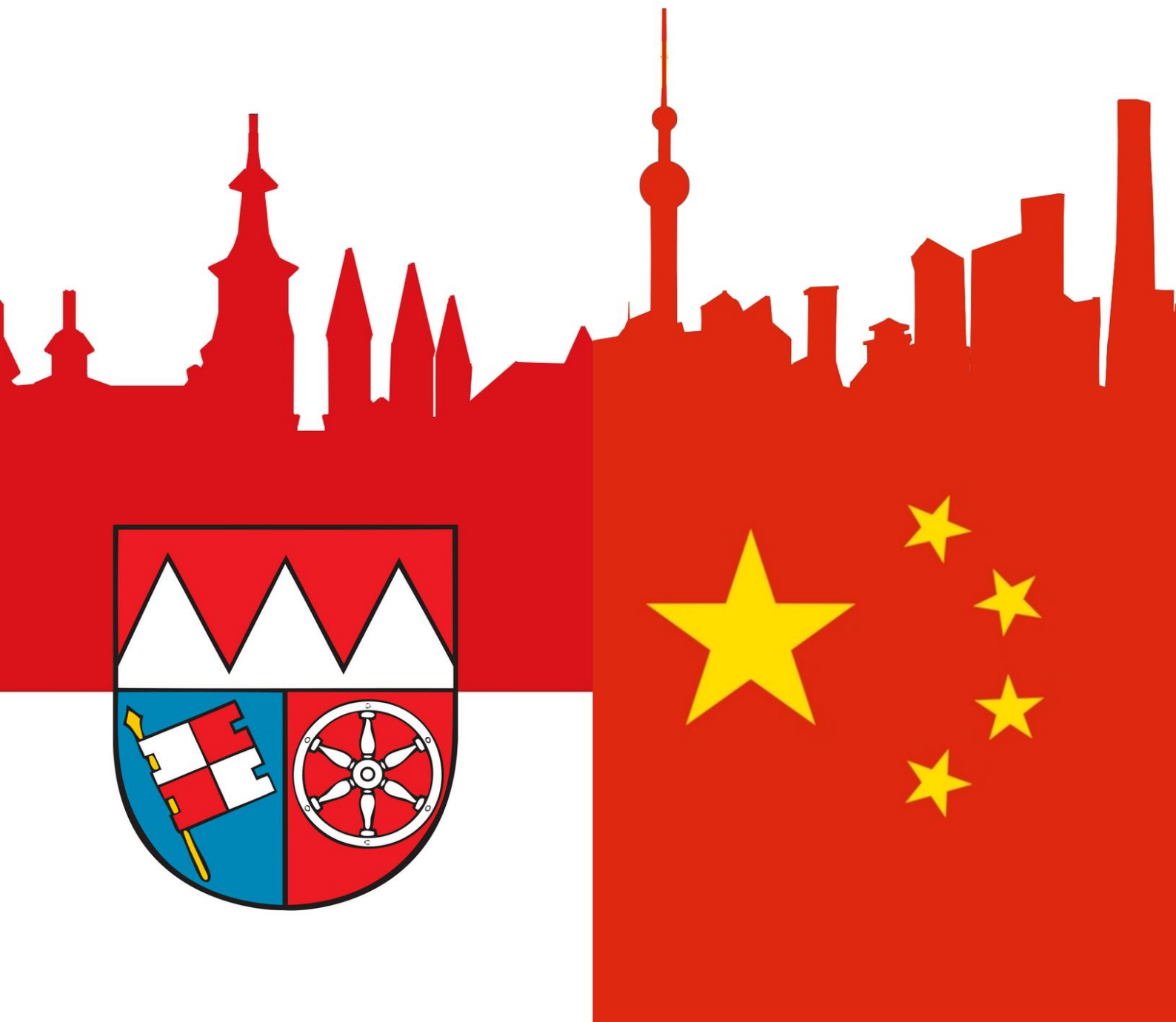


Chinese Entanglements with Lower Franconian Business



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A Student Research Project by the
Chair of China Business and Economics
at the University of Würzburg



Impressum

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Introduction

The significance of China for the German economy is vast and growing. China ranks third in German export destinations and first in imports, and, as such, has remained Germany's most important trade partner for three years, reaching a total trade volume of almost 200 billion euros in 2018.¹ Bavaria, as one of Germany's most economically developed states, is worthy of special consideration for its relationship with China, and Lower Franconia, as a region within Bavaria and the location of our university, presents a topic of particular and personal interest to us. The academic focus of our study program involves both business and economics on one side, and China on the other; we have decided to examine Lower Franconia through this lens. The research question of this case study is as follows: How are firms in Lower Franconia entangled with China?

While academic work in this field exists, this report's sole focus on Lower Franconia distinguishes itself from other studies that have been conducted in the past. To that end, this report begins by explaining its rationale and academic approach in the methodology section. An online survey serves as this report's central subject of analysis to investigate five regional industries: the automotive, technology and machinery, clothing, food and beverages, and tourism and hospitality industries. The survey results were analyzed and interpreted in individual sections for each industry. A wide range of literature covering all relevant industries was used to supplement these findings. Lastly, interviews were conducted in order to obtain a more personal touch and hopefully give more color to this study's primarily macroeconomic perspective approach.

The subsequent section is a general assessment of the economy of Lower Franconia, providing a broader regional context as a backdrop for this study. Basic information and core competencies of the region are presented and discussed. Additionally, general economic indicators are examined and put into a comparative perspective in the context of Bavaria and Germany as a whole. The general composition of the economy was

¹ Statistisches Bundesamt, *Foreign Trade: Ranking of Germany's trading partners in foreign trade*, November 01, 2019, https://www.destatis.de/EN/Themes/Economy/Foreign-Trade/Tables/order-rank-germany-trading-partners.pdf?__blob=publicationFile and Xinhuanet, *China remains Germany's most important trading partner*, February 18, 2019, http://www.xinhuanet.com/english/2019-02/18/c_137831889.htm

examined from a sectoral approach. This section concludes with an interview with the director of international affairs at the local Chamber of Industry and Commerce (IHK) on the topic of Lower Franconia and China.

Thereafter the five industry reports will follow, which constitute the main body as well as central subject of this report's analysis.

The final analytical section draws from the results of the individual industry reports in order to provide a comprehensive comparison between industries and their entanglements with China. Similarities, differences, as well as overlaps provided by the general survey results will be presented and interpreted. This chapter concludes with a discussion about the future outlook of firms in Lower Franconia. Lastly, the conclusion will provide a last look into overall results and will provide some recommendations for firms which plan to establish business connections with China.

Methodology

This section of the case study provides an account of how the study was structured and how the cases, industries, entanglements and firms were chosen. In addition, it includes an assessment of the resources used on a general level, and a critical discussion about the limitations inherent to the choices made throughout the conduction of this study.

Construction and Structure of the Case Study

The structure chosen for the study is primarily based on the book by Robert K. Yin 2014, *Case Study Research: Design and Methods*. His book, which presents itself as a hands-on guide on how to conduct a case study, offers four types of possible designs (Figure 1). Each of these designs are based on different rationales; however, all of these designs also take into account the context in which the study will be conducted. As he emphasizes, the case and the context are not always clearly distinguishable from each other.

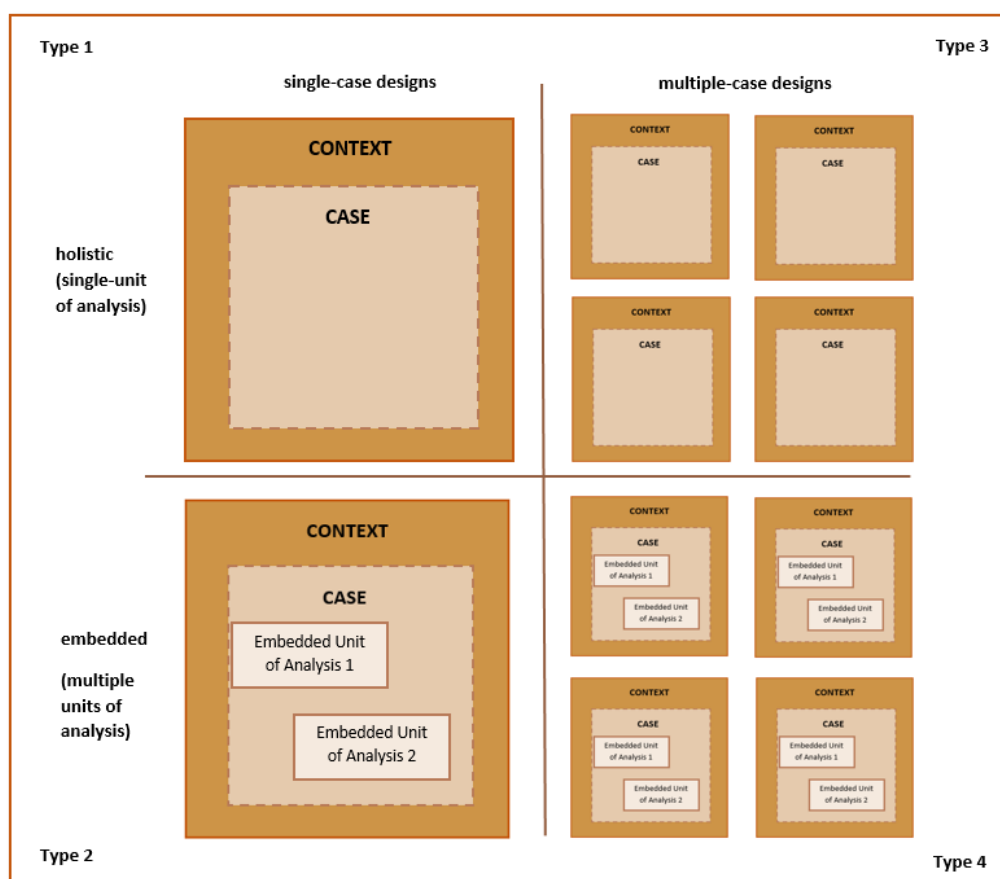


Figure 1: Matrix of Case Study Designs²

² Based on Yin, Robert K. (2014): Case study research. Design and methods. 5. Edition. Los Angeles, London, New Delhi, Singapore, Washington, DC: SAGE. (n.p.) (Chapter 2: Case Study Research Designs)

He argues that a single case study should be applied for a case that is very special in terms of access or occurrence, if the chosen focus lies in observations of a common phenomenon, if the research is longitudinal in nature, or if the case is at the core of the selected hypothesis or theory. He then elaborates the distinction between single case studies with a single unit of analysis and single case studies with multiple units of analysis (Type 1 and Type 2) and contends that some cases might require analysis on several levels. This is particularly possible if the units of analysis can be identified in a clear manner. However, he warns that one of the major possible pitfalls of pursuing multiple levels of analysis is the potential missing link to the overall context; this pitfall might occur if the unit of analysis is not appropriately chosen and the results are not properly embedded in the context of the case.³

A multiple case study design, on the other hand, should be chosen when the underlying rationale is based on replication, either in a literal or theoretical sense. In case of a literal replication, the cases and methods used are the same, and the anticipated results should be the same or at least very similar. In the case of a theoretical replication, Yin argues, the outcomes are expected to be different but can be explained based on underlying expected factors. Like the single case study, Yin also distinguishes here between a holistic form (Type 3) and an embedded form (Type 4).⁴

Following Yin's argumentation, this case study follows a variation of the embedded comparative multiple case study design (Type 4). The context is provided by the research question: How are firms in Lower Franconia entangled with China? In terms of the selection of embedded cases, five industries important to Lower Franconia were selected: the automotive industry, the tech and machinery industry, the clothing industry, the food and beverages industry, and the tourism and hospitality industry. As the unit of analysis, Lower Franconian firms in each industry were chosen.

³ Yin, Robert K. (2014): Case study research. Design and methods. 5. Edition. Los Angeles, London, New Delhi, Singapore, Washington, DC: SAGE. (n.p.)

⁴ Ibid.

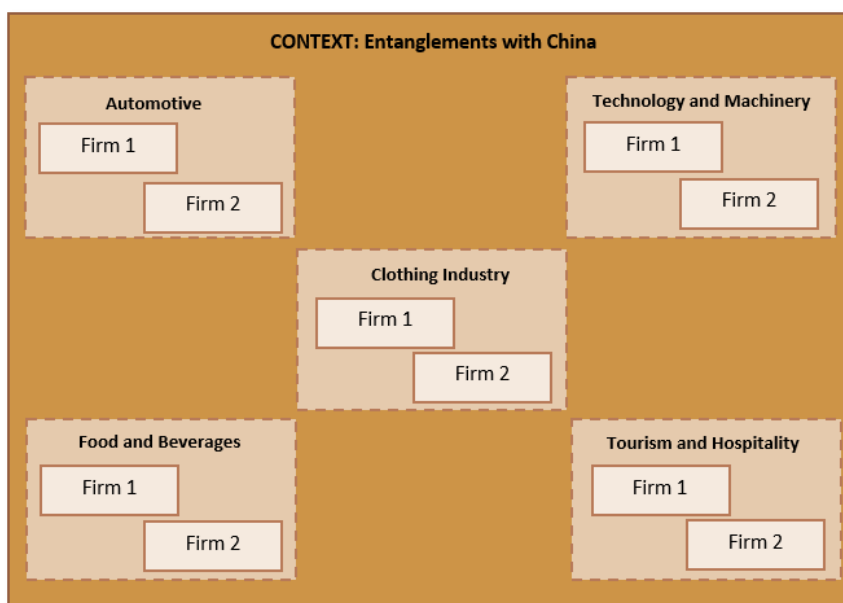


Figure 2: Case Study Design, Adaption after Type 4 by Yin 2014 (N.P)

While the overall context was based on the research question, the cases and the comparison between the cases were further embedded into a more general context, the comparison of Lower Franconia with Bavaria, Germany, and Europe. On one hand, this provides a more comprehensive picture of the entanglements with China and how they can be viewed in different contexts. On the other hand, as Yin states, contexts and cases are not always distinguishable from one another. Lower Franconia is a clearly defined geographical space,⁵ but it is also closely interconnected with Bavaria (its federal state), Germany (its country), and also ultimately to the context of Europe as a whole. Therefore, comparisons have not only been made on an overall level, but also in the industry reports themselves.

Regarding the multiple case design, we assert that the industries chosen are not to be seen as another unit of analysis, but rather as individual cases, for several reasons. First, the industries are very different in size, overall revenue generated, and number of employees, which, if used as a quantitative unit of analysis, might distort the comparison and thus the results. Instead, each industry was separately researched by groups of four people, a design which further embedded the results in a more overarching context. Second, the replication argument made by Yin was followed by using several overlapping methods for data collection, which were defined in advance by all the industry groups

⁵ For more information and definition, refer to "General Assessment of the Economy of Lower Franconia"

working together. On a detailed level this included, for example, that a part of the conducted survey⁶ had the same questions for all five groups; on a general level this included, for example, that an overall industry report framework was established beforehand for all the industry groups to follow. Also, the individual group reports were collected and put into the overall industry report framework, which was also predefined. Thus, this study follows Yin's theoretical replication premise. Third, as stated, the unit of analysis must be clearly defined. This was not completely possible for all the industries in all cases, as some industries have very close ties and the lines between them are blurred. For these three primary reasons, we decided to use each selected industry as a case in itself, rather than as a unit of analysis.

Although the firms are also considerably different, they are clearly defined entities and are comparable within their own industry; however, their comparability was also inherently challenging, because the company sizes were significantly different and some industries chose to include several subcategories. An example of this can be seen in the tourism and hospitality industry, in which both hotels and sightseeing spots were included for one industry group. On the other hand, some industries were particularly closely intertwined, as for example the automotive industry and the technology and machinery industry. In this case, the groups collaborated on various levels to avoid overlap, and the chosen criteria distinctions for their industries have been clearly defined in their respective industry reports. In regard to the specific challenges inherent in the different industries, the individual industry reports provide a more in-depth description of the challenges and limitations of each case.

Selection of Entanglements, Firms, and Industries

The selection of industries was based on the Industry Report for Bavaria of 2018, which lists the clothing industry, beverages industry, and machinery industry as especially important in Lower Franconia in comparison to Germany as a whole. While the export-focused automotive industry dominates other administrative districts in Bavaria, the suppliers for the automotive industry are of regional importance in Franconia and Swabia. Therefore, the automotive industry was also selected as one of the five important regional industries. Furthermore, in addition to trade, transportation, and information and communications technology, tourism plays an important role, adding 20.2 percent of the

⁶ All survey templates have been included in the Appendix for further reference

gross revenue and providing 25.4 percent of the jobs for the working population of Bavaria in 2017.⁷ It was therefore included as an important industry in the study.

The selection of entanglements was partially based on the different forms of market entry according to the book by Wolfgang Perlitz about international management. These market entry forms contributed the following structural entanglements: “export”, “joint venture”, “franchising”, “licensing”, “leasing”, “production and assembly facilities”, “management contracts”, “sales offices,” and “subsidiary company”.⁸ The other options were based on different forms of foreign direct investment (FDI) strategies, namely “1. Market-seeking FDI; 2. Efficiency-seeking FDI; and 3. Resource-seeking FDI,”⁹ which, in turn, are based on Dunning’s eclectic paradigm. He argues that a company must be able to internalize the advantages of locational and ownership advantage through a direct investment; otherwise, they would not be successful. Especially in regard to ownership advantages, which need to be both identified by and fostered through the firm, Dunning argues that they are based on different assets. Assets of an exogenous nature “refer to privileged access to input factors such as (government) funding, raw materials and labour [sic] allocation which can be exploited to reduce costs”,¹⁰ while those of endogenous nature “are of a technological, a managerial, or an organisational [sic] nature”.¹¹ Locational advantage is based on factors in the targeted market which cause a company to invest, rather than export. These include local resources or the local institutional environment. Considering the local environment and the factors given by ownership advantage, a company then chooses to follow the previously mentioned forms of direct investment strategy. Based on the rationale behind these strategies, the selection of entanglements was extended to include “natural resources from and to China”, as well as “technological transfer”, “trademarks”, “patents”, “copyright contracts”, “management contracts and know-how”.

⁷ Bayerisches Staatsministerium für Wirtschaft und Medien, Energie und Technologie(2018) „Industriebericht Bayern 2018, mit Branchenreport und Regierungsbezirksprofilen“, p. 14,27, 68-69

⁸ Perlitz, M. (2004): Internationales Management, 5. Aufl., Stuttgart, Lucius & Lucius Verlagsgesellschaft 2004. p.186

⁹ Voss, Hinrich (2011): The Determinants of Chinese Outward Direct Investment, Cheltenham UK, Northampton US, Edward Elgar Publishing Limited, p.17

¹⁰ Voss (2011): p.15

¹¹ Ibid.

On the level of employees, the resource-seeking strategy also argues that the knowledge embodied in company employees plays an important role. Furthermore, the network theory argues that decisions to invest abroad also rely on the information retrieved through the networks of a company, which are interconnected through their employees. This is especially true for smaller companies and companies that are reliant on international production networks, which often do not have a strong ownership advantage and therefore do not have many resources or capabilities available. In addition, the social and ethnic ties of employees to the country in which the company invests may influence company decisions and the commitment to a company on a personal basis. For these reasons, the list of entanglement was extended to include “employees from China”.¹² Furthermore, as the chosen industries have very different contexts and structures, “customers”, together with the category “consumers”, were added to the list. Lastly, because terminology and definitions might differ for the companies filling the surveys, the option of “financial investment to China” and “other” were added to the general list of entanglements.

Lastly, the selection of firms as units of analysis was based on lists retrieved from the local Chamber of Industry and Commerce (referred to as the IHK in the remainder of this case study) for Lower Franconia and was based on the category options and the filters available on their website.¹³ Thus, the selection by each industry group was in part predetermined by the options available under the broad categories of “chamber and administrative districts”, “sectors”, “branch of economic activity”, “date of establishment”, “number of employees”, “transnational activity”, “type of company and legal form”, and “company name and address”.¹⁴ Especially close industries, for example the automotive and the technology and machinery industry, divided the possible options between themselves in advance in accordance with the respective importance to their industries, in order to ensure that no companies were listed twice. The resulting lists were then cross-checked. In regard to the option “transnational activity”, no selection was made, in order to capture all firms which may have, in one way or the other, a connection with China. This was because the criteria provided by the local Chamber of Industry and Commerce, from which the companies may have received the status of official “transactional activity” with China, were not explicitly defined. As possible definitions might have differed, this

¹² Voss (2011): p.16-27, 34-36

¹³ IHK, *Firmen in Bayern*. <https://firmen-in-bayern.de/sites/fitby/search/detailSearch.aspx>

¹⁴ A detailed list of the selected options for each chosen industry has been included in the Appendix

category was not used, in order to collect a comprehensive data set pertaining to the current situation in Lower Franconia.

Assessment and Limitations of the Study

In terms of structure, a variation of Yin's embedded comparative multiple case study design, has been chosen. The study has several strong points. The replication and comparison framework were constructed into the chosen design. Based on this, multiple major industries in Lower Franconia were studied in a comparable way. Another strong point of the methodology was the freedom allowed to the individual groups in terms of some data collection and framework components, so that the differences between different industries and different industry groups could also be regarded.

However, there were also several major challenges in regard to organization, scope, and scale of the project. Although 20 student researchers participated in the project, the scope of the chosen research was rather large for the anticipated timeframe of 13 weeks. This timeframe also included the Christmas and New Year's holidays, in which primary data collection was not possible, and during the other 12 weeks the students still had to attend their regular classes; therefore, each student researcher could only contribute a limited amount of time to this study.

Another challenge was posed by the overall number of researchers who worked on this project. While it was an advantage in terms of scope for the study, the proper communication of different aspects of the framework and the overall study were challenged by the limited time for meetings and the communication tools via social media. The individual industry groups each had four members, of which one was designated as the team's leader. The research and writing process of each group was conducted without the team leaders, who focused on intra-group communication, kept track of the overall organization and structure, created deadlines, and ensured comparability between the reports. In the final phase, the team leaders then wrote the comparison section, which compared the individual industry reports, and incorporated the individual reports into a single, comprehensive final report.

Although the framework was established for the sake of comparability between the industries, differences between the industries must be considered in some aspects, such as in regard to the response rate of the surveys. As the industries and companies are of

different sizes, the number of responses by firms in each industry varied. The overall response rate to the surveys was between 5 and 11 percent. However, as the number of contacted firms in each industry was also very different, ranging from 100 to over 500 firms,¹⁵ the comparability is somewhat challenging in some aspects. In addition, each industry had several survey responses that were not completed. Therefore, a single interpretation of the survey results should be approached with caution.

In order to support the validity of the surveys and to fill existing the gaps, each industry report additionally used different forms of literature and some also included interviews with industry experts. While some literature and public information were accessible for the levels of Bavaria and Germany, available sources specifically for Lower Franconia and China were more limited. Therefore, the groups supplemented their research results with academic and official statistics, online sources (such as newspaper articles and firm websites), and interviews. The amount of research available for each industry and the selection of data for each report was therefore different.

For the assessment of the Lower Franconian economy, interviews were conducted with the chamber of commerce and industry in Lower Franconia (IHK) and in Beijing (AHK). The interview questions were partially selected based on the European Business in China, Business Confidence Survey 2019 by the European Union Chamber of Commerce in China,¹⁶ and are therefore directly comparable with some findings of the report. The interview questions in each industry were drawn partially from the same survey, but were also partially based on previous literature research and the survey conducted in each industry.

In summary, the researchers encountered several challenges regarding the organization of this project, the chosen timeframe, and the availability of academic literature. Furthermore, there are differences between the industries in terms of scale and response rate to the surveys conducted. These challenges were met by the industry report authors with a mix of qualitative and quantitative research approaches. They used several expert

¹⁵ The specifics of the contacted number of firms and their selection in each industry is provided in each industry report

¹⁶ European Union Chamber of Commerce in China (2019): European Business in China, Business Confidence Survey 2019

interviews and online sources, for example, as well as statistical data produced by private and governmental institutions. All of these aspects should be taken into consideration for an informed assessment of the validity of this study.

General Assessment of the Economy of Lower Franconia

General Impression and Core Competencies

Lower Franconia is one of the seven government districts of Bavaria and is located in its northwest corner. On a map, Lower Franconia looks like a bulge facing outward from the rest of Bavaria. It is therefore located very centrally in Germany and often called "Bavaria's German middle". In terms of infrastructure, it is well connected to not only the Central and Upper Franconian regions, but also to the important metropolitan areas of Thuringia, Stuttgart, and Frankfurt am Main, to which Lower Franconia is connected through the River Main. The capital and largest city of Lower Franconia is Würzburg, and the second largest city is Aschaffenburg. The district is itself divided into the Mainfranken region, which encompasses the free cities of Würzburg and Schweinfurt and their surrounding counties, as well as the counties of Bad Kissingen, Haßberge, Kitzingen, Main-Spessart, and Rhön-Grabfeld. Firms in this region are represented by the Chamber of Industry and Commerce (IHK) Würzburg-Schweinfurt and the smaller region of Aschaffenburg, which encompasses the bulge starting west of Marktheidenfeld.

The economy of Lower Franconia therefore generally enjoys favorable conditions and stands upon a stable foundation; however, within Bavaria, economically Germany's strongest state, Lower Franconia performs below average. In 2020 the government district will receive a revenue reallocation grant (*Schlüsselzuweisungen*) of around 540 million Euros. This fund reallocation process is a core instrument of the intercommunal financial equalization in Germany, which seeks to support structurally weak communities and counties to offset shortages in locally generated tax income. The increase of 6.9 percent in the 2020 reallocation compared to that received by Lower Franconia in 2019 is the highest increase among all Bavarian government districts, indicating that this district's economy might have begun to face some difficulties in keeping up with the rest of Bavaria in the recent past.¹⁷

¹⁷ Bayerische Staatsregierung, FÜRACKER: 530 MILLIONEN EURO FÜR UNTERFRANKEN
Schlüsselzuweisungen für die Kommunen in Unterfranken steigen auch 2020, December 12, 2019,
<https://www.bayern.de/fueracker-530-millionen-euro-fuer-unterfranken-schluesselzuweisungen-fuer->

The Bavarian branches of the IHK published an introductory guide for Chinese investors written in Chinese, with a map of Bavaria highlighting regional specialties. In it, Würzburg is distinguished for the Franconian wine that originates from this region and is furthermore described as a hub for engineering and machine construction, the automotive industry, the building industry, and medical technology and software. Aschaffenburg is also classified as a hub for engineering, medical technology, software, and furthermore for the chemical industry.¹⁸

Lower Franconia possesses many research institutes and special research groups at the University of Würzburg and the University for Applied Science in Aschaffenburg, such as the Max Planck Research Group for System Immunology at the University of Würzburg, and the center for telemedicine in Bad Kissingen.¹⁹ "The mutual connection of lower Franconian knowledge and research potential, of which transfer into the domestic economy and the support of enterprise formation out of the research activities of the universities, are therefore an elemental building block of our region's development strategy. Here, research results are being developed into marketable products".²⁰ The district government says on its homepage. Multiple business incubators have been formed, such as (ZENTEC) in Großwallstadt, the Technology and Founding Center (TGZ), and the Center for Digital Innovation Mainfranken (ZDI) in Würzburg, and many more. The industrial competency profile of this region therefore seeks to focus on the automotive, biomedical, and material science industries.²¹

The metropolitan area Mainfranken offers a networking platform that seeks to connect business and science, listing mechanical engineering, automotive technology, medicine and health, energy and environment, information technology and artificial intelligence, and new materials and plastic innovation as the region's core competencies.²²

die-kommunen-in-unterfranken-steigen-auch-2020/.

¹⁸ Bayerischer Industrie- und Handelskammertag e.V., *通往巴伐利亚经济界的大门*, August 2018, p.8, https://www.bihk.de/bihk/downloads/bihk/auslaendische-gaeste_chinesisch_2018.pdf.

¹⁹ Regierung Unterfranken, *Unterfranken - Ein starker Wirtschaftsstandort in Deutschlands Mitte*, 2019, <https://www.regierung.unterfranken.bayern.de/regbezirk/00111/index.html>

²⁰ Ibid.

²¹ Ibid.

²² Region Mainfranken GmbH, CORE COMPETENCIES, n.d., <https://www.mainfranken.org/en/innovationhub/mainfrankens-strenghts/index.html>.

Statistical Comparison of Indicators across Bavaria and Germany: Overall Economic Indicators

To obtain a more comprehensive view of the performance of the Lower Franconian economy, general economic indicators must be examined. The region's GDP per capita amounted to 40,257 euros in 2017, which was average for Bavaria but above the German average of 39,615 euros. The city of Schweinfurt, however, tops the list by 105,609 euros per capita. Only in Munich and Ingolstadt does any municipality generate more GDP per capita in all of Germany.²³

The available income per capita in Lower Franconia amounted to 23,657 euros in 2017,²⁴ compared to 22,124 euros in Germany as a whole.²⁵ In Aschaffenburg and Würzburg, within both city and county jurisdictions, the people had the most money to spend. Strangely, the people in the city of Schweinfurt had the lowest available income per capita, at 20,983 euros. The unemployment rate was very low, even by southern Germany standards, at only 2.9 percent in 2017, with the largest fraction of unemployed people found in the three biggest cities. In 2017, gross yearly pay per employed person was an average of 46,700 euros, another fairly average number for the Germany as a whole; however, this lay below the average for southern Germany, and the people in Schweinfurt (city), Main-Spessart, and Würzburg (city) earned the best pay in Lower Franconia.²⁶ Investments per employed person were approximately 8,100 euros, a very low number

²³ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Bruttoinlandsprodukt"*, 2017, <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI017-1.xml&CONTEXT=REGATLAS01>

²⁴ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Verdienste und Einkommen"*, 2017, <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI016-1.xml&CONTEXT=REGATLAS01>.

²⁵ Rudnicka, J., *Verfügbares Einkommen je Arbeitnehmer in Deutschland bis 2018*, February 19, 2019, <https://de.statista.com/statistik/daten/studie/164049/umfrage/verfuegbares-einkommen-je-arbeitnehmer-in-deutschland-seit-1960/>.

²⁶ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Industrie"*. 2018. <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI010-2.xml&CONTEXT=REGATLAS01>.

compared to the rest of Germany. Only 9 of 39 total districts fell below that number.²⁷ Lastly, as for innovativeness, the number of business registrations per 10,000 inhabitants was 72.5 in 2017.²⁸ This number is slightly above the German average, but slightly below the average in Bavaria.

Statistical Comparison of Indicators across Bavaria and Germany: Industry Composition

In order to determine the distinguishing qualities and overall performance of the economy of Lower Franconia, a look into the database of the German Office for Statistics might illuminate its overall structure. The statistic office's website features an interactive map that allows the comparison of government districts and municipalities based on a multitude of indicators.

First of all, it is necessary to describe the industry composition in Lower Franconia. Manufacturing trade in Lower Franconia accounts for 36.5 percent of regional gross value added, with Miltenberg, Main-Spessart, Schweinfurt (city), and Haßberge being the major producers in relative terms.²⁹ Processing trade (a component of manufacturing trade) accounts for about 28.7 percent. Here too, Miltenberg, Main-Spessart, Schweinfurt (city), and Haßberge are prevalent contributors, but also Kitzingen. In both areas of trade, Lower Franconia is at approximately the Bavarian average and above German average.

The building industry then accounts for another roughly 5 percent of Lower Franconian industry. This industry is relatively strong in Germany's eastern states, but also in the Bavarian districts of Upper Palatinate and Lower Bavaria, Lower Franconia being at about

²⁷ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Industrie"*, 2017, <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI010-1.xml&CONTEXT=REGATLAS01>

²⁸ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Unternehmen"*, 2018, <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI004-1.xml&CONTEXT=REGATLAS01>

²⁹ Statistische Ämter des Bundes und der Länder: Gemeinsames Statistikportal, *Regionalatlas Deutschland Indikatoren des Themenbereichs "Bruttowertschöpfung"*, 2017, <https://www-genesis.destatis.de/gis/genView?GenMLURL=https://www-genesis.destatis.de/regatlas/AI017-2.xml&CONTEXT=REGATLAS01>

the German and Bavarian averages, with the strongest building industries in Bad Kissingen, Schweinfurt (county) and Aschaffenburg (county).³⁰ Agriculture, forestry, and fishery comprise between 1.2 and 1.7 percent of Lower Franconia's economy, situated above the German and at Bavarian averages, Bad Kissingen, Schweinfurt (county) and Kitzingen contributing most.³¹

Lastly, the service industry accounts for 62.1 percent of the Lower Franconian economy; this number is rather high by Bavarian standards, with only Central Franconia and Upper Bavaria having higher shares (65.1 percent and 69.1 percent respectively). This figure is especially high compared to the service sector data in southern Germany, including Baden-Württemberg, in which only the district of Karlsruhe has a higher service industry percentage (65.7 percent).³² However, this number is rather low in comparison to Germany as a whole. Interestingly, in the city of Würzburg the service industry generates a whopping 83.6 percent of overall income, only surpassed by the county of Gamisch-Partenkirchen in all of southern Germany.

All of these facts indicate that southern German is generally still strong in production, with Lower Franconia living up to its epithet as "Bavaria's German middle", as it seems to have an overall economy that is balanced between Bavarian and German average economic compositions. The key to obtaining an overall understanding of this region seems to be the exploration of concrete development strategies in order to discover where its economic and technological fortes lie. Otherwise, Lower Franconia proves to be difficult to distinguish from the rest of the German economy simply by looking at the raw data from broader categories, and no major distinctions can be drawn.

To summarize, it can be said that Lower Franconia performs rather well given current economic indicators, and considering the tough competition that it faces within Bavaria in statistical comparisons, in which the district of Upper Bavaria tops most comparisons with a notable lead. The city of Schweinfurt appears to be especially productive, and Würzburg seems to be very heavily involved with the service sector. Manufacturing and building are typically strong characteristics for districts in southern Germany, but less so than in most

³⁰ Statistische Ämter, *Regionalatlas „Bruttowertschöpfung“*, 2017

³¹ Ibid.

³² Ibid.

other Southern districts. In conclusion, the primary competencies and economic strengths of Lower Franconia include an interesting amalgamation of science and technology, manufacturing and heavy machinery, and wine production with service sector highlights.

Interview about Lower Franconia and China

In the following section includes an interview with Kurt Treumann, the Director for International Affairs of the Chamber of Industry of Commerce of Würzburg-Schweinfurt since 2014. His responsibilities include foreign trade, countries, markets and foreign trade projects, as well as queries related to domestic trade. Among other things, Kurt Treumann and his team conceive and organize project funding for interested companies from Bavaria and other parts of the world, while also offering support and assistance for the respective companies throughout the project. The subjects of these projects vary widely, from the promotion of innovation and research to projects in the realm of digitalization. As a service provider for its 72 thousand members, the Chamber of Industry and Commerce Würzburg-Schweinfurt also organizes informative events about current topics that may be of importance for the business activities of its constituents. In addition, the chamber plans and conducts business trips for member companies that are relevant to the day-to-day business of the firms. Overall, the International Affairs department of the Chamber of Industry and Commerce Würzburg-Schweinfurt assists companies in their internationalization processes, plans and organizes events and projects for its member firms, and serves as a contact person for questions about foreign countries, markets, and foreign trade in general.

“With an alert eye and ear”, Interview with Kurt Treumann, Director for International Affairs of the Chamber of Industry and Commerce of Würzburg-Schweinfurt (IHK)

With regard to Main Franconian firms, how has doing business and the general investment climate in China developed throughout your professional career?

Kurt Treumann: Matters connected to China are becoming increasingly visible in our consulting and advisory work. China-related issues are reflected at all levels of Main Franconian companies, from the operational level to corporate governance and the search for future managers. In many spheres, China is becoming an important part of the business activities for companies in our region. You cannot ignore another reason for a greater interest in China: the improved market access that can be achieved via contacts with Chinese firms. China is, after all, an important sales market for many companies in

Main Franconia. In my opinion, the current rate of economic growth in China (approximately between 6 percent and 6.5 percent), which is much higher in the EU and Germany, indicates that the Chinese market is far from being fully penetrated and still offers much potential.

Regarding China's investment climate, Chinese representatives claim that it is becoming more and more liberal with regard to foreign investors. Unfortunately, from my experience I cannot confirm that there is such a trend. I have instead observed a change towards protectionism. With regard to the investment climate, statements from China and China's actual actions often do not correspond with each other. In the end, it's not just about tariff barriers, but also about issues like required certifications, which make it difficult for Main Franconian companies to expand their investments in China. However, China is no exception on a global level; there are various other countries with such limitations. Companies that want to invest in China have to be prepared for these limitations and watch out for any changes in these matters.

What is the primary motivation for Main Franconian companies' engagement with China?

K.T.: This commitment is driven by the demand of Chinese customers. We can see this very clearly in the automotive industry. The Chinese would like us to be closer to them; they don't want us to produce here and ship goods over to China. There are multiple reasons for that, from avoidance of customs to an easier way of carrying out the negotiations and making various arrangements. The geographical distance, even in the European Union, makes many aspects of doing business very difficult; therefore, there are German companies that leave Germany and manufacture German products elsewhere. You follow the market power and if it happens to be in China, the firm goes there to fulfill their strategic goals.

Furthermore, cost minimization is continuously an essential incentive for engagement with China, although there is also a clear change in this regard. The production costs in China are constantly rising, which naturally influences the profitability of manufacturing products in China. Firms are sometimes driven by the potential advantages of market proximity, which they can only gain by being more directly present in the Chinese market. There is a visible trend towards more local production and being closer to the end customers. German firms have to take this trend into consideration and adjust their activities accordingly.

Business opportunities in China are also prompting companies to go there; many are aware that if they don't seize these opportunities, other entrepreneurs most definitely will. Companies do not want to miss out on these business opportunities and determine that taking certain risks in China are worth it.

Do Main Franconian firms in China face market access restrictions? What kind of restrictions do they face?

K.T.: There are market access restrictions in certain sensitive sectors, in which German firms face the requirement of creating joint ventures with Chinese companies. In such cases it is crucial to reflect on the ways that a company can handle such requirements. Even if a firm operates in a sector which does not require forming a joint venture with a Chinese partner, it is very important to find a partner and try to shape relationships that are not disadvantageous for your firm. Simply packing your things and rolling into China is not possible. German firms definitely need partners there.

Furthermore, German companies have to skillfully manage a possible know-how transfer. This is a truly important issue for all firms that are even somewhat connected to China. Even if you only sell something at a trade fair, there is the possibility of an unintentional transfer of know-how. This is also one of the first things my clients consider when they are supposed to work with Chinese entrepreneurs. They think about who will access or potentially could access their databases in China. Such matters are a source of fear for many companies. Even more critical is the fact that nobody can truly guarantee them that their data and knowledge are completely safe. Therefore, the joint venture requirements in some industries discourage companies from going to China and prevent them from conducting their business in this country.

How do you perceive Main Franconian companies' treatment by the Chinese Government in comparison to the treatment of domestic Chinese companies?

K.T.: So far, no companies have ever complained to me about any unfair treatment from the Chinese government, so I have no direct personal experience in this matter. However, I've read that there is a certain distortion of competition in the Chinese market. This largely stems from the fact that many Chinese companies are state-owned and subsidized.

What are the top business challenges that companies perceive as having the greatest impact on their business in Mainland China?

K.T.: Let's begin with the slowdown of Chinese economic growth, which I do not perceive as a major problem yet. Of course, it is lower than what we are used to in Germany, but the current 6 to 6.5 percent annual economic growth rate is absolutely acceptable when one considers the rates in other countries. China has started to pay more attention to environment protection. They no longer ignore it in pursue of high growth rates. The lower rates in the recent years are a reflection of a more sustainable approach towards their economy and environment.

In my opinion, the most significant challenges are the lack of sufficiently qualified experts (e.g. in production), rising personnel and labor costs, and the trade war between China and the USA. Other major challenges include overcapacities, competition from state-owned companies, finding local partners, rising protectionist tendencies, and the language barrier.

The language barrier is indeed still a great challenge, although in the big cities it is getting easier to communicate in languages other than Chinese. However, if we consider the language issue during business negotiations or the discussion of technical details, it is still a major challenge to communicate without problems.

Furthermore, the negotiation style poses another major challenge, because Chinese and German people differ significantly in this aspect of conducting business. Additionally, establishing contacts in Asia also works differently than in Europe. The emotional level in communication is more important there. Another issue is the importance of social hierarchies. In Asia, it is much more crucial to appropriately represent oneself and one's position within the firm. Furthermore, the understanding of guarantees on the Chinese side versus the German side does not necessarily align, which can lead to misunderstandings and conflicts.

Some German companies lack these sorts of knowledge and intercultural skills. On one hand, it is clear for me that there is a certain necessity for firms to deepen their knowledge about intercultural management. On the other hand, many companies do not see this kind of need, because, even without certain intercultural skills, they still manage to be successful in foreign markets. As the IHK, we have tried a few times to offer workshops

regarding intercultural management. Unfortunately, many firms perceived it as something that wasn't essential for them, and we were eventually unable to offer these workshops. To summarize this point, companies move around the world and somehow get away with it without changing their ways; however, they potentially miss a lot of opportunities that they could have had with a deeper intercultural knowledge.

Another great challenge is talent acquisition and retention, mostly with regard to highly-skilled workers. That's why the issue of dual vocational training abroad is a recurring theme. In my opinion, there is potential for German producers in the same sector who also share the same employee profile; they could form alliances and implement programs that would allow them to obtain and keep skilled workers. I believe that this idea is going to become increasingly important in the production sector of foreign markets. It can help to solve some problems with the skilled labor forces in China. The loyalty towards firms is not really a given among the Chinese employees. Of course, it is understandable that young people want to learn from multiple companies, so they practice so-called job-hopping. That's why talent acquisition in China is so difficult.

How do you expect the number of regulatory obstacles facing Main Franconia companies in Mainland China to change over the next few years?

K.T.: Regulatory obstacles will certainly increase significantly, as that is a global trend now. Such tendencies are already visible in international markets in general, particularly when looking at the trade war between China and the USA. The growing number of regulatory obstacles can also be attributed to increasing protectionism worldwide.

What are the top three most significant regulatory obstacles for Main Franconia companies when doing business in Mainland China?

K.T.: The most important ones are discrimination against companies with foreign equity stakes (including the issues of awarding public contracts), cybersecurity and protection of intellectual property, and property rights.

In general, did Main Franconian companies increase their China-related business activities in recent years?

K.T.: In my estimation, generally yes. However, you cannot forget that the trade war has a negative impact on business activities in China, which is subsequently reflected in the German presence in China. Additionally, the trade war strongly influences German imports

from China. It has broken existing supply chains; certain suppliers have already disappeared from China and no longer exist. We can already observe the first major frictional losses that are a result of the trade war.

Is it profitable right now to do business with China? Is it worthwhile for Main Franconian companies to expand their China-related operations?

K.T.: Yes, generally it pays off to do business with China. However, we have to be aware that China changed significantly in recent decades, what influences the type of business activities carried out by firms in China. China is moving rapidly in the direction of high-quality production; it is no longer a country for the production of cheap products. This has implications on the types of firms that decide to engage with China.

China plans to become the world's biggest economy by 2049. To achieve this goal, it has to become one of the global technological leaders, increase the efficiency of its production, modernize its industries, and lead the way in innovation (for example in the digitalization field, which is going to be increasingly important). China knows this and is already implementing measures to accomplish these objectives, what can be seen in projects like "Industry 4.0." For us, the Chinese development in these areas is interesting because we ourselves also need to catch up in some sectors in order to stay competitive. That's the reason why alliances with China are very beneficial for us in some domains.

One of these domains is the automotive sector, in which China is a very active player, especially with regard to e-mobility and autonomous driving. In these areas I see potential for cooperation between German and Chinese automotive companies. China knows that we are already very advanced in our combustion engine sector and that they could not catch up in that. The Chinese commitment to e-mobility is therefore a result of that knowledge and their growing environmental awareness.

Other sectors in which it benefits Main Franconian companies to expand their China-related operations are high-end and high-quality products. The Chinese middle class is still growing and aiming at increasing its wealth, which naturally has an impact on the growing consumption of high-quality products. German quality is still perceived as a status symbol in China, which has potential for us to exploit. Everything of higher value, including food and beverages, is greatly appreciated by Chinese consumers. For example, this applies to milk powder for babies or wine from Main Franconia. High-quality wine from

Franconia can surely find a market in China. On the other hand, Franconia is a somewhat smaller wine region and we cannot produce endlessly into the international markets. The export rate in this part of Germany lies under 20%, which is relatively low.

Other types of German companies that can be very successful in China are niche and specialist suppliers, such as in the mechanical engineering sector. With regard to many standardized and mainstream products, the Chinese are able to manufacture them just as well as we are.

German companies can also make use of the Chinese advancements in the field of digitalization and tap into markets with Chinese internet users who widely use new digital technologies. China has over 800 Million of them! What are the implications of this phenomenon? Chinese people are very open to new digital trends. They have a very positive attitude to all innovation. They rarely question them and let things run their course, which results in a good environment for new technologies and innovations to develop. Of course, the state sometimes intervenes in these processes, but the important thing is that Chinese people stay open to changes in digital arenas. They are constantly learning how to get faster and how to get better at handling issues of digitalization. They continue to develop the artificial intelligence and other technological innovations. An example of this is Alibaba, a leader in these areas. You don't read about Alibaba's servers breaking down or products not getting delivered. This successful development is the reason for Alibaba's stock prices continuously increasing. Their way of doing things works, apparently. One of the reasons for their success is a huge data pool. From distance, it seems that they know exactly how to use their data. In Europe, as far as data collection and processing is concerned, there are far more limitations. The European approach obviously has its own logic and advantages for the Internet users; however, it also means that we are limited in developing some technologies.

Furthermore, China is becoming more and more focused on environmental and ecological issues. They are trying to solve environmental problems that have a negative impact on the health of its local population. Counteracting water, air, and land pollution are currently extremely important topics in China. If Bavarian companies that deal with such issues are able to expand their business to China, they could tap into the enormous potential offered by the Chinese market. However, many companies say that they are still far too small to

go international. It is an unbeatable argument. If a firm lacks international expertise, it makes little sense to expand their activities into China.

From your perspective, is China an attractive destination for the present and future investments of Main Franconian companies?

K.T.: China is an important market for us and it will remain so. However, it has become a bit more volatile in recent years. Doing business in China is not getting any easier either. Under such circumstances, it is quite clear that we have to accept the rules of the game and adjust to them. As I have mentioned before, China has changed considerably. In many cases it is no longer a cheap supplier, and it is no longer a cheap market for production. Wages in China have risen and the cost of living there has risen, both of which can be observed in the real estate sector, especially in big cities. These changes have brought about a completely different market structure. That's why our areas of business in China are also changing. Some firms are withdrawing from China and re-establishing their production sites in other cheaper countries. The image of China as the cheap workshop of the world does not reflect the contemporary reality of this country. We have to carefully watch Chinese advancements and take its competitive power seriously.

What are Main Franconian companies experiencing as a result of tariffs on goods? How serious are the effects of the trade war on Main Franconian companies?

K.T.: Of course, the trade war has also an influence on the companies that produce in China but sell their products elsewhere. The conflict between China and the United States of America leads, among other things, to the fact that the business models of some companies are no longer working. Firms that have so far been producing entirely in China now feel compelled to divide their production among multiple countries. The component products are assembled later, but it can happen that, ultimately, the final product is officially of Chinese origin. If that's the case, it cannot be shipped to the USA without tariffs, which the manufacturing companies want to avoid. It works exactly the same for manufacturers in the USA who want to ship their products to China.

Furthermore, it is important to note that this issue concerns everyone, not only Chinese and American firms. If a company has a business relationship with the USA or/and China, it is very likely that the trade war and the resulting tariff increases will affect the company's business activities. Even companies that have nothing to do with China can be indirectly influenced by the trade war.

Who are the key competitors of Main Franconian firms in China?

K.T.: It is crucial to be aware of the competitors from every direction. German manufacturers and investors are not the only ones who have recognized China's value. That's why the firms moving their business activities to China have to watch out for competition not only from Chinese firms, but also from other German and foreign, non-Chinese firms. For many companies who want to grow and be successful, there is no way to avoid China. In China, competition appears on every horizon, although different countries and companies specialize in different products and services, which means that the focus of their business activities doesn't lie in the same place.

To summarize, how would you describe the general business outlook in China over the next years?

K.T.: With an alert eye and ear, the general business outlook is optimistic for a variety of reasons. One of the most important reasons is China's large and growing internal market with a growing middle and upper classes that are very quality-conscious. When we talk about China, the highly-developed coastal regions and some other advanced cities from the inland pop into our minds. Looking into cities like Beijing and Shanghai, we do not get any impression that they are somehow backwards in relation to the European cities. In some fields, they are even more advanced!

To summarize, the business outlook for the next years is quite positive, but one has to remain cautious: China is not a suitable market for every company. Doing business in China requires a certain affinity for this market, expertise in internationalization, and, of course, resources. One should not recommend China without reservations, but rather consider doing business there only after a thorough analysis.

The Automotive Industry in Lower Franconia

The Automotive Industry

As the vanguard of the German automotive industry, Bavaria has been one of the driving forces for the development of the automotive industry in Germany over the past hundred years and has been setting a precedence for major players in the national and international playing field. Ever since the invention of the internal combustion engine by Rudolph Diesel in Augsburg in 1893, Bavaria has proven its superiority as an incubator of talent and engineering know-how in the automotive sector. However, this market dominance has encountered obstacles in recent years, including the “Dieselgate” scandal, which forced the German automotive industry to move its research and development focuses towards electric mobility and automotive lightweight construction. One in four cars manufactured in Germany is made in Bavaria by its more than one thousand companies which employed an estimated 400,000 workers in 2018. Apart from the major Original Equipment Manufacturers (OEMs), such as BMW, Audi, and MAN in southern Bavaria, numerous important suppliers are located in northern Bavaria, including Lower Franconia. The most notable firms in Lower Franconia are FTE Automotive in Ebern, which supplies ABS-brake-and-clutch-systems, Brose Fahrzeugteile in Würzburg, which manufactures conventional engines and electric drives, as well as ZF Friedrichshafen in Schweinfurt, which produces drive technology and chassis components.³³

We can further distinguish between the different types of automotive firms. First of all, there are the original equipment manufacturers (OEMs). Those are usually highly visible car brands like BMW, Audi and MAN, and are typically well-known by consumers. However, the OEMs are highly dependent on their own supplier base because they do not produce parts, components, and modules by themselves, but rather make use of the specific technologies and know-how of the different suppliers, thus reducing costs and improving quality. To explore the depth of the OEM-supplier-network further, the

³³ Mainfranken24, *Automobil-Industrie in Bayern boomt*, September 26, 2018, <https://www.mainfranken24.de/automobil-industrie-in-bayern-boomt/>

automotive supply iceberg by Bollhorn and Franz will provide a visual representation of this phenomenon.

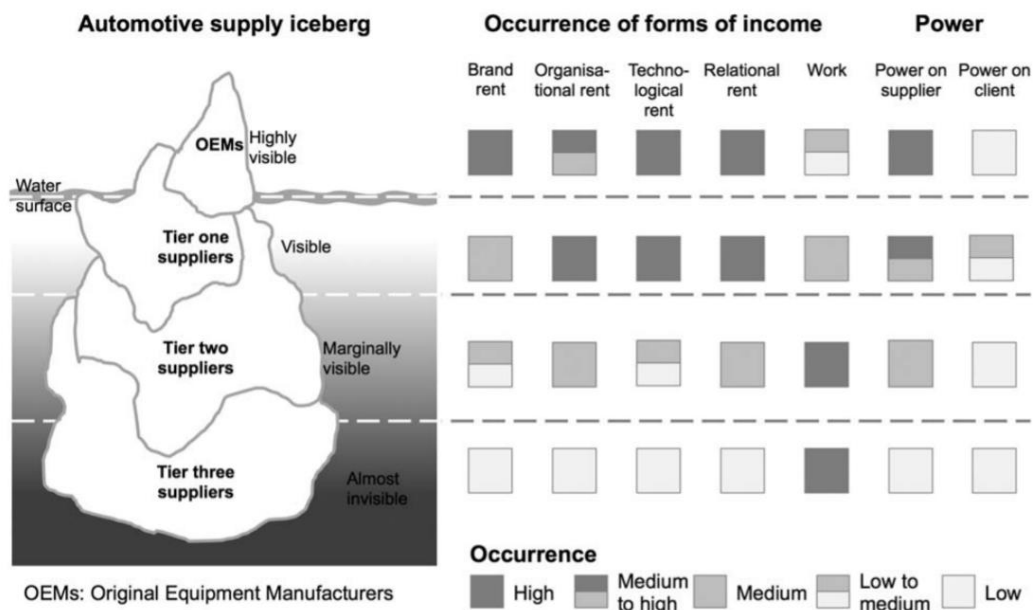


Figure 3: Automotive Supply Iceberg³⁴

Tier 1 suppliers are usually characterized as system suppliers, which are typically supplied by module suppliers (tier 2). Maintaining additional supportive roles, the automotive industry has yet more supplier tiers, including for example component and part suppliers. The complexity of these supplier networks highly contributes to the lack of transparency and visibility. Suppliers that do not directly supply a specific OEM generally supply other OEMs as well, not always exclusively within one industry. Therefore, in our survey of 97 companies, 26 companies clearly claim themselves to be automotive suppliers and automotive parts producers, which can be categorized as tier 1 suppliers in the automotive industry. This approach also explains the remaining 71 companies, which we will categorize as Tier 1+n suppliers; these are very important to German manufacturing as a whole, as they not only supply automotive firms but also other firms from other industries.

Due to the inclusion of different tier suppliers in this industry report, it is almost impossible to comprehensively cover the entirety of automotive firms in Lower Franconia regarding

³⁴ Bollhorn, Kai and Franz, Martin, "Production Network Knowledge as A Foundation for Resistance - Workers Influence on A Chinese Acquisition in Germany." *Tijdschrift voor economische en sociale geografie* 107 (4), 2016: 410

specific figures, because they are not published in official statistics. However, the tier 1 suppliers are well-documented. 26 firms manufacture automobiles and automotive parts, which together grossed a total revenue of over 4.38 billion euros in 2018, a 16.6 percent decrease from 2017. The foreign export revenue of these companies contributes 47 percent of their total revenue. The entire manufacturing industry earned a total revenue of more than 30 billion euros in 2018, of which the automotive industry constituted 14.58 percent.³⁵

Currently there is no statistical information provided by official entities in Lower Franconia regarding import, export, and trade data. The Federal Statistical Office of Germany states that they do have import-export related data by province (state); however, they do not provide further data on any particular region within each province.³⁶ The 26 firms officially reported that the manufacture of automobiles and automotive parts employed 19,863 employees in 2018, indicating a 4.4percent employment decrease from 2017. The entire manufacturing industry employs a total of 140,720 people, of which the automotive industry contributes 14.11 percent.³⁷

Methodological Approach

To begin, the list we received from the local Chamber of Industry and Commerce included 391 firms, of which non-automotive companies, car workshops, car dealerships and other irrelevant firms (eg. insurance companies) were removed. We cooperated with the technology and machinery industry group during the final selection process in order to avoid any overlap of relevant firms. This issue arose through adding the main category “industry and production” to our list of selections, which needed to be chosen in order to cover all automotive suppliers. However, that also made it particularly difficult to use the figures given in official statistics, as we have excluded two thirds of related companies due to irrelevance, and statistics generally only provide the figures and numbers from one specific category, not one single company. Therefore, we analyzed all companies that we found relevant, covering not only companies in the “Automotive” category, but also in the “Industry and Production” category to get a more comprehensive overview of our chosen

³⁵ Bayerisches Landesamt für Statistik, 2018, p.46

³⁶ Destatis, *Häufig gestellte Fragen: Liegen auch Außenhandelsergebnisse für einzelne Bundesländer vor?* n.d., https://www.destatis.de/DE/Themen/Wirtschaft/Aussenhandel/_inhalt.html#sprg230462

³⁷ Bayerisches Landesamt für Statistik, 2018, p.46

industry. Additionally, we added 21 subcategories to the list for additionally specific results. The included different types of companies were in accordance with above mentioned found types within the automotive industry.

All of the companies were contacted via e-mail; however, the largest companies were also contacted via phone in advance to ensure participation and cooperation. On the phone we received partially negative feedback, mainly due to disinterest in the survey and the time constraints due to the finalization of financial statements at the end of the fiscal year. Nevertheless, most of the people we called were cooperative and gave us contact information for those who were responsible for receiving such content. We were then able to send out the survey e-mails to the responsible entities in their respective firms.

The survey sent to the firms was divided into two parts: namely a general part for the whole study and an industry specific part. For the latter part of the survey, we first divided our questions into China and non-China parts, so that a company with no connection to China could skip the questions about business in China and vice versa for companies with China entanglements. Regarding the automotive-related questions for firms with connections to China, we tried to assess their direct entanglements and also asked for their opinions about the Chinese automotive industry. Because the vast majority of our participants were Lower Franconian firms in China, the results are mostly consistent. It is noteworthy that there are only commercial entanglements with China in our survey participation, but, taking a look only at the local companies, it can be seen that our participants are only exporting to China, not importing from China. We only had one Chinese firm in Lower Franconia, which participated in our survey; therefore, the representativeness of this result is questionable.

During our literature research, the most prevalent problem was the lack of literature specifically about Lower Franconia. A large amount of literature dealt with the Bavarian automotive industry, but finding articles dealing with Lower Franconia proved to be a problem. It must be noted that we included many companies that do not have their headquarters in Lower Franconia, but merely a major branch. As a result, we also partly used literature dealing with the Bavarian automotive industry. Generally, there is a lack of academic writing regarding the Lower Franconian and Bavarian automotive industries. Because of these circumstances, we mostly relied on official statistics.

Findings of the General Survey

Regarding the list of firms to be contacted, our group requested the data from two main categories of companies and a total of 21 subcategories of companies from the Chamber of Industry and Commerce. After final selection process, the list of automotive companies to be contacted totaled 97.

After closing the survey, there were a total of 11 participants out of the contacted 97, with a gross response rate of 11.34 percent. In the end, however, only two people finished the survey to completion, reducing the rate of complete responses to 2.06 percent. One third of the participants stated that their small company employs zero to nine employees, while another 33.3 percent stated that they employ 10 to 49 people. The remaining 33.3 percent stated that they employ more than 50 people and among them one third employ more than 250 people. While the responses regarding the legal status of the firms were rather homogeneous, with the majority of respondents (88.89 percent) being GmbH and the sole exception of one GmbH & Co. KG (11.11 percent), the respondents' estimated total revenue of 2018 differed greatly. Two firms, accounting for 22.2 percent of the respondents, stated that they had an approximate 2018 revenue of up to 250,000 euros, whereas the other seven firms earned more than 500,000 euros but not more than 50 million euros in 2018. Among these seven firms, three firms (accounting for 33.3 percent) reported a 2018 revenue of 500,000 to two million euros, while one firm (11.1 percent) grossed up to 10 million euros. The remaining three firms (33.3 percent) made between 10 million and 50 million euros in 2018. Overall, the participating firms in the automotive industry are mostly quite small, are predominantly GmbHs, and yet have a wide range of profitability.

Entanglements with China

To address the companies with connections to China, we asked for their direct business with China, e.g. whether they have physical branches in China or if they are exclusively selling to or buying from China.³⁸ We thought this to be a noteworthy distinction to see whether there are more “physical” entanglements with China or mostly trade relationships. The results showed that none of our participants had any direct branches, such as factories, in China, except for one participant with a Chinese mother company. However,

³⁸ The survey sent to the companies is added in the Appendix

all of our participants sell to China, and some also buy from China. To assess the importance of their connections in China, we asked for the percentage of their China-related business in their overall turnover of 2018, but the responses vary greatly. According to question which asked about the development of China related income in the past three years, their earnings either rose or stayed the same in the last three years, showing a positive trend up to this point.

The second part of the industry-specific survey for firms with connections to China asked for opinions about trade with China, the general situation, future prognosis, and the possible threat posed by the Chinese automotive industry. Some of these questions were repeated in the part of the survey for companies without connections to China. The results did not vary significantly. For example, the questions asking about the perception of Chinese companies as an opportunity versus as a threat, had similar results in both parts. They stated that they perceive Chinese companies more as a threat, although one response was relatively neutral. Only one company, interestingly one with no entanglements with China, reportedly perceives Chinese companies as an opportunity.

Similar results were produced by question, “Do you perceive Chinese products as more competitive than German products in the automotive industry?”. The answers from companies with connections China were somewhat undecided, with both positive and negative responses, but overall relatively neutral. The answers from companies with no connections to China, however, were more on the negative side, stating that they deem Chinese products as less competitive than German products, except for one very strong positive opinion. One possible explanation for this result is that the companies do not only have no entanglements with China themselves, but also that there is no competition or hardly any competition from Chinese companies in their specific industry. In sum, it can be said that the surveys does not show any clear differences in this regard between companies with China entanglements and those without.

The third section of questions for the companies with China relations was about the problems they encountered or perceived as most critical in regards to their business with China. We decided to include this point to see whether commercial and regulatory problems were more prevalent or intercultural ones. The results of two follow-up questions show that language and intercultural issues are indeed significant problems. One of those questions further shows that human resource and regulatory problems are

also seen as obstacles regarding business in and with China. However, none of the participating companies offer specific training opportunities or workshops to further intercultural understanding.

Companies Without Chinese Entanglements

For the companies without connections with China, we wanted to know why they had no entanglements with China, and if they planned to expand their business to China in the future. Additionally, we were interested about whether they had any international connections at all. The results show that most of them had entanglements inside the EU, a few respondents had international entanglements outside of Europe, and one company had no international connections at all. All of the participants stated that they plan to expand their international business in the next five years and one respondent specifically names China as a planned expansion. However, in a separate question it is stated that most of the participating companies have no interest in expanding their business to China. Regardless, most of the companies perceive the prospects for the automotive industry in China as positive, with only one neutral response.

This dichotomy of opinion might seem contradictory at first, but the results of the question about market access might give an explanation. Apparently, the companies see major problems with market entry in China. Since all of the possible answers were chosen, no problem stands out. This can either be interpreted as being due to a different focus, or possibly indicates that all the possible selections are prevalent problems with market entry into China. However, most of the companies simply do not wish to expand to China for other unspecified reasons. The results of a follow-up question show that market entry simplification would not have any influence on the participating companies. Interestingly, none of the participant companies, neither with China relations nor without, employs Chinese staff in Lower Franconia. In conclusion, it can be said that, of the companies that participated in the survey, the slight majority had commercial relationships with China, while the rest had no entanglement at all. Of the latter, most seemed to have a positive prognosis for the future of the automotive industry in China, but do not wish to expand their business to China, despite general interest in the international market.

Types of Entanglements

As mentioned above, we primarily divided our survey between companies with “physical” entanglements, meaning those that have, for example, factories in China, those that have commercial entanglements with China, including buying and selling, and those with no

entanglements at all. The most common entanglement, according to our survey, is that of commercial relationships, closely followed by companies without any connections with China. None of our participants had any plants or branches in China, although one respondent has a Chinese mother company.

For the companies with commercial relationships with China, both import and export seem to be the major components. None of our participants seems to have any other entanglement with China other than trade relations. For example, none seem to employ Chinese staff, have any financial investments, or cooperation like a joint venture. Therefore, we conclude that the majority of companies in the automotive industry in Lower Franconia only have trade relations to China.

Of the companies with no connections to China, most expressed a neutral or positive prognosis of the future of the automotive industry in China but were not interested in developing any entanglements with China. Only a minority seemed to have plans to expand their business to China, whereas the rest seemed to be more interested in other countries or had no interest in going international at all.

It is noteworthy that the majority of the participating company's profit comes from its business with China. Additionally, next to selling raw materials to China, they also import from China. According to the survey, they only supply German automotive companies, meaning that they are importing Chinese products for the German market and are most likely not producing in Germany. This supposition, however, cannot be stated with certainty. This is the only notable difference between Chinese firms and Lower Franconian firms that we can infer from the survey, considering that the Lower Franconian firms only export.

The Big Picture

The automotive industry, its current situation in Lower Franconia, and its entanglements were described in the previous sections. This section will focus on a comparison with other regions, starting with Bavaria, then moving on to a German-focused analysis, and concluding with a comparison with the situation of European Union as a whole. This section focuses on two major questions. First, what are the similarities between the region and Lower Franconia? Secondly, are there vast differences between Lower Franconia and

the other mentioned regions? This section will start with a brief introduction of the current state of the automotive industry in each region. Each section will start with a short overview of the key statistics and will be followed by an analysis of recent press and articles. The numbers are mostly gathered from the official statistics of each respective institution. German statistics usually only refer to direct car manufacturing and assembling, thus second and third tier suppliers might not be represented in these numbers. Nevertheless, these numbers give insight into the impact and structure of the automotive sector of each region. Afterwards, the aforementioned questions will be discussed based on information about the other regions and the gathered data about Lower Franconia.

The Automotive Industry of Bavaria

In 2018 Bavaria's production sector generated a total revenue of 376 billion euros.³⁹ The automotive industry in Bavaria generated revenue of approximately 106.5 billion euros.⁴⁰ Thus, the automotive constitutes about 28 percent of Bavaria's producing sector revenue. Another interesting number provided by the Invest in Bavaria organization, which is supported by the official government of Bavaria, reports that about 25.8 percent of all cars produced in Germany are from Bavaria.⁴¹ These numbers clearly demonstrate the importance of the automotive sector to Bavaria. 64.3 percent of revenue was earned in foreign sales.⁴² However, the numbers in this statistical book are not separated based on their respective destinations, thus they do not provide detailed information about entanglements with China.

Specific facts and figures are published on the official website of Bavaria's statistical bureau. According to these numbers, companies in Bavaria exported goods worth 16.9 billion euros to China. The imported goods amounted to approximately 16.4 billion euros.⁴³

³⁹ Bayerisches Landesamt für Statistik, *"Verarbeitendes Gewerbe in den Regierungsbezirken und Regionen Bayerns 2018 (sowie Bergbau und Gewinnung von Steinen und Erden)"*, Fürth: 2019, p.15

⁴⁰ Bayerisches Landesamt für Statistik 2019, p.13

⁴¹ Invest in Bavaria, *Automobilindustrie*, n.d., <https://www.invest-in-bavaria.com/branchenvielfalt/automobilindustrie.html>

⁴² Bayerisches Landesamt für Statistik 2019, p.13

⁴³ Bayerisches Landesamt für Statistik, *51000-009s Außenhandel: Land, Aus- und Einfuhr, Länderverzeichnis Außenhandel, Warensystematik*, 2020, <https://www.statistikdaten.bayern.de/genesis/online/data?operation=begriffsRecherche&suchanweisung=de&suchanweisung=au%C3%9Fenhandelsstatistik>

These statistics are divided into several categories, such as parts for machinery, chassis, other parts for vehicles, fully built cars, busses, trucks and special vehicles, and other unspecified vehicles. The exports in this sector are much higher than their imports. The combined categories export a total of 5.3 billion euros, so exports to China amount for about one third of Bavaria's total exports.⁴⁴ The imports are worth only an estimated 343 million euros, significantly less than the exports.⁴⁵ In total, business entanglement with China is extremely export-driven. Exports to China provide about 15 percent of the automotive sector's total revenue.

After the evaluation of key industry numbers, we move on to the available literature, press and official statements. The government of Bavaria has maintained two representative offices in China since 1997 in Qingdao and Shenzhen. They offer consulting services to Chinese companies. According to their official homepage, the first meeting is free of charge.⁴⁶ They further state that they have 19 alliances with cities and counties; additionally, some of the key regions of Bavaria maintain deep collaboration with certain Chinese regions. These areas include Nurnberg-Shenzhen, Regensburg-Qingdao, Ingolstadt-Foshan, and Augsburg-Jinan. Furthermore, they list the Bavarian automotive sector as one of the major areas for Chinese direct investment. The Bavarian Prime Minister Markus Söder announced that for the next three years the government will support the automotive sector of Bavaria with 300 million euros in total.⁴⁷ In sum, the Bavarian government wants to further subsidize the automotive sector, and there are deep connections between the Bavarian state and China.

The Automotive Industry of Germany

Germany generated a total revenue of 6.85 trillion euros in 2018 and the production sector accounted for 3.07 trillion euros. The automotive sector accounted for 495.7 billion euros in revenue, which is about 7 percent of the total revenue and 16 percent of the revenue

⁴⁴ Bayerisches Landesamt für Statistik 2020

⁴⁵ Bayerisches Landesamt für Statistik 2020

⁴⁶ Repräsentanz des Freistaats Bayern in China, *Unsere Dienstleistungen*, 2020, <https://www.bavariaworldwide.de/shandong/ueber-china/wirtschaftsbeziehungen/>

⁴⁷ Bayernkurier, *Unbedingt Auto-Land bleiben*, November 26, 2019. <https://www.bayernkurier.de/wirtschaft/39510-unbedingt-auto-land-bleiben/>

of the production sector.⁴⁸ The total amount of exports in the automotive sector of Germany was approximately 229.7 billion euros, which was the single biggest category and totaled about 17.4 percent of Germany's total export.⁴⁹ Germany imported goods worth 116.9 billion euros in the automotive sector.⁵⁰ Germany's export to China amounted to more than 93 billion euros and the imports totaled more than 106 billion euros.⁵¹ The data about the automotive sector has the same categories as the statistics of Bavaria. The total amount of exports from the Bavarian automotive sector to China amounted to over 25.7 billion euros, which contributed about 11 percent of total automotive exports and 27 percent of the total exports to China.⁵² The imports in this sector were comparatively low, with a sum of around 2.1 billion euros.⁵³ The imports from China are about 1.8 percent of Germany's imports in automotive and about 1.9 percent of total imports from China. In total, the German automotive sector aggressively exports to China while maintaining very low imports. The ratio is similar in Bavaria. The automotive sector of Bavaria accounts for roughly 21 percent of the total German automotive sector.

While this data already shows the deep entanglement between Germany and China, one must consider that these numbers are only taking into account the direct import and export in this bilateral relationship. These numbers fail to fully reflect the whole size of the relationships, considering that, for example, the plants of Sino-German joint ventures in China which solely produce for the Chinese market do not impact these numbers. Hertenstein states that quite a few companies have moved their entire value chain to China⁵⁴. Another number which gives insight in the overall entanglement is given in a

⁴⁸ Statistisches Bundesamt, *Statistisches Jahrbuch 2019*, 2019, p.526,

https://www.destatis.de/DE/Themen/Querschnitt/Jahrbuch/statistisches-jahrbuch-2019-dl.pdf?__blob=publicationFile

⁴⁹ Statistisches Bundesamt 2019, p. 432

⁵⁰ Statistisches Bundesamt 2019, p. 433

⁵¹ Statistisches Bundesamt 2019, p. 427

⁵² Statistisches Bundesamt. 51000-0007 Aus- und Einfuhr (Außenhandel): Deutschland, Jahre, Länder, Warensystematik. n.d. <https://www-genesis.destatis.de/genesis//online/data?operation=table&code=51000-0007&levelindex=1&levelid=1578064031331>

⁵³ Statistisches Bundesamt. 51000-0007

⁵⁴ Peter Hertenstein and Peter J. Williamson, "The role of suppliers in enabling differing innovation

report by McKinsey. This report states that about 22.3 percent of all sold passenger vehicles in China are from German brands. Germany ranks second, only surpassed by China's own brands with a market share of 37.5 percent⁵⁵. Furthermore, McKinsey conducted a study about the perception of the origin of high-end vehicles among Chinese consumers. According to the results, 70 percent of Chinese consumers think that German brands produce high-end cars.⁵⁶ The brand perception is very one-sided, similar to the import-export relationship. In Germany the cars from German brands account for about 64 percent of total cars.⁵⁷ There are no numbers given by the Federal Motor Transport Authority (Kraftfahrt Bundesamt) about ownership of cars from Chinese brands, thus indicating the nonexistence of Chinese cars in the German market. Another form of this relationship is mergers and acquisitions. In recent years Chinese firms became infamous in Germany for buying many German firms, such as ZF Friedrichshafen, which caused great resistance on sides of its workers.⁵⁸

The press is concerned about the prospects of the automotive sector in Germany. Merkur paints a negative picture for its future development. An article from 2019 mentions that sales in China falter and companies seek to cut costs. Furthermore, it references a study which predicts that the China-related automotive business will shrink by 10 percent in 2019.⁵⁹ BR refers to a study which comes to a similar conclusion. They argue that the major reason is the shrinking demand in the Chinese market. Looking at the previously gathered numbers, it is very clear that a shrinkage of the Chinese market will have a direct impact on the German automotive sector, considering that a good chunk of it is based in

strategies of competing multinationals from emerging and advanced economies: German and Chinese automotive firms compared", *Technovation* 70-71, 2018, p. 46-58.

⁵⁵ Gao, Paul; Wang, Arthur, and Zhou, Tony, *Winning the race. China's auto market shifts gears*, 2019, p.29 https://www.mckinsey.com/~/_/media/mckinsey/industries/automotive%20and%20assembly/our%20insights/winning%20the%20race%20chinas%20auto%20market%20shifts%20gears/winning-the-race-chinas-auto-market-shifts-gears.ashx

⁵⁶ Gao et al. 2019, p. 46.

⁵⁷ Kraftfahrt Bundesamt, *Bestand an Pkw in den Jahren 2010 bis 2019 nach Herkunftsländern*, 2019, https://www.kba.de/DE/Statistik/Fahrzeuge/Bestand/MarkenHersteller/b_mark_pkw_zeitreihe.html?nn=663630

⁵⁸ Bollhorn and Franz 2016, pp. 413

⁵⁹ Merkur, *Krise in der Autoindustrie verschärft sich*, 2019, <https://www.merkur.de/wirtschaft/schwache-verkaeuft-stuerzen-autoindustrie-in-krisenmodus-zr-12388617.html>

the Chinese market. The article further states that 2020 will not change for the better. Furthermore, they argue that suppliers must rethink their product portfolios, as electrically powered cars need way less machinery and fewer parts than traditional fuel-powered cars⁶⁰. Other problems mentioned are job cuts in many automobile firms, such as Daimler and Audi. Additionally, they mentioned that short-term contracts are becoming more frequent among automotive suppliers. Contrary to the rather negative picture created in the press, the CEO of Daimler announced that they will persist with their business in China, because China is the biggest market for Daimler. In addition, he thinks that the Chinese market will be the strongest growing automotive market in the next 10 years.⁶¹ McKinsey & Company also worked on this topic and came to the conclusion that, while the Chinese market has slowed down, it “will return to growth, albeit at a slower pace.”⁶² In addition, they argue that “weaker brands face the threat of elimination.”⁶³

The Automotive Industry of the European Union

The relationship between the European Union and China regarding the automotive sector paints a similar picture. McKinsey & Company calculates that the automotive sector makes up for about 7 percent of the EU’s total GDP.⁶⁴ According to the data of the European Automobile Manufacturers Association, the automotive sector accounted for 138.4 billion euros of the EU’s export totals, and they imported goods from this sector worth about 54 billion euros.⁶⁵ This imbalance is similar to the very one-sided German automotive sector. More detailed data further underlines the similarities to Germany. In

⁶⁰ Kirschner, Regina and Brunner, Tobias, *Automobilexperte Bratzel: Mehr mit China zusammenarbeiten*, 2019, <https://www.br.de/nachrichten/wirtschaft/automobilexperte-bratzel-mehr-mit-china-zusammenarbeiten,RjhHhzl>

⁶¹ Süddeutsche Zeitung, *Daimler-Chef hält an China-Geschäft fest*, December 29, 2019, <https://www.sueddeutsche.de/wirtschaft/auto-stuttgart-daimler-chef-haelt-an-china-geschaeft-fest-dpa.urn-newsml-dpa-com-20090101-191229-99-291060>

⁶² Gao et al. 2019, p.200

⁶³ Gao et al. 2019, p.200

⁶⁴ Cornet, Andreas et al., *RACE 2050 - A Vision for the European Automotive Industry*, 2019, p.8, https://www.mckinsey.de/~/_media/McKinsey/Locations/Europe%20and%20Middle%20East/Deutschland/News/Presse/2019/2019-01-08%20Race%202050/Report_Race2050_A%20Vision%20for%20the%20European%20automotive%20industry.ashx

⁶⁵ European Automobile Manufacturers' Association, *The Automobile Industry Pocket Guide 2019/2020*, 2019, p.8, <https://www.acea.be/publications/article/acea-pocket-guide>

2018 imported cars with Chinese origin accounted for only 1.8 percent of cars in the EU. The major import regions are Turkey and Japan.⁶⁶ However, about 16.6 percent of all exported motor vehicles from the EU went to China. China is the second largest export destination, only behind the USA with a share of 27.3 percent.⁶⁷ These numbers are heavily influenced by the German automotive sector, as Germany has the most assembly plants in entire EU, making up about 18 percent of the total plants.⁶⁸ Germany alone produced 29.3 percent of all vehicles in the EU.⁶⁹ Thus it is not surprising that the European and Chinese entanglement shown in the numbers resemble the previously shown relations between Germany and China. McKinsey & Company also concluded that the automotive sector is of major importance to the European economy. However, they also mention that the future brings new challenges, as the market shifts because of trends, such as new powertrains, which resembles the opinion of media in Germany.

Additionally, they state that the key market has changed over time. In the 1970s they were the European and American markets, while in 2018 it switched to Asia, thus indirectly showing a deepened entanglement with China.⁷⁰ Both China and the EU understand the importance of their cooperation; therefore, is it not surprising that both sides recently signed an agreement to improve relationships.⁷¹

Comparison Between the Regions

One may find similarities and differences while comparing the described regions with the information that this paper has provided about Lower Franconia. The survey shows that existing entanglement focuses mainly on trade between Chinese and Lower Franconian companies. The analyzed statistics for each region also show that there is great participation in trade with China, especially export to China. All companies participating in the survey with connections to China sold their goods to China, and only a few also

⁶⁶ European Automobile Manufacturers Association 2019, p. 41

⁶⁷ European Automobile Manufacturers Association 2019, p. 43

⁶⁸ European Automobile Manufacturers Association 2019, p. 24

⁶⁹ European Automobile Manufacturers Association 2019, p. 20

⁷⁰ Cornet et al. 2019, p. 8-12

⁷¹ European Automobile Manufacturers' Association, *European and Chinese auto makers commit to working more closely together*, n.d., <https://www.acea.be/press-releases/article/european-and-chinese-auto-makers-commit-to-working-more-closely-together>

engaged in import. This is similar to all three regions, as they also mostly export and hardly import automotive goods from China. However, differences are in the scope of the automotive sector itself. After the analysis of the statistics of Bavaria, Germany, and the EU, this study concluded that the automotive sector is a key industry to all named regions.

Although Lower Franconia is in the state of Bavaria, its automotive sector is relatively weak. This is surprising because the Bavarian state is, as previously detailed, one of the key regions of the German automotive sectors. As previously demonstrated, the automotive sector in Bavaria accounts for about 28 percent of its total revenue, whereas in Lower Franconia the automotive sector accounts for merely 14 percent. While the automotive sector is not particularly small, it lacks the average size of Bavaria's automotive sector. Lower Franconia's automotive sector is also less involved in international trade, clearly shown in the discrepancy between Lower Franconia's and Bavaria's numbers. Whereas Bavaria's automotive sector gains 67 percent of its revenue from foreign sales, Lower Franconia only earns 47 percent. Even though 47 percent is still a high number, it is 20 percent less than Bavaria's total foreign sales. As mentioned before, there is no possibility to further analyze the destinations and origins of import and export for regions smaller than states, thus the trade to China cannot be further discussed with any region.

Comparing Lower Franconia to Germany overall leads to more similar results. The automotive sector accounts for 16 percent of Germany's production sector revenue, much more akin to the results from Lower Franconia. Compared to the overall European automotive sector, the Lower Franconian automotive sector is relatively strong, considering that, for example, Lower Franconia employs more people in its automotive sector than the average in the EU. Lower Franconia has more than 14 percent of its employees working in the automotive industry, whereas in the EU only about 11.4 percent of employees work in automotive industry⁷². In total, Lower Franconia is regionally comparatively weak in terms of automotive industry clout, on a national level Lower Franconia is about average, and looking at the total region of the EU Lower Franconia is relatively strong.

⁷² European Automobile Manufacturers Association 2019, p. 13.

Conclusion

The automotive industry in Lower Franconia has the great regional advantage of being in Germany's Bavaria, an industrial powerhouse as shown in this study. The occurrence of major German OEMs in southern Bavaria has even pushed the development of a supplier industry in Lower Franconia. The results of our survey about those firms operating in and from Lower Franconia are very interesting, however, on a small scale. 11 out of the 97 companies participated and the gross response rate was 11.34 percent. In summary, most respondents' firms (66.6 percent) are quite small with employee numbers ranging from 0 to 49. Overall, there is a clear preference for the legal status of GmbH among the respondents, which does not seem to correlate with profit opportunities or employment figures, as the answers were rather heterogeneous among the latter. Due to the inclusion of firms from "Industry and Production", a comparison between the entire manufacturing industry and the automotive industry as a part thereof was conducted regarding revenue and employee figures. Additionally, we explored the discrepancy between the total selection of automotive suppliers including "Industry and Production" and the net automobile and parts manufacturers and concluded that the reason might be the different tiers in the supply chain, which would lead to non-exclusive automotive part manufacturers as tier 3 suppliers.

Our research shows that the most common entanglement of firms in Lower Franconia's automotive sector is that of commercial relationships, closely followed in prevalence by companies without connections to China. None of our participants had any factories or branches in China, and one respondent had a Chinese mother company. For the companies with commercial relationships with China, both import and export seem to be the major components. None of our participants seems to have any other entanglement to China other than trade relationships. For example, none appear to employ Chinese staff, have any financial investments, or participate in collaborations like joint ventures. Therefore, we conclude that the majority of companies in the Lower Franconian automotive industry only have trade relationships with China. Of the companies with no connections to China, most expressed a neutral or positive prognosis regarding the future of the automotive industry in China but were not interested in any entanglements with China. Only a minority seemed to have plans to expand their business to China; the rest seemed to be more interested in other countries or had no interest in going international whatsoever.

The analysis of the regions of Bavaria, Germany and Europe showed clear trends in the automotive sector. The numbers showed the importance of the automotive sector especially for Bavaria and Germany, but also for Europe as a whole. The survey finds that the automotive sector's entanglements in Lower Franconia are essentially similar to each of the other examined regions, considering that its relationships with China are mostly export-driven. Although the automotive sector's total share of the economy in Lower Franconia is not as high as in Bavaria itself, it is still strong in the region, creating extensive job opportunities and contributing a significant chunk of Bavaria's total revenue. In the near future, the announced support of the Bavarian government might develop the automotive sector in Lower Franconia even further. As seen in the analyzed articles, the automotive sector is indeed likely to change in the future. The German automotive sector must follow new trends, and the Lower Franconian industry, especially because it is dominated by suppliers, must grow and develop along with these new advances.

The Machinery and Technology Industry in Lower Franconia

The Machinery and Technology Industry

The scope of “Machinery and Technology Industry” as a subdivision of the overall case study required some further definition. The most relevant industry that comes to mind is the machinery industry itself, because it is the industry which employs the most people in Germany and the second most important industry in terms of revenue. From a general perspective, machinery deals with construction of tools and components that enable serial production and industrial manufacturing. “Machinery” can be considered an interdisciplinary industry which is also involved in process optimization, material science, and mechanical design. A characteristic that is distinctive from other industries might be that “machinery” does not typically serve the final consumer, but rather facilitates the work of other industries such as the automotive industry.⁷³ “Technology” on the other hand is not listed as a possible selection criterion by the Chamber of Industry and Commerce, probably due to being a very general term that does not characterize an official industry on its own. Because our research was largely based on the company information provided by the Chamber of Industry and Commerce’s list, we decided to use a very broad search filter,⁷⁴ with Machinery being just one among many of the included industries.

The large companies (more than 250 employees), which participated in the survey and we were able to identify through their voluntarily provided contact information, were mostly committed to the production of machinery or machine components e.g. pipes for industrial, mechanical, or construction usage. Smaller companies and those which had no entanglements with China operated in areas like facility management and construction. The wide range of included companies and the somewhat ambiguous definition of “technology” should be taken into consideration by the reader in regards to the survey’s results and throughout the remainder of this industry report. Therefore, from this point

⁷³ Klinkusch, Julia, „Branchenprofil Maschinenbau in Deutschland“, *Ingenieur*, n.d.,
<https://www.ingenieur.de/karriere/branchenprofile/maschinen-und-anlagenbau/#allgemeines>

⁷⁴ A detailed list of the selected options for each chosen industry has been included in the Appendix.

onward, the content of this industry report focuses primarily on the machinery industry. Furthermore, as previously stated, our industry is unique in the sense that it does not generally produce consumer goods, but instead provides the means and equipment for other industries to construct, function, and manufacture other products. This definition is very strict and may not apply to some machinery firms with a high degree of diversification and multiple product lines.

Notable German companies in the machinery industry include Bosch and ThyssenKrupp AG, but there are also a large number of small and medium-sized companies, some of which are so-called “Hidden Champions” that produce high-quality, highly specialized components and machinery solutions. The machinery sector employs over a million workers, making it the single largest industry in Germany in terms of employment. The backbone of the German economy is said to be rooted in the so called “*Mittelstand*”, which can be understood as an umbrella term for small- and medium-sized companies.⁷⁵ There are about 6,500 enterprises that belong to the machinery industry, 5,655 of which have fewer than 250 employees. In fact, in 2017 the industry averaged around 179 employees per company.⁷⁶ Companies in the machinery industry also have over 183,000 engineers on their payroll,⁷⁷ which is approximately 13 percent of all the engineers in Germany, depending on which statistics are used.⁷⁸

Revenue Distribution in the Industry

The machinery industry accounted for about 262 billion euros of total revenue, second only to the automotive industry. Other industries relevant to our surveyed firms also achieved significant amounts of revenue, including the Chamber of Industry and

⁷⁵ Wer liefert was, „Kleine Firmen – große Wirkung: So wichtig ist der deutsche Mittelstand für den Maschinenbau“ n.d., *inside business*, <https://www.wlw.de/de/inside-business/branchen-insights/maschinen-anlagen/mittelstand-maschinenbau>

⁷⁶ Bundesministerium für Wirtschaft und Energie, *Maschinen- und Anlagenbau*, n.d., <https://www.bmwi.de/Redaktion/DE/Artikel/Branchenfokus/Industrie/branchenfokus-maschinen-und-anlagenbau.html>

⁷⁷ Wer liefert was, „Kleine Firmen – große Wirkung: So wichtig ist der deutsche Mittelstand für den Maschinenbau“ n.d., *inside business*, <https://www.wlw.de/de/inside-business/branchen-insights/maschinen-anlagen/mittelstand-maschinenbau>

⁷⁸ Johannes Wendland, „Wie viele Ingenieure gibt es in Deutschland?“, *ingenieur*, July 06, 2012, <https://www.ingenieur.de/technik/wirtschaft/arbeitsmarkt/wie-ingenieure-es-in-deutschland/>

Commerce's categories "electrical engineering" (184 billion euros), "metal production and processing" (110 billion euros), "plastic material processing" (66 billion euros) and construction (86 billion euros).⁷⁹

The machinery industry is a traditionally export-orientated industry which constitutes a significant portion of Germany's total exports.⁸⁰ In 2018, the value of exported machinery goods was estimated at around 178 billion euros. China was the second most important export destination, accounting for 19.1 billion euros and 10.7 percent of the overall revenue. This falls closely behind the USA, which remains Germany's primary export target for machinery goods and provides 10.8 percent of export revenue.⁸¹ With the machinery industry and other tech-related industries depending heavily on exports, both the trade war between China and the USA and general protectionist tendencies around the globe are said to be responsible for a revenue drop of nine percent in the first half of 2019. Further explanation could be given by the structural changes in the car industry due to climate change policies, electro-mobility, and the emissions rate manipulation scandal.⁸² Lastly, China is not only a trade partner but also a competitor, as it is home to the world's largest machinery industry itself.⁸³ The development of business relations between Germany and China also causes many challenges for both the German government and German companies. Unpleasant issues like unfair competition, forced technology transfers, data safety, data security, economic espionage, and the uneven playing field

⁷⁹ Statista Reserach Department, *Umsätze der wichtigsten Industriebranchen in Deutschland in den Jahren von 2016 bis 2018*, August 2019.

<https://de.statista.com/statistik/daten/studie/241480/umfrage/umsaetze-der-wichtigsten-industriebranchen-in-deutschland/>

⁸⁰ Statista 2019, *Exporte aus Deutschland*

⁸¹ Verlag Deutscher Maschinen- und Anlagebau, *Deutscher Maschinenaußenhandel*, 2018,

https://www.vdma.org/documents/105628/29336164/Deutschland_Maschinenaussenhandel_2018_12_1550480861963.pdf/6ad859e8-aaa7-ab26-b6d9-537e6ccf76b8

⁸² Janczura, Sarah, „Der deutsche Maschinenbau in der Krise und wie Tech-Unternehmen darauf reagieren wollen“, *ingenieur*, August 09, 2019,

<https://www.ingenieur.de/technik/fachbereiche/maschinenbau/der-deutsche-maschinenbau-in-der-krise-und-wie-tech-unternehmen-darauf-reagieren-wollen/>

⁸³ Koradin Mediengruppe, *China ist weltgrößter Maschinenbauer*, April 01, 2019,

<https://industrie.de/top/weltmarkt-fuer-maschinen-steuert-2018-sicher-durch-rauer-werdende-gewaesser/>

and market restrictions in China are frequently discussed and debated on the political agenda.⁸⁴

Methodological Approach

Regarding the design of the industry-specific survey, after the initial low participation rate, we decided to significantly shorten our industry-specific survey to encourage participation. We therefore subsequently focused on key questions regarding economic espionage, Chinese employees, the US-China trade war, and competition. We believed that these questions offered some degree of comparability among the questions so that we could establish some connections between them and other questions in the analysis. Especially topics such as economic espionage and forced technology transfer are hot topics in our industry at the moment.⁸⁵

Our chosen search filters resulted in a total of 4763 firms. Companies that belong to the automobile industry were discarded. In our first wave of e-mails we contacted 423 firms, selected primarily by the availability of their contact information. Due to the ensuing lack of responses, we then decided to reduce the questionnaire to the most relevant questions and sent out a second wave of e-mails to 372 firms, including some new additions to the list for which we found contact information. This resulted in a slightly increased response rate, which we tried to further augment by phone calls to some companies. Here we preferred larger enterprises for the sake of perceived relevance and our overall restricted time schedule. In the end, 28 firms were willing to participate in the survey, only 19 of which completed all of the questions. Nonetheless, responses from incomplete surveys were also used when pertinent.

We used literature available on the internet to strengthen arguments and connections that could be gleaned from the survey. This was necessary to compensate for the low participation rate, which would not allow for a statistically significant line of argumentation. The literature we used included articles, studies and statistics published by relevant

⁸⁴ Hua, Sha, „Unternehmen berichten von Zwang zum Technologietransfer in China“, *Handelsblatt*, May 20, 2019, <https://www.handelsblatt.com/politik/konjunktur/nachrichten/umfrage-unternehmen-berichten-von-zwang-zum-technologietransfer-in-china/24360418.html?ticket=ST-2591501-YrXQaKuDUGfShsdQ7zr5-ap6>

⁸⁵ The questions for the specific industry survey are listed in the Appendix.

journals and state agencies, as well as online sources. Numbers based on official statistics were naturally used preferentially. Further research on the companies was conducted based on their answers in the survey, however, because of a data protection agreement some sources cannot be directly stated to protect the privacy of the firms.

Findings of the General Survey

The first part of the general survey endeavored to establish whether or not entanglements existed between China and our selected machinery and technology firms in Lower Franconia.

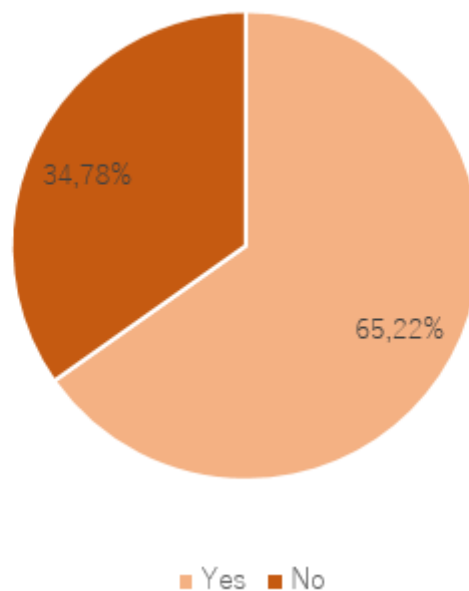


Figure 4: Does Your Firm Have Entanglements with China? (n=23)

As can be seen in Figure 4, roughly two-thirds of the surveyed companies confirmed that they indeed engage in some form of entanglement with China. In response to the follow-up question asking them to specify their connection to China, a large majority of companies reported export relationships (91.7 percent), with import relationships falling in second place by a significant amount (66.7 percent).

By looking at Figure 5, one can see that other types of entanglement were comparatively insignificant. Despite the small sample size of 12, these results can be considered rather unsurprising, due to the fact that German machinery and technology firms belong to a

traditionally export-orientated industry and accounts for a substantial portion of Germany's total exports.⁸⁶

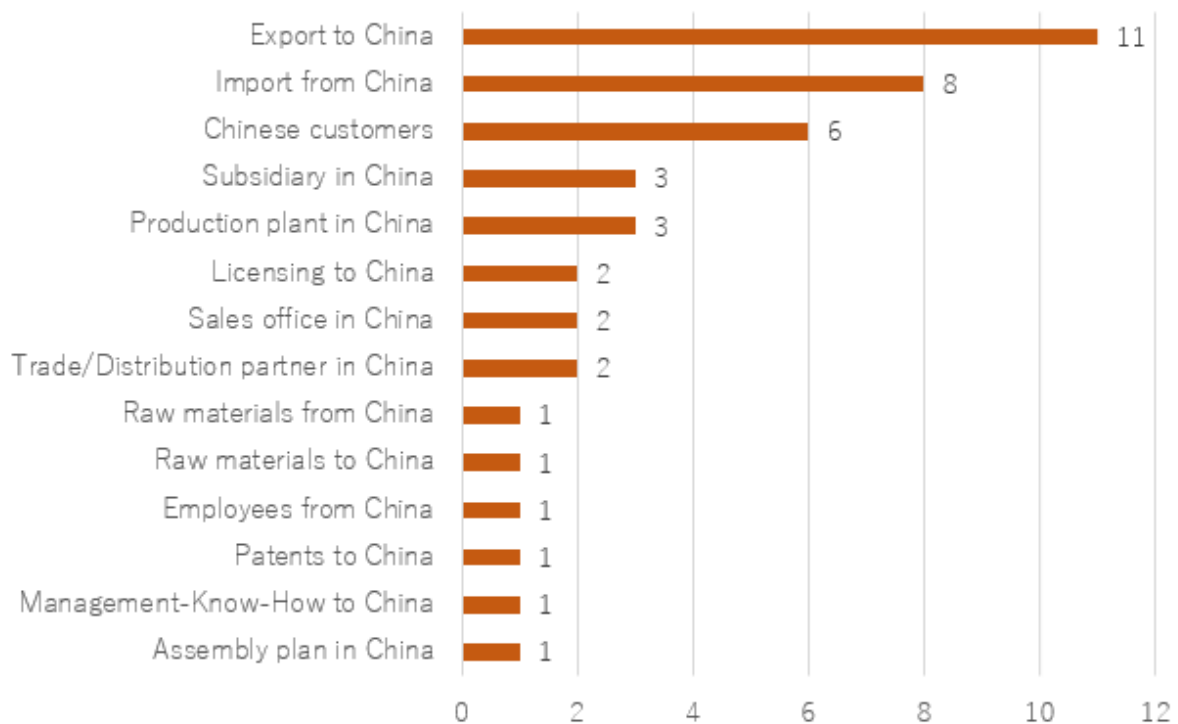


Figure 5: Which Entanglements Apply to Your Firm? (n=12)

Because multiple selections were possible in the checklist, we reviewed the answers of the individual participants to obtain a more detailed understanding of the results. First of all, there is a pretty obvious discrepancy between the number of reported entanglements for “Exports to China” and “Chinese Customers”. A possible explanation for this discrepancy would be that those companies have customers that are other German or foreign companies with locations in China. To find answers, we researched two of these companies, identified by their provided contact e-mail addresses (a voluntary item on the survey); our research showed that, according to news reports, they do in fact have Chinese customers. One company specializes in pipe systems, while the other produces highly-specialized machinery that is used on cargo ships. Both are important players in their respective fields worldwide. We do not know whether these exporting firms simply did not check “Chinese customers” by accident because they sped through the survey without

⁸⁶ Statista Research Department, *Exporte aus Deutschland nach Güterabteilungen (Top 15) im Jahr 2018*, August 23, 2019, <https://de.statista.com/statistik/daten/studie/151019/umfrage/exportgueter-aus-deutschland/>

reading the options thoroughly, or perhaps responded in this way because they did not see this answer option as a top priority.

The participant responses for all physical asset selections shown in Figure 5 (production plant, assembly plant, subsidiary, and sales office) are distributed among four of the surveyed companies. These companies are listed along with their respective products in Figure 6. In this table we can see that three of these companies have subsidiaries in China, two of which also own a production plant or assembly plant in China. Company 3 even has both. Further research revealed that Company 3 is a multinational technology enterprise which produces specialized machinery and is sometimes referred to as a “Hidden Champion”. Company 4 does not conduct any manufacturing in China but owns a subsidiary in the country.

Company No.	Product	Subsidiary	Production Plant	Assembly Plant	Sales Office
Company 1	n/a	Yes	Yes	No	No
Company 2	n/a	No	Yes	No	Yes
Company 3	Machinery	Yes	Yes	Yes	Yes
Company 4	Pipes/building tech.	Yes	No	No	No

Figure 6: Fixed Assets in China among Participating Companies by Type

The survey results pertaining to company size (in regards to number of employees) are visualized in Figure 7. For this question we achieved a well-balanced participation of small, medium, and large companies.

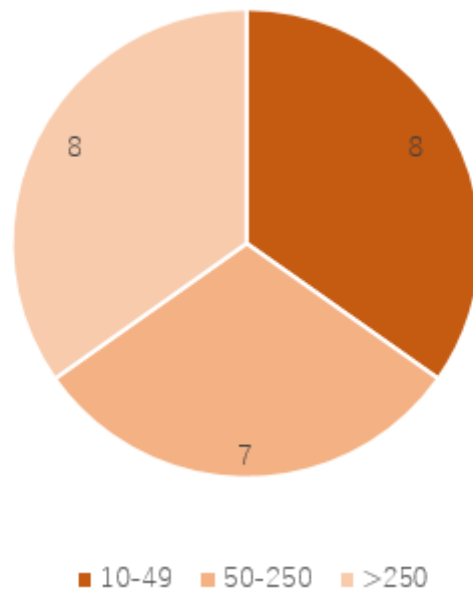


Figure 7: How Many Employees Does Your Company Have? (n=23)

As can be seen in Figure 8, larger enterprise size appears to positively correlate with existing entanglement(s) with China. To strengthen this argument, we reviewed the answers of the smaller firms in more detail. Three out of four companies with 10 to 49 employees and a reported existing entanglement with China did not specify what kind of entanglement (the question of Figure 5). The one remaining small company responded with “licensing to China”. On the other hand, the larger companies responded that they engage in export, import, and have fixed asset investments in China.

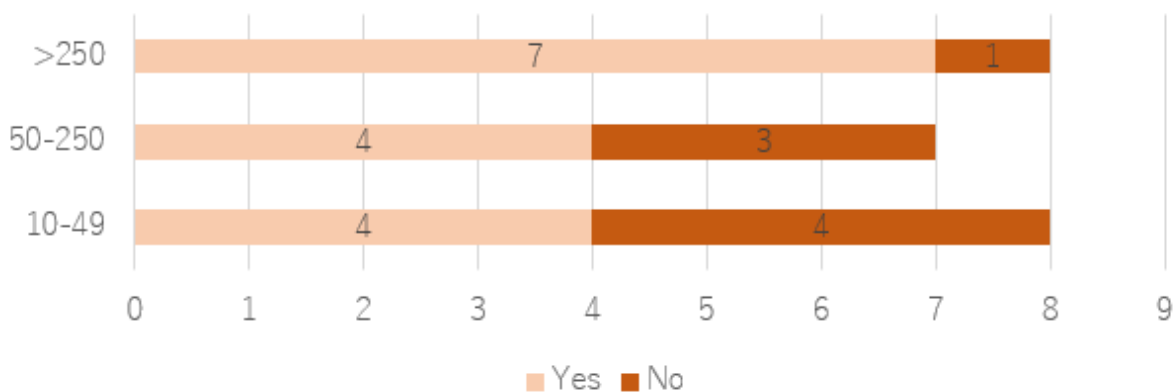


Figure 8: Relationship Between Employee Number and Entanglement with China

Motivations for Entanglement with China

When looking at the motives for entanglement with China in Figure 9, it becomes clear that the survey participants are primarily motivated by the desire to enter the Chinese market. Low cost of production, whether due to raw materials or labor, does not constitute a main driving force for China-related business operations. Two of the three companies that checked low cost of labor, material, or manufacturing as reason for their entanglement with China also reportedly have production or assembly facilities in China. According to their website, one of the companies that checked “market entry” as a motive stated that they see China not only as a market for sales but also as a way to evade the increasing supervision by US-authorities on the US-market. Three companies named technical know-how as a motive for China-related business. One of these companies is involved in a joint venture with a Chinese enterprise that develops innovative facility management solutions to improve the energy efficiency and environmental sustainability of buildings. Despite being infamous for pollution in the West, in recent years China has demonstrated efforts in policy and investment to improve environmental protection. Therefore, China appears to be a promising future market for green energy and sustainability solutions.⁸⁷

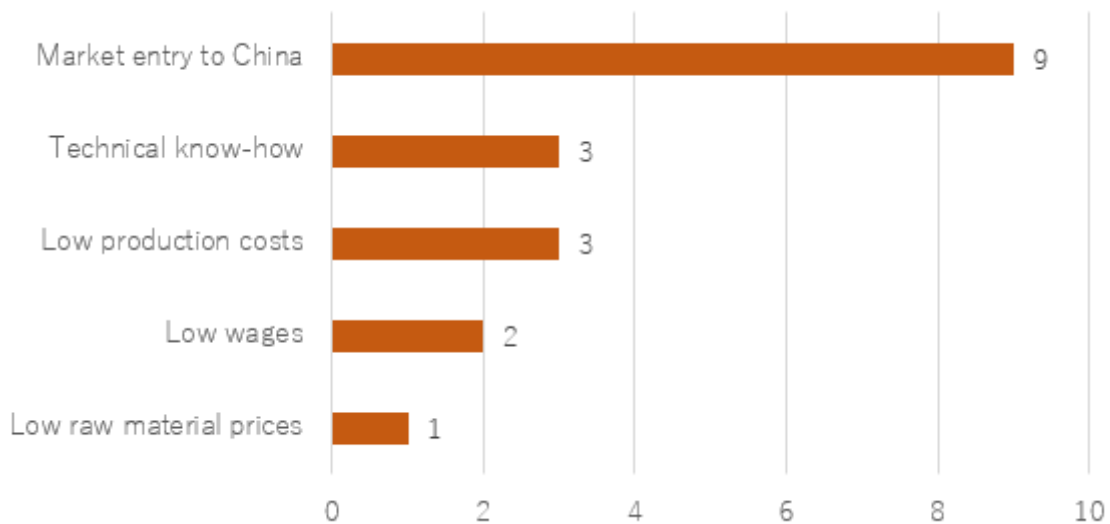


Figure 9: What Are the Main Reasons for your China-Related Business? (n=11)

⁸⁷ HKTDC Research, *China's Environmental Market*, 2019, <http://china-trade-research.hktdc.com/business-news/article/China-Consumer-Market/China-s-Environmental-Market/ccm/en/1/1X000000/1X002L45.htm>

Expanding the Business to China

According to survey results, the majority of companies that maintain some kind of entanglement with China are willing to expand those business relations or to at least consider doing so (Figure 10). Companies that have no existing connections with China also do not report interest in this future possibility (Figure 11). In both cases, the companies have been asked: “Do you consider expanding your business to China?”

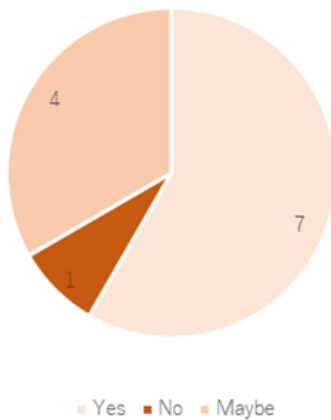


Figure 10: Existing Entanglement with China (n=12)

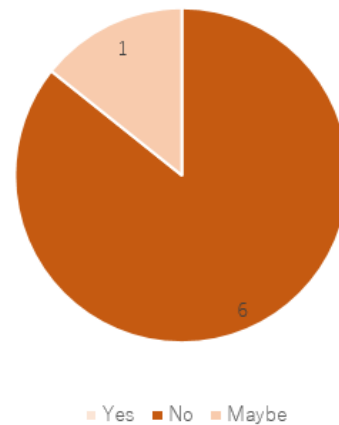


Figure 11: No Entanglement with China (n=7)

We wanted to understand why some firms are willing to expand their business relations with China while others are not. For this reason, we asked companies with existing entanglements about China as a location for investment and about their company’s revenue development in China-related business operations over the last 3 years. As can be seen in Figure 12, we found that a firm that is willing to expand is more likely to have experienced increasing revenue and more likely to see China as a top 3 investment destination. Only one company expressed willingness to expand its China-related business despite both experiencing revenue losses and seeing China as a relatively bad investment destination. Further investigation showed that this particular company has already committed to a joint venture while also investing into manufacturing facilities in China. On one hand, this could explain why the company is experiencing decreased revenue at this point in time. On the other hand, their reported opinion about China being

a bad location for investment may simply reflect their lack of satisfaction with the current development of their existing commitments in China.

Company No.	Do you consider to expand your business to China? (n=12, entangled firms)	How do you classify China as a location for your company's investments in a global comparison? (n=12)	How has your revenue with your China-related business developed over the past 3 years? (n=12)
Company 1	Yes	Top 3	Increased
Company 2	Yes	Top 3	Increased
Company 3	Yes	Top 3	No change
Company 4	Yes	Top 5	Increased
Company 5	Yes	Top 10	Increased
Company 6	Yes	Outside Top 10	Decreased
Company 7	Yes	No planned investment	No change
Company 8	Maybe	Top 10	Increased
Company 9	Maybe	No planned investment	No change
Company 10	Maybe	No planned investment	No change
Company 11	Maybe	No planned investment	No change
Company 12	No	Outside top 10	Decreased

Figure 12: Expansion Plans, China as an Investment Location and Revenue Changes in China-Related Business

Future Outlook for the Industry in China

There seems to be quite a bit of ambiguity in the current business environment. When asking about the business prospects of their industry in the next 3 years, companies that are already entangled with China did not give a clear response, with neither “very good” nor “very bad” being selected by any of the survey participants. Ultimately, the average of these responses was 3.25, which represents a slightly positive business outlook (Figure 13).

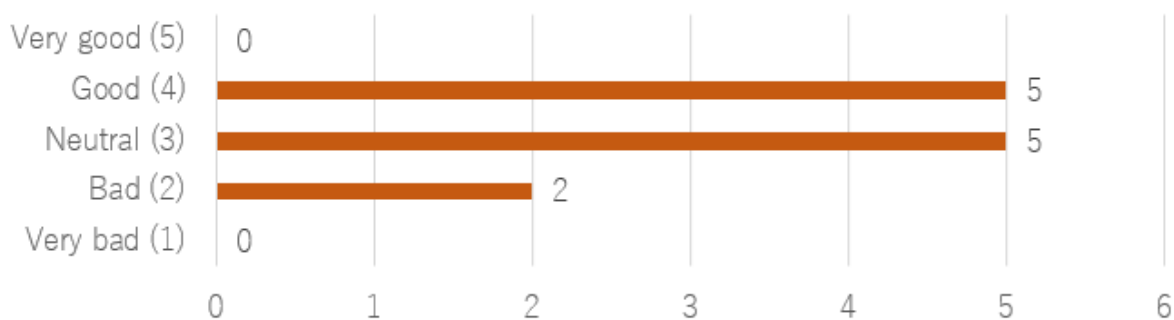


Figure 13: How Do You Rate the Business Prospects for Your Industry in China in the Next 3 Years? (n=12, With Entanglement)

Firms that are not entangled with China think the prospects for their industry in China to worsen over the next 3 years (Figure 14). We also asked these companies how they perceive the barriers for market entry into China. The average of these responses was 1.86.

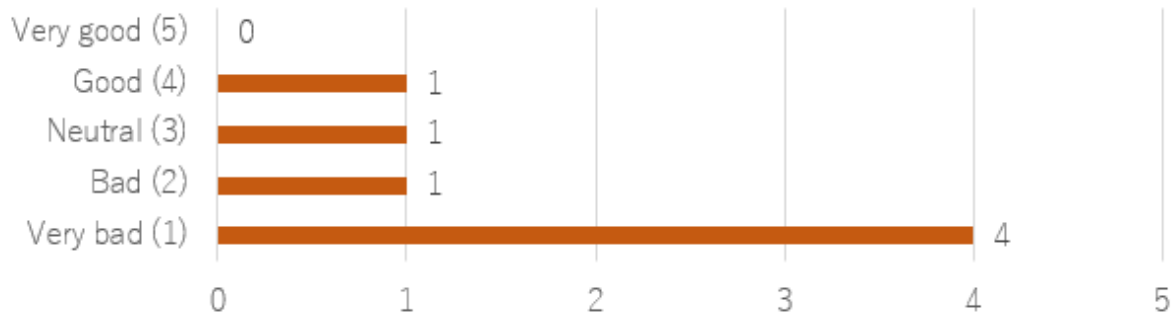


Figure 14: How Do You Rate the Business Prospects for Your Industry in China in the Next 3 Years? (n=7, No Entanglement)

As demonstrated by Figure 15, the majority of participating companies do not see strong market barriers for their industry. This would mean that there must be other reasons for their negative perception of business opportunities in China.

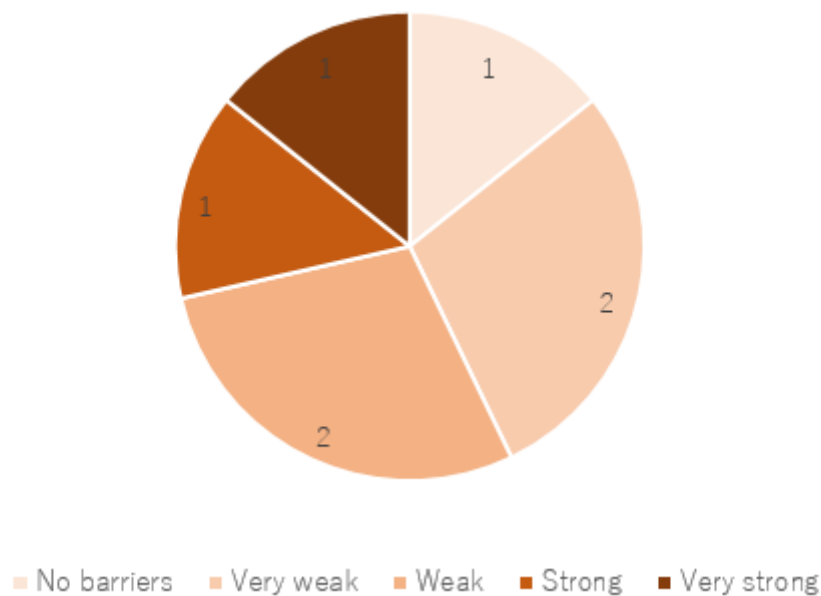


Figure 15: How Do You Rate the Market Access Barriers for Your Industry in China? (n=7)

Overall, the opinions among the participating firms are difficult to assess and impossible to thoroughly explain without conducting an in-depth qualitative interview. This case study

can only provide the speculation that the current market environment is experiencing an episode of instability caused by the trade war, increasing protectionist tendencies and spreading allegations about forced technology transfer. That being said, some companies actually see increasing opportunities in China due to the aggressive trade policies and increasing supervision of European firms by the USA. Therefore, China may become a desirable alternative for investment and diversification.

Entanglements with China

Chinese Employees in Lower Franconia

The tech and machinery survey revealed that only two companies have Chinese employees for their business location in Lower Franconia (Figure 16). Both of these firms are large-sized and have a long-term commitment to their entanglement with China e.g. fixed-assets and export relations. Their products revolve around machinery and pipe components for industrial usage.

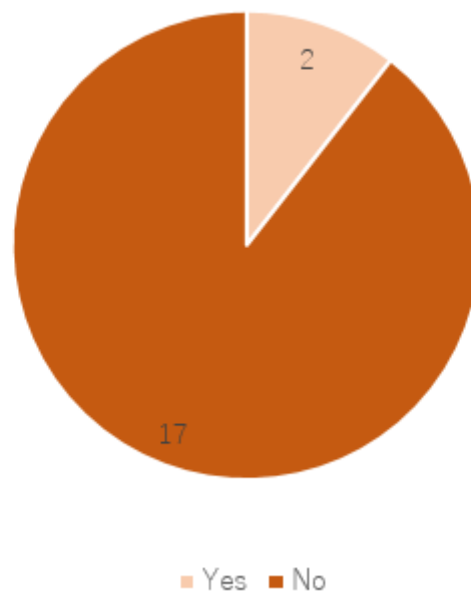


Figure 16: Do You Hire Chinese Employees/Interns for Your Business Locations in Lower Franconia? (n=19)

We also asked the firms with entanglements with China if they experienced any kind of problems related to intercultural differences. Although responses indicated that the participating companies have not yet encountered significant issues, the results may suggest that some degree of insecurity remains in this regard. As of yet, most companies

do not provide any training to improve intercultural understanding (Figure 17). Two out of the three companies that do reportedly provide this kind of training have fixed assets in China.

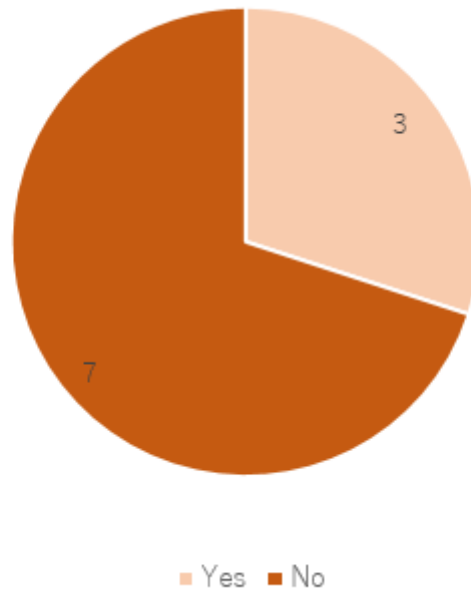


Figure 17: Are Seminars/Courses Held in Your Company to Promote Intercultural Understanding? (n=10)

Economic Espionage

China's digital rise has led to challenges for the German government on several levels, and issues like data security, data protection, and technology theft have become a recurring part of the political agenda. German companies are often confronted with intellectual property theft, industry espionage, and forced technology transfers. Especially in the machinery and tech sectors, espionage can be considered a sensitive topic. Our results in Figure 18 indicate that German companies do not necessarily perceive Chinese industry espionage as a threat, even showing a slight preference towards "no threat" at an average of 2.72 on our given scale. Yet, when focusing on individual survey participants it becomes clear that companies with an existing entanglement to China are more likely to perceive economic espionage as a threat. Firms with an entanglement average 3.45 on the same question (n=11) while no-entanglement firms average 1.57 (n=7). Three of the companies that rated the threat of industry espionage as a 4 or 5 (strong threat) have fixed asset investments in China. One company is involved in a joint-venture with a Chinese firm and evaluated the threat of espionage at a 5, the strongest possible response.

This seems to indicate that the perceived threat of economic espionage is positively correlated with a stronger entanglement with China.

No threat	1.	2.	3.	4.	5.	Strong threat
Responses (total)	4	3	6	4	1	$\bar{x}=2,72$
Responses (with entanglement)	0	1	5	4	1	$\bar{x}=3,45$
Responses (no entanglement)	4	2	1	0	0	$\bar{x}=1,57$

Figure 18: Do You Consider Chinese Industry Espionage as a Threat for Your Business? (n=18)

Interestingly, firms with and without connections to China revealed a well-balanced consensus that the German government is not providing sufficient protection against economic espionage (Figure 19). The one company which has a direct entanglement with China and rated the German government protection as 4 (rather good) still perceives the threat of industry espionage as 4 (rather strong). This company has a production plant located in China. A possible interpretation for this response combination could be that the (perceived) threat of economic espionage indeed grows when a company has a business location in China.

Bad protection	1.	2.	3.	4.	5.	Good protection
Responses (total)	2	5	9	1	1	$\bar{x}=2,66$
Responses (with entanglement)	1	3	6	1	0	$\bar{x}=2,64$
Responses (no entanglement)	1	2	3	0	1	$\bar{x}=2,71$

Figure 19: Do You Think That the German Government Is Adequately Protecting Your Company against Industrial Espionage? (n=18)

The majority of companies believe that the trade war between China and the USA has had a negative impact on their businesses (Figure 20). Still, some companies with connections to China appear to see opportunity arising from the current situation. This might be explained by the fact that the US-administration is currently increasing oversight on German firms while also enacting aggressive trade policies against the EU. While the USA still remains the number one export destination for German machinery goods, China may become an alternative for diversification in the future.

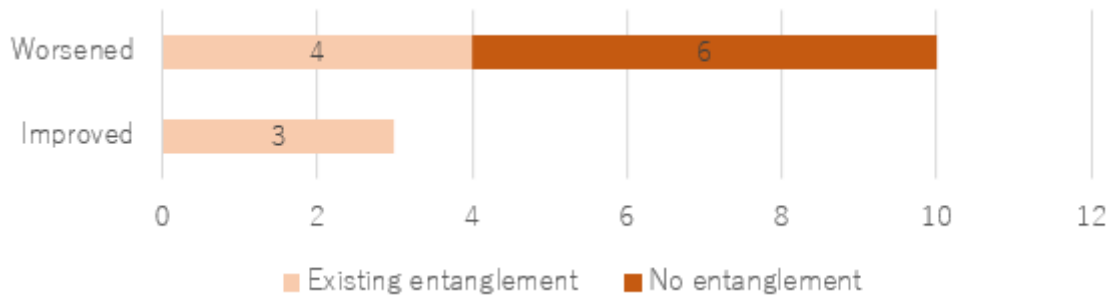


Figure 20: Due to the US-China Trade War Our Business Conditions: (n=14)

Firms with entanglements with China consider themselves to be in competition with both German and Chinese companies. Firms without entanglement do not share that sentiment (Figure 21).

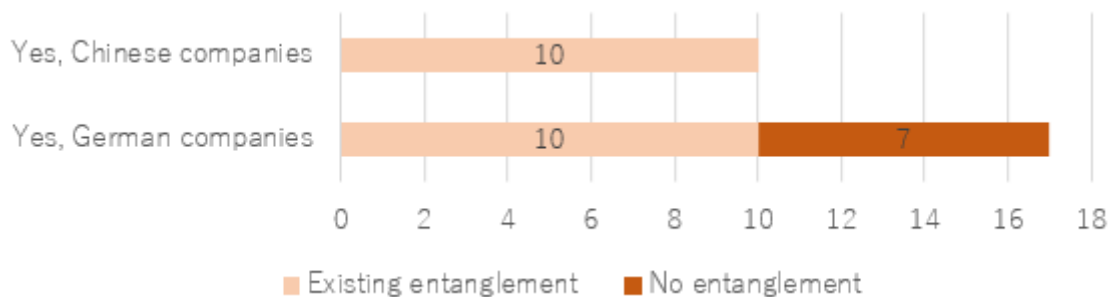


Figure 21: Do You Consider Yourself to Be in Competition with Other Firms? (n=17)

The Big Picture

Both the results from the surveyed companies in Lower Franconia and the statistics on German export goods show that machinery- and tech-related industries are very export-orientated. Our results can therefore be seen as a “local” confirmation of the national pattern, as seen below.

More than one third of all machinery and machinery-related industries in Germany are situated in Bavaria and Baden-Württemberg, which makes the southern regions an important region in regards to this industry that justifies further research. Bavaria alone accounts for 23 percent of all industry profits in Germany, 21 percent of all employees, and 14 percent of all companies in the industry. The only other countries that can come close to this are North-Rhine-Westphalia and, on a smaller scale, Lower Saxony. Another interesting fact is that regions with strong representation by the machinery industry typically feature the lowest unemployment rates compared to the rest of the Germany. This emphasizes the importance of the industry for national economic competitiveness

and societal stability. Such statistics also indicate that the machinery industry builds horizontal and vertical connections to other industries that stimulate the local economy.⁸⁸ Lower Franconia itself offers several competitive traits that are beneficial to the growth of machinery and technology firms. It is not only centrally located but is also interconnected by a well-built transportation infrastructure (highways, railroads, and cargo ship routes) in direct proximity to Frankfurt, Nuremberg, and Stuttgart. Innovative power is promoted by local Universities and research institutes, such as the Fraunhofer Institute. The Julius-Maximilian-University in Würzburg has even introduced the bachelor's and master's degree major "Nanostrukturtechnik" (Nanostructure Technology), which was a national novelty. Another example is the major "Technische Informatik" (Technical Computer Science) which was responsible for the development of four satellites under the University of Würzburg Experiment (UWE) program. Other technologies are being developed with a focus on applicability to machinery, aerospace, and medicine.⁸⁹

As previously stated, China and the USA are the main export destinations for German machinery. Nonetheless, both of these markets demonstrated severe setbacks in 2017. 16.3 billion euros were earned in the US market, which was still a growth of 2.9 percent but a decline of 8.2 percentage points compared to the growth rate of the previous year. When looking at China, exports plummeted by 9.3 percent of export value in 2017, while the year before had already absorbed a drop of 5.9 percent. When looking at the single European market on the other hand, statistics show an exports revenue increase of 4.1 percent. Today, the EU remains Germany's third most important export market. Since Germany is in close geographical proximity from European countries and shares a political and economic structure with other EU countries, the EU market should persist as a beacon of stability in times of global conflict and crisis.⁹⁰ Although business with the USA recovered in 2018, German companies should be wary of possible fluctuations and be careful about being too dependent on individual regions.⁹¹

⁸⁸ Informationsdienst des Instituts der deutschen Wirtschaft, *Die starken M+E-Regionen*, October 18, 2018, <https://www.iwd.de/artikel/die-starken-m-e-regionen-407041/>

⁸⁹ Regierung von Unterfranken, *Unterfranken - Ein starker Wirtschaftsstandort in Deutschlands Mitte*, 2019, <https://www.regierung.unterfranken.bayern.de/regbezirk/00111/index.html>

⁹⁰ Paul, Holger, *Europa ist und bleibt Erfolgsgarant für den Maschinenbau*, February 23, 2017, <https://www.vdma.org/v2viewer/-/v2article/render/16139353>

⁹¹ Handelsblatt, *Maschinenbau-Export verzeichnet deutliches Plus im US-Geschäft*, June 20, 2018, <https://www.handelsblatt.com/unternehmen/industrie/vdma-maschinenbau-export-verzeichnet->

The second strongest producer of the machinery industry in Europe is Italy (ranking 5th in the world), with a 2017 total revenue of 116 billion euros. Other relatively strong countries in the machinery sector include France (48 billion euros in 2017), the United Kingdom (38 billion euros) and the Netherlands (27 billion euros). Nonetheless, Germany remains the undisputed champion of the machinery industry in Europe with a revenue of 260 billion euros in 2017.⁹²

Conclusion

The research on individual participants revealed that some companies likely did not answer the questionnaire correctly. That being said, questions that had relatively high participation (e.g. regarding entanglement form) confirmed patterns which have already been statistically proven by other studies. A good example would be the export-orientated nature of the machinery industry that was clearly reflected in our own survey as well. In this respect, our study was able to confirm that the machinery sector in Lower Franconia appears to be similar to the machinery industry in Germany as a whole. Among the companies that participated in our survey, large companies with 250 or more employees were reportedly more likely to have existing entanglements with China. These enterprises also showed a tendency toward fixed asset investments in China that went beyond mere exports. The overall primary motivation for entanglement seems to be the Chinese market itself as opposed to low costs. Results also suggested a relatively high ambiguity towards the current business outlook for the machinery and tech industry in China, which could be increasingly influenced by events like the trade war and the rise of protectionist tendencies around the world. Economic espionage and forced technology transfer seem to be relevant topics from the perspectives of the companies we surveyed. These concerns should be taken seriously, especially when considering that China features the largest machinery industry in the world and is highly ambitious in the goal of becoming a global leader in this field. It will be important for the German industry to maintain innovative power and competitiveness against Chinese companies in the future while also successfully rising to challenges such as climate change and increasing regulation of the domestic market.

deutliches-plus-im-us-geschaeft/22714218.html?ticket=ST-2558564-V9SrtlwWjakDHTcjAsq7-ap6

⁹² Weinzierl, Stefan, *Maschinenbau: Das sind die 10 stärksten Länder*, June 19, 2017,

<https://www.produktion.de/bildergalerien/maschinenbau-das-sind-die-10-staerksten-laender-279.html>

The Clothing Industry in Lower Franconia

The Clothing Industry

According to the Federal Statistics Office, the textile sector includes the textile industry, the clothing industry, the leather industry, and the chemical fiber industry,⁹³ all of which are part of the manufacturing sector.⁹⁴ In a broad sense, the textile industry refers to the treatment procedure and the distribution of any textile goods. Therefore, the textile industry and the clothing industry can be viewed as disparate parts of the textile economy, indicating different steps of the process.⁹⁵

The textile industry accounts for the largest share of the textile sector, followed closely by the clothing industry.⁹⁶ Both industries produce one of the most important consumer products in Germany, textiles and clothing.⁹⁷ The textile and clothing industry in Germany consists of primarily small and medium enterprises (SMEs). In the course of globalization and the ongoing structural changes worldwide, large parts of the textile processing industry have been outsourced to low-income countries in recent years. Well-known examples of this phenomenon include the companies Adidas, Puma, and Hugo Boss, which are all based in Germany, but have shifted their manufacturing sites to other

⁹³ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019,

<https://de.statista.com/statistik/studie/id/14051/dokument/textil-und-bekleidungsindustrie-in-deutschland--statista-dossier/>

⁹⁴ Statista, *Kleidung, Schuhe & Textilien - Marktdaten zur Textil-, Bekleidungs-, Schuh- und Lederwarenindustrie*, n.d.,

<https://de.statista.com/statistik/kategorien/kategorie/12/themen/92/branche/kleidung-schuhe-textilien/>

⁹⁵ Neugebauer, Carolin and Schewe, Gerhard, "Wirtschaftsmacht Modeindustrie – Alles bleibt anders", *Aus Politik und Zeitgeschichte*, December 23, 2014.,

<http://www.bpb.de/apuz/198384/wirtschaftsmacht-modeindustrie-alles-bleibt-anders?p=all>.

⁹⁶ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.7

⁹⁷ Umwelt Bundesamt, *Textilindustrie*, August 15, 2019,

<https://www.umweltbundesamt.de/themen/wirtschaft-konsum/industriebranchen/textilindustrie#textpart-1>

countries.⁹⁸ As a result, around 90 percent of clothes sold in Germany are imported from China, Turkey, and Bangladesh.⁹⁹

In general, the textile industry consists of the production of cloth, yarn, and thread. These consist of fibrous materials as well as raw, semi-finished or finished products, of which the structures are comprised of natural fibers (vegetable, animal, mineral) or chemical fibers (synthetic, inorganic). More than 50 percent of the manufactured textiles are so-called technical textiles. These textiles are used, for example, in automobile production, in the medical sector, for environmental protection, and in the building industry.¹⁰⁰

The clothing industry, which is sometimes called the fashion industry,¹⁰¹ includes leather clothing, work and professional clothing, other outerwear, underwear, furs, hosiery, and other clothing, that are made from knitted fabrics.¹⁰² Companies in the clothing industry create the design of the clothes, produce them, and are responsible for their sale. Therefore, the products of the clothing industry are refined commodities of the textile industry. The production process can be conducted by the clothing companies themselves. Alternatively, the clothing companies can cooperate with (often foreign) suppliers, who take over a part of the value chain activities.¹⁰³

Current Challenges of the Clothing Industry

The end of the 70s marked a time of important change in the German clothing industry. Increasing wage costs pushed firms in the industry to outsource their labor-intensive activities to low-cost countries. This shift still persists today. The situation has further been intensified by the “fast fashion” phenomenon, which essentially means faster changes of clothing collections. This phenomenon has affected delivery durations, increased overall costs, and made production processes more complex.¹⁰⁴

⁹⁸ Statista, *Kleidung, Schuhe & Textilien*

⁹⁹ Umwelt Bundesamt, *Textilindustrie*, August 15, 2019

¹⁰⁰ Umwelt Bundesamt, *Textilindustrie*, August 15, 2019

¹⁰¹ Neugebauer and Schewe, “Wirtschaftsmacht Modeindustrie – Alles bleibt anders“

¹⁰² Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.20

¹⁰³ Neugebauer and Schewe, “Wirtschaftsmacht Modeindustrie – Alles bleibt anders“

¹⁰⁴ Horstmann, Sophie, „Eine Branche im Wandel“, *Mainpost*, December 11, 2019,

<https://www.mainpost.de/ueberregional/wirtschaft/mainpostwirtschaft/Eine-Branche-im-Wandel>

According to the Bavarian State Office for Statistics, in 2018 only around 45 companies with approximately 2,625 employees are registered as clothing and textile manufacturers.¹⁰⁵ More and more firms in the clothing industry in Lower Franconia (and in Germany as whole) have been influenced by the economic slowdown. Since 2008 more than 40 enterprises have become insolvent. Challenges include not only the structural transition of the industry, but also the rising competition. The companies in the clothing industry, including retailers, are influenced by electronic commerce, which is accompanied by the constant need for investment in digital advancements in order to stay competitive. At the same time, revenues stagnate, the margins remain low, and the competitive environment becomes increasingly fierce.¹⁰⁶

Another challenge is changes in customer behavior. Fewer people are willing to go shopping in the city center. Therefore, more individualized offers and services are in high demand, such as click & collect, which enables the customer to purchase items online and then pick them up at a shop. Such changes in customers' preferences impel companies to gather customer-related data and learn more about their behavior.¹⁰⁷

The Example of s.Oliver.

Ilse Aigner, Bavaria's former minister of economic affairs, once stated that the Bavarian textile and clothing industry needs to focus on high quality and innovation to justify the costs of its products. The high potential of the clothing industry relies on various functional features and diverse areas of application. For the clothing industry, the company s.Oliver from Lower Franconia is an example of best practice. The company's strategy is based on the rapid introduction of seasonal fashion trends, direct contact with the customers, and digital networking across all sales channels.¹⁰⁸ This strategy has already

¹⁰⁵ Bayerisches Landesamt für Statistik, "Verarbeitendes Gewerbe in den Regierungsbezirken und Regionen Bayerns 2018 (sowie Bergbau und Gewinnung von Steinen und Erden)", Fürth, 2019, p.41-42

¹⁰⁶ Horstmann, "Eine Branche im Wandel"

¹⁰⁷ Weishaupt, Georg, „Modisch abgehängt“, *Handelsblatt*, October 30, 2017, <https://www.handelsblatt.com/unternehmen/handel-konsumgueter/deutsche-textilbranche-modisch-abgehaengt/20504362.html?ticket=ST-816756-kTJVU2WwRxQTdFjcWpS9-ap6>

¹⁰⁸ Horstmann, "Eine Branche im Wandel"

demonstrated success; in 2016 the company achieved the highest turnover in the history of the company at over 1.6 billion euros.¹⁰⁹

As shown in Figure 22, s.Oliver has operated in different business arenas since 2006, including wholesale, classical retail, franchising, online retail, different licenses of specific brands, and more. Especially in the year 2016, the combined revenues from non-wholesale areas of business comprised a sizeable part of total turnover. For example, the company has identified the importance of digitalization and has generated an increasing portion of overall revenue via its online shop since its introduction in 2006.

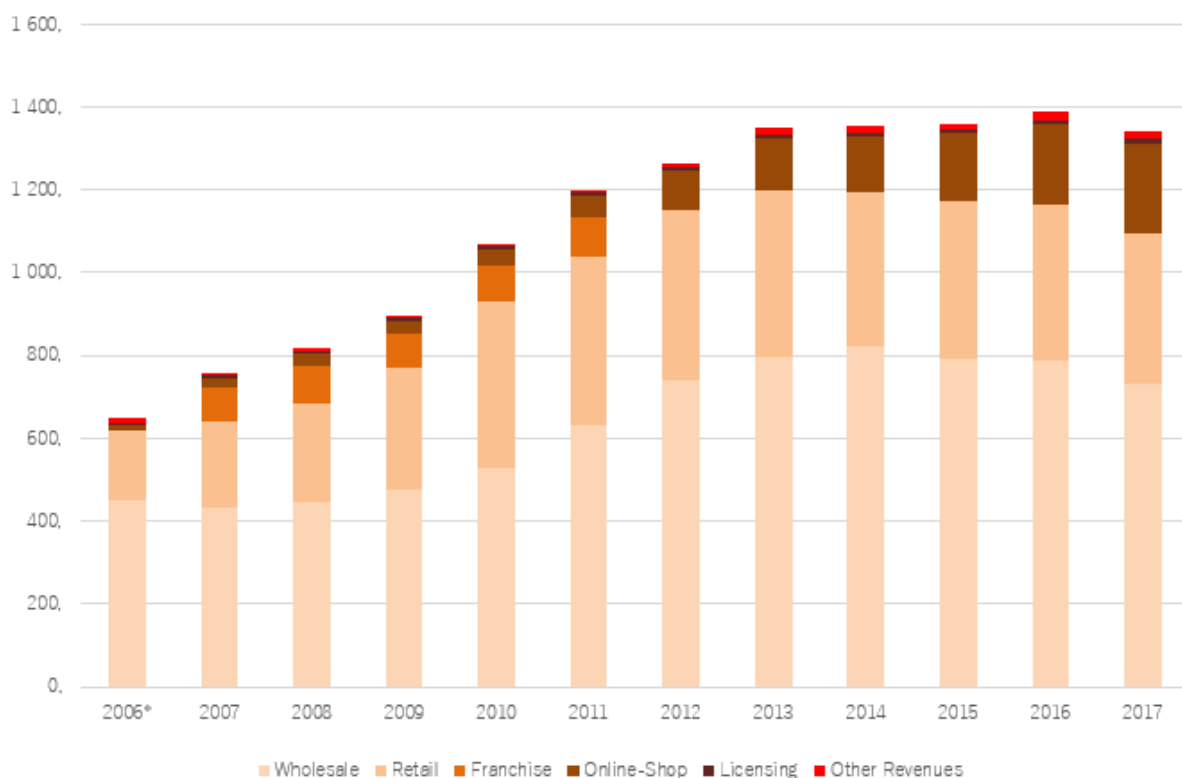


Figure 22. Turnover of s.Oliver by Areas of Operations from 2006 until 2017 (In Million Euro).¹¹⁰

¹⁰⁹ Wollenschlaeger, Ulrike, „S.Oliver: Konzernumsatz klettert auf 1,67 Mrd. Euro“, *TextilWirtschaft*, May 08, 2017, <https://www.textilwirtschaft.de/business/news/Jahresbilanz-S.Oliver-Konzernumsatz-klettert-auf-167-Mrd.-Euro-204384?crefresh=1>

¹¹⁰ Own representation based on: Hohmann, M., „Umsatz von s.Oliver nach Geschäftsbereichen in den Jahren 2006 bis 2017“, *Statista*, March 3, 2019, <https://de.statista.com/statistik/daten/studie/284263/umfrage/umsatz-von-s-oliver-nach-geschaefsbereichen/>.

Figure 23 presents the countries in which s.Oliver conducts its procurement activities. Most of its products are imported from China, totaling a share of 36.25 percent. In general, more than 70 percent of imports come from Asian countries. s.Oliver is therefore an example of a firm that heavily relies on Asian markets for its procurement activities. The company creates its designs and develops its products in Rottendorf (Germany), but outsources the production to suppliers in other countries in Europe and Asia.¹¹¹

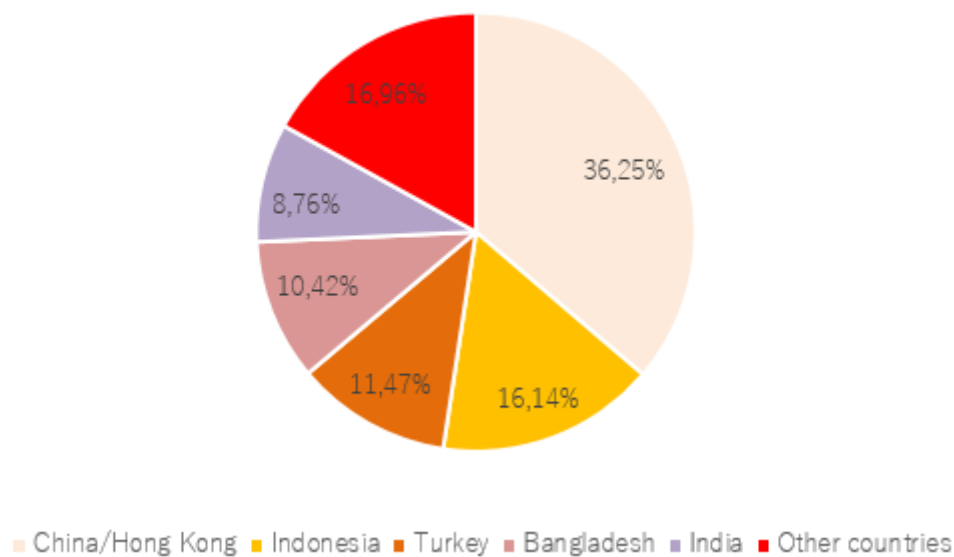


Figure 23. Distribution of s.Oliver's Procurement Markets Worldwide in 2011.¹¹²

Methodological Approach

The list of companies in the clothing industry in Lower Franconia was compiled by using the Company Database of the Bavarian Chambers of Commerce and Industry. We only chose firms that were registered in Lower Franconia. In order to ensure an exact specification of the participants, and to avoid distortions resulting from too many clothing industry subcategories, we focused only on firms that engage in clothing production and clothing wholesale. Therefore, we excluded retailers from the study population.¹¹³

¹¹¹ s.Oliver Group, *Sicherheitsstandards & Sicherheit am Arbeitsplatz*, n.d., <https://soliver-group.com/verantwortung/themen/sozialstandards-sicherheit-am-arbeitsplatz/>

¹¹² Own representation based on: Statista Research Department, *Verteilung der Beschaffungsmärkte von s.Oliver im Jahr 2011 weltweit*, June 23, 2015, <https://de.statista.com/statistik/daten/studie/284272/umfrage/beschaffungsmaerkte-von-s-oliver-weltweit/>

¹¹³ A detailed list of the selected options for each chosen industry has been included in the Appendix

Originally, the compiled list of clothing industry firms included 177 firms. Then we excluded companies that turned out to be insolvent, were duplicated,¹¹⁴ did not fulfill the originally chosen criteria, and companies for which we were unable to find any contact details online.

Additionally, although the company under the name s.Oliver Bernd Freier GmbH & Co. KG did not appear on our list, we included it to our research population and contacted the representatives of the firm. We believed that the company should be included, since it is not only one of the biggest companies in the clothing industry in Lower Franconia, but it also engages in both clothing production and wholesale trade. After the aforementioned adjustments, the target population included 104 companies. The firms were initially contacted via e-mail and later via phone to boost the response rate to one that would allow us to draw scientific conclusions from the results.

These efforts resulted in a higher participation rate (12 firms), accounting for a survey completion rate of 11.54 percent. One participant, however, responded to the question “Does your firm have any entanglements with China?”, but closed the survey afterwards and did not answer any other questions. We decided to include this incomplete survey in the results nonetheless, leading to a total of 13 participants who filled out this question.

In regard to the industry-specific survey questions, we originally assumed that the firms in the clothing industry are most likely to engage with China in two ways: through import and/or export. Furthermore, we expected that the participants might have Chinese customers and business partners. For these reasons, we added questions concerning these four aspects. During the analysis of the survey results, it became clear that only one respondent exports to China. Furthermore, the respondents generally do not have customers from China, or at least do not possess any specific knowledge about them. For these reasons, the focal points of our analysis were the results concerning imports and business partners.

¹¹⁴ Some companies are included on the received list more than once. There are many possible explanations for this issue: for instance, some companies may have registered different divisions of the same firm as separate companies, but were in fact the same firm with the same contact details.

The literature research was mainly based on statistics and data collections from the Federal Statistical Office, the Bavarian State Office for Statistics, and Statista. Furthermore, reports from the inter-trade association of the textile and clothing industry of Germany (Gesamtverband der deutschen Textil- und Modeindustrie) and dossiers from Statista provided specific insights into the clothing industry, and the Bavarian clothing industry in particular. For the detailed research about Lower Franconia, we used local newspapers and firm websites. Statements and reports from German Trade & Invest (GTAI) served as a source to gain an overview about the Chinese consumer market.

Interview Methodology

The selection of interview partners was based on the twelve firms which participated in the online survey. They had already taken the time to properly answer the online survey and therefore expressed their interest in this study. From those twelve participating companies, the pool of potential interview partners was further reduced to the six firms which already engage in some form of entanglement with China. The initial idea was to conduct interviews with companies of different sizes, measured by the number of employees and annual turnover.

Two companies agreed to provide expert interviews. The first company was Bieber Fashion GmbH,¹¹⁵ which has six employees and a company history of over 100 years. This company experienced a remarkable transformation from a producer to a wholesaler. The interviewee of Bieber Fashion was Mr. Streck, the company's sales manager. The second company that participated in an interview was Eisend Kids e.K..¹¹⁶ This firm has 20 employees and it has managed to position itself in a market niche, exclusively offering dresses for girls. Its representative was Mr. Eisend, who is also a sales manager and agreed to take part in the interview after an initial telephone request.

The method used for these interviews was a semi-structured qualitative approach, which allowed enough room for follow-up questions. All two interviews had a similar outline, involving the history of the companies, the company size in terms of employees and turnover, company sales and procurement markets, as well as questions about past and future strategy and marketing decisions. A strict sequence of questions was deliberately

¹¹⁵ In the following referred to as Bieber Fashion

¹¹⁶ In the following referred to as Eisend Kids

not implemented for flexibility reasons. The questions were based on background information from the company websites of Bieber Fashion,¹¹⁷ and Eisend Kids.¹¹⁸ Both respondents received an overview of the interview questions beforehand for orientation and possible alterations. Both Bieber Fashion and Eisend Kids agreed on the full terms of participation.¹¹⁹ Further analysis of the interviews in the report was not pursued, as the interviews should be presented to the reader in an authentic format in order to allow genuine insight into the two qualitative interviews.

The interview method for Bieber Fashion, as well as for Eisend Kids, was a telephone interview. In both cases, one mobile phone in speakerphone mode was used to call the respondent, while another mobile phone was used to record the interviews. Both parties were informed about the conditions and consented to transcription of the recording using written consent forms.

With regard to the transcription of the audio files into the written German text, the transcription rules of Dresing & Pehl (2011) were applied.¹²⁰ This method basically focuses on a word-to-word interview transcription in order to draw the most authentic picture of what was said and to avoid any falsification in respect to the further processing of the transcript. Those rules were applied with only minor modifications, e.g. the initials of the participants were used to give the format a more personal character. In addition, specific time stamps were not used to mark the different statements. The final versions presented here have been translated from German and focus on the most important contents of the transcript. The contents and general format of interviewees' statements have remained the same.

Limitations of the Industry Report

In regard to the data used in this report, it only shows the development over the past three years in order to provide an accurate and up-to-date picture of the situation in the clothing

¹¹⁷ Bieber Fashion, *Bieber*, n.d., <http://www.bieber-fashion.de/>

¹¹⁸ Eisend Kids e.K., *Eisend Kids*, n.d., <https://shop-eisend-kids.de/>

¹¹⁹ The permits grants the Julius-Maximilians University of Wuerzburg the use of the written interview in the clothing industry report and for the scientific publication of the whole case study report.

¹²⁰ audiotranskription.de, *Erweitertes Transkriptionssystem nach Dresing & Pehl (2011)*, n.d., <https://www.audiotranskription.de/audiotranskription/upload/ErweiterteTranskription30-09-11.pdf>

industry. The greatest challenge in literature research was consistency, because definitions in the clothing industry frequently differ from source to source. The methodologies of the data collection in the quoted statistics deviate from each other, which potentially could have influenced the data in the statistics. As our survey analysis shows, the most frequent types of clothing companies in Lower Franconia can be classified as microenterprises or small-sized enterprises. For these sizes of companies, the data in the existing literature was limited. Regarding the interviews, transcription and translation introduced a new challenge. It was difficult to convey the unique tone and personal character of the conversation when transcribed into written words. The fact that the interviews were conducted in German and translated into English added another layer of difficulty in this aspect.

The results of the survey were subject to a low response rate which might not reflect the complex reality of Lower Franconian firms' entanglements with China. Furthermore, the respondents in the clothing industry were, to a large extent, employees in microenterprises and small enterprises. Moreover, half of the analyzed firms were limited liability companies. Therefore, we note that the results of the survey and the following interpretation cannot be generalized to all Lower Franconian companies in the clothing industry, but should instead be viewed in terms of the size and legal forms of the respondents' companies.

Apart from the mentioned limitations, we believe that we accurately identified certain trends and that our interpretation of the results has an academic value. In addition, we cautiously propose that the results and subsequent analysis may be helpful for firms considering the expansion of their China-related business activities.

Findings of the General Survey

The clothing industry survey was sent to 104 companies in total and received an 11.54 percent response rate,¹²¹ comprised of the responses of 13 firms. 59 percent of the survey participants responded that their firms' turnover in 2018 lay below 2 million euros. This means that over half of the participating companies, according to the criteria set by the Commission of the European Communities, can be classified as microenterprises.¹²² In

¹²¹ For a specific evaluation of the response rate, refer to the section Methodological Approach

¹²² For the definition of microenterprise see: The Commission of the European Communities, Commission

addition, the respondent sample included small enterprises (33 percent) and large-scale enterprises (8 percent) (Figure 24).¹²³

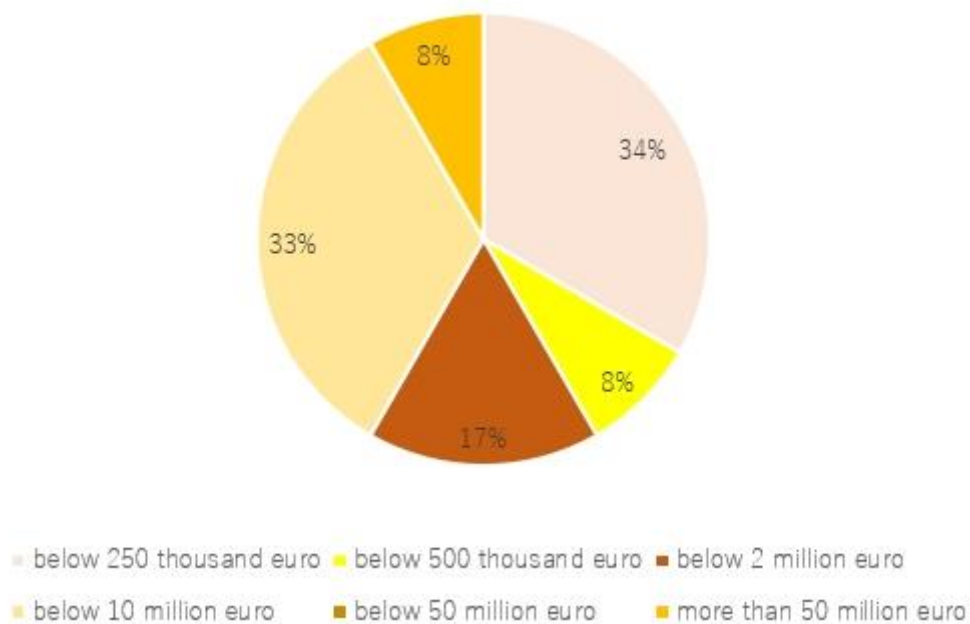


Figure 24. How High Was Your Total Turnover in 2018?

Furthermore, one can also classify the firms in terms of the number of employees. By applying this criteria from the Commission of the European Communities,¹²⁴ we conclude that the respondent sample can be characterized as follows: 50 percent of the companies are microenterprises, 34 percent of the companies are small enterprises, 8 percent of the

Recommendation of 6 May 2003 Concerning the Definition of Micro, Small and Medium-sized Enterprises. 20/05/2003 P. 0036 – 0041, Official Journal L 124: The Commission of the European Communities, 2003. EUR-Lex Website, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32003H0361>

¹²³ The Commission of the European Communities, *Commission Recommendation of 6 May 2003 Concerning the Definition of Micro, Small and Medium-sized Enterprises. 20/05/2003 P. 0036 - 0041. Official Journal L 124*, May 20, 2003, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32003H0361>

¹²⁴ The Commission of the European Communities, *Commission Recommendation*

companies are medium-sized enterprises, and 8 percent of the companies are large-scale enterprises (Figure 25).

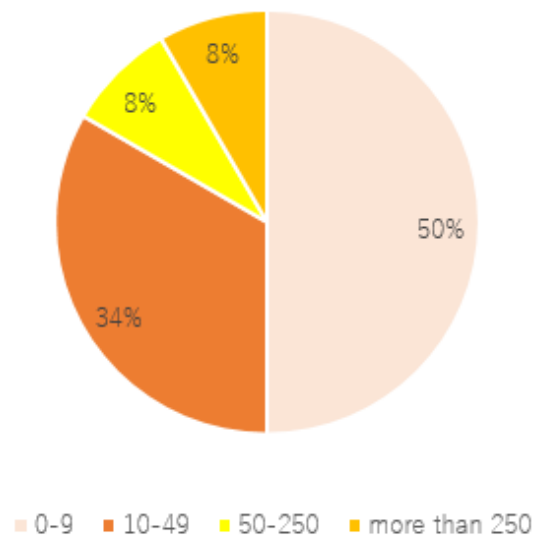


Figure 25. How Many Employees Does Your Company Have? (n=12)

Looking into the legal status of the firms that participated in the survey, 50 percent of the analyzed firms are limited liability companies. 25 percent of the firms can be classified as limited partnerships with a limited liability company as general partner. 17 percent of the survey participants declared that their firms' legal status is a general partnership. 8 percent of the respondents answered that their firms are individual enterprises.

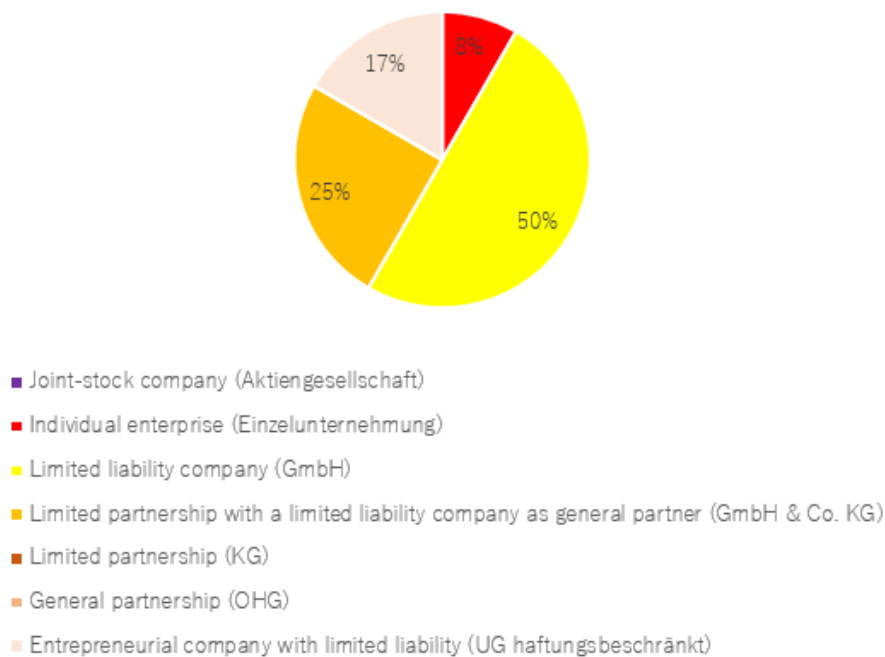


Figure 26. What Is the Legal Status of Your Company? (n=12)

Out of these 13 firms, six are entangled with China (46 percent), leaving seven firms with no entanglements (54 percent). Originally, only four firms confirmed having an entanglement with China; however, later in the survey, two additional firms from the category with “no entanglements” stated, among other things, to import from China. Given that imports are defined as a form of entanglement in our survey, we subsequently included these two firms into the cohort of respondents with entanglements. This might have occurred due to an alternative interpretation of either the question or the term “entanglement”. Overall, we see that almost half of the participating firms from the Lower Franconian clothing industry are in some way entangled with China.

A total of five participating firms were prompted to select their existing types of entanglement with China from a predefined list. All of the firms that are entangled with China reportedly import from China, except for one. This one firm reported having entanglements with China but did not continue to fill out the survey; therefore, the number of participants for this question amounted to five and not six. While importation is the common denominator of all the entangled firms, the sourcing of raw materials from China, the possession of a production plant in China, and the recruitment of employees from China were the second most frequently reported types of entanglement with China. Tied in third place were sales offices in China, patents from China, assembly plants in China, joint ventures with a Chinese partner, and exports to China, with each being selected once (Figure 27).

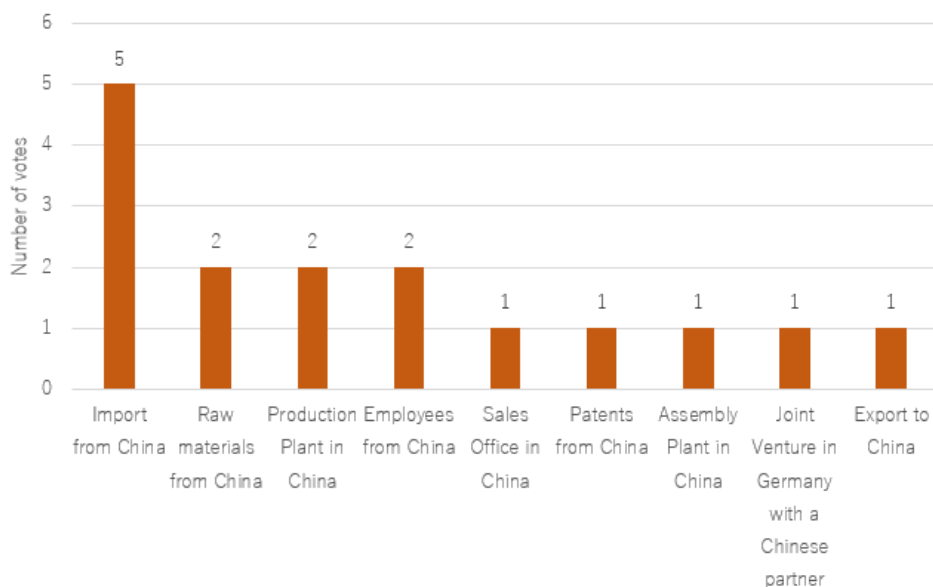


Figure 27. What Types of Entanglements Do You Have with China? ($n=5$), Answers from the Firms With Entanglements with China.

In our initial assumptions in regard to the forms of entanglements in the clothing industry, we expected the import and export business to play a crucial role. However, out of five firms who stated having entanglements with China, only one firm conducts export business with China. The reason for this outcome could be interpreted in light of the main drivers of engagement with China as reported in our survey results; the option “market entry to China” received no votes by the participating firms. Therefore, the Chinese market as an export destination for clothing from Lower Franconia still plays a marginal role when compared to the import business. Contrary to our initial assumption that the turnover per annum would correlate with the degree of the firms’ entanglements, we found that the smallest participating firm, with an annual turnover of less than two million euros in 2018, in fact engages in more forms of entanglements than the largest participating firm, which had an annual revenue of more than 50 million euros in 2018. Although these findings cannot be generalized to the clothing industry as a whole, the results still provide valuable insight into the operations of different firms.

To summarize, all of the firms in the clothing industry that have entanglements with China are entangled through imports from China. Furthermore, the smallest firm and the largest firm from our sample group are both characterized by a high degree of entanglement with China, having at least four entanglements each.

Entanglements with China

Share of China-Related Business in 2018

To assess the importance of the China-related business, survey participants were asked to estimate the share of China-related business as a percentage of overall revenue in 2018. A total of three firms answered this question. The relatively low number of participants in this question might be attributed to the previously mentioned problem: two out of five participants that are in fact entangled with China responded that they had no entanglements near the beginning of the survey. Therefore, these two firms responded to the question set that was intended for firms without entanglements with China. Of the three firms that did respond to this question, two (67 percent) stated that their sales share of China-related business amounted to 26 - 40 percent in relation to overall sales in 2018. One firm (33 percent) even responded that 41 – 60 percent of its sales revenues came from China-related business. To be more precise, this firm’s China-related business stems entirely from imports, whereas the share of revenue from the two other firms was

comprised of a variety of China-related business activities. Interestingly, the firm with the largest reported share in its China-related business is a small enterprise, while one of the firms with a share of 26 to 40 percent is classified as a microenterprise. The third firm, which also reported 26 to 40 percent of its revenue was China-related, belongs to the category of large-scale enterprise. The participating microenterprise stated having a far larger share of sales stemming from China-related business than the large-scale enterprise. Again, our assumption about the correlation between the share of the turnover (or firm size) and degree of entanglement was proven wrong.

In summary, it can be said, that at least one fourth of total revenue in 2018 originated from China-related business. When comparing the share of sales stemming from the China-related business to overall sales in 2018, more than half of the entangled firms stated that their share of China-related business sales amounted to 26 percent to 40 percent. For all the surveyed firms that draw their revenue partly from business with China, at least one-fourth of the total sales in 2018 can be attributed to China-related business. Furthermore, the percentage of sales revenues stemming from business connected to China does not positively correlate with the firm size measured in overall turnover per annum.

Reasons for Engagement with China

The question: “What are the main reasons for your engagement in China-related business activities?” aimed at exploring the main drivers of China-related business activities. The three participants of this question are identical to those from the previous question. The firms were allowed to choose multiple responses. Among all the possible reasons to engage in business with China, Low manufacturing costs and technological know-how were the most selected, followed by low labor costs, low raw material prices, and managerial know-how, which were each selected once (Figure 28). Interestingly, no firm chose market entry to China as a driver for their China-related business activities. Therefore, cost-related and strategic considerations prevail in these firms’ decisions to engage with China. On a firm-specific level, the one firm that only engages in import business also considers lower costs and prices in China to be the main driver to import from China. The other two firms are diversely entangled with China; therefore, other considerations than cost alone must have been deemed relevant. The microenterprise in this respondent group, for example, reportedly has a joint venture with a Chinese company. The reason for this form of cooperation could be attributed to the acquisition of

technological know-how from its Chinese joint venture partner, and is thus in line with the current perception of China as a technologically advanced country rather than solely a low-cost and low-value-added country of production.

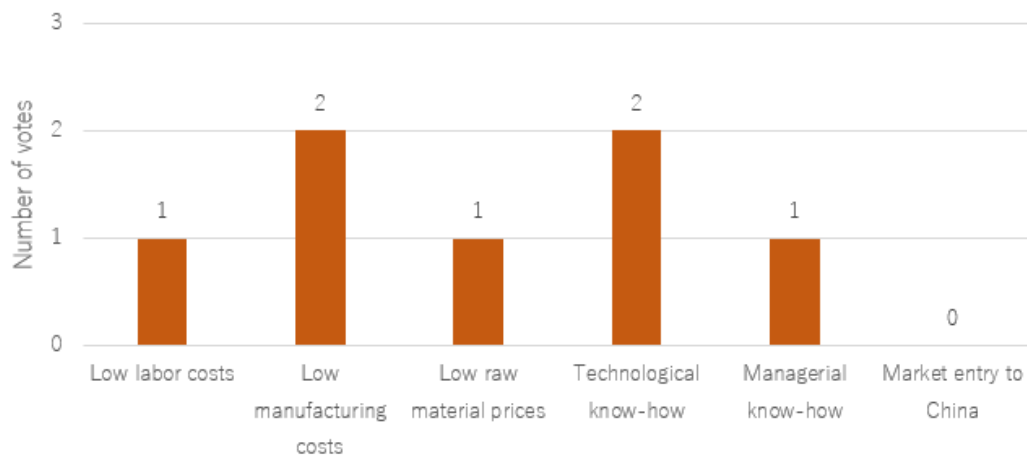


Figure 28. What Are the Main Reasons for Your Engagement in China-Related Business Activities? (n=3), Answers from the Firms, Which Declared That They Are Entangled with China.

In summary, the reasons to engage in business with China in this question are mainly cost- and strategy-driven (depending on the nature of entanglement). Furthermore, the responses from the participating firms indicate the rising importance of China and Chinese firms as technologically advanced partners. This result is surprising because we originally assumed that cost-related rationales would prevail amongst the drivers of engagement with China. Furthermore, the acquisition of technological know-how proved to be equally important. This result is in line with the growing perception of China as a technologically advanced country, rather than merely a low-cost and low-value-added country of production.¹²⁵

Business Expansion to China

The intention behind this question was to find out whether or not firms are keen to expand their existing business with China or to initiate new China-related business. The question was both directed at firms with entanglements and firms who are not entangled with China. Among those firms who are entangled with China, three stated that they are maybe willing to expand their business with China (60 percent). The remaining two firms responded with “no” (40 percent). Therefore, more than half of the firms who are already

¹²⁵ Gewirtz, Julian Baird, „China’s Long March to technological Supremacy“, *Foreign Affairs*, August 27, 2019, <https://www.foreignaffairs.com/articles/china/2019-08-27/chinas-long-march-technological-supremacy>

entangled with China consider potentially expanding this aspect of their business (Figure 29). Among those seven firms who are not entangled with China, six do not want to initiate any China-related business (86 percent), while one firm selected “maybe” in response to that possibility (14 percent) (Figure 30). Overall, the vast majority of firms who are not entangled with China plan to continue this status quo in the future, whereas the majority of firms who are already entangled with China in fact consider a potential expansion of their business with China. Moreover, no company, whether entangled or not, answered with a definite “yes” towards the possibility of expanding business with China. This result reveals a general caution with regard to expanding businesses with China in the Lower Franconian clothing industry.

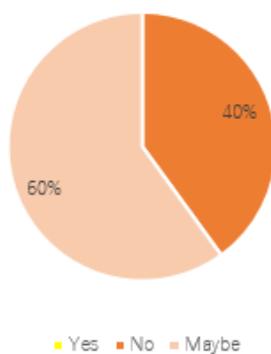


Figure 29. Are You Considering Expanding Your Business with China? (n=5), Answers from the Firms with Entanglements with China

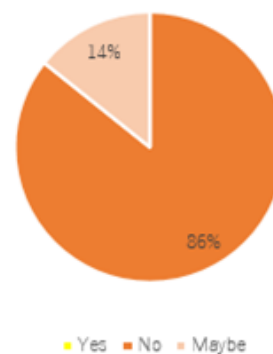


Figure 30. Are You Considering Expanding Your Business with China? (n=7), Answers from the Firms with No Entanglements with China

China as Investment Destination

This question was posed to determine the attractiveness of China as a destination country for Lower Franconian investments from the clothing industry. It was answered by five firms who have entanglements with China. As mentioned before, two firms which stated not to have entanglements with China at the beginning of the survey are, in fact, entangled with China. Therefore, their answers were included into the analysis of this question. Out of these five firms who are entangled with China, four stated that they do not plan on investing in China (80 percent). One firm placed China in the Top 10 destination countries for potential investments (20 percent). If we combine the results from this question with the results of the previous question, we can speculate that the variously entangled microenterprise would potentially be willing to expand its business with China through further investments, as it acknowledges the attractiveness of China as a destination country for investment. The two remaining firms who maybe consider expanding their business with China only engage in the import business with China. Therefore, their potential expansion of business would probably

not occur in the form of investments into China but rather in the expansion of the import business itself.

To summarize, those three firms who potentially consider expanding their business with China might do so along the lines of their existing entanglement with China. To be more precise, the firm that has already invested in China will potentially invest even more. The two firms that are only linked commercially to China through imports do not plan to invest in China; therefore, they might potentially pursue an expansion of their business with China within the realm of import business.

Assessment of Business Prospects over the Next Three Years

The intention behind this question was to determine how both entangled and non-entangled firms assess their business prospects in China over the next three years. Among the entangled firms, 60 percent evaluated their business prospects as “neutral” (Figure 31). The number of entangled firms that responded to this question amounts to five once more and not three, because the answers of the two firms that incorrectly stated having no entanglements have been included. The prospects assessments of “good” and “bad” received one vote respectively and thus amount to 20 percent each. Those firms who voted “neutral” only engage in import business with China. Among the firms that are not entangled with China, 72 percent (five out of seven firms) reportedly believe their business prospects in China to be “very bad” in the future. The assessments of “good” and “neutral” were only selected by one non-entangled firm each (14 percent) (Figure 32).

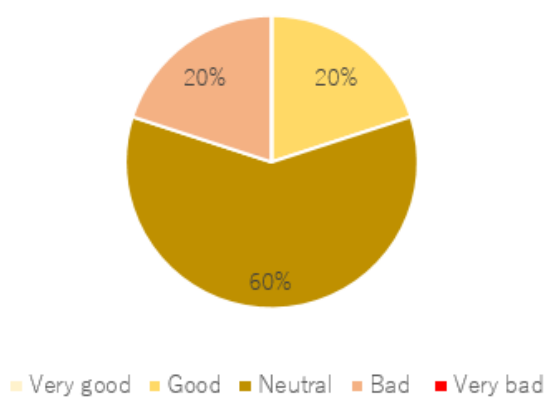


Figure 31. How Do You Assess the Business Prospects for Your Industry in China for the Next 3 Years? (n=7), Answers from the Firms with No Entanglements with China.

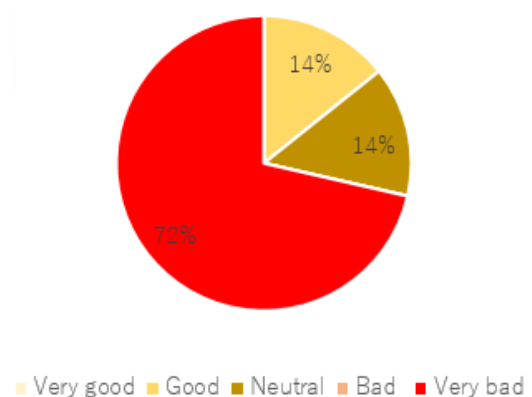


Figure 32. How Do You Assess the Business Prospects for Your Industry in China for the Next 3 Years? (n=5), Answers from the Firms with Entanglements with China.

Therefore, the large majority of firms who are not entangled with China in the clothing industry share pessimistic views about China-related future business prospects, which could also be seen as a reason for their current lack of entanglement with China. In contrast, the majority of firms who are already entangled with China share neutral views about their China-related business prospects in the future, making it difficult to predict how their entanglements with China will change over the course of the next three years.

Estimated Market Access Restrictions

This question was similarly posed to firms both with and without entanglements with China. The two participants who mistakenly stated having no entanglements with China were again included into the cohort of firms with entanglements. Looking at the results it is evident that three out of five firms that are entangled with China (60 percent) perceive the market access restrictions for their industry to be strong. The remaining two firms, however, stated the exact opposite (40 percent) (Figure 33). On a firm-specific level, we can see that two of the firms that selected “strong” market access restrictions are in fact operating in the Chinese market using their own production facilities and, therefore, have likely accumulated in-depth knowledge and experience about the market access restrictions in China. The third firm who selected “strong” only imports from China, just like the two firms who responded “weak” in regard to market access restrictions. Although these three firms only import from China and do not penetrate the Chinese market, their respective assessments of market access restrictions differ greatly; therefore, no meaningful interpretation can be deduced based on the present data set.

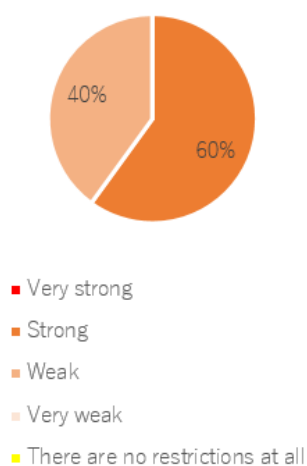


Figure 33. According to Your Estimations, How Strong Are the Market Access Restrictions for Your Industry in China? (n=5), Answers from the Firms with Entanglements with China.

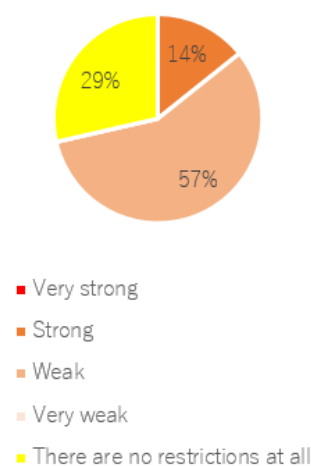


Figure 34. According to Your Estimations, How Strong Are the Market Access Restrictions for Your Industry in China? (n=7), Answers from the Firms with No Entanglements with China.

Looking at Figure 34, we see that four firms out of seven (57 percent) estimated market access restrictions to be “weak”. One respondent selected “strong” (14 percent). Two participating firms stated that there are no market access restrictions for their industry in China (29 percent). Overall, the participating firms with no entanglements largely believe that market access restrictions are weak or not present at all. Therefore, the perceived market access restrictions should not be considered a primary reason for the lack of engagement with China from these firms’ perspectives. The firms which are deeply entangled with China and thus may possess in-depth knowledge about the Chinese market regard the market access restrictions as strong, whereas the evaluations of firms who exclusively conduct import business with China differ greatly from one another.

China-Related Importation

The intention behind this question was to determine the share of imports from China in relation to overall imports by the firm. As with the previous question, the number of entangled firms adds up to five due to the inclusion of the two firms that incorrectly claimed to have no entanglement with China. 60 percent of the entangled firms, that is, three out of five firms, stated that their share of imports from China amounts to 15 percent or less. Two firms (40 percent) indicated that their share of imports from China is higher than 15 percent of their overall imports. When comparing the results of these three firms that only conduct import business with China to the two firms that are more deeply entangled with China, no clear correlation can be seen between their nature of entanglement and their respective share of imports from China. More specifically, a firm which merely conducts import business with China does not necessarily have a larger share of imports from China compared to firms with deeper and more numerous entanglements.

Import Channels

This question was meant to determine through which channels goods are imported from China, and multiple answers could be chosen by the firms. The answers of the two participants who inaccurately reported not to be entangled with China have once again been included into the analysis. Out of five entangled firms, two firms (40 percent) reportedly import via a domestic foreign trade company (Figure 35). Two further firms import directly from the Chinese manufacturer (40 percent). Only one firm (20 percent) responded that it uses its own foreign trade agencies to import goods and materials from China. The latter firm turned out to be the largest of the entangled firms in terms of overall turnover per annum. It could thus be cautiously inferred that financially stronger firms tend

to tighten control over their import business by cutting out the middleman and establishing their own foreign trade agencies in the destination country.

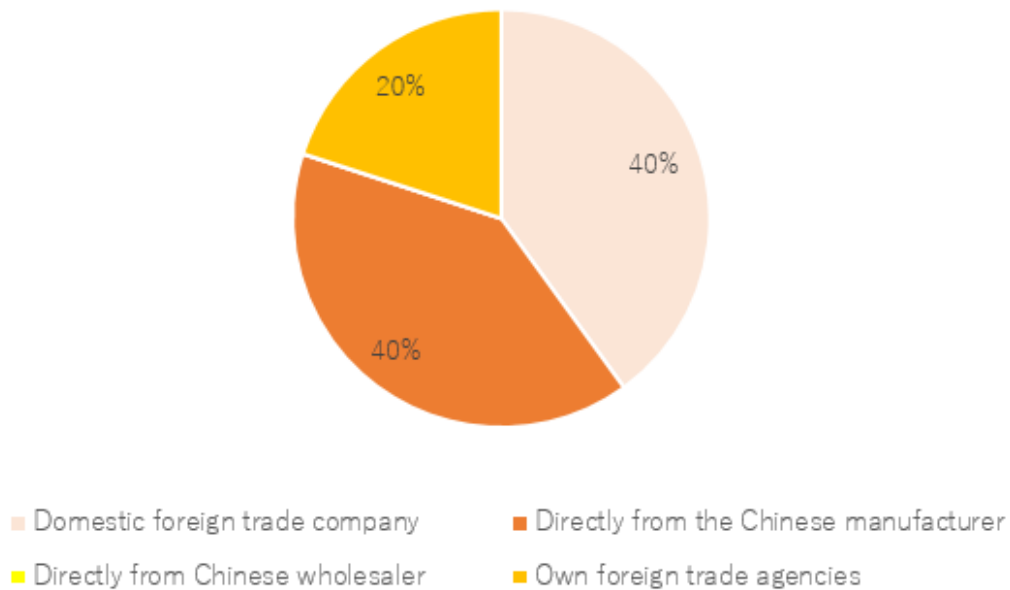


Figure 35. Which Channels Do You Use to Import Products from China? (n=5), Answers from the Firms with Entanglements with China.

The variety of import channels can also be explained by a series of other motivations, such as establishing proximity with the Chinese market by importing directly from the Chinese manufacturer and thus accumulating market-specific knowledge or by using a foreign trade company to compensate for lack of import knowledge. Overall, we see that the firms who are entangled with China choose different import channels and they probably do so due to firm-specific criteria like financial endowment, proximity to the Chinese market, experience with the Chinese market or lack thereof, and so on.

Chinese Business Partners

As having a Chinese business partner represents a form of entanglement in our case study, only the answers of entangled firms have been considered. The firms with no entanglement to China stated having no Chinese business partners. The other results of this question are largely evenly distributed. Two firms out of five with entanglements (40 percent) have more than three Chinese business partners. The responses “none”, “one”, and “two” were selected once respectively (20 percent each) (Figure 36). The differences in number of business partners between firms who only conduct import business with China might be explained by the import channels they use. One firm, for example, imports

directly from Chinese manufacturers, who, in this context, are simply business partners for the import business.

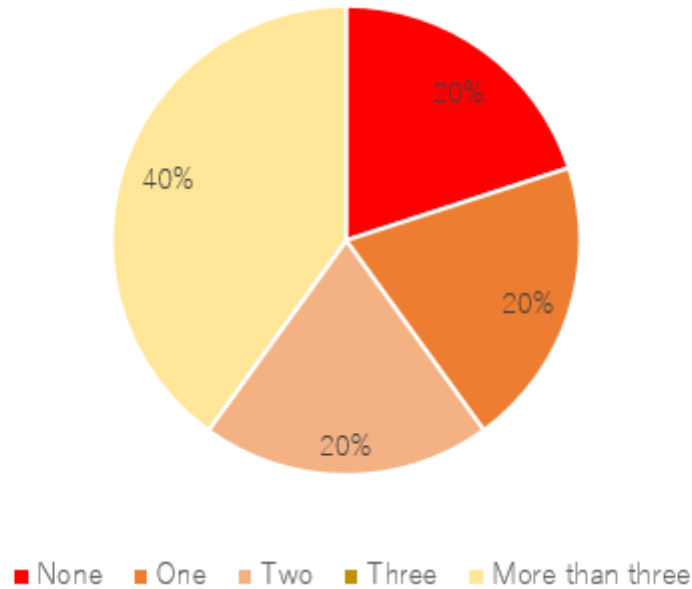


Figure 36. How Many Chinese Business Partners (E.G. Suppliers, Salesman, Etc.) Do You Have? (n=5), Answers from the Firms with Entanglements with China.

In contrast, another firm that imports via a domestic foreign trade agency would be in no need for a Chinese business partner, as presented by the combined results of the present and previous question. Overall, the vast majority of entangled firms have at least one Chinese business partner. Furthermore, the type of import channels could be a potential indicator for the amount of business partners a firm has.

Among the four firms who reported having at least one Chinese business partner, the methods used for their selection were mostly unique. Two firms find their Chinese business partners through business contacts, recommendations, and business-networks. One firm establishes its business contacts with China through agencies that facilitate the matchmaking processes between firms that are searching for a business partner. The largest entangled firm, by contrast, reportedly finds its Chinese business partners through its own foreign agencies in China. To summarize, the way in which entangled firms find Chinese business partners does not appear to follow a specific trend, but rather to be a matter of firm-specific preference.

Next, the participants were asked how they evaluate their cooperation with their Chinese business partners. This question was designed to give insight into the quality of business relations with Chinese partners. Looking at firms who already have a Chinese business partner, the results clearly point to a positive experience between these Lower Franconian firms and their Chinese business partners (Figure 37). On a more general note, this result might further indicate that firms that have an existing positive relationship with Chinese partners will be more inclined to continue or even expand their entanglements with China.

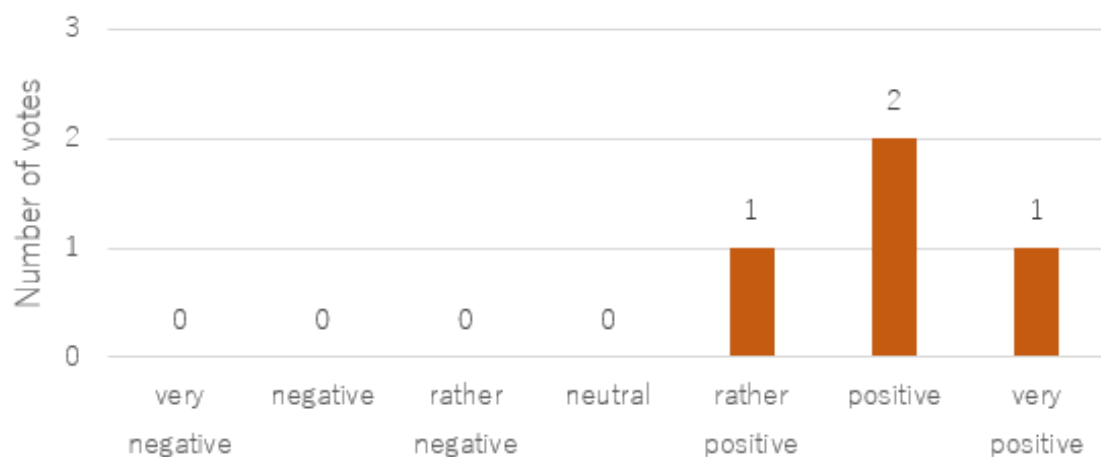


Figure 37. How Do You Evaluate the Cooperation with Your Chinese Business Partners? (n=4), Answers from the Firms with Chinese Business Partners.

Interviews

On the Way to India,

Interview with Achim Eisend, Sales Manager of Eisend Kids e.K.

The Eisend Kids company has been in operation since 1983. It was established by the Faas company and then became a family business. What is the history behind it?

Achim Eisend: As a short overview, the Eisend company emerged from the Faas & Eisend company, which in turn came to life from the Faas company. My mother simply worked as an ordinary employee at Faas. After Mr. Faas became seriously ill, and because he had no offspring of his own, my parents actually joined him in the Faas & Eisend Company.

How did the company develop over the years?

A.E.: There were more employees in the beginning, simply because the entire production process still took place in-house at that time. We had up to 60 employees, but this included the entire production process. In the 90s, some parts of the production were outsourced. This started with external contractors, mostly in East Germany. The next step was to outsource part of production to Poland and later to Bulgaria. Regarding production, everything was still in our hands. The next big step took place in the 2000s with outsourcing parts of the production to Asia for the first time. We actually started with India. That was when our number of employees really went down, because it was simply no longer feasible to conduct the whole process in Europe or in Germany.

The company specializes in children's clothing. Was this concept adopted from the previous company? And why children's clothing?

A.E.: (laughs) The children's clothing concept actually came from the Faas company, although they only produced children's skirts. After my parents joined the company, the firm enriched its product portfolio and started to offer other products from this segment. In the 90s and the beginning of the 2000s, the company's catalogue already included many different products, but only for girls, from skirts, pants, T-shirts, and sweatshirts to dresses. We offered the complete "children's program" except for outdoor clothing. In mid-2005, after the almost complete relocation to Asia, we began to specialize exclusively in dresses for girls. So, taking a look at our collection right now, it includes mostly dresses. Additionally, there are some products that go well with dresses, like cardigans and leggings. Anyway, the dresses are our main segment and we focus on them.

There is the saying that "you always have to go with fashion," because there is constant change, especially in the fashion industry. On your website we read that your mother, Rosmarie Eisend, developed the designs herself. What is it like today for your company? How do you develop new designs? How do you get inspired?

A.E.: Inspiration comes partly, of course, from fashion fairs like the "Munich Fabric Starts" convention. That's the place where you can find a lot of information about color themes and which of them are really hip in the new season. Then, of course, a lot of inspiration comes from checking stores. You just fly to Paris or London and take a look at the shops there. And that is how you start to develop the design, using that know-how.

You and your brother Ralf came on board the company in the late 80s and early 90s, so to speak. How has the business developed from there?

A.E.: My brother and I received education as industrial clerks. Then we both actually tried to study economics, while already working for the company. We had to drop out, because it simply was not possible in terms of time management.

After we came on board, there was little change to our strategy in the beginning. We rather had to grow into it at first. The first strategic change actually really began with the shift of production to East Asia. Only then did we see a real and steady upward trend in sales.

You export to approximately 14 countries. What is the marketing strategy behind this? How did the markets open up as you approached them, and how were the initial contacts established?

A.E.: First contact was very often made at trade fairs. At the moment, the largest are in Hamburg and Munich. There is also one in Neuss and one in Wallau. We are definitely represented at these regional trade fairs, especially in Munich. They are relatively international now, so it is possible to make international customer contacts there. In recent years, of course, more and more happens on the Internet. You are seen on websites, and you are seen on the Zalando pages. We are a supplier of Zalando and Amazon. People see us on these websites with our logo and make contact, including foreign customers.

In terms of marketing, it is currently not the case that we provide a fixed marketing budget for certain countries. We flexibly adjust to the needs of these markets. Nowadays, we work a lot with online retailers such as Tausendkind, Zalando, myToys, and Amazon. They actually approached us with requests or recommendations regarding certain marketing measures. Last year, we even had a television ad for Tausendkind. Moreover, we also make use of digital channels and advertise on Facebook and Instagram. Another thing is our own leaflets, catalogs, posters, which we make available to our distributors, too.

Have there been any contacts established with the help of personal connections?

A.E.: Yes, of course, that also happens. This takes place mainly at trade fairs. Somebody just says, "Listen, I know someone from France, from Dubai." Speaking of Dubai, I went there for a product presentation; that also resulted from a personal contact.

You said that you sell a lot online. How has business changed since you started selling online, and do you have your own IT staff for that purpose?

A.E.: We have a B2B website, so we offer our items online, but not for the end-customers. Otherwise, everything for the end-customers runs on our partners' platforms, Zalando, Amazon, and myToys. They buy the items from us and take care of everything related, like photoshoots for the dresses. After the whole process, they offer them in their online shop.

Since you are relatively specialized in children's clothing, what annual turnover can you actually achieve in such a niche? How much do you produce each year?

A.E.: Well, the niche is actually there! If I go to a trade fair now, we are almost a monopolist there. We produce about 700,000 dresses a year.

What about the current number of employees?

A.E.: There are currently about 20 people in-house.

What are your strongest sales markets in general?

A.E.: Logically, Germany, since we are in Germany. Other than that, Austria, Italy, Switzerland, the Netherlands, and even Finland are also very profitable markets for us. We also sell to Canada, which is rather difficult. At the moment, we are trying to get a foothold in the Indian market. We are trying to establish an online presence in this market with the help of an agent there.

You already addressed the fact that production has gradually been shifted abroad due to growing globalization pressure in the early 2000s. In which countries are your producers or suppliers based? And how high is the production share of the respective countries?

A.E.: We are still doing a little bit in Turkey, but I think that it hovers around 5 percent. I would say that roughly a third is in India, a third in Bangladesh, and a third in China.

You have already described how you come up with new design ideas. How does it exactly work, from the first prototype to production abroad?

A.E.: We make the designs in-house and then fly with them to Asia, where we actually produce the collection on-site. We go to local fabric markets, where we inform ourselves about fabrics and sometimes buy them. We work with initial samples, then show them to the customers. After customers order them, we start the production process. Because the development happens on-site, I was in Asia myself two or three times for two or three weeks each time.

What experience have you had with various producers? Have you had any bad experiences? How do you cope with cultural differences like language barriers?

A.E.: Normally, you can get along very well with the suppliers in English. However, in some countries it is difficult. In China, for example, there are a lot of people with whom you cannot communicate in English. Looking at the language aspect, it's easier in India than in China. With regard to culture, if you adapt and accept the mentality in other countries, then there are no problems!

You also produce in Bangladesh. Are there any considerations to produce in other countries, for example in Vietnam?

A.E.: Not really, because we have already positioned ourselves in these three countries. Each country has special advantages, meaning that they are specifically specialized in certain types of clothing. For example, Bangladesh is very good for manufacturing normal T-shirts. For everything related to printed cotton, you usually go to India, and for a bit higher quality you usually go to China. We currently only need these three countries and have no considerations with regard to Vietnam, Malaysia, Indonesia, or other countries.

Could you tell us something about your BSCI¹²⁶ membership?

A.E.: Sure! It all started after the garment factory collapse in Bangladesh. Since then, these memberships/certificates have been increasingly requested by large customers. It is mainly about giving the customers more security in terms of where your production takes place. On one hand, this has many advantages, but on the other, in terms the BSCI's demands, it is unrealistic. For example, if I take a look at what is happening with working overtime or working on Sundays, which is forbidden by BSCI, which is far from reality.

In what respect?

A.E.: As a specific example, I once attended regular job interviews with seamstresses in India. The first question of many interviewees was whether they can also work on Sundays. The factory boss said that they are not allowed to, because he is a BSCI member. The interviewee answered: "Okay, then I am already done here." The BSCI-certified factories really have problems finding workers because these laws are unrealistic. Some people in India need Sunday work to supplement their incomes. Sometimes they also receive food

¹²⁶ *Business Social Compliance Initiative (BSCI)*: Initiative to improve social standards in the global value chain.

for their families on Sundays; the factory takes care of the food for the family on Sunday, because the head of the family works in the factory.

I had a similar experience working as an intern in a company in China. They also limited the working hours for regular workers, in Chinese it is called 加班时间 (jiabanshijian),¹²⁷ which means working overtime. The workers were not very happy about it. Some people are really dependent on those additional working hours and they really want to work more.

A.E.: Yes, exactly, exactly. They aren't even allowed to work as much overtime as we currently are here, in Germany. And I think that these regulations do not consider the reality in these countries. The fact that children are particularly in need of protection is absolutely right, really absolutely right. When I went there for the first time 15 years ago, I saw some really bad things, but nowadays I don't see that anymore at all. The initial idea of BSCI was, for example, that a girl who is 14 years old is not allowed to work. It is absolutely unrealistic in that culture. The alternative for the girl is that she either goes to work in a stone quarry or maybe, even worse, has to prostitute herself. Under such circumstances and with regard to this example, I think it might be better if she was still working on a sewing machine instead.

But that those young people should be especially protected in terms of working hours is absolutely right. Other results of the BSCI are that people have started installing emergency exits, fire protection, sanitary facilities, and clean drinking water at the workplace. That's absolutely right! Such measures are absolutely not detached from reality and needed to be implemented. But, in some aspects of the BSCI, Europeans might have gone a little bit too far. I have been to two BSCI courses myself, and the people who spoke there have never been to the countries they were talking about. Nevertheless, I think that BSCI a good thing, but in some aspects it is a little bit over the top.

What do you personally think about China? As a country of production, as a sales market, or culturally?

A.E.: So, personally I believe that our company has more of a chance to establish its products on the Indian market. I think that we have no such chance in China. Additionally, I believe that the Chinese government does not like it very much that we, as Europeans, try to sell our things there. From a cultural perspective, I can say that the Chinese I work

¹²⁷ Chinese for "overtime work."

with are very reliable, very correct, and also very decent people. However, I have the feeling that it is more likely among Indians that a relation can be established, where business and friendship go hand in hand. I don't think that the Chinese want such relationships as much.

With regard to the market entry barriers set by the Chinese government, have you had any bad experiences?

A.E.: Yes, we tried to talk to our agents, and we immediately encountered certain obstacles. So, for example, we have registered our brand, both in India and in China. And that was a disaster in China, because there were constant obstacles until we finally got our brand registered there. It was a lot more complicated than in India. My agents also said that they think we have to cancel the mission in China because there are always obstacles there. It's also more of a personal feeling that I have, when I say that the Chinese do not like it a lot when we sell there.

From the Tailor's Room to a Wholesaler

Interview with Michael Streck, Sales Manager of Bieber Fashion GmbH

Bieber Fashion has been around for over 100 years and four generations. It all started very small in a little tailor's room. In 1980 the business was closed. Afterwards it was launched again. Can you say more about these developments?

Michael Streck: Yes, we started, as you said, as a tailor's room. The market has changed dramatically, of course, especially in the 1970s. That was when foreign production started and there is not much left of the work at home. Now we produce in other European countries, China, and India. Without this change we would have no longer had a chance in the market with our current price segment. And, in principle, we have changed from a production company to a wholesaler, so we are only a distributor, no longer a producer as it used to be in the tailor's room. Today, we only have six employees; in the past, when we were still producing, there were significantly more than 200 employees at peak times.

As you just said, you have developed into a wholesaler. Which kind of fashion does Bieber Fashion currently produce? Does the production take place for your own brand or do you also produce for other brands?

M.S.: Well, we let others produce for our own brand "Beaver's." You can buy it on the internet from various partners of ours or in local stores, but of course, we also produce for well-known brands, which I cannot name now.

There is an old saying: "You should always go with fashion!". What does that mean for you personally and how does it impact the company itself? Where do all the designs come from, since fashion trends are constantly changing?

M.S.: We are active in a classic fashion segment, in the so-called "HAKA" segment. We manufacture men's outerwear, jackets, and coats. Within this classic segment there are not so many major fashion changes that there would be otherwise. Major fashion labels go through different changes than we do. The inspiration for our collections comes from their stores: we go there, take a look at what is up-to-date, what could be changed and then offered in an altered form. Of course, we also look at fashion magazines. The most important source of inspiration, however, is conversations with our customers. We do not gain relevant information all by ourselves. We also cooperate with our customers to create new collections.

What does the further process look like? When you've developed a new collection, do you then contact your suppliers or producers abroad to give them a new sample?

M.S.: Yes, exactly! Our ideas are somehow put on paper. Later we select the fabrics and the designs. Then we pass this order on to our producers abroad, either in Europe, India or China. They make a prototype and send it to us. We then evaluate it together with our customers. If there are changes to be made, further samples are requested.

As you have already mentioned, customers also play an important role in the evaluation process. Who are your customers and do you also sell internationally?

M.S.: Our customers are primarily retailers, wholesalers, and online shops. We are currently only active in the German and Swiss markets.

What does the sales process look like for your company?

M.S.: We sell directly to our customers. We currently employ six people; two are responsible for the sales, the other four manage the technical aspects and the commercial field. We sell everything directly from here. You can't see us at trade fairs, and we also do not have a large online presence. We rely on direct conversations with our customers, whom we visit directly or vice versa.

A lot has changed in the fashion industry due to globalization. Many companies actually produce their goods abroad in order to survive the price war. As you have already mentioned, Bieber Fashion is no exception, and you also have your products

manufactured in India and China. On which country do you rely the most in terms of production?

M.S.: We work a lot for Swiss customers. For the Swiss market it is important that the goods are of European origin. The outer fabrics and linings are produced within the European Union, which results in customs benefits for Swiss customers. That is why we focus on the production in Europe. For larger quantities or items that have to have low prices, we go to India and China, of course.

Do you also obtain any raw materials from those countries, like textiles?

M.S.: No, we just manufacture there. This is a so-called "full-scale business" in India and China. We manufacture the complete leather jackets and coats there. They are entirely manufactured there; the fabrics and other components come from the local market. We do not have to provide them ourselves. But within Europe we organize the provision of the raw material ourselves.

Currently, do you produce more in India or China?

M.S.: Well, we produce a lot more in China than in India.

There is another new trend: manufacturing is being shifted to even cheaper production countries, e.g. Bangladesh or Vietnam. Does your firm consider doing so as well?

M.S.: That is true; we are already paying attention to the currently popular production markets. We have already considered moving our production to Vietnam. I think that I would not be able to manufacture my products well in Bangladesh. But, as I said, Vietnam might be an option.

Can you say something about the business figures of Bieber Fashion in recent years? Are there any significant changes? Have you been able to withstand the price war or does your company have new strategic orientations?

M.S.: The turnover has remained more or less the same; it has neither depreciated nor improved. But, of course, we were able to improve our overall performance by reducing costs. As I said, we are always on the lookout for new production markets. We see more of an opportunity to reduce costs than to generate new sales. The market is very saturated;

that's a bit of a challenge right now. There are highly reduced prices¹²⁸ and a lot of competition everywhere, so we try to save costs in order to improve our performance.

Could you say something more about your sales figures?

M.S.: We are a relatively small company with a small staff. Yet our turnover is about 3-4 million euros per year.

Since production takes place abroad, do the tags on the garments also display the origin of the production country, "Made in China" or "Made in India"? Are there perhaps some tricks to circumvent that and label the clothes with a European country of origin, e.g. if the final assembly takes place in Europe?

M.S.: The care label on our products clearly indicates the origin of our products, in other words, the country of production. We are very clear about this, because we do not want to hide anything from anyone on the market. That is clearly documented and we are very open about that.

There are still certain prejudices against China, be it as a country of production or as a sales market. What do you personally think about China?

M.S.: I have never been to China myself and it is not really necessary for me to go there, with regard to my function in the company. But I would of course love to visit China! It is a very diverse, huge, and fascinating country with an ancient history. I am very interested in it, privately, and I will definitely go there someday! As far as the economy is concerned, it is, of course, a very strong competitor of ours. Chinese goods are oftentimes compared with the European ones. However, you can't compare that one-to-one, but the end-customer prices are simply much cheaper if you produce the goods in China. A part of our business is already there, but maybe that will change in the future, too. A lot depends on the producer with whom you're working. I would be very happy if I could go to China, take a look at everything for myself, and maybe even find a producer there.

The Big Picture

After the results of the survey have been analyzed in detail, this chapter will compare these findings with the data concerning the clothing industry in Bavaria, Germany and Europe.

¹²⁸ In German: "Rotstiftpreis," which is a highly reduced price.

The Bavarian Clothing Industry

According to a representative survey from the General Association of the German Textile and Fashion Industry (*Gesamtverband der deutschen Textil- und Modeindustrie e.V.*), there were 81 companies in the Bavarian clothing industry with around 10,070 employees in the year 2016.¹²⁹ Two years later, in 2018, Statista reported only 75 companies in the Bavarian clothing industry.¹³⁰ This means a decrease of six companies within two years. In 2017, the total turnover of the Bavarian clothing industry amounted to approximately 2.07 billion euros, in which the domestic sales turnover came to 1.36 billion euros and the non-domestic turnover accounted for 704 million euros.¹³¹

German Clothing Industry

The General Association of the German Textile and Fashion Industry recorded 252 companies in the clothing industry in 2016. In 2018, there were only 234 companies (18 companies less than in 2016). This development is also reflected in the statistics from Statista. The number of companies has been decreasing continuously since 2004. At that time there were still over 520 companies in the German clothing industry.¹³²

Figure 38 shows the total number of companies in the clothing industry in Germany in 2016 vs. 2018, sorted by number of employees. According to the definitions set by the Commission of the European Communities,¹³³ 90 percent of the companies in the German clothing industry belong to the category of small and medium enterprises. The number of SMEs has varied widely in the past two years, whereas the number of large companies has remained relatively constant. Specifically, the number of micro and small enterprises (dark blue) decreased by 11 companies within two years and the number of medium-sized enterprises (orange and grey) decreased by five companies.

¹²⁹ textil+mode (Gesamtverband der deutschen Textil- und Modeindustrie e. V.), *Mit jeder Faser intelligent: 2017, Die deutsche Textil- und Modeindustrie in Zahlen*, Berlin: Gesamtverband der deutschen Textil- und Modeindustrie e. V., 2017, p.17, https://www.verband-textil-bekleidung.de/fileadmin/Daten/Rundschreiben-Wirtschaft/RS-2017-Wirtschaftspolitik/zahlen2017_web.pdf.

¹³⁰ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.49

¹³¹ textil+mode, *Mit jeder Faser intelligent*, 2017, p.17

¹³² Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.33

¹³³ The Commission of the European Communities, *Commission Recommendation*.

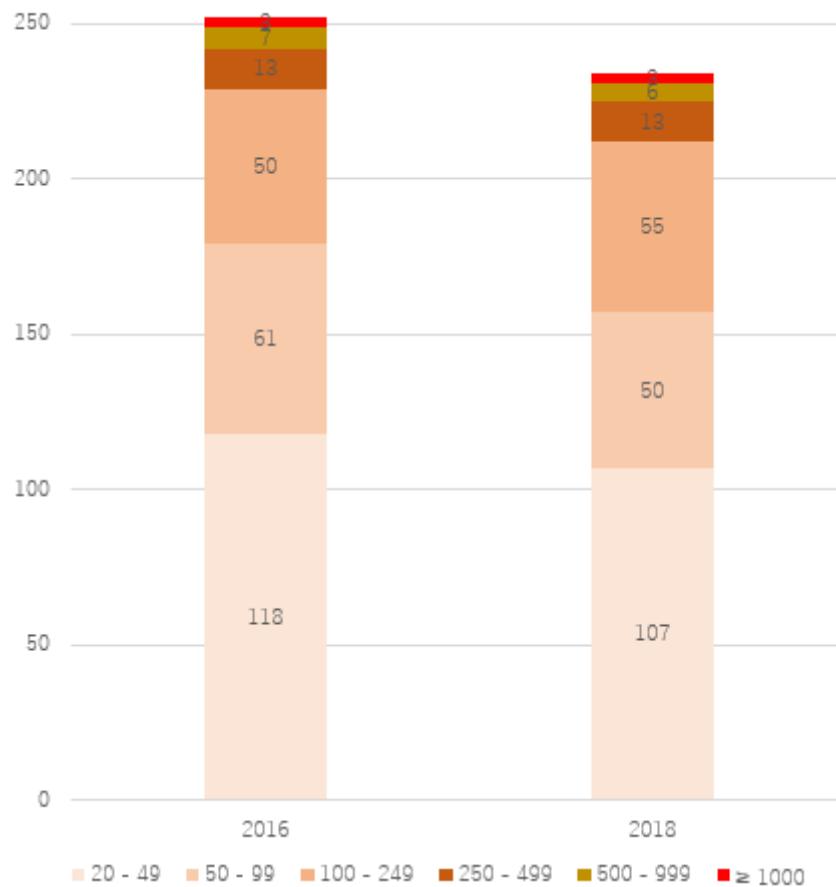


Figure 38. Comparison of the Numbers of Companies by Number of Employees.¹³⁴

With regard to the results of our survey, we observed that 92 percent of participants who completed the whole survey are SMEs. By applying the classification criteria of the Commission of the European Communities, we can further specify that 59 percent of the participating SMEs are microenterprises and 33 percent belong to the cohort of small enterprises. The remaining 8 percent of participants can be classified as large-scale enterprises. Because the vast majority of the participating firms in the Lower Franconian clothing industry belong to the category of SME, our results are in line with the overall dominance of SMEs in the German clothing industry.

¹³⁴ Own representation based on: textil+mode, *Mit jeder Faser intelligent*, 2017, p.16, and Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.38

An interesting perspective on the German clothing industry is the comparison of the number of companies in different German states. The three federal states, Bavaria, North Rhine-Westphalia, and Baden-Württemberg, the largest contributors to the German clothing industry, show fluctuations in the number of companies (see Figure 39). In Lower Saxony, Hesse, and Thuringia, where there are far fewer clothing companies, the number of companies remained constant from 2016 to 2018. This observation might indicate that the competition in Lower Saxony, Hesse, and Thuringia is lower than in the other federal states.

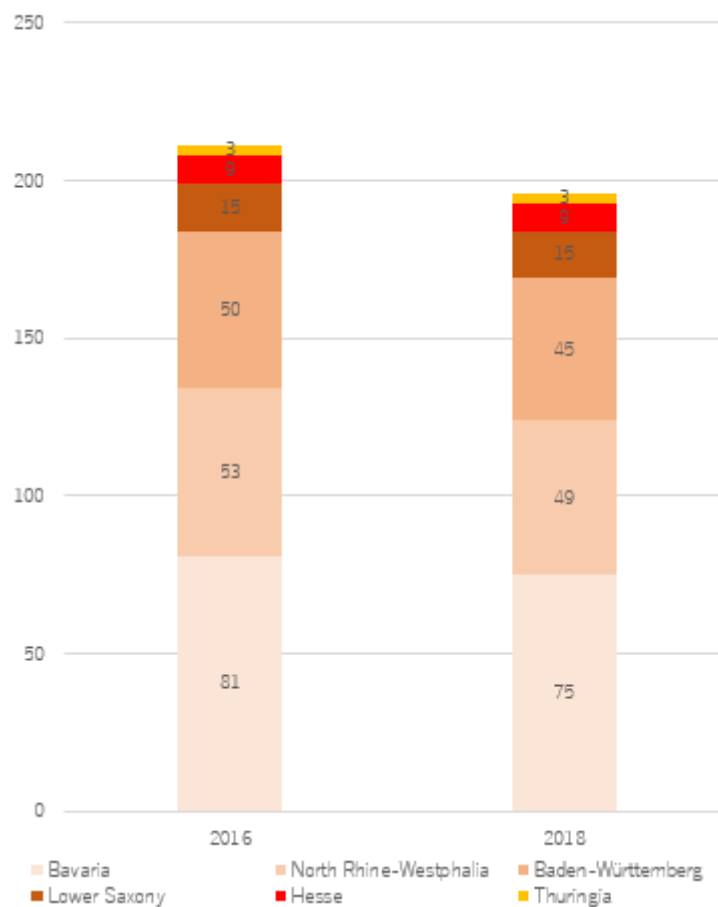


Figure 39. Comparison of the Numbers of Company by Federal State in 2016 and 2018.¹³⁵

¹³⁵ Own representation based on: textil+mode, *Mit jeder Faser intelligent*, 2017, p.16, and Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.49

In Figure 39 the numbers of clothing companies are organized by product category. In 2018, most German companies manufactured outerwear (79 companies, blue). Apart from other articles of clothing, the second most popular product type within the German clothing industry was laundry (grey), followed by working clothes and other professional garments. Only 16 German enterprises specialized in hosiery, and 15 firms manufactured clothing made of knitted and similar materials. The smallest share was represented by leather garments, which was produced only by three companies that year.

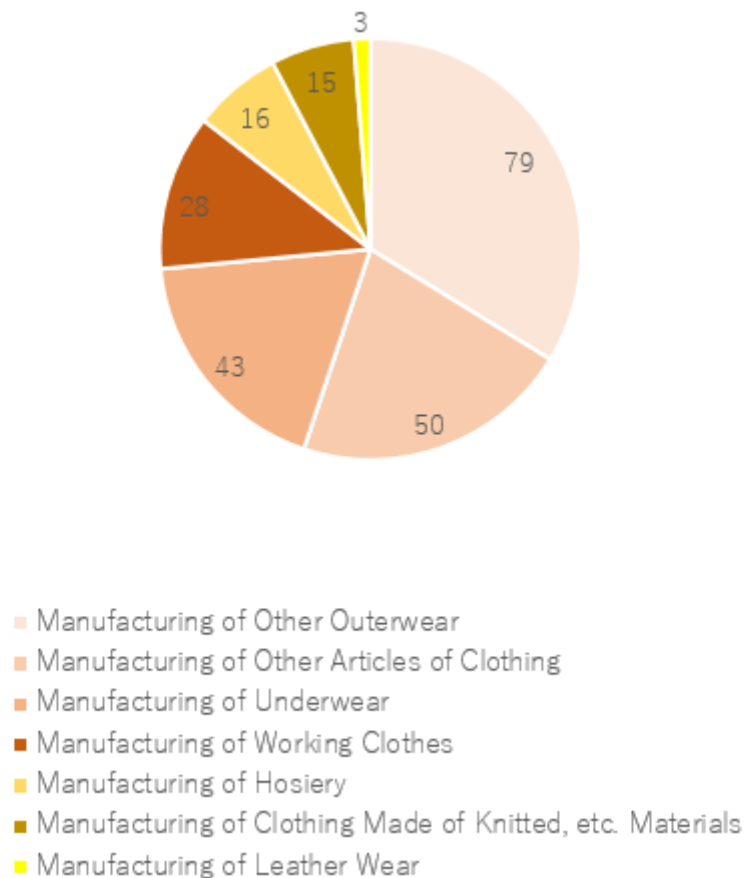


Figure 40. Numbers of Companies by Clothing Segments in 2018.¹³⁶

Turnover of the German Clothing Industry

The clothing industry in Germany had a total turnover of 7.25 billion euros in 2016 and 7.39 billion euros in 2017. This share fell to just 7.01 billion euros in 2018. In contrast, the textile industry alone had a total turnover share of approximately 12.3 billion euros to 12.4 billion euros in the same period, almost twice the total revenue of the clothing industry.¹³⁷

¹³⁶ Own representation based on: Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.38

¹³⁷ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.8

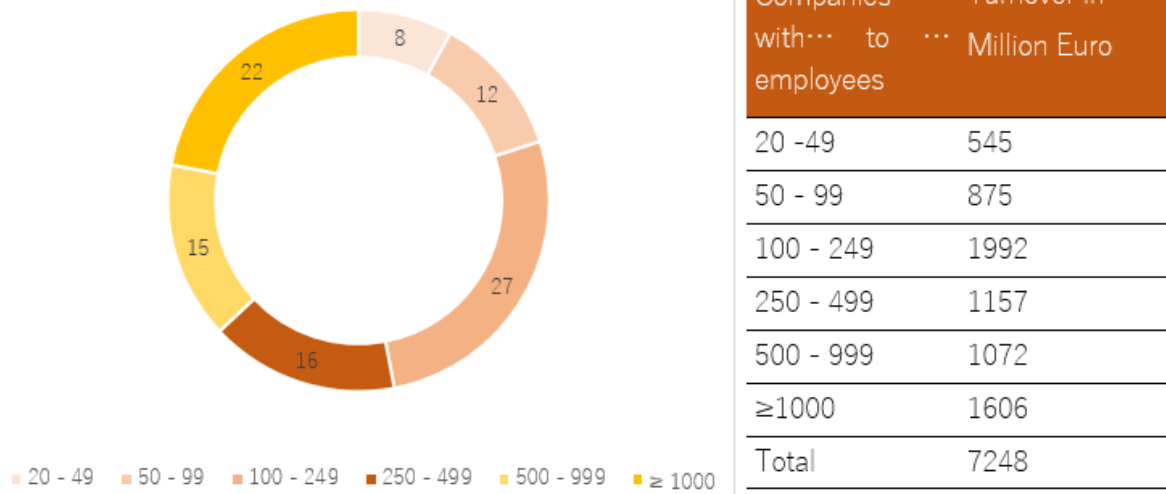


Figure 41. Total Turnover of the Clothing Industry in 2016 by Numbers of Employees.¹³⁸

As shown in Figure 41, the largest share of the total turnover (around two billion euros in 2016) was generated by the SMEs (the companies with fewer than 250 employees). The second largest share of turnover (1.6 billion euros) came from large-sized companies with one thousand or more employees. In general, 47 percent of the total turnover is generated by companies having up to 249 employees (SMEs). The products that sold most in 2016 were outerwear (4.3 billion euros), which were also the most exported, followed by underwear, hosiery, other wearables, work and professional clothes, and leather wear.¹³⁹

In 2018, ten German clothing manufacturers each exceeded one billion euros in turnover. These included the major sports goods manufacturers Adidas Group and Puma, luxury fashion providers such as Hugo Boss, discount fashion retailers Kik and Takko, and also branded providers in the medium-price segment like Esprit and s.Oliver.¹⁴⁰ The Lower Franconian company s.Oliver ranked 8th in a nationwide comparison, with a turnover of 1.342 billion euros.¹⁴¹

¹³⁸ Own representation based on: textil+mode, *Mit jeder Faser intelligent*, 2017, p.16

¹³⁹ textil+mode, *Mit jeder Faser intelligent*, 2017, p.10

¹⁴⁰ Hohmann, "Umsatz mit Bekleidung", 2019

¹⁴¹ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.6

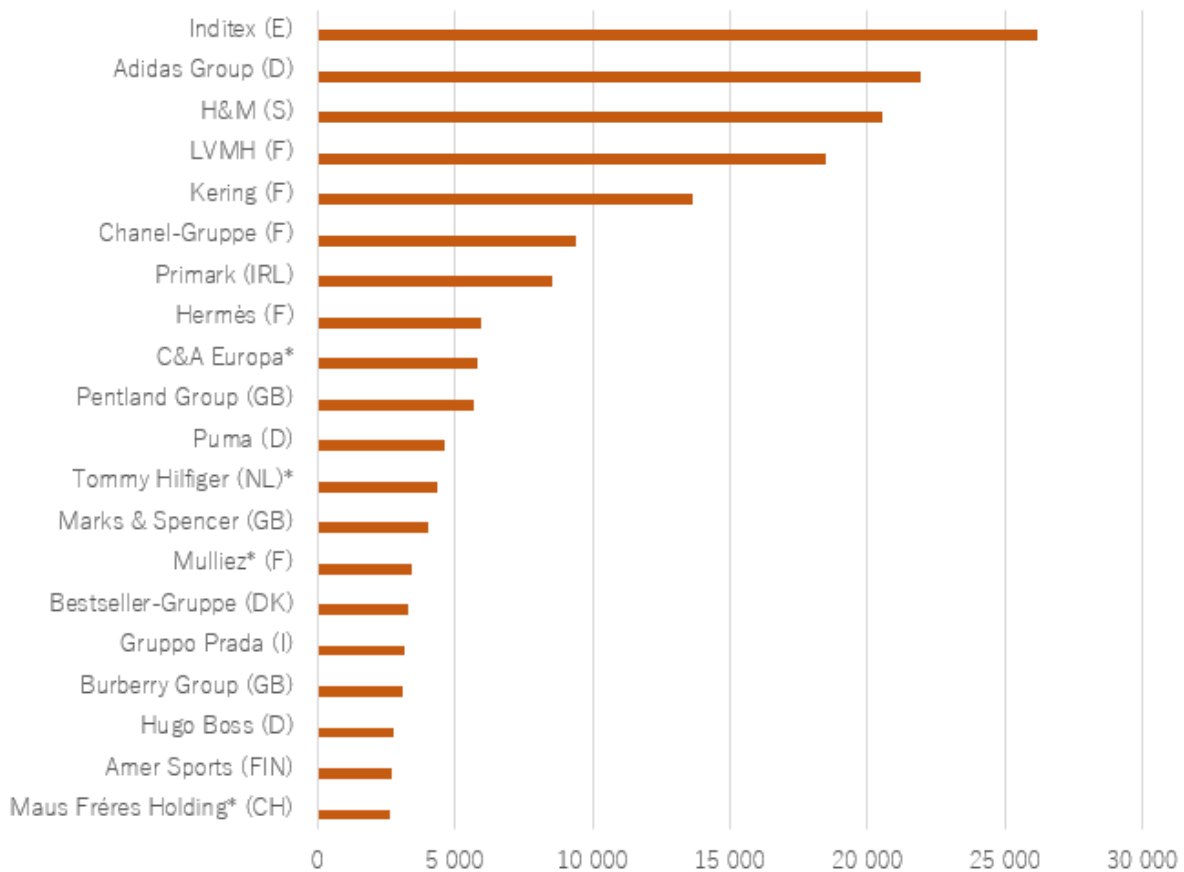


Figure 42. Total Turnover of the Leading Clothing Manufacturers in Europe 2018 (In Million Euro).¹⁴²

The statistics in Figure 42 show the 20 largest clothing manufacturers in Europe in terms of turnover in 2018. Inditex, known for brands such as Zara, is in first place with over 26 billion euros. The Bavarian company Adidas Group is in second place with almost 22 billion euros, followed by the Swedish group H&M with over 2.0 billion euros. Other German representatives were Puma in 11th place with 4.6 billion euros and the German luxury fashion company Hugo Boss from Metzingen (Baden-Württemberg) in 18th place with a turnover of around 2.8 billion euros. Therefore, the leading German clothing manufacturers are producers of sporting goods.¹⁴³ According to Statista, the domestic turnover of the German clothing industry in 2018 amounted to approximately 44 billion euros, while the foreign turnover was approximately 26 billion euros.¹⁴⁴

¹⁴² Own representation based on: Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.5

¹⁴³ Hohmann, "Umsatz mit Bekleidung", 2019

¹⁴⁴ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.59

Trade Statistics: Clothing Exports and Imports

According to statistics from the General Association of the German Textile and Fashion Industry, the largest share of German exports in 2016 were to other European countries, at more than 14 billion euros. In 2018, the most important country in term of German clothing export value was Switzerland, followed by Austria and Poland (see Figure 43). However, in 2016 the total export value of clothes from Germany to Asia amounted to only 495 million euros. The value of exports to China reached almost 92 million euros.¹⁴⁵ Two years later, in 2018, China was still on the list of most important export partners (21st place) in the clothing industry with an exports of almost 96 million euros (see Figure 43).

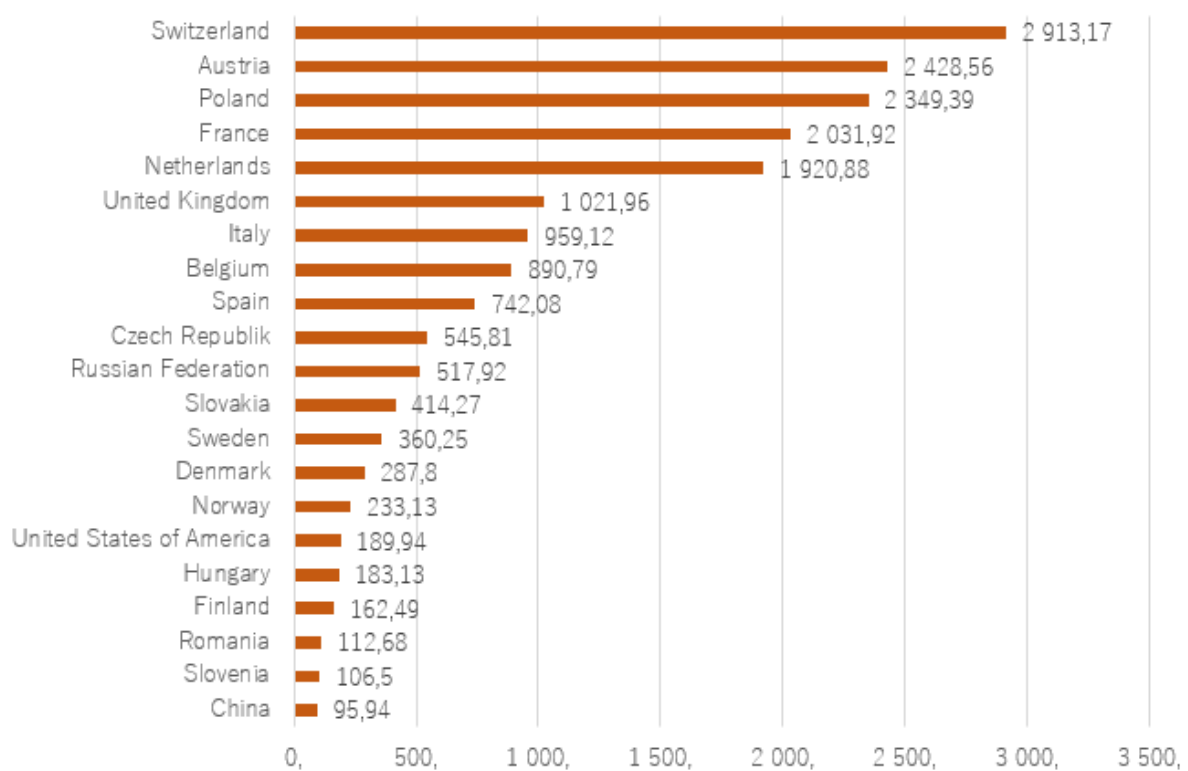


Figure 43. The Most Important Countries for Clothing Exports From Germany in Terms of the Export Value in 2018.¹⁴⁶

When comparing the results of the General Association of the German Textile and Fashion Industry's statistics with our survey results, we observed that only one out of five firms who are entangled with China claimed to export to the Chinese market. While this result was somewhat contradictory to our initial assumption that firms in the Lower Franconian

¹⁴⁵ textil+mode, *Mit jeder Faser intelligent*, 2017, p.37-38

¹⁴⁶ Own representation based on: Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.68

clothing industry would engage in a higher degree of export business, it nevertheless reflects the national export pattern of German firms in the clothing industry. More specifically, according to Figure 43, we see a dominant flow of German exports to its neighboring countries in 2018, leaving China in the backseat rows of its most popular export destination. With this in mind, the low export engagement of our participating firms makes sense in the context that the overall tendency of the German clothing industry is to export primarily to its neighboring countries.

On the other hand, the German import value of clothing in 2018 amounted to almost 19 billion euros from Asia. From China alone, the value of clothing imports reached more than 8 billion euros in 2016.¹⁴⁷ This trend continued until 2018: China was the top import partner in the German clothing industry, with an import value of over 8 billion euros, followed by Bangladesh. The most important European import partners were Turkey and Italy, with import values of around 3.3 billion and 1.5 billion euros respectively (Figure 44).

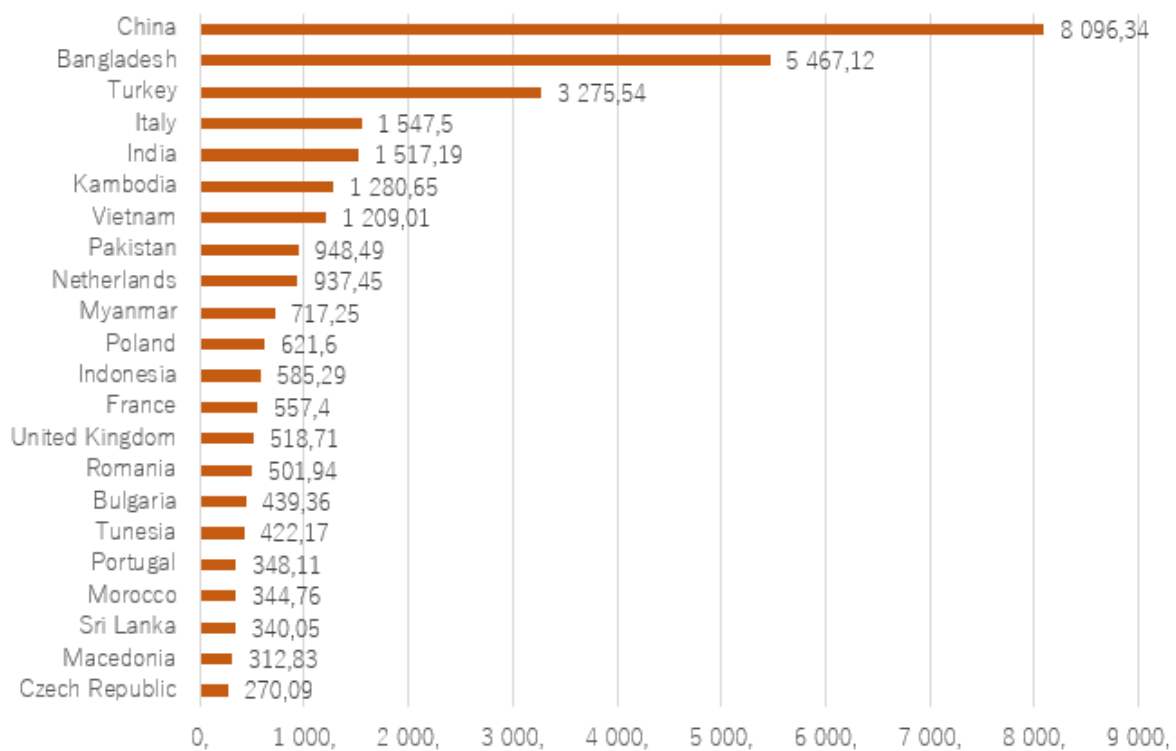


Figure 44. The Most Important Countries for Clothing Imports to Germany in Terms of the Import Value in 2018.¹⁴⁸

¹⁴⁷ textil+mode, *Mit jeder Faser intelligent*, 2017, p.44

¹⁴⁸ Own representation based on: Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.70

The significance of China as an import partner in the clothing industry was also reflected by our survey results. All of the firms that stated having entanglements with China in our survey do in fact import from China, among other things. Therefore, the results of our survey for Lower Franconia reflect the overall German import and export trends.

European Clothing Industry

A statistical analysis by Statista showed that in 2017 there were 124,700 companies in the clothing industry in Europe.¹⁴⁹ The total turnover amounted to around 69.7 billion euros, its lowest point since 2006. In 2007 the total turnover reached 97.9 billion euros, but since then it has steadily decreased, with an exception of 2011, when the turnover reached 76.5 billion euros.¹⁵⁰

Compared to other European countries, Germany was in second place with turnover of 8.46 billion euros, closely followed by France with 7.9 billion euros. Italy was the European market leader in the clothing industry with total turnover of 28.8 billion euros.¹⁵¹ German exports experienced a decrease in non-European markets in 2016. German exports to Russia and Turkey dropped in both relative and absolute terms. However, this decrease was more than offset by an increase of exports to the Chinese and European markets.¹⁵²

Additional Information on the Clothing Industry

Innovative High-Tech Materials and Functional Clothing

The German clothing industry is a market leader and pioneer of innovative textiles for the automotive industry, healthcare, and construction, but also for aviation and traffic technology. Therefore, the research-intensive textile applications and innovative textiles from Germany enjoy a distinguished reputation worldwide.¹⁵³ These innovative textiles are used in the clothing industry, for instance in outdoor clothing. One example is the large-scale company Vaude in Obereisenbach. Functional clothing and high-tech materials, such as 3-D knit construction, are used for particularly light backpacks and

¹⁴⁹ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.35

¹⁵⁰ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.13

¹⁵¹ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.14

¹⁵² textil+mode, *Mit jeder Faser intelligent*, 2017, p.4

¹⁵³ textil+mode, *Mit jeder Faser intelligent*, 2017, p.4

environmentally friendly fleece fabrics. These innovative products received numerous awards in 2019.¹⁵⁴

The importance of technology and innovation within the clothing industry can also be carefully inferred from the results of our survey. The firms that stated having entanglements with China indicated that the acquisition of technological know-how is one of the main drivers of their entanglements with China. This result could thus be interpreted in light of the rising importance of innovative and research-driven textiles in the German clothing industry. The acquisition of technological know-how from China might provide valuable incentives and insights into innovative technological advancements, which, in turn, might be useful for the German clothing industry to further maintain and develop their position as market leader and pioneer of innovative textiles. This line of thinking is, of course, speculative in nature and thus provides only one of many potential rationales as to why the acquisition of technological know-how from China ranked amongst the main drivers of engagement with China in the context of our survey.

Cost Structure of the German Clothing Industry in 2017

Based on statistics by Statista on the Cost Structure of the German Clothing Industry in 2017, the materials for manufacturing (not counting energy) caused the highest cost share (32.2 percent) in 2017. The second biggest cost share, with around 28 percent, were labor costs. This number is divided between personnel costs (18.4 percent), wage labor costs (9.3 percent) and labor leasing costs (0.4 percent).¹⁵⁵

Given the relatively higher cost shares for labor and manufacturing materials in the German clothing industry, cost-related rationales still play an important role for Lower Franconian firms in the clothing industry and their entanglements with China. With regard to the survey results, low manufacturing costs were stated as one of the main drivers for the firms' engagement in China-related business activities, closely followed by low labor costs and low raw material prices in China. Although the acquisition of technological know-how was similarly presented as one of the main reasons for their engagement with

¹⁵⁴ Vaude, *German Engineering & Innovation: Trail Spacer 18 Multisport-Rucksack mit 3D-Strickkonstruktion*, n.d., <https://www.vaude.com/de-DE/Unternehmen/Presse/Produktneuheiten/FruhjhrSommer-2019/German-Engineering-Innovation-Trail-Spacer-18-Multisport-Rucksack-mit-3D-Strickkonstruktion>

¹⁵⁵ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.27

China, the relatively lower cost share for labor and manufacturing in China still acts as an important incentive for firms to engage in China-related business activities.

According to another study by Statista, the most important country for export of clothing worldwide in 2017 in terms of export value was China. In clothing exportation, China (not including Hong Kong) is the market leader with an export value of \$157.85 billion USD. All three top countries for clothing export are dominated by Asian countries, China, Bangladesh, and Vietnam. This resembles the list of the most important import countries for the German clothing industry, in which China and Bangladesh are two most important trading partners (see subsection “Trade Statistics: Exports and Imports of Clothing”). The German clothing industry came in fifth place in 2017 with \$24.06 billion USD and was the second export leader of Europe, behind Italy. As one of the most important trading ports, Hong Kong was in ninth place with \$13.86 billion USD.¹⁵⁶

From the list of most important countries for clothing export in a worldwide comparison in 2017, the most prolific importer of clothes was the United States with an import value of more than \$95 billion USD. In second place was Germany with \$39.94 billion USD. Japan followed close behind with an import value of \$30.3 billion USD. Out of the top ten import countries, six countries are from Europe. Therefore, the European import value of clothes reached \$145.6 billion USD in 2017, including the United Kingdom. Japan, Hong Kong, and South Korea were the only Asian countries on this list.¹⁵⁷

Brief Overview of Purchasing Power and Consumption in China

According to the *Allianz Global Health Report*, 1.1 billion people belong to the “wealth class”¹⁵⁸ and more than half of them come from the People's Republic of China.¹⁵⁹ This fact is also evident in the Chinese consumer market. Here, the younger generation is pursuing a high-quality lifestyle. For older people, health and love for life play important

¹⁵⁶ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.75

¹⁵⁷ Statista, *Textil- und Bekleidungsindustrie in Deutschland*, 2019, p.73

¹⁵⁸ The *wealth class* should be understood as follows: “All individuals with net financial assets of between 30 and 180 percent of the global average, i.e. between 7.600 and 45.600 EUR or 8.856 and 51.514 US-Dollar, are defined here as the wealth class.” (see: Stefanie Schmitt, “Kaufkraft und Konsum – China”, *Germany Trade & Invest*, October 25, 2018, <https://www.gtai.de/gtai-de/trade/wirtschaftsumfeld/kaufkraft-und-konsum/china/kaufkraft-und-konsum-china-17666>)

¹⁵⁹ Schmitt, “Kaufkraft und Konsum – China”, 2018

roles in consumer decisions. In 2017, Chinese people spent most on food and other living costs (housing, energy, water). This category was followed by transportation and telecommunication as well as education, culture, and leisure.¹⁶⁰ With a 6.8 percent share of total expenditures, clothing and shoes were the most important consumer goods, before furniture and household appliances. Chinese consumers particularly focus on pursuing individuality in their appearances. This results in their desire to consume unique and personalized goods, as well as in their willingness to pay more for higher quality and premium products. The ever-increasing rent and property prices slow down consumption in other product categories.¹⁶¹

Conclusion

The aim of our survey was to analyze how Lower Franconian firms in the clothing industry are entangled with China. Our research population contained a total of 104 companies from the Lower Franconian clothing industry, of which 11.54 percent participated in our survey. Given the fact that only 12 firms completed the survey, the survey results are limited in their representativeness for the Lower Franconian clothing industry as a whole. However, the results do reflect certain trends in the Bavarian and German clothing industries, as shown in the previous section. Overall, we believe that our work can not only be seen as a valuable contribution to the existing body of literature concerning the clothing industry in Germany, but also as a point of reference for firms considering an expansion of their China-related business.

The significant majority of the participants can be classified as SMEs; 50 percent of participating firms belonged to the category of microenterprises and 34 percent can be classified as small enterprises. The remaining 8 percent belonged to the cohort of large-scale enterprises.

In the survey results, a predominance of the import business was apparent. More precisely, five out of 12 firms who completed the survey stated to have entanglements with China. More precisely they choose the following entanglements, listed from the highest to the lowest number times selected: import from China (5), raw materials from China (2), production plant in China (2), employees from China (2), sales office in China (1), patents

¹⁶⁰ Schmitt, "Kaufkraft und Konsum – China", 2018

¹⁶¹ Schmitt, "Kaufkraft und Konsum – China", 2018

from China (1), assembly plant in China (1), joint venture in Germany with a Chinese partner (1), and export to China (1). One key result, therefore, is that the import business was a common denominator of all entangled firms in the Lower Franconian clothing industry that responded to this survey.

With regard to the main reasons for the firms' entanglements with China, the results show the dominance of cost-related and strategically driven factors. Specifically, low manufacturing costs and the acquisition of technological know-how received the most selections among the entangled firms, closely followed by low labor costs, low raw material prices, and the acquisition of managerial know-how. This shows that the clothing industry is not predominantly driven by cost-related rationales as previously assumed. In addition, the relevance of technological know-how as a driver of engagement with China can be carefully linked to the rising importance of China as a technologically advanced country rather than merely a low-cost and low-value-added country of production.

The relevance of the China-related business activities for Lower Franconian firms in the clothing industry was reflected by its relative sales shares compared to overall sales in 2018. 67 percent of the entangled firms stated that their sales share of China-related business activities amounts to between 26 percent and 40 percent. The remaining 33 percent of entangled firms even responded that 41 percent to 60 percent of overall sales came from China-related business. Furthermore, no positive correlation could be found between the firm size, measured in total sales per annum, and sales share from China-related business. In simpler terms, a larger firm does not necessarily have a larger sales share stemming from China-related business activities, according to our survey.

Another interesting finding of our survey revealed potential reasons for some firms' lack of present and future engagement with China. The firms with no entanglements to China assessed their business prospects in China to be very bad for the next three years. Interestingly, the same group of respondents did not attribute their pessimistic assessments to existing market access restrictions in China, which they largely perceived as weak or nonexistent. On the contrary, entangled firms evaluated their business prospects in China to be neutral.

Also interesting, the majority of the entangled firms in our survey reported having at least one Chinese business partner. More precisely, 40 percent of respondents even revealed

that they cooperate with more than three Chinese business partners. Furthermore, all the entangled firms indicated that their cooperation with Chinese business partners is, without exception, positive.

In Comparison to Bavaria, Germany, and Europe

Although the absolute number of our survey participants remained relatively low, certain trends that were reflected in our survey results are also observable for the Bavarian and German clothing industries in their entirety. The predominance of SMEs within the German clothing industry (see subsection “German Clothing Industry”) also holds true for the Lower Franconian firms who participated in our survey. 92 percent of the survey participants could be categorized as SMEs. Upon a closer look, 59 percent of participants were microenterprises and 33 percent belonged to the cohort of small enterprises. Therefore, our results appear to be in line with the overall dominance of SMEs in the German clothing industry.

Among the entangled firms in our survey, only one participant reportedly engages in export business with China. Although this low degree of involvement in the export business was contrary to our initial assumption, it does, however, represent a general trend within the German clothing industry as a whole. The most important export destinations of the German clothing industry in 2018 were its neighboring countries, Switzerland, Austria, and Poland. China was listed in 21st place (see subsection “Trade Statistics: Clothing Exports and Imports”). Based on this fact, the low export engagement of our participating firms with China might therefore be explained by the general tendency within the German clothing industry to export predominately to neighboring countries. In a similar fashion to export patterns, the survey results for clothing industry import business with China strongly resembles the data from the German clothing industry as a whole. All the entangled firms in our survey reportedly engage in import business with China. Therefore, the importance of China as an import partner for the German clothing industry is similarly evident in the entanglements of Lower Franconian firms within our survey.

The Food and Beverages Industry in Lower Franconia

The Food and Beverages Industry

Under the compound industry of food and beverages we included primary producers of these products (beer breweries, wine vineyards and cellars, butchers, bakers, confectioners and millers). We also included retailers of the finished products (restaurants, bars, distributors, and retailers of foods and beverages). Our intention was to try to include as many firms as possible under the umbrella of this industry, hoping to discover a broad range of entanglements with China.

Bavaria contributes 20 percent of the total turnover in Germany in the food and beverage industry, and every third company of this sector is located in Bavaria. Milk processing, meat processing, and the production of baked good are the largest facets of business in this industry in the region. 75 percent of total turnover in the food and beverage industry comes from the production sector.¹⁶²

Unique Aspects and Characteristics about the Food and Beverage Industry

Compared to other regions in Bavaria, Lower Franconia has fewer production companies. According to the “Cluster Bayern Ernährung” (Bavarian Nutrition Clusters), a partner of the Bavarian ministry of Agriculture, Food, and Forestry, beer and wine production were the most significant contributors to the food and beverage industry in Lower Franconia in 2016. Food and beverage producers comprised approximately 80 percent of the total production companies in Lower Franconia. The remaining 20 percent were engaged in meat production.¹⁶³ Lower Franconia also contributes almost 94 percent of the total wine production in Bavaria.¹⁶⁴ This number shows that Lower Franconia is the leading wine producer in Bavaria by a wide margin.

¹⁶² Ebert, Volkert and Kosiolek, Elisabeth, *Branchenreport Ernährungswirtschaft Bayern 2017*, Kulmbach: Cluster Ernährung, 2017, p.6

¹⁶³ Ebert and Kosiolek, *Branchenreport*, 2017, p.9

¹⁶⁴ Bayerisches Staatsministerium für Ernährung, Landwirtschaft und Forsten, *Bayerischer Agrarbericht*

During our interview with Mr. Andreas Göpfert, the head of communications for Gebietswein Werbung GmbH, we learned about Würzburg's wine industry and its special type of white wine, Silvaner, which is often sold in a uniquely shaped bottle called the "Bocksbeutel". The iconic Bocksbeutel is squat, round, and partially flattened, unlike typical wine bottles, and only wine from this region is legally allowed to be distributed in this type of bottle. Wine is essential to both the culture and economy of Lower Franconia, in contrast with other regions in Bavaria where beer plays the dominant role in alcoholic beverage production and consumption. This wine, with 350 years of history,¹⁶⁵ has made the whole region well-known and special, and has created a niche wine culture which lures tourists and sommeliers from all around to visit Lower Franconia for wine tastings.

This examination of the wine industry was especially important to our group because the demand for wine, German and otherwise, has skyrocketed in recent years and continues to increase. According to Chinese wine import data, Germany was counted as one of the ten biggest wine exporters to China in 2018. Compared to the year before that, the sales revenue increased 23.85 percent, adding up to a total of 25.8 million USD for 5.17 million liters of German wine that were important into China.¹⁶⁶ "The wine business has big potential" said Mr. Göpfert. He also mentioned a few wine producers in Lower Franconia (such as Horst Sauer Weingut, Sommerach Vineyard, and DIVINO) which already sell their wine in China. This is an excellent example of an entanglement between firms in Lower Franconia and China.

Aside from the wine sector, using online research we found a brewery called Kauzen-Bräu in Ochsenfurt, which was established in 1809 and brews 100,000 hectoliters of beer annually.¹⁶⁷ According to a report, this company has sold beer to China since 2012. A Chinese beverage distributor discovered this local brewery and started a cooperation with them. The advantages of Kauzen beer were its good quality and the many awards it had

2018, n.d., <http://www.agrarbericht-2018.bayern.de/landwirtschaft-laendliche-entwicklung/verkaufserloese.html>.

¹⁶⁵ Haus des Frankenweins, *Der Silvaner, unsere fränkische Identität*, 2020, https://www.frankenwein-aktuell.de/Der_Frankenwein.html.

¹⁶⁶ lookvin.com, *2018 中国十大葡萄酒进口来源国 各个国家表现如何? (Chinas top ten wine import sources, how does each country perform?)*, 2019, <http://www.lookvin.com/article/news/detail-52655.html>

¹⁶⁷ kauzen.de, *Fakten*, 2020, http://www.kauzen.de/1_fakten.php

won, said the Chinese businessman.¹⁶⁸ Today, Kauzen beer can no longer be purchased through Chinese online shops for unknown reasons, but there are still some old reports about this beer on the internet, including its price and user comments. Unlike the vast majority of German beverage producers, Kauzen's official website also has a Chinese version. This can be seen as a strategy to attract more potential Chinese customers and business partners.¹⁶⁹

Our research results illustrate the food and beverage industry in Lower Franconia as characterized by many companies with long traditions and histories. These companies have many years (or even centuries) of experience in product research and development, loyal customers, and the potential to gain international recognition. According to Mr. Göpfert, Lower Franconian beverage companies are often small and prefer to target a niche consumer base; however, the high-quality wine produced by this region could bring local producers worldwide esteem if they would take the chance to approach international consumers.

Total Revenue

According to the official manufacturing sector revenue reported by the Bavaria State Office for Statistics in 2018, the total revenue of the food and beverage industry in Lower Franconia was approximately 2.63 billion euros.¹⁷⁰ This total was comprised from the revenues of food and animal feed production, slaughtering facilities, meat processing, and fruit and vegetable processing, as well as the production of baked goods, confections, coffee, tea, other beverages, wine, and beer. The three largest contributors to overall revenues were the food and animal feed industry with a gross income of 1.73 billion euros, the beverage production industry with almost 573 million euros of revenue, and baked goods production with over 391 million euros. In contrast, wine production only earned around 55 million euros, the lowest annual revenue in the whole segment.¹⁷¹

¹⁶⁸ Main-Post, *Ochsenfurter Weißbier für China*, August 16, 2012.

<https://www.mainpost.de/regional/wuerzburg/Ochsenfurter-Weissbier-fuer-China;art736,6975864>.

¹⁶⁹ Kauzen, <http://www.kauzen.de/>

¹⁷⁰ Bayerisches Landesamt für Statistik, "Verarbeitendes Gewerbe in den Regierungsbezirken und Regionen Bayerns 2018 (sowie Bergbau und Gewinnung von Steinen und Erden)" Fürth, 2019, p.41

¹⁷¹ Bayerisches Landesamt für Statistik, "Verarbeitendes Gewerbe", 2019, p.41

Precise data about firms' revenue in China-related business in Lower Franconia was not found through this research. China was ranked as the second-largest export and import partner of Bavaria in 2017 with 16.020 million euros worth of exports and 15.272 million euros worth of imports. The same report also stated that food and beverage products contribute approximately 4.9 percent of the total export revenue of Bavaria.¹⁷²

Dimension of the Companies

The food and beverage industry in Lower Franconia employed 22,889 workers in approximately 240 companies in September 2018, most of whom (10,757) worked in the food and animal feed industry. The next largest sub-industry in terms of employment was baked good production (6,161 employees), and in third place was beverage production (1,998 employees).¹⁷³ However, this report from the Bavarian State Office of Statistics does not include very small businesses; it only includes gives data from companies that employ at least 20 people.

While sorting the list of businesses provided by the Chamber of Industry and Commerce Würzburg/Schweinfurt, we noticed that many firms in the food and beverage industry could be classified as micro-businesses, having fewer than ten employees. This situation is also reflected by our survey results, although we attempted to eliminate micro-businesses from our contact list in order to have a more manageable number of firms. Over 70 percent of survey participants gave their employees as under 50. Only two out of the 27 participants reportedly have more than 250 employees. During his interview, Mr. Göpfert confirmed that the majority of wine producers in Lower Franconia are small family businesses, which often sell their wine directly from the vineyard, without needing a distributor.

Methodological Approach

A few specific notes about methodology are in order for the food and beverage industry interviews and online survey. First, in conducting the interviews, we followed a “semi-structured” approach. While said interviews were based on a set of pre-decided questions, there was additional room and leeway allowed for unanticipated topics, answers, and

¹⁷² Bayerischer Industrie- und Handelskammertag e. V., *Der Außenhandel Bayerns 2017*, June 2018, p.3
<https://www.bihk.de/bihk/downloads/bihk/der-aussenhandel-bayerns-2017.pdf>

¹⁷³ Bayerisches Landesamt für Statistik, "Verarbeitendes Gewerbe", 2019, p.41

avenues of discussion. Six of our interview questions were based on the general part of our online survey. In addition to these questions, we asked the interviewees about other impressions and opinions concerning their own business and the business of their industry with China. Regarding the selection of interview partners, size and prominence were our main criteria because we wanted the interviews to be somewhat representative of the food and beverage industry in Lower Franconia and also possibly demonstrate some entanglement with China. Thus, we eventually interviewed the Fränkischer Weinverband (Franconian Wine Association) and Juliusspital, a renowned vineyard in Würzburg with a centuries-long history.

Second, the online survey consisted of two parts, the first part being a fixed list of general questions that every industry group used, and the second part being a list of 11 industry-specific questions.¹⁷⁴ For the industry-specific questions, we tried to include topics and questions that the general list did not contain, but that we believed to be important for the food and beverage industry and also complementary to the general questions. It is important to note that companies that stated in the first part of the survey that they do not have business-related entanglements with China were directly transferred to part three, without responding to part two. Alternatively, companies entangled with China only responded to part one and two, but not to part three. As a last note on structure, some questions in the survey were identical in every industry report, while others were specific questions about the food and beverage industry

As for the selection of companies, we used the Chamber of Industry and Commerce's list with about two thousand companies in the food and beverage industry in Lower Franconia, using specific filters that will be provided in the Appendix. We originally intended to exclude all firms with less than ten employees; however, the list was partially flawed and did not contain data on the number of employees for many of the companies. We decided to include these companies because we did not have enough information about them to eliminate them, which explains why the survey results report less than ten employees for some of the participating companies. Then we sent our survey by e-mail to the remaining 550 firms and received a response rate of about five percent.

¹⁷⁴ The survey is provided in the Appendix.

Although this industry report primarily relies on the online survey results and the interviews we conducted, we utilized a few other sources as well. These include academic papers, government reports, and online resources related to the food and beverage industries in Lower Franconia, Bavaria, Germany, and Europe.

Findings of the General Survey

The following section shall present the results from the general part of the online survey for the food and beverage industry in Lower Franconia. The first part of the survey (questions 1-8) consists of questions intended to provide some general information on the participating companies and to categorize them based on various criteria, such as size and total annual revenue. The second part (questions 9-28) strives to illuminate the various kinds of entanglements between firms in Lower Franconia and China.¹⁷⁵

27 of the 550 contacted companies, slightly more than 5 percent, consented to participation and submitted responses for our online survey about the food and beverage industry. A look at the industry branches to which these firms belong reveals a surprisingly diverse picture; a few of the survey respondents include a hotel and restaurant, a butcher company, a wine bar, a pasta company, a beverage company, and a vineyard. The bulk of participants were small- and medium-sized enterprises; over 70 percent of respondents reported having fewer than 50 employees, while only 9.5 percent reported more than 250. In terms of total annual turnover, 35 percent of participants reportedly earn less than 500,000 euros per year and 25 percent make between 500,000 and 2 million euros, with only 10 percent of the participating firms grossing more than 50 million euros annually. 43 percent of the participants are registered as limited liability corporations, followed by companies that are limited liability corporations with a limited partnership (GmbH & Co KG) with 29 percent. Looking at the location of participating companies, a quarter of them have their headquarters in Würzburg, the largest city in Lower Franconia. Others are based in Aschaffenburg, Hammelburg, Kitzingen, and Schweinfurt.

In the following sections it is important to know that 38 percent of respondents reported entanglements with China, whereas 62 percent stated the opposite. The third part of the survey (questions 29 to 34) addressed the companies without entanglement with China

¹⁷⁵ The survey is included in the Appendix for reference.

to shed some light on the reasons behind their decision to refrain from business with China.

For companies which reported ties to China (Figure 45), the first question of the second part, provided participants with an extensive list of possible entanglements with China to choose from. The most common forms included exports to China (44 percent of participants), Chinese customers or guests (33 percent), imports from China (22 percent), having a subsidiary in China (22 percent), having connections with Chinese traders or having Chinese partners for the distribution of goods in China (22 percent), and the export of management “know-how” to China (22 percent). Less common forms of entanglement included joint ventures in Germany with a Chinese partner, a sales office in China, trademarks to China, Chinese employees and lastly, raw materials from China. Clearly, exports to China seems to be the dominant form of entanglement here.



Figure 45: Which of These Entanglements Does Your Company Have with China? (n=9)

Entanglements with China

As mentioned above, 38 percent of participants in the food and beverage industry reported entanglements with China, and the most prevalent form of entanglement was exportation. Furthermore, the survey results reveal that China-related business still contributes only a small portion of most firms' overall revenue. 62.5 percent of respondents estimated that China-related business accounted for between 1 and 10 percent of their revenue, 12.5

percent of participants estimated 41 to 60 percent of their revenue, and another 12.5 percent responded that 61 to 80 percent of their revenue is China-related.

When asked about the main reasons for their China-related business, 57.1 percent of participants selected access to the Chinese market as a goal, 28.6 percent selected the low price of raw materials. Low manufacturing costs, low labor costs, and management know-how were included by 14.3 percent each. Further answers included “overnight guests” and “quality”, but without further specification. Regarding their future business development strategy, 37.5 percent of respondents reported that they were likely to expand their China-related business, 50 percent are reportedly considering the option but are still undecided, while 12.5 percent are not considering an expansion of their business in the Chinese market (Figure 46).

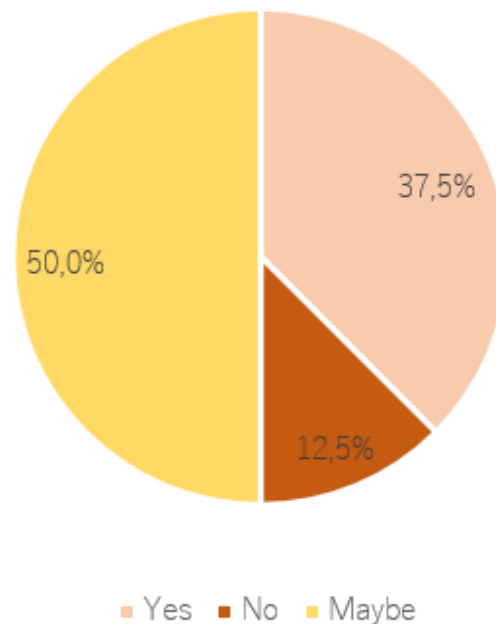


Figure 46. Do You Consider Expanding Your China-Related Business? (n=8)

Similarly, in terms of their expectations for the future prospects of their industry in China over next three years, on a scale from 1 to 5, the arithmetic mean was 3.29, indicating moderately optimistic expectations. As for investments, China appears to occupy a rather negligible rank for most participating Lower Franconian companies; 75 percent stated that they do not plan any investments in China whatsoever. On the other hand, 12.5 percent reported China to be a top three destination country for investment, and another 12.5 percent even said China was their top choice for investment.

Complementary to the question about future business strategy and expectations, only 14.3 percent of participating companies reported that their China-related revenue has decreased, while 28.6 percent said it has stagnated. However, 42.9 percent of participating firms responded that their China-related revenue has increased over the past three years (Figure 47). Interestingly, access barriers to the Chinese market do not seem to be a major source of concern for respondents; 42.9 percent reportedly do not perceive any kind of barriers, 14.3 believe that they face very weak barriers, and 42.9 reported weak access barriers (Figure 48). None of the participants reported that they perceive China's market barriers to be strong or very strong. Concluding the second part of the general section of the survey, some companies with business interests in China do wish to obtain assistance from institutions (e.g. the local Chamber of Industry and Commerce)), including legal consultation, active political lobbying, and active consultation about exports and transactions.

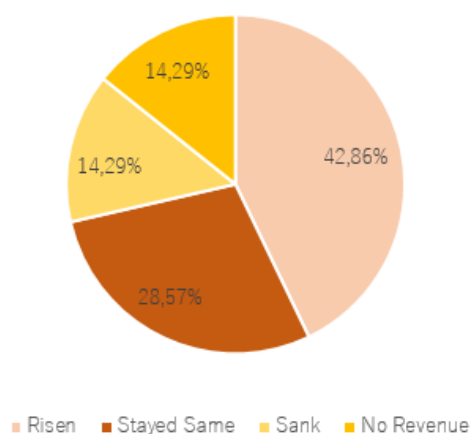


Figure 47: How Did Your China-Related Revenue Develop over the Last Three Years? (n=7)

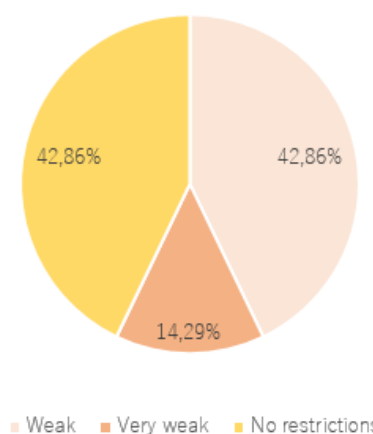


Figure 48: How strong do you perceive Market Access Barriers in China to be? (n=7)

Turning to the second section of part two, which deals with more industry-specific questions, 43 percent of respondents reported the use of materials, equipment, ingredients, or resources that were produced in China; some of the responses were merchandise, foodstuff, IT-devices, smartphones, and other electronic machine components. As a subsection of the food and beverage industry, 12.5 percent of participants declared affiliation with bars or restaurants in China. Categorizing the different types of clients and customers in China, the most common business connections reported by respondents were distributors (100 percent), but also retail companies (50 percent),

restaurants or bars (25 percent), and private individuals (25 percent). The previous list takes into account the fact that companies often have not only one, but multiple business partners in China, and the results confirmed this assumption; 66.7 percent of participants reported having between 1 and 5 Chinese business partners, and 16.7 percent even reported having more than 10.

Despite having various assorted business connections and partners in China, 83.3 percent of companies responded that they do not have any subsidiaries or branches in China, which complements and reinforces the impression that in the food and beverage industry, companies seem to prefer to rely on distributors and middlemen when doing business in China. This might possibly be explained by the language barrier or might simply be the most cost-effective method for smaller companies to engage in international trade. However, the remaining 16.7 percent reported having branches located in Shenzhen, Hong Kong, Hangzhou, Shanghai, and Beijing. Unsurprisingly, these branches are concentrated along the economically stronger and more affluent eastern and southeastern coastal regions of China. Only two respondents stated having Chinese employees; one firm reported having a single Chinese employee and the other firm reported having 33 Chinese employees. It seems likely that this correlates with the fact that the bulk of participating companies do not have branches or subsidiaries in China, where Chinese nationals would arguably be more likely to be employed than in branches in Lower Franconia.

Although digitalization provides new and innovative ways to reach customers and do business, most companies in the Lower Franconian food and beverages industry seem to be traditionalists. As few as 14.3 percent of participants stated that they use forms of e-commerce (online business) in their transactions with China. This is somewhat surprising considering that e-commerce should be an especially attractive way to find international consumers. Online sales could help German companies skip middlemen and jumpstart the exportation process. Chinese consumers have an eager appetite for Western goods, and even small companies in Lower Franconia could find a willing market in China. The survey participants stated that their Chinese customers prefer red and white wine, milk powder, whey powder, and baby foods. The preference for wine can likely be explained through the fast-rising standard of living of the Chinese middle class and the increasing demand for luxury products. In contrast, it is plausible that there is a connection between the milk powder scandals in China and the high demand for milk powder and baby formula

in countries like Germany.¹⁷⁶ Regarding the methods with which participants establish ties with Chinese business partners, trade fairs for wine seem to be the most common approach. Further examples mentioned involved international travel, direct requests from the Chinese side, and the establishment of a new purchasing office.

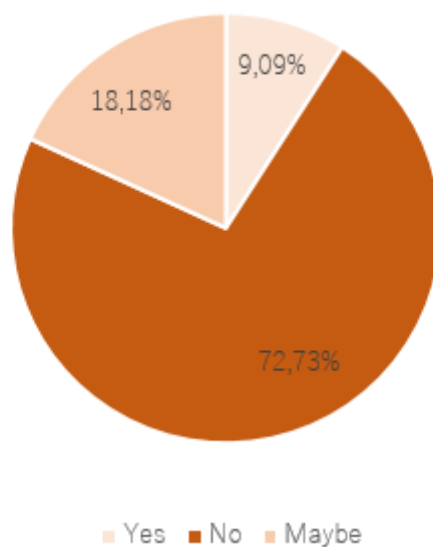


Figure 49. Do You Plan to Extend Your Business to China in the Future? (n=11)

Lastly, the third part of the survey will describe how the participating companies without Chinese entanglements compare with the companies referred to in the previous paragraphs (Figure 49). 72.7 percent of respondents without entanglements with China reportedly do not plan to extend their business to China in the future, 18.2 percent reported considering this possibility, and only 9.1 percent have already made the decision to enter the Chinese market. This means that mobility between the entangled companies and non-entangled companies exists, but the willingness to pursue change is limited. Besides, these numbers pale in comparison to those in the previous section, in which more than one third of companies were firmly planning to expand China-related business and only 12.5 percent rejected the idea entirely.

Ranking China on a global scale as a location for potential future investment, it is unsurprising that 91 percent of participants without existing entanglements stated that they plan no investments in China at all. Interestingly, one respondent, although not

¹⁷⁶ Huang, Yanzhong, "The 2008 Milk Scandal Revisited", *Forbes Magazine*, July 16, 2014, <https://www.forbes.com/sites/yanzhonghuang/2014/07/16/the-2008-milk-scandal-revisited/#6794f3304105>.

entangled with China yet, reportedly expects China to be in their top three possible destinations of investments in the future. These numbers are similar to the previous section, in which 75 percent of companies were not planning to invest in China, either.

Rating the development of industry prospects in China in the next three years, the arithmetic mean of responses was a 2.36 on a scale from 1 (bad) to 5 (good), communicating overall negative expectations. Compared to companies with entanglements with China (arithmetic mean: 3.29), this seems rather pessimistic, which is also not surprising considering that almost three quarters of participants in this section are not planning to establish business ties with China. In addition, 50 percent of respondents perceived either strong or very strong market access barriers in China, as opposed to participants already entangled with China, none of whom reported seeing strong barriers at all. Regardless, 22.2 percent of participants without entanglements in fact use ingredients or appliances manufactured in China, such as electronic gastronomic devices, lights, illuminants, iron tools and sanitary equipment; this, in itself, could perhaps be considered an entanglement, though an indirect one.

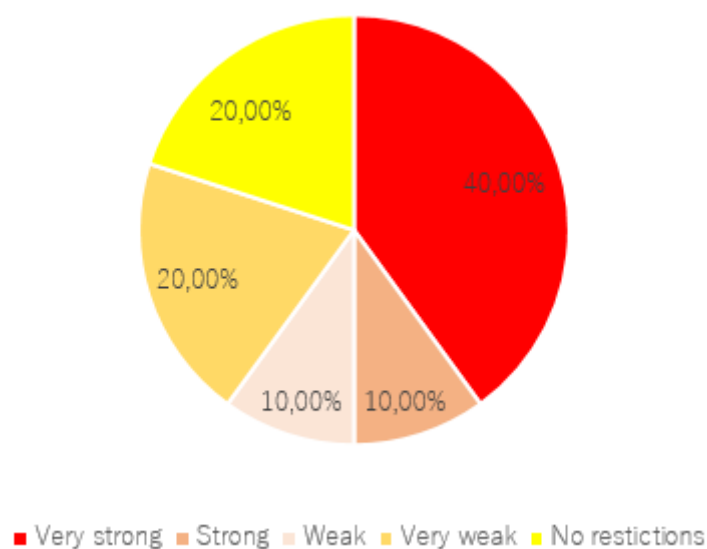


Figure 50. How Strong Do You Perceive Market Access Barriers in China to Be? (n=10)

There are several major takeaways from this survey. First, the overall responses of companies without connections to China clearly indicate that the majority do not plan to establish any ties in the future, either. Perhaps this is related to their responses to other survey questions, in one of which they stated seeing no profitable investment potential in their respective industry in China. They also reported on average that they perceive strong access barriers to the Chinese market (Figure 50), which could be another reason not to

pursue business connections with China. Perhaps they do not want to invest in China because they are not optimistic about the development prospects of their industry in China, as is also apparent from the survey results. However, there could be a multitude of other possible explanations for the reluctance to become involved with business in China, such as the ongoing trade war, cultural differences, lack of capital, or simply alternative plans.

Similarly, the survey also paints a consistent picture of the companies already entangled with China. Apart from the fact that most companies are still not planning any investments in China, they are relatively optimistic about future business opportunities there. Their China-related business revenue has largely grown over the past three years, and many are at least considering the option to further increase that business in the future. At the same time, it should be noted that the estimated proportion of most respondents' China-related business compared to their total annual turnover is still small. Therefore, while the current scope of business with China seems insignificant, there appears to be both substantial room for future growth and also a willingness for many companies to pursue such opportunities.

Third, the spheres of companies that have entanglements with China and those that do not seem to be largely independent of each other. A certain degree of mobility between them must exist, as can be seen in the result that approximately a quarter of the companies not yet entangled with China consider entering the Chinese market in the future. However, it is nonetheless a fact that the majority of companies without ties do not plan to establish any in the future. Likewise, the companies that have already entered the Chinese market are more likely to expand their business with China, rather than cut it, during the next few years. If this trend is accurate and continues into the upcoming years, companies without Chinese entanglements will remain without entanglements, whereas companies with Chinese entanglements will build on those connections and their ties will continue to grow and multiply.

Interviews- Key Takeaways

Interviews were conducted with two important figures in the Lower Franconian wine industry. Kordula Geier is the sales executive at Weingut Juliusspital, and Andreas Göpfert, is the head of communications at the Gebietsweinwerbung Frankenwein-Frankenland GmbH which is partnered with the Fränkischer Weinverband. This section will introduce the key takeaways from both of these interviews.

Currently, the Chinese market is an increasingly important market. German companies have generally increased their China-related business activities in recent years, and Lower Franconia is no exception. Sales executive Kordula Geier explained that business in China has gained significance and developed positively in the last 10 years, but is still trying to find itself in the international economy. The related business activities of the Weingut Juliusspital have expanded accordingly; ten years ago they engaged in no business in China at all, but the rising Chinese middle class and the accumulation of Chinese affluence has created a demand for wine. The wine industry is complex, and, as a cultural good and a luxury good, wine can play a major role in lifestyle trends. Therefore, the tendency to develop a wine industry in a developing economy is quite high.

According to Andreas Göpfert, China initially had no influence on the Franconian wine industry because viticulture and wine itself are not interchangeable from region to region. There are individual companies that successfully export their wines to China, such as Sommerach, Horst Sauer, and Divino, but China is new to wine culture and has not yet developed a taste for niche wines, which are Lower Franconia's specialty. Chinese consumers usually demand two different types of wine: very expensive and very cheap. Extremely expensive wines, which are desirable to newly affluent Chinese customers as a status symbol, are outside of the current price range offered by Lower Franconian vineyards. Mr. Göpfert emphasized that this is not due to lack of quality, but simply because no vineyards in Franconia sell wines for 500 euros or more per bottle. On the other end of the spectrum, there is high demand in China for very cheap wine, which also cannot be met by Lower Franconia and its small vineyards. Therefore, so far, Chinese influence on the Lower Franconian wine industry is quite low.

Based on this interview, Chinese people prefer to drink wines that have very intense, distinct flavors (i.e. wines that are very voluminous, very bold, have very strong wood aroma, etc.) instead of balanced or nuanced flavors. Franconia has a completely different style of wine; its regional specialty, Silvaner, is white with many different aromas and a complex bouquet. To understand such kinds of wine, people need to make an effort. Instead of making this kind of effort, Chinese consumers tend to take the cheapest wines, such as from Chile, or the most expensive wines, such as from France. These wines cannot be provided by Lower Franconia. Andreas Göpfert explained that, at this point in time, Franconian wine does not fit China because it remains a niche product and its target group are niche consumers.

However, the wine culture in China is developing rapidly. The main driving force for the involvement of Juliuspital with Chinese business is of course increasing sales, but their main goal is a strategic one. Juliuspital is 400 years old and this aspect of its branding also plays an international role in the industry. For the many vineyards and wine sellers who are the constituents of the Fränkischer Weinverband, international sales are also playing an increasingly larger role and influence domestic sales as well. Therefore, international reputation is important for both interviewed organizations. Juliuspital is active in many international markets, and China is a very intriguing one because of its size and especially because of its well-developed culinary culture. There is a wide range of cuisines in China, and there are no prevalent religious dietary restrictions in China, unlike countries in the Middle East for example. The average income of people in China has also developed significantly, so many consumers can pay seven to ten euros for a bottle of wine. Currently, the marketing goals of Juliuspital are branding and image enhancement, similar to the goals of the regional wine advertising agency, which seeks to improve the associations that the German and international publics have in relation to Franconian wine.

The Chinese wine market also has good prospects because there are no huge restrictions on market entry for Juliuspital. Investment restrictions are not an issue because the work is conducted via sales partners in China. Customs processing is more complex due to the Chinese language, but customs clearance for China is easier than some other markets, such as the United States. Juliuspital perceives restrictions primarily in the form of language barriers, as not all prospective Chinese business partners can speak English. Due to the difficult communication, up-to-date information from the market is difficult to reach for Juliuspital and the Fränkischer Weinverband. Market access is primarily possible only through middlemen and importers. The Fränkische Weinbauverband still experiences some clear restrictions; for example, due to tariffs on imported goods and other taxation rates, wines sold abroad are three times more expensive than they are in Germany. Furthermore, because the Franconian wine region is small, it encounters many budget and resource limits when considering international business opportunities.

In conclusion, the general business outlook of both Ms. Geier and Mr. Göpfert are optimistic in regard to China. Ms. Geier explained that work with Chinese is very quick, concrete, and clear. There are no taboo topics and it is swift and easy to establish new contacts. Both of the interviewees agreed that China is a prime location for the development of the international wine industry. Juliuspital will continue to export wine to

China, and an increasing number of other vineyards in Lower Franconia are taking a leap of faith and following suit. Mr. Göpfert is hopeful about the future of Silvaner wine on the international market (and hopes that it could perhaps even overtake Riesling as the most iconic German wine). He also believes that even small, family-owned Franconian companies have positive prospects to expand their business into China, but doing so would require investment and possible risk, just like all business opportunities.

The Big Picture

On the lowest level, the sales revenue of the agricultural sector in Lower Franconia amounted to 671.8 million euros in 2016, including 126.4 million euros for crops, 80.6 million euros for wine, 78.2 million euros for pigs, 75.2 million euros for vegetables, and 64.8 million euros for milk.¹⁷⁷ In contrast to that, the agricultural sales revenue for all of Bavaria was over 7.26 billion euros in 2016, with Lower Franconia accounting for less than 10 percent of the overall revenue of Bavarian agriculture. What is striking here, however, is the fact that, first of all, the dairy industry contributed a third of the overall Bavarian agricultural sector and thus constituted the largest agricultural branch here, yet accounted for slightly less than 10 percent of the agricultural revenue in Lower Franconia. Second, because the revenue of the Bavarian wine industry was worth 86.3 million euros in 2016, it made up about one percent of the total revenue of agriculture in Bavaria. At the same time, it accounted for more than 10 percent in Lower Franconia. In other words, the sales revenue of the wine industry in Lower Franconia accounts for as much as 93 percent of the sales revenue of the total wine industry in all of Bavaria, making Lower Franconia Bavaria's uncontested leading wine region.¹⁷⁸ Additionally, 95 percent of wine-growing areas in Bavaria are situated in Lower Franconia.¹⁷⁹ All this shows what an important branch the wine industry is for the food and beverage industry in Lower Franconia.

To name a few more facts and figures, approximately 152,000 people were employed in the agricultural sector in Bavaria in 2016. In the same year, 117,200 employees worked for 9,133 companies in the handmade foods sector, which encompasses butcher shops and bakeries, with the total annual sales revenue in this sector amounting to 8.8 billion

¹⁷⁷ Bayerisches Staatsministerium, *Bayerischer Agrarbericht 2018*, n.d.

¹⁷⁸ Bayerisches Staatsministerium, *Bayerischer Agrarbericht 2018*, n.d.

¹⁷⁹ Regierung von Unterfranken, *Qualitätsprüfung für Weine*, June 03, 2019, <https://www.regierung.unterfranken.bayern.de/aufgaben/7/4/00090/index.html>.

euros. The manufactured food industry, which includes beverages, candy, and processed fruits and vegetables, consisted of 998 companies with 114,800 employees and generated a sales revenue of 27 billion euros in 2016.¹⁸⁰ A few well-known companies active in Bavaria's food and beverage industry include Bärenmarke, one of Germany's most famous dairy companies, Dallmayr, a famous gourmet delicacy store and coffee brand located in Munich, Erdinger, one of Bavaria's most renowned breweries, and Rapunzel, one of the oldest and largest organic food companies in Germany.¹⁸¹

The Food and Beverages Industry in Germany and the European Union

Moving on to the next higher level, owing to its population of 83 million inhabitants and the largest economy in the European Union, Germany also boasts Europe's largest food and beverage industry and is the biggest producer of foods and beverages on the continent. In 2018, the production value of the industry amounted to 180 billion euros¹⁸² (retail sales revenue was 243 billion euros in 2017),¹⁸³ with international exports of processed foods and beverages worth 71.5 billion euros. The largest segments of Germany's food and beverage industry in 2018 were as follows: meat, with 23.7 percent; dairy products, with 15.1 percent; baked goods, with 9.1 percent; and confectionary and alcoholic beverages with 7.6 percent each. Among these, dairy products and alcoholic beverages achieved the highest growth rates (3.3 percent and 5 percent, respectively).¹⁸⁴ Therefore, while the dairy branch of Germany as a whole does not quite reach the eminent position that it maintains in Bavaria, it still seems to be an indispensable sector of the food and beverage industry in Germany.

Finally, in the entire European Union the turnover of the food and beverage industry accounted for 1.109 billion euros in 2018, with employment figures reaching 4.57 million people in a total of an estimated 294,000 companies. Exports of food and beverage products added up to 110 billion euros in the same year, while imports reached 75 billion

¹⁸⁰ Ebert and Kosiolek, *Branchenreport*, 2017, p.9

¹⁸¹ germanfoods, *Fine Food Products from Bavaria*, 2020, <https://germanfoods.org/german-product-gallery/bavaria/>.

¹⁸² Germany Trade and Invest, *Overview German Food and Beverage Industry*, 2020, <https://www.gtai.de/gtai-en/invest/industries/consumer-industries/food-beverages>

¹⁸³ Germany Trade, *Overview*, 2020

¹⁸⁴ Germany Trade, *Overview*, 2020

euros, indicating a positive trade balance in this industry.¹⁸⁵ The most important sub-industries were dairy products (revenue of 200 billion euros), baked goods (155 billion euros), meat products (152 billion euros) and confectionary (107 billion euros).¹⁸⁶ As seen from the aforementioned statistics, the milk and dairy industry constitutes a major pillar of the food and beverage industry on every level, and is in fact the single most important component of the food and beverage industry of the EU as a whole.

The Chinese Market

To conclude with a comparison and reference to the Chinese market, China's food product imports have continually grown for more than the past decade. While they were worth only a total of 9.4 billion USD in 2005, they exceeded 50 billion USD in 2015, with an average annual growth rate of 18.9 percent from 2005 to 2015. The poor reputation of domestically-produced Chinese goods, the consumer behavior of the growing Chinese middle class, as well as the limited capacity of the Chinese agricultural sector are often cited as driving factors of the rising demand for the importation of foreign food products.¹⁸⁷ In 2016, the largest foreign suppliers of food products to China were New Zealand (27 percent of total Chinese food imports), Brazil (10 percent), USA and Australia (6 percent each), South Korea and France (5 percent each) and Germany (4 percent). Germany exported 854 million euros worth of meat products, 220 million euros worth of dairy products, and 205 million euros worth of beverages to China in 2016. Growth rates for beverage imports and meat product imports from Germany were 11 percent and 61 percent respectively, as compared to 2015.¹⁸⁸

German food exports to China indeed show plenty of growth potential for the future, for example because of the good reputation of German food products among Chinese consumers and the demands of the rising middle class for high-quality products. However, China's recent import data also indicate that, as of yet, Germany's trade with China in the

¹⁸⁵ FoodDrink Europe, *Data & Trends EU Food and Drinks Industry 2018*, October 2018, https://www.fooddrinkeurope.eu/uploads/publications_documents/FoodDrinkEurope_Data_and_Trends_2018_FINAL.pdf

¹⁸⁶ Statista Research Department, *Food Europe*, n.d., <https://www.statista.com/outlook/40000000/102/food/europe#market-revenue>

¹⁸⁷ Niu et al., "Farming the World: China's Epic Race to Avoid a Food Crisis", *Bloomberg*, May 22, 2017, <https://www.bloomberg.com/graphics/2017-feeding-china/>.

¹⁸⁸ Hildebrandt, Jens, "Lebensmittelmarkt China", *German Chamber of Commerce in China*, 2017, p.6

food and beverage sector remains marginal in comparison to China's trade with other countries. This picture matches the results that we obtained from our online survey on the current business situation and future business development potential between Lower Franconian companies and China.

Additional Information on the Food and Beverages Industry

During the conduction of the two interviews, several interesting aspects came to light, although they are not applicable to the food and beverage industry as a whole. The interviewees both discussed the interconnection of China and the overall Asian wine market, as well as the wine market worldwide. As Ms. Geier from Juliusspital explained that the Chinese is an up and coming market with constantly increasing potential. Comparing the Chinese wine market with the Japanese wine market, it is clear that the Japanese wine industry is also developing right now, but in Japan long-lasting contacts are preferred. In China, everything moves much more quickly. Once a business relationship is established in Japan, it stays. However, communication in these partnerships is tricky, and managers should always be aware of cultural risks, and always focus on politeness. In Chinese business, however, an e-mail with a few words is enough to establish communication. Therefore, regardless of political barriers or geological barriers, the Chinese market has lower social barriers and that is one reason why wine export from Juliusspital to China is successful.

In regard to wine export destinations, the Chinese market is much more convenient than the market in the United States because there are fewer market restrictions. Only customs processing is more complex due to Chinese written characters and the Chinese language as a whole. However, customs clearance itself is much easier in China. As a comparison: the Scandinavian market is a monopoly, so everything runs through the state purchasing companies. Many nations have similar restrictions, but the United States is an extreme example. Drastic taxes on wine imports are not a threat in China.

Of course, there are some pitfalls behind the easy entry to the Chinese market that are not present in European or American markets. Regardless of the market, patents and brand protection are very important, but this is especially true in China. For example, Ms. Geier described how the labels of high-quality chateau wine from France are often copied in China and then also sold as a "chateau wine" but with some cheap swill in the bottle.

In the beginning, new markets are always somewhat like the “Wild West”, but over time the consumers will learn and the market will settle.

The Chinese market is special, because the wine culture in China has only just sprouted. People are trying to educate themselves about wine and trying to learn how wine should be consumed, but it is a learning process. The young generation in China has good prospects and many different avenues to explore cultural development. Wine now belongs to the daily ritual of many young people, and this kind of new consumer behavior presents a valuable opportunity for German wines. This is also recognized by the Franconian Wine Association and its close partner, the Gebietswein Werbung GmbH, a classical advertising company. The firm often interacts with international journalists and other professionals, including sommeliers from China, and gives them tours of the wine region and introduction to its wines.

From the interview with Mr. Göpfert about the Franconian Wine Association and its affiliated advertisement agency, further information about Asia, China and Lower Franconian entanglements was collected. There are 6,000 hectares of wine grapes growing in Franconia; in comparison, there are 100,000 hectares in China. This demonstrates the global trend. Franconian Wine producers do not belong to the global players nor the big players either. Franconian wine is a niche player, in pursuit of being “extraordinary”. Franconian wines are positioned relatively high on the lists of the people looking for something special, and the specialty of Franconian wine companies is dry white wine, chiefly Silvaner wine. Silvaner is a complex and well-balanced wine. The problem, however, is that Chinese consumers do not look for such a wine, which is mid-priced and not overtly famous. The Chinese market demands either very exclusive, expensive, famous French wine or extremely low-priced, mass-produced wines from countries like Chile.

The Franconian Wine Association also appoints an annual “wine queen” in the region; the wine queen is the main advertising medium in the region. She travels around the world to promote Franconian wine. She also travels to China, sponsored by the German wine institute. This is one possibility to bring awareness of Franconian wine to the Chinese public. According to Mr. Göpfert, emotion is an important component of any successful business deal. Japan and South Korea generally feel sympathetic for Germany, which means that it is easier for Franconian winegrowers to enter the Japanese and South Korean markets. However, the Weinverband has no official relationship with China at all.

A region with 6,000 hectares of vineyards is simply too tiny. Only two percent of wine is exported from Franconia's local wineries. A large obstacle in regard to exportation is that the older generation of winegrowers often do not speak English, so the communication barrier is very high. Additionally, Franconia has primarily family businesses that target consumers locally or, at most, in other parts of Germany; they rarely work with distributors and other middlemen, and instead directly deliver their products themselves. Only a few winemakers export to the USA, China, and Japan.

Conclusion

The food and beverage industry survey results portrayed firms without China entanglements as largely having no plans to establish any ties with China in the future, because, at least in part, they see no profitable investment potential in their respective industries in China. Access barriers to the Chinese market are one reason for this stance; another possible explanation is their pessimistic perspective of the development prospects in their industry in China. The survey data gathered from these companies is, at least on the surface, consistent and has no obvious contradictions in this regard.

Unlike the firms without connections in China, the majority of participants with existing entanglements seem relatively optimistic about these future business opportunities, in part because they have experienced significant growth in their China-related business in the last three years. However, most companies are still not planning any investment in China. This situation seems contradictory, but one possible explanation is that Lower Franconian firms typically prefer and act in a risk-averse style. It also should be noted that the proportion of these companies' business in China in comparison to their total annual turnover is still minor.

This case study gained a significant glimpse into Lower Franconia's wine industry in particular, due to the interview partners who acquiesced to participate. Like Mr. Göpfert said, Franconian wine is a niche product. Franconia does not produce large quantities on an international scale, but there are always potential customers who are looking for Franconian wine and established customers who already know and love it. There could definitely be advantages for winegrowers to sell wine to international and Chinese markets, but to do so they must face higher costs and several obstacles, such as finding market access and language barriers. Therefore, this is a decision that each company must make for itself. Ms. Geier from Juliuspital on the other hand, who has already engaged in China-

related business, is more optimistic about Franconian wine's growing business in the Chinese market. China has already begun to play an important role in the industry, and the speed of this business development has been fascinating and impressive.

However, the development of the food and beverage industry in Lower Franconia appears steady according to available statistics. As the second biggest export and import partner of Bavaria as a whole, China has had some clear influence on Lower Franconia's food and beverage economy over the last ten years, but the dimension of these influences is still small. For the future, we do believe there will be substantial room for the growth of China's entanglements with the food and beverage industry in Lower Franconia.

The Tourism and Hospitality Industry in Lower Franconia

The Tourism and Hospitality Industry

Definition of Tourism

The term “tourism” as used in this industry report follows the United Nations World Tourism Organization’s (UNWTO) official definition of tourists:

“A visitor (domestic, inbound or outbound) is classified as a tourist (or overnight visitor) if his/her trip includes an overnight stay, or as a same-day visitor (or excursionist) otherwise.”¹⁸⁹

Chinese tourism in Lower Franconia and Lower Franconian tourism to China are both covered by the term “international tourism”, which corresponds to the term

“international visitors”, a subcategory of “international travelers”:

“An international traveler qualifies as an international visitor with respect to the country of reference if: (a) he/she is on a tourism trip (see para. 2.29)”¹⁹⁰ and “(b) he/she is a non-resident travelling in the country of reference or a resident travelling outside of it.”¹⁹¹

Complimentary to international tourism, another definition by the UNWTO for domestic tourism will be used for non-international tourists. The comparison of these two categories is one of the fundamental census criteria in tourism research.¹⁹²

¹⁸⁹ United Nations, *International Recommendations for Tourism Statistics 2008*, 2010,

<http://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=434285>

¹⁹⁰ United Nations, *International Recommendations for Tourism Statistics 2008*, 2010, p.13

¹⁹¹ United Nations, *International Recommendations for Tourism Statistics 2008*, 2010, p.16

¹⁹² Schmude, Jürgen and Namberger, Philipp, *Tourismusgeographie*, Darmstadt: Wiss. Buchges., 2010, p.17

“From the perspective of the country of reference, a domestic traveler qualifies as a domestic visitor if: (a) he/she is on a tourism trip (see para. 2.29) and (b) he/she is a resident travelling in the country of reference.”¹⁹³

It has to be noted, that the focus of this report lies on the inbound tourism part of international tourism only, from the perspective of Lower Franconia.

“Inbound tourism, which comprises the activities of a non-resident visitor within the country of reference on an inbound tourism trip (see para. 2.10)”¹⁹⁴

Effects of Tourism

Tourism has various economic effects, which are usually positive in nature. In contrast, on a sociocultural and ecological level, problems occur more frequently. Monetary effects are easily noticeable, but non-monetary effects, such as a decrease of unemployment, are more difficult to grasp. Similarly, tangible effects are visible, but intangible effects are often impossible to verify. Intangible effects may include effects on infrastructure, image, and competencies. Quantifying tangible effects is not easy either.¹⁹⁵

Another possible distinction of effects is the categorization into direct, indirect and induced effects. Direct effects include the transfer benefits from the state and the unmediated income resulting from tourism. The next stage is indirect income, which originates from services both downstream and upstream, like the sale of new furniture to a place of accommodation and the disposal of the old furniture. Induced effects have the widest range. Because of the increased purchasing power, which is a result of direct and indirect effects, the beneficiaries will use the resulting financial gains on additional expenditures. This means an increase of revenues and income for others and can ultimately lead to increased employment opportunities.¹⁹⁶

¹⁹³ United Nations, *International Recommendations for Tourism Statistics 2008*, 2010, p.13

¹⁹⁴ United Nations, *International Recommendations for Tourism Statistics 2008*, 2010, p.10

¹⁹⁵ Schmude and Namberger, *Tourismusgeographie*, 2010, p.86-87

¹⁹⁶ Cooper, Chris; Fletcher, John; Fyall, Alan and Wanhill, Stephen, *Tourism*, Harlow: Pearson, 2005, p.162-

Based on this, one can say, that indirect and induced effects are not only hard to track; more than that, they are directed to the processes and statistics of other industries, which are analyzed in other chapters of this report (e.g. the food and beverage industry). This section focuses on the direct effects of tourism. Because it is difficult to measure growth in the tourist industry in terms of finance, it is a common practice to compare the changes in number of guests instead.

Distinction from Other Industries

The tourism industry has experienced a period of sole focus on economic growth.¹⁹⁷ While other industries encounter difficulties in keeping growth rates at detectable levels, there is still a great deal of potential in the tourism sector. Tourism industry insiders call it the “leading industry of the future”.¹⁹⁸ The potential for growth is indeed huge, especially in emerging markets, for which double-digit growth rates are predicted.¹⁹⁹ Tourism became a mass phenomenon in the 21st century, which has caused tensions in the sociocultural and ecological environment of many tourist destinations. A touristic intensity of more than 5000 overnight stays per 1000 local inhabitants is the level that marks economic dependency on tourism, a phenomenon that can foster problems in other fields. Seasonality can compound negative effects and is calculated using the ratio of overnight stays during the location’s peak month to overnight stays during its month of lowest visitation.²⁰⁰

Tourism can be divided into fourteen types: cultural tourism, business tourism, ecotourism, gastronomy tourism, rural tourism, coastal/maritime and inland water tourism, adventure tourism, urban tourism, health tourism, mountain tourism, wellness tourism, education tourism, medical tourism, and sports tourism.²⁰¹ The broad range of types of tourism creates a wide variety of economic entities that face direct effects of the tourism industry.²⁰² Only one kind of firm is invariably involved because the very definition of international tourism requires non-residents to visit a country abroad. Aside from the case

¹⁹⁷ Schmude and Namberger, *Tourismusgeographie*, 2010, p.86

¹⁹⁸ Opaschowski, Horst W., Pries, Michael, and Reinhardt, Ulrich, *Freizeitwirtschaft, die Leitökonomie der Zukunft*, Hamburg: Lit-Verl., 2006

¹⁹⁹ Steinecke, Albrecht, *Internationaler Tourismus*, Stuttgart: UTB, 2014, p.183

²⁰⁰ Schmude and Namberger, *Tourismusgeographie*, 2010, p.11

²⁰¹ World Tourism Organization, *UNWTO Tourism Definitions: Définitions Du Tourisme De L'omt = Definiciones De Turismo De La OMT*, Madrid: UNWTO, 2019, p.28-55

²⁰² Schmude and Namberger, *Tourismusgeographie*, 2010, p.30

of day trips in border regions, accommodation is needed, which we include in this report under the term “hospitality”.

Generally spoken, accommodation is differentiated into three categories, hotels and inns, various other lodging, and boarding houses.²⁰³ Certain target groups have certain preferred forms of accommodation.²⁰⁴ Budget, the type of tourism, and local availability of accommodation are all factors that influence the guests’ choice. While the number of guests staying in commercial lodgings is reported to local administration and data are publicly available on the local level, it is difficult to guess the number of overnight stays of guests who stay at the homes of friends and relatives.²⁰⁵

Threats to the Tourism Industry

One of the biggest threats to the development of a tourist destination is security uncertainty.²⁰⁶ Although a relatively small incident, the axe attack in Würzburg in 2016 reached the Chinese media.²⁰⁷ The ensuing effect on the number of tourists visiting Würzburg after the incident (or the lack thereof) could lead to conclusions about the security sensitivity of Chinese tourists. Another factor involving the economic development of Chinese tourism in Würzburg is the extent of cooperation between local establishments and Chinese partners. Cooperation undeniably has the potential to foster economic growth in the hospitality sector.²⁰⁸ In terms of contracts and selection of partners, becoming familiar with the trends of the Lower Franconian tourism industry in regard to Chinese companies would help us gain an understanding of the possibilities and barriers of cooperation.

Alternatively, the lack of cooperation with Chinese partners could indicate diminished economic potential and the existence of obstacles. Intercultural discord, for example, could be a hindrance to Chinese tourism in Würzburg, and the question of intercultural

²⁰³ Fuchs, S., *Instrument zur Bewertung von Standorten für die Hotellerie in München*, München:

Diplomarbeit an der Ludwig-Maximilians-Universität München, Lehrstuhl für Wirtschaftsgeographie und Tourismusforschung, München., 2009, p.3

²⁰⁴ Schmude and Namberger, *Tourismusgeographie*, 2010, p.31-33

²⁰⁵ Steinecke, *Internationaler Tourismus*, 2014, p.21-24

²⁰⁶ Steinecke, *Internationaler Tourismus*, 2014, p.71-78

²⁰⁷ Xinhuanet, *After the Terror Attack in Wuerzburg, Germany, the Remaining Honkongnese Is No More in a Critical Condition*, 2016, http://www.xinhuanet.com//world/2016-08/02/c_129197001.htm

²⁰⁸ Schmude and Namberger, *Tourismusgeographie*, 2010, p.33

differences could influence the viability of continued Chinese tourism in the future. In the event that the city wishes to increase or decrease the number of Chinese guests, planning is essential to achieve such goals. As Lower Franconia is a region under the jurisdiction of the province of Bavaria. Tourism affairs are handled by the Bavarian Ministry of Economic Affairs, Regional Development, and Energy, which has commissioned the University of Applied Sciences Kempten to investigate possible future scenarios for tourism in Bavaria.²⁰⁹

Two of these scenarios are listed by the researchers as likely to lead to a desirable future. The first scenario, “Digital Dirndl”, describes Bavaria becoming a global destination for post-materialistic guests, and the second scenario, “New Compatibilities”, illustrates a fundamental change for the tourism industry due to climate change and rampant growth. These scenarios both represent varieties of soft tourism.²¹⁰ If either of these scenarios were to come true, this raises questions about the possible impact on Chinese tourism, especially if growth were extensive and restricted the number of visitors.

Methodological Approach

Because the industry of tourism and hospitality is fairly different from other economic sectors, this industry is difficult to measure. Very small businesses, such as souvenir shops, will not show up in figures that are organized by number, even though they might give interesting insight because their clientele could consist of primarily Chinese people. To avoid neglecting these kinds of businesses and points of interest, comparing percentages is likely to provide a better picture of entanglements with China. Questions about what percentage of the tourists are from China, what proportion of customers are Chinese, and how much time and money they spend compared to tourists of other nationalities could lead to comparable results on which statements can be built. This issue has been considered during the preparation of the interviews and surveys.

²⁰⁹ Hochschule Kempten, *Szenarien für den Tourismus in Bayern 2040*, 2019, p.5,
https://www.stmwi.bayern.de/fileadmin/user_upload/stmwi/Publikationen/2019/2019-11-13_Szenarien_fuer_den_Tourismus_in_Bayern_im_Jahr_2040.pdf

²¹⁰ Hochschule Kempten, *Szenarien für den Tourismus in Bayern 2040*, 2019, p.5

Interviews

As mentioned above, the tourism industry is characterized by a very diverse and complex composition of enterprises. In order to adapt our study to this structure, we decided to investigate at a general level and not to dive into one specific branch. This is also true for the selection of partners, for the two interviews. One interview was conducted with the tourism director of the city of Würzburg, Mr. Rudek. He has comprehensive expertise about the specifics of local tourism, which is valuable to the case study. He is extremely familiar with Würzburg's current circumstances and the strategies and plans for the future of local tourism. He further has a broad view in regard to local specifics, and is knowledgeable about Würzburg's political and economic trends. The other interview was conducted with the administrator of the Würzburg Residence, Mr. Weiler, and the Castellan of the Residence, Ms. Streiffuss. Mr. Weiler is the administrator of the Residence and has copious knowledge about relevant economic entanglements, whereas Ms. Steiffuss holds the position of castellan and is therefore responsible for guided tours and has extensive personal interactions with visitors. She is closer to the visitors on a daily basis and is able to share her observations and experiences with Chinese guests and other guests of other nationalities.

The questionnaire was written with a focus on the comparison between incoming tourists from China versus those of other origin. Questions about the number of tourists and trends over the last decade were followed by questions about categorization into age groups and distribution of nationalities. These first three questions were supposed to provide an overview of tourism in Würzburg. The subsequent topic was the issue of web presence; the website is available in German and English, not yet in Chinese.²¹¹ The absence of a Chinese version might give implications about the marketing strategy of the city of Würzburg with regard to Chinese tourists.

The main part of the questionnaire inquired about the types of tourism practiced by Chinese visitors in Würzburg and which aspects of their travels differ from tourists of other nationalities. It included questions about the means of transportation, motivations for visiting Würzburg, the seasonality of these visitors, their duration of stay, and their use of

²¹¹ Stadt Würzburg, *#visitwuerzburg*, 2018, <https://www.wuerzburg.de/en/index.html>

tourist information's services. Answers to these questions allow a more specific characterization of Chinese tourism in Würzburg.

The last part of the questionnaire focused on the economic effects of Chinese guests and the future strategy of the city of Würzburg regarding tourism, especially Chinese tourism. An estimation of the economic value of Chinese visits to Würzburg, especially in comparison to guests of other nationalities, would offer a basic understanding of whether an increase of the number of Chinese tourists would be desirable or not.

In Würzburg, the most important tourist attraction is the Residence Würzburg, which is famous even on the international level because it is on the United Nations Educational, Scientific and Cultural (UNESCO) world heritage site list. Status and prestige make it a tourist spot which allows the opportunity to research visitors' expectations for and behavior at a tourist site. The list of questions for this interview was almost identical to the list of questions used during the interview with Mister Rudek, but the questions are intended specifically in reference to the Residence Würzburg instead of the whole city of Würzburg. Only one question was eliminated because the Residence interview partners' purview does not include lodging; therefore, we decided to leave out the question about the accommodation preferences.

Survey and Literature

Parallel to the interviews, we added industry-specific questions about tourism and hospitality to the general survey. We contacted 410 enterprises in the Lower Franconian tourism industry via e-mail and requested that they answer the survey. A total number of 22 firms participated. This accounts for a completion rate of 5.37 percent. Similarly to the interviews, the survey contains questions regarding perception of Chinese guests, Chinese tourism in Germany and Lower Franconia in general, the development of the Chinese guest numbers, the seasonality of Chinese tourists, cooperation with Chinese travel agencies, and experiences (or willingness to pursue) cooperation with Chinese companies. Unlike in the interviews, we also asked specifically about which certain sightseeing spots²¹² are favored by Chinese tourists and whether the service and facilities at those locations are adapted to Chinese guests.

²¹² Which is based on tripadvisors (Chinese) hot spot list for lower Franconia:

https://cn.tripadvisor.com/Attractions-g4301119-Activities-Lower_Franconia_Franconia_Bavaria.html

During our literature research for the tourism and hospitality section, we found various sources. Articles and reports about the 2016 axe attack incident are apparently the only news that made it into the Chinese media (Xinhua 2016); otherwise, Lower Franconia seems to be out of Chinese media's sight. Most academic literature discusses tourism on a larger scale; Lower Franconia as touristic entity seems to be too insignificant. Basic literature on international tourism is available, but the Chinese sources are hidden behind paywalls or focused on incoming tourism (non-local tourists arriving from other locations). This emphasis is common and unsurprising. Outgoing tourism (local tourists leaving to visit other places) has a shorter value chain for the home country, as the main parts of tourism infrastructure are located at the travel destination.²¹³ This is related to the economic effects of tourism that were mentioned above. We assume that the consequence is less revenue for the home country of outbound travelers.

Lower Franconia's administration offers very specific data about the development of its tourism industry, but the data lacks the distinction of guests by nationality and only differentiates between intra-national and international guests. The same is true for the data of the Bavarian Administration of State-Owned Places, Gardens and Lakes.²¹⁴ Without data regarding what fraction of international tourists in Lower Franconia are Chinese citizens, our study must build on the statements and estimations of local institutions provided to us during the interviews and the survey.

Findings of the General Survey

Regarding the hospitality and tourism industry survey, a total number of 22 firms out of 410 contacted firms participated in the survey, accounting for a completion rate of 5.37 percent. The participating organizations include various kinds of hotels, inns, and travel agencies for the largest part, but also a gallery and a camping site, for instance.

Starting with employee numbers, 82 percent of the surveyed firms reported having fewer than 49 employees, which means that they are small companies, as defined by the European Commission.²¹⁵ With between 50 and 250 employees, six percent of the firms

²¹³ Schmude and Namberger, *Tourismusgeographie*, 2010, p.30-31

²¹⁴ The Bavarian Administration of State-Owned Places, Gardens and Lakes is responsible for the Residence Würzburg, too.

²¹⁵ European Commission, *Commission Recommendation of 6 May 2003 Concerning the Definition of Micro,*

fell into the medium-sized company category. Thus, only 12 percent of the firms employed more than 250 employees, and small enterprises account for by far the most significant percentage of our participants. The same trend applies to the total revenue in 2018, for which the majority of survey responses indicate that the participating companies can be classified as micro, small, or medium-sized enterprises. Comprising 71 percent, the vast majority of firms reported a total turnover of up to 2 million euros, which is defined as micro company²¹⁶, whereas small companies with up to 10 million euros of total turnover accounted for 23 percent. In contrast, medium-sized companies with up to 50 million euros of total turnover only amount to 6 percent. In terms of legal form distribution, most companies were reportedly registered as limited liability companies (GmbH, 53 percent), followed by sole proprietorships (23 percent), and corporations (AG, 12 percent). The locations of the surveyed firms revealed a distinct geographical pattern, mostly covering the main administrative districts of Aschaffenburg, Kitzingen, Schweinfurt, and Würzburg, but also including some smaller, less conspicuous localities like Bad Neustadt an der Saale or Niedernberg in Miltenberg.

However, the most relevant questions for this research project are questions, which ask whether the firms have any links with China, and, if they did, what forms of entanglement they are engaged in. The results show that the majority of the surveyed firms reported having entanglements with China (59 percent). To determine the most prominent forms of entanglements, the respondents were presented with a list of potential entanglement forms,²¹⁷ in which they could select their respective ties. The results will be further elaborated upon in the section “Entanglement Forms” later in this report.

On a general basis, tourists in Bavaria spend an average of 33.9 billion euros per year. Based on proportion of overnight stays (7.4 percent)²¹⁸, tourists spend approximately

Small and Medium-Sized Enterprises, May 20, 2003, <http://data.europa.eu/eli/reco/2003/361/oj>

²¹⁶ European Commission, *Commission Recommendation*

²¹⁷ For the specific industry surveys refer to the Appendix. For more information on entanglement selection, refer to the general Methodology of this paper.

²¹⁸ 98,4 million overnight stops in total in Bavaria per anno; 7,3 million overnight stops in Lower Franconia per annum.

2.51 billion euros every year in Lower Franconia.²¹⁹ There are no available data about the revenue that is generated from China-related business.²²⁰

Entanglements with China

Depending what the participants declared for the question of whether or not they have entanglements with China, they were presented with two different versions of the survey. Version 1 of the survey studied the perceptions of firms which do not engage in any entanglements with China, for instance with regard to the influence of Chinese tourism on Germany, or China as a potential target for future investments and business expansions. Version 2 of the survey analyzes the impressions of firms which do engage in entanglements with China, such as the drivers and motivations for China-related businesses and the business prospects of this industry.

Firms Without Entanglements with China

The companies which reported not to engage in any entanglements with China were asked nine more questions related to the hospitality and tourism industry, initially addressing trends in the tourism industry as a whole, before continuing with questions specifically related to China. The first question addressed the number of guests or customers during their peak season, in which the large majority (80 percent) had up to 100 guests or customers, while the remainder served up to one million people. These numbers correlate with the fact that most survey participants were categorized as hotels or travel agencies. In the past 5 years, the number of visitors was consistent for the major part of participants (80 percent), while for the remaining 20 percent the number of visitors has demonstrated a significant increase. This indicates a slight growth trend in the tourism industry in Lower Franconia over recent years. Considering the great relevance of the tourism industry for the economy in Lower Franconia in particular as well as the preservation of the region's cultural value, a list of relevant sightseeing spots was given participants to determine which locations their customers find most attractive. This should help to evaluate how to choose a focus, as well as illuminate where there is still potential for growth.

²¹⁹ Bayerisches Staatsministerium für Ernährung, Landwirtschaft und Forsten, *Bayerischer Agrarbericht 2018*, n.d., <http://www.agrarbericht-2018.bayern.de/landwirtschaft-laendliche-entwicklung/verkaufserloese.html>.

²²⁰ Growth in the tourism industry is usually measured by other means, as explained above.

Starting off with the most established sightseeing spots, the Residence and the Marienberg Fortress in Würzburg dominated the top of the list with 100 percent participant selection each, followed by the Old Main Bridge in Würzburg and Johannisburg Castle in Aschaffenburg, each with a 67 percent selection rate. The fifth place was occupied by the outlet center Wertheim Village in Baden-Württemberg with 50 percent, which geographically does not fall under the administrative region of Lower Franconia, but due to its proximity provides an incentive for many tourists to visit the Lower Franconian region. This was followed by the Spa Garden in Bad Kissingen with 33 percent, and last but not least the Rose Garden in Veitshörsheim, the Park Schonbusch in Aschaffenburg, the Old Town in Miltenberg, and wine cellar tours with 17 percent each.

The responses of the non-entangled firms to the China-related questions were fairly interesting, as they generally depicted pessimistic or disinterested stances towards business opportunities and other prospects in China. To give an example, in response to the question which asked whether the participants would consider expanding their business to China, all of them responded collectively that they did not consider this option.

Complementary to these results, none of the participants identified China as a location for potential international investment. Similarly, out of the organizations which did not yet have exclusive contracts with Chinese travel agencies, none of the participants showed willingness to establish such contracts. To the question about why they would not want to have exclusive contracts, one firm responded that tourism was playing an increasingly smaller role for their company and that they focused on permanent local residents. Other organizations reported that such contracts were not relevant for them or that their company was too small to work with tour groups. Overall, the disinterest in working with Chinese organizations might largely be due to the irrelevance or the incompatibility of their business models. The lack of interest in investments could also stem from the fact that hotels in Lower Franconia represent a major part of the survey participants, for whom investments in China are less relevant than for exporting industries.

Interestingly, in response to the question that asked how they would assess the business prospects for their industry in China for the next three years, half of the respondents evaluated the prospects as “rather bad” and one third as “very bad”, while only 17 percent regarded the industry prospects to be “neutral”. This highly pessimistic view might be influenced by the typically critical or negative news reports regarding China’s economic

and political situation and development in the recent past.²²¹ However, this could also provide some highly interesting avenues for research which would surpass the limits of this study.

These opinions regarding future prospects might further correlate with the perceived market access restrictions of the Chinese market, resulting in survey responses which ranged from “strong” to “weak” to “no restrictions” with a third of the total votes each. This demonstrates that access restrictions still pose an obstacle for the majority of participants, and might hinder or even prevent the development of cooperation between Lower Franconian and Chinese firms. Nonetheless, for accommodation facilities, market restrictions might pose a smaller problem than for travel agencies, for example.

Despite the pessimistic outlook of the participants however, they responded more positively to the perceived impact of Chinese tourism on Germany and Lower Franconia, with most participants (83 percent) deeming the influence of Chinese tourism on Lower Franconia and Germany to be positive. However, all participants rejected the idea of adapting their offered services specifically to Chinese tourists.

For the final question of this version of the survey, the participants listed some assistance they would like to receive from institutions such as the chamber of commerce and industry in Lower Franconia (IHK) and in Beijing (AHK), industry associations, etc., if they wanted to invest in China. Here the wish for an industry lobby contact has been brought forward. To conclude, firms who are not engaged with China demonstrated very uniform, negative responses to their business prospects and the market restrictions in China, whereas they regarded the influence of Chinese tourism on Lower Franconia and Germany with optimism.

²²¹ For example: Weißenborn, Michael, “Die neue rote Gefahr aus China”, 2018, <https://www.stuttgarter-nachrichten.de/inhalt.china-unter-xi-die-neue-rote-gefahr-aus-china.909d6372-843d-46d3-9c1b-f16888cc89f9.html> and Spiegel, “Große Koalition will offenbar Huawei stoppen”, 2019, <https://www.spiegel.de/wirtschaft/soziales/huawei-grosse-koalition-will-huawei-von-5g-net-ausschliessen-a-1301037.html>

Firms with Entanglements with China

The version of the survey for firms which are engaged with China incorporated 17 more questions than Version 1, all of which correspond with the other questions in the survey to some degree, making the overall results more comparable.

Regarding the number of guests or customers, half of the organizations reported numbers below 100, while the remaining responses ranged from “up to 500”, “up to 5000”, “up to 10,000”, and finally to “up to 50,000”. In comparison with the numbers of firms not connected with China, which were almost entirely below 100 guests, we can see that the firms in connection with China generally tended to serve a higher number of customers. From the list, we discovered that a large number (89 percent) has Chinese customers or visitors, which would be expected considering the industry. However, there are also other companies with entanglements, including imports from China, distributors or distribution partners in China, financial investments in China, and also employees from China. These results highlight the trend that entanglements with China in the German hospitality and tourism industry are predominantly characterized by inbound tourism and the inflow of Chinese tourists, rather than outbound. Outbound tourism, on the other hand, is generally directed by exclusive contracts with travel agencies in China.

For those who receive visitors from China, the reported number of visitors in the recent years has increased for more than half of the respondents, whereas visitor numbers have stagnated for the remaining participants. This indicates an upward trend for the firms who have been experiencing a growing number of customers; this increase can be expected to continue to rise, considering the ever-increasing number of visitors from China to Germany.²²²

In relation to the total turnover in 2018, the China-related business accounted for 1 to 10 percent for most participating companies, while 11 percent of firms responded 26 to 40 percent, and another 11 percent even reported 81 to 100 percent. This leaves much room for growth potential and expansion of most firms’ business activities with China. At the same time, less than half of the participants would consider expanding their business with China. Motivations of the firms for their China-related business were diverse, with one

²²² Eurostat, *Arrivals at Tourist Accommodation Establishments by Country/world Region of Residence of the Tourist*, 2019, eurostat.ec.europa.eu

fourth engaging in the business for management know-how. Another important reason for their links with China was that many firms host Chinese visitors who come to Lower Franconia on business trips, some of whom are invited as guests by local firms and firms in the larger industry. Other reasons included the booking portal *booking.com* as an intermediary for Chinese travelers coming to Germany, mediation, sourcing, and that service providers offer accommodations.

Looking at the development of China-related business, the results indicate an increase for one third of the responding organizations over the past 3 years, while the remaining two-thirds show stagnation, a decline, or even no income at all. This indicates a diverging, but overall still productive development for China-related businesses. Concerning China as a location for investments in a global comparison, almost 90 percent of these firms reported no planned future investments, while only one respondent reported China as a Top 5 investment destination, which, again, might be due to the circumstances of the tourism industry as a whole or simply indicative of the circumstances of individual participants.

In spite of this, most participants viewed the business prospects for the industry in China for the next three years as “neutral” (44 percent), and one third even regarded the prospects as “very good”. Surprisingly, these positive opinions contrast with the pessimistic responses to this question from the firms with no entanglements with China.

In terms of market access restrictions for their ventures in China, one third of respondents reportedly faced no restrictions, similarly to the results from the first version of the survey described above, whereas the remaining percentage faced weak or very weak restrictions, and only 11 percent reported to perceive the barriers as strong. The remaining firms reported the market access restrictions as not applicable to their business, emphasizing the subtle to non-existent relevance of these barriers for many firms in Lower Franconia.

Lastly, the firms responded that the services they would like to receive from institutions for their business with China include the company contact information of exhibitors at the trade fairs in Frankfurt and Nuremberg and contact with the German Chamber of Industry and Commerce in Shanghai.

With regard to the possession of exclusive contracts with travel agencies who organize tours for Chinese visitors, one third of the surveyed organizations reported having exclusive contracts, which they rated as either neutral (88 percent) or positive. From those who reported not yet having exclusive contracts, at least one third expressed willingness to make such contracts. These results reveal a fairly constructive cooperation between Lower Franconian and Chinese organizations or at least the willingness for cooperation, especially in contrast to the noticeable disinterest from the first group of participants.

Only 29 percent of the participants declared that they adapt to the needs of and provide offers for Chinese tourists specifically, for example by enabling mobile payment services, expanding access to internet and Wi-Fi, offering multi-language services, and so on. This also implies significant potential, especially considering that the stream of tourism from China is increasing over time, and there will be the need to make some adaptations for Chinese guests, as with any international visitors. This topic will also be addressed in the following description of the interview with the tourism director of Würzburg, Mr. Rudek.

When asked to rate the behavior of their Chinese guests and customers, the responses were fairly mixed, with two-thirds rating it as “neutral”, while 17 percent each rated the behavior as either rather positive or rather negative. Frequently reported reasons for the rather negative perception involved the different cultural customs and values of the Chinese visitors. To prevent potential mishaps and misunderstandings, it is highly reasonable to prepare for the cultural and linguistic differences and perhaps even adapt to these differences to a certain degree.

As for the most attractive sightseeing spots for Chinese tourists, the Residence and the Marienberg Fortress in Würzburg ranked in first place and second place once again with 71 percent and 57 percent respectively, followed by the old town in Miltenberg (43 percent), and Johannsburg Castle in Aschaffenburg and Wertheim Village in Baden-Württemberg (29 percent each). Other popular destinations again included the Old Main Bridge in Würzburg, the Rose Garden in Veitshöchsheim, the Park Schonbusch in Aschaffenburg and wine cellar tours. In addition to these, cities like Prichsenstadt and Iphofen have also been listed as popular destinations for Chinese tourists.

With regard to the perceived impact of Chinese tourism on Lower Franconia as well as on Germany, the impact was evaluated either “rather positive” or “positive” for 78 percent of

respondents, with only 22 percent viewing it as “neutral” and no one viewing it as “negative”. This was the only question for which the responses of the firms not related to China correlated closely with those of the firms connected to China, highlighting the overall anticipatory and hopeful outlook of this industry regarding the influence of the Chinese tourism on Lower Franconia and Germany as a whole.

To conclude this section, we can see two highly distinctive groups of firms with widely differing viewpoints in some respects. The group without links to China showed remarkable homogeneity in their answers, especially with regard to topics like business expansion and potential investments, while subjects like exclusive contracts and business prospects revealed a strong indifference. On the other hand, the responses of the group with links to China were much more heterogeneous, but also showed more positivity and willingness for business opportunities and exclusive contracts. This difference might have evolved due to positive experiences with Chinese guests and customers, which have reinforced their optimistic stances. Also, as pointed out before, the circumstances of the industry and of the various business forms and models of some firms that participated in this survey eliminate the relevance of engaging in business with China for many firms.

Interviews

As previously mentioned, it is not useful to look into various branches of the industry, as there are too few accessible and available sources; this would therefore hinder comprehensive and meaningful insight. For the industry-specific survey, we decided to conduct two interviews with two of the most prevalent institutions. The first interview with Mr. Rudek, tourism director of the city of Würzburg provides a thorough overview of the tourism and hospitality situation in and around Würzburg. The second interview with Mr. Weiler, the administrator of the Residence, and Ms. Streiffuss, the castellan of the Residence of Würzburg, gives a deeper insight into UNESCO world heritage site and one of the most remarkable attractions in Lower Franconia, the Residence of Würzburg.

City of Würzburg Interview - Key Takeaways

At the beginning of the interview Mr. Rudek gave a short historical introduction, from which it was obvious that, since China’s economic reform, the number of Chinese tourists has been on the rise. In addition, the overall number of overnight guests has increased approximately by 33 percent in the past decade. Existing rooms are booked at a satisfying rate. Regarding the usage rate of available beds, Würzburg ranked fourth place, right

behind Berlin, Hamburg, and Munich. Würzburg has traditionally focused on business guests. This might change in the near future, however, due to upcoming generational changes in the hospitality sector.

In regard to Chinese tourists, Würzburg is almost too close to Frankfurt or Nuremberg to benefit from the overnight stays of international guests. The same has been reported to Mr. Rudek from colleagues in Heidelberg. For many tourists, Würzburg is instead one of the first stops on their way to Munich or Vienna. This makes Würzburg a good location for a visit between a few hours and a full day before heading down south for their first overnight stay. To attract more overnight guests from abroad, Würzburg would need more internationally recognized hotel brands, because these brands are highly interconnected, which could bring Würzburg onto the agenda for a different reason. Because accommodations are generally occupied by a large number of business guests, remaining beds are priced comparatively high. That makes Würzburg unattractive as an overnight stay for many tourist groups, who are not willing to spend that much money for a layover. For tourists who personally organize their travel for themselves, Würzburg is more appealing, as many Chinese people are tired of overcrowded, noisy, and busy places. They enjoy the greenery and leisurely flair of Würzburg without having to sacrifice any sightseeing. These tourists specifically choose Würzburg as their destination and are willing to spend more money in the city. Many of them are repeat visitors, meaning they have already been to Europe, likely took part in a hectic group tour, and come back to experience a more laid-back holiday.

Local tourism-related websites are not currently available in Chinese, because access rates to these sites from abroad are quite low and the effort of translating them likely would not be profitable. Würzburg on its own is simply not big enough to be recognized internationally. The strategy applied here is joining many different larger networks and having reputable partners such as Lufthansa, the Deutsche Bahn, and the German head office of tourism. Classic draws for tourists can be the romantic road, the UNESCO world heritage tours, local gastronomy, and wine villages or wine tours. Mr. Rudek also stated that they are focusing more on a business-to-business (B2B) approach while engaging in a business-to-customer (B2C) approach via digital media. Using digital media, tourists of a broader range can be reached more easily.

Mr. Rudek further discussed the mobility of tourists, which can be divided into two categories. One type of mobility involves the formation of organized groups, for which schedules are stricter and contracts with non-local partners are signed on a long-term basis. Breaking this kind of cycle is very difficult, but the city continues to adjust, and offers new options to these groups. Würzburg wants to entice them to visit Würzburg's Residence, as it is a UNESCO world heritage, yet has comparatively short queues.

The second group consists of tourists who travel individually, or in smaller, individually organized groups. As the overall trend points toward increasing individualized forms of tourism, smaller destinations have the chance to offer off-the-beaten-path opportunities and closer-to-culture experiences. To attract these customers, accommodation and experience offers are posted online and can be booked in advance, ultimately reaching and attracting more Chinese tourists. Independent tourists usually explore the city on foot, using their smartphones to navigate without needing to speak German or English. To facilitate these behaviors, the installation of a seamlessly functional digital infrastructure is essential. An important task in the upcoming years will be the installation of hotspots where tourists can get information in various languages, which will hopefully make Würzburg more attractive and more accessible for a wider range of international visitors.

Following the trend of preference for more individualized travel experiences, Chinese tourists also seem to want to get more local. They want to get in touch with the culture surrounding them when they travel abroad and want to spend more quality-time in the places they visit. Points of interest like the Old Main Bridge are being requested more frequently because tourists have seen it on social media and want to relive the leisurely lifestyle portrayed online. Also, the seasonal peaks have appeared to even out slightly. Tourists no longer unanimously prefer summer months because the weather can get uncomfortably hot; therefore, increasing numbers of tourists favor months like January, which have less business travel and thus cheaper tickets. Otherwise, peak travel time for Chinese tourists include the Golden Week (the week-long national holiday) in October and some other Chinese holidays.

Tourists' length of stay depends on their preferred travel method. The classical bus tours that visit 16 cities in five days still exist, but their popularity is on a decline. Repeat travelers typically slow down the speed of their trip and spend more time at each location. The train, a rented car, or boats are used for transportation. Smaller cities like Würzburg can profit

substantially from this second wave of tourists and therefore need to be able to satisfy the needs of this group of tourists. Due to the pending generational change in the tourism industry, the next generation has the opportunity to choose new paths; whether they want to focus on culture, business tourism, or other options, they must then adjust their marketing mechanisms. Large groups of visitors still prefer big, brand-name hotel chains like Mercure, Novotel or Maritim, but the repeat travelers are choosing smaller, family business inns and hotels in order to feel closer to the local culture, people, and traditions. These family businesses offer traditional local food and an authentic atmosphere but must also heed the requirements of international guests.

Chinese tourists have special needs regarding their accommodation. For example, they want accommodation with a good internet connection, international TV programs, and electric kettles in their rooms. Additional services such as multilingual staff and menus, and a high-quality service attitude, are other welcome characteristics that these businesses should pursue to satisfy international customers. These requirements seem challenging because of German perfectionism. If German businesses are not able to offer a certain service perfectly, they tend to rather not offer it at all, despite the fact that the younger generation of travelers usually benevolently regard a warm-hearted try, and generally understand the possibility of intercultural misunderstandings. Another aspect which needs to be emphasized is available payment methods. In Germany there are still restaurants arguing about whether they should accept payment via credit card, while China seems to have skipped this payment method entirely and adopted contactless payment or payment via smartphone or even social media apps, Mr. Rudek explained.

Tourists still require printed city maps, but disseminating travel and destination information via attractive online platforms like Weibo and WeChat was well-received by Chinese users and will be expanded. Due to the development of digitization, communication problems and barriers have reduced remarkably. Chinese tourists often come to the tourist information center with their smartphones in hand, sometimes already open to a webpage about the information, places, or services they are seeking. If not, they have at least a translation app at hand to eliminate misunderstandings and efficiently expedite the process.

Are Chinese tourists good tourists? From a financial perspective, Mr. Rudek pointed out the retail business sector and gastronomy industry, which profit the city. Regarding the

hotel industry, it again depends if the tourists come in large groups or individually. Whereas the latter is where the focus lies, smaller group sizes are not always financially recognizable by politicians. Good communication with authorities must be maintained to illuminate the fact that, despite arriving in smaller groups, the length of stay and eager spending of individually-organized tourists, make their patronage more profitable to the whole region.

There are various kinds of cooperatives, alliances, and partnerships with China. Würzburg organizes delegation visits from partner cities, trade visitors, and tourist boards, along with engaging in cooperation with other city networks and networks throughout the Franconian region. As part of the “historic highlights of Germany” and “magic cities” lists, Würzburg can profit from cooperation with other cities, as well as for UNESCO world heritage tours and travelers on the romantic road. Cooperation with Chinese tourist agencies are rare, as their asking prices exceed the financial capabilities of a city of this size. Providers like CTrip call for six-digit fees as they believe that they are doing the destination a favor by promoting it and sending tourists there. With Würzburg’s prestigious Residence, fortress, and high-quality wine and dining, the lower Franconian region is confident that, if people are really interested in the region, they will come. These tourists are the tourists who Würzburg wants to target.

Behavior-specific particularities of Chinese tourists include, for example, that the groups appear to be very fit and mobile. They do not generally need additional rest breaks or elevators, and do not seem to move slower because of elderly participants. Perhaps this is indicative of the typical Chinese tourism demographic, which ranges in age from children up to late middle-age, but elderly tourists are not commonly seen. Or perhaps the explanation is cultural discipline. Additionally, Chinese tourists are known to be open, kind, and curious. They use digital media on a rather excessive level, which gives them an infrastructural advantage compared to traditional tourists, and they can therefore explore the city more quickly and easily. Reportedly, Chinese tourists have a clear idea of what they want. On one hand, this simplifies the adjustment of offers to please them, but they can also come on a little too strong from time to time, unlike, for example, American tourists, who are always very cautious not to step onto someone’s foot or bump a stranger while passing them on the street.

An increase in the number of tourists from China is not only desirable but is also needed to balance out the decreasing German and Western tourism due to ongoing demographic changes. Strategic planning will also be key in establishing changes concerning sustainability, which is a topic which requires increasing attention. Sustainability and other environmental concerns must be reinforced by appropriate marketing mechanisms and productive interactions with authorities and politicians, because needed changes in infrastructure can only be achieved by working in cooperation. Adding to problems, the hospitality and tourism industry is suffering personnel shortages due to unattractive payment and working hours. To solve these problems, cities, regions, and provinces must work hand-in-hand to benefit from each other's expertise and experiences. Bureaucratic obstacles need to be minimized in order to allow solutions which can quickly change undesirable circumstances. The development of foresight is necessary to see future advantages and benefits without overlooking the expensive path towards these goals.

As closure, Mr. Rudek outlined his personal vision for Würzburg's tourism industry by stressing that his original vision is already on its way to reality, as tourism in the region becomes increasingly internationalized. Travel behavior will change during the next ten years, and it is in the public's hands to decide which path they want to take. Mr. Rudek's vision is to emphasize valuable tourism with which Würzburg and its inhabitants can live harmoniously, without being overrun or left behind.

Residence Interview – Key Takeaways

To start, Ms. Streiffuss and Mr. Weiler explained the origins of the Residence visitors. They estimated the proportions of German and non-German tourists to be around 50 percent each. In the group of non-German tourists, tourists from English-speaking nations make up the largest fraction, and the fraction of tourists from Asian countries is the second largest. In this group, Japanese and Chinese are the leading nationalities, with Chinese tourists accounting for roughly 50 percent of all Asian tourists at the Residence. The number of Chinese tourists has been rising continuously over the past 10 years.

When they speak about Chinese tourists, Ms. Streiffuss and Mr. Weiler differentiate between Hong Kong, Taiwan and Mainland tourists, due to noticeable cultural differences which will be highlighted later. The number of tourists from Hong Kong has been rising more slowly than tourists from Mainland China, and Taiwanese tourists comprise the largest faction, although their numbers are not growing as significantly as the other two

groups. Mr. Weiler predicted that, as long as China does not somehow change or limit the freedom to travel, numbers will rise even more in the future. China is a potentially enormous market, from which only a select few citizens already have passports and the ability to travel.

They believe many international tourists skip Würzburg during their travels because of time constraints, and also because the Residence does not enjoy the same degree of historical prestige as, for example, the Neuschwanstein castle. The Chinese tourists who do come are of varying age groups, except for the very elderly. Chinese tourist groups often arrive on large group busses or arrive driving rental cars. Younger visitors more frequently utilize public transportation such as trains and public bus services.

Chinese guests are interested in the offered information, mainly available in print because there are some communication barriers which hinder direct exchange of information. It is not financially viable to solve this problem at this time, as educated staff would be too expensive and the costs of creating signs and a version of the website in Chinese outweigh the still comparatively small number of Chinese speaking guests. The language barrier can lead to misunderstandings and non-compliance of Residence rules, such as the prohibition of taking photos inside, touching antique items, and carrying drinks or food into the historic rooms. Therefore, the residence employs additional staff to ensure that all guests follow the given rules. Ms. Streiffuss states that this could have cultural explanations, because in China important and precious items are always locked away far out of reach or even guarded. If this is not the case, the Chinese tourists think touching the exhibits is not a problem because they are not displayed as if they were enormously precious. But the philosophy of the Residence is to make history tangible – figuratively. To give visitors a rich experience is their main goal, while also preserving the historical building and its objects. There is a fine line between preserving things of historical value and satisfying visitor expectations. Sometimes the staff demands for panes of glass to divide visitors from the exhibits, but the institution does not want to give up the unique experience available at the Residence.

From a financial perspective, both Ms. Streiffuss and Mr. Weiler agreed that their Chinese guests seem to come from a higher financial background and socioeconomic level. They come to spend real money, not just buy cheap souvenirs, and are very confident consumers.

Other than the city of Würzburg itself, the Residence does not have larger cooperation. Their financial capabilities are limited and they rely on being seen in a bigger picture, registered and cited in broader networks like the Bavarian Palace Administration (Schlösserverwaltung) or tourist committees.

In general, the increase of Chinese visitors is welcome but would also necessitate offering more specific proposals, which will not be feasible until demand reaches a profitable level. Offering an App instead of an audio guide is an idea that would be useful for many guests, especially if it were available in many different languages. But besides the costs of designing such an App, the technical infrastructure for making wireless internet access available everywhere in the Residence is not available at the moment. Tourism will change over the upcoming decade and, in accordance with climate change, the demand for more sustainability will likely continue to rise. As times change, the institution of the Residence will see where trends are pointing and hopefully adjust accordingly. The visions of both Ms. Streiffuss and Mr. Weiler are to uphold the Residence's present condition and preserve it, whilst simultaneously fulfilling their cultural mission and stimulating tourism in the whole lower Franconian region.

Comparison of the Two Interviews

In conclusion, these two interviews indicated that the trend towards individualized traveling is spreading among Chinese tourists, many of whom are young, active, adventurous, and have many years of adventure ahead of them. They were consistently described as interested guests who are willing to spend both time and money to explore new parts of the world. Through the progress of digitalization, language barriers can be reduced and communication problems can be solved more easily. Today's tourists are able to move more independently because smartphones are able to provide them with information and navigation on demand. The technical infrastructure needed for further development on this front still has plenty of room for improvement and will need more attention during the upcoming years. If this goal can be achieved, it holds many more opportunities to enhance the recognition of Lower Franconia beyond the borders of Bavaria and perhaps worldwide.

Another area of great potential lies within the generation change in the traditional hotel sector. Creating awareness for the needs of international guests will give them copious local and individual competitive advantage that large hotel brands are not flexible to

compete with. In the end, climate change and sustainability will have to come into consideration, whether because of the preservation of places like the Residence or in regard to its operation methods, transportation infrastructure, or the way people travel overall. These are all details which will determine the future of where and how future tourists, from China or elsewhere, will travel and spend their vacation time.

The Big Picture

A closer look at the situation of the hospitality and tourism industry in Lower Franconia reveals, that the number of overnight stays in 2018 was 7.3 million in total, in comparison to the 98.7 million overnight stays in the whole state of Bavaria.²²³ The percentage of 7.4% might appear rather insignificant; however, the tourism industry in Lower Franconia is still of great significance, as it represents a key component in sustaining economic welfare and employment on one hand and upholding and distributing the cultural diversity and richness of the region on the other hand.²²⁴

When examining the ratio between German tourists and tourists from abroad, it becomes apparent that Lower Franconia possesses a very high ratio of domestic tourists. In fact, over 90 percent are tourists travelling within regions of Germany.²²⁵ In Franconia, the combination of the wine region with many cultural, architectural, and culinary highlights attracts the most overnight stays. This distribution indicates that Lower Franconia might not be as crucial for international tourists as a travel destination, but all the more essential for domestic tourists from other parts of Germany. However, the percentage of international visitors in Lower Franconia is rising gradually, which opens up new opportunities and challenges for the industry to adapt to.

The accommodation capacity rate in Lower Franconia in 2018 was, with an average of 44.8 percent, only a few percentage points lower than that of the whole state of Bavaria

²²³ Bayerisches Landesamt für Statistik, *Tourismus: Gemeinden, Ankünfte, Übernachtungen, Durchschnittliche Auslastung*, 2019

²²⁴ Deutscher Handelsverband, *Der HBE Unterfranken*, n.d., <https://www.hv-bayern.de/bezirke/unterfranken/>

²²⁵ Bayerisches Landesamt für Statistik, *Tourismus in Bayern im Dezember 2018 und im Jahr 2018*, February 2019, p.18, https://www.statistik.bayern.de/mam/produkte/veroeffentlichungen/statistische_berichte/g4100c_201812.pdf.

(46.5 percent). When comparing the number of overnight stays per 1000 inhabitants, the number in Lower Franconia only accounts for around three-fourths of the number in Bavaria as a whole (5569/1000 vs. 7570/1000 inhabitants); nevertheless, the numbers indicate a slight growth trend throughout recent years.²²⁶

Tourism in Bavaria

As a whole, Bavaria represents the most prominent destination state for tourism in Germany and showed a steady growth rate of 2.5 percent in 2018.²²⁷ In Bavaria, the tourism industry provides employment opportunities for 600,000 people and is one of the keys to creating equivalent living conditions throughout the state. The ratio of domestic tourists to international tourists in Bavaria is almost twice that of Lower Franconia: in 2018, an estimated 80 percent were tourists from other regions in Germany, while 20 percent came from abroad. This highlights the attractiveness of the state to an international audience, and it plays a major role in promoting the German economy, culture, and values.

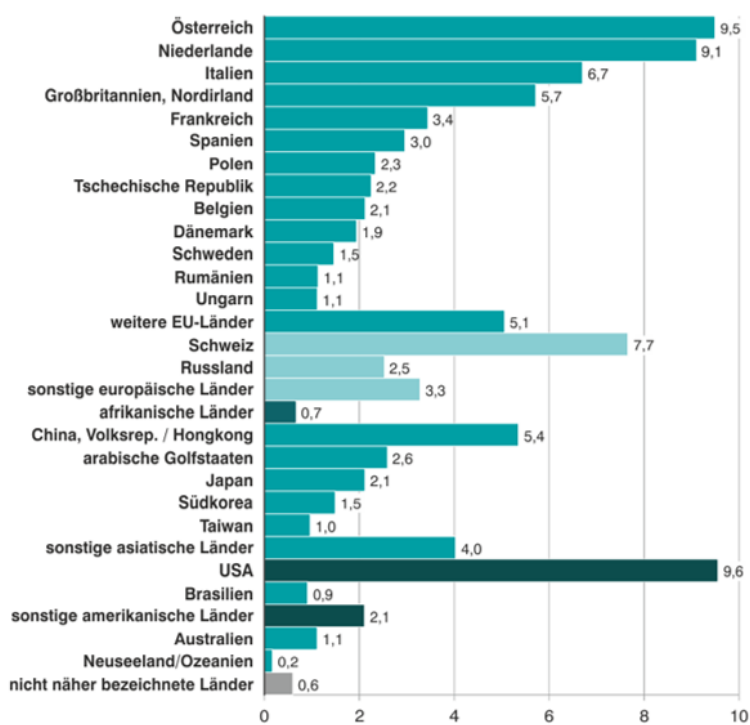


Figure 51: Foreign Guests in Bavaria in 2018 by Selected Countries of Origin in Percent²²⁸

²²⁶ Bayerisches Landesamt für Statistik, *Tourismus: Gemeinden, Übernachtungen je 1000 Einwohner, Jahre*, n.d.,

<https://www.statistikdaten.bayern.de/genesis/online?sequenz=tabelleErgebnis&selectionname=45511-023&>

²²⁷ Bayerisches Landesamt für Statistik, *Tourismus in Bayern*, 2019, p.7

²²⁸ Bayerisches Landesamt für Statistik, *Ausländische Gäste in Bayern 2018 nach ausgewählten*

Out of the international visitors in Bavaria, tourists from the USA, Austria, the Netherlands, Switzerland, Italy, and the UK topped the list, as shown in Figure 51 above.

Interestingly, Chinese tourists in Bavaria ranked 7th place with a total percentage of 5.4 percent. Considering China's expanding upper-middle class with higher disposable incomes and overall increasing affluence, there is an undeniable, massive potential for growth in the tourism industry for Chinese visitors, which, if steered wisely, could contribute immensely as an important economic factor and a driving force for all of Bavaria. Despite the popularity of Bavaria with Chinese tourists, however, the number of tourists from PR China and Hong Kong experienced a decrease of 5 percent in 2018, which should serve as a signal to redirect the focus of organizations.²²⁹

Tourism in Germany

Viewing the tourism industry on a national level, the number of nights spent by domestic and international tourists in travel accommodations in Germany has demonstrated a steady increase for years. In 2018, the number reached 478 million in total, with 390.3 million domestic tourists, while the number of nights spent by international tourists reached 87.7 million. This adds up to a distribution ratio of 22.5 percent, which, compared to the 20 percent of Bavaria and the 10 percent in Lower Franconia, has the highest ratio between the different administrative levels. The number of tourist arrivals from China and Hong Kong to the European Union from 2012 to 2016 has increased greatly as well, adding up to 10.48 million arrivals in the EU in 2016.²³⁰ Out of these visitors, 5.55 million trips were made in 2017 from China to Western Europe, which comprises over 40 percent of all regions in the EU.²³¹ The European Commission and European Travel Commission jointly introduced the EU-China Tourism Year in 2018 to promote travel destinations and to offer improved travel experiences. Simultaneously, the number of Schengen visas increased to 2.4 million in 2017.²³²

Herkunftsländern, 2019,

https://www.statistik.bayern.de/mam/statistik/wirtschaft_handel/tourismus/0404_auslaendische_gae ste_nach_herkunftslaendern_2018_780px.png.

²²⁹ Bayerisches Landesamt für Statistik, *Tourismus in Bayern*, 2019, p.17

²³⁰ Eurostat, *Arrivals at Tourist Accommodation Establishments*, 2019

²³¹ S. Lock, *Number of outbound trips from China to Europe in 2017, by region of destination*, 2019, <https://www.statista.com/statistics/311592/outbound-travel-from-india-to-china-by-destination/>

²³² Luty, Jennifer, *Chinese tourism in Europe - Statistics & Facts*, January 18, 2019, <https://www.statista.com/topics/4805/chinese-tourism-in-europe/>

Tourism in the European Union

The contribution of the travel and tourism industry to the European economy also has a highly significant impact. The direct contribution of the tourism industry to GDP in Germany increased from 2012 to 2018, peaking at around 132.6 billion euros in 2018.²³³ In contrast to this, the contribution of the travel and tourism industry to GDP in Europe over the same period increased by 17 percent, reaching approximately 2.15 trillion USD in 2018.²³⁴

In terms of employment opportunities, the direct and indirect contributions of the travel and tourism industry to employment in Germany accounted for approximately 6.3 million jobs in 2018. In comparison to this, the industry has directly contributed approximately 14 million jobs to the European economy in 2017.²³⁵

Conclusion

Regarding the general survey, a response rate of 5.37 percent narrows the perspectives on the topic and might leave interesting or new perspective out of reach, as it accounts for only a few companies or institutions in the industry. Furthermore, as sizes differ greatly, a number of very small businesses are often neglected in the literature and figures on the industry. Therefore, the interview questions and survey parts, specifically on the tourism and hospitality industry, used percentages for a better comparison of the results.

The survey results show that firms having no entanglement with China are not only not interested in changing these circumstances in the upcoming future, but in fact have a rather negative perception of investment in China and cooperation with Chinese partners. In contrast, firms with existing entanglements with China appeared to be interested in either maintaining or even enhancing these ties. They had a more positive opinion regarding investment and working together with Chinese partners, perhaps owing to positive experiences with such entanglements in the past. But with respect to the perceived impact of Chinese tourists visiting Lower Franconia, over 80 percent of participants claimed it to be positive. Another consensus from the survey was that,

²³³ World Travel and Tourism Council 2019b, p. 12

²³⁴ Luty, Jennifer *Travel and tourism's total contribution to GDP in Europe 2012-2028*, June 20, 2019, p.7, <https://www.statista.com/statistics/617528/travel-tourism-total-gdp-contribution-europe/>

²³⁵ Luty, *Travel and tourism's total contribution*, 2019, p.1

regardless of whether or not they reported having entanglements with China, none were eager to offer special adjustments for their Chinese guests. This leaves room for a change, as Chinese tourist numbers are likely to rise continuously throughout the next decade. This could be of special importance to places, which have been reported to be of most interest for Chinese tourists, such as the Residence, Marienberg Fortress, the old town of Miltenberg, the Johannisburg Castle in Aschaffenberg, and Wertheim Village in Baden-Württemberg.

The interviews provided a deeper understanding on the topic. The one with the city tourism institution provided insights into the hotel industry, such as business guests preferring well-known hotel companies, while tourists travelling independently or large groups prefer staying in smaller, more traditional hotels. In addition, the experiences of Mr. Weiler and Ms. Streiffuss in their everyday interactions with Chinese guests presented a comprehensive view of the past and present circumstances of the tourism industry while giving also an outlook on emerging future trends. Group tourism persists, but tourists who travel individually are on the rise, opening new opportunities for Würzburg to gain further recognition as a destination for a travel balance between leisure and sightseeing activities.

Trends towards flattening season peaks and more evenly distributed waves of tourists, digitalization as a vehicle for declining communication barriers, together with a more open-minded next generation of leaders in this industry are observations that a simple quantitative survey cannot provide. Awareness and visions – and obstacles to overcome in the process – are showing that the industry of tourism and hospitality is very active and strives to preserve Würzburg as a worthwhile destination for an international clientele, without losing the acceptance and support of its residents.

In conclusion, the knowledge gained on the topic raises more detailed questions for further research. The positive perceptions of firms, who are already working with Chinese but are not willing to adapt to their special needs, can be subject to future considerations to set up for more Chinese tourists to come. Besides that, sharing and communicating positive experiences could help to overcome prejudices and mutual collaboration, and could solve issues collectively. Change is on its way, and the upcoming years will decide where tourism in Würzburg is going, who will be a part of trends, and if the city, hotels and sightseeing spots will be able to establish a welcoming atmosphere for their potential tourists, not only from China but from all over the world.

Overall Comparison Between the Reports

The following section provides a comprehensive comparison between the five chosen industries (automotive, clothing, food and beverages, hospitality and tourism, and technology and machinery) and their China-related activities, based on results from the general part of the survey sent to firms. The aim of the analysis below is to present and interpret similarities, differences, and overlaps between these important industries in Lower Franconia with regard to their entanglements with China.

Commonalities, Differences, and Overlaps

As the results of the study show, industries vary in their degree of entanglement with China, as well as in types of the established entanglements (as seen in Figure 52 and Figure 53, respectively). From these results, the industry with the largest share of firms with various connections to China is the technology and machinery industry. As many as 65 percent of the respondents from this cohort admitted to have at least one type of entanglement with China. The hospitality and tourism industry was found to have the second highest share of firms entangled with China (59 percent), followed closely by the automotive industry (56 percent). According to the general survey, over half of the participating firms in the aforementioned industries are somehow connected with China. Below the threshold of a 50 percent entanglement rate, one can find the clothing industry (46 percent) and the food and beverages industry (38 percent).

<i>Does your firm have entanglements with China?</i>		
Answer/ Industry	Yes	No
Automotive (n=9)	56%	44%
Clothing (n=13)	46%	54%
Food and Beverages (n=21)	38%	62%
Tourism and Hospitality (n=17)	59%	41%
Technology and Machinery (n=23)	65%	35%

Figure 52: Overall Entanglements with China

<i>What types of entanglements do you have with China? (Only entanglements with at least one answer)</i>					
Industry/ Entanglement	Automotive (n=2)	Clothing (n=5)	Food and Beverages (n=9)	Tourism and Hospitality (n=9)	Technology and Machinery (n=12)
Export to China	50%	20%	44%		92%
Import from China	50%	100%	22%	11%	67%
Joint venture in Germany with a Chinese partner		20%	11%		
Subsidiary in China			22%		25%
Licensing to China					17%
Production plant in China		40%			25%
Assembly plant in China		20%			8%
Sales office in China		20%	11%		17%
Distributor/distribution partner in China			22%	11%	17%
Chinese customers/consumers/guests	50%		33%	55%	50%
Financial investment in China				11%	
Management know-how to China			22%		8%
Patents to China					8%
Patents from China		20%			
Trademark licenses to China			11%		
Employees from China		40%	11%	11%	8%
Raw materials to China	50%				8%
Raw materials from China		40%	11%		8%
Other				33%	

Figure 53: *Types of Entanglements with China*

The results indicate that participating Lower Franconian companies from the technology and machinery industry in particular are motivated to establish connections with China. This may suggest that companies in this industry generally reap the most benefits from relationships with China. The relatively high share of entangled firms in the automotive industry might indicate that many companies from this sector also perceive China-related activities as advantageous for their business. Furthermore, the results can be interpreted from two perspectives: not only is it potentially beneficial for Lower Franconian firms in these industries to be entangled with China, but Chinese firms may also be driven to seek connections with Germany in these two fields. Possible explanations for the latter may lie in the German leadership and innovativeness in industries strictly related to engineering.²³⁶ As China pursues its goal of becoming a leader in technological industries,²³⁷ it would likely be reasonable to stay close to one of the world's current technological leaders. This speculation can be further supported by the overwhelmingly large share (92 percent) of entangled firms in the technology and machinery industry that export their products or services to China. 67 percent of the entangled companies in this industry that import from

²³⁶ "Machinery & Equipment Industry: Market Leadership Powered by German Engineering," Germany Trade & Invest, <https://www.gtai.de/gtai-en/invest/industries/machinery-equipment>, (n.d.).

²³⁷ "Automotive Industry: Germany – The World's Automotive Hub of Innovation," Germany Trade & Invest, <https://www.gtai.de/gtai-en/invest/industries/mobility/automotive>, (n.d.) and Gu Yekai, "China Highlights Innovation Momentum," *The Telegraph*, <https://www.telegraph.co.uk/peoples-daily-online/science/china-technological-innovation/>, (October 1, 2019).

China indicate a bi-directional exchange of goods various stages in manufacturing and production. It may be cautiously surmised that such relationships based on international trade are profitable for both parties, for technologically advanced Germany and China, which aspires to become one of the world's leaders in this field.

Another industry from which the survey results indicated heavy entanglement with China is hospitality and tourism. A significant share of entangled firms in this sector could be explained through the growing number of Chinese tourists coming to visit Germany.²³⁸ It appears that Lower Franconian companies in this sector have successfully recognized opportunities associated with the increasing quantity of Chinese tourists and have acted upon this by establishing various entanglements with the Chinese side. 55 percent of the entangled companies from this sector reported having Chinese customers. As this is by far the most substantial entanglements in the hospitality and tourism industry, it is possible to conclude that Chinese demand motivates connections with China in this sector.

As perceptions of China move away from being a country merely associated with low-cost sourcing,²³⁹ the interest in China from firms in the clothing industry might change as well. The aforementioned perspective could possibly explain the relatively low share of entangled firms from this sector. Regardless, one interesting survey result is that all of the entangled companies in the clothing industry reportedly engage in import from China. Although China is shifting its focus to more technologically complex industries, imports from this country are still perceived as beneficial by many of the Lower Franconian firms from the Clothing industry at this point in time.

According to the survey, the industry with the smallest share of firms entangled with China is Food and Beverages industry. Such a result is somehow surprising, given the positive Chinese perception of products from Germany (see also "With an Alert Ear and Eye", interview with Kurt Treumann, the Director for International Affairs at the chamber of industry and commerce Würzburg-Schweinfurt). The comparatively low share of entangled firms in this sector may indicate that these companies are not aware of possible

²³⁸ "Chinese Tourists in Germany: A Growing Business Opportunity," chinatouriststar,

<https://chinatouriststar.com/chinese-tourists-in-germany-a-growing-business-opportunity/>, (n.d.).

²³⁹ CNBC.com staff, "World No Longer Sees China as a Cheap Outsourcing Destination: Survey," *CNBC*, <https://www.cnbc.com/2017/01/31/china-no-longer-considered-a-low-cost-sourcing-destination-survey.html>, (January 31, 2017).

benefits from engagement with China, or do not consider such entanglements to be as positive as they may appear for observers outside the industry.

Figure 54 summarizes the primary incentives for engagement in China-related business activities, from the perspectives of Lower Franconian firms in the five researched industries. These results indicate that the reasons for conducting parts of business with or in China vary widely and are, at least partly, determined by each industry's individual characteristics and needs. Low manufacturing costs seem to be one of the most important drivers for the firms in the clothing industry. They are not, however, a crucial incentive for firms operating in the technology and machinery industry. This may be another indicator of China's change in the recent years; firms from the technology and machinery industry do not engage with China primarily for the low labor costs. For this type of firms, market entry is the biggest incentive to engage with China, followed by low manufacturing costs and technological know-how. The latter is also an important reason for engagement in China-related business activities for firms in the automotive and clothing industries.

<i>What are the main reasons for your engagement in China-related business activities?</i>							
Reason/ Industry	Low labor costs	Low manufacturing costs	Low raw material prices	Technological know-how	Managerial know-how	Market entry to China	Other
Automotive (n=2)	0%	0%	0%	50%	0%	50%	0%
Clothing (n=3)	33%	67%	33%	67%	33%	0%	0%
Food and Beverages (n=7)	14%	14%	29%	0%	14%	57%	29%
Tourism and Hospitality (n=8)	0%	0%	0%	0%	25%	0%	87,5%
Technology and Machinery (n=11)	18%	27%	18%	27%	0%	82%	0%

Figure 54: Reasons for China-Related Business Activities

Market entry into China also reportedly drives the engagement of the firms in the automotive industry and food and beverages industry. In the case of the food and beverages industry, Chinese entanglement appears, to a certain degree, to be determined by low raw material prices. In the case of the hospitality and tourism industry, 87.5 percent of the respondents answered that their engagement is driven by the other factors. Considering the answers of these firms to the second question (Figure 53), these other drivers are likely closely associated with the growing Chinese demand for tourism and tourism-related services.

With regard to China's attractiveness as a destination for companies' investments (Figure 55), respondent firms in all but one of the researched industries demonstrated very strong similarities in their assessment. Over 80 percent of the firms in the automotive, clothing, food and beverages, and hospitality and tourism industries reportedly plan no investments in China. Such results indicate that China is not perceived by them as an attractive destination for investment. An exception of this highly negative assessment of China as a potential investment country is reflected by the responses of the firms from the technology and machinery industry. Although 58 percent of the respondents in this cohort reported not to plan any investments in China, the remainder (42 percent) see China as a potential investment destination. 16 percent of these firms even placed China in their top 3 investment countries.

<i>How do you rank China as a location for your company's investments in a global comparison?</i>						
Rank/ Industry	No planned investments	Beyond the Top 10	In the Top 10	In the Top 5	In the Top 3	Top 1
Automotive (n=6)	83%	0%	0%	17%	0%	0%
Clothing (n=12)	92%	8%	0%	0%	0%	0%
Food and Beverages (n=19)	84%	0%	0%	0%	11%	5%
Tourism and Hospitality (n=15)	93%	0%	0%	7%	0%	0%
Technology and Machinery (n=19)	58%	10,5%	10,5%	5%	16%	0%

Figure 55: Overview on China Investment Rankings

The surveyed companies also varied in their assessments of the market access restrictions for their respective industries (Figure 56). Firms from the food and beverages industry were the harshest in their assessment; 23.5 percent of the firms from this sector reportedly perceive Chinese market access restrictions as very strong. However, an accumulation of the responses "very strong" and "strong" would indicate that the participating companies in the clothing industry see Chinese market access restrictions as the strongest of all the industries (33 percent compared to 29.5 percent from the food and beverage industry). Firms from the automotive industry seem to have a quite different perception of the market restrictions in China; 80 percent of the respondents in this sector reportedly think that restrictions are weak or very weak. The hospitality and tourism industry had the largest share of respondents who responded that there are no restrictions at all for their sector. Such diverse opinions about the perceived degree of market restrictions may result from the different regulations for different industries or be partly

determined by the specific types of business activities that the participating companies engage in.

<i>According to your estimations, how strong are the market access restrictions for your industry in China?</i>					
Assessment/ Industry	Very strong	Strong	Weak	Very weak	There are no restrictions at all
Automotive (n=5)	0%	20%	60%	20%	0%
Clothing (n=12)	0%	33%	50%	0%	17%
Food and Beverages (n=17)	23,5%	6%	23,5%	18%	29%
Tourism and Hospitality (n=12)	8%	17%	17%	17%	41%
Technology and Machinery (n=19)	n.d.	n.d.	n.d.	n.d.	n.d.

Figure 56: Assessment of Market Access Restriction for the Industries

Future Outlook

Regarding the possibility of future expansion of China-related business, companies expressed very different inclinations. Firms from the automotive industry and the technology and machinery industry were the most inclined towards expanding their business with China (Figure 57) 50 percent and 37 percent of the respective responses from the automotive sector and the technology and machinery industry confirmed considering this option. The most reluctant towards this possibility were the firms from the clothing industry and the hospitality and tourism industry. Not a single clothing company confirmed having this consideration, and 67 percent of the respondents from this sector ruled out this possibility completely. Among the firms from the hospitality and tourism industry, 73 percent of the survey participants reportedly do not consider expanding their business with China.

<i>Are you considering expanding your business with China?</i>			
Answer/ Industry	Yes	No	Maybe
Automotive (n=6)	50%	17%	33%
Clothing (n=12)	0%	67%	33%
Food and Beverages (n=19)	21%	47%	32%
Tourism and Hospitality (n=15)	13,5%	73%	13,5%
Technology and Machinery (n=19)	37%	37%	26%

Figure 57: Insights on Considerations of Business Expansion to China

Similar results are showcased by the question regarding business prospect assessment for the five researched industries in China in the next three years (Figure 58). The automotive industry (50 percent) and the technology and machinery sector (31.5 percent) had the largest share of the firms that reportedly perceive business prospects in China as very good or good. The most skeptical companies with regard to the future business prospects in China (i.e. responded “very bad” or “bad”) were firms from the clothing industry (50 percent) and the hospitality and tourism industry (47 percent).

<i>How do you assess the business prospects for your industry in China for the next three years?</i>					
Assessment/ Industry	Very Good	Good	Neutral	Bad	Very Bad
Automotive (n=6)	0%	50%	50%	0%	0%
Clothing (n=12)	0%	17%	33%	8%	42%
Food and Beverages (n=18)	11%	11%	39%	17%	22%
Tourism and Hospitality (n=15)	13%	7%	33%	27%	20%
Technology and Machinery (n=19)	0%	31,5%	31,5%	16%	21%

Figure 58: Assessment of Business Prospects in China for the Industries

In conclusion, firms from the technology and machinery industry and the automotive industry seem to have the most optimistic stance towards their business activities in China. As China pursues the goal of becoming a worldwide leader in high-tech industries,²⁴⁰ new business opportunities for Lower Franconian companies in open up in these sectors. China striving towards more added-value production and promoting technologically advanced industries also means shifting away from the position of low-cost manufacturing country.²⁴¹ This change may indicate that engagement with China is likely to become less profitable for sectors like the clothing industry. Firms in Lower Franconia appear to recognize these changes, which is reflected by the survey responses regarding their perceptions of future business outlooks.

²⁴⁰ “Made in China 2025,” Institute for Security & Development Policy, <http://isd.eu/publication/made-china-2025/>, (June 2018).

²⁴¹ “Made in China 2025,” Institute for Security & Development Policy, <http://isd.eu/publication/made-china-2025/>, (June 2018).

Conclusion

The Study, the Results, and Beyond

In accordance with Robert Yin's embedded comparative multiple case study design, this project included multiple cases, which must ultimately maintain both strong interconnection with one another and also remain unquestionably rooted in the overall context. This study examined five cases, in the form of important industries in Lower Franconia: the automotive industry, the tech and machinery industry, the clothing industry, the food and beverages industry, and the tourism and hospitality industry. These industry cases were embedded within the overarching context of the study question, "How are Lower Franconian firms entangled with China?" and were investigated using a combination of quantitative and qualitative methods.

This case study was designed, conducted, and authored by twenty student researchers, who worked in five groups of four people each. In some regards, this contributed to the integrity of this project, because the research of each industry was separate from the others and was therefore less likely to be contaminated by knowledge or expectations from other industry cases. On the other hand, despite collectively predetermined methods and a shared framework, the large number of researchers and writers led to a broad spectrum of minor variances and some aspects of incomparability. Regardless, this case study is potentially valuable as a comprehensive collection of information about Lower Franconia's business connections with China, a topic which has little representation in current academic literature. This study might also be used as a possible resource for related institutions and Lower Franconian firms that are interested in pursuing China-related business opportunities, even firms outside of the five investigated industries.

The investigative methods for this project included an online survey for the firms in each industry, interviews with relevant experts, and literature research. Naturally, the types of firms and their rates of survey participation, the availability of interview partners and the content of resulting interviews, and the availability of literature and statistics varied between the different industries. This should be kept in mind when assessing the overall findings. The following paragraphs will discuss the most noteworthy outcomes of each research method.

To begin, the online survey was sent to firms in each industry by using lists of companies provided by the IHK. The resulting participation rate ranged between 5 and 11 percent, including some responses which were incomplete. The majority of participating firms were microenterprises or small-sized enterprises, with fewer than 50 employees. Survey responses indicated that the tech and machinery industry had the largest percentage of firms with Chinese entanglements, followed by the hospitality and tourism industry and automotive industry, all three of which showed that more than half of participating firms are entangled with China. The clothing industry and food and beverage industry reported having the lowest entanglement rates, which might be based on the specific services and competencies of firms in these industries. The only form of entanglement shared by all five industries was imports from China. Otherwise, the most prevalent form of entanglement varied per industry.

Interestingly, the survey results of all industries except the clothing industry indicated that their primary motivation for engagement with China-related business was not China's low-cost labor and low-cost manufacturing. Instead, many firms reported that they engage in business with China because of its technological know-how or to gain access to the Chinese market. This possibly reflects China's ongoing changes in an international context, as it moves away from being a hotspot for cheap production and becomes a desirable consumer market and a player in high-tech industries, as discussed in the section "Overall Comparison between Reports".

Another interesting trend found in the survey results was the observation by multiple industry reports that firms with existing entanglements with China tended to have quite different perceptions of China than firms without entanglements. Firms with Chinese entanglements were generally more likely to consider expanding China-related business, had more positive expectations about the business prospects in China, and were more likely to rank China as a good destination for investment. Firms with no entanglements generally expressed more reluctant and pessimistic opinions in these regards. Therefore, it stands to reason that firms with existing entanglements with China will pursue more entanglements in the future, whereas firms without entanglements will likely remain without entanglements.

Interviews with industry experts communicated some similar themes. Most interviewees acknowledged that China is a rapidly growing and increasingly important market, which

presents many opportunities for Lower Franconian firms. However, many firms are too small to consider engaging with China or do not have the necessary capital. Other firms do not do business with China simply because they do not know where to start and are intimidated by obstacles such as the language barrier. Some Lower Franconian firms have established business connections with China, however, and some are pursuing various new forms of China-related business. Agents can help facilitate these kinds of business opportunities, as well as institutions and digital resources.

In general, industry research through the lens of available literature was difficult to compare between the industries, and the researchers struggled to find information that specifically pertained to Lower Franconia. For example, the hospitality and tourism industry discovered that Chinese tourists comprise about five percent of tourists in Bavaria, but similar statistics were not available for Lower Franconia. The food and beverages industry report established that Germany as a whole was one of the top ten origins for imported food and drinks in China, but direct data about what percentage came from Lower Franconia was not found. The facts and figures given by the industry reports are more useful to establish an overall understanding of Lower Franconia's contributions to Bavaria and Germany as a whole than they are to answer the case study's overall research question.

In conclusion, this case study utilized various methods to illuminate existing entanglements between Lower Franconian firms and China. Each of the chosen industries indeed has many business connections with China, but the types of entanglements mostly depended on the industry and types of firms. Because China is developing and becoming increasingly relevant to the world economy as a whole, these results might be beneficial for Lower Franconian businesses that are interested in pursuing business connections with China. Therefore, this study has made it possible to compile the following suggestions for these firms. First of all, because of China's growing middle class, the Chinese market and related business opportunities are growing especially quickly in regard to luxury, individuality, and culture; businesses with related products to offer might want to consider entering the Chinese market. Second, Chinese people are very tech savvy on average and digitalization is important to them; in order to find Chinese customers and business partners, it is advisable to provide high-quality websites or utilize other digital methods such as apps or social media. Third, China is no longer the cheapest destination for simple manufacturing, and has in fact developed many high-tech competencies, making it a good

option for higher levels of production and also as potential customers for technology- and machinery-related industries. Lastly, firms interested in entering the Chinese market should contact the IHK for information, further services, and relevant workshops. To summarize, in addition to existing business relationships, China presents many new opportunities for the business world, including business in Lower Franconia. The business connections of the future are being forged today, and Lower Franconia has plenty of room and potential to forge profitable connections with China.

Appendix

Appendix A – Relevant Industry Groups as Chosen by the Groups

Selection of the options for the company lists for all industries:

Chamber and administrative districts:	Administrative districts:	Type of company and legal form:
IHK Aschaffenburg IHK Würzburg	Aschaffenburg, Schweinfurt, Würzburg, Miltenberg, Bad Kissingen, Rhoen-Grabfeld, Hassberge, Kitzingen, Main-Spessart	Headquarters, branch offices

Selection for specific industries

Industry group	Sectors	Branch and economic activity	Founding Date	Number of employees	Transnational activity
Automotive	automotive, Industry and production	2211 Manufacture of rubber tyres and tubes, retreading and rebuilding 243 Manufacture of other products of first processing of steel 244 Manufacture of basic precious and other non-ferrous metals 251 Manufacture of fabricated metal products, except machinery and eq	-	-	-

		<p>252 Manufacture of tanks, reservoirs and containers of metal, Manufacture of central heating radiators and boilers</p> <p>255 Forging, pressing, stamping and roll-forming of metal, powder met</p> <p>256 Treatment and coating of metals, machining</p> <p>271 Manufacture of electric motors, generators, transformers and elec</p> <p>272 Manufacture of batteries and accumulators</p> <p>273 Manufacture of other electronic and electric wires and cables</p> <p>274 Manufacture of electric lighting equipment</p> <p>29 Manufacture of motor vehicles, trailers and semi-trailers</p> <p>291 Manufacture of motor vehicles</p> <p>292 Manufacture of bodies (coachwork) for motor vehicles, manufacture</p> <p>293 Manufacture of parts and accessories for motor vehicles</p>			
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Technology and Machinery		<p>05 Mining of coal and lignite</p> <p>06 Extraction of crude petroleum and natural gas</p> <p>08 Other mining and quarrying</p> <p>16 Manufacture of wood and of products of wood and cork, except furn</p> <p>17 Manufacture of paper and paper products</p> <p>18 Printing and reproduction of recorded media</p> <p>19 Manufacture of coke and refined petroleum products</p> <p>20 Manufacture of chemicals and chemical products</p> <p>21 H.v. Manufacture of basic pharmaceutical products and pharmaceutical p</p> <p>22 Manufacture of rubber and plastic products</p> <p>23 Manufacture of other non-metallic mineral products</p>	-	-	-

		<p>24 Manufacture of basic metals</p> <p>25 Manufacture of fabricated metal products, except machinery and eq</p> <p>26 Manufacture of computer, electronic and optical products</p> <p>27 Manufacture of electrical equipment</p> <p>28 Manufacture of machinery and equipment n.e.c.</p> <p>31 Manufacture of furniture</p> <p>32 Other manufacturing</p> <p>33 Repair and installation of machinery and equipment</p> <p>35 Electricity, gas, steam and air conditioning supply</p> <p>36 Water collection, treatment and supply</p> <p>37 Sewerage</p> <p>38 Waste collection, treatment and disposal activities, materials re</p> <p>39 Remediation activities and other waste management services</p> <p>41 Construction of buildings</p> <p>42 Civil engineering</p>			
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		43 Specialised construction activities 46 Wholesale trade, except of motor vehicles and motorcycles 47 Retail trade, except of motor vehicles and motorcycles 50 Water transport 51 Air transport 62 Computer programming, consultancy and related activities 63 Information service activities 72 Scientific research and development 95 Repair of computers and personal and household goods			
Textile	-	14 Manufacture of wearing apparel, 46421 Wholesale of clothing and footwear	-	-	-
Food and Beverages	-	01 Crop and animal production, hunting and related service activities 03 Fishing and aquaculture 10 Manufacture of food products 11 Manufacture of beverages	-	-	-

		<p>472 Retail sale of food, beverages and tobacco in specialised stores</p> <p>478 Retail sale via stalls and markets</p> <p>479 Retail trade not in stores, stalls or markets</p> <p>56 Food and beverage service activities</p>			
Tourism and Hospitality	tourism and leisure industry	<p>501 Sea and coastal passenger water transport</p> <p>503 Inland passenger water transport</p> <p>55 Accommodation</p> <p>79 Travel agency, tour operator and other reservation service and re</p> <p>9102 Museums activities</p> <p>9103 Operation of historical sites and buildings and similar visitor a</p> <p>9104 Botanical and zoological gardens and nature reserves activities</p>	-	-	-

Appendix B – The Survey Text and Its Translation

Appendix B.1 Information, Data Protection and General Part of the Survey

For each group the surveys consist of a general survey part and an industry specific section, the general survey part is included in all surveys and will only be listed once in this Appendix, the industry-specific question will then be listed for each group in Appendix B.2. Different groups made varying decisions on which questions the respondents will be shown or not shown, depending on their answers in certain questions. But the questions from the general section were all included in some way in each survey. This Appendix is for reference and lists all questions from all surveys.

Sehr geehrte Teilnehmende,

wir bedanken uns herzlich für Ihr Engagement und die Zeit, die Sie sich für die Beantwortung der nachfolgenden Umfrage nehmen.

Die Fallstudie des Wintersemesters 2019/20 im Masterstudiengang "China Business and Economics" der Universität Würzburg beschäftigt sich mit der Frage, ob und wie die Firmen in Unterfranken mit China verflochten sind. Hierfür befragen wir Firmen in jenen fünf Branchen, die für die Wirtschaft in Unterfranken von besonderer Bedeutung sind.

Zusätzlich zu den von Ihnen erhaltenen Daten führen wir auch Interviews mit Experten in Ihrer Branche durch, um einen möglichst detaillierten Einblick in die Verflechtungen mit China zu erhalten. Die erfassten Ergebnisse werden im Anschluss anonymisiert branchenspezifisch ausgewertet und in einen Gesamtbericht eingebettet, welcher neben den Branchen auch den bayrischen, den deutschen und den europäischen Kontext in Betracht ziehen wird.

Dieser umfassende Gesamtbericht wird nach Abschluss des Projektes Ende Januar mit allen teilnehmenden Unternehmen kostenlos geteilt. Sie erhalten somit Zugang zu verschiedenen Einschätzungen und Prognosen, sowie einen Einblick in die Firmenverflechtungen mit China innerhalb Ihrer Branche.

Vielen Dank und Freundliche Grüße,

Die Studierenden des Masterstudienganges China Business and Economics

In Translation:

Dear participants,

we thank you very much for your engagement and the time you take for answering the following questions.

The case study of the winter semester 2019/20 in the masters program „China Business and Economics” of Würzburg University deals with the question, whether and how the firms of Lower Franconia are entangled with China. Herefor we ask firms in those five industries, that are of special importance for the economy of Lower Franconia.

Additional to the data we receive from you, we will also conduct interviews with experts from your industry to get an as detailed as possible insight into the entaglements with China. The determined results will then be anonymized and evaluated repectively for each industry and embedded into a general report, which will next to the industries also take into account the Bavarian, German and European context.

This comprehensive report will then shared with all participating industries free of charge after completion of the project. You will thus gain access to different estimations and predictions in addition to an insight into the entaglement of firms with China within your industry.

Thank you, yours sincerely,

The students of the masters program „China Business and Economics”)

Informationen zum Datenschutz

Die Teilnahme an der Umfrage ist freiwillig. Durch eine Nicht-Teilnahme oder unvollständige Teilnahme entstehen keine direkten Nachteile. Die Erhebung und Verarbeitung der Daten erfolgten auf Basis Ihrer Einwilligung ausschließlich zur Durchführung der Studie und zu Forschungszwecken. Ihre angegebenen Daten werden nur in anonymisierter Form erhoben und ausschließlich durch Teilnehmer dieses Seminars verarbeitet. Personenbezogene Daten werden nicht abgefragt.

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Die Universität Würzburg hat einen Datenschutzbeauftragten bestellt. Der Datenschutzbeauftragte ist zu erreichen: Ass. jur.,
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Die zuständige Aufsichtsbehörde sind die Landesbeauftragten für den Datenschutz Bayern (Wagmüllerstraße 18, 80538 München). Im Rahmen gesetzlichen Vorgaben bestehen für Sie eine Reihe von Rechten, unter anderem Recht auf Auskunft (Art. 15 DSGVO), Recht auf Berichtigung (Art. 16 DSGVO), Recht auf Einschränkung der Verarbeitung (Art. 18 DSGVO), Recht auf Löschung („Recht auf Vergessenwerden“; Art. 17 DSGVO), Recht auf Widerspruch (Art. 21 DSGVO), Recht auf Beschwerde bei einer Aufsichtsbehörde (Art. 13 DSGVO), Recht auf Datenübertragbarkeit (Art. 20 DSGVO).

Die Einwilligung zur Verarbeitung der Daten können Sie jederzeit mit Wirkung für die Zukunft widerrufen.

In Translation:

Data protection information

The participation in the survey is voluntary. No disadvantages will arise due to non-participation or incomplete participation. The collection and processing of your data will

be carried out on the basis of your consent exclusively for conducting the study and for research purposes.

Your indicated data will only be collected in an anonymized form and be processed exclusively by the participants of this seminar. Personal data will not be inquired. The survey will be conducted with the help of [umfrageonline.com](https://www.umfrageonline.com). A dissemination of your data to other countries, in which the enterprise maintains branch offices, could therefore occur. For further details, please follow the link:

<https://www.umfrageonline.com/datenschutz>

The data are only accessible to researchers participating in the seminar „Case Study [Markets in China]“ of the masters program „China Business and Economics“ der Julius-Maximilians-Universität Würzburg (Institut für Kulturwissenschaften Ost- und Südasiens, Sinologie, Am Hubland, 97074 Würzburg). All persons, who come into contact with the data are obliged to the safeguarding of confidentiality and to the adherence to data protection and corresponding secrecy. The data will at no point in time be passed down to third parties. No automatized decision-making on the basis of personal data, that will develop legal effects for the persons concerned or might in a similar way significantly impair you, will occur (i.e. profiling).

The university of Würzburg has appointed a data protection representative. The data protection representative can be reached: Ass. Jur., Regierungsdirektor Klaus Baumann, Leiter des Justizariats, Ständiger Vertreter des Kanzlers, Sanderring 2, 97070 Würzburg, Telefon: +49 931 31-82786, E-Mail: justizariat@uni-wuerzburg.de

The supervisory body are the state representatives of data protection in Bavaria. (Wagmüllerstraße 18, 80538 München). Within the framework of legal guidelines there are a couple of rights, among others the right to information (Art. 15 DSGVO), right to correction (Art. 16 DSGVO), right to limitation of processing (Art. 18 DSGVO), right to deletion („right to be forgotten“; Art. 17 DSGVO), right to objection (Art. 21 DSGVO), right to complaint to a supervisory body (Art. 13 DSGVO), right to data transferability (Art. 20 DSGVO). You can at all times cancel consent to the processing of your data with effect for the future.)

*Sind Sie mit der obigen Datenschutzerklärung einverstanden? * (Do you consent to the above data protection agreement?)*

- a. Ja, ich bin einverstanden und nehme an der Umfrage teil. *(Yes, I consent and take part in the survey.)*
 - b. Nein, ich bin nicht einverstanden und möchte nicht mehr an der Umfrage teilnehmen. *(No, I do not consent and do not wish to take part in the survey anymore.)*
-

The General Survey:

Generelle Angaben zu Ihrer Firma (General information about your firm)

Diese Angaben dienen uns als Grundlage für die spätere Kategorisierung der Firmen innerhalb der Branche. Sie werden in unserem Endbericht daher nur in anonymisierter Form verwendet. *(These information serve us as a basis for the later categorization of firms within your industry. They will therefore be used in our final report only in an anonymized form.)*

*Firmennamen * (Firm name)*

Dies dient uns rein zur Zuordnung für das Versenden des Projektberichtes. Die Daten werden nur in anonymisierter Form im Bericht verwendet. *(This serves us purely for the sending of the project report. The data will only be used in anonymized form in the report.)*

*Wie viele Angestellte hat Ihre Firma? * (How many employees does your firm have?)*

- a. 0-9
- b. 10-49
- c. 50-250
- d. mehr als 250 *(more than 250)*

*Wie hoch war Ihr Gesamtumsatz im Jahr 2018? * (How big was your total revenue in 2018)*

- a. bis 250 000 Euro *(to 250,000 euros)*
- b. bis 500 000 Euro *(to 500,000 euros)*
- c. bis 2 Millionen Euro *(up to 2 million euros)*
- d. bis 10 Millionen Euro *(up to 10 million euros)*
- e. bis 50 Millionen Euro *(up to 50 million euros)*
- d. mehr als 50 Millionen Euro *(more than 50 million euros)*

*Welcher Rechtsform ist Ihr Unternehmen zugehörig? * (What legal form does your firm belong to?)*

- a. AG (*incorporated*)
- b. Einzelunternehmung (*sole proprietorship*)
- c. GmbH (*Ltd.*)
- d. GmbH & Co. KG (*Ltd. with limited partnership*)
- e. KG (*Limited partnership*)
- f. OHG (*general partnership*)
- g. Andere (*other*)

*Wo ist Ihre Firma ansässig? * (Where is your firm based?)*

*Hat Ihre Firma Verflechtungen mit China? * (Does your firm have entanglements with China?)*

(zum Beispiel auch: Kunden, Mitarbeiter, Import/Export, geistige Eigentumsrechte etc.)
(*for example also: customers, coworkers, import/export, intellectual propriety etc.*)

- a. ja (*yes*)
- b. nein (*no*)

Bitte geben Sie uns die Email-Adresse an, an welche wir Ihnen den Bericht zusenden dürfen. (optional) (Please give us your E-Mail-adress, to which we can send the report for you. (optional))

Diese ist nur für den Fall, wenn Sie den Bericht gerne an eine andere Email-Adresse gesendet haben möchten als die, welche für den Versand des Fragebogens verwendet wurde. Sie wird zu keinem Zeitpunkt weitergegeben und nur für den Versand des Projektberichtes verwendet. (*This is only in case, you would like to have the report sent to a different e-mail-adress, than the one used for the sending you the survey. It will at no point in time be forwarded and only used for sending the project report.*)

Welche der folgenden Verflechtungen mit China haben Sie? (mehrere Antworten möglich) (Which of the following entanglements with China do you have? (multiple answers possible))

- a. Export nach China (*export to China*)
- b. Import aus China (*Import from China*)

- c. Joint Venture in China mit einem chinesischen Partner (*Joint venture in China with a Chinese partner*)
 - d. Joint Venture in Deutschland mit einem chinesischen Partner (*Joint venture in Germany with a Chinese partner*)
 - e. Tochtergesellschaft in China (*subsidiary in China*)
 - f. Franchising nach China (*Franchising to China*)
 - g. Franchising aus China (*Franchising from China*)
 - h. Lizenzierung nach China (*Licensing to China*)
 - i. Lizenzierung aus China (*licensing from China*)
 - j. Leasing nach China (*leasing to China*)
 - k. Leasing aus China (*leasing from China*)
 - l. Produktionswerk in China (*production site in China*)
 - m. Montagewerk in China (*assembly site in China*)
 - n. Vertriebsbüro in China (*selling agency in China*)
 - o. Händler / Distributionspartner in China (*merchants / distribution partners in China*)
 - p. Kunden / Konsumenten in China (*customers / consumers in China*)
 - q. Finanzielle Investitionen nach China (*financial investments to China*)
 - r. Management-Know-how nach China (*financial invesments from China*)
 - s. Management-Know-how aus China (*management know-how from China*)
 - t. Urheberrechtsverträge nach China (*copyright contracts to China*)
 - u. Urheberrechtsverträge aus China (*copyright contracts from China*)
 - v. Technologietransfer nach China (*technology transfer to China*)
 - w. Technologietransfer aus China (*technoloy transfer from China*)
 - x. Patente nach China (*patents to China*)
 - y. Patente aus China (*patents from China*)
 - z. Managementverträge mit chinesischen Firmen (*management contracts with Chinese firms*)
- Markenlizenzen nach China (Trademarks) (*markets licensing to China (trademarks)*)
- Markenlizenzen aus China (Trademarks) (*markets licensing from China (trademarks)*)
- Mitarbeiter aus China (*coworkers from China*)
- Übernahme der deutschen Organisationsstruktur durch in China ansässige Firma (*adoption of German organizational structure by a firm based in China*)
- Übernahme der chinesischen Organisationsstruktur durch unterfränkische Firma (*adoption of Chinese organizational structure by Lower Franconian firm*)
- Rohstoffe nach (*China raw materials to China*)

Rohstoffe aus China (*raw materials from China*)

Sonstiges (*other*)

Wie hoch schätzen Sie den Anteil Ihrer chinabezogenen Geschäfte am Gesamtumsatz im Jahr 2018? (How big do you estimate the share of china-related business of total revenue were in 2018?)

- a. 0%
- b. 1-10%
- c. 10-25%
- d. 26-40%
- e. 41-60%
- f. 61-80%
- g. 81-100%

Was sind die Hauptgründe für Ihre chinabezogenen Geschäfte? (mehrere Antworten möglich) (What are the main reasons for your China-related business? (multiple answers possible))

- a. Niedrige Lohnkosten (*low labor expense*)
- b. Niedrige Herstellungskosten (*low cost of production*)
- c. Niedrige Rohstoffpreise (*low prices for basic materials*)
- d. Markteintritt nach China (*market entry to China*)
- e. Technisches Know-how (*Technological Know-How*)
- f. Management-Know-how (*Management Know-How*)
- g. Sonstiges: (other)

Erwägen Sie eine Ausweitung Ihrer Geschäfte mit China? (Are you considering expanding your business with China?)

- a. Ja (*yes*)
- b. Nein (*no*)
- c. Vielleicht (*perhaps*)

Wie ordnen Sie China im weltweiten Vergleich als Standort für Investitionen Ihres Unternehmens ein? (How would you rank China internationally as a location for investments for your enterprise?)

- a. Keine geplanten Investitionen (*No planned investments*)

- b. Außerhalb der top 10 (*outside the Top 10 destinations*)
- c. In den top 10 (*within the Top 10 destinations*)
- d. In den top 5 (*Top 5*)
- e. In den top 3 (*Top 3*)
- f. Top Zielland (*Top destination*)

Wie haben sich die Einnahmen aus Ihren Geschäften mit China in den letzten 3 Jahren entwickelt? (How did the earnings from your business with China develop in the last 3 years?)

- a. Keine Einnahmen (*no earnings*)
- b. Gesunken (*fell*)
- c. Gleich geblieben (*stayed the same*)
- d. Gestiegen (*rose*)

Wie schätzen Sie die Geschäftsaussichten für Ihre Branche in China für die nächsten 3 Jahre ein? (How do you judge the business outlook for your industry in China for the next three years?)

- a. 1 sehr schlecht (*very bad*)
- b. 2
- c. 3
- d. 4
- e. 5 sehr gut (*very good*)

Wie stark schätzen Sie die Marktzugangsbeschränkungen für ihre Unternehmungen in China ein? (How strong do you think market entry barriers for your business in China are?)

- a. Keine Beschränkungen (*no limitations*)
- b. sehr schwach (*very weak*)
- c. schwach (*weak*)
- d. stark (*strong*)
- e. sehr stark (*very strong*)

Welchen Service würden Sie gerne von vorhandenen Institutionen (bspw. IHK, AHK, Branchen-Verbänden etc.) für Ihre Geschäfte mit China erhalten? (optional) (What service would you like to obtain from existing institutions (i.e. IHK, AHK, industry associations etc.) for your business with China?)

Appendix B.2 Industry-Specific Questions

Automotive industry

Beliefen Sie deutsche oder ausländische Automarken direkt? (Do you directly deliver to German or foreign car brands?)

- a. Deutsche (*German ones*)
- b. Ausländische (*foreign ones*)

Ihr Unternehmen ist ein Commodity Zulieferer im Bereich: (Your enterprise is a supplier in the area of:)

- a. Exterieur (*exterior*)
- b. Interieur (*interior*)
- c. Metall (*metal*)
- d. Elektronik (*electronics*)
- e. Powertrain (*powertrain*)
- f. Glas (*glass*)
- g. Sonstiges: (*other*)

Beschäftigen Sie chinesische Mitarbeiter am Standort in Unterfranken? (Are you employing any Chinese coworkers in your site in Lower Franconia?)

- a. Ja (*yes*)
- b. Nein (*no*)

Werden Kurse/Seminare/Workshops zur Verbesserung des interkulturellen Verständnisses durchgeführt? (Are there any courses/seminars/workshops to improve intercultural understanding undertaken?)

- a. Ja (*yes*)
- b. Nein (*no*)

Was betrachten Sie als typische Herausforderungen mit chinesischen Mitarbeitern und Geschäftspartnern? (What do you see as typical challenges with Chinese coworkers and business partners?)

- a. Keine nennenswerten Herausforderungen (*no noteworthy challenges*)
- b. Sprache (*language*)
- c. Kulturelle Gepflogenheiten (*cultural customs*)
- d. Mangelnde Transparenz (*lacking transparency*)

e. Sonstiges: *(other)*

Verfügen Sie über physische Unternehmenseinheiten ("Ableger") des Unternehmens in China? (Do you have any physical business units of your enterprise in China?)

- a. Ja, Tochtergesellschaft *(yes, subsidiaries)*
- b. Ja, Produktionsstätte *(yes, production sites)*
- c. Ja, Forschungszentrum *(yes, research centers)*
- d. Ja, Verkaufsabteilung *(yes, sales offices)*
- e. Ja, Representative Office *(yes, representative office)*
- f. Nein *(no)*
- g. Sonstiges: *(other)*

Aus China bezieht Ihr Unternehmen: (From China your business obtains:)

- a. Rohstoffe *(basic materials)*
- b. Komplexere Bauteile *(complex components)*
- c. Module/Komponenten *(modules/components)*
- d. Maschinen/Ausstattung *(machines/equipment)*
- e. Elektronik *(electronic parts)*
- f. Technologie *(technology)*
- g. Nichts *(nothing)*
- h. Sonstiges: *(other)*

Nach China liefert Ihr Unternehmen: (To China your business supplies:)

- a. Rohstoffe *(basic materials)*
- b. Komplexere Bauteile *(complex components)*
- c. Module/Komponenten *modules/components)*
- d. Maschinen/Ausstattung *(machines/equipment)*
- e. Elektronik *(electronic parts)*
- f. Technologie *(technology)*
- g. Nichts *(nothing)*
- h. Sonstiges: *(other)*

Sehen Sie chinesische Unternehmen eher als Chance oder als Bedrohung für die deutsche Industrie? (Do you see Chinese businesses more as an opportunity or as a threat for German industry?)

- a. 1 Eher als Chance (*more as an opportunity*)
- b. 2
- c. 3
- d. 4
- e. 5 Eher als Bedrohung (*more as a threat*)

Profitiert oder leidet Ihr China-bezogenes Geschäft unter der EU-Gesetzgebung bzw. Richtlinien? (Does your china-related business profit or suffer from EU-legislation or guidelines?)

- a. 1 profitiert (*profits*)
- b. 2
- c. 3
- d. 4
- e. 5 leidet (*suffers*)

Halten Sie chinesische Produkte in der Automobilbranche für wettbewerbsfähiger als deutsche Produkte (Do you think Chinese products in the automotive industry are more competitive than German products?)

- a. 1 Stimme voll zu (*agree completely*)
- b. 2
- c. 3
- d. 4
- 5. e Stimme überhaupt nicht zu (*do not agree at all*)

Was sind Ihrer Meinung nach die 5 größten Herausforderungen beim Einstieg in den chinesischen Markt bzw bei der deutsch-chinesischen Zusammenarbeit? (What are according to your opinion the 5 greatest challenges in entering the Chinese market or with German-Chinese cooperation?)

- a. Unbeständigkeit der Chinesischen Währung (*instability of Chinese currency*)
- b. Die Verlangsamung der globalen Wirtschaft (*slowdown of the global economy*)
- c. Mangel an qualifiziertem Personal (*lack of qualified personell*)
- d. Steigende Lohnkosten (*rising wages*)
- e. Internationale Handelskonflikte (z.B. China-USA Handelskrieg) (*international trade conflicts (i.e. US-China trade war)*)

- f. Unklare Gesetzgebung (Gesetze und Vorschriften) (*unclear legislation (laws and guidelines)*)
- g. Unfairer Wettbewerb (*unfair competition*)
- h. Steigende Preise für Rohstoffe und Güter (*rising prices of raw materials and goods*)
- i. Schlecht ausgebaute Zulieferernetzwerke (*badly developed supplier networks*)
- j. Lizenzierungs- und Zertifizierungsregeln (*licensing and certification rules*)
- k. Sprache/Kulturelle Gepflogenheiten (*language/cultural customs*)
- l. Vertrauenswürdigkeit (*trustworthiness*)
- m. Korruption (*corruption*)
- n. Urheberrechtsverletzung (*copyright infringements*)
- o. Bürokratie (*bureaucracy*)
- p. Zölle und Einfuhrbeschränkungen (*tariffs and import restrictions*)
- q. Mangelndes Know-How/Technologie (*lack of know-how/technology*)

Würden Sie sagen, dass Ihr Unternehmen aufgrund von Markteintrittsbeschränkungen oder regulativen Barrieren Geschäftschancen auf dem chinesischen Markt verpasst hat? (Would you say that your business has missed any business opportunities in the chinese market because of market entry barriers or regulative barriers?)

- a. Ja (*yes*)
- b. Nein (*no*)
- c. Neutral (*neutral*)

Wenn der Markteintritt für ausländische Unternehmen in Ihrer Branche für China erleichtert werden würde, welchen Einfluss hätte dies auf die Investitionen Ihrer Firma in China? (If market entry to China for foreign business within your industry would be made easier, how would this influence your firm's investments in China?)

- a. Klarer Anstieg der Investitionen (*clear rise of investments*)
- b. Keinen Einfluss (*no influence*)
- c. Leichter Anstieg der Investitionen (*small increase in investments*)

Ist Ihr Unternehmen im Ausland tätig? (Is your business operating abroad?)

- Nein (*no*)
- Innerhalb der EU (*within the EU*)
- Nordamerika (*North America*)
- Südamerika (*South America*)

Afrika (*Africa*)

Asien (*Asia*)

Australien/Ozeanien (*Australia/Oceania*)

Würden Sie bei besserer wirtschaftlicher Lage die Geschäfte im In- und Ausland ausweiten? (Would you expand business at home and abroad with at a better economic situation)

Ja, in Deutschland (*yes, in Germany*)

Ja, im Ausland (*yes, abroad*)

Ja, in China (*yes, in China*)

Nein (*no*)

Aus dem Ausland bezieht Ihr Unternehmen: (From abroad your business obtains:)

- a. Rohstoffe (*raw materials*)
- b. Komplexere Bauteile (*complex components*)
- c. Module/Komponenten (*modules/components*)
- d. Maschinen/Ausstattung (*machnines/equipment*)
- e. Elektronik (*electronics*)
- f. Technologie (*technology*)
- g. Nichts (*nothing*)
- h. Sonstiges: (*other*)

Ins Ausland liefert Ihr Unternehmen: (To abroad your business delivers:)

- a. Rohstoffe (*raw materials*)
- b. Komplexere Bauteile (*complex components*)
- c. Module/Komponenten (*modules/components*)
- d. Maschinen/Ausstattung (*machines/equipment*)
- e. Elektronik (*electronics*)
- f. Technologie (*technology*)
- g. Keine Exporte (*no exports*)
- h. Sonstiges: (*other*)

Haben Sie vor Ihr Geschäft in den nächsten 5 Jahren im Ausland (weiter) auszuweiten (auch Export-Aktivitäten)? (Do you intend to expand your business abroad within the next five years (including export activities)?)

- a. Nein (*No*)
 - b. Ja, innerhalb der EU (*yes, within the EU*)
 - c. Ja, Nordamerika (*yes, North America*)
 - d. Ja, Südamerika (*yes, South America*)
 - e. Ja, Asien (*Yes, Asia*)
 - f. Ja, China (*Yes, China*)
 - g. Ja, Afrika (*Yes, Afrika*)
 - h. Ja, Australien/Ozeanien (*Yes, Australia/Oceania*)
-

Technology and Machinery

Beschäftigen Sie chinesische Mitarbeiter/Praktikanten an Ihren Standorten in Unterfranken? (Do you employ Chinese coworkers/internees at your sites in Lower Franconia?)

- a. ja (*yes*)
- b. nein (*no*)

Gab es in Ihrer Firma Probleme/Missverständnisse aufgrund interkultureller Unterschiede? (Were there any problems/misunderstandings because of intercultural differences in your firm?)

- a. 1 nicht zutreffend (*not the case*)
- b. 2
- c. 3
- d. 4
- e. 5 zutreffend (*is the case*)

Werden in Ihrer Firma Seminare/Kurse zur Förderung des interkulturellen Verständnisses durchgeführt? (Are seminars/courses for promoting intercultural understanding conducted in your firm?)

- a. ja (*yes*)
- b. nein (*no*)

Betrachten Sie chinesische Wirtschaftsspionage als Bedrohung für Ihr Geschäft? (Do you view Chinese economic espionage as a threat for your business?)

- a. 1 keine Bedrohung (*no threat*)
- b. 2

- c. 3
- d. 4
- e. 5 starke Bedrohung (*strong threat*)

Finden Sie, dass die deutsche Regierung ihre Firma ausreichend gegen Wirtschaftsspionage schützt? (Do you think that the German government protects your firm enough from economic espionage?)

- a. 1 schlecht (*bad*)
- b. 2
- c. 3
- d. 4
- e. 5 gut (*good*)

Durch den US-China Handelskrieg haben sich die Geschäftsbedingungen für unsere Firma... (Through the US-China trade war, the business relations for our firm have...)

- a. verbessert (*improved*)
- b. verschlechtert (*deteriorated*)

*Mit welchen Unternehmen steht Ihre Firma im Wettbewerb? (mehrere Antworten möglich)
(With which enterprises is your firm competing)*

- a. deutsche (*German ones*)
- b. chinesische (*Chinese ones*)
- c. keine (*none*)

Clothing

Wie hat sich die Anzahl Ihrer chinesischen Kunden in den letzten drei Jahren verändert?

** (How did the number of your Chinese customers change within the last three years?)*

- a. Nicht zutreffend (*does not apply*)
- b. Stark gestiegen (*increased strongly*)
- c. Leicht angestiegen (*increased slightly*)
- d. Gleichbleibend (*stayed the same*)
- e. Leicht gesunken (*decreased slightly*)
- f. Stark gesunken (*decreased strongly*)
- g. Ich weiß nicht. (*I don't know.*)

Welche Einkaufskanäle bevorzugen Ihre chinesischen Kunden in China?

*(mehrere Antworten möglich) * (Which purchasing channels do your Chinese customers in China prefer? (multiple choice))*

- a. Nicht zutreffend *(does not apply)*
- b. Eigene Ladengeschäfte *(individually owned stores)*
- c. Einzelhandelsgeschäfte *(retail stores)*
- d. Online Shops *(online shops)*
- e. Online Marketplace (z.B. Amazon) *(online marketplace (i.e. Amazon))*
- f. Ich weiß nicht. *(I don't know.)*
- g. Andere

Welche Einkaufskanäle bevorzugen Ihre chinesischen Kunden in Unterfranken?

*(mehrere Antworten möglich) * (Which purchasing channels do your Chinese customers in Lower Franconia prefer?)*

- a. Nicht zutreffend *(does not apply)*
- b. Eigene Ladengeschäfte *(individually owned stores)*
- c. Einzelhandelsgeschäfte *(retail stores)*
- d. Online Shops *(online shops)*
- e. Online Marketplace (z.B. Amazon) *(online marketplace (i.e. Amazon))*
- f. Ich weiß nicht. *(I don't know.)*
- g. Andere *(other)*

Welche Ihrer Produkte werden von Ihren chinesischen Kunden in China bevorzugt gekauft?

*(mehrere Antworten möglich) * (Which of your products are preferentially bought by your Chinese customers in China? (multiple choice))*

- a. Nicht zutreffend *(does not apply)*
- b. Pullover & Strickjacken *(pullovers and cardigans)*
- c. Jacken & Mäntel *(jackets and coats)*
- d. Kleider/Röcke *(dresses and skirts)*
- e. Jeans/Hosen *(jeans and pants)*
- f. T-Shirts/Langarmshirts *(T-shirts/long sleeve shirts)*
- g. Blusen/Hemden *(blouses/shirts)*
- h. Anzüge/Sakkos/Blazer *(suits/sports coats/blazers)*
- i. Kinderklamotten *(children's wear)*

- j. Dessous/Wäsche (*dessous/undergarments*)
- k. Sportswear (*sportswear*)
- l. Für Mamas (*for moms*)
- m. Große Größen (*big size*)
- n. Berufsbekleidung (*working clothes*)
- o. Ich weiß nicht. (*I don't know.*)
- p. Andere (*other*)

*Welche Ihrer Produkte werden von Ihren chinesischen Kunden in Unterfranken bevorzugt gekauft? (mehrere Antworten möglich) * (Which of your products are preferentially bought by your Chinese customers in Lower Franconia? (multiple choice))*

- a. Nicht zutreffend (*does not apply*)
- b. Pullover & Strickjacken (*pullovers and cardigans*)
- c. Jacken & Mäntel (*jackets and coats*)
- d. Kleider/Röcke (*dresses and skirts*)
- e. Jeans/Hosen (*jeans and pants*)
- f. T-Shirts/Langarmshirts (*T-shirts/long sleeve shirts*)
- g. Blusen/Hemden (*blouses/shirts*)
- h. Anzüge/Sakkos/Blazer (*suits/sports coats/blazers*)
- i. Kinderklamotten (*children's wear*)
- j. Dessous/Wäsche (*dessous/undergarments*)
- k. Sportswear (*sportswear*)
- l. Für Mamas (*for moms*)
- m. Große Größen (*big size*)
- n. Berufsbekleidung (*working clothes*)
- o. Ich weiß nicht. (*I don't know.*)
- p. Andere (*other*)

*Wie hoch ist aktuell der Anteil Ihrer Importe aus China im Verhältnis zu Ihren Gesamtimporten? * (How high is the share of your imports from China currently in relation to your total imports?)*

- a. 0%
- b. ≤ 5%
- c. ≤ 15%
- d. >15%

Über welche Kanäle importieren Sie Produkte aus China? (mehrere Antworten möglich)
** (By which channels do you import products from China?)*

- a. Nicht zutreffend (*does not apply*)
- b. Inländisches Außenhandelsunternehmen (*domestic exports management company*)
- c. Direkt vom chinesischem Hersteller (*directly from Chinese producers*)
- d. Direkt vom chinesischen Großhändler (*directly from Chinese wholesale merchants*)
- e. Andere (*other*)

*Wie hoch ist aktuell der Anteil Ihrer Exporte nach China im Verhältnis zu Ihren Gesamtexporten? * (How high is the share of your exports to China currently in relation to your total exports?)*

- a. 0%
- b. ≤ 5%
- c. ≤ 15%
- d. >15%

Über welche Kanäle exportieren Sie Produkte nach China? (mehrere Antworten möglich)
** (By which channels do you export products to China?)*

- a. Nicht zutreffend (*does not apply*)
- b. Inländisches Außenhandelsunternehmen (*domestic exports management company*)
- c. Direkt vom chinesischem Hersteller (*directly from Chinese producers*)
- d. Direkt vom chinesischen Großhändler (*directly from Chinese wholesale merchants*)
- e. Andere (*other*)

Über wie viele chinesische Geschäftspartner (z.B. Zulieferer, Händler, etc.) verfügen Sie?
** (How many Chinese business partners (suppliers, merchants, etc.) do you have?)*

- a. Keinen (*none*)
- b. 1
- c. 2
- d. 3
- e. mehr als 3 (*more than 3*)

*Wann sind die Geschäftsbeziehungen Ihres Unternehmens mit China entstanden? **
(When did the business relations of your business with China arise?)

- a. Nicht zutreffend (*does not apply*)

- b. vor 2003 (*before 2003*)
- c. 2003 bis 2013 (*2003 to 2013*)
- d. seit 2013 (*after 2013*)
- e. in Planung (*in planning*)

*Auf welche Art und Weise finden Sie chinesische Geschäftspartner (z.B. Zulieferer, Produzenten, Einzel-/Großhändler)? (mehrere Antworten sind möglich) * (By what means do you find Chinese business partners (i.e. suppliers, producers, retail/wholesale merchants)?)*

- a. Nicht zutreffend (*does not apply*)
- b. über Geschäftskontakte/Empfehlungen/Business-Netzwerke (*over business contacts/recommendations/business networks*)
- c. Vermittlungsagenturen (*agencies*)
- d. Internet (Plattformen, soziale Netzwerke wie LinkedIn, etc.) (*internet (platforms, social networks like LinkedIn, etc.)*)
- e. Branchenverbände (*industry associations*)
- f. Handelskammern (*chambers of commerce*)
- g. Andere (*other*)

Wie schätzen Sie die Zusammenarbeit mit Ihren chinesischen Geschäftspartnern ein? (wenn zutreffend) (How do you evaluate the cooperation with your Chinese business partners? (if it applies))

- a. sehr negativ (*very negatively*)
- b. negativ (*negatively*)
- c. eher negativ (*rather negatively*)
- d. neutral (*neutrally*)
- e. eher positiv (*rather positively*)
- f. positiv (*positively*)
- g. sehr positiv (*very positively*)

Food & Beverages

Welche Zutaten, Geräte, Zubehör oder Rohstoffe, die in China produziert wurden, verwendet Ihr Unternehmen? (Which ingredients, gadgets, accessories, or resources, that are produced in China, does your business use?)

- a. Keine (*none*)
- b.

Verfügt Ihr Unternehmen über Geschäftsbeziehungen zu Restaurants oder Bars in China bzw. steht in direktem Kontakt mit diesen? (Does your business maintain business relations with restaurants or bars in China or stands in direct contact with them?)

- a. ja (*yes*)
- b. nein (*no*)

Falls Sie Produkte an chinesische Kunden verkaufen, an welche Arten von Unternehmen bzw. Wirtschaftseinheiten in China verkaufen Sie diese gewöhnlich? (If you sell products to Chinese customers, to which kinds of businesses or economic units do you typically sell them?)

- a. Einzelhandelsunternehmen (*retail establishments*)
- b. Restaurants oder Bars (*restaurants or bars*)
- c. Zwischenhändler oder unabhängige Verkäufer (*intermediaries or independent merchants*)
- d. Privatpersonen (*privat individuals*)

Über wie viele Geschäftspartner in China verfügen Sie? (How much business partners do you have in China?)

- a. Keine (*none*)
- b. 1 bis 5 (*1 to 5*)
- c. 6 bis 10 (*6 to 10*)
- d. Mehr als 10 (*more than 10*)

Über wie viele Geschäftsstellen bzw. Niederlassungen in China verfügt Ihr Unternehmen? (How many business offices or establishments does your business have in China?)

- a. Keine (*none*)
- b. Anzahl: (*number:*)

In welcher Region in China befinden sich Ihre Niederlassungen bzw. wo in China tätigen Sie Ihre Geschäfte? (In which region in China are your sites, or where in China do they conduct business?)

- a. Niederlassungen in: (*establishments in:*)
- b. Sonstige (*other*)
- c. Geschäftsaktivitäten in: (*business activities in:*)

Verwenden Sie im Rahmen Ihrer Geschäftsbeziehungen zu China Formen des E-Commerce (Online-Handel)? (Do you use types of e-commerce within your business relations to China?)

- a. ja (*yes*)
- b. nein (*no*)
- c. falls ja, welche? (optional) (*if yes, which? (optional)*)

Wie viele Mitarbeiter aus China beschäftigen Sie in Ihrem Unternehmen?

Wann und wie sind die Verflechtungen und Geschäftsbeziehungen Ihres Unternehmens mit China entstanden? (How many coworkers from China do you employ in your business?)

Welche Ihrer Produkte und Dienstleistungen werden von ihren chinesischen Kunden bevorzugt gekauft? (Which products and services are preferentially bought by your Chinese customers?)

Auf welche Weise finden Sie chinesische Kunden / Geschäftspartner? (By what means do you find Chinese customers?)

Hospitality and Tourism

Wie bewerten Sie den Einfluss des chinesischen Tourismus auf Deutschland? (How do you evaluate the influence of Chinese tourism to Germany?)

- a. Negativ (*negatively*)
- b. Eher negativ (*rather negative*)
- c. Neutral (*neutral*)
- d. Eher positiv (*rather positive*)
- e. Positiv (*positively*)

Wie bewerten Sie den Einfluss des chinesischen Tourismus auf Unterfranken? (How do you evaluate the influence of Chinese tourism to Lower Franconia?)

- a. Negativ (*negatively*)
- b. Eher negativ (*rather negatively*)
- c. Neutral (*neutrally*)
- d. Eher positiv (*rather positively*)
- e. Positiv (*positively*)

Wie viele Gäste / Kunden haben Sie in der Hauptsaison? (How many guests / customers do you have in the main season?)

- a. unter 100 (*under 100*)
- b. unter 500 (*under 500*)
- c. unter 1000 (*under 1,000*)
- d. unter 5000 (*under 5,000*)
- e. unter 10 000 (*under 10,000*)
- f. unter 50 000 (*under 50,000*)
- g. unter 1 Mio (*under 1 million*)
- h. unter 3 Mio (*under 3 million*)
- i. unter 5 Mio (*under 5 million*)
- j. unter 10 Mio (*under 10 million*)
- k. unter 20 Mio (*under 20 million*)
- l. unter 30 Mio (*under 30 million*)

Wie hoch schätzen Sie den Anteil der chinesischen Gäste / Kunden an der Gesamtzahl? (How high do you estimate the share of Chinese guests/customers of your total number?)

Haben Sie exklusive Verträge mit Reiseorganisatoren, welche Touren für Chinesen organisieren? (Do you have exclusive contracts with travel organizations, who organize tours for Chinese people?)

- a. ja (*yes*)
- b. nein (*no*)

Würden Sie exklusive Verträge mit chinesischen Reiseorganisatoren eingehen? (Would you assume exclusive contracts with Chinese travel organizations?)

- a. ja (*yes*)
- b. nein (*no*)

Warum würden Sie keine exklusiven Verträge mit chinesischen Reiseorganisatoren eingehen? (Why would you not assume exclusive contracts with Chinese travel organizations?)

Wie schätzen Sie die Zusammenarbeit mit chinesischen Reiseorganisatoren ein? (How do you evaluate the cooperation with Chinese travel organizations?)

- a. Negativ (*negatively*)
- b. Eher negativ (*rather negatively*)
- c. Neutral (*neutrally*)
- d. Eher positiv (*rather positively*)
- e. Positiv (*positively*)

Warum schätzen Sie die Zusammenarbeit so ein? (Why do you evaluate the cooperation this way?)

Wie bewerten Sie das Verhalten Ihrer chinesischen Gäste / Kunden? (How do you evaluate the conduct of your guests / customers?)

- a. Negativ (*negatively*)
- b. Eher negativ (*rather negatively*)
- c. Neutral (*neutrally*)
- d. Eher positiv (*rather positively*)
- e. Positiv (*positively*)

Aus welchem Grund bewerten Sie dies so? For what reason do you evaluate it this way?)

Welche der folgenden Sightseeing-Spots sind Ihrer Meinung nach bei chinesischen Touristen beliebt? (Which of the following sightseeing spots are popular among Chinese tourists according to your opinion?)

- a. Residenz (Würzburg) Kurgarten Bad Kissingen (Bad Kissingen)
- b. Alte Mainbrücke (Würzburg) Schloss Johannisburg (Aschaffenburg)
- c. Festung Marienberg (Würzburg) Altstadt Miltenberg (Miltenberg)
- d. Rosengarten (Veitshörsheim) Wertheim Village (Baden-Württemberg)
- e. Park Schonbusch (Aschaffenburg) Weinkeller-Touren
- f. Wildpark an den Eichen (Schweinfurt)

Passen Sie Ihr Angebot spezifisch an chinesische Touristen an? (Do you adjust your offers specifically to Chinese tourists?)

- a. ja (*yes*)
- b. nein (*no*)

Wie haben sich die Besucherzahlen aus China in den letzten 5 Jahren für Sie entwickelt? (How did visitor numbers develop in the last five years)

- a. Stark gesunken (*fell strongly*)
- b. Eher gesunken (*fell rather*)
- c. Gleich geblieben (*stayed the same*)
- d. Eher gestiegen (*increased rather*)
- e. Stark gestiegen (*increased strongly*)

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