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Chinese M&A Activities in Germany

An exploratory study on an under-researched phenomenon

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ABSTRACT

This exploratory thesis examines Chinese M&A activities in Germany since 2002 by incorporating findings from industry reports, empirical data, and a questionnaire filled out by AutoCo (anonymized) under a mixed methods approach. Typical German targets are active in the Manufacturing industry, have poor financial profiles, and obtain traits such as technology, access to international markets and complementary products that motivated Chinese investors to acquire. After being acquired by Chinese companies, the German subsidiaries on average improve regarding EBIT margins, cash positions and liquidity, while confirming the “light-touch” approach in terms of organizational integration. Post-acquisition integration corresponds to pre-acquisition motivations and in the questionnaire results, the synergy realization exceeded the level described by the German management in previous cases. Furthermore, AutoCo expresses a high satisfaction level of transaction experience, post-acquisition integration and collaboration. Overall, this thesis presents findings on pre- and post-acquisition considerations and thus provides insights into an under-researched phenomenon.

Key words: M&A, China, Germany, Acquisition Rationale, Post-Acquisition Integration

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1. Introduction

“Geely könnte auch ein Wolf im Schafspelz sein”

“Geely could also be a wolf in sheep’s clothing” – Ingo Speich, Portfolio Manager at Union Investment at Daimler’s shareholder annual general meeting in April 2018

The quote of Ingo Speich at Daimler’s shareholder annual general meeting regarding Geely’s recent investment in Daimler is a typical example of how German people react when news about a Chinese acquisition of a German company are published. In the last few years, Chinese companies’ investments in Germany attracted media and public attention. Given that the transaction volume and value increased by more than 200% and 700% between 2011 and 2016 respectively, the concerns about the intention behind Chinese acquisitions increased among the German public.

Almost one month after Geely becoming the largest shareholder in Daimler, Financial Times published an article reacting to this event (Chazan, 2018). Even though Financial Times tries to understand where the rather negative sentiment against the Chinese investor originates, it picks up the general worries of Germany regarding this topic and does not contribute much to a more complete picture with a more neutral coverage. This reflects the current state of literature with only limited background knowledge of Mainland China M&A activities in Germany. Despite China only playing a minimal role in the first few Global Merger Waves, the country has an increasingly important role internationally in recent years (McCarthy, 2013; McCarthy et al., 2016). In 2016, Germany attracted 35 transactions and was the largest European recipient of Chinese FDI in terms of deal volume (Rödl & Partner, 2017). In fact, China has led two smaller merger waves in Germany in 2002 and 2010 respectively (Gentile-Lüdecke, 2013; Yu et al., 2016). Current literature points out that German companies’ decision to sell to Chinese companies is driven by access to funding and access to the Chinese market (Knoerich, 2010; Forbach, 2014). Conversely, Chinese companies are motivated to buy German companies because of their key technology, brands, and markets (Forbach, 2014). Additionally, relevant literature highlights the “light-touch” approach regarding post-acquisition integration of the Chinese acquirers (Liu & Woywode, 2012). Despite the sporadic research on motivations and post-acquisition integration, the topic of Chinese M&A activities in Germany has so far been understudied and mostly spoken from the German perspective. Furthermore, current literature leaves gaps to be filled in the areas such as the targets’ financial characteristics pre- and post- acquisition. Therefore, we strove to answer the following research questions in our thesis:

1) *Pre-acquisition considerations*: Which common characteristics such as industries, sizes, financial profiles of German companies do Chinese acquirers seek and what are their key motivations?

2) *Post-acquisition considerations*: How do German companies develop regarding their financial situation and post-acquisition integration after being acquired by Chinese companies?

To examine these two research questions, we applied a mixed methods approach that combines both qualitative and quantitative research methods. The number of transactions and the legal form of the German companies not requiring them to report financial statements led to a very restricted sample size and provided the reason for using such mixed methods approach that optimizes the quality of the findings when resources are limited. In order to obtain answers to the research questions under the mixed methods approach, we used industry reports of mainland China outbound and German inbound M&A activities, empirical information on Chinese transactions in Germany, and financial data on the German target companies of these transactions for quantitative analysis. Additionally, we incorporated the results of a questionnaire filled out by a Chinese acquirer for qualitative analysis of the two research questions. Moreover, since the existing literature is limited and media coverage on this topic can be biased and contributes to a one-sided discussion, a more comprehensive style that presents the matter objectively is needed. By having a co-authorship of one native-Chinese and one native-German, we took a balanced view on a potentially sensitive topic and exploited the possibilities of researching sources that are written in the local languages.

As a result, this thesis identified the following characteristics of German target companies: concentrating in the Manufacturing industry, having a low EBIT margin and a poor capital structure, and obtaining key traits such as technology, access to foreign markets and a complementary product portfolio. The financially troubled characteristics of the target companies extended beyond the first Chinese Merger Wave in Germany and still prevailed in the second Merger Wave. After being acquired by the Chinese investors, the German companies on average experienced improved EBIT margins, revamped cash positions and better liquidity situations. The “light-touch” approach was confirmed as the old management team stayed in office and high autonomy was observed on the target level. Post-acquisition integration was in line with pre-acquisition motivations and the synergy realization from AutoCo (anonymized questionnaire participant) exceeded the level described by the German management in previous cases. In addition, we discovered a high satisfaction level of

transaction experience, post-acquisition integration and collaboration from the Chinese perspective.

Contribution

As pointed out earlier, more research on Chinese M&A activities in Germany is desired. This is a quite new field of research, since Chinese acquisitions in Germany are a rather recent phenomenon that only grew in importance in the 2010s. A few qualitative studies have been done on post-acquisition integration and knowledge transfer. However, a short-coming of those studies is a “western perspective”-research with the focus on the German side. There is only one relevant qualitative study conducted by Liu and Woywode that has a similar research set-up as we do, namely the composition of the co-authorship. Despite their interviewees including a few Chinese representatives who were involved in the transactions, the paper tells the story from the angle of German companies and their management. For the qualitative part of this thesis, we made three advancements. First, we focused on the angle of Chinese acquirers. Secondly, we collected information almost ten years later than Liu and Woywode (2012) did and can therefore extend the knowledge of the previous research. Thirdly, we had a different focus with regard to content by not only updating on a previous study focusing on post-acquisition integration but also introducing pre-acquisition considerations. Regarding the quantitative part of this thesis, using quantitative data for analysis on this topic is entirely new to the best of our knowledge and thus contributes to the comprehensive view of Chinese M&A activities in Germany.

Disposition

This introductory chapter is followed by a literature review on the most important concepts related to this thesis. Part 3 consists of a detailed description of the methodology, the data collection and analysis process as well as research quality. Chapter 4 elaborates on the results, which are organized in a way to answer each of the research questions respectively. After presenting a conclusion in Chapter 5, references and appendix follow in Parts 6 and 7.

2. Literature Review

2.1. Merger Waves

2.1.1. Global Merger Waves

Merger wave is a term coined for the cyclical nature of increased merger and acquisitions in certain industries (Yaghoubi et al., 2016a; Yaghoubi et al., 2016b; McCarthy et al., 2016). They can be introduced by booming financial markets and economies, and ended with stock market corrections, external shocks such as wars and crises, or drained opportunities (Yaghoubi et al., 2016a; McCarthy et al., 2016; Bouwman et al., 2009). Six global merger waves have been well-documented in the field of literature, occurring in the periods of 1890s, 1910s, 1960s, 1980s, 1990s and 2000s respectively (McCarthy, 2013; Yaghoubi et al., 2016a; McCarthy et al., 2016). The first five merger waves originated in the U.S. and started to affect regions such as the UK and the EU from the third wave onwards (McCarthy, 2013).

The sixth and most recent wave acknowledged by the scholars occurred in the early 2000s. After the collapse of the dot.com bubble, the US Federal Reserve lowered interest rates, which in turn motivated investors to take advantage of cheap credit and engage in waves of takeovers (McCarthy, 2013). It peaked in the U.S. in 2006 and hit “averaged \$10 billion a day” in terms of M&A value (The Economist, 2006). The stock market crash and economic recession in 2008 marked the end of the sixth wave (McCarthy, 2013; Yaghoubi et al., 2016a). McCarthy (2011) utilizes a monthly merger wave frequency to provide *prima facie* evidence for a sixth wave from 2003 to 2008. One of the interesting findings is that the sixth wave is truly international and occurs in all major economic regions (McCarthy et al., 2016). Despite the fact that the first five merger waves were U.S.-led, both Europe and Asia overtook North America regarding total deal values in the sixth wave (McCarthy, 2011). China only became one of the strong forces in the sixth wave (McCarthy et al., 2016).

2.1.2. Chinese Merger Waves in Germany

The history of the Chinese cross-border transactions can be traced to “The Going Global Strategy”, which was initiated in 1999 by the Chinese government to promote internationalization, brand recognition and outward foreign direct investment (OFDI). Under such encouraging environment, Chinese corporations started to engage in acquisitions in Germany.

The first Chinese Merger Wave in Germany

In the early 2000s, Chinese firms had the tendency to acquire relatively small German companies that faced operational difficulty or even bankruptcy (Ni, 2015). The process could be tedious and strenuous as the Chinese were not experienced in cross-border transactions or familiar with German laws. One of the earliest acquisitions that captured media attention was China's TV maker TCL acquiring bankrupt Schneider Electronics AG in 2002 for 8.4 million Euros (Xinhua News Agency, 2002). In the academic world, Kneorich (2010) examines the first Chinese Merger Wave that arrived in the machine tool industry in 2004 and highlights the strategic approach of the Chinese companies as well as the cooperative nature between the two parties in the transaction. During this period, cross-border M&As have become one of the most widespread forms of FDI and the go-to expansion strategy for multinational enterprises (Yu et al., 2016).

The second Chinese Merger Wave in Germany

After the financial crisis in 2008, Chinese companies began to take on a larger role as the Western counterparts reduced M&A activities. Global outbound M&A activities from China have grown enormously since 2008 and reached \$56 billion in deal value in 2014 (Yu et al., 2016). Gentile-Lüdecke (2013) identifies that the second Chinese Merger Wave in Germany started in 2010 with the main focus on energy and automotive industries. The targets of Chinese M&A activities in Germany then became larger companies in size with healthy financial standings. Acquiring niche market leaders also gained importance. At this point, Chinese companies were looking for targets that could reinforce competitiveness or gain complementary edges in order to enter new markets (Ni, 2015; Gentile-Lüdecke, 2013). Gentile-Lüdecke (2013) states that often the target German company is proactively searching for Chinese buyers.

According to the article on the International Financial Law Review, the value of Chinese investment in Germany increased by a factor of 32 in 2016 and the focus shifts from stressed automotive suppliers to the Technology industry (International Financial Law Review, 2017). The surging deal volume and increased media exposure for several big transactions emphasized on the importance of our research questions.

2.2. Overview of Chinese M&A Activities in Germany

In this section, we give a brief overview of the Chinese M&A activities taking place in Germany over the recent years. The number of transactions tripled from 2011 to 2016 and the

transaction value even eight folded over the same time. Chinese investment in Europe in general developed similarly in this time period. In 2016 and 2017, Germany is the European country where most Chinese acquisitions took place, closely followed by the UK. This fact once more highlights the relevance of this thesis. When looking at the companies that acquired German firms between 2011 and 2016, it turns out that only 35% were state-owned while 65% were privately owned enterprises. This is contradictive to the general perception that most transactions are backed by the Chinese government. However, it should be mentioned that the percentage of serial investors is considerably higher among the state-owned companies than among the privately-owned ones. Regarding the kind of companies that were bought by Chinese investors it is remarkable that the vast majority were private companies. In 2016 and 2017, only a few companies fell into the categories of Listed, Family-owned or Distressed (Rödl & Partner, 2017).

Before we dive more into the phenomenon of Chinese acquisitions in Germany and its characteristics, we should understand why this is happening. Therefore, the next step is to look at the country-specific perspectives and motivations to better understand the driving forces that lead to Chinese companies wanting to buy German companies and German companies agreeing to be sold to Chinese investors.

2.3. German Perspective

In general, the goals of the German side are mostly shaped by increased competitiveness. Firstly, access to funding is of importance to German companies (Knoerich, 2010); especially if they are active in R&D-heavy sectors. In China, particularly for state-owned companies in the early 2000s, funding is relatively more easily available and can be handed to the subsidiaries. During the first Chinese Merger Wave in Germany, as presented earlier, many of the targets were in need of restructuring or even had to face bankruptcy. In any case, Chinese were popular acquirers since they were perceived to pay higher prices than investors with a western background (Forbach, 2014).

Geography is another important factor: Access to the rapidly growing Chinese market increases in importance every year (Knoerich, 2010). Unfortunately for German firms, it is rather hard to establish a presence there without any connections to a Chinese counterpart due to several reasons.

Another strategic motive related to geography is the possibility to build or acquire a plant in China (Knoerich, 2010), which together with the country's low labor costs would provide the German company an opportunity to enter new market segments.

Gentile-Lüdecke (2013) also mentions that some cash-strapped European governments that have been burdened by the sovereign debt crisis in the Eurozone encouraged Chinese investments in their home countries. However, if this situation also applies to the case of Germany can be debated.

2.4. Chinese Perspective

In the following paragraphs, we closely examine the other party in the transactions. For this purpose, we first look at general reasons for outward Foreign Direct Investments and then at the motivations of Chinese enterprises specifically.

General reasons for outward FDI

The OECD paper (Kang & Johansson, 2000) states several driving factors for OFDI and groups them into five categories: Macroeconomic, Industry-level, Firm-level, Technology-related and Government-related factors. Regarding the macroeconomic environment, economic growth is the factor that influences the decision for OFDI the most – high growth comes with increased OFDI. Companies that are most likely to engage in OFDI usually experience intensified global competition and market pressure such as deregulation, falling commodity prices, excess capacity in key markets or rapid technological change. Driving forces on the firm-level include competitive advantages in foreign markets, usually through the intangibles. Production knowledge and skills, brands and superior management capabilities increase the probability of OFDI. High R&D costs are a supporting factor for technology-related OFDI. Additionally, the government can provide a supporting environment for acquisitions by liberalizing international capital movements and investments, providing incentives for investments, promoting regional integration, and carrying out regulatory reform and deregulation as well as privatization (Kang & Johansson, 2000).

Amighini et al. (2013) distinguish between four different motivations: market-seeking, resource-seeking, strategic asset-seeking, and efficiency-seeking investments. These strategies aim for entering new markets, gaining natural resources, extending the set of a firm's proprietary resources and reducing costs respectively (Amighini et al., 2013).

China-specific motivation

Forbach (2014) provides an overview of reasons for Chinese investors to acquire a German company. Those include access to technology, brands and markets, both in Europe and internationally, as well as gaining international experience. Moreover, Chinese companies

also try to strategically supplement their product portfolio to offer more products and potentially eliminate a competitor, in this case the German firm, in their home market (Forbach, 2014).

Yin (2015) identifies ten types of motivations of Chinese OFDI, whereof they categorize four types into conventional FDI that can be linked to asset exploiting and six types into unconventional FDI that can be linked to asset seeking. Tests show that both conventional and unconventional factors had significant influence on the decision of OFDI. In the context of Chinese OFDI, despite the country's lack of extensive OFDI experience, advanced unconventional methods such as market learning and strategic asset seeking can be observed (Yin, 2015).

Kolstad and Wiig (2012) state that China's OFDI is attracted to large countries, which is particularly true when only looking at OECD countries. Countries that show a combination of abundant natural resources and a bad institutional environment are favored by Chinese investments, especially in non-OECD countries.

In connection with research on Chinese OFDI, Amighini et al. (2014) created a new database called "EMENDATA" (Emerging Multinationals' Events and Networks Database). The purpose of the database is to overcome potential biases of other studies which examine Chinese OFDI that arise by using the official numbers of MOFCOM, the Chinese Ministry of Commerce. EMENDATA includes cross-border M&A deals, minority acquisitions, and greenfield investments from multinational corporations in emerging countries between 2003 and 2011. The new database indicates that Chinese companies are geographically more widespread than implied by official sources. Contrary to MOFCOM that tracks mostly state-owned enterprises, the data from EMENDATA suggest that Germany is one of the major receivers of Chinese FDI. (Amighini et al, 2014) These findings underline the relevance of this thesis and confirm the trend regarding increasing Chinese cross-border investments in Germany.

2.5. Aspects of Cross-border M&A Transactions

2.5.1. Pre-Acquisition Aspect

Like a typical acquirer in a M&A transaction, Chinese investors must go through a series of stages before the deal can be closed. Haspeslagh and Jemison list negotiation as the step after target searching, financial evaluation and before reaching an agreement with the current management in their conventional view of acquisitions (McSweeney & Happonen, 2012). As a party engaged in a cross-border M&A transaction, Chinese investors face challenges in

unfamiliar territories such as German culture and local regulations on labor and tax, amongst others (Backaler, 2014). As a result, Chinese companies will need to rely on local experts who can provide insights into the cultural, legal and other relevant fields (Yu et al., 2016).

2.5.2. Post-Acquisition Aspect

According to Chaminade (2015), examples of the Chinese acquirers' influence on German target companies include more personnel in R&D, new product development and innovation projects focusing on new technologies. Concerning knowledge flows between subsidiaries and parent companies, there is mixed evidence from the cases examined by the study. Sometimes there is no cooperation on a knowledge-level but only regarding production; in other cases, there is an intense cooperation on joint R&D efforts by exchanging Chinese and German personnel. Personnel mobility does not only take place for joint projects but also for training of Chinese employees. The impact of Chinese owners on innovativeness is measured by the number of cross-border patents. Despite being somewhat harder to observe, the Chinese involvement in this area is growing (Chaminade, 2015).

Liu and Woywode (2012) build their research on the finding that Asian post-merger integration in most cases significantly differs from Western post-merger integration and focuses on the "light-touch" approach. In this context, they define "light-touch" approach as the original management of the acquired company remaining in office, maintaining the brands, and leaving the local entities with a high level of freedom in decision-making while offering advice and a representative of the acquirer joining the advisory board. When looking at the results of the seven cases presented in Liu and Woywode's paper (2012), the "light-touch" approach is confirmed by keeping the German management team intact and some general involvement in higher level strategic decisions but otherwise little integrations and no involvement in daily business. Therefore, only limited synergies were realized regarding joint product development, transfer of skills and other potential actions. In a few cases however, more in-depth integration efforts at the target could be observed, including individual examples of a cost optimization program, a restructuring phase, personnel changes as well as capital injections and investments in German production facilities by the Chinese parent company. In some cases, employee exchange programs, both long- and short-term, existed. One Chinese parent company expanded into international markets using technological and market know-how of the German subsidiary. The combination of Chinese sales channels and German technology were used for the German target company to get in a more advantageous position in China. In the two cases mentioning the development of the number of employees,

the workforce increased after the takeover by the Chinese company. It's noteworthy that in the most successful integration case, the acquirer and the target knew each other before the transaction due to an active trade relation (Liu & Woywode, 2012).

Forbach (2014) repeats in his study that the case companies differ a lot in the extent to which they transfer knowledge between the parent and the subsidiary. In the worst example, there was no clear frame agreed upon for the knowledge transfer so as a result, knowledge transfer did not happen. Again, exchanges of personnel in both directions were observed in some cases. Among the staffs that were exchanged for a limited time were engineers, purchasing professionals and in one case the management team (Forbach, 2014).

The results described above fit well into the theory of the “partnering approach”, which is typical for emerging market M&A activities (Kale & Singh, 2012). Under a partnering approach the acquired entity is kept separately and not absorbed into the acquirer. Core and supporting activities are only aligned on a selective basis and not completely integrated in the same way as in the traditional approach. Employees usually remain in the acquired company and the decision-making competencies stay with the old management. Also, the management team following the partnering approach accomplishes items on their post-acquisition agenda more gradually compared to the rapid way of the traditional integration approach (Kale & Singh, 2012).

Looking at post-merger performance, McCarthy et al. (2016) highlight that Chinese acquirers created the most value (+5.8%) while U.S. acquirers destroyed -3.8% of their market values, although many do's and don'ts of the Western literature predicted failures of the Chinese acquirers. McCarthy et al. (2016) also conclude that Chinese acquirers are different from their counterparts in Europe, North America and even its geographic and cultural neighbors in Asia without further unveiling the mystery of Chinese performance.

In the past, the “light-touch” approach was understood as if the Chinese companies were not interested in properly integrating their newly-bought subsidiaries. McKinsey sheds light on this topic by looking at the reasons that lead to the comparatively limited integration efforts (Cogman et al., 2015). According to their report, it is not due to a lack of interest in integration but more because of limited management abilities to pursue the integration of companies in the western region. There is simply a scarce number of potential employees with relevant knowledge and experience to carry out such an integration. For the future, Cogman et al. (2015) predict that the Chinese acquirers will focus on the integration given the mixed track record of acquisitions so far.

When examining the literature available on our topic, we identified the following gaps. First, the only available papers touch upon the key motivations from the Chinese investors with no connection to common traits of the German target companies and there is no relevant research specifically on the mutual characteristics of the targets. Secondly, we find no quantitative investigation of the pre-acquisition financial profile and post-acquisition financial development of the German target companies. Thirdly, the experience of post-acquisition integration is only told from the German management's perspective and does not incorporate the view from the Chinese counterpart. As an extension to the last point, there is no literature on how the Chinese investors evaluate the transaction and post-acquisition collaboration with the German management.

Thus, this thesis seeks to fill the literature gaps by answering the two research questions on pre- and post-acquisition considerations. Given the limited current resources, we opted for not being driven by specific hypotheses but applied an exploratory approach that allowed us to leverage the entirety of available information for a broad and comprehensive view on Chinese M&A activities in Germany.

3. Methodology

3.1. Mixed Methods Approach

In order to fill in the literature gaps and explore the answers to the research questions, we believe that a mixed methods approach optimizes the quality of our findings. A further benefit of utilizing a mixed methodology is a comprehensive understanding of our thesis topic because there is not extensive qualitative research or any quantitative research on Chinese M&A activities in Germany. In this thesis, the quantitative part contains two major sections, industry reports and empirical data. The empirical data includes information on transactions and financial information on the target groups and corresponding peers. The qualitative analysis relies on the outcome of a questionnaire. Both quantitative and qualitative analyses are integral parts to form the answers to both research questions.

3.2. Research Design

3.2.1. Quantitative Analysis

3.2.1.1. Financial Data collection and analysis

Limited data availability required us to adjust our research design throughout the financial data collection process and we took on a data-driven approach. As a result, data collection and data analysis are interlinked and interdependent. Therefore, the structure deviates from the rest of methodology and the following sections integrate both data collection and data analysis.

Our sample

The current literature and media coverage on Chinese M&A activities in Germany suggest a starting point in 2002. Thus, we used 2002/01/01 as the earliest date for our transaction collection from Thomson Reuters' SDC and Bureau Van Dijk's Zephyr. The cut-off dates were based on the most recent date available at the time of data collection in February 2018. Within this time period, we pulled data on all completed M&A deals between Chinese acquirers and German targets. The raw data lists 134 transactions in SDC and 150 transactions in Zephyr. After merging the raw data and checking for duplicates and name changes, we had a total of 202 transactions that serve as a base for our analysis.

We further cross-checked the transaction details using Bloomberg and publications on the deals and carried out manual adjustments when necessary. Based on equity stake acquired in each transaction and the nature of the deals, we put the 202 transactions into six categories:

Category 0 Unqualified Transactions, Category 1 Majority Acquisitions, Category 2 Minority Acquisitions, Category 3 Top-up Transactions, Category 4 Inter-company Transactions, and Category 5 Joint Ventures. Out of the five meaningful categories, we deemed Category 1 Majority Acquisitions the most important to find answers for our research questions because a majority stake gives Chinese acquirers full control over the German companies. In total, we narrowed down to 138 Category 1 transactions and performed a second round of manual adjustments such as ruling out cases where only partial business units or assets were sold. In the end, we had 130 Category 1 First-Time Majority Acquisitions.

We only looked at target companies that still remain as a separate entity in the databases and contain financial information in either Bloomberg or Amadeus to ensure the comparability of post-acquisition performance, which we examine later. While applying these two criteria, we also took into account that some companies had changed names throughout the years (See the list of name changes in Appendix Table 12). In the end, 82 target companies stood out from 130 Category 1 transactions identified above, spreading from 2008 to 2017.

We found 78 records on Amadeus. We had to manually adjust for two companies for which we aggregated two records each because they were either parts of the same target company or the same entity that changed name after the acquisition. As a result, we had financial information on 76 distinct companies from Amadeus. In addition, Bloomberg had data on six companies that were not found on Amadeus. In total, we had relevant financial information of 82 target companies. In order to answer the two research questions presented earlier, we pulled financial data and calculated metrics, for data analysis later.

After examining the data availability of these fields, we identified 12 relevant metrics based on both literature review and our research questions, highlighted in grey in the following table.

Table 1 Financial Metrics Overview

Profitability Ratios	Balance Sheet (Assets)	Balance Sheet (Liabilities)	Cash Flow and Income Statement
Profit margin%	Fixed assets	Non-current liabilities	Cash flow
ROE using P/L before tax %	Intangible fixed assets	Long term debt	Operating revenue (Turnover)
ROCE using P/L before tax%	Cash & cash equivalent	Other non-current liabilities	Sales
Gross Margin%	Total assets	Provisions	Costs of goods sold
EBITDA Margin%	Number of employees	Current liabilities	Other operating expenses
EBIT Margin%		Loans	P/L for period [=Net income]
		Creditors	
		Other current liabilities	
Liquidity Ratios	Others	Calculated Metrics	
Liquidity ratio(x)	R&D expenses / Operating revenue%	Cash as a % of Total Assets	
Current ratio(x)	Export revenue / Operating revenue%	Change in Cash Ratio	
Solvency ratio (Asset based)%	Number of patents	Capital Structure (Debt Based)	
Solvency ratio (Liability based)%	Number of trademarks	Long-term Debt as a % of Total Debt	
		Asset Turnover Ratio (x)	
		Total Debt	
		Total Equity	

“EBIT margin” and “asset turnover ratio” reflect the target companies’ abilities to generate profit and utilize assets in an efficient way. “Cash as a percentage of total assets”, “change in cash ratio”, “capital structure (debt based)” and “long-term debt as a percentage of total debt” tell the story of how these companies stand when it comes to cash position, debt, and capital structure. “Number of employees” is mostly used to assess labor changes. “Current ratio” and “solvency ratio (asset based)” shed light on the liquidity and solvency standings of the target companies. “Total assets”, “total debt” and “total equity” support the interpretation of metrics that are connected to balance sheet changes. Appendix Table 14 and

Table 15 provide an overview of the financial metrics calculation for both the pre- and post-acquisition analysis.

After identifying the relevant financial information, we used the transaction year as the point of origin that was stated as T on a common timeline so that transactions in different calendar years could be compared (see Appendix Table 13 for the common timeline for target companies). Initially, we pulled data from T-2 (2 years prior to the acquisition year) to T+4 (4 years after the transaction year). However, we believe that data from T-1 painted a more accurate picture of the target companies right before their respective acquisition and data limitation pulled a strain on T+3 and T+4, leading to our decision of excluding these years.

As a part of our empirical analysis, we tracked the development of target companies after being acquired by the Chinese investors. In order to do so, we focused on defined subsamples to isolate external factors. Three criteria were used to define subsamples: size, industry, and acquisition year. These criteria were applied to search for peer groups that match with the defined subsamples. The peer groups were used as a control group to compare the financial profile of the target companies in order to answer the first research question.

We sorted the 82 companies based on their available data related to the Amadeus size categorization (see below) into four types: Small, Medium, Large and Very Large.

Table 2 Amadeus Size Categorization

Amadeus Medium		
Operating revenue	>=1.3	\$mil
Total assets	>=2.6	\$mil
Employees	>= 15	

Amadeus Large		
Operating revenue	>=13	\$mil
Total assets	>=26	\$mil
Employees	>= 150	

Amadeus VL		
Operating revenue	>=130	\$mil
Total assets	>=260	\$mil
Employees	>= 1000	
Listed		

The size categorization was judged based on operating revenue as the first priority. If this information was not available, we used the total assets instead. The same reasoning applied for the next step, number of employees. For very large companies, Amadeus also requires them to be listed on the stock exchange. However, we waived the listed criterion to simplify the process of categorization. By default, if a company could not reach a criterion to be qualified as a Medium sized company, it would be categorized as a Small sized company.

We used the following US SIC codes for the industry breakdown of the 82 companies.

Table 3 Sample Industry Distribution using Relevant US SIC Codes

US SIC Codes	Industries	Number of Companies
1500-1999	Construction	1
2000-3999	Manufacturing	70
4000-4999	Transportation, Communications, Electric, Gas and Sanitary Services (TCEGS)	2
5000-5199	Wholesale Trade	0
5200-5999	Retail Trade	0
6000-6999	Finance, Insurance and Real Estate	1
7000-8999	Services	8
	Total Number of Companies in the Sample	82

After sorting the 82 target companies into industry subsectors, we further broke them down based on acquisition years and sizes. We only looked at Manufacturing and Services subsectors due to a lack of enough data points in other subsectors.

Table 4 Manufacturing and Services Subsample Breakdown

US SIC Codes	Industries & Sizes	Transaction Year										Number of Firms	
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017		
2000-3999	Manufacturing												
	S	0	0	0	1	1	1	1	1	3	2	10	
	M	1	0	0	0	1	0	0	2	5	1	10	
	L	0	0	0	1	3	6	4	6	5	7	32	
	VL	0	0	0	5	4	1	2	1	4	1	18	
	Number of Firms	1	0	0	7	9	8	7	10	17	11	70	
7000-8999	Services												
	S	0	0	0	0	0	0	0	0	0	0	0	
	M	0	0	0	1	1	0	1	2	1	0	6	
	L	0	0	0	0	0	0	0	0	1	1	2	
	VL	0	0	0	0	0	0	0	0	0	0	0	
	Number of Firms	0	0	0	1	1	0	1	2	2	1	8	

We started out only focusing on subgroups (which satisfied all three criteria set out for mapping peer groups – size, industry, and acquisition year) that included five or more targets. This guaranteed an objective comparison later and having less than five targets in the subgroup would increase the risk of firm-specific traits influencing the overall performance. Only six subgroups passed this threshold (highlighted in Table 4) and they all fell in the subsector of Manufacturing.

However, we could only look at the subgroups highlighted in green due to a data limitation issue. When looking for peer groups which in the year prior to the transaction were of the same size and industry, Amadeus only allowed us to do so from the years 2014 to 2017, which ruled out the subgroups Manufacturing_VL_2011 and Manufacturing_L_2013.

Furthermore, after identifying key financial metrics, we faced a more severe limitation in data when calculating ratios. As a result, we had to compromise on one of the criteria to have enough data points for a meaningful analysis. We combined Manufacturing_M_2016 and Manufacturing_L_2016 into Manufacturing_M+L_2016 because we believe that both the

transaction year and industry help isolate macroeconomic factors and external influences. Moving forward, the defined subsample is Manufacturing_M+L_2016.

Table 5 Companies included in the Defined Subsample

Overview of the Defined Subsample	
Target Name	ITN Nanovation AG
	Industrial Acoustics Company GmbH
	Sideo Vogt GmbH
	Hermann Vogt GmbH & Co. KG
	Elexxion AG
	Wilhelm Schimmel, Pianofortefabrik GmbH
	Laurèl GmbH
	H von Gimborn GmbH
	Ayanda GmbH
	TEDA Laukötter Technologie GmbH

Peer Group

The peer group found in Amadeus was identified by the following criteria: German companies within the Manufacturing industry (using US SIC codes from 2000 to 3999) and being medium or large companies (using the size categorization criteria) in 2016. We pulled financial information on 16,794 medium sized peers and 5,547 large sized peers respectively and aggregated them to get the combined peer group. We proceed with the similar steps such as setting the transaction year as the origin of the common timeline indicated as T and calculated the metrics specified in the previous section.

In the section of empirical analysis later, the peer group’s financial characteristics in T-1 (2015, which is the year prior to our subsample’s acquisition year) are compared to those of the subsample as a step to answer the first research question.

Post-acquisition Development

At first, we wanted to track the financial development of the subsample and the peer group post-acquisition to answer the second research question. The subsample was chosen as the result of data limitation problems described earlier and the peer group was matched accordingly. Consequently, both the subsample and the peer group were lacking financial information in the database starting from T+1 (calendar year 2017).

Instead, we looked at the 82 target companies and tracked their post-acquisition financial development. As aforementioned, we only looked at companies that remained as separate entities and contain financial information to ensure the comparability of post-

acquisition performance. Since the majority of these target companies did not have strict financial reporting duties due to their legal forms, we had to accept the incompleteness of reported data and performed summary statistics on available fields and years from T-1 to T+2. The tracking of post-acquisition financial development is done by analyzing the changes in the identified metrics. We used T-1's values (values from the year prior to the respective transaction) as the reference point to showcase the relative development after companies being acquired in years T, T+1 and T+2 (seen as $T / T-1$, $T+1 / T-1$, $T+2 / T-1$).

3.2.1.2. Industry Reports

Before examining the financial characteristics of the German target companies to find out more about the attributes of German companies that Chinese acquirers are interested in, we turned to industry reports from Big Four Accounting Firms for general traits of Chinese M&A in Germany, e.g. regarding industry sectors.

Data Collection

The data collection was divided into two parts: One part focused on the target companies of Chinese Mainland Outbound M&A activities and the second part focused on the target companies of German Inbound M&A activities. For the first part we used PwC's "M&A Review and Outlook" for the years from 2011 to 2017. The PwC reports cover Mainland China Outbound Deals of different acquirer groups, but for this thesis we only used the aggregated information from each year.

Initially, we wanted to examine both the deal volume and the deal value, but data for the deal value was not available in all years so our analysis focused on the deal volume only.

Each PwC report includes the number of announced deals in different industries for the two years prior to the publishing year. Usually there are some adjustments on the deals reported because not all announced deals were completed. Therefore, we used the most recent figures available to ensure a more accurate comparability between the PwC reports and our own sample (presented in more detail in the Financial data collection and analysis section of the methodology), which includes completed deals only.

For the second part we used Deloitte's "Germany: Cross Border M&A Yearbook" for the years from 2014 to 2016. To be consistent, we worked with the same approach as laid out for the PwC reports and collected information on aggregated deal volume in different industries each year using the most recent information available.

Data Analysis

The industry reports were used for analysis on two levels. First, we aimed to compare the industry distributions of the targets included in Chinese Mainland Outbound acquisitions with the target companies in our sample of Chinese M&A activities in Germany. Secondly, we compared the industry distributions of the targets included in Germany Inbound transactions with the target companies in our sample of Chinese M&A in Germany. Both methods generated insights that contributed to answering the first research question. To be able to fairly compare the sample presented in the Big Four Reports with our own sample of companies, we adjusted the data. In the following paragraph we describe the adjustments that have been carried out to ensure better comparability.

PwC Reports

The announced deals in the PwC data from 2011 to 2017 included acquisitions resulting in a change of control, investments involving at least 5% ownership, Joint Ventures, and trading assets among other categories. However, it does not get clear from the notes in the PwC report, whether PwC includes intercompany transactions as well. This concerns only six cases in our sample of Chinese M&A in Germany (explained in more detail in Financial data collection and analysis section of the methodology). Since PwC does not specifically exclude intercompany transactions, we kept them in the sample of companies that would be compared to the PwC data. Therefore, the target companies of deals belonging to all categories of our data sample from 2011 to 2017 involving an acquisition of at least 5% qualified for the comparison. 167 target companies of our sample fulfilled these criteria.

PwC had a different set of categories for the industries instead of the SIC classification that was used for our sample on Chinese M&A activities in Germany. Thus, the categorization of both the PwC data and our sample data had to be adjusted so that the same categories were applied to both samples before we could compare one with the other. For this exercise we used categories of “Manufacturing”, “Construction”, “Transportation, Communications, Electric, Gas and Sanitary service”, “Finance, Insurance and Real Estate”, “Services” closely following the SIC classification. Companies that would not fall into either of the mentioned categories were grouped in “Others”. See the table below for the translation of the PwC and SIC categories into the categories used for the comparison.

Table 6 Mapping of PwC and SIC Categories

PwC Categories	SIC Categories	Categories Used for Comparison
High Technology Industrials Consumer	Manufacturing	Manufacturing
Materials	Constructions	Constructions
Energy & Power Telecom	Transportation, Communications, Electric, Gas and Sanitary service	Transportation, Communications, Electric, Gas and Sanitary service
Financials	Finance, Insurance, Real Estate	Finance, Insurance, Real Estate
Healthcare Media and Entertainment	Services	Services
Others	Retail Trade Wholesale Trade	Others

Deloitte Reports

The data in the Deloitte Reports included both closed and announced deals from 2014 to 2016. Deloitte excluded deals when a stake of less than 25% was acquired. Apart from this criterion, there are no further specifications regarding exclusion or inclusion of deals. Therefore, we used all targets of our sample of Chinese M&A in Germany between 2014 and 2016 where a stake of at least 25% was acquired to compare with all transactions in Germany recorded by Deloitte, regarding industries.

Again, the industry categories used by Deloitte do not correspond to the SIC categories used in our data sample. We adjusted the data to match the classifications and used categories of “Manufacturing”, “Transportation, Communications, Electric, Gas and Sanitary service”, “Finance, Insurance and Real Estate” and “Services”. See below for a translation of the Deloitte and SIC classification into the categories we used for the comparison of industry backgrounds. Here, we did not use a category called “Other” because a research on the companies belonging to the Deloitte category of “Life Science” and to the SIC categories of “Retail Trade”, “Wholesale Trade” and “Construction” revealed that their business portfolios were linked to providing services, which is the reason why we decided to group them under the category “Services” instead.

Table 7 Mapping of Deloitte and SIC Categories

Deloitte	SIC category	Category used for comparison
Manufacturing Consumer Business	Manufacturing	Manufacturing
Technology, Media & Telecommunications Energy & Resources	Transportation, Communications, Electric, Gas and Sanitary service	Transportation, Communications, Electric, Gas and Sanitary service
Real Estate Financial Services Industry	Finance, Insurance, Real Estate	Finance, Insurance, Real Estate
Life Science and Healthcare	Retail Trade Wholesale Trade Construction	Services

3.2.2. Qualitative Analysis

3.2.2.1. Data Collection

Since currently available literature typically presents the German perspective, we purposely introduced the Chinese perspective by utilizing results from a questionnaire and thus made our contribution to the current literature on this topic. We believe that it is the most beneficial to choose a Chinese company that has made the most unrelated first-time major stake acquisitions in Germany in different years, so we could reflect on the similarities and differences of both pre-acquisition and post-acquisition processes and considerations.

As a result, we chose AutoCo and contacted its investment office for the questionnaire. AutoCo is a privately owned Chinese company founded in 1988, focusing on automotive parts R&D, manufacturing, and distribution. According to Bureau Van Dijk's Zephyr and Thomson Reuters' SDC databases, AutoCo acquired 100% of GermanOne and its subsidiary GermanOneSub in 2011, 100% of GermanTwo in 2013, and a 75% stake in GermanThree in 2014 (all companies were anonymized).

The 12-page questionnaire consists of four pages of questions for each transaction. It includes two parts for each transaction: pre-acquisition considerations (including acquisition process) and post-acquisition integration. For all three transactions, there are always eight questions for the pre-acquisition part and 10 questions for the post-acquisition part, which have almost the same suggested options inspired by previous literature and findings. The investment office personnel can tick one or more options that apply to the situation or write down his or her own answer. In addition, there is an open-ended question included in the end of the post-acquisition part on how the cooperation with the German counterpart could be

further improved. One additional question is added to the second and the third acquisitions to evaluate if the transaction in question was smoother or more difficult than the first acquisition. The questionnaire is written in Mandarin Chinese and the results were translated into English for analysis by one of the authors who is a native Chinese speaker.

3.2.2.2. Data Analysis

Creswell (2013) uses a qualitative analysis framework that includes the following seven steps: organization and preparation, reading, coding, themes and description, interrelation, interpretation, and validation. For the first step – organization and preparation, we stored the scanned PDF of the completed questionnaire on an online file hosting service platform and the native Chinese speaking author made an informal English translation of the questionnaire. Then both authors finished the second step – reading separately. The authors took notes of the key words and consolidated answers to three transactions into one inclusive answer sheet for the third step – coding. The fourth step – themes & description entailed results grouping and arrangement based on common themes. These common themes defined the order in the interpretation section of the questionnaire answers. The fifth step – interrelation was achieved by interrelating answers to the three transactions in question as well as previous literature. Consequently, the sixth step – interpretation involved analysis on similarities and differences of answers under common themes and literature, and with data findings when possible. For the seventh step – validation we followed Thomas & Magilvy's (2011) approach for establishing research validity in qualitative research, which is further broken down into credibility, transferability, dependability and confirmability. Credibility was assured by peer debriefing which took place by note comparing of the two authors after the third step – coding and before the fourth step – themes & description. One limitation associated with this effort is that the native German speaking author's understanding relied on the informal translation of the questionnaire results. Transferability of our studies was achieved by providing a compact description of the study participants. Conducting the analysis together with a peer and providing a description of research methods ensured dependability which means that another researcher should be able to follow the decision trail applied by the researchers. The final component of research quality, confirmability, was addressed by the design of the questionnaire. Firstly, the 25 questions and suggested answers used in the questionnaire were derived based on concepts seen from relevant literature and company announcements. Secondly, the “other” option is included for all applicable questions, so the questionnaire participant had the opportunity to write down anything if the suggested answers were not

accurate. These efforts minimized the effects of the researchers' perspectives on potential answers of the questionnaire so that the participant was not led into a specific direction designed by the researchers.

4. Results

4.1. Pre-acquisition considerations: Which common characteristics such as industries, sizes, financial profiles of German companies do Chinese acquirers seek and what are their key motivations?

One goal of this thesis is to understand, which common characteristics of German companies the Chinese companies are interested in buying. Thus, in the following sections, we first lay out our findings from industry reports to show how our data fits in the bigger pictures of M&A activities of each country and highlight the industry characteristics. We then present empirical data analysis, which examines the financial characteristics in more detail. Lastly, the first part of the questionnaire completes our understanding regarding pre-acquisition considerations.

4.1.1. Evidence from Industry Reports

Mainland China Outbound M&A Activities

We compare the results of the PwC industry reports on Mainland China Outbound Activities from 2011 to 2017 to those of the companies in our sample that fall in the same time period and are in accordance with the same criteria that PwC chose for their publications.

Figure 1

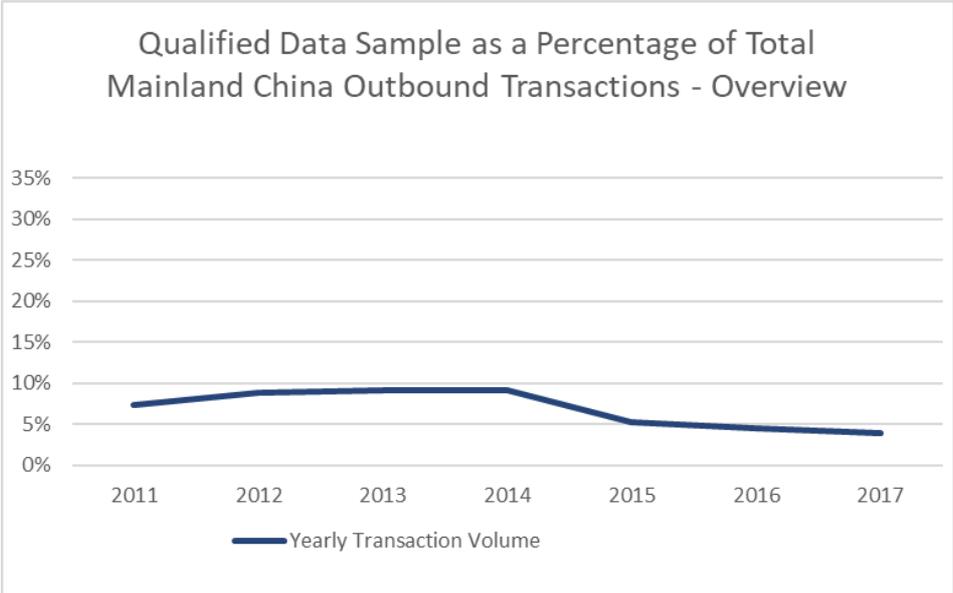


First, looking at the Mainland China Outbound activities overall, it can be observed that the total transaction volume and value from 2011 to 2017 increased by a factor of four and three respectively. As shown in Appendix Figure 17, this increase was driven almost equally by all major investment destinations, which are North America, Asia, and Europe.

The information about deal value was not available for the following analyses. Therefore, when analyzing figures 2 to 6, one needs to keep in mind that they only contain information on deal volume and no conclusion regarding the deal value or the size of transactions can be drawn.

After applying the same criteria as PwC to our qualified data sample, we got 167 companies that could be compared to the ones mentioned in Mainland China Outbound M&A activities. The figure below shows which share of total transactions our qualified data sample accounts for.

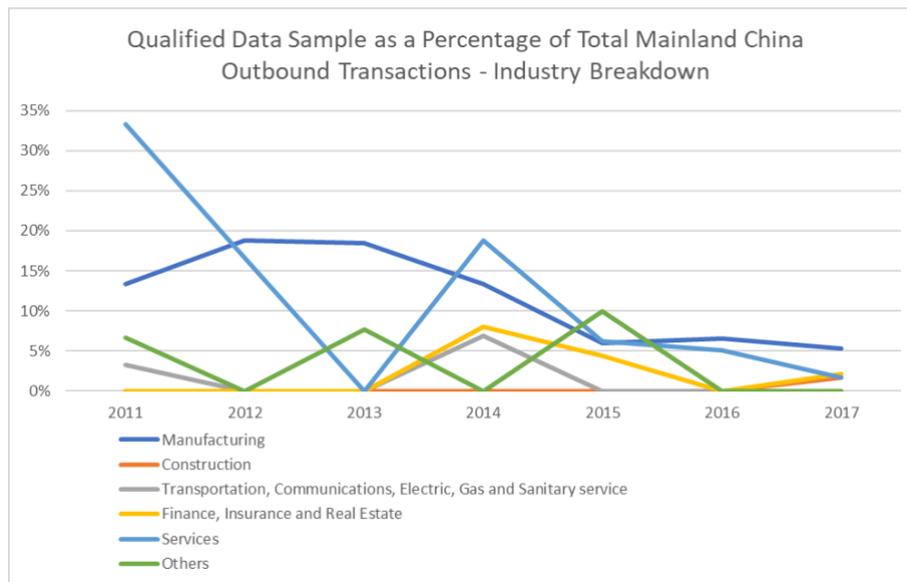
Figure 2



The large picture conveyed by the yearly transaction volume shows that our qualified data sample accounts for a relatively constant proportion of total Mainland China outbound transactions. The drop in relative proportion since 2015 might decrease the importance of the topic of Chinese M&A in Germany. However, we believe that this is because mainland Chinese outbound transactions expanded internationally as seen in Figure 1, so the absolute increase in Germany only translates to a smaller share than its previous level. Therefore, given the rising number of deals actually taking in place in Germany, which reached a record level in 2016, the topic should certainly be given more attention to.

Looking within industry sectors, the proportions vary strongly as Figure 3 shows.

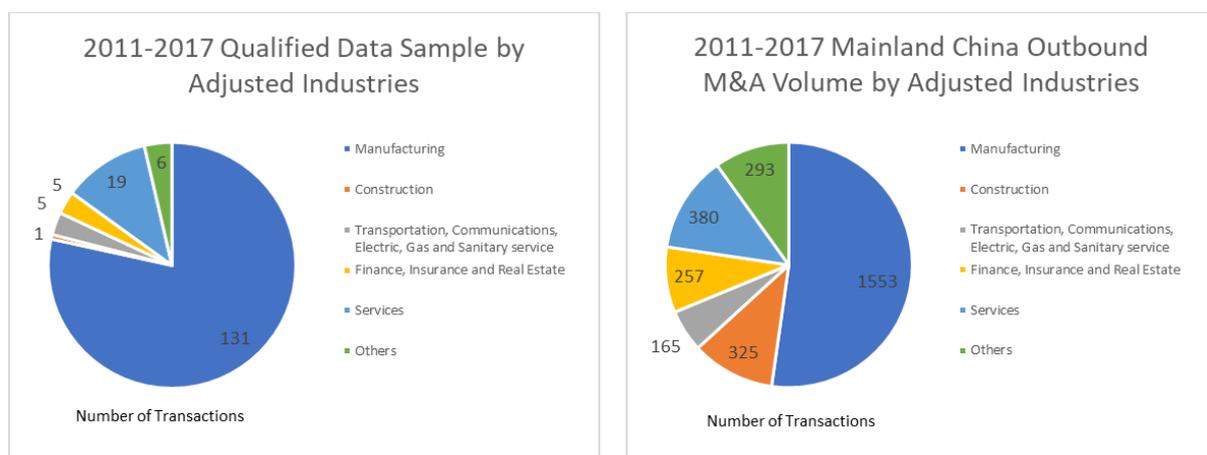
Figure 3



Both the Manufacturing and Services (except for 2013) industries until 2015 make up a large percentage of total Mainland China M&A activities in the respective sector with shares usually between 15% and 20%. There is an overall converging trend of all industries towards 5% of total mainland Chinese transaction volume.

For the following comparison, we adjusted the industry categorization and used a new classification of industries (see Table 6 in the methodology) to be able to compare the PwC reports' sample with our qualified data sample. Figure 4 shows the overview of the industry breakdown aggregated for the years 2011 to 2017.

Figure 4



Overall, it can be observed that there is even more weight on the Manufacturing sector in our qualified data sample than it is within the total Mainland China Outbound M&A transactions, where the Manufacturing industry already accounts for more than 50% of all transactions. A hypothesis is that the proportion of the German targets belonging to the

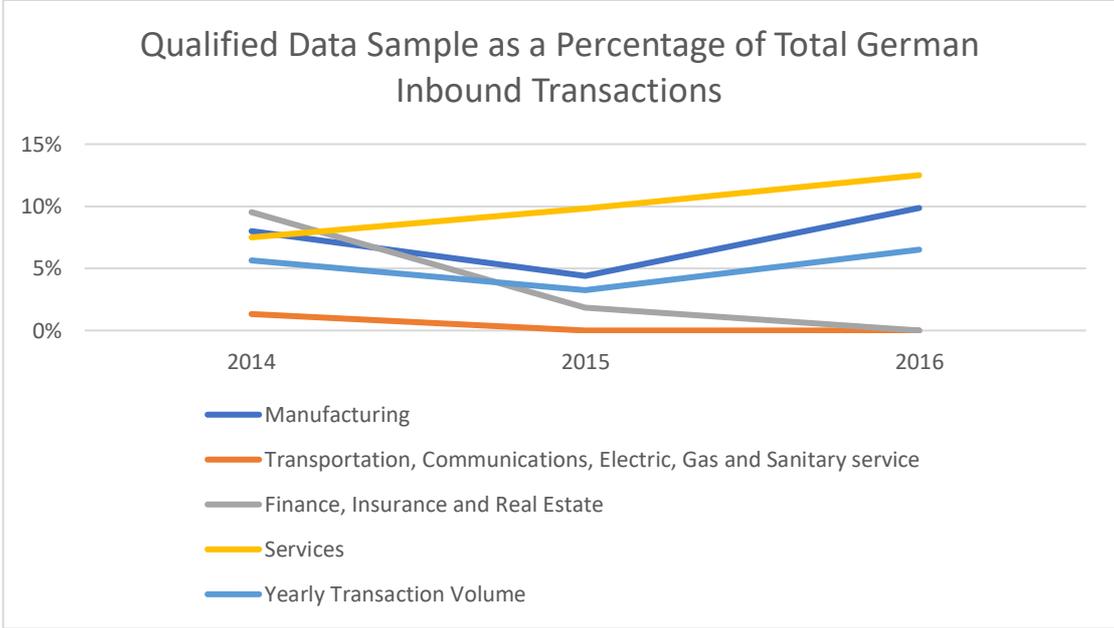
Manufacturing industry positively correlates to the composition of the German Mittelstand (Mid-Cap companies), which concentrates in the Manufacturing sector. Interestingly, while the weight on the Manufacturing industry of all Mainland Chinese Outbound M&A transactions increases over time, it tends to decrease for transactions in Germany (see Appendix Figure 18 for a detailed overview of the industry split-up for both samples in every year). Additionally, with the exception of 2016, our qualified data sample is likely to be more diverse and includes a higher number of different sectors each year (see Appendix Figure 18).

Germany Inbound M&A Activities

Similar to the comparisons drawn in the first half of this section, we compare the overall Germany inbound M&A activities with China’s M&A activities in Germany.

After having applied the same criteria as Deloitte, 109 companies from our qualified data sample are left for the comparison with Germany Inbound M&A activities between 2014 and 2016. The graph below shows which share of total transactions our qualified data sample accounts for.

Figure 5

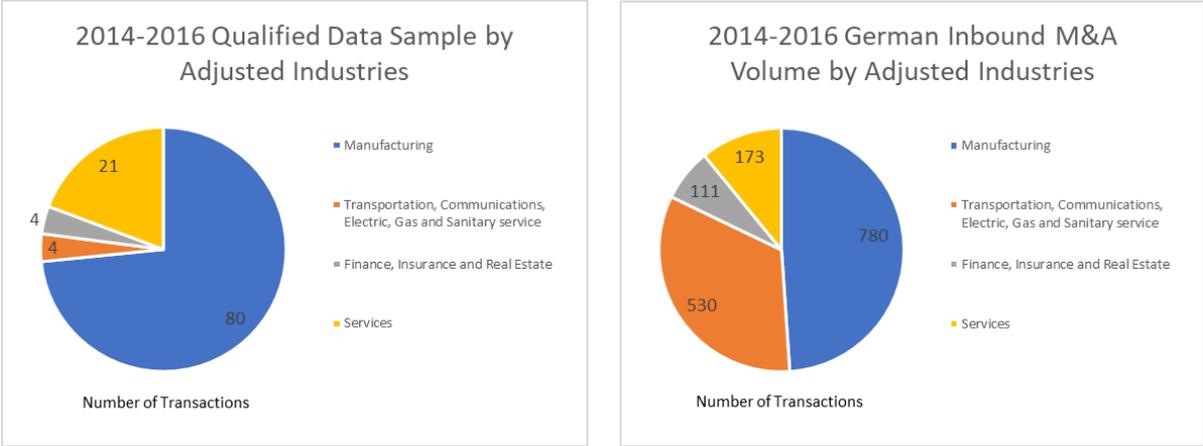


The total yearly transaction volume of Chinese companies accounts for between 3% and 7% of all inbound acquisitions in Germany. In 2014, Chinese acquirers provided the highest percentage of all acquisitions in Germany within the Finance, Insurance and Real Estate sector. However, this share decreased from close to 10% to 0% in 2016, showing the lost interest in this sector in Germany by the Chinese investors. In contrast, the Services sector is

the only industry that experienced constantly increasing interest from the Chinese acquirers so that its share rose from slightly more than 7% to almost 13% in 2016.

As laid out in the methodology section, we adjusted the industry categorization (see Table 7 in the methodology) to compare the Deloitte reports with our qualified data sample. Below, the overview of the industry split-up aggregated for the years 2014 to 2016 is shown.

Figure 6



The sample of transactions that involve a Chinese buyer put more weight on the Manufacturing sector than international acquirers from other countries in Germany. This observation rejects the hypothesis raised earlier when comparing the qualified data sample with mainland Chinese outbound M&A volume. Indeed, the Chinese acquirers showed exceptional interest and specifically targeted German companies in the Manufacturing industry. When looking at all German inbound transactions, only around 10% of the targets belong to the Services industry. In contrast, the Services sector accounts for almost one fifth of Chinese M&A transactions in Germany, twice as much as the national inbound proportion, which makes it the second most important industry for Chinese acquirers.

4.1.2. Empirical Analysis

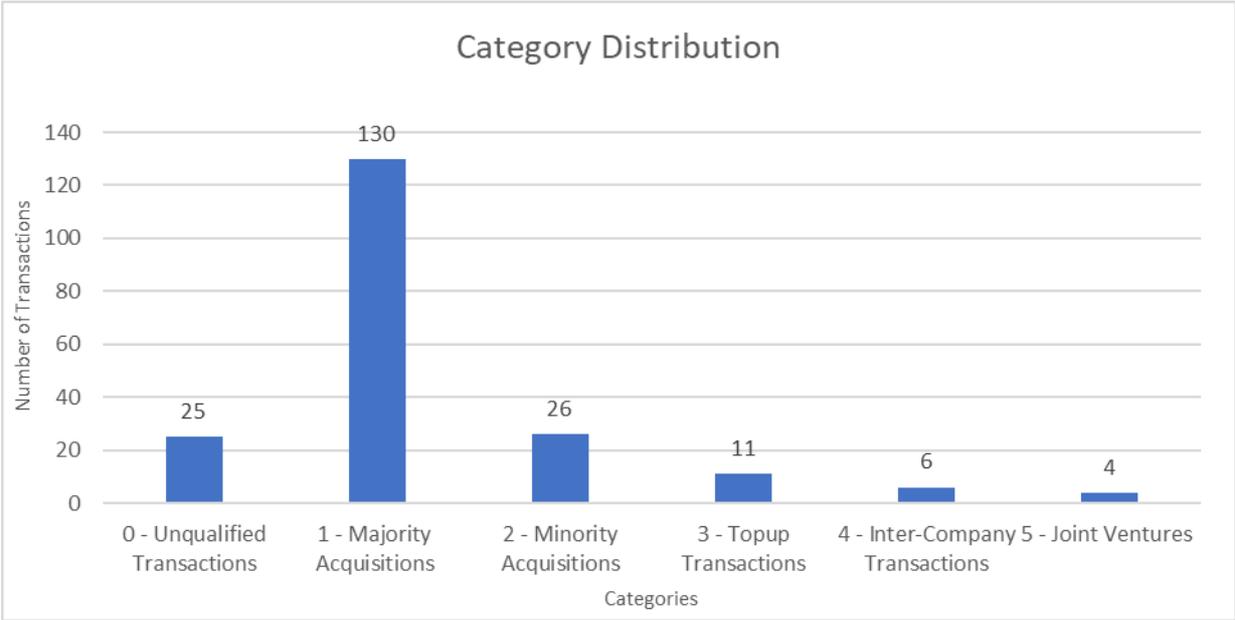
In this section, we first describe the identified sample companies more generally and afterwards look at the financial situation of the companies in the year prior to their transactions.

High-level description of our data sample

After comparing our sample with the results from the PwC and Deloitte industry reports, we look at all transactions of Chinese companies in Germany that we have identified in SDC and Zephyr independently.

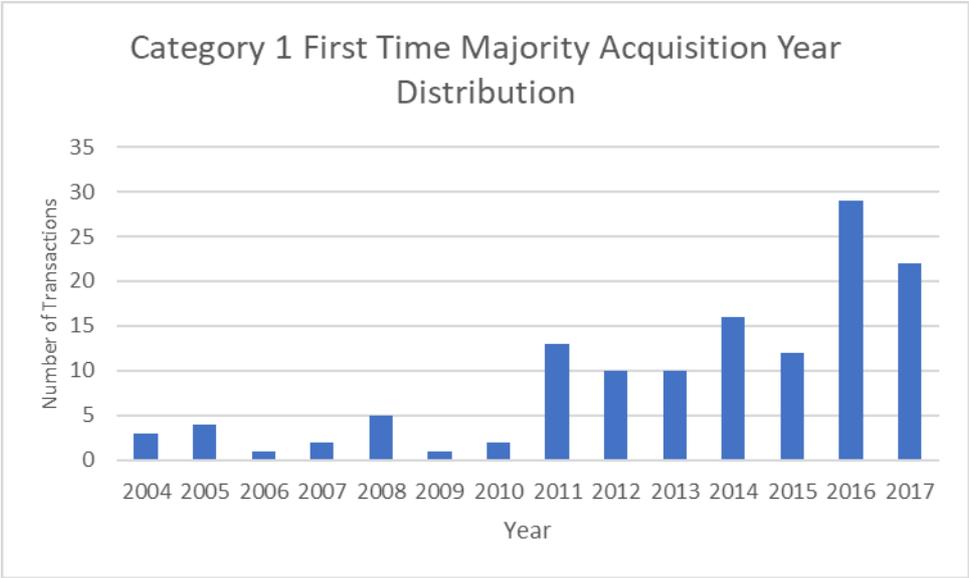
In total, there were 202 transactions from January 1st, 2002 to December 31st, 2017. The break-down below shows that most of the acquisitions were majority acquisitions, where the acquiring company for the first time bought a majority stake in the target. In contrast, top-up acquisitions are defined as the Chinese acquirers increased an already existing stake in the same target companies.

Figure 7



As reasoned earlier in the methodology section, we focus on first time majority acquisitions in this thesis. The following graph confirms the increased relevance of the topic of this thesis given that the amount of first time majority acquisitions has risen substantially since 2011 and even more considerably in 2016 and 2017.

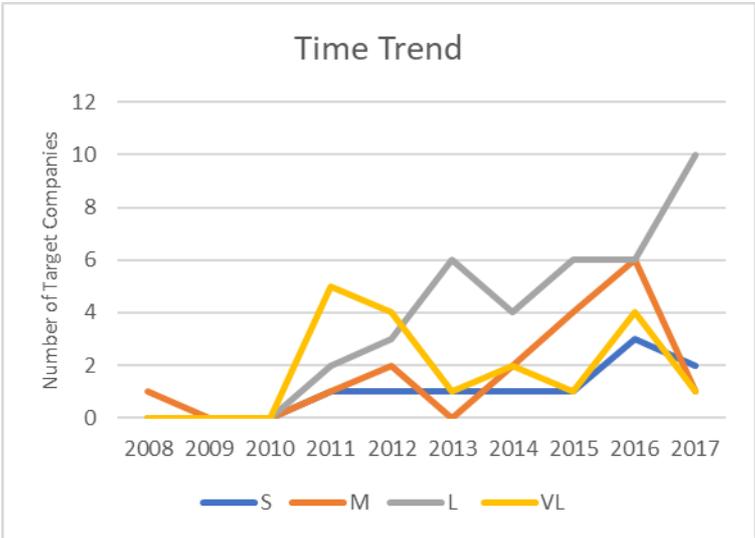
Figure 8



Regarding the industry breakdown, our sample that includes all first time majority acquisitions presents the same trend seen earlier in the adjusted sample based on the criteria of PwC and Deloitte respectively. Manufacturing companies account for the vast majority of the target companies with 81%. Second comes the Construction sector representing 11% of all Chinese first time majority acquisitions in Germany from 2002 to 2017 (see Appendix Figure 19).

On the basis of the Amadeus size categorization, which was presented in the methodology section, the graph below shows the time trend of the amount of transactions within each size group.

Figure 9



Over the course of the past ten years, Chinese companies increasingly focused on acquiring large companies as can be seen from the grey line. This observation confirms the claims of Ni (2015) and Gentile-Lüdecke (2013) that the focus shifted from small and troubling companies in the first Chinese Merger Wave to larger companies in the second Chinese Merger Wave in Germany.

Description of the Pre-Acquisition Financial Situation of our Data Sample

In the following part, we look at the financial characteristics of the companies of which a majority stake was acquired by a Chinese company, remained as a separate entity and had available and sufficient financial information. The chart below shows the summary statistics on the 82 companies that satisfied the criteria laid out more specifically in the methodology section in the year prior to their transactions.

Table 8 Summary Statistics on 82 Companies in T-1 (Year Prior to Transaction)

<i>Summary statistics on 82 companies in T-1 (year prior to transaction)</i>	EBIT Margin, %	Cash as a % of Total Assets	Number of employees	Capital structure (Debt based) %	Long-term debt as a % of Total Debt	Asset Turnover Ratio (x)	Current Ratio (x)	Solvency ratio (asset based) %
Mean	-4%	11%	631	127%	45%	1.7	2.7	22%
Median	2%	5%	184	79%	43%	1.6	1.3	24%
Range	[-70% ,16%]	[0% ,79%]	[1 ,12355]	[28% ,692%]	[1% ,100%]	[0.2 ,4.1]	[0 ,34.9]	[-62% ,90%]
Standard Deviation	0.17	0.15	1665	1.42	0.28	0.83	5.16	0.25

First of all, the results are widely spread in each category. Also, there are considerable differences of the mean and median in several metrics, such as “EBIT margin”, “cash as a percentage of total assets”, “number of employees” and “current ratio”, which indicate that outliers among the companies affect our sample. Therefore, the following analysis focuses on median instead of mean.

Relatively low EBIT margins can be observed in the mean, the median and the range, with some even being negative. Looking at the median, our sample tends to have a small cash position of 5% and leans on short-term debt, which counts for more than 50% of total debt. The combination of both findings can signal liquidity issues. “Solvency ratio”, calculated as total debt divided by total assets, seems to be on the conservative side with a median of 24%. Although the analysis mostly looks at the median, it is interesting to point out that the metric “capital structure (debt based)” has a mean of 127%. It indicates that on average the 82 target companies had negative equity and were facing financial distress prior to being acquired, which suggest the characteristics of the target companies interested by the Chinese companies mentioned in the literature (Ni, 2015).

As the next step, summary statistics on the subsample, chosen based on the criteria laid out in the methodology section, are analyzed in the year prior to the transactions.

Table 9 Summary Statistics on Subsample in T-1 (Year Prior to Transaction)

<i>Summary statistics on subsample in T-1 (year prior to transaction)</i>	EBIT Margin, %	Cash as a % of Total Assets	Number of employees	Capital Structure (Debt based) %	Long-term debt as a % of Total Debt	Asset Turnover Ratio (x)	Current Ratio (x)	Solvency ratio (asset based) %
Mean	-19%	10%	92	125%	25%	2.1	1.8	22%
Median	-9%	6%	42	121%	16%	1.9	1.9	11%
Range	[-70% ,5%]	[0% ,45%]	[8,224]	[55% ,217%]	[2% ,87%]	[0.7,4.1]	[0.3,4.4]	[-3% ,60%]
Standard Deviation	0.25	0.14	81	0.53	0.29	1.01	1.22	0.24

Based on the median, the subsample performed worse than the 82 companies in terms of EBIT margin, but operated better regarding asset efficiency, liquidity and solvency. Another difference lies in less long-term debt relative to total debt, which amounts to only 16% in the subsample. Interestingly, the subsample companies have a debt-based capital

structure of more than 100% in terms of both the mean and the median, which implies negative equity on the balance sheet and makes a stronger case for the Chinese's favor in the troubled firms than the 82 companies (Ni, 2015). Despite the fact that the subsample only includes medium and large companies in terms of Revenue, the number of employees is quite low, which implies that the Chinese companies favored German companies with relatively high revenue per employee.

In the following paragraph, summary statistics of the peer group of the subsample including medium and large manufacturing companies in Germany in 2016 are compared to those of the subsample. The comparison is done using the financials in 2015 so that they can be compared to the financials of the subsamples one year prior to their transactions.

Table 10 Summary Statistics on Peers in T-1 (Year Prior to the Subsample's Transactions)

<i>Summary statistics on peers in T-1 (year prior to the subsample's transactions)</i>	EBIT Margin, %	Cash as a % of Total Assets	Number of employees	Capital structure (Debt based) %	Long-term debt as a % of Total Debt	Asset Turnover Ratio (x)	Current Ratio (x)	Solvency ratio (asset based) %
Mean	4%	17%	73	70%	45%	3.6	4.7	38%
Median	4%	10%	30	64%	45%	2.0	2.2	38%
Range	[-96% ,100%]	[0% ,110%]	[1,13235]	[0% ,54788%]	[-17009% ,128%]	[0,18495.9]	[0,98.9]	[-97% ,100%]
Interquartile Range	[1% ,8%]	[2% ,27%]	[17,70]	[40% ,86%]	[24% ,68%]	[1.4,2.9]	[1.2,4.6]	[16% ,61%]
Standard Deviation	0.11	0.19	152	5.04	1.59	135.38	8.17	0.30

In general, the standard deviation of the peer group is higher than that of the subsample, which is not surprising given that the peer group consists of a broader range of companies. Curiously, the standard deviation for EBIT margins is the only standard deviation measure that is higher for the subsample than for the peers. This finding shows that the subsample has more outliers than the peer group, which is further confirmed by the considerably wider interquartile range.

The companies in our subsample were less profitable than their peers given the lower median EBIT margin. In addition, they held less cash in relation to total assets and had a larger proportion of short-term debt to total debt. This suggests a weaker position of the subsample companies with regard to liquidity. Indeed, the current ratio of the subsample is lower than that of the peer group. Additionally, the lower solvency ratio and asset turnover of the subsample imply a worse position regarding long-term sustainability and efficiency, respectively.

4.1.3. Evidence from the Questionnaire

The questionnaire is set up in a way that the same set of questions are asked for each transaction with a few adjustments mentioned in the methodology section. We compiled the results from all three transactions and discuss our findings in the following section, hoping to provide insights into the Chinese acquirers' perspective through the lens of AutoCo. It is important to keep in mind that the results and interpretation are strictly limited to the companies involved in the questionnaire. To illustrate the aggregated results, we include the number of ticks in parenthesis when necessary.

AutoCo acquired 100% of GermanOne and its subsidiary GermanOneSub in 2011, 100% of GermanTwo in 2013, and a 75% stake in GermanThree in 2014. As many sources mentioned, companies that possess special technology are suggested targets. AutoCo confirmed this target screening criteria by ticking the box for all three transactions. Additionally, GermanTwo is a world-leading niche market player, which is another important trait that attracted AutoCo. This is special to Germany as the country hosts 48% of niche market world leading "Mittelstand" (Bayley, 2017).

When it comes to target screening, AutoCo often utilized current trading partners (2) and sometimes used personal contact (1). We have seen a similar case presented in the literature (Liu & Woywode, 2012) that went extremely well – the two parties were trading partners before the acquisition.

When asked about key motivations for the acquisitions, AutoCo disclosed the following information: expand into oversea markets (3), access to key technology (3), complementary products (2), incentives from the Chinese government (2), fitting in with future strategic plan (1). The answers were not surprising because almost all the usual reasons listed in the literature such as technology, international experience, market access and strategic supplement of product portfolio were named except for brand (Kang & Johansson, 2000; Forbach, 2014).

AutoCo demonstrated motivations related to a market and asset seeking approach to FDI (Amighini et al., 2013; Yin, 2015). Although the option "incentives from the Chinese government" was ticked twice, it is not the most important driver for acquisitions, which is supported by McKinsey's report that demystified "the invisible hand of the Party" (Cogman et al., 2015). Rather, it provides a milder if not more encouraging environment for cross-border deals. The most recent acquisition of GermanThree in 2014 presents "future strategic plan" as one of the key considerations. A prediction can be that by engaging in foreign M&A activities, Chinese companies are one step further into their corporate strategic transition and

advancement. The CEO of Shanggong Co. Ltd supported this prediction of using M&A as a way to strategically transition the corporation in his speech when he commented on the key considerations for acquiring the insolvent Duerkopp Adler (Zhang, 2006).

As seen in the literature about cross-border M&A activities, AutoCo faced challenges such as price negotiations (3), German laws (2), and misaligned interest about future development (1). It used agents (banks/big Four) (3), site visits (2) and personal contacts (1) to contact the target companies. The processes took 6-12 months (3) to complete and AutoCo was happy with the overall transaction process in all three cases. When asked if AutoCo is doing similar investment in terms of company size, industry and other criteria in adjacent markets, the Chinese company chose no for all three acquisitions. On one hand, it is possible that the acquirer has a more granular definition of similarity and thus rule out other investments. On the other hand, this answer would suggest that Germany has a unique competitive advantage over its neighboring countries.

4.1.4. Summary of Key Findings on Pre-acquisition Considerations

Summarizing the results from the industry reports, it becomes obvious that Chinese acquirers mostly seek companies within the Manufacturing and Services industries. The heavy weight on Manufacturing targets is highlighted by the fact that both compared to total mainland Chinese outbound and total Germany inbound M&A activities, the proportion of manufacturing targets among the Chinese acquisitions in Germany is higher. A similar trend can be observed for the services target companies.

From the empirical financial data analysis, we observe a much faster growth in acquiring large companies than the smaller ones, implying a shift in target sizes from 2008 to 2017. By looking at EBIT margin, our subsample has the worst profitability when compared to the 82 target companies and its own peer group. The subsample is a good example to illustrate that Chinese investors still preferred financially troubled German companies in the second Chinese Merger Wave in Germany since the negative equity implied by the metric “capital structure (debt based)” is not observed in the peer group. This finding goes against the claim of Gentile-Lüdecke (2013) that the Chinese investors turned to financially healthy firms after 2010. The 82 target companies also tend to have a worrying capital structure, but the problem is less severe because the median indicates positive equity. When it comes to asset efficiency shown by the asset turnover ratio, the subsample performs better than the 82 companies but worse than the peers. Comparing to the peer group, the subsample has worse liquidity and solvency standings.

Overall, the majority of the evidence from the questionnaire on the pre-acquisition considerations supports what we saw in the literature. It helps us understand the reasoning behind which most important traits the Chinese companies are looking for in the German companies, such as the possession of key technology, sales channels in the foreign market, and a complementary product portfolio.

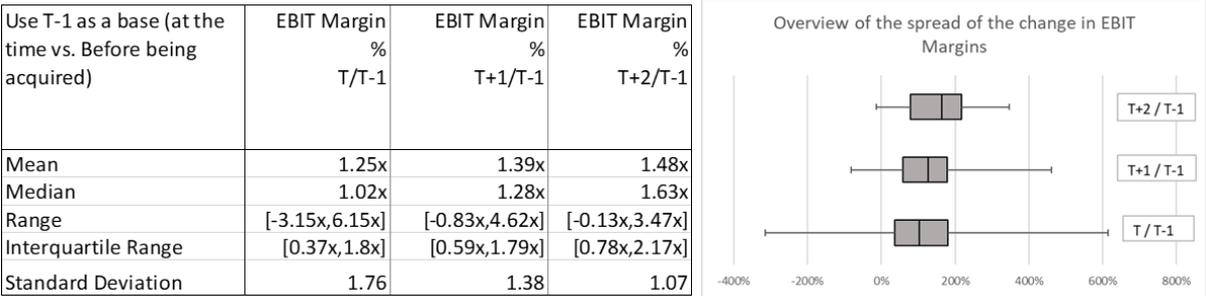
4.2. Post-acquisition considerations: How do German companies develop regarding their financial situation and post-acquisition integration after being acquired by Chinese companies?

To answer the second research question on the post-acquisition considerations, we utilize the empirical data and the second part of the questionnaire and outline the findings in the following sections.

4.2.1. Empirical Analysis

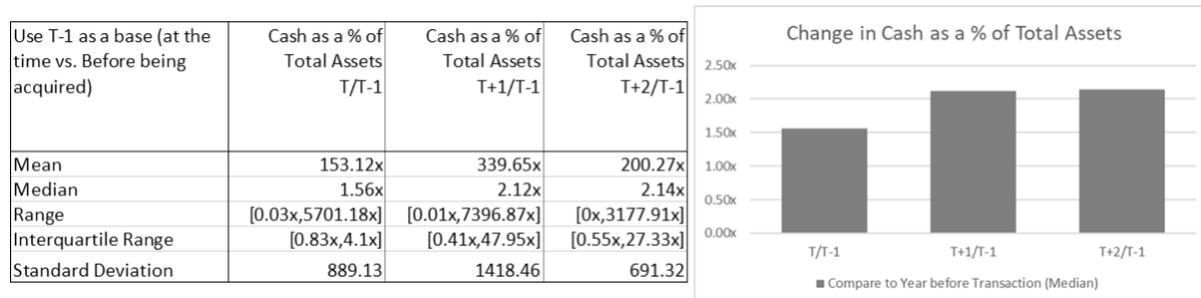
As aforementioned, we only looked at companies that remain as separate entities and contain financial information to ensure the comparability of post-acquisition performance. Since the majority of these target companies do not have strict financial reporting duties due to their legal forms, we have to accept the incompleteness of reported data and perform summary statistics on available fields and years.

Figure 10



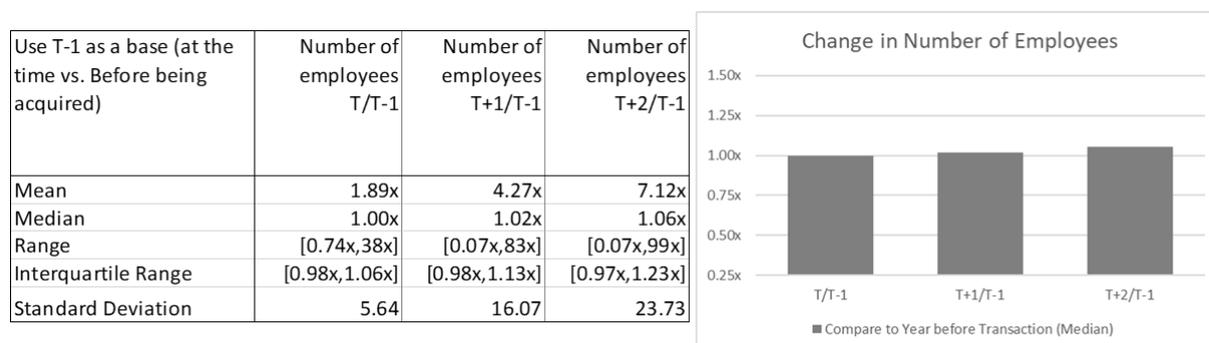
EBIT margin has been increasing on average for the target companies over the observed years. Overall there is not a material difference between the mean and the median, and the standard deviation is quite small. The range and the standard deviation are shrinking over time. It is worth noting that the targets had various operating profitability before being acquired but improve in a similar direction after being acquired by the Chinese, while converging the differences between the companies.

Figure 11



For the metric “cash as a percentage of total asset”, there is a big difference between the mean and the median. The extremely high standard deviation and wide interquartile range suggest that these 82 target companies have drastically different cash positions, especially in the first year after the acquisition. Overall, cash positions at these targets considerably improve, and the major increase usually happens right after the acquisition. The cash analysis supports one of the German motivations to be sold to the Chinese, namely receiving funding and capital injection (Knoerich, 2010).

Figure 12



The data points for number of employees in the observed years are quite dispersed, as can be seen from the difference between the mean and the median, the range, and the standard deviation. While looking at the median, the data shows no layoff but slow increases, which is in line with corporate growth. The standard deviation grows over time, suggesting that the Chinese acquirers tend to stabilize the workforce right after being acquired but their strategic can differ in later periods. This finding still supports the “light-touch” approach and the stabilizing concept from the literature (Liu & Woywode, 2012; Cogman et al., 2015).

Figure 13

Use T-1 as a base (at the time vs. Before being acquired)	Capital Structure (Debt based) % T/T-1	Capital Structure (Debt based) % T+1/T-1	Capital Structure (Debt based) % T+2/T-1	Long-term Debt as a % of Total Debt T/T-1	Long-term Debt as a % of Total Debt T+1/T-1	Long-term Debt as a % of Total Debt T+2/T-1
Mean	1.05x	0.88x	1.16x	2.66x	3.55x	6.10x
Median	0.98x	0.83x	0.84x	1.03x	1.21x	0.85x
Range	[0.29x,2.08x]	[0.23x,2.23x]	[0.3x,2.81x]	[0.34x,31.84x]	[0.02x,36.77x]	[0.07x,58.4x]
Interquartile Range	[0.88x,1.18x]	[0.66x,0.95x]	[0.66x,1.36x]	[0.87x,1.3x]	[0.86x,2.31x]	[0.68x,3.5x]
Standard Deviation	0.36	0.46	0.80	5.74	7.78	14.40

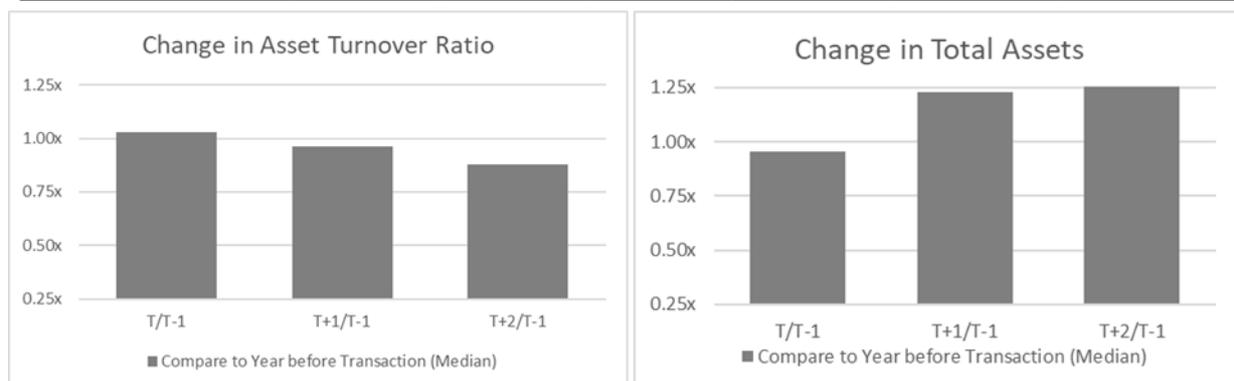


The metric “capital structure (debt based)” is constructed by dividing total debt by total assets.

By looking at the median, Chinese acquirers prefer to change the capital structure drastically and maintain it below the pre-acquisition level. The major improvement on the capital structure is often taken between the transaction year and one year after the acquisition. However, there is a slight increase in the year after. Looking within the debt structure, long-term debt holds a dominant portion. It is difficult to conclude that two years after the acquisition, the target companies reduce the weight on long-term debt by looking at the median (0.85x of the pre-acquisition level) because in the same period, we observe a six-fold increase in the mean.

Figure 14

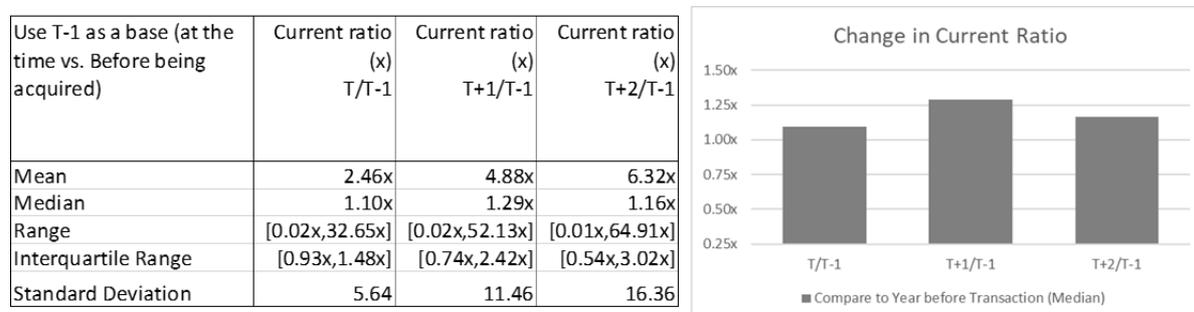
Use T-1 as a base (at the time vs. Before being acquired)	Asset Turnover Ratio (x) T/T-1	Asset Turnover Ratio (x) T+1/T-1	Asset Turnover Ratio (x) T+2/T-1	Total assets th USD T/T-1	Total assets th USD T+1/T-1	Total assets th USD T+2/T-1
Mean	1.30x	1.14x	0.94x	1.06x	2.12x	2.92x
Median	1.03x	0.96x	0.88x	0.96x	1.23x	1.34x
Range	[0.46x,5.8x]	[0.22x,5.74x]	[0.11x,1.84x]	[0.15x,3.38x]	[0.14x,13.88x]	[0.13x,27.59x]
Interquartile Range	[0.92x,1.22x]	[0.74x,1.05x]	[0.82x,1.06x]	[0.88x,1.06x]	[1.12x,1.52x]	[0.88x,2.23x]
Standard Deviation	0.94	1.14	0.37	0.55	2.65	5.77



Asset turnover ratio is calculated by dividing net income by total assets.

Asset efficiency seems to be worse despite the small increase right after being acquired. This result can be due to large increases in assets. An additional summary statistics test was run on total assets. The results from the metric “change in total assets” support the hypothesis that the asset base has increased in the years T+1 and T+2 with the assumption that the growth of total assets outpaces the growth of net income. Taking this into consideration, the decrease in asset turnover ratios in the later periods can be explained. The small increase right after acquisition can be due to fire-sales and liquidations of assets in distressed situations.

Figure 15



Current ratio has material improvements, which correspond to improved cash position as observed in the metric “cash as a percentage of total assets”. The greatest improvement happens right after being acquired and most of the sample reach best liquidity one year after the acquisition.

Figure 16

Use T-1 as a base (at the time vs. Before being acquired)	Solvency ratio (Asset based) % T/T-1	Solvency ratio (Asset based) % T+1/T-1	Solvency ratio (Asset based) % T+2/T-1
Mean	4.85x	1.29x	3.01x
Median	1.18x	0.91x	0.86x
Range	[0.24x,83.61x]	[-0.9x,8.75x]	[-0.21x,22.65x]
Interquartile Range	[0.98x,2.88x]	[0.16x,1.52x]	[0.27x,1.79x]
Standard Deviation	14.14	1.99	5.75

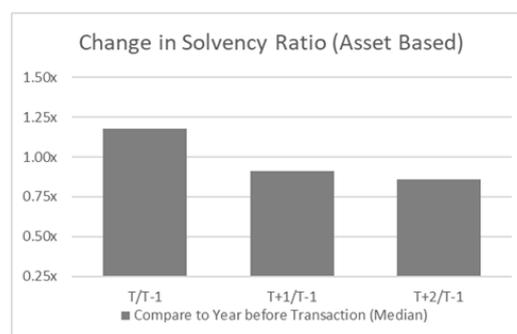


Table 11 Summary Statistics on Balance Sheet in T-1 (Year Prior to Transaction)

Summary statistics on Balance Sheet in T-1 (year prior to transaction)	Total assets th USD T/T-1	Total assets th USD T+1/T-1	Total assets th USD T+2/T-1	Total debt th USD T/T-1	Total debt th USD T+1/T-1	Total debt th USD T+2/T-1	Total Equity th USD T/T-1	Total Equity th USD T+1/T-1	Total Equity th USD T+2/T-1
Mean	1.06x	2.12x	2.92x	1.17x	1.95x	1.98x	1.91x	5.24x	7.99x
Median	0.96x	1.23x	1.34x	1.00x	1.25x	1.08x	0.95x	1.12x	1.20x
Range	[0.15x ,3.38x]	[0.14x ,13.88x]	[0.13x ,27.59x]	[0.35x ,4.79x]	[0.45x ,8.49x]	[0.32x ,6.95x]	[-31.61x ,73.62x]	[-1.55x ,69.85x]	[-1.87x ,77.83x]
Interquartile Range	[0.88x ,1.06x]	[1.12x ,1.52x]	[0.88x ,2.23x]	[0.82x ,1.07x]	[0.81x ,1.48x]	[0.88x ,1.73x]	[0.65x ,1.19x]	[0.84x ,2.01x]	[0.66x ,2.09x]
Standard Deviation	0.55	2.65	5.77	0.94	2.13	1.92	12.73	14.52	20.65

Solvency ratio (asset based) equals total debt divided by total assets.

By looking at the metric “solvency ratio (asset based)” alone, it is hard to draw a conclusion of how the target companies’ solvency changes after the acquisitions because in the years T+1 and T+2, the median indicates a lower than pre-acquisition number, which means improved solvency, but the mean suggests the opposite. Thus, it is important to look at the numerator and the denominator of this metric. We ran additional summary statistics on the balance sheet items, namely total assets, total debt, and total equity. The key finding is that all three components grow in the years after the transaction year. However, they grow at different speed and the standard deviation can be high. Thus, no clear conclusion can be reached, and we might see a stronger trend once it is possible to extend the analysis beyond two years after the acquisition.

4.2.2. Evidence from the Questionnaire

A few answers to the post-acquisition questions show a consistent theme of the “light-touch” approach, a term coined by Liu and Woywode (2012) when they examined precisely Chinese M&A in Germany from 2008 to 2010. The style of keeping the domestic management and the brand and retaining high autonomy at the target level can be called “hands-off” approach or the partnering approach in the literature review (Backaler, 2014; Kale & Singh, 2012). AutoCo kept the same German management team, left the German CEOs in charge, and only got involved in big strategic decisions in all three acquisitions.

After the acquisitions, the top priorities for AutoCo are unswervingly R&D collaboration (3) and increase sales volume in each other’s markets (3). These priorities

confirm the goals of emerging markets, and especially China, in the realms of joint product and technology development, and market seeking (Kang & Johansson, 2000; Forbach, 2014; Liu & Woywode, 2012; Yin, 2015).

To achieve these goals, AutoCo has made several improvements by reducing costs at the German subsidiary (2), more specifically by reducing the cost of raw material for GermanThree, opening new production plants in Germany (1), setting up new production plants in China for the subsidiary (2), and collaborating on R&D (3). As described above, AutoCo has taken many steps to realize potential synergies and its efforts exceeded that of Chinese acquirers on average in the studies of Forbach (2014). It is different because the German management teams from the cases in the previous studies were rarely completely satisfied with realized synergies (Forbach, 2014). There are three possible explanations for this difference. First, it is possible that the Chinese management and the German management have different expectations and thus evaluate satisfaction differently. For example, it may suggest that the German management teams need more synergy realization than the Chinese management teams to be satisfied. The second explanation can be that the cases we looked at in the questionnaire had gone more successfully than the cases presented in the studies on average. To further strengthen our argument, we can ask the management of the German subsidiaries for their view. Lastly, the time factor can possibly explain the difference. The two studies presented in the Literature focused on the M&A experience from 2004 to 2012 and AutoCo made acquisitions from 2011 to 2014. As mentioned earlier, there are distinct characteristics between the first Chinese Merger Wave in Germany (2002-2008) and the second Chinese Merger Wave in Germany (2010-present). Thus, the studies can draw out more characteristics of the first Merger Wave and AutoCo's experience is more representative for companies in the second Chinese Merger Wave, resulting in incomparability.

Compared with the level of synergy realization above, the level of labor exchange is low. For the three acquisitions in question, AutoCo's decisions varied as there is no change (1), Chinese employees allocating to Germany (1), and German employees allocating to China (1). Relevant literature suggests that personnel mobility is the most common implementation although the direction and the degree of labor exchange are not clearly observed in these acquisitions (Forbach, 2014; Liu & Woywode, 2012).

AutoCo said that the benefits from these acquisitions include market access for increasing sales (2), learning technological know-how from German engineers (1), knowledge-transfer between management teams (1) and R&D collaboration (3). These benefits match the key motivations for the acquisitions. Both market access for increasing

sales and R&D collaboration are on the top of the list for motivations and priorities. In the case of GermanOne and GermanOneSub, learning technological know-how from German engineers is achieved by allocating Chinese employees in Germany. Surprisingly, knowledge-transfer between management teams is one of the benefits realized after the acquisitions because it is generally not mentioned in the discussions of goals, motivations, or top priorities.

Not only the Chinese parent company but the German subsidiaries benefit from the transactions. AutoCo explained the benefits for the German subsidiaries, namely through cash injection (3), access to sales channels in China (1), and access to low-cost production in China (3). As a result, the German companies fulfil their goals and motivations such as funding, access to the Chinese market and lower-end markets (Knoerich, 2010; Gentile-Lüdecke, 2013). The benefit of cash injection is supported by the quantitative analysis presented earlier and captured by the metric “cash as a percentage of total assets” in the post-acquisition financial development.

There is a lack of studies in the current literature that ask the Chinese perspective about their satisfaction level of the collaboration and integration post-acquisition. By asking questions on these topics, we fill in the gap and contribute to research. In all three cases, AutoCo deemed the post-acquisition cooperation with the German management to be good. This statement complements the similar view of the German management, which was introduced in the literature review. AutoCo was happy with the post-acquisition integration at all three Germany subsidiaries. According to relevant literature, the German companies were happy about the transactions overall except for few bad examples (Liu & Woywode, 2012; Forbach, 2014). Due to time constraint, we were not able to reach out to the German management teams at AutoCo’s subsidiaries. Connecting the general post-acquisition satisfaction from the German side in the literature with all the improvements made and high autonomy under the “light-touch” approach in AutoCo’s case, it is not a stretch to assume that the German management teams in question are also content with the collaboration and integration. Furthermore, McKinsey pointed out that Chinese acquirers lacked the competences to integrate in the past and the typical Western approach to post-merger integration might not work for the Chinese investors (Cogman et al., 2015). In recent years, Chinese companies have acknowledged the importance of integration and have developed concrete integration plans.

Comparing the second and the third transactions to the first one, AutoCo thought the second acquisition was smoother and the third acquisition was about the same difficulty level.

This answer cannot confirm nor deny that the accumulation of cross-border M&A experience helps Chinese companies in later acquisitions.

In the open-ended question about how the cooperation with the German management can be further improved, AutoCo emphasized again the importance of utilizing the advantage of low-cost production in China (3), establishing collaborations on R&D (3), creating effective complementary advantages in the areas of production and sales (2), and taking advantage of governmental friendly policies and setting up new factories in China for the subsidiary (1) in order to expand into the European market (2), increase shares in the global market (2), and improve the company's global competitiveness (2). Here AutoCo did not mention any issue with cultural integration, which is a repeating topic in the key post-acquisition integration challenges in the literature. It is possible that the Chinese companies focus more on the mutual benefits and create a "win-win" situation, thus diverting the negative impact from cultural clashes.

4.2.3. Summary of Key Findings on Post-acquisition Considerations

From analyzing the post-acquisition financial development of the 82 companies, we have the following findings. First, the target companies had widespread EBIT margins before they were acquired but improve slowly and converge gradually in the years post-acquisition. Secondly, the increased cash positions confirm that cash injection is a common action taken by the Chinese acquirers as laid out in the literature. Consequently, liquidity improves as current ratio increases. Thirdly, a fairly steady number of employees provides no evidence for labor layoffs, which are a top concern for the German public. Lastly, capital structure improves while at the same time all major balance sheet components - total assets, total debt and total equity - increase at different rates, indicating changes in the target companies' operations.

Many of the inputs from the questionnaire results on post-acquisition considerations are relevant and partially unique. Firstly, the "light-touch" approach suggested by the literature is confirmed as AutoCo left the original German management in charge and gave high autonomy to the subsidiaries. Secondly, steps towards realizing synergies include reducing costs at the targets, setting up new production plants in China for the targets and R&D collaborations. This exceeds what has been observed in general in the previous study of Liu and Woywode (2012). Thirdly, key benefits for AutoCo are access to new markets aimed at increasing sales and the opportunity to gain technology know-how from German engineers and transfer knowledge between managements. Key benefits for the German subsidiaries

contain cash injection, access to sales channels and low-cost production in China. Lastly, the new finding with regard to the overall satisfaction of the Chinese acquirer constitutes a contribution to previous literature since the focus has never been on the Chinese angle. Moreover, AutoCo did not express concerns related to cultural integration, which is a common argument brought up by the literature.

5. Conclusion

The answer to the first research question is derived from the analyses on the industry reports, empirical data, and pre-acquisition part of the questionnaire to highlight the common characteristics of the German target companies and the key motivations of the Chinese acquirers. We observe that Chinese acquirers specifically targeted German manufacturing companies and the preference is followed by companies in the Services industry. Furthermore, there is a tendency of acquiring larger sized companies. Captured by the 82 companies with available financial data, we discover that on average, target companies had a low EBIT margin and a poor capital structure with implied negative equity. Thus, the financially troubled characteristics of the target companies extend beyond the first Chinese Merger Wave in Germany and still prevail in the second Merger Wave, which does not support the argument of Chinese companies switching to financially healthier companies since 2010, presented by Gentile-Lüdecke (2013). Moreover, the questionnaire we used is a new method of obtaining information from the Chinese perspective. The answers from AutoCo confirm that key traits such as technology, access to an international market and complementary products are desirable in the German target companies. However, despite brands being one of the top motivations mentioned in the literature, it was not relevant at all for any of the transactions in question. This finding leads to a debatable role of brands as a key consideration for Chinese M&A activities in Germany. Other findings worth noticing are that the incentives from the Chinese government were a non-determining factor of the acquisitions and that oversea acquisitions were an integral part of Chinese corporate transitions, which demystifies the common perception seen in the media and supports the similar view in the McKinsey report (Cogman et al., 2015).

The answer to the second research question regarding the financial and post-acquisition integration development of the German target companies comes from the analyses of empirical data using the year prior to the acquisition as a base and the post-acquisition part of the questionnaire. EBIT margins of the available 82 companies improve and the initial widespread difference between companies' EBIT margins converge over the observed time period. The cash positions enhance, which supports the point of cash injection by the Chinese investors in the literature and lead to the consequently improved liquidity on the target level. There are no layoffs of employees on average and thus counterargues the key concern prevailed in the media among the German public. The capital structures also progress but it is difficult to pinpoint the driving force as all balance sheet items grow at different rates. The questionnaire confirms the "light-touch" approach regarding keeping the original

management and giving the target companies high autonomy. Post-acquisition integration is in line with the key motivations related to R&D collaborations and increasing sales in both markets. AutoCo listed benefits for both German targets and Chinese acquirers, which correspond to the theoretical reasons why both sides agreed to an acquisition presented in the literature. Regarding the synergy realization, we find that AutoCo took actions that were introduced by the literature but the extent to which the actions were taken exceed the experience from the German target management in the literature. We have two new discoveries that were not discussed in the current literature: namely the high satisfaction level of transaction experience, post-acquisition integration and collaboration from the Chinese perspective and the nonexistent challenges resulting from cultural integration.

Limitations

The intention of this thesis is to analyze Chinese M&A activities in Germany from 2002 to the time when this thesis was written and not to predict future activities. Therefore, the findings are strictly specific to the time period of examination.

Unfortunately, it is impossible to compare 82 companies with a peer group for both pre-acquisition financial characteristics and post-acquisition financial development because the 82 companies are comprised of targets that belonged to different industries, sizes, and acquisition years. Therefore, the results presented in this thesis are subject to macroeconomic influences and the improved financial development might not entirely be accredited to Chinese acquirers' actions. Furthermore, due to the small scope of Chinese M&A activities in Germany in absolute deal numbers, regressions and deeper financial analysis are not feasible to conduct. Looking at the results, one might argue that there is a selection bias because we pulled financial data only for companies that still remained as a separate entity. However, this is due to the fact that financial data available from the databases only exist for companies that reported their financials and are not fully dissolved into the parent companies. Given around two-thirds of the original 130 Category 1 First Time Majority Acquisitions were captured by our analysis, we deem the impact of such selection bias to be non-material.

Regarding the questionnaire, we could only examine a limited number of transactions due to the timeframe of this thesis and the geographic distance between the authors and the recipients.

Suggestions for Future Research

Since the phenomenon of Chinese M&A activities in Germany only reached a substantial deal volume in 2016, we believe that in a few years, there will be financial data available for a bigger sample size. Consequently, it will allow the subsamples to be more refined in terms of size, industry, and acquisition year, and large enough for a direct comparison with their correspondent peer groups. In addition, it will be possible to analyze long-term financial development for the German target companies. In the near future, one can compare the characteristics and financial development between categories identified in this thesis, such as between first time majority acquisitions and joint ventures. Lastly, we tried to provide quantitative evidence of increased R&D collaborations between the Chinese parent company and the German subsidiary by collecting data on R&D expenses as a percentage of operating revenue and numbers of patents. Sadly, before the publication of this thesis, such analysis cannot be performed due to data limitation and can be considered as one of the future research topics.

Future research can be done on analyzing the experience about the transactions, post-acquisition collaboration and integration from both the German and the Chinese perspectives in the same transactions. Another topic can be on examining the driving factors for the difference in the satisfaction level of realized synergies between the parent company and the subsidiary, possibly by comparing the cultural backgrounds of the acquiring companies.

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7. Appendix

Table 12 Name Changes in the Subsample

Name Appeared on SDC and Zephyr	Name Appeared on Amadeus and Bloomberg
Industrial Acoustics Co GmbH	INDUSTRIAL ACOUSTICS COMPANY GMBH
Hermann Vogt GmbH & Co	HERMANN VOGT GMBH & CO. KG
KOCH H&K INDUSTRIEANLAGEN GMBH	ALPINE METAL TECH GERMANY HOLDING GMBH
Schimmel Pianofortefabrik	WILHELM SCHIMMEL, PIANOFORTEFABRIK, GESELLSCHAFT MIT BESCHRÄNKTER HAFTUNG
Laurel GmbH Laurèl GmbH	LAURÈL GMBH
Ayanda GmbH & Co KG	AYANDA GMBH
Laukoetter Dessau GmbH	TEDA LAUKÖTTER TECHNOLOGIE GMBH
mdexx Holding GmbH	MDEXX GMBH
Truck-Lite Europe GmbH	REBO LIGHTING & ELECTRONICS GMBH
Robert Bosch Starter Motors	ROBERT BOSCH STARTER MOTORS GENERATORS GMBH

Table 13 Common Timeline

Common Timeline of the 82 Target Companies				
Transaction year:	T-1	T	T+1	T+2
2008	2007	2008	2009	2010
2011	2010	2011	2012	2013
2012	2011	2012	2013	2014
2013	2012	2013	2014	2015
2014	2013	2014	2015	2016
2015	2014	2015	2016	2017
2016	2015	2016	2017	n/a
2017	2016	2017	n/a	n/a

Figure 17

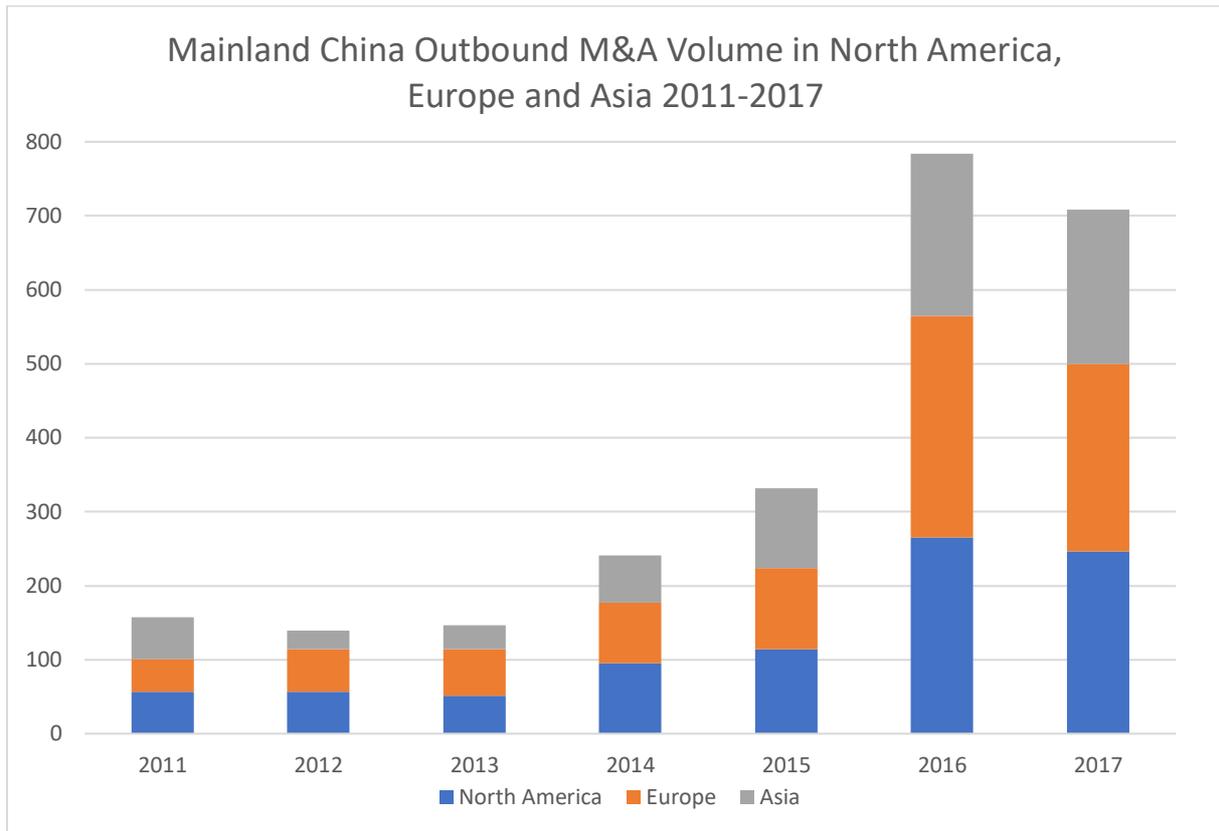
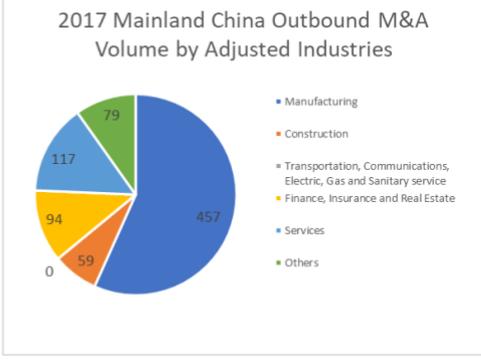
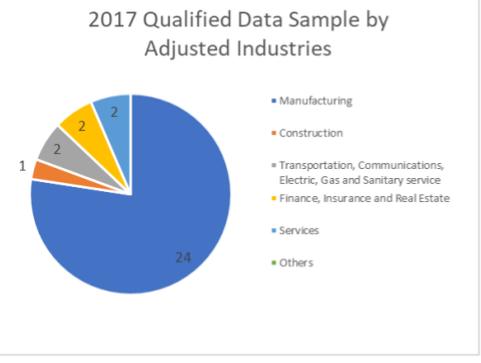
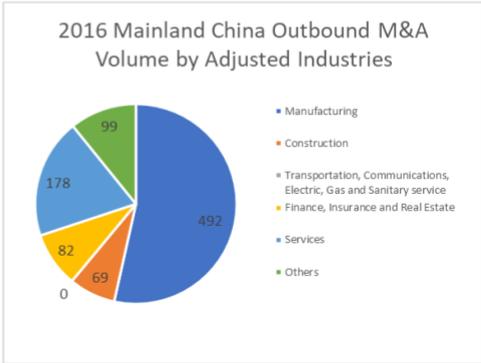
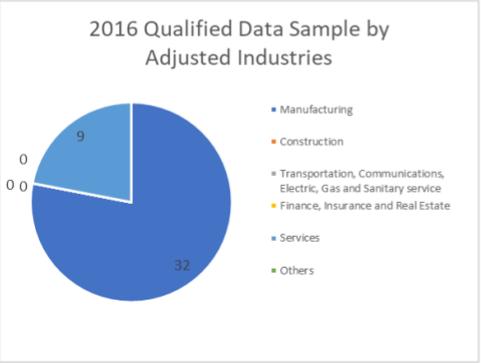
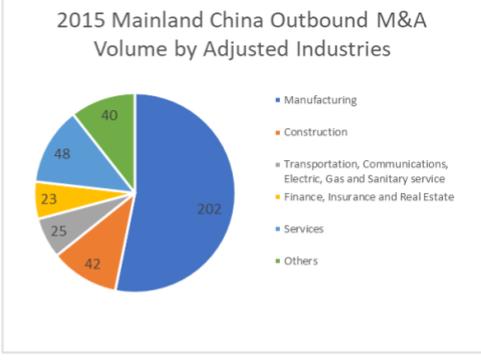
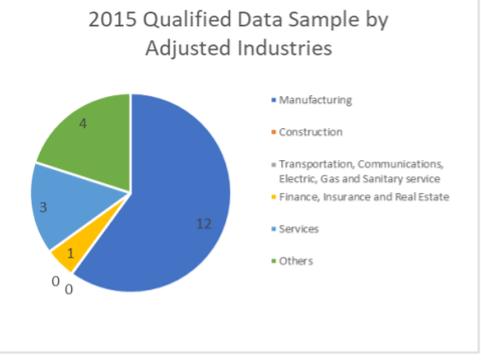
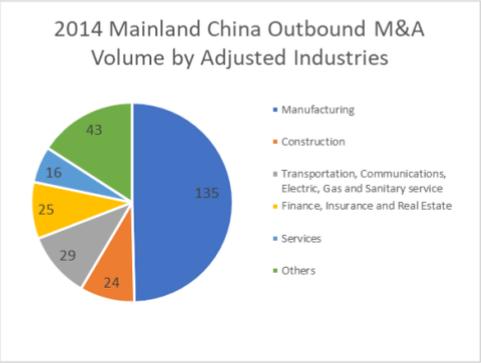
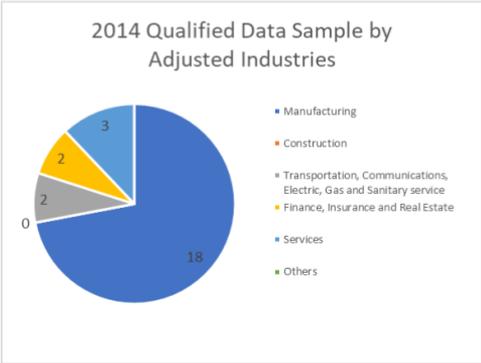
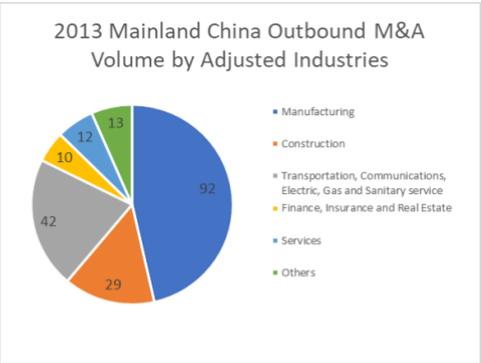
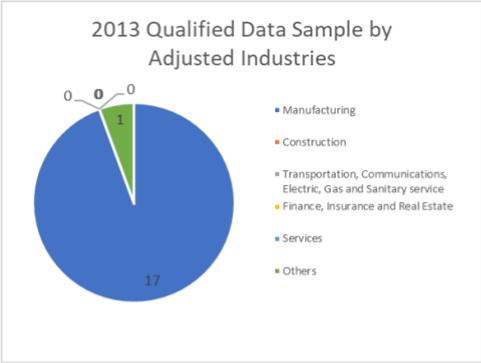
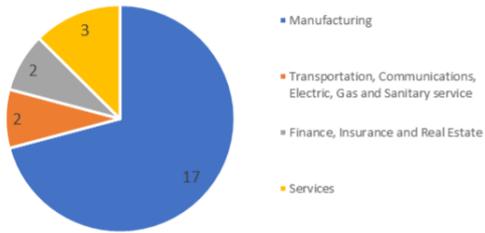


Figure 18

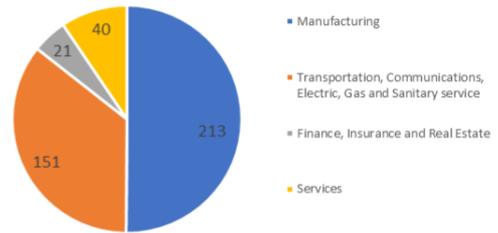




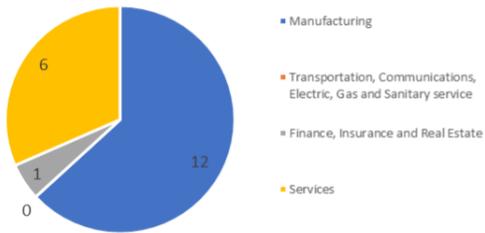
2014 Qualified Data Sample by Adjusted Industries



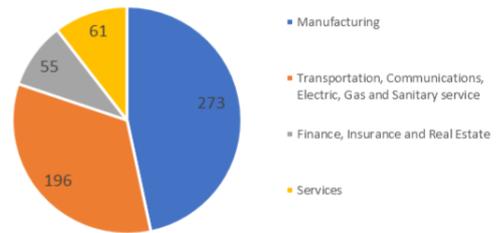
2014 German Inbound M&A Volume by Adjusted Industries



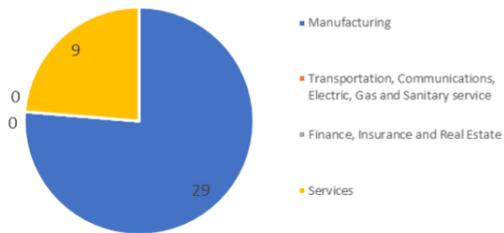
2015 Qualified Data Sample by Adjusted Industries



2015 German Inbound M&A Volume by Adjusted Industries



2016 Qualified Data Sample by Adjusted Industries



2016 German Inbound M&A Volume by Adjusted Industries

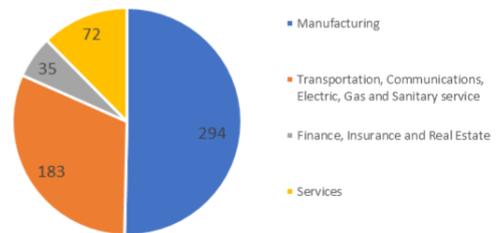


Figure 19

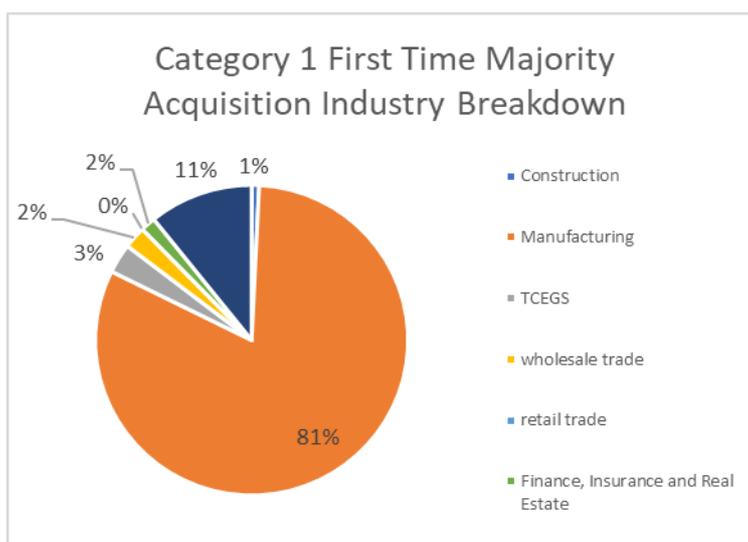


Table 14 Overview of Financial Metrics Calculation

Examples of Metrics	Calculation
"EBIT Margin %"	Directly extracted from Amadeus or Bloomberg
"Cash as a % of Total Assets"	$\frac{\text{Cash \& Cash Equivalent}}{\text{Total Assets}}$
"Number of employees"	Directly extracted from Amadeus or Bloomberg
"Capital Structure (Debt based) %"	$\frac{\text{Total Liabilities}}{\text{Total Assets}}$
"Long-term Debt as a % of Total Debt"	$\frac{\text{Total Long Term Liabilities}}{\text{Total Liabilities}}$
"Asset Turnover Ratio (x)"	$\frac{\text{Operating Revenue}}{\text{Total Assets}}$
"Current ratio (x) "	Directly extracted from Amadeus or Bloomberg
"Solvency ratio (Asset based) %"	Directly extracted from Amadeus or Bloomberg

Table 15 Calculation of Change in Financial Metrics

Examples of Metrics	Calculation
"EBIT Margin % T+2/T-1"	$\frac{EBIT\ Margin\ \%_{T+2}}{EBIT\ Margin\ \%_{T-1}}$
"Cash as a % of Total Assets T+2/T-1"	$\frac{Cash\ \&\ Cash\ Equivalent_{T+2}/Total\ Assets_{T+2}}{Cash\ \&\ Cash\ Equivalent_{T-1}/Total\ Assets_{T-1}}$
"Change in Cash Ratio % T+2/T-1"	$\frac{Cash\ \&\ Cash\ Equivalent_{T+2} - Cash\ \&\ Cash\ Equivalent_{T-1}}{Total\ Assets_{T-1}}$
"Number of employees T+2/T-1"	$\frac{Number\ of\ Employees_{T+2}}{Number\ of\ Employees_{T-1}}$
"Capital Structure (Debt based) % T+2/T-1"	$\frac{Total\ Liabilities_{T+2}/Total\ Assets_{T+2}}{Total\ Liabilities_{T-1}/Total\ Assets_{T-1}}$
"Long-term Debt as a % of Total Debt T+2/T-1"	$\frac{Total\ Long\ Term\ Liabilities_{T+2}/Total\ Liabilities_{T+2}}{Total\ Long\ Term\ Liabilities_{T-1}/Total\ Liabilities_{T-1}}$
"Asset Turnover Ratio (x) T+2/T-1"	$\frac{Operating\ Revenue_{T+2}/Total\ Assets_{T+2}}{Operating\ Revenue_{T-1}/Total\ Assets_{T-1}}$
"Current ratio (x) T+2/T-1"	$\frac{Current\ Ratio_{T+2}}{Current\ Ratio_{T-1}}$
"Solvency ratio (Asset based) % T+2/T-1"	$\frac{Solvency\ Ratio\ (Asset\ based)_{T+2}}{Solvency\ Ratio\ (Asset\ based)_{T-1}}$