattdecor, decor papers producer was founded in 1985. Mefro Wheels (1991), MST (1992), flexible hoses producer, and Solitem (1999) were founded in 1990s.

3.1.2. Economy Branches

German Mittelstand companies which have production plants in Turkey represent a variety of economy branches. There are nine different economy branches in which these companies operate. These branches are: Electrical Machinery, Construction, Paper Products, Chemistry, Machinery and Equipment, Metal Goods, Other Manufacturing, Automotive, and Plastics and Rubber. Metal Goods producers represent the biggest company group with 14 members. Among them Sonnenflex Schleifmittel, abrasives producer for marble industry, established its production facility in Afyon in 1996. Automotive industry members follow Metal Goods producers with 12 companies. For example, C.F. Maier produces plastics and lightweight metal for this industry in its Tekirdağ plant since 1995. 10 Mittelstand companies from Machinery and Equipment industry constitute the third biggest company group. Among them, Enercon produces

rotor blades for its own wind tribunes since 2002 in Izmir. Remaining economy branches and number of their members consist of Chemistry (7), Construction (5), Other Manufacturing (5), Electrical Machinery (4), Plastics and Rubber (4) and Paper Products (1) as can be seen below on Figure 18.

Figure 18: Number of Manufacturer Mittelstand in Turkey by Economy Branches



Only 3 of the 14 Metal Goods manufacturing German Mittelstand companies established their production facilities out of the Marmara region. These companies are Maurer Söhne (Izmir), Sonnenflex Schleifmittel (Afyon), Renztürk (Ankara). Sonnenflex Schleifmittel, abrasives manufacturer, serves to the marble industry. Therefore, it is located in Afyon where the most of the Turkish marble companies are also located. Remaining 11 Metal Goods manufacturers are located in Marmara region. Among them are Gühring (Kocaeli), Neumo (Istanbul) and Flammastek (Tekirdağ), which operate in Turkey for more than fifteen years.

Half of the automotive industry suppliers are located in Marmara region. Forscher, cable producer, established its plant in Istanbul in 2001 while Optibelt started

production in the same city in 2015. Additionally, Mann+Hummel, and BPW manufacture in Kocaeli. Sand Profile, sealing profiles producer for cars, established its plant in Düzce in 2007. Other automotive industry members are: AKG, Krone, and ESA-Rohr (Izmir); Farhym, and Mekra-Lang (Ankara); SCT (Mersin).

Machinery and Equipments manufacturers are located in İstanbul (3), Tekirdağ (2), İzmir (2), Kocaeli (1), Düzce (1) and Ankara (1). For example Spinner produces machine tools in Istanbul since 2000 while Coko Werk, technical plastics producer, operate in Tekirdağ since 2006. 2 of the 7 Chemistry producers are located in Aegean region. Baerlocher established its manufacturing plant in Manisa in 2015, while Desomed started manufacturing in Izmir in 2000. In Istanbul 3 Chemistry producers are located: Remmers, Zeller+Gmelin, and Peter Lacke.

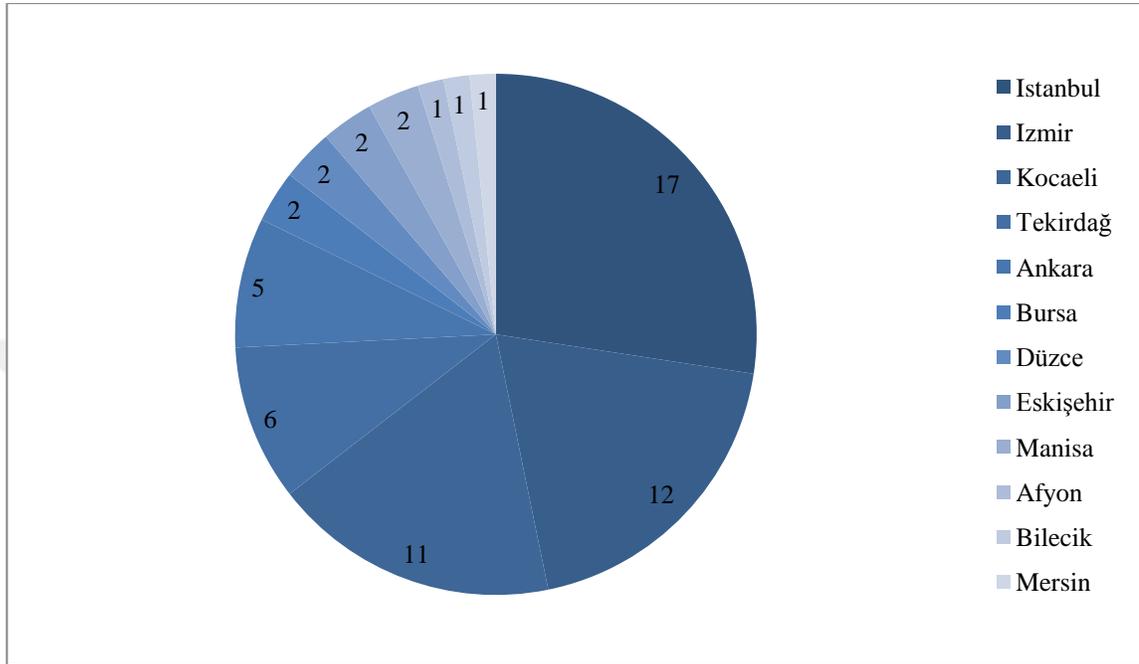
5 Construction industry members are located in Istanbul (3) and Eskişehir (2). Of these, Peri, Dolezych and Siegenia-Aubi operate in Istanbul while Knauf and Cellofoam in Eskişehir. 3 of the 5 Other Manufacturing branch members are located in Izmir. These companies are filter media producer BWF, printing cylinder manufacturer Janoschka, and flexible hoses producer MST. Electrical Machinery manufacturer German Mittelstand firms in Turkey are: Pas South East Europe (Tekirdağ), Sew Eurodrive (Istanbul), Netzsch (Izmir) and Viessmann (Manisa). Three of four Plastics and Rubber manufacturers are located in Marmara region. These are Woco (Bursa), Bericap, and Joker (Kocaeli). The only Paper Products manufacturer Schattdecor, decor papers producer, established its production facility in Kocaeli in 2010.

3.1.3. Geographical Dispersion

Geographically, many of the manufacturing German Mittelstand companies in Turkey are located in Marmara region. 39 of the 62 enterprises, which accounts for 63%, are located in this region. Istanbul hosts 17 manufacturing Mittelstand companies while Kocaeli (11), Tekirdağ (6), Bursa (2), Düzce (2) and Bilecik (1) follow it. Mefro Wheels owns a production plant in Bilecik since 2005, while technical rubber producer Sand Profile and Machinery and Equipment industry member Gerd Wolff produce in Düzce

since 2007. Four Metal Goods producers constitute the biggest economy branch among Mittelstand firms, which have manufacturing plant in this city. Among them are Neumo, material producer for pharmaceutical and food processing industry, Rifis, machine construction company, Dorma, door technology producer, and GTV, lock producer. Chemistry producers from Istanbul consist of construction chemicals manufacturer Remmers, paints producers Zeller+Gmelin and Peter Lacke. Peri, formworks producer for construction industry, started manufacturing in its Istanbul plant in 1990, while the remaining two construction industry members, Dolezych and Siegenia-Aubi established their plants in Istanbul in 2010s. Four Metal Goods producers constitute the biggest group in Kocaeli as well. These are Maldaner, Oschatz, Gühring, round shank cutting tools manufacturer, and Meiser, steel processing company. Two Machinery and Equipment producers exist among six companies which have production facilities in Tekirdağ: Coko Werk, technical plastic parts producer, and Schnee, metal drawer producer. Woco from Plastics and Rubber industry, and Michelfelder, stainless steel processor have production facilities in Bursa. Geographical dispersion of manufacturing German Mittelstand enterprises by number can be seen below on Figure 19.

Figure 19: Geographical Dispersion of German Mittelstand Firms in Turkey



12 manufacturers in Izmir, 2 in Manisa and one in Afyon make Aegean region the second popular investment area for German Mittelstand firms. Almost a quarter (24%) of manufacturer Mittelstand enterprises are located in this region. A globally operating family-owned company Viessmann, heating systems producer, started manufacturing in Manisa in 2013. The other establishment in Manisa is the production plant of Chemistry firm Baerlocher. Together with Other Manufacturing, Automotive parts producers are represented by three members in Izmir. Among them are AKG, cooling systems producer, Krone, trailer manufacturer, and ESA-Rohr, aluminium tube producer. Two Machinery and Equipments producers in Izmir are: Enercon and Püschel Automation. Maurer Söhne from Metal Goods industry, Desomed Euro, disinfectants producer, and Netzsch, electrical machinery manufacturer also have production plants in Izmir. Additionally, the one and only Plastics and Rubber producer Mittelstand firm in Izmir is the sales promotion materials manufacturer Vkf-Renzel. Sonnenflex Schleifmittel, abrasives producer for marble industry, established its plant in Afyon as we mentioned above.

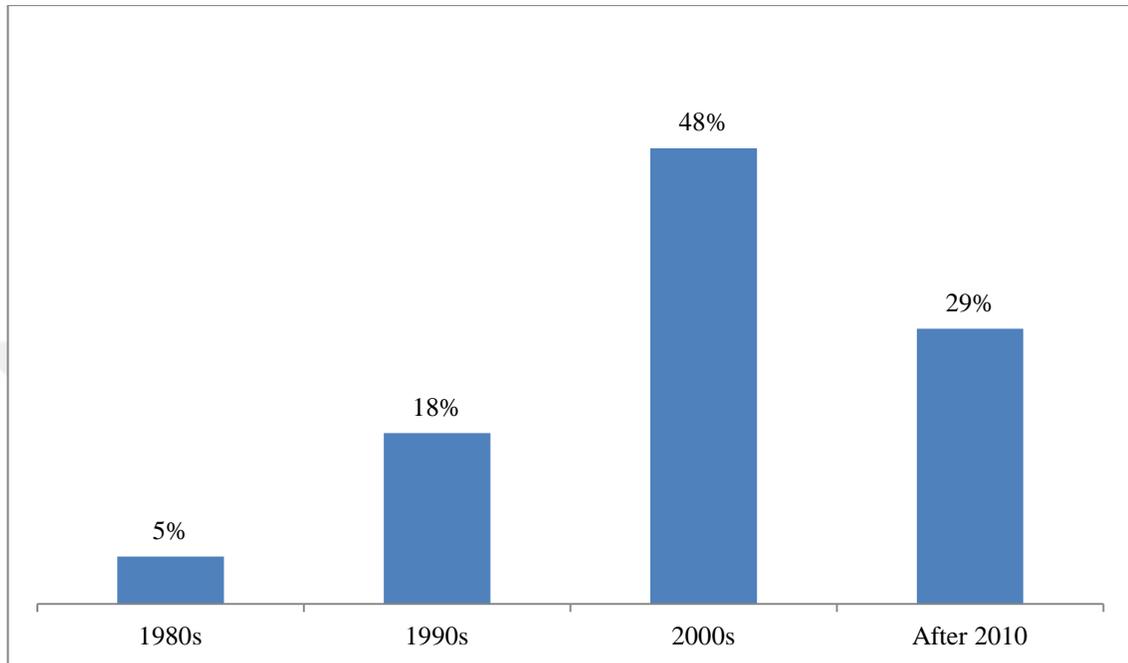
Central Anatolia is the third popular investment region for German Mittelstand companies. Ankara (5) and Eskişehir (2) are two locations for their manufacturing plants and this region hosts 11% of the manufacturer German Mittelstand companies in Turkey. Among them, another global player Knauf, drywall gypsum boards producer, has been manufacturing insulation materials in its Eskişehir plant since 2014. Another insulation materials producer Cellofoam also established its production plant in Eskişehir in 2004. Two Automotive industry members from Ankara are Farhym, inner auto parts producer, and Mekra-Lang, mirror producer. Other Mittelstand companies in Ankara are: Lichtgitter from Metal Goods industry, Renzturk, stationary equipments producer, and Solitem from Other Manufacturing branch. The only Mittelstand producer, which is not located in aforementioned three regions, is SCT from Mersin. SCT manufactures filter for automotive industry since 2004 in Turkey.

3.1.4. Plant Establishment Years in Turkey

Most of the manufacturer German Mittelstand companies in Turkey established their plants in the 2000s. Almost half of them started production in Turkey between 2000 and 2009 as shown below on Figure 20. In 2000 Pas South East Europe (Tekirdağ), Desomed Euro (Izmir), Spinner (Istanbul), and Gühring (Kocaeli) were founded in Turkey. In 2006, on the other hand, 7 German Mittelstand companies established manufacturing plants in Turkey. Among them are Zeller+Gmelin (Istanbul), Woco (Bursa), Schnee (Tekirdağ), and Püsche Automation (Izmir).

After 2010, 18 German Mittelstand companies, which accounts for the 29% of the 62 firms, established a manufacturing plant in Turkey. In 2012, 7 manufacturer German Mittelstand firm established plants in Turkey. 4 of them are located in Izmir, namely Janoschka, MST, AKG, and Krone. GTV and Luehr, filter producer, are located in Istanbul and F.EE is located in Kocaeli. Recently, in 2015, chemistry producer Baerlocher, suppliers from automotive industry BPW, and Optibelt, started manufacturing in their Turkey plants.

Figure 20: German Mittelstand Firms by Plant Establishment Years in Turkey



Konvekta, thermo system producer for commercial vehicles, was the first of the German Mittelstand companies in establishing a manufacturing plant in Turkey in 1984. Together with Konvekta, Maldaner (1987) from metal industry and Bericap (1988), plastic closures producer, are three Mittelstand companies that established their production facilities in Turkey in 1980s.

On the other hand, 11 of the manufacturing German Mittelstand companies, which correspond to around 18% of all, founded their plants in Turkey in 1990s. Among these, Peri, formworks manufacturer for construction industry, established its plant in 1990. In 1999, on the other hand, 5 German Mittelstand firms established manufacturing plants in Turkey. These firms are: Flammastek (Tekirdağ), Maurer Söhne, and Vkf-Renzel (Izmir), Neumo (Istanbul), and Mekra-Lang (Ankara).

3.2. OPERATIONS IN TURKEY

As it is stated above, manufacturer German Mittelstand companies operate in various industries and in different regions in Turkey. But how do they differ from their competitors in Turkish and neighbouring markets? Below their operations in terms of product groups and target markets will be explained. Moreover, this part also covers their competitive characteristics and relations with employees¹⁰.

3.2.1. Product Diversification

Mittelstand companies that engage in construction industry in Turkey produce mostly rock wool, an insulation material. These companies are Knauf and Cellofoam operating, in Eskişehir. Knauf produces wooden wool and XPS, the latter being also an insulation material, produced in its other plants abroad. Peri produces two product groups both in Turkey and its other production plants: formworks and scaffolding. Siegenia-Aubi, on the other hand, manufactures its entire product groups, window and door hardware, in Istanbul. Schattdecor from Paper and Paper Products industry produces one product group, namely printed decor papers in Turkey and in its other production plants.

Four Electrical Machinery manufacturers PAS, SEW Eurodrive, Netsch and Viessmann produce different product groups in Turkey. PAS produce cable systems for home appliances manufacturers in Tekirdağ. Another product group of PAS is plastic components, which are not produced in Tekirdağ. SEW Eurodrive, the leading drive technology producer, manufactures three of its five different product groups in Istanbul. Netsch, on the other hand, manufactures grinding and dispersion product group in Izmir. It has two other product groups which are not produced in Turkey: analyzing and testing; and pumps and systems. Global heating systems manufacturer Viessmann produces central heating boilers in Manisa.

¹⁰ The details on relevant companies have been retrieved from their official websites; see references for details.

As far as the five Mittelstand companies which fall under the category of “other manufacturing” as shown on the Figure 18, two of them produce filters in Turkey. BWF manufactures its filters media product group in Turkey and it produces needle felts, wool felts and profiles in its other plants. Luehr, on the other hand, has one product group, namely air pollution filters both produced in Turkey and in other plants. Janoschka produce printing cylinders in Izmir among its four product groups: printing cylinders, packaging, decor and security. Solitem and MST are one product group companies. Solitem produces sun collectors, while MST manufactures flexible hoses and connective parts for automotive, aircraft and aerospace industries.

Plastics and Rubber producers manufacture various products in Turkey, each of them focusing again on niche markets. Vkf-Renzel produces leaflet holders, product displays, shopping baskets, shelf edge strips and posterstands in Izmir. Woco’s powertrain products help to reduce fuel consumption. Additionally, its elastomeric technology products isolate vibrations and seal chassis systems. Bericap’s products are plastic closures and caps for beverage, food and non-food markets. All of its product groups can be produced in its Kocaeli plant. Jokey, on the other hand, offers buckets, tubs and trays for fillers of food and non-food items from its plant in Kocaeli. It has two other product groups which are not produced in Turkey: products for automotive and electrics industry and spa products for bathroom mirror cabinets.

Chemistry producer Mittelstand companies in Turkey offer various products to both Turkish and foreign markets. Baerlocher established its plant in Manisa in order to offer conventional and calcium-based PVC stabilizers to Turkey and neighbouring countries. Other Chemistry producers serve mainly to Turkish construction industry. Among them are Remmers, Köster and Zeller+Gmelin. Remmers offers concrete protective products while Zeller+Gmelin manufactures industrial lubricants. Köster is well-known for its waterproofing and anti mold systems in construction market. Peter Lacke’s product groups cover chemical materials related with automotive, household appliances, plastics, and glass industries. On the other hand, Veritas manufactures sealing and connector systems for automotive industry in Turkey. Another one,

Desomed manufactures mainly baby-care wipes in Turkey, among its other product groups such as hygiene and care products and disinfectants for hospitals.

Machinery and Equipments producer Mittelstand firms in Turkey manufacture a wide range of products. Coko Werk and Schnee produce plastic parts and drawers for home appliances respectively. Enercon manufacture rotor blades in Izmir only for its own wind tribunes. F.EE has three product groups: electrotechnics, informatics and automation robotic. In Turkey it produces industrial automation parts for its own products. Püschel and Hahn produce parts for their automation systems in Turkey as well. On the other hand, Konvekta serves mainly to automotive industry from its Istanbul plant with thermo systems for commercial vehicles. Lichtgitter manufactures 7 different product groups, such as gratings and metal planks in Ankara. Moreover, universal turning machines and twin turret lathes are produced by Spinner in Turkey.

Various products are produced by manufacturer German Mittelstand firms in automotive industry. For example AKG manufactures radiators and heat exchangers globally. In its Izmir plant only radiators are produced for Turkish automotive industry. BPW produces integrated chassis systems for commercial vehicles. Farhym, and Mekra Lang also manufacture parts for commercial vehicles in Ankara. Farhym produce air-channel, luggage rack and interior lighting, while rear mirrors for commercial vehicles are produced by Mekra Lang. Mann+Hummel and SCT manufacture various filters for automobiles. Optibelt has four production groups: automobile, machinery, agriculture and household appliances. In Turkey, drive belts are produced for automotive industry. Krone, on the other hand, produces trailers and semi trailers in Izmir. Forschner and ESA-Rohr manufacture cabling systems and formed tube parts respectively. Forschner produces cabling systems for medical sector out of Turkey while ESA-Rohr also produces tube parts for aerospace industry in Germany. Additionally, fibre glass materials are produced by C.F. Maier in Tekirdağ, while Sand Profile manufactures rubber profiles and edge protectors in Düzce.

Metal Goods manufacturing German Mittelstand firms offer a wide range of products to both Turkish and foreign markets from their plants in Turkey. Flammastek produce roll-bond evaporators for refrigerators in Turkey. Gühring has 8 product groups

consisting of drilling, threads, reaming, tool holders, etc. All of them are produced in its Kocaeli plant. Mefro Wheels manufacture various wheels for automotive producers in Turkey, while Neumo produces fluid handling applications. Renzturk's products consist of punching, binding and laminating systems for book and calendar production. Rifis, Maldaner, and Meiser manufacture metal processing machines for Turkish metal producers. Sonnenflex produce cutting discs, grinding wheels and fibre discs for Turkish marble industry in its Afyon plant. Automatic door systems are produced by Dorma in Istanbul, while GTV manufactures locks and keys in the same city.

3.2.2. Markets

Three Electrical Machinery producers PAS, Netzsch, and Viessmann, which produce in Turkey, export their products to Eastern European, Turkic Republics and Middle East. On the other hand, SEW Eurodrive serves its local customers in Turkey. It produces drive technologies and its customers are located in Kocaeli and Bursa. The only Paper and Paper Products industry manufacturing Mittelstand firm in Turkey, Schattdecor, offers its products from Kocaeli, the only production plant in the Middle East, to Turkish and mainly to Middle Eastern and Central Asian countries.

Three of four Plastics and Rubber producers manufacture both for Turkish and foreign markets in Turkey. Vkf-Renzel has many production plants in Western, Central and Eastern Europe. Turkey, China and USA plants offer sales promotion materials for both domestic and foreign markets. Bericap exports many countries from its Kocaeli plant. It also serves to Turkish beverages industry with plastic caps. Jokey, on the other hand, offers plastic materials for both Turkish and Middle Eastern food producers. Another Plastics and Rubber producer manufacturing Mittelstand firm is Woco and it serves mainly to Turkish automotive industry.

Of the five Mittelstand companies from Construction industry, three serve only to Turkish market. Peri sells its formworks and scaffoldings that produced in Istanbul to the construction projects in Turkey. Dolezych produces various lifting equipments for Turkish market. Additionally, Siegenia-Aubi manufactures window and door hardware

for Turkish construction industry. On the other hand, other Construction industry members Cellofoam and Knauf, insulation materials producers, serve both Turkish and foreign markets. Cellofoam has production facilities in its home market, i.e. Germany, as well as in Czech Republic and Turkey. Products manufactured in Turkey are being exported to Middle Eastern countries as well. Knauf also exports to 20 different foreign markets from its Eskişehir plant.

Other Manufacturing industry Mittelstand firms in Turkey serve both to Turkish and foreign markets. Outside Germany, filter media producer BWF has production plants in Russia, China India, Austria, USA, Italy and Turkey. Therefore its products manufactured in Izmir are exported mainly to the Middle Eastern, Central Asian and Gulf countries. Janoschka, on the other hand manufacture printing cylinders in its Izmir plant to serve both Turkish and Middle Eastern markets. Solitem, sun collectors producer, also exports its products from Ankara and offer them to Turkish market. MST, flexible hoses manufacturer, has production plants in Germany, Italy, England and Turkey. Thus it also exports to foreign markets from its Izmir plant and serves mainly to Turkish automotive industry. Luehr also established its production plant in Istanbul to offer its air pollution filters to industry plants in Turkey and in Middle Eastern and Central Asian countries.

Mittelstand firms in chemistry industry serve both to Turkish and neighbouring markets from their plants in Turkey. For example Baerlocher offers its products from Manisa to entire Turkish and especially Middle Eastern and African countries. Other Chemistry companies Peter Lacke and Zeller+Gmelin established their plants in Turkey to serve Turkish and Middle Eastern, African and Central Asian countries. Desomed, disinfectants producer, constantly increases its export markets from its plant in Izmir. Construction chemicals producers Köster, and Remmers serve mainly to Turkish construction industry. Additionally, Veritas manufactures plastic parts for mainly Turkish automotive industry in its Tekirdağ plant.

As it is stated above Mittelstand firms followed their large customers while making investments abroad. Among 10 Machinery and Equipments producers two of them, Coko Werk and Schnee, established their plants close to a large German home

appliances producer BSH in Tekirdağ. Therefore these two Mittelstand mainly serve to their large customer in Turkish market. Enercon produces rotor blades for its own wind tribunes in Izmir. Thus it serves both Turkish and foreign markets from Izmir. F.EE, Konvekta and Lichtgitter from the same economy branch offer their products that produced in Turkey to domestic and neighbouring markets. Püschel, and Hahn manufacture parts for their automation machineries for various production processes in Turkey. Therefore they mainly serve to Turkish market. Gerd Wolff and Spinner have their only production facility outside Germany in Turkey. Spinner is an export-oriented company as more than 60% of its sales come from foreign markets. As a result, its plant in Turkey serve both Turkish and foreign markets in Middle East and Central Asia.

Automotive industry member manufacturing Mittelstand companies serve to mainly to Turkish automotive industry from their plants in Turkey. However, export revenues are also an important source of income for them. Among 12 automotive industry supplier Mittelstand companies in Turkey, 3 established their plants in Turkey for serving mainly foreign markets. Mekra Lang exports its products from Ankara to Germany, Russia, Brazil, China, Sweden, Holland, Iran and Egypt. Krone exports to 15 countries on 3 continents from Izmir. Additionally, Sand Profile mainly exports its products from Turkey. Other players from automotive industry such as Optibelt, Forschner, Mann+Hummel, C.F. Maier, AKG, and BPW offer their products mainly to Turkish market and export to neighbouring countries from their plants in Turkey. On the other hand, Farhym, ESA-Rohr, and SCT serve only to Turkish automotive industry.

Manufacturer German Mittelstand firms from Metal Goods industry serve mainly to Turkish market and neighbouring countries. Among 14 companies, 9 serve to their Turkish customers from their plants in Turkey. Oschatz, Maldaner, Rifis and Michelfelder offer their various machines to Turkish metal industry. Additionally, Dorma produces automatic door systems for domestic market in Istanbul, while Sonnenflex manufactures abrasives for Turkish marble industry in Afyon. On the other hand, wheels for commercial and passenger cars for Turkish automotive industry are produced by Mefro Wheels. Renzturk's binding systems for book and calendar production are used in domestic market, while Neumo offers its fluid handling

applications to Turkish pharmaceutical and food processing sector. Moreover, Flammastek serves to European and Middle Eastern countries from its plant in Tekirdağ. Gühning and Maurer Söhne also export their products from Turkey. On the other hand, Meiser's and GTV's exports from Turkey are headed mainly to neighbouring countries.

3.2.3. Employees

Although it is difficult to give an exact number of jobs created by these 62 manufacturer German Mittelstand companies in Turkey, an average estimation based on the findings below might suggest that the number of employees of these companies exceed five thousand. Manufacturer German Mittelstand plants in Turkey mostly employ blue collar workers, since R&D departments stay in Germany. Departing from the organizational structure of these companies, it can be estimated that these type of employees account for around 90% of all the workforce of these companies in Turkey. Number of employees for each Mittelstand company widely differs from each other depending on their respective sectors. Below each sector will be assessed in terms of their workforce both at global and in Turkey.

Each of four Electrical Machinery producers employs more than 2.000 people. PAS has around 2.600 employees, while Netzsch employs around 3.000 people worldwide. SEW Eurodrive has a workforce of around 16.000 people and Viessmann employs 11.400 people. In Turkey PAS employs 100 people in its Tekirdağ plant. Viessmann, on the other hand, employs 150 people in its Manisa plant since 2013. Since these four companies' products are complicated electrical products, they offer their employees education programmes in Turkey.

German Mittelstand companies from Construction industry employ people in different levels. Knauf, a globally operating family company, employs 26.500 people worldwide. Peri also operates globally and employs 7.700 people around the world. Siegenia-Aubi has a workforce of 2.800 people. Dolezych and Cellofoam are relatively smaller companies and they employ 600 and 100 people respectively. In Turkey, on the other hand, Knauf employs 130 people while 10 people are employed in Cellofoam's

Eskişehir plant. 24 employees from Schattdecor's, printed decor paper producer, Thansau plant in Germany have been working for the company for more than 25 years, a detail which reflects attachment of employees to the firm, as mentioned above under the relevant title. Moreover, average length of service in its Thansau plant is 14 years. Schattdecor employs 2.172 people worldwide and its Kocaeli plant's managing director is from Germany.

The biggest employer among Metal Goods manufacturer German Mittelstand firms is Dorma with its 7.400 employees worldwide. As for its Turkey plant, Dorma employs more than 50 people in Istanbul. Another global player Gühring employs around 6.000 people globally, while Mefro Wheels has a global workforce of around 4.000 people. Meiser's 80 of 2.000 employees work in its plant in Kocaeli. Neumo employs 1.900 people, while Oscatz employs around 1.400 people worldwide. Among relatively smaller Mittelstand firms from the same economy branch, Maurer Söhne employs 700, Renzturk employs 300 and Michelfelder employs 140 people.

Mittelstand companies pay particular importance for physical and intellectual health of their employees. Many of them offer vocational training programs for their employees. Additionally, for example Renzturk offers apprenticeship programs for Turkish students. On the other hand, GTV launched shorter working times for its employees in order to avoid negative effects of 2008 global economic crisis.

Among five German Mittelstand firms operating in Turkey, which are categorised as "Other Manufacturing", two of them, BWF and Janoschka, employ around 1.400 people worldwide. Their managing directors for Izmir plants are Turkish. Solitem's Ankara plant is also managed by a Turkish manager. Luehr, air pollution filters producer for industry plants, employ 300 people worldwide. 140 of them work for production and remaining personnel are mainly engineers and service workers. BWF, filter media producer, was established in the nineteenth century and since then lasting employee relations is an important trait for this company.

Plastics and Rubber producer Mittelstand companies, which have production plants in Turkey, are global players as well. Therefore three of them employ over a thousand people. Woco employs 4.650 people worldwide for producing innovative

plastic materials for various industries. Bericap is also a globally operating family-owned company with its global workforce of 3.250 people. Jokey, on the other hand, employs around 1.700 people in its 14 production plants that dispersed in three continents. Another Plastics and Rubber producer Vkf-Renzel produce sales promotion materials with its 590 employees, who mainly work in European plants.

The biggest employer among Machinery and Equipments producers in Turkey is Enercon with its global workforce of around 18.000 people. Other manufacturing Mittelstand companies in Turkey from the same economy branch employ around a thousand people at most. For example Coko Werk employs around a thousand and F.EE employs around 900 people in their plants. Hahn employs 380 people in its plants in Europe, North America and East Asia. A global player Konvekta employs 550 people in production of thermo systems for commercial vehicles. Spinner, on the other hand, offers its products to more than 60 countries with a workforce of approximately 550 people.

Among 7 Chemistry producers, Mittelstand companies in Turkey 3 employ more than a thousand people. Global players Baerlocher and Veritas employ 1.200 and 4.300 people respectively. Remmers, employs more than a thousand people, while Zeller+Gmelin has a total workforce of 900 people. Desomed, on the other hand, employ around 850 people. Relatively smaller Mittelstand companies from the same industry are Peter Lacke and Köster. Peter Lacke employs around 400 people while Köster has a 200-employee workforce.

The biggest employer among manufacturing German Mittelstand Automotive industry members is Mann+Hummel. It employs around 16.000 people worldwide. Moreover, 5 of the 12 automotive suppliers employ around 2.000 people worldwide. AKG employs 2.400 people worldwide while Forschner has a workforce of 2.500 people. Mekra Lang (2.400), Krone (2.600) and Optibelt (1.950) employ around 2.000 people as well. Relatively smaller German Mittelstand firm Sand Profile has a workforce of almost 250 people. In line with the aforementioned close employer-employee relations in German Mittelstand firms, these companies offer training opportunities for their workers in Turkey. For example BPW offers seminars and training sessions for its

employees in its Kocaeli plant while Optibelt claims that the owners and employees remain committed with heart, hand and understanding every single day in company.

3.2.4. Competition

Most of the Mittelstand companies operating in Turkey are also chief global players, ranking among the first few in the world. In this respect, many of them also fall under the category of hidden champions. Under this title, these companies will be reviewed with respect to their competitiveness, and again to their sectors.

Electrical Machinery manufacturers produce R&D-intensive products in Turkey. PAS is the leading cable systems producer for home appliances. SEW Eurodrive is the world leader in drive technologies. Netzsch manufactures complicated electrical machineries for different purposes since 1873. Viessmann, on the other hand, is a truly globally operating family-owned large company, which is one of the leading firms in heating systems technologies. Therefore, these four manufacturer German Mittelstand companies increase the level of competition in Turkey for local producers. As a result, Turkish producers try to become more innovative in their respective fields.

Mittelstand companies from Construction industry in Turkey are highly competitive firms in their respective fields. For example Peri, formworks and scaffoldings manufacturer, is the biggest in Turkish market both in terms of production capacity and employee number. Siegenia-Aubi manufactures innovative hardware for window and door producers since 1914. Knauf, on the other hand, is one of the biggest companies in insulation industry, with its 26.500 employees worldwide, which also reflects its competitiveness. Cellofoam also has an R&D team in Germany which conducts research on insulation, lamination and rock wool materials. Schattdecor from Paper and Paper Products industry claims that it is the best in the decor paper market. They do not only produce decoration papers but also build lasting relations with customers as stated by their CEO.

Mittelstand companies in Other Manufacturing industry operating in Turkey are competitive firms in their respective sectors. BWF, for example, is the worldwide

technology and market leader in filter media production and sales. Janoschka, on the other hand, is the leading prepress provider for packaging, decoration, and security market. MST is an innovative and dynamic company in flexible hoses production, which was established in 1992. As a family-owned company operating globally, Luehr has 75 years of experience in manufacturing air pollution filters for industry plants.

Plastics and Rubber producers show high competitive characteristics in Turkey. Vkf-Renzel has more than 30 years of experience and competence in sales promotion materials manufacturing. It sustains innovative characteristic as a result of its close relations with customers. Woco, for example, employs a zero-defect policy for more than 55 years, in order to maintain high quality. On the other hand, Bericap shows highly innovative characteristic in its industry. Double-Seal system for beverage caps is among its recent innovative solutions. Plastic buckets producer Jokey is one of the global market leaders in packaging industry with its sales subsidiaries on all continents.

As far as Chemistry is concerned, German Mittelstand firms in Turkey are competitive players in both Turkish and neighbouring countries. For example Baerlocher's Manisa plant sets new standards for additive production with the help of its latest production technologies. Its team of experts create tailored stabilizers with respect to customers' needs. Desomed claims that its products are R&D-intensive and user-oriented innovative products. Desomed also enjoys flexibility in product development thanks to its medium size. Köster, on the other hand, is specialized in waterproofing products for decades. Its products in this field preserve buildings worldwide. A global player Veritas is leader in materials and connector technologies for automotive industry. Veritas emphasizes that it builds all new developments upon its traditional values. Peter Lacke's competition power stems from its R&D oriented business strategy. Almost half of its staff is involved in R&D processes. Additionally, they build close relationships with customers, in order to maintain innovation process. Another Chemistry producer Zeller+Gmelin distinguish itself from its competitors by experience in R&D and its closeness to customers. Among chemistry producer Mittelstand companies Remmers offers unprecedented products, particularly for heritage protection and flooring.

In Machinery and Equipments manufacturing economy branch, many of the German Mittelstand firms are competitive players in their respective fields. For example Coko Werk is one of the leading producers in the plastics for home appliances industry. On the other hand, Enercon's power of competition stems from high degree of vertical integration. Enercon produces its own annular generators, inverters, towers and rotor blades for wind tribunes. F.EE enjoys worldwide recognition as a state-of-the-art company in robotic automation industry, while Hahn emphasizes on its R&D intensive characteristic. In the same sector, Püschel promote its closeness to customers while answering their specific requirements. Konvekta has a worldwide service and production network with trained employees. Moreover, Spinner manufactures highly innovative and R&D intensive machineries for metal industry companies.

Competitiveness of German Mittelstand Automotive industry firms stem from various characteristics of them. For example AKG can offer customer-oriented solutions in manufacturing high-quality radiators. Forschner also stays close to its customers, while producing cabling systems for more than 60 years. BPW's reputation rests on a combination of expertise and experience in production of chassis systems for commercial vehicles. C.F. Maier emphasizes its dynamism and flexible middle-sized structure in producing highly sophisticated fibre glass materials internationally. On the other hand, Sand Profile continuously analyzes its processes in order to maintain high quality production of plastic and rubber seals. Krone and Optibelt are highly innovative firms in their respective fields, while SCT's products are highly available in 92 countries on 5 continents and it increases SCT's competitiveness.

Metal Goods producer Mittelstand firms in Turkey have strong tradition. For example Oschatz is an innovative company in plant construction for 165 years. Gühring is also a company with long history as one of the leading manufacturers of precision tools in the world. Maurer Söhne has a long tradition in steel construction. It is one of the world market leaders in this sector. Mefro Wheels produce a substantial share of the Turkish market as a supplier of Turkish automotive industry. Meiser respects to its traditional values in spite of its fast growth worldwide. On the other hand, Neumo is technology leader in steel fittings, assemblies and equipments. Renzturk is also

recognized as the leading manufacturer in the punching and binding industry, while Sonnenflex is one of the leading companies in the abrasive industry. Dorma has a hundred years of tradition in sector and it is leader in terms of yearly turnover. GTV, on the other hand, has more than 230 years of experience in production of locks. Maldaner is the largest metal impregnation company in Europe, while Michelfelder is technology leader in laser formed pipes sector.

3.3. STRUCTURAL CONDITION: AN INTERMEDIARY ORGANIZATION DTR-IHK

As mentioned above, an important constituent of German style capitalism is intermediary organizations. They work as hardworking parts of the economic environment, which connect private companies and public authorities. A successful example for these intermediary organizations is IHK offices around the world. DTR-IHK works as an intermediary organization between German companies, which operate in Turkey, and German public authorities in Turkey and Germany. Therefore in order to shed light on the institutional framework of investing in Turkey for German Mittelstand companies, activities of DTR-IHK are valuable source of information. Since 2010, DTR-IHK has been publishing a magazine once in two months, which is named *ODA*. In order to research the role of this intermediary organization on Turkish-German business environment, all of the issues of *ODA*, which were published on DTR-IHK's web-site as of 10.06.2016, were scanned. Since January-February 2010 issue until March-April 2016 issue, 38 *ODA* magazines were published both in German and Turkish¹¹. Below the findings of this research will be submitted.

First, DTR-IHK hosts many business trip delegations from Germany in Turkey. Members of these delegations are mostly the German companies, which do not have an investment in Turkey. Additionally, DTR-IHK organizes business trips for German companies and invites them to Turkey in cooperation with other IHK offices from Germany. DTR-IHK informs them about business environment and legal conditions in

¹¹ You can view all of the issues on: <http://www.dtr-ihk.de/tr/yayinlar/dergimiz-oda/>, (10.06.2016).

Turkey, and arranges bilateral meetings between German and Turkish companies. Second, DTR-IHK informs German companies about business environment in Turkey and invites them to Turkey in foreign trade days of IHKs from different cities or regions.

Within the above-mentioned time period covered by publications of ODA, almost 60 events took place, in which DTR-IHK hosted business delegations from Germany. These events are important in terms of showing the circulation of business circles and sectoral contacts. 7 of these events were held in 2010. For example, IHK Regensburg organized a business trip to Turkey and DTR-IHK led their trip to two member companies. DTR-IHK itself organized two business trips for German companies which operate in the fields of renewable energy and environment technologies. In another event, DTR-IHK organized bilateral meetings between German and Turkish companies which participated in a fair in Istanbul. Additionally, IHK-Hannover organized a business trip to Istanbul for companies from the fields of logistics, textile and chemistry in cooperation with DTR-IHK.

In 2011, DTR-IHK hosted German delegations in 10 different organizations. Among them, 6 different business delegations were hosted by DTR-IHK in its own business trip invitations. In these business trips, German firms from solar energy, energy efficiency in buildings, and medical technique fields were among participants. In 2011 DTR-IHK's Izmir office was founded. It also invited German firms which operate in bio energy industry to Izmir. Moreover, investment agency of Bavarian land of Germany organized a business trip to Turkey for firms from printing industry, and a delegation of machinery manufacturers from Nord Rhine-Westphalia visited Turkey.

In 14 different events DTR-IHK hosted German delegations in 2012. 6 of them were organized by DTR-IHK. German firms from the fields of water management, machinery manufacturing, energy efficiency in buildings, geothermal, and solar energy participated in these organizations. Except for these organizations, official business trips with widespread participation were organised in 2012. In this context, Minister of Economy from German land Hessen visited Bursa with 20 different company representatives; Stuttgart Municipality organized a business trip for SMEs to Istanbul, Kocaeli and Izmir on October 2012. Likewise machinery manufacturers from Saxony

visited Istanbul with the help of DTR-IHK; energy companies from Baden-Württemberg visited Istanbul in the same year as well.

In 2013, DTR-IHK hosted German delegations in 14 different organizations. 9 of them were organized directly by DTR-IHK. Among them, business trips for companies from the fields of photovoltaic, metal industry, sustainable construction and energy efficiency were held to Turkey. Moreover, in the same year, 40 businessmen from Esslingen visited DTR-IHK in Istanbul. IHK-Köln and DTR-IHK arranged bilateral meetings between German and Turkish companies which participated in Automation Fair in Istanbul on March 2013. Additionally, Minister of Economy of Baden-Württemberg from Germany visited Istanbul and Izmir offices of DTR-IHK together with private sector representatives.

In 2014, 2015 and in first four months of 2016, DTR-IHK hosted in 12 different business organizations in Turkey. For example, on April 2014, International Energy and Environment Conference was held in Istanbul and DTR-IHK organized bilateral meetings between German and Turkish companies in cooperation with investment agency of Nord-Rhine Westphalia. Moreover, DTR-IHK organized a business trip to Istanbul for German companies operating in field energy efficiency in industry. In 2015, geothermal business trip was held in Izmir and German-Turkish Solar Energy Forum was held in Istanbul by DTR-IHK. A business trip for the firms which operate in energy efficiency for buildings was organized by DTR-IHK, in cooperation with German Ministry of Economy in 2016. Additionally, a business trip to Istanbul for bio-energy firms is also going to be held by DTR-IHK in November 2016.

Another function of DTR-IHK is to promote Turkey as an investment destination for German firms. For this reason, it participates in different foreign trade days or country promotion days which are held by IHK offices across Germany. Between 2010 and 2016, DTR-IHK representatives participated in 44 different organizations in order to inform German firms about Turkey. For example in 2010, IHK-Dresden organized a meeting about business cultures of Turkey, China, Russia, India and Saudi Arabia. A representative from DTR-IHK participated in this organization and gave information about business environment and culture in Turkey. In 2011, IHK-Hamburg and DTR-

IHK together organized Turkish Economy Promotion Day in Hamburg. IHKs from Duisburg, Bonn and Detmold organized meetings in their cities, in order to inform their members about business environment in South Europe in the same year. IHK representatives from Turkey, Spain, Portugal and Italy participated and promoted these countries as investment areas.

In 2012, a meeting was organized by IHK-Nurnberg in order to inform companies about Turkey with the help of the representative from DTR-IHK. IHK-Bremen held a breakfast for its members and a representative from DTR-IHK promoted Turkey there. Moreover, export days in Bavaria and Nord-Rhine Westphalia were held and member companies were informed about different countries. DTR-IHK participated in these organizations as well. In 2013, IHKs in Dresden, Potsdam, Lüneberg, Rostock, Kiel and Halle organized Turkey promotion days. Additionally, a representative from DTR-IHK participated in export days, which were held by IHKs in Frankfurt, Bremen, Stuttgart and Hamburg. IHK-Schwaben held Mediterranean Economy Conference in 2014 and different IHK offices from Mediterranean countries, including Turkey, were represented. Additionally, in the same year and in 2015, IHKs in Heilbronn, Ulm, Karlsruhe, Braunschweig and Leipzig organized Turkey promotion days and a representative from DTR-IHK took part in these days in order to inform German companies about business environment and legal conditions in Turkey.

3.4. GENERAL ASSESSMENT

German Mittelstand companies from various economy branches established production facilities in Turkey as stated above. These companies were also founded in Germany in various periods. Below on Table 4 the full list of German Mittelstand companies, which have production facilities in Turkey, are listed in order to show both their founding years in Germany and plant establishment years in Turkey. Their full names that are used for their operations in Turkey can be seen in the Appendix.

Table 4: List of German Mittelstand Firms by Founding and Plant Establishment Years

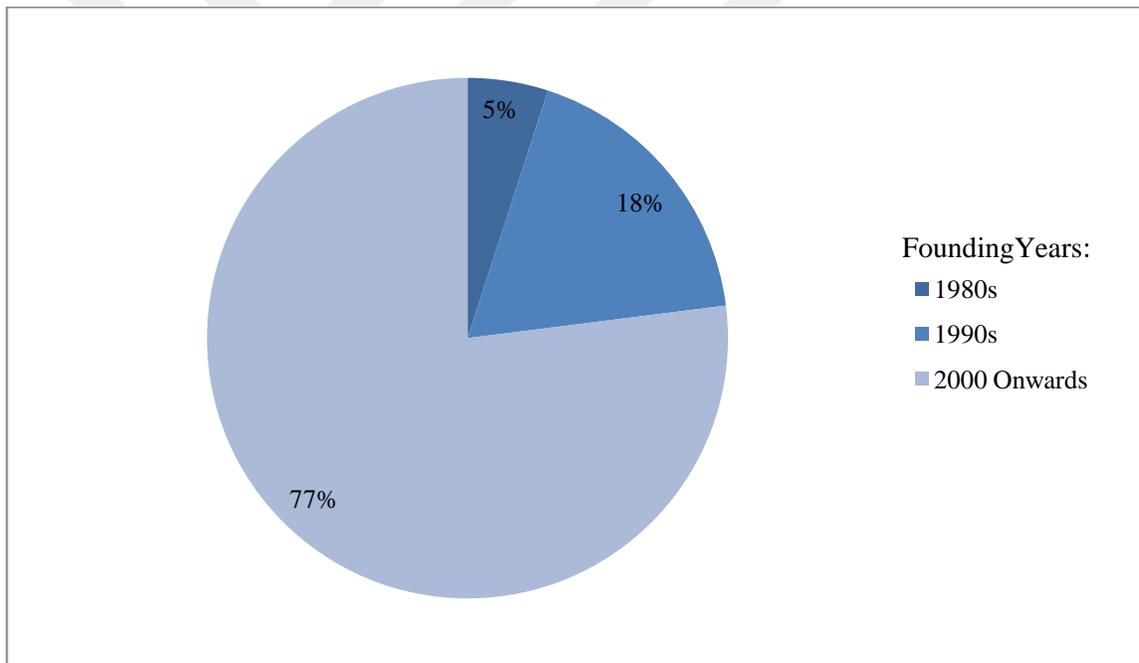
	Name Of The Company	Foundation Year in Germany	Plant Establishment Year in Turkey
1.	GTV	1780	2012
2.	BAERLOCHER	1823	2015
3.	OSCHATZ	1849	1996
4.	VERITAS	1849	2008
5.	ZELLER+GMELIN	1866	2006
6.	OPTIBELT	1872	2015
7.	NETZCH	1873	2013
8.	MAURER SÖHNE	1876	1999
9.	BWF	1892	2005
10.	GÜHRING	1898	2000
11.	BPW	1898	2015
12.	PETER LACKE	1906	2009
13.	KRONE	1906	2012
14.	RENZTURK	1908	2006
15.	DORMA	1908	2007
16.	SIEGENIA-AUBI	1914	2010
17.	VISSMANN	1917	2013
18.	AKG	1919	2012
19.	BERICAP	1926	1988
20.	COKO WERK	1926	2006
21.	LICHTGITTER	1929	2002
22.	SEW EURODRIVE	1931	1997
23.	MEKRA-LANG	1932	1999
24.	KNAUF	1932	2014
25.	RIFIS	1934	2007
26.	DOLEZYCH	1935	2013
27.	LUEHR LMA	1938	2012
28.	MANN VE HUMMEL	1941	2005
29.	SCHNEE	1946	2006
30.	NEUMO	1947	1999
31.	FORSCHNER	1948	2001
32.	SPINNER	1949	2000
33.	REMMERS	1949	2006
34.	GERD WOLFF	1954	2007
35.	WOCO	1956	2006

36.	MEISER	1956	2007
37.	KONVEKTA	1957	1984
38.	SONNENFLEX	1959	1996
39.	C.F. MAIER	1960	1995
40.	MALDANER	1962	1987
41.	FARHYM	1962	2003
42.	CELLOFOAM	1963	2004
43.	JOKEY	1968	2013
44.	PERİ	1969	1990
45.	PÜSCHEL	1969	2006
46.	MİCHELFELDER	1970	2008
47.	JANOSCHKA	1976	2012
48.	DESOMED EURO	1978	2000
49.	KÖSTER	1982	1994
50.	FLAMMASSTEK	1982	1999
51.	F.EE	1982	2012
52.	ENERCON	1984	2002
53.	VKF RENZEL	1985	1999
54.	SCHATTDECOR	1985	2010
55.	SAND PROFILE	1986	2007
56.	MEFRO WHEELS	1991	2005
57.	PAS	1992	2000
58.	HAHN	1992	2009
59.	MST	1992	2012
60.	SCT	1993	2004
61.	SOLİTEM	1999	2001
62.	ESA ROHR	2007	2013

As mentioned above, globalization process of German Mittelstand companies started mainly along with the liberalization of Central and Eastern European countries. Among 62 manufacturer German Mittelstand companies in Turkey, 41 of them have at least one subsidiary in Central and Eastern European countries. In other words, two thirds of the German Mittelstand companies that have productions plant in Turkey, own at least one subsidiary in Central and Eastern European countries as well. They mainly established subsidiaries in those countries immediately after the liberalization of Central and Eastern European countries in 1990s. Therefore Turkey was a more remote area for investments of these medium-sized enterprises. Firstly they gained experience in Central

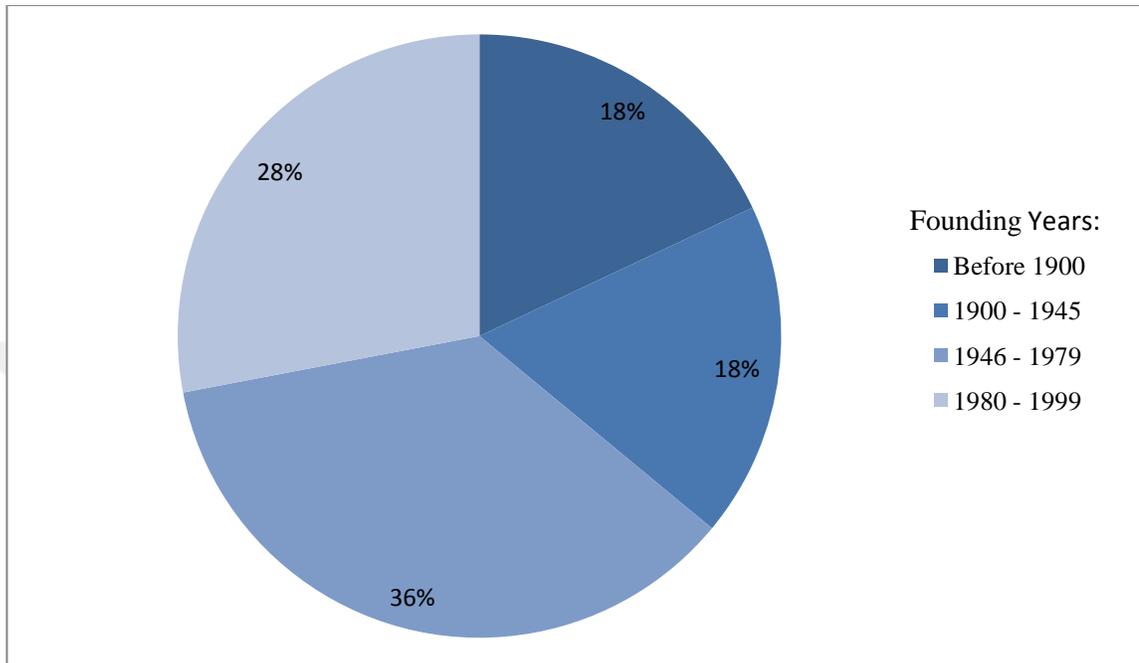
and Eastern Europe. Then they began to invest in farther countries such as Turkey. As a result, while 18% of the manufacturer German Mittelstand companies established their plants in Turkey in 1990s, 77% of them established their plants in Turkey from 2000 onwards. Accordingly, around 95% of these companies have started to operate in Turkey as of 1990s. As seen on the Figure 21 below, the remaining 5% accounts for just three companies, which started to operate in Turkey in 1980s, i.e. during the initial phases of liberalization attempts in the period.

Figure 21: German Mittelstand Firms by Foundation Years in Turkey



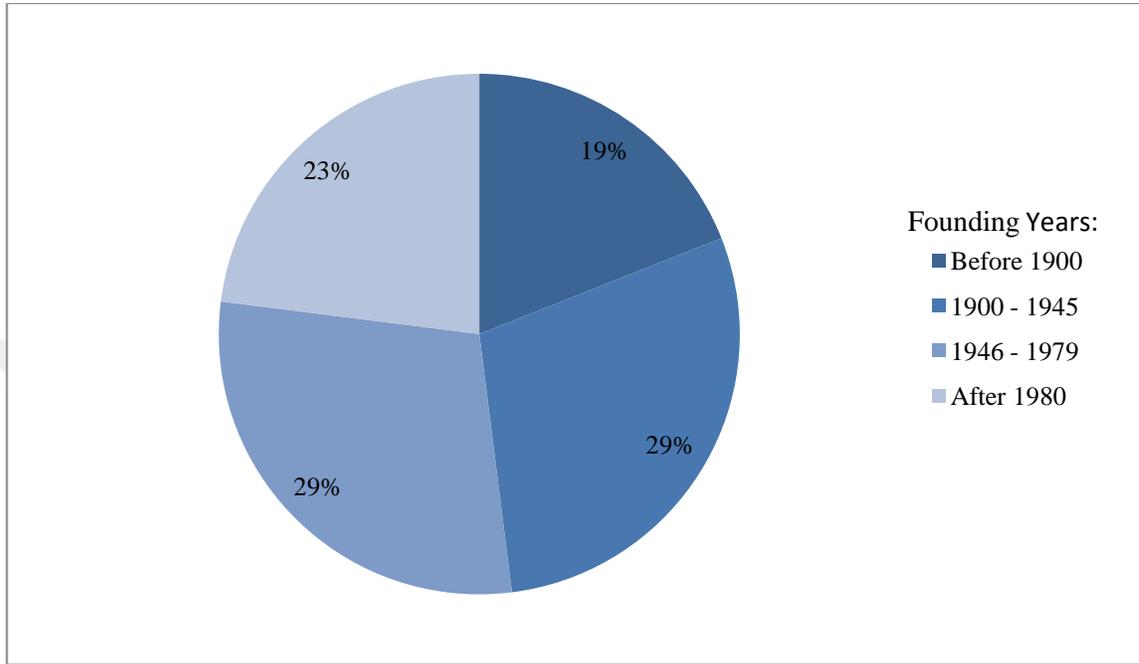
Below on Figure 22 and Figure 23, these firms are given by their founding years in Germany. Moreover, among these 62 firms, 33 of them have a subsidiary in China. In other words, more than half of the German Mittelstand firms, which have a manufacturing plant in Turkey, own a subsidiary in China as well. It can be deduced that more than half of the manufacturer German Mittelstand firms in Turkey are global players in their respective fields. They aim to decrease their production costs and increase their global market share by their presence in China.

Figure 22: Mittelstand Firms Which Established Plants in Turkey in 1990s



As can be seen on Figure 22, German Mittelstand companies which established a production facility in Turkey during 1990s were founded in various time periods in Germany. More than one third of them were founded between 1946 and 1979, while more than a quarter of them were founded between 1980 and 1999 in Germany. On the other hand, 18% of them were founded between 1900 and 1945. Finally, 18% of the German Mittelstand companies which established a production plant in Turkey were founded before 1900 in Germany.

Figure 23: Mittelstand Firms Which Established Plants in Turkey in 2000 Onwards



German Mittelstand companies which established a manufacturing plant in Turkey in 2000 onwards were founded in various time periods in Germany as can be seen on Figure 23. 29% of them were founded between 1900 and 1945. Likewise, 29% of the German Mittelstand companies which established a plant in Turkey in 2000 onwards were founded between 1946 and 1979. Almost a quarter of them were founded after 1980, while almost a fifth of them were founded before 1900 in Germany. Thus, the Figures 22 and 23 suggest that while newly-established firms are eager to internationalize, the older ones also seem to sustain their dynamism and keep up with the challenges of globalization.

As for geographical dispersion, German Mittelstand companies invested in industrial regions of Turkey in line with their sectoral requirements. Çerkezköy and Çorlu towns in Tekirdağ province, Tuzla in İstanbul, Gebze in Kocaeli and industrial areas in Bursa are popular locations for German Mittelstand firms in the Marmara region. Aegean Free Zone, industrial areas in Çiğli, Torbalı and Kemalpaşa in the province of İzmir are popular investment areas for them in Aegean region. As it is stated

above in the second chapter, German Mittelstand companies followed their large global customers in their process of globalization. Therefore, automotive industry suppliers are often located close to global automotive manufacturers in Kocaeli and Bursa. Accordingly, three of the home appliances industry suppliers established their plants in Çerkezköy, in order to serve to BSH Home Appliances.

As can be deduced from the competitive characteristics of German Mittelstand firms in Turkey, these companies are concentrated on their core competencies. All of them are well-known to other players in their respective sectors worldwide. They have a long tradition in their industries. Most of them respect their traditional values in spite of rapid globalization process. On the other hand, many of them are counted as technology leader in their respective fields. Closeness to customer plays a vital role in innovative characteristics of these companies. As a result, many of them are global market leader in their sectors.

Manufacturer German Mittelstand firms serve mainly to Turkish and neighbouring markets from their plants in Turkey. Some of them offer their products only to their large customers, particularly in home appliances and automotive industry. However, since Turkey is geographically located close to the Middle Eastern, Northern African, Central Asian, and Gulf countries, many of the German Mittelstand companies which have manufacturing plant in Turkey export their products to these countries.

Blue-collar workers are mostly employed in manufacturer German Mittelstand's plants in Turkey since R&D departments stay in Germany. It is often not possible to learn how many employees work for their plants in Turkey since these companies are family-owned and keep away from journalists and researchers. However it can be assumed that roughly 90% of the employees of manufacturer German Mittelstand firms in Turkey are blue-collar workers. Same ratio can change depending on the industry and target market. For example Turkish-market-oriented Mittelstand firms dealing in construction materials employ relatively more white-collar workers, since they have sales teams around Turkey.

These companies generally offer training opportunities for their employees in order to improve their skills. They want to build lasting relations with their employees

like in Germany, in order to set up close ties. Moreover, director managers of their plants in Turkey are generally Turkish nationals. Interestingly, Turkish origin managers who were educated in Germany are employed usually by German Mittelstand companies in Turkey. They are familiar to both Turkish and German culture and they mainly educated in engineering and business or economics.

Structurally DTR-IHK plays a vital role in German Mittelstand companies' presence in Turkey. Prior to their investments in a foreign country, these medium-sized enterprises are getting informed in many fields by different IHKs. DTR-IHK's members attend to different organizations in Germany in order to inform German companies about Turkish investment environment. Legal conditions and sector-oriented situations are promoted in these organizations. On the other hand, experienced firms in Turkish market share their experiences to investment planner companies. As it is stated above, intermediary organizations play a critical role in successful globalization processes of many Mittelstand companies. DTR-IHK is a dedicated intermediary organization for making investment in Turkey easier for especially Mittelstand companies.

CONCLUSION

German business model has its origins in a business environment, in which strong family-owned enterprises, public authorities, and a wide range of intermediary organizations cooperate closely. German economic environment has numerous peculiarities which distinguish it both from the Anglo-Saxon capitalism and from a variety of command economies. The term German style capitalism is used in the literature in order to refer to this economic environment. Hampden–Turner and Trompenaars (1995) argue that German style capitalism is ideologically close to the old communist world since there are a large number of public authorities which participate in taking economic decisions. Germans have founded a large number of intermediary organizations in order to prevent disputes between private sector and the state. As stated by Streeck (1997), German style capitalism was invented in West Germany after World War II and this economic system was standing between two approaches qualified as *laissez-faire* and *étatiste*. For example codetermination is an important term for German economy which enables German workers to participate in the management of enterprises.

Germany emerged as an independent state at the end of the nineteenth century. Therefore it was an example of late industrialism. Public authorities and private sector were in close relationships in order to make Germany an industrial power. As it can be deduced from the aforementioned foundation and progress stories of Siemens, Krupp and Zeiss, private entrepreneurs and public authorities had always been in close contact. Additionally, it is also worth mentioning that German technical infrastructure and know-how survived through extremely turbulent periods such as World War II.

One of the most important characteristic of German economy is its strong tradition of family companies. A long-lasting relation exists between these companies and their employees by the help of the codetermination and low wage differences between companies. Consequently, these companies could concentrate on their work organization and products. Since these companies are family-owned, they concentrate on long-term growth rather than short-term profit maximization. Sachse (1991) argues that

German family companies have proved their resistance especially in the form of Mittelstand.

Lately Mittelstand firms have been under the spotlights of the researchers from English speaking countries. They promote Mittelstand companies as the backbone of the German economy. These companies' contribution to German economy especially in terms of generating turnover, creating jobs and exporting are being highlighted. It can be inferred that Mittelstand companies from rural areas propose cure for one of the biggest problem of the capitalist system, accumulation of economic activity around a few megacities and in a few large international enterprises. South Korea and China are eager to constitute the same well-functioning job creation system between German Mittelstand companies and German schools. Therefore, Turkey should also analyze the German Mittelstand companies and their relations with state schools in order to slow down the accumulation of economic activity especially in Istanbul and in order to spread these activities to underdeveloped parts of the country.

As stated above, almost two thirds of German employees subject to social security contribution, work for German SMEs. They generated almost 40% of the total turnover of all German companies in 2013. Additionally, more than 80% of vocational training positions for young Germans were created by Mittelstand companies. As a result of its importance for German economy, a special Mittelstand institution, IfM Bonn, was founded. Researchers from this institution constantly study about qualitative and quantitative aspects of German Mittelstand companies. It can be deduced that, in order to have strong and vivid SMEs in Turkey, researchers should be encouraged about studying SMEs rather than large enterprises. By this way, problems of SMEs can be focused on and better solutions can be found by vital discussions between researchers and decision makers.

Dual-training system is one of the most important institutions, which favour German Mittelstand companies. These companies can employ skilled workers by the help of this system that contains both theoretical training in schools and vocational training in enterprises. Moreover, close relationships between Mittelstand companies and regional public saving banks enable these companies to remain away from the

highly volatile capital markets. Research institutions such as Fraunhofer Gesellschaft play intermediary organization role in creating funds for R&D activities of German Mittelstand companies. Mittelstand companies are supported by IHKs especially in exporting and FDI activities as stated above. Again, this supporting environment should also be studied in detail in Turkey.

Transformation process of German Mittelstand companies has gained momentum especially after the collapse of the communist regimes in Central and Eastern Europe at the end of the twentieth century. However, during Cold War years German companies experienced globalization with the help of the United States' support programmes. Technology transfer from the United States contributed to the recovery process of West German economy. After the collapse of the communist system and the reunification of Germany in 1990, transformation process of German Mittelstand companies has entered into a new phase. Schlögel (2008) argues that as a result of the transformation process of Central and Eastern European countries from communism to free market economies, Germany could establish the same proximity with its Eastern neighbours as it already had with its Western neighbours. Brenken (2006) and Kannegiesser (2006) state that transformation process in Central and Eastern Europe was a structural break in the globalization process of German Mittelstand companies. Geographical and cultural proximity of these countries to Germany eased the FDI activities of Mittelstand firms in this region. Moreover, these former communist countries had similar vocational training system with Germany and German was widely spoken there. Relatively low transportation costs and easier quality control of production than East Asian countries made Central and Eastern European countries a suitable investment area for Mittelstand enterprises.

After the aforementioned transformation process, a large number of German Mittelstand companies emerged as globally operating companies. Many successful SMEs turned into large enterprises due to their strong performance in international markets. Share of the exporter German companies increases in line with the company size. As stated by Brutscher et al. (2012), 43% of the companies with a yearly turnover of less than €5 million are exporters, while the same ratio is 77% for the companies

which have a yearly turnover more than €250 million. Mittelstand companies which have profound export experience are more active in FDI activities. Western Europe and Central and Eastern European countries are top export and FDI destinations for German Mittelstand companies. However, East Asian countries, particularly China, are increasing their share in export and FDI activities of Mittelstand enterprises. It can be deduced that, the contribution of Mittelstand companies to German export and FDI activities is not limited with SMEs, since there are a large number of Mittelstand companies which are not counted as an SME due to their employee number or yearly turnover level. Therefore it is hard to measure the contribution of Mittelstand companies to German exports and FDI activities statistically.

German Mittelstand companies' exports account for almost one fifth of total German exports. Among these internationally active companies, Simon (2009) introduced "hidden champions" to the world, coining the term in the 1980s. After his studies about these relatively small world market leaders, business researchers from all over the world started to study about SMEs, rather than large multinational enterprises. Principal distinctive characteristic of these companies is their concentration on core competencies. Moreover, they have long-lasting relations with their employees, suppliers and customers. Their close relationships with customers enable them to constantly improve their products. Hidden champions often emerge from the aforementioned German business environment. As it is stated by Holz (2013), there are approx. 1.400 hidden champion world market leader German companies, which also fall under the category of Mittelstand. It can be deduced from the success stories of German Mittelstand companies that, public authorities, intermediary organizations and private sector representatives should cooperate in establishing a proper business environment, in which innovative and globally-operating SMEs can flourish.

Needless to say, the aforementioned performance and transformation of German business model have implications for Turkish economy. Germany and Turkey have developed close economic and political relations since the unification of Germany in the late nineteenth century. Since then, Turkey has been an attractive investment destination for German companies. Economic relations between Germany and Turkey increased

especially after the beginning of the Turkish workforce migration to Germany in 1960s and in 1980s when FDI regime in Turkey was liberalized. More than \$7 billion was invested in Turkey by Germany as stated by Kuştepe et al. (2013). Today these two countries are still close foreign trade partners. Particularly Germany is one of the most important foreign trade partners of Turkey. As a result, Germany was the top export destination for Turkish products in 2015, and Turkey imported from Germany after China at most in the same year. By 2016, a total of 6.434 partly or fully-owned German firms have been operating in Turkey.

62 German Mittelstand companies, which have production plants in Turkey, operate in various economy branches. Producers of metal goods, automotive parts, machinery and equipments are the top three economy branches, in which these companies operate. Istanbul, Izmir and Kocaeli are the top three locations for manufacturing plants of German Mittelstand companies in Turkey. As stated above, German Mittelstand companies attach importance to the proximity to sales markets, availability of skilled workers, personal and material costs, and transportation infrastructure while deciding on the new investment location. It can be deduced that, Turkey is chosen as an investment location for production plant since it is geographically close to many Arab states of the Persian Gulf, Middle Eastern, North African and Central Asian countries. Moreover, particularly Tuzla (Istanbul) and Gebze (Kocaeli) industrial areas host a large number of skilled and relatively low-cost workers. Therefore, together with Izmir, these are popular investment locations in Turkey for German Mittelstand companies. Developed highway infrastructure in Marmara region and around Izmir is another criterion, which affects the investment decisions of these enterprises.

Manufacturer German Mittelstand firms show similar characteristics in their operations in Turkey. First, they produce R&D-intensive and innovative products. They concentrate on their core competencies and with the help of close relations with employees, they sustain their innovativeness. Second, they are export-oriented firms. Many of them have built their plants in Turkey in order to serve both to Turkish and neighbouring countries of Middle East, North Africa, Central Asia, and Gulf region.

Third, they are eager to build lasting relations with their employees. Additionally, they offer vocational training opportunities to their employees in order to increase their skills. As a result of these traits, many of these companies are global market leader or global technology leader in their respective sectors.

Two thirds of the Mittelstand firms that have production plants in Turkey, own at least one subsidiary in Central and Eastern European countries. As it is mentioned above, collapse of the communist regimes in Central and Eastern Europe was a structural break in transformation process of German Mittelstand companies. It can be deduced from this research that Central and Eastern European countries are important investment locations for Mittelstand companies which have manufacturing plants in Turkey as well. First, they invested in Central and Eastern European Countries in 1990s, and then they started to invest in farther countries such as Turkey in 2000s. As a result, 77% of the German Mittelstand companies which have production facilities in Turkey established their plants in Turkey from 2000 onwards, while only 18% of them established in the 1990s and only 5% in the 1980s. On the other hand, both newly-established and older firms invested in Turkey during these years. It can be inferred that older Mittelstand firms are successful in keeping up with the challenges of globalization, while newly-established ones are also eager to globalize. Additionally, more than half of the manufacturing Mittelstand firms in Turkey own a subsidiary in China. As a result, half of the German Mittelstand companies which have production plants in Turkey are also active in fast-growing Chinese market. It can be deduced that, these companies aim to become a global player and Turkey is a part of their globalization project.

Intermediary organizations play a crucial role in sustaining the supportive environment in which Mittelstand companies operate as driving force of the German economy. German public authorities and private sector representatives intend to create the same environment abroad, by means of global offices of DIHK. In Turkey, DTR-IHK performs this duty. It organizes business trips for German enterprises to Turkey in various economy branches. It can be deduced from the activities of DTR-IHK, Turkey is an attractive investment location for firms from the fields of renewable energy, waste management and energy efficiency in industry and buildings.

In conclusion, their business strategies paved the way for the world market leadership for a large number of them. Instead of imitating the business strategies of globally operating multinational large enterprises, managers of SMEs should research about the strategies of these family-owned and middle-sized firms. On the other hand, decision makers from developing countries can learn from the supporting environment for Mittelstand enterprises which exists in Germany. Intermediary institutions and their working principles should be studied in order to empower Turkish SMEs like in Germany. Central and Eastern European countries saw Germany as a model after the collapse of the communist regimes. Additionally, South Korea re-organized its education system in the light of German model. Thus, Turkey can also learn from Germany as South Korea and Central and Eastern European countries did. Details of German vocational education system and favourable environment it provided for SMEs should also be taken seriously into consideration. All in all, German Mittelstand companies stand as a precious model for SMEs in other countries, and as such they deserve to be studied further in detail, based on individual cases and particular sectors.

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APPENDIX

APPENDIX: MANUFACTURER GERMAN MITTELSTAND FIRMS IN TURKEY

1. AKG TERMO TEKNİK SİSTEMLER SAN. VE TİC. LTD.ŞTİ.
2. BAERLOCHER KİMYA SANAYİ TİCARET LTD.ŞTİ.
3. BERICAP KAPAK SAN. A.Ş.
4. BPW OTOMOTİV A.Ş.
5. BWF ENDÜSTRİ FİLT. VE TEKNİK KEÇE LTD.ŞTİ.
6. C.F.MAIER POLİMER TEKNİK LTD.ŞTİ.
7. CELLOFOAM SES YALITIM ÜR. SAN. VE TİC. LTD.ŞTİ.
8. COKO WERK PLASTİK İMALAT SANAYİ LTD. ŞTİ.
9. DESOMED EURO KİMYA SAN. VE TİC. A.Ş.
10. DOLEZYCH KALDIRMA VE YÜK GÜVENLİĞİ SİST. SAN. VE TİC. LTD. ŞTİ.
11. DORMA KAPI SİSTEMLERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
12. ENERCON RÜZGAR ENERJİ SANT. KURULUM HİZM.LTD.ŞTİ.
13. ESA ROHR TEKNİK OTOMOTİV SAN. VE TİC. LTD.ŞTİ.
14. F.EE ENDÜSTRİYEL OTOMASYON VE ROBOTİK SAN. TİC. LTD. ŞTİ.
15. FARHYM OTO. SAN. VE TİC. LTD. ŞTİ.
16. FLAMMASSTEK TEKNİK MONTAJ SAN.VE TİC.A.Ş.
17. FORSCHNER KABLO SİSTEMLERİ LTD.ŞTİ.
18. GERD WOLFF MAKİNA SAN.TİC.LTD.ŞTİ.
19. GTV KİLİT SİSTEMLERİ SAN.VE TİC LTD.ŞTİ
20. GÜHRİNG TAKIM SANAYİ VE TİCARET LTD. ŞTİ.
21. HAHN OTOMASYON SAN. VE TİC.LTD.ŞTİ.
22. JANOSCHKA BASKI SİLİNDİRLERİ SAN.VE TİC.A.Ş.
23. JOKEY PLASTİK İSTANBUL SAN.VE TİC.A.Ş.
24. KNAUF INSULATION İZOLASYON SAN. VE TİC. ANONİM ŞİRKETİ
25. KONVEKTA KLİMA VE SOĞ.CİH.SAN.TİC.A.Ş.
26. KÖSTER YAPI KİMYASALLARI İNŞ.SAN.VE TİC.A.Ş.

27. KRONE TRAILER İNTERNATİONAL TİC.LTD.ŞTİ.
28. LICHTGITTER IZGARA SAN. VE TİC. A.Ş.
29. LUEHR LMA SAN. VE ÇEVRE KORUMA FİLT. ÜRT. VE MONTAJ LTD.ŞTİ.
30. MALDANER METAL EMPRENYE TİC.LTD.ŞTİ.
31. MANN VE HUMMEL FİLTRE SAN.VE TİC.LTD.ŞTİ.
32. MAURER SÖHNE GENLEŞME DERZLERİ SAN. VE TIC.LTD.ŞTİ.
33. MEFRO WHEELS TURKEY JANT SANAYİ ANONİM ŞİRKETİ
34. MEISER IZGARA SAN. VE TİC. LTD. ŞTİ.
35. MEKRA-LANG OTOM.YAN.SAN.A.Ş.
36. MİCHELFELDER LAZERTEKNİK SAN. VE TİC. LTD. ŞTİ.
37. MST HORTUM SANAYİ VE TİCARET LTD.ŞTİ.
38. NETZCH MAKİNE SANAYİ VE TİCARET LTD.ŞTİ.
39. NEUMO MÜH.VE PAS.ÇELİK SAN.TİC.LTD.ŞTİ.
40. OPTİBELT GÜÇ AKTARMA EKİPMANLARI SAN. VE TİC. LTD. ŞİRKETİ
41. OSCHATZ ENERJİ VE ÇEVRE KORUMA TESİSLERİ SAN.VE TİC A.Ş.
42. PAS SOUTH EAST EUROPE SAN.VE TİC.LTD.ŞTİ.
43. PERİ KALIP VE İSKELELERİ SAN.VE TİC.LTD.ŞTİ.
44. PETER LACKE KİMYA VE BOYA SAN.DİŞ TİC.LTD.ŞTİ.
45. PÜSCHEL OTOMASYON SİS.LTD.ŞTİ.
46. REMMERS YAPI MALZEMELERİ SANAYİ VE TİCARET ANONİM ŞİRKETİ
47. RENZTURK KIRTASIYE MAKİNE İMALAT SAN. VE TİC. LTD. ŞTİ.
48. RİFİS MAKİNA SAN.VE TİC.LTD.ŞTİ.
49. SAND PROFILE KAUCUK SANAYİ VE TİCARET LTD. ŞTİ.
50. SCHATTDECOR DEKORATİF KAĞIT BASKI SAN.VE TİC.LTD.ŞTİ.
51. SCHNEE METAL PLASTİK SANAYİ VE TİCARET LTD. ŞTİ.
52. SCT FİLTRE OTOMOTİV SAN. VE TİC.LTD,ŞTİ.
53. SEW EURODRIVE HAREKET SİS.SAN.VE TİC.LTD.ŞTİ.
54. SIEGENIA-AUBI YAPI ELEMANLARI SAN.VE TİC.LTD.ŞTİ.
55. SOLİTEM GÜNEŞ ENERJİ TEK.MAK.İNŞ.TES.TİC.VE SAN.LTD.ŞTİ.
56. SONNENFLEX SCHLEIFMITTEL MERMER VE DEMİR KESİCİ LTD.ŞTİ.

57. SPINNER TAKIM TEZGAHLARI SAN.VE TİC.LTD.ŞTİ.
58. VERİTAS OTOMOTİV SANAYİ LTD.ŞTİ.
59. VISSMANN ISI TEKNİKLERİ TİC.A.Ş.
60. VKF RENZEL SALES PROMOTION TİC.LTD.ŞTİ.
61. WOCO POLYMER SYSTEMS SAN.VE TİC.LTD.ŞTİ.
62. ZELLER+GMELİN MİNERAL YAĞ BASKI BOYALARI KİMYA İML.VE DAĞ.LTD.ŞTİ.

