

Hochschule für Telekommunikation Leipzig (FH)

Abschlussarbeit zur Erlangung des akademischen Grades

Bachelor of Science

im Studiengang Wirtschaftsinformatik

Thema: Exploring the Offshoring Approach of German Companies
Compared to the U. S. American Approach

Vorgelegt von: Veronika Lawrence

geboren am: 31. Oktober 1991
in: Starnberg
Matrikelnummer: 134130

eingereicht am: 15. Oktober 2016

Themensteller: T-Systems International
Systems Integration
SAP Technology & Analysis

Erstprüfer: Prof. Dr. Christian Czarnecki

Zweitprüfer: Dipl.-Ing. Thomas Vogt

Contents

	Page
List of Figures	4
List of Tables	5
List of Acronyms	6
1. Introduction	7
2. Offshoring in Literature	8
2.1. Definition and Terms	8
2.2. Factors for the Development of Offshoring	9
2.3. Offshoring in the USA	11
2.4. Offshoring in Germany	17
2.5. Significant Differences between Germany and the USA	21
3. Case Studies	23
3.1. Interview Technique	23
3.2. A German Project Manager on Offshoring with Different Service Providers	25
3.2.1. Background	25
3.2.2. Results of Interview	25
3.2.3. Conclusions	27
3.3. An Indian Offshoring Pioneer Comparing German and U.S. Clients	28
3.3.1. Background	28
3.3.2. Results of Interview	28
3.3.3. Conclusions	31
3.4. Ingo Kümmitz	31
3.4.1. Background	31
3.4.2. Results of Interview	31
3.4.3. Conclusions	31
3.5. Subir Purkayastha	31
3.5.1. Background	31
3.5.2. Results of Interview	31
3.5.3. Conclusions	31
3.6. Summary and Evaluation	31
4. Conclusions and Limitations	32
References	33
Appendix	36

List of Figures

1.	Definition of terms, based on Antràs and Helpman, 2004, pp. 552f	9
2.	Size of U.S. companies by number of employees	13
3.	Number of employees per company size in the U.S.	14
4.	U.S. import of ICT services	15
5.	Results of 2012 Survey of Business Owners - U.S. Census Bureau	16
6.	Percentage of SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)	19
7.	Percentage of employees in SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)	19
8.	Interview process	23
9.	Direct, personal relationships between customer, on-site team and offshore team	25
10.	Hierarchical communication between customer and offshore team	26

List of Tables

1. Definition of company sizes 11
2. Comparison of German offshoring approaches according to M. Scheitza . . 27

List of Acronyms

SMEs small and medium enterprises 4, 19, 20, 21, 29, 39

FDI foreign direct investment 8, 17, 20, 21, 30, 39, 43

WWII Second World War 9, 12, 17

WTO World Trade Organization 10

NAFTA North American Free Trade Agreement 10, 13

EEC European Economic Community 10, 17

ICT Information and Communication Technology 10, 11, 15

ARPANET Advanced Research Projects Agency Network 12

BEA Bureau of Economic Analysis 16

GDR German Democratic Republic 17, 18

FRG Federal Republic of Germany 17

NATO North Atlantic Treaty Organization 17

GDP gross domestic product 21

SLA service level agreement 26, 28, 37, 39

KPI key performance indicator 26, 37

AMS Application Management Service 43

1. Introduction

2. Offshoring in Literature

Offshoring has been widely studied in the past decades. There are two major branches of research: the first describes reality through statistics or case studies (e.g. Rottman and Lacity, 2008 and Pedersen et al., 2013) while the second branch designs trade models to explain the discovered correlations (e.g. Antràs and Helpman, 2004, Grossman and Rossi-Hansberg, 2008 and Helpman, 1999).

This wealth of existing knowledge has been used for the following section, where the relevant terms of the subject are defined first. Furthermore, a brief history of offshoring is given before describing offshoring in the USA first, then offshoring in Germany.

2.1. Definition and Terms

In existing literature, there is no single definition of the term offshoring nor one precise delimitation to the term outsourcing. Both terms refer to sourcing decisions in companies.

For example, according to Knolmayer, 2007, pp. 1f, outsourcing is buying services from other companies. Offshoring is defined as a special form of outsourcing, in which the service is bought from a foreign company. On the other hand, Alebrand, 2013, p. 2 defines outsourcing and offshoring as mutually exclusive: outsourcing is the provision of services by external companies, offshoring is the internal execution of tasks in a foreign country.

These contrasting definitions may serve as an example for the lack of distinct terms in this field of research. Nevertheless all the definitions agree that outsourcing pertains to external service provision and offshoring refers to service provision in a foreign country. This Bachelor's thesis will use the following definition of the term offshoring by Andersson, Karpaty, and Savsin, 2016, p. 321:

“Offshoring [is the] disintegration of the firms’ production processes across national borders[...]”

This means, offshoring is not only a description for the state of an organization, but also the process of relocating business processes.

The term outsourcing is derived from “Outside Resource Using” (Specht and Lutz, 2007, p. 46). It is acquiring intermediate inputs from external businesses (Specht and Lutz, 2007, p. 46).

Therefore, the terms offshoring and outsourcing do not have a direct relation; both terms are independent from each other and describe different possibilities of entrepreneurial organization. In figure 1, the delimitation between outsourcing and offshoring is clearly shown. A company can choose to offshore, outsource or both; every single possibility has

its own term. Offshoring, in the context of this thesis, means foreign outsourcing and foreign direct investment (FDI), unless otherwise specified.

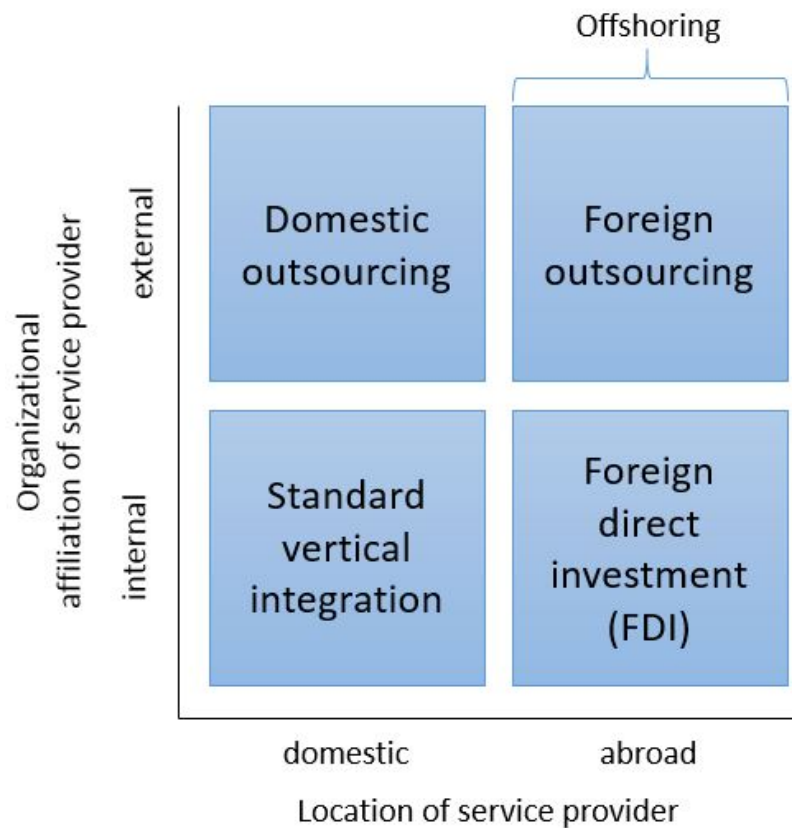


Figure 1: Definition of terms, based on Antràs and Helpman, 2004, pp. 552f

Some publications add a geographical dimension to their definition of offshoring. Jahns, Hartmann, and Bals, 2007 state that there must be shores between the customer and the supplier in order to call the transaction offshoring, otherwise the correct term would be Nearshoring. Cappallo and Da-Cruz, 2006 postulate a need for a relatively high distance ("relativ hohe räumliche Distanz", p. 487) between the partners. Dressler, 2007 defines offshoring only as transaction between partners on different continents. Given the ambiguous and arbitrary nature of the distinction between offshoring and nearshoring, this thesis refrains from using the term nearshoring. All provision of services outside the captive country of a company are called offshoring.

2.2. Factors for the Development of Offshoring

Globalization, and offshoring as part of the development, had its early beginnings in the 1970s and gained traction once the Iron Curtain had fallen in 1989 (Sachs and Warner, 1995, p. 1). This section describes the various factors that enabled the development of offshoring to the point it is today.

Political and Historical Developments After the end of Second World War (WWII), countries belonged to one of three distinct sectors of the world: the capitalist western countries, communist eastern countries or developing countries that sought a way to not get crushed between the two super powers and proclaimed state-led industrialization, a third way between capitalism and communism. (Sachs and Warner, 1995, pp. 12f)

With the majority of world population in countries without market-based economic mechanisms in place and most of the currencies not freely convertible, international trade was basically nonexistent in the post-war world. While western countries systematically restored their trade relations, developing countries were much slower to open their economic systems to international trade. By 1994, most countries had opened their trade policies through removing trade barriers, ensuring the free convertibility of their currencies and disestablishing state monopolies. (Sachs and Warner, 1995, pp. 12-25)

In the last twenty years, global trade relations have only increased. Trade agreements and organizations such as the World Trade Organization (WTO)¹, the North American Free Trade Agreement (NAFTA)² or the European Economic Community (EEC)³ (a predecessor of the European Union) further facilitated global trade and created a stable environment for long-term business agreements across borders.

Information and Communication Technology Innovations in Information and Communication Technology (ICT) have been paramount in enabling offshoring. Beginning with the invention of the first computer in 1941, the rapid development of computing power, data storage and particularly data transmission removed the need for local completion of tasks. The Internet necessitated a quick standardization and modernization of communication systems on a global scale – the prerequisite for offshoring. (Hutzschenreuter, Dresel, and Ressler, 2007, pp. 9f and Jahns, Hartmann, and Bals, 2007, p. 93)

Organizational Factors In order to efficiently offshore tasks or processes, the work has to be well-defined and standardized. In this way, economies of scale can be fully utilized and completion of work can be managed across multiple involved companies or subsidiaries. (Hutzschenreuter, Dresel, and Ressler, 2007, p. 11)

The aforementioned developments in ICT remove the need for local presence of the service provider (Uno-Actu-Principle) for most services. Digitalization enables organizations to detach tasks from specific locations. In a first step, those tasks are centralized and standardized. The second step is often offshoring the tasks. (Hutzschenreuter, Dresel, and Ressler, 2007, pp. 12f)

¹For further information please see the website of WTO, <https://www.wto.org/>, visited on 05. August 2016

²Further information: <https://ustr.gov/trade-agreements/free-trade-agreements/north-american-free-trade-agreement-nafta>, visited on 05. August 2016

³Established 1957 with the Treaty of Rome <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV:xy0023>, visited on 05. August 2016

Company size is an important indicator when describing organizational factors. Therefore, in table 1 a delimitation is introduced according to recommendation of European Commission⁴.

Company category	Staff headcount	Turnover
Micro	< 10 and	$\leq \text{€ } 2 \text{ m}$
Small	< 50 and	$\leq \text{€ } 10 \text{ m}$
Medium	< 250 and	$\leq \text{€ } 50 \text{ m}$
Large	≥ 250 and	$> \text{€ } 50 \text{ m}$

Table 1: Definition of company sizes

Macroeconomic and Socio-Demographic Factors ICT developments, organizational and political factors are enablers for offshoring, but the main driver for offshoring decisions in companies are the differences in salaries, taxes, and interest rates between industrialized and developing countries that result in cost arbitrage. In Jahns, Hartmann, and Bals, 2007, p. 89, the example of engineering wages in 2000 is given: while German and American engineers earned \$31 and \$36 per hour, an Indian engineer made only \$6.5⁵ per hour⁶. It is obvious that companies want to use this disparity to their advantage.

In addition to the wage differences, socio-demographic factors such as education, motivation and age distribution in developing countries influence offshoring supply. High social prestige connected to working for large western companies contributes to a higher ratio of academics that apply for offshoring related jobs and motivates employees. Thus, the quality of work is often very good and may be better than in the original country. (Jahns, Hartmann, and Bals, 2007, p. 93)

In the following sections, those factors for both the USA and Germany will be examined. Furthermore, a quantification of offshoring will be attempted in order to provide a basis for the direct comparison of both countries in section 2.5.

2.3. Offshoring in the USA

“The United States is the world’s largest direct investor[...]”
(Kozlow, 2006, p. 3)

⁴EU recommendation 2003/361: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32003H0361&from=EN>, visited on 19. August 2016

⁵Figures are given with a decimal point.

⁶The authors refer to United Nations Secretary and Industry Labor Office (2002) as source of these wages, which could not be verified at the time of writing this thesis.

Offshoring originated in the USA and spread from there as a trend around the globe. This section explores the contributing factors from historical, organizational and macroeconomic angles. It is then completed by a quantitative evaluation of offshoring in the USA.

Political and Historical Developments The United States, with its country intact and victorious in WWII, emerged as one of two global super powers in the post-war world. On an economical level, the U.S. quickly confirmed its position as the world's richest country. Between 1940 and 1960, gross national product more than doubled from \$200 bn to \$500 bn. In the same time, large American corporations grew even larger in a wave of mergers, resulting in conglomerates with operations in a variety of industries. In this time, the first companies developed holdings overseas and, in that way, pioneered the development of offshoring. (Winkler, 1994b)

As confrontations between the Soviet bloc and the U.S. slowly escalated to the Cold War in the 1960s, the American government ran unprecedented research and innovation programs. Military-funded inventions such as ARPANET lay the groundwork for the development of the Internet (Leiner et al., 2003), while the race to space culminated in the first man on the moon in 1969. Surrogate wars, most notably Vietnam War, strained the national economy⁷, so that by the start of the 1970, the country was in a deep recession. The Dow Jones Index fell 36 percent between November 1968 and May 1970; in the same time, unemployment rates reached 6.6 %, and by 1973 inflation rose to 9 %. President Carter, elected in 1976, tried to turn the economy around by means of government spending and deregulation. (Winkler, 1994a)

In the 1980s, a trend that had started 50 years ago culminated in three-fourths of all employees working in the service sector. This trend has been facilitated and accelerated by availability and use of computers, a technology the U.S. government had made significant investments in since the 1950s. At the same time, classic industries such as automobile, steel and textile were suffering from increased competition. Combined with falling oil prices in 1982, a sharp recession had more than 10% of the population unemployed. President Reagan reacted with tax cuts and by 1984 the economy had turned around and entered a five-year period of growth. (Winkler, 1994c)

Relations between the superpowers began to normalize in the late 1980s. All over Eastern Europe, people were demonstrating for democratic reforms. In 1989, the Berlin Wall fell. With the end of the Cold War, the world was open for global trade again. (Winkler, 1994c)

To recap, the most important phenomena in recent U.S. history with respect to offshoring are:

- Quick economic recovery after WWII

⁷This section is focused on the economical circumstances that contributed to the development of offshoring. Therefore, social and societal effects of Vietnam War are not included for the sake of a stringent argumentation.

- The expansion of large, multi-industrial corporations
- Government investment in research, yielding the basis for offshoring enabling technology
- The tendency to react with increased spending to economic downturns
- Economic deregulation in the late 1970s
- Growing importance of the service sector

In 1993, U.S. congress approved North American Free Trade Agreement, the first free trade agreement of its kind, after a heated national debate. Labor unions insisted that NAFTA would lead to job losses, environmentalists worried that it would encourage companies to bypass controls on industrial pollution, and government argued, a greater exchange of goods and services would make the three participating countries⁸ more competitive in global markets(Winkler, 1994c). With this, the era of offshoring began.

Organizational Factors When analyzing organizational structure of U.S. economy, there is no way around the United States Census Bureau. Every five years, the authority conducts a Survey of Business Owners and Self-Employed Persons. The most recent installment selected 1.75 million businesses in 2012 asking for information regarding characteristics of the businesses and their owners. Data was then matched to existing information from the Internal Revenue Service and further census data⁹.

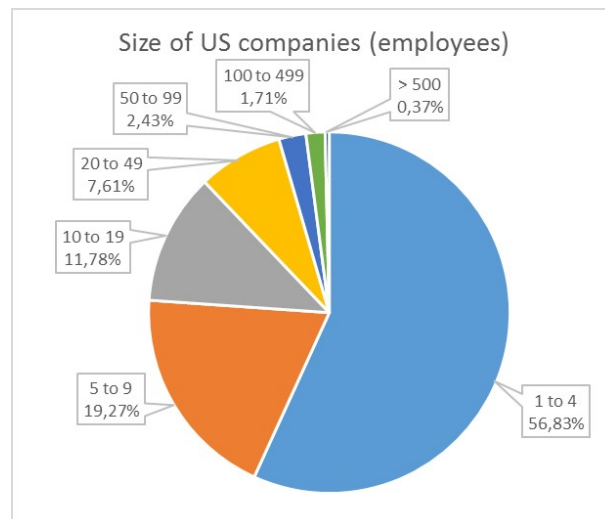


Figure 2: Size of U.S. companies by number of employees¹⁰

⁸USA, Mexico and Canada

⁹For a complete description of census methodology please refer to <http://www.census.gov/programs-surveys/sbo/technical-documentation/methodology/2012-sbo-methodology.html>, visited on 20. August 2016

¹⁰Data source: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SB0_2012_00SCB42&prodType=table, visited on 19. August 2016

In figure 2 the number of companies per size category is plotted on a pie chart. Remarkably, micro companies make up about three-fourths of all companies. Another fifth are small companies. As the U.S. Census Bureau uses a different scale to classify company sizes than presented in table 1, a delimitation between medium and large companies is not possible, but the low number of companies with more than 500 employees (17 724, or 0.33%) is noteworthy.

Before any conclusions are made, a different angle of analysis is added in order to gain a comprehensive view on U.S. economy.

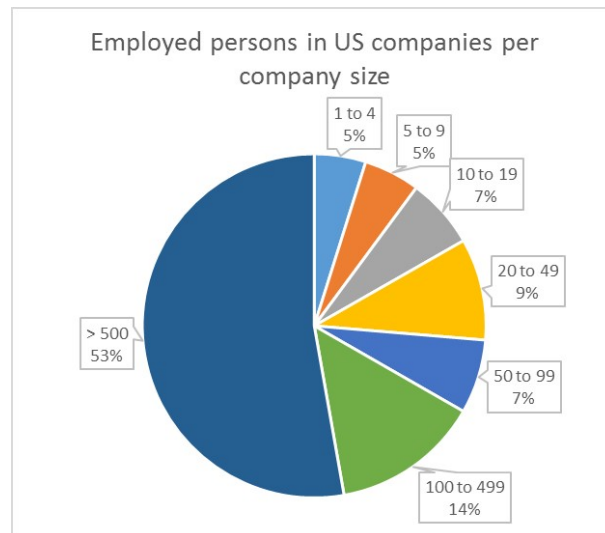


Figure 3: Number of employees per company size in the U.S.¹¹

In figure 3, the number of employees working in companies of each size categories is shown. The outstanding fact is that 53% of the working American population, 60 825 680 persons, are employed at the 17 724 companies with more than 500 employees. On the other hand, micro companies only employ 10% of working population.

This means that large companies have a significant influence on U.S. economy. As mentioned on page 12, in U.S. history there have been several waves of mergers that resulted in large, multi-industry companies (Winkler, 1994b). In consequence, many corporations that dominate global markets today are American (e.g. The Coca Cola Company, Procter & Gamble, General Electric).

Macroeconomic and Socio-demographic Factors The USA spans 9 984 670 square kilometers and five time zones¹². This makes the country the third largest in the world by area. (Central Intelligence Agency, 2016)

Therefore, U.S. citizens are already used to dealing with large distances and different time zones, maybe from working in a company that operates nationwide, maybe because

¹¹Data source: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SB0_2012_00SCB42&prodType=table, visited on 19. August 2016

¹²Considering no overseas territories.

friends or family live in different states. Cross-country relocations are fairly common, and TV air times are always given in the different time zones for the convenience of the viewers. Offshoring profits from this circumstance, because even though the distance to co-workers increases, the communication behaviors needed for collaboration across a distance are already in place.

Offshoring Quantified Offshoring originated in the USA in the early 1990s (Pisani and Ricart, 2016, p. 389). Even earlier, U.S. companies pioneered in foreign investment, for example by establishing production sites abroad (Kozlow, 2006, p. 5). Looking at the past 25 years, imports of services and especially imports of ICT services have grown exponentially. In figure 4], import volume for ICT services is shown. Short of a small decline in 2002, which can be explained with the burst of the Dotcom Bubble in the same year, volumes have consistently grown and tripled from \$12 bn in 1999 to \$36 bn in 2015. Since 2010, the growth has slowed down considerably. It remains to be seen if this trend persists or if it is just a small break that will make way to further growth.

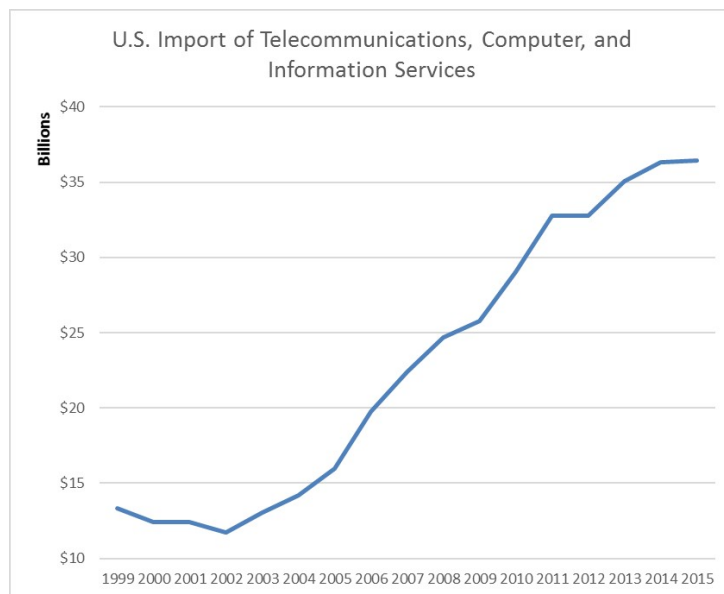


Figure 4: U.S. import of ICT services¹³

A comprehensive look at the prevalence of offshoring in the U.S. can be gained by consulting the Survey of Business Owners and Self-Employed persons. An overview of relevant findings is given in figure 5.

In this graph, for each company size there are several percentages given. First, the percent of firms that size which outsourced or transferred any business function or service to a company outside the U.S. is shown. Predictably, all but the biggest company size with more than 500 employees have a low share of companies that practice foreign outsourcing. However, even of the biggest companies, only 7.1 % have used this method of offshoring in 2012.

¹³Data source: www.bea.gov/newsreleases/international/trade/trad_time_series.xls, visited on 10. August 2016

Additionally, there are the percentages of revenue and number of employees of companies which outsourced outside of the U.S. in 2012 shown. In most size categories, companies have a bigger share of revenue than what would be suggested by their number. This leads to the conclusion that companies that outsource abroad earn more revenue than those which don't.

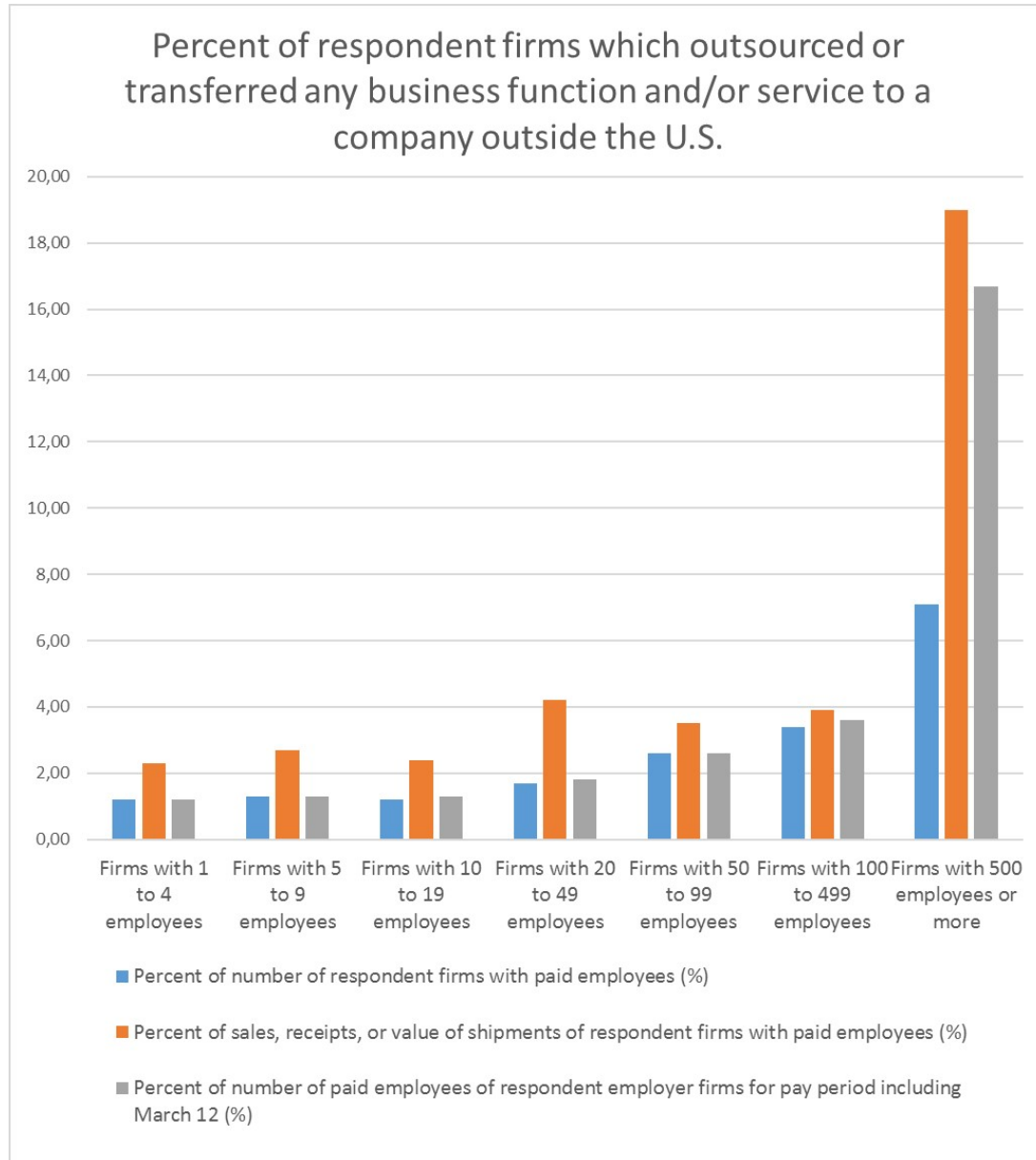


Figure 5: Results of 2012 Survey of Business Owners - U.S. Census Bureau¹⁴

Data regarding foreign direct investments of U.S. companies in context of offshoring is not as readily available; in fact, “[...]no U.S. government agency collects data on U.S. firms in such a way that it is possible to track a plant closing in the United States with a comparable plant opening in a foreign country. As a result, most data on the activity of U.S. firms shifting plants or jobs abroad are anecdotal.” (Jackson, 2013)

¹⁴Data source: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SB0_2012_00SCB42&prodType=table, visited on 19. August 2016

Often, one company may outsource to a different company in the U.S., which in turn could use a subcontractor in a different country. In this scenario, no company has actively shifted jobs abroad, but there is still an impact on the employment market. An estimation by Bureau of Economic Analysis (BEA) of job losses due to offshoring was 195 000 jobs per year from 1999 to 2001, which is only 1.5% of the 13 million jobs that were lost overall per year. (Kozlow, 2006, pp. 14ff)

It is expected that the share of U.S. companies which offshore through FDI is much higher than the 7.1% of large companies that use foreign outsourcing. In Hutzschenreuter, Dresel, and Ressler, 2007, pp. 167ff, a study of 231 American companies is presented. Of those, 60% have implemented offshoring. Considering the small sample size and the fact that only large companies have been invited to participate in the study (Hutzschenreuter, Dresel, and Ressler, 2007, pp. 199f) it can be assumed that this number is much lower. Unfortunately, research did not uncover a more precise estimation.

2.4. Offshoring in Germany

In this section, the main factors determining offshoring ventures of German companies will be explored, starting with a short excursion in recent history, then discussing organizational and macroeconomic and socio-demographic factors. At last, the scale of offshoring in Germany is quantified.

Political and Historical Developments In the aftermath of WWII, German economy was devastated. Vast areas of the country were destroyed by allied bombs, including cities and production plants. The country was divided into four military occupation zones, one of which would become the soviet-influenced German Democratic Republic (GDR) in 1949. (BBC, 2012)

In GDR, the Soviet Union undertook an extensive industrial dismantling, while similar plans had not been executed in the allied occupation zones, which in 1949 formed the Federal Republic of Germany (FRG). Still, reconstruction of West German economy progressed very slowly. Facing the threat of communist ideology spreading in Europe, U.S. Secretary of State Marshall established the “Marshall Plan”, which allowed participating countries to receive U.S. goods and raw materials while paying in their local currency. This was the foundation for a rapid growth of West German economy between 1950 and 1960, the so-called ‘Wirtschaftswunder’. (Kimmel, 2005)

The same time frame saw a deepening of the division of the country. While GDR joined the soviet Warsaw Pact in 1955, West Germany joined the North Atlantic Treaty Organization (NATO) in the same year and the EEC in 1957. This development culminated 1961 in the construction of the Berlin Wall. (BBC, 2012)

From an economic perspective, FRG had quickly become a valued trading partner and important exporter of industrial machine tools, automobiles, and chemical and engineering products to the western hemisphere. In spite of suffering from restrictions of the commu-

nist regime, GDR assumed a similar role in the communist part of the world, exporting machine tools, electronics and chemicals. The 1960s brought first signs of economic slowdown, in part due to the stop of intra-German migration from east to west that had supplied the west with skilled labor until 1961. Under the pressure of consolidation in the late 1960s, the new Grand Coalition in FRG increased regulation of the economy. (Solsten, 1995¹⁵)

By the 1980s, the intra-German diplomatic relationship had normalized to a point where it was possible for West Germans to visit the GDR. Soviet president Mikhail Gorbachev started reforms mid-decade in order to liberalize the Soviet Union and stabilize the economy. Even though these reforms were disapproved of by East German government, the news reached people in the GDR and encouraged opposition. In spite of facing rising repression by the government, opposition groups grew large enough to organize large public demonstrations in 1989. Additionally, many GDR citizens fled the country through neighbor states, particularly Hungary. East German government caved to the pressure and opened the Berlin Wall on 9. November 1989. The following year, West German Chancellor Kohl and the first freely elected GDR government created the legalistic and diplomatic prerequisites for reunification. On 3. October 1990, Germany was reunited. (Solsten, 1995¹⁶)

As the Cold War had ended, the path for even stronger European integration was clear. In 1992, twelve European nations signed the Treaty of Maastricht on European Union¹⁷, creating the European Union and prepared the introduction of a common currency with financial criteria that are to be met by each member in order to adopt the currency. The euro was introduced as an accounting currency in 1999 and in 2002 the original members of the Eurozone replaced their national currencies with euros.

Summing up, the most important historical developments for offshoring in Germany are:

- Strong focus on exports
- *Wirtschaftswunder* in the 1950s
- Government regulation of economy
- European integration
- Euro as common currency in the EU

¹⁵This book was accessed online, therefore page numbers can not be given. The cited information is found in chapters “The Economy” and “The Economic Miracle and Beyond”, <http://countrystudies.us/germany/134.htm> and <http://countrystudies.us/germany/137.htm>, visited on 22. August 2016

¹⁶Chapter “History: 1945 to 1990”, <http://countrystudies.us/germany/3.htm>, visited on 23. August 2016

¹⁷Further information can be found at EUR-Lex: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:xy0026>

Organizational Factors Germany's economy is largely influenced by small and medium enterprises (SMEs). Many companies have found their niche where they excel and dominate the market. Often, those companies are family-owned, managed by the owner(s) and rooted in their local community. These qualitative characteristics are not useful for statistical analysis, therefore, SMEs are defined by number of employees and revenue as shown in table 1.

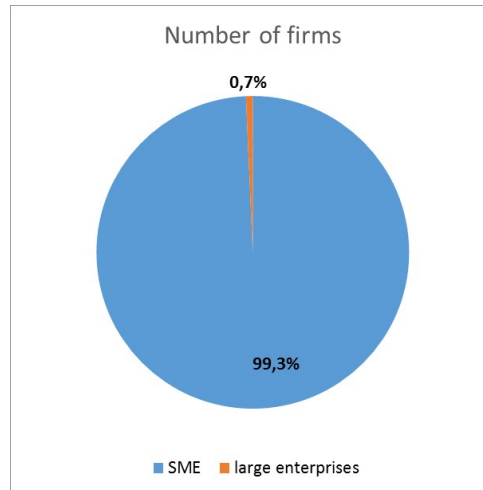


Figure 6: Percentage of SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)

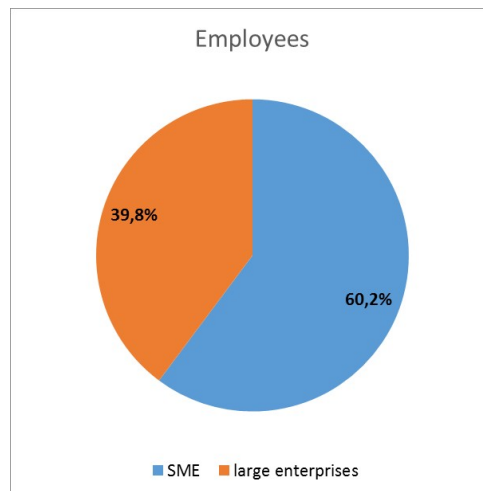


Figure 7: Percentage of employees in SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)

In figures 6 and 7, percentages of SMEs, large enterprises and their employees in 2011 are shown. The majority of German working population work in SMEs, so those are often seen as very important for growth and structure of German economy (Söllner, 2014, p. 40). Conversely, large enterprises are just 0.7% of all companies, but they earn 66.5% of revenues (Söllner, 2014, p. 42). Those companies are more likely to engage in offshoring, because economies of scale promise larger cost savings.

Historically, Labor Unions are very strong in Germany. Despite the fact that offshoring often does not have a fundamental impact on employment in the original country, Unions

often oppose offshoring plans and present a major obstacle to German companies who wish to offshore. Lengthy negotiations make it impossible for managers to move quickly and the result often hampers possible cost savings.

Both of those unique factors deter many German companies from offshoring, even though cost pressure has increased over the last two decades.

Macroeconomic and Socio-demographic Factors There are two¹⁸ basic systems of education in Germany. One is pursuing an academic degree, the other is vocational training in combination with adapted school that caters to the respective job description. This system ensures well-trained employees in both academic and non-academic jobs and is unique to Germany and Austria. As a result, employers can assume a certain level of domain knowledge in new employees. This results in shorter training times for new employees. On the other hand, knowledge transfer is often informal and not standardized or documented. Employees tend to hold their position for long times, building specialized knowledge in their working fields.

Germany, being a small and densely-populated country, is very conducive to local collaboration. SMEs especially are very focused on their main location and even in larger companies, employees tend to build location-specific networks. When facing a problem, the first approach to solve it involves finding and speaking to someone who had this problem before. This approach often is very successful, as fluctuation in more senior employees is low and the aforementioned specialized knowledge that is built up over the course of a career at a company. Also, there may be no alternative to relying on co-workers, because this kind of intrinsic knowledge remains often undocumented.

Offshoring Quantified According to Eickelpasch, 2015, p. 70, only 9.3 % of business services have been imported in 2010¹⁹. This may seem like a very low number, even though it is expected that fewer German companies offshore, compared to the USA. However, Eickelpasch only accounts for Foreign Outsourcing as his definition of offshoring does not include FDIs (Eickelpasch, 2015, p. 56). This information is therefore not sufficient to draw any conclusions concerning offshoring in Germany.

Further insights into the prevalence of offshoring in Germany can be found in a survey that has been conducted by German Statistisches Bundesamt in 2008. For this survey, 9361 manufacturing and service companies answered a questionnaire focusing on drivers, scope and results of offshoring on firm-level (Statistisches Bundesamt, 2008, p. 7). Of the polled service companies²⁰, 15.4% had offshored one or multiple corporate functions until 2006, and 10.7% planned to do so in the time span 2007 - 2009. The percentage of

¹⁸In the last two decades, dual degree and vocational training programs have gained traction. Offering both an academic degree and working experience, those programs are very popular and have even been implemented in American subsidiaries of German companies, e.g. Volkswagen.

¹⁹The author cites input-output tables of Statistisches Bundesamt and calculations of DIW Berlin.

²⁰The survey is on shifting business activities abroad, so it includes production abroad. This thesis focuses on offshoring services, so only results of service companies are included.

companies that offshore grows with the number of employees. (Statistisches Bundesamt, 2008, p. 11)

Regarding cooperation partners, the survey found that 81.4% of service companies practiced or planned FDI and only 24.7% chose Foreign Outsourcing, transferring tasks to external partners. Most often, a new subsidiary had been established (47.5%). (Statistisches Bundesamt, 2008, p. 18)

2.5. Significant Differences between Germany and the USA

As shown in the previous sections, there are vast differences between Germany and the USA when it comes to offshoring. However, accurately quantifying those differences is no small effort. Government institutions for measuring trade activities exist in both countries, but there are no international standards regarding the indicators. Furthermore, both economies vary largely in size. The U.S. are the worlds largest economy with a gross domestic product (GDP) of \$17.947 trillion in 2015, while Germany had a GDP of \$3.356 trillion²¹. Therefore, one can not simply compare unadjusted offshoring volume.

Economic Focus As detailed in section 2.4, Germany has been an export-oriented country since the 1950s. In fact, German authorities have registered trade surpluses since 1952 without exception (Statistisches Bundesamt, 2016). In contrast, the U.S. have registered consistent trade deficits in the last 30 years²². This suggests that the U.S. has an import-oriented economy.

This discrepancy, on the first glance, does not imply anything about offshoring. On nearer inspection, though, there are two aspects. First, offshoring, as far as foreign outsourcing is concerned, is part of the foreign trade balance. Second, exporting and importing are two different mindsets that manifest in companies. For an import-oriented company, importing business services suggests itself, whereas for an exporting company this idea is not nearly as obvious.

Maturity of Offshoring American companies have a long history of collaboration with foreign countries, be it own subsidiaries (FDI) or foreign outsourcing. The first foreign subsidiaries have been founded by U.S. companies in the 1950s (see page 12 for details). German companies, being located in a less stable environment during Cold War, were overall less expansive and generally started to internationalize in the 1990s.

Structure of organizations Even though the quantitative distribution of companies in size categories in Germany and the U.S. is similar, there is a vast difference in the influence

²¹Data source: World Bank, <http://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=US-DE&start=1990>, visited on 14. August 2016

²²Data source: U.S. Census Bureau, Foreign Trade: <https://www.census.gov/foreign-trade/balance/c0015.html>

the different categories have on national economies. In Germany, SMEs employ 60% of the work force and earn 33.5 % of revenues (Söllner, 2014), whereas in the U.S., large corporations with more than 500 employees²³ employ 53% of the working population and earn 65% of revenue²⁴.

Offshoring Locations and Distances Hutzschenreuter, Dresel, and Ressler, 2007 compare their own study of 178 German companies to a similar study of 447 American companies regarding the offshoring locations that are preferred by each country. For German companies, European countries have with 52% a slight majority over farshore²⁵ regions such as India or Brazil. (Hutzschenreuter, Dresel, and Ressler, 2007, p. 175)

American companies however largely prefer farshore countries for their offshoring endeavors. 94% of offshoring activities are relocated to a different continent, specifically 67% in Asian countries. Of those 67%, 41% are offshoring activities in India. (Hutzschenreuter, Dresel, and Ressler, 2007, p. 175)

Language English is a language that is spoken all over the world. With 400 million native speakers it is one of the largest languages of the world, but as the *lingua franca* of global business and with over 1.5 billion speakers all over the world (Hogg and Denison, 2008, p. 1), companies operating in English have a great advantage when communicating with offshore service providers.

In comparison, German is spoken by about 100 million native speakers and in 2015, had been learned by 15.4 million people around the globe (Auswärtiges Amt, 2015). This severely limits the pool of viable service providers, if German companies require the provision of services in German.

²³Please note that the American category system is not matchable to the European categories that are used in this thesis. U.S. Census Bureau differentiates companies from 100 to 499 employees from companies with more than 500 companies, whereas large companies in the European definition have more than 250 employees.

²⁴Data source: http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SB0_2012_00SCB42&prodType=table, visited on 19. August 2016

²⁵The authors define farshore-offshoring as offshoring on a different continent.

3. Case Studies

In order to expand on existing knowledge, a series of expert interviews has been conducted for this thesis. In the following section, the process of conducting the interviews is described. Next, there is an in-depth summary of each interview, concluded by an abstract to highlight the most important points for this thesis. The last section contains a comparison and evaluation of all interviews.

3.1. Interview Technique

In order to complement theoretical findings from literature research, expert interviews have been conducted. A structure for the interviews has been defined (see appendix). In this way, statements from different experts can be compared and evaluated, which allows for a comprehensive review. Even though interviewees may share their native language (German) with the interviewer, interviews have always been conducted in English. Thus, any inaccuracies that may occur during translating the statements were prevented and comparability of interviews has been improved.

The interviews were held remotely, either via an Internet VoIP-Service such as Skype, or via using WebEx, the standard communication platform used at T-Systems when interviewing employees of this company. Considering the often tight schedules of experts in their fields, the duration of interviews was planned to be 45 minutes.

To further document the interviews and the steps leading up to them as well as the steps of refinement that follow, a process (see figure 8) has been defined and adhered to.

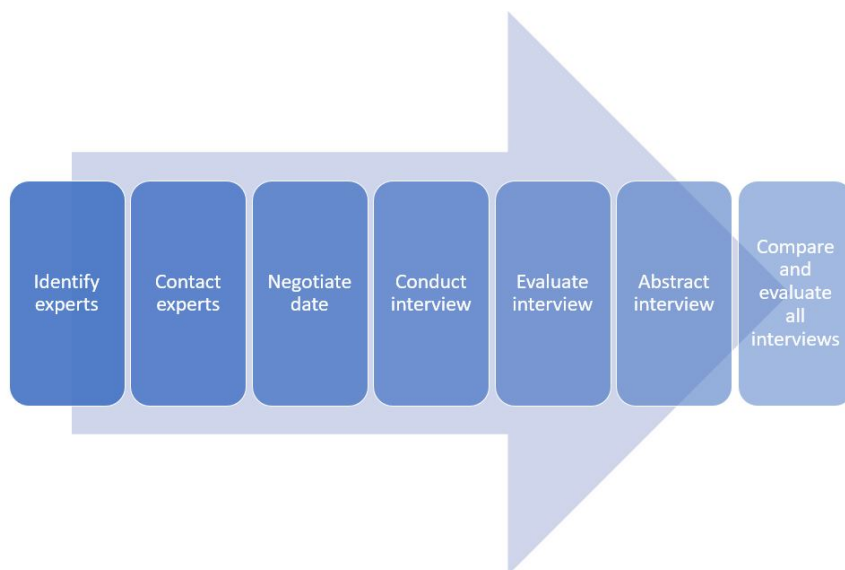


Figure 8: Interview process

Identify experts The experts are identified by conducting a network-based search. Initial contacts are asked to identify persons they consider an expert on the topic, who are in turn asked to provide further contacts.

Contact experts Initial contact to the expert is established via an email sent by the expert's contact. Included is a standard email explaining the topic, duration and process of the interview and providing the researchers' contact details.

Negotiate date Once the expert has agreed to participate in the interview, the researcher contacts them directly in order to set up date, time and method of communication for the interview. Note that all interviews are conducted using at least voice-based communication. Video can be added to further facilitate the communication between the expert and the researcher.

Conduct interview The interviews are conducted in five phases with defined leading questions²⁶. This means, the leading questions will be asked, but the researcher will also ask further questions as appropriate to the course of the interview. These phases are:

- Introduction
- Offshoring Experiences in the USA
- Offshoring Experiences in Germany
- Comparison of Experiences in Germany and the USA
- Finalization

During the interview, audio has been recorded. The audio files form the primary source of knowledge gained from the experts.

Evaluate interview The recordings are evaluated and any important passages are noted. These evaluations are added to the appendix.

Abstract interview For each interview, an abstract is developed. The abstracts are included in the thesis.

Compare and evaluate all interviews Finally, an overview and comparison of all interviews is generated to derive common statements and areas of disagreement.

²⁶The structure of the interview can be found in the appendix, page 36.

3.2. A German Project Manager on Offshoring with Different Service Providers

This interview was conducted on 1. July 2016 08:00 h CEST with Michael Scheitza, a senior project manager at T-Systems International. The standard communication tool of T-Systems, Cisco WebEx, was used for the interview. The recording of the interview can be found on the enclosed CD (file name: 20160701_Michael.Scheitza.mp3). A written summary of the interview is found in appendix, page 37.

3.2.1. Background

Michael Scheitza has worked for eight years as a project manager in an international environment. He has experience in offshoring projects with Russia, Poland, Romania, India, Malaysia, Mexico, and Brazil. He does not have any experience with offshoring from a U.S. perspective, so he did not feel comfortable answering any questions regarding this topic.

3.2.2. Results of Interview

At T-Systems, application management contracts are often delivered offshore. Most customers leave the choice of delivery location to T-Systems, provided there is no legal obligation to deliver locally. The delivery model for each contract is chosen by the necessary skills, the language that is requested by the customer, and required service levels. When deciding on a delivery location, scalability is very important. It is essential that there are enough people with the required knowledge.

Generally speaking, there are two different possible working relationships between customer, German on-site team and offshore team.

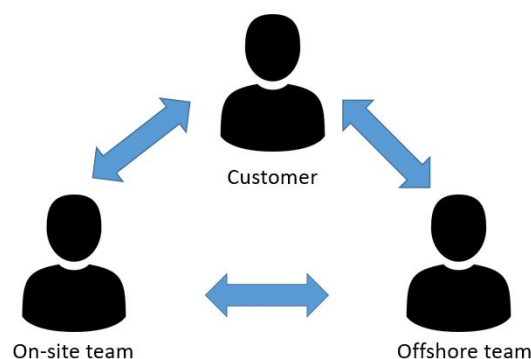


Figure 9: Direct, personal relationships between customer, on-site team and offshore team

The first possible working relationship works best in teams smaller than 50 persons offshore. In the transition phase, offshore team members travel to Germany in order to directly interact with and learn from the customer. In figure 9, the set up in this case is depicted.

The interviewee gave an example of an application management contract that was delivered from Brazil. There was the requirement that all 20 team members speak enough German to directly speak to the customer. In transition phase, personal relationships were established between the Brazilian team, the customer and German project management of T-Systems. This facilitated collaboration later in the project, because the persons involved knew each other in person, not only via telephone and email.

The motivation for the offshore team in this case stems from the identification as part of a global delivery team. If the on-site and offshore teams share the same tasks, the delivery model is called *Verlängerte Werkbank*. The team size in this case is usually less than 30 people and the project manager distributes tasks directly to offshore team members.

The drawback in this approach is that it tends to increase volatility in the team. Michael Scheitza shared an experience he made with an Indian team: Each time there were quality issues, T-Systems had spent money on bringing team members on-site or German project management had traveled to India to improve communication. Few months later, he noticed that especially those team members who had been to Germany left the project and changed jobs in order to further their careers. This way, the investment in communication was unsuccessful.

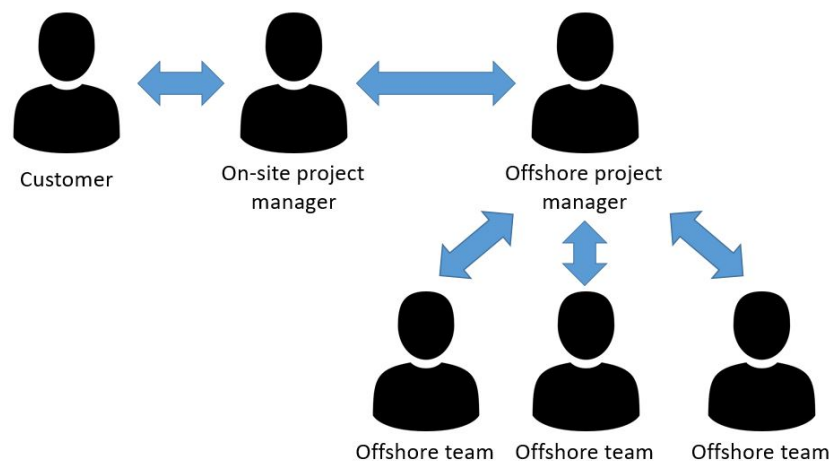


Figure 10: Hierarchical communication between customer and offshore team

The second possibility is used in larger teams with more than 50 people. Teams that size are large enough to be organized in hierarchical layers with a local team lead or project management. This approach does not involve deep relationships and personal communication. Instead, the working relationship is managed via service level agreements (SLAs) and key performance indicators (KPIs), where quality and quantity of deliverables are defined. The communication structure in this case is depicted in figure 10. In transition phases of projects, only the offshore project managers or team leads travel to Germany

and distribute the knowledge they gained in working with the customer to their teams offshore.

In this case, the offshore team does not identify as a part of a global delivery team, because the personal relationships that are needed for this approach are not in place. Alternately, the team members can identify with the project itself and are motivated by the local project manager. Ideally, the team is driven by the desire to be successful in fulfilling the contract.

Neither approach, said Michael Scheitza, is clearly superior to the other. Each has its drawbacks and advantages, and both are applicable in certain situations.

3.2.3. Conclusions

In the interview, Michael Scheitza differentiated and specified two distinct approaches to offshoring that are used in Germany. In table 2, they are directly compared to each other.

	Personal Relationships	Numbers-based Approach
Team size	< 50 people	> 50 people
Transition phase	All offshore team members travel on-site and form personal relationships with T-Systems team members and customers	Offshore project managers travel on-site and share their knowledge with the team
Communication	Direct communication between customer, on-site team and offshore team	Hierarchical communication from customer to on-site team to offshore project management to offshore team
Motivation	Identification as part of a global delivery team	Motivation by local project management and identification with the contract

Table 2: Comparison of German offshoring approaches according to M. Scheitza

Even though the interviewee could not contribute any experience with offshoring from an American point of view, there have been very interesting points. Firstly, the other interviews focused mainly on offshoring with an Indian service provider. This interview offered insights in offshoring projects with a multitude of different destinations. Secondly, there were criteria for choosing a delivery model outlined. Last, the two different collaboration models were described very thoroughly, offering a concise view on the offshoring projects the interviewee experienced.

3.3. An Indian Offshoring Pioneer Comparing German and U.S. Clients

A. S. Viswanathan agreed to an interview on 7. July 2016 at 17:00 h CEST / 20:30 h IST. For this, Skype was used as a communication tool. On the enclosed CD, the recording of the interview has the file name 20160707_A_S_Viswanathan.mp3. The summary of the conversation can be found in appendix page 39.

3.3.1. Background

The interviewee is electrical engineer with a specialization in industrial engineering. In 1978, he started his career with English Electric, which was a part of General Electric Group. There, he worked for two years before joining Siemens. With Siemens, he held various positions ranging from the shop floor to CIO of the IT subsidiary of Siemens in India. Later, he moved on to the board of Siemens Information Systems, a software company that took global mandate within the Siemens Group. His responsibilities included Business Solutions for offshoring SAP, which his team was pioneering in India, as well as IT services.

In 2007, Siemens merged all local IT companies into a new company called IT Services and Solutions. Viswanathan was on the executive management of this company, heading Global Portfolio of Mobility.

After taking a break in 2011, he founded his own management consultation company in 2012. He specializes in offshoring consulting, primarily with customers from Germany, China and India.

3.3.2. Results of Interview

Offshoring in the US When first conceptualizing the offer of offshoring services, the first customers were from the United States. They were very quick in understanding the advantages and seizing the opportunity, not only shifting single tasks, but entire operations to India. Before offshoring, U.S. companies took the time to evaluate different service providers. Once the decision was made, there was no plan B, so there was a necessity to make offshoring work.

This has a profound effect on working relationship. In Viswanathans experience, contributing to positive working relationships was English being a common language. Management meetings and schedules were easily set up. SLAs were more critical, as after the initial cycles of new contracts, there would be a new wave of requirements, imposing stricter quality standards. In this phase, facts and figures dominate the working relationship.

The American approach to offshoring is characterized by legalistic and contractual con-

cerns. When researching service providers, U.S. companies have consultants performing background searches of companies providing operations in India. Three to four companies are shortlisted and visited by the American team for presentations. Thereafter, contract negotiations start. A lot of emphasis is placed on contracting and commercial SLAs. The processes are not deemed as important, since the companies believed in the ability of the service provider to deliver.

Contributing to the success of American offshoring projects is the high offshorability of an American job. The work is conceptualized as a specific set of tasks where a specific set of skills is needed. Therefore, the skills of workforce can easily be managed. This goes back to U.S. companies already have experience with shifting jobs within the U.S. and people are already working in different places and time zones within the country. Also, jobs are very transaction-based in the U.S.. The education system facilitates that each employee does not need to have an end-to-end knowledge of the entire process. This is connected to the higher fluctuation of employees in American companies and is a huge advantage when it comes to offshoring – it needs only minimal training to enable a new person to do the job.

Offshoring in Germany Compared to American jobs, in German companies the job design is much more intrinsic and process-oriented. An example of a buyer is given: in Germany, the buyer has a specific background in the field, maybe an apprenticeship or some other kind of special training, whereas the buyer in the U.S. is not expected to have deep insights in the field when starting the job. The German buyer has knowledge in costing, the market, and product design, whereas the American buyer consults a technical specialist for those details. This system-oriented thinking is an advantage for the German society, but an obstacle for offshoring.

This kind of job design is mirrored in the SAP systems of companies. When it comes to customizing the system, a German system differs greatly from an American system, because the role of an individual is more holistic in Germany. This presents a problem when shifting tasks offshore, as one person in Germany can't simply be replaced by one person in India as it is the case with American jobs. The person in India simply lacks the specific background and experience with the German company.

Furthermore, offshoring is a very alien concept for German companies, especially SMEs. Those grow very organically from small family businesses, so the owners have in-built control of all processes from the beginning. When it comes to outsourcing within Germany, the service provider does not have full control of the entire process, but only provides some parts. Additionally, German service providers often have a very good knowledge of their customers, and are almost an extension of their customers' organization.

When it comes to offshoring, both of these points present problems. When relocating tasks, the customer inevitably needs to give up control over processes. Similarly, when replacing domestic outsourcing with an offshore provider, the same standard can not be applied to a foreign company that is used to evaluate a German company that has years of experience collaborating with the customer. Additionally, Germans tend to display a high degree of detailing, so the standards for the service providers are often very high. This

has, in Viswanathan's experience, been one of the biggest barriers for German companies approaching offshoring, and it is important to achieve a change in mindset for this. Also, in general Germans are more used to exporting than to importing. The notion to import services from a different country is somewhat foreign, as it implies that the service provider could do the job better than the German company itself.

It is very typical of German companies to prefer FDI over foreign outsourcing. Frequently, an implicit objective is recreating the own organization in India. The reason for this is the inability of German companies to change the structure of jobs in a way that makes them easily offshorable.

Language is a further important point that must be discussed when talking about offshoring in Germany. German companies are becoming more international, but many still prefer to have their systems built and maintained completely in German. This is becoming less of a problem as many Indians are learning German, but it still is a handicap.

Additionally, the transition phase must be carefully managed when implementing offshoring, especially with respect to the loss of jobs or the decrease of job security in the German company. Work councils and unions make this process slow and difficult. This needs to be accepted and accounted for in the planning both on the German and Indian side. A comparable American company would be much quicker in implementing offshoring, which is a tremendous disadvantage for German companies. In the worst case, Viswanathan recounts, shortly before completing the transition, unions had objected to an offshoring project so all measures had to be reversed. This was a very difficult scenario for both the service provider and the customer, as the setup in India was already completed.

A German company that wants to offshore successfully first needs to define entire functions that can be offshored, rather than offshoring just some minor roles. Second, if the company is looking to offshore not only easily offshorable IT services²⁷, but business processes, they must be designed in a way that the transactions are separated from the decision-making. Then, the transaction part of the job can be offshored without many problems. However, as long as jobs are looked at in an integral way, it is an obstacle to offshoring. The very deep level of job "slice and dice" that is common in American jobs is not needed, but that one level of division could help German companies to more success in offshoring.

Application management is identified as one function that is easily offshorable. In general, the tasks could be dealt with replacing one German resource with three Indian resources. This, of course, results in a much smaller cost arbitrage but still yields an economic advantage as multitasking can be applied in the Indian site. The distribution of work is managed by Indian managers who have enough knowledge of the entire process in this scenario. Obviously, this is a lot more management effort than offshoring with an American companies would entail.

²⁷Hardware, infrastructure support and similar tasks

3.3.3. Conclusions

test test test

3.4. Ingo Kümmritz

3.4.1. Background

3.4.2. Results of Interview

3.4.3. Conclusions

3.5. Subir Purkayastha

3.5.1. Background

3.5.2. Results of Interview

3.5.3. Conclusions

3.6. Summary and Evaluation

4. Conclusions and Limitations

References

- Alebrand, Wolf-Werner (2013). "Offshoring statt Outsourcing". In: *Controlling & Management Review* 57.8, pp. 86–92. ISSN: 2195-8262. DOI: 10.1365/s12176-013-0812-4.
- Andersson, Linda, Patrik Karpaty, and Selen Savsin (2016). "Firm-level effects of offshoring of materials and services on relative labor demand". In: *Review of World Economics* 152.2, pp. 321–350. ISSN: 1610-2878. DOI: 10.1007/s10290-015-0243-8.
- Antràs, Pol and Elhanan Helpman (2004). "Global Sourcing". In: *Journal of Political Economy* 112.3, pp. 552–580.
- Auswärtiges Amt, ed. (2015). *Deutsch als Fremdsprache weltweit: Datenerhebung 2015*. URL: https://www.goethe.de/resources/files/pdf37/Bro_Deutschlernerhebung_final2.pdf (visited on 08/24/2016).
- BBC, ed. (2012). *Timeline: Germany*. URL: http://news.bbc.co.uk/2/hi/europe/country_profiles/1053880.stm (visited on 08/22/2016).
- Cappallo, Stefan and Patrick Da-Cruz (2006). "Offshoring". In: *DBW - Die Betriebswirtschaft* 04, pp. 487–488.
- Central Intelligence Agency, ed. (2016). *The World Factbook: North America: The United States*. URL: <https://www.cia.gov/library/publications/the-world-factbook/geos/us.html> (visited on 08/20/2016).
- Dressler, Sören (2007). *Shared Services, Business Process Outsourcing und Offshoring*. 1. Aufl. s.l.: Gabler Verlag. ISBN: 978-3-8349-0257-3. DOI: 10.1007/978-3-8349-9266-6.
- Eickelpasch, Alexander (2015). "Outsourcing und Offshoring in der deutschen Industrie". In: *Vierteljahrshefte zur Wirtschaftsforschung* 84.1, pp. 55–77. ISSN: 0340-1707. DOI: 10.3790/vjh.84.1.55.
- Grossman, Gene M. and Esteban Rossi-Hansberg (2008). "Trading Tasks: A Simple Theory of Offshoring". In: *American Economic Review* 98.5, pp. 1978–1997. ISSN: 0002-8282. DOI: 10.1257/aer.98.5.1978.
- Helpman, Elhanan (1999). "The Structure of Foreign Trade". In: *Journal of Economic Perspectives* 13.2, pp. 121–144. ISSN: 0895-3309. DOI: 10.1257/jep.13.2.121.
- Hogg, R. and D. Denison (2008). *A History of the English Language*. Cambridge University Press. ISBN: 9781139451291.
- Hutzschenreuter, Thomas, Stephan Dresel, and Wolfgang Ressler (2007). *Offshoring von Zentralbereichen: Von den Erfahrungen deutscher und amerikanischer Unternehmen lernen*. Berlin, Heidelberg: Springer-Verlag Berlin Heidelberg. ISBN: 978-3-540-71934-2.
- Jackson, James K. (2013). "U.S. Direct Investment Abroad: Trends and Current Issues". In: *Congressional Research Service* 7-5700, pp. 1–7. URL: <https://www.fas.org/sgp/crs/misc/RS21118.pdf> (visited on 08/21/2016).
- Jahns, Christopher, Evi Hartmann, and Lydia Bals (2007). "Offshoring: Analyse der Hintergründe und Potenziale". In: *Insourcing, Outsourcing, Offshoring*. Ed. by Dieter Specht. Vol. v.356. Beiträge zur Produktionswirtschaft. s.l.: DUV Deutscher Universitäts-Verlag, pp. 85–106. ISBN: 978-3-8350-0830-4.
- Kimmel, Elke (2005). *Grundzüge des Marshallplans: Eine Einleitung*. Ed. by Bundeszentrale für politische Bildung. URL: <http://www.bpb.de/geschichte/deutsche-geschichte/marshallplan/40034/einleitung> (visited on 08/14/2016).

- Knolmayer, Gerhard F. (2007). "Sourcing-Entscheidungen aus den Perspektiven des Produktions- und Informationsmanagement". In: *Insourcing, Outsourcing, Offshoring*. Ed. by Dieter Specht. Vol. v.356. Beiträge zur Produktionswirtschaft. s.l.: DUV Deutscher Universitäts-Verlag, pp. 1–30. ISBN: 978-3-8350-0830-4.
- Kozlow, Ralph (2006). *Globalization, Offshoring, and Multinational Companies: What Are the Questions, and How Well Are We Doing in Answering Them?* Ed. by Bureau of Economic Analysis. URL: <http://bea.gov/papers/pdf/06AEAMNCpaperFinal.pdf> (visited on 08/11/2016).
- Leiner, Barry M. et al. (2003). *Brief History of the Internet*. URL: <http://www.internetsociety.org/internet/what-internet/history-internet/brief-history-internet> (visited on 08/18/2016).
- Pedersen, Torben et al., eds. (2013). *The Offshoring Challenge: Strategic Design and Innovation for Tomorrow's Organization*. London: Springer. ISBN: 978-1-4471-4907-1. DOI: 10.1007/978-1-4471-4908-8.
- Pisani, Niccolò and Joan Enric Ricart (2016). "Offshoring of Services: A Review of the Literature and Organizing Framework". In: *Management International Review* 56.3, pp. 385–424. ISSN: 0938-8249. DOI: 10.1007/s11575-015-0270-7.
- Rottman, Joseph W. and Mary C. Lacity (2008). "A US Client's learning from outsourcing IT work offshore". In: *Information Systems Frontiers* 10.2, pp. 259–275. ISSN: 1387-3326. DOI: 10.1007/s10796-007-9061-4.
- Sachs, Jeffrey D. and Andrew Warner (1995). "Economic Reform and the Process of Global Integration". In: *Brookings Papers on Economic Activity* 1, pp. 1–118.
- Söllner, René (2014). "Die wirtschaftliche Bedeutung kleiner und mittlerer Unternehmen in Deutschland". In: *Statistisches Bundesamt, Wirtschaft und Statistik*, pp. 40–51. URL: https://www.destatis.de/DE/Publikationen/WirtschaftStatistik/UnternehmenGewerbeanzeigen/BedeutungKleinerMittlererUnternehmen_12014.pdf?__blob=publicationFile (visited on 08/19/2016).
- Solsten, Eric, ed. (1995). *Germany: A Country Study*. Washington: GPO for the Library of Congress. URL: <http://countrystudies.us/germany/> (visited on 08/22/2016).
- Specht, Dieter and Markus Lutz (2007). "Outsourcing und Offshoring als strategische Handlungsalternativen". In: *Insourcing, Outsourcing, Offshoring*. Ed. by Dieter Specht. Vol. v.356. Beiträge zur Produktionswirtschaft. s.l.: DUV Deutscher Universitäts-Verlag, pp. 43–60. ISBN: 978-3-8350-0830-4.
- Statistisches Bundesamt (2008). *Verlagerung wirtschaftlicher Aktivitäten: Ergebnisse der Piloterhebung*. Wiesbaden. URL: https://www.destatis.de/DE/Publikationen/Thematisch/UnternehmenHandwerk/VerlagerungAktivitaeten5529301069004.pdf?__blob=publicationFile (visited on 08/08/2016).
- (2016). *Außenhandel: Gesamtentwicklung im Außenhandel seit 1950: 2015 vorläufig*. Wiesbaden. URL: https://www.destatis.de/DE/ZahlenFakten/GesamtwirtschaftUmwelt/Aussenhandel/Gesamtentwicklung/Tabellen/GesamtentwicklungAussenhandel.pdf?__blob=publicationFile (visited on 08/24/2016).
- Winkler, Alan (1994a). "Decades of Change". In: *An outline of American history*. Ed. by Howard Cincotta. [S.l.]: United States Information Agency. URL: <http://usa.usembassy.de/etexts/history/ch12.htm> (visited on 08/16/2016).
- (1994b). "Postwar America". In: *An outline of American history*. Ed. by Howard Cincotta. [S.l.]: United States Information Agency. URL: <http://usa.usembassy.de/etexts/history/ch11.htm> (visited on 08/16/2016).

Winkler, Alan (1994c). "Toward the 21st Century". In: *An outline of American history*. Ed. by Howard Cincotta. [S.l.]: United States Information Agency. URL: <http://usa.usembassy.de/etexts/history/ch13.htm> (visited on 08/16/2016).

Appendix

A. Interview Structure

Introduction [10 Minutes]

Hello, thank you for participating in this expert interview! I'd like to preface with a short introduction to what my thesis is all about. However, before we start I need your consent to me recording this conversation. Do you agree with recording the interview?

– Wait for answer –

Thank you.

First, let me introduce myself. My name is Veronika; I'm currently in the last leg of studying Information Systems and working on my Bachelors' Thesis. This thesis is about comparing offshoring approaches in the US and Germany. The following questions are all about learning as much as possible from your experience, so please take the freedom to answer as detailed as you deem appropriate.

First of all, I'd like to learn something about you. Please introduce yourself and tell me about your international working experiences.

Offshoring Experiences in the US / with the US [10 Minutes]

- In what way did you experience offshoring in U.S. companies? (Internal / Provider)
- In your experience, how do U.S. American companies approach offshoring?
- How is the working relationship between the US and the offshoring destination?
- If you think about offshoring in U.S. companies, is there any significant anecdote you'd like to share? Why is this a typical situation in this context?

Offshoring Experiences in Germany [10 Minutes]

- In what way did you experience offshoring in German companies? (Internal / Provider)
- In your experience, how do German companies approach offshoring?
- How is the working relationship between Germany and the offshoring destination?
- If you think about offshoring in German companies, is there any significant anecdote you'd like to share? Why is this a typical situation in this context?

Comparison [10 Minutes]

- In your opinion, what are the most significant differences between US American and German companies when it comes to offshoring?
- Further questions to clarify points as needed

Finalization [5 Minutes] Thank you again for taking the time to answer my questions today. It was a great help! Is there anything you would like to add, or any feedback you might have regarding this interview?

It was great to learn from your experience today. I'll be in touch should there be any points that need further clarification, is that all right for you?

Thank you again, have a great day/evening/weekend!

B. Interview Summaries

The expert interviews are summarized based on the recorded .mp3-files. There may be gaps in the summaries, when there is no relevant discussion or breaks caused by external influences. All interview recordings have been added to the appendix on a CD and are considered the primary source.

B.1. Michael Scheitza, 07/01/2016

Time	Summary
01:00 – 01:55	Introduction and consent to recording
01:55 – 02:49	Michael Scheitza has worked for eight years with different offshore approaches. He has experience with Russia, Poland, Romania, India, Malaysia, Mexico and Brazil. The longest projects he had with Russia, Romania and India.
03:45 – 03:54	He has worked for a few weeks in Malaysia and India. In Poland, he worked for half a year, but that was not for an offshoring experience.
03:54 – 04:24	He has no experience with offshoring from an U.S. American point of view, so this part of the interview is skipped.
05:22 – 08:05	At T-Systems, application management contracts work well with offshoring, provided there's no legal obligation to deliver locally. Most customers leave the choice of location of delivery to T-Systems. The delivery model is usually decided by needed skills, requested language and required service levels (pertaining to time zones).
08:05 – 09:35	Knowledge is not the only factor in deciding on a delivery model, but scalability is also very important. For a project, there need to be enough people with the required knowledge. When this can't be ensured, a different point of production must be chosen.

- 09:47– 10:45 Working relationship between T-Systems and the offshoring partner depends on the type of contract. There is an example given of an application management deal with Brazil, which contained many small applications. This meant that the team size was about 20 people, all of which were requested to speak enough German to directly interact with the customer.
- 10:45 – 11:43 In the transition phase of the project, the Brazilian team came to Germany in order to get the needed knowledge directly from the customer. In this time, one-on-one relationships between the Brazilian team, the customer and project management in Germany were established. This facilitated collaboration later on because people knew each other in person and not only via email and telephone.
- 11:43 – 12:45 In larger deals that involve a larger team, such deep collaboration is usually not established. Instead, the working relationship is managed via SLAs and KPIs, where quality and quantity of deliverables are defined.
- 12:46 – 13:57 Neither approach is clearly superior to the other (personal collaboration vs. management via SLA)
- 13:57 – 15:38 He had an experience once with an Indian Team, where money was spent on bringing people to Germany to improve collaboration and quality. Few months later, these people ended up leaving the project to further their careers, because having worked abroad is an achievement that enables people to earn more in India. So the money spent on improving collaboration was essentially burned.
- 15:38 – 17:09 In the first three months, it is good to build personal relationships with team members. In the long run, there are two options. One option is the really deep personal exchange outlined in the example of the Brazilian team, which has the downside of increasing volatility in the team and is not a standard approach. The other option is to draw motivation out of the contract and out of being successful in fulfilling the contract.
- 17:12 – 19:01 Personal relationships are very important for employee satisfaction, but there are two possible identifications for people working offshore for a project: one is the identification with the project itself and being motivated by the local team lead. The other possibility is getting into the personal relationship with the customer (can be both T-Systems and the end customer) and identifying as part of a team.
- 19:01 – 19:25 Such identification with a global delivery team is not possible in large teams (50+ persons), in his experiences.
- 19:25 – 20:15 If the onsite and the offshore team share the same tasks (“Verlängerte Werkbank”), the team size is usually less than 30 people. The project manager is then distributing tasks directly to offshore team members.
- 20:15 – 20:36 If the team is large enough to be organized into different organizational layers, e.g. local project managers or team leads, these personal relationships get lost.

21:05 – 22:22	There is the cliché that in the US, there is a certain motivation culture that involves a lot of enthusiasm, whereas in Germany, there is a lot of focus on the organization and the end result. Both have a certain truth to them but do not cover reality. Similarly, in general people are happier when working in an integrated way in an offshore team. The prerequisite is that the tasks enable this working mode.
25:00 – 26:47	In smaller scale collaborations, it is important to know the people you are working with on a personal level, not only by a name and picture. Especially in Munich, he has hosted so many offshoring partners that he is now one of the best tourist guides. He shows them the sights in order to let his guests learn about our cultural background and to start a discussion. This is helpful in building personal relationships.
27:55 – 28:50	Thanking the interview partner and finalization

B.2. A.S. Viswanathan, 07/07/2016

Time	Summary
00:34 – 02:54	Introduction and consent to recording
02:54 – 04:24	Viswanathan is electrical engineer with a specialization in industrial engineering. In 1978, he started his career with English Electric which was a part of the General Electric Group. He worked there for two years, then he changed employers and started with Siemens. He held several positions, from the shop floor to CIO of the IT subsidiary of Siemens in India. Later, he moved on to the board of Siemens Information Systems, a software company that took global mandate within the Siemens Group.
04:24 – 06:00	His responsibilities with Siemens were primarily the Business Solutions, as well as pioneering offshoring SAP with his team. Furthermore, he was responsible for IT services. In 2007, Siemens merged all local IT companies (mentioned are India, Germany, Austria, Switzerland, and Greece) into a new company called IT Services and Solutions. Viswanathan was on the executive management of this company and headed Global Portfolio of Mobility which included Transportation and Logistics on water, air etc.
06:00 – 07:00	After taking a break in 2011, he founded his own management consultation company in 2012 with primarily customers from Germany, China and India.
07:00 – 08:20	When they conceptualized offering offshoring services the first customers were from the U.S. and the UK. They were very quick in understanding the cost advantages of offshoring and seizing the opportunity, not only shifting single tasks, but the entire operations to India. Customers in the U.S. were fairly open to offshoring. Viswanathan had the feeling that they would just go ahead and implement offshoring, so there were not many problems.

- 08:20 – 09:34 Working relationship with the U.S., in his experience, have been positive. Contributing to that was English being a common language and management meetings and schedules were easily set up. The SLAs were more critical. A reason for the positive experience could be that U.S. companies had virtually no plan B with respect to offshoring. When they did offshore, they took the time to evaluate different vendors, but once the decision was made, they just went with it and the work was shipped to India. This means there was a necessity to make the relationship work.
- 09:34 – 10:14 After the initial cycles of new contracts, the focus shifted to delivery. There would be a next wave of requirements with better productivity standards. In this phase, the facts and figures dominated working relationships, especially SLAs.
- 10:14 – 11:40 The American approach to offshoring is characterized by legalistic and contractual considerations. They always have consultants as part of the team who would do a good background search of the companies that provide operations in India. Then they would select three to four companies, travel to India and go to presentations of the chosen companies and then enter contract negotiations. They spent a lot of time on the contracting, so on the commercial SLAs and not so much on the processes. They believed it would be done and depended on that.
- 11:40 – 13:46 When it came to bringing Indian onsite teams to the U.S., for example for transitions, visa issues caused an unexpected amount of problems. This went so far that it became an administrative aspect of the discussion of offshoring with new customers.
- 13:46 – 15:03 The offshorability of an American job is very high. The work is conceptualized in a way that the needed skills can easily be managed. It is not a holistic job, but a specific set of tasks where a specific set of skills is needed. This goes back to U.S. companies already having experience in shifting tasks, but within the U.S.. People are working in different places and different time zones within the U.S., so they were already used to working in such a way.
- 15:03 – 16:39 Jobs are very transaction-based in the U.S.. The education system facilitates that the single employee does not need to have an end-to-end knowledge of the entire process or the bigger picture of why this process works in that way. This is connected to the higher fluctuation of employees in American companies. Simultaneously, it is a huge advantage when it comes to offshoring. It would only need some kind of minimal training to get a new person for the job up and running.
- 16:40 – 18:24 In German companies, the job design is more intrinsic and process-oriented. For example, a buyer in Germany compared to a buyer in the U.S. has a more specific background, maybe an apprenticeship in the field or some kind of special training. So when it comes to customizing an SAP system, a German system would differ greatly from an American system, because the role of an individual is more process- and system-oriented and holistic in Germany.

- 18:24 – 19:30 This role system presents a problem when shifting tasks offshore, because it can't be transferred like to like. That means, one person in Germany cannot simply be replaced with another person in India, because that person lacks the specific background and experience with the German company. Also, knowledge requirements are very intricate. In the buyer example, the employee needs knowledge in costing, the market, product design and so on. They wouldn't consult a technical specialist for those details. This system-oriented thinking is an advantage of the German society, but also an obstacle for offshoring.
- 19:30 – 19:55 Employees in Germany have proper education, vocational training and guidance and are very competent when they start the job. This competence is mirrored in the SAP systems and when the SAP system is then moved to India, there is a problem because there are no employees with the same skill set there.
- 19:55 – 21:00 Offshoring is a very alien concept to Germany, especially for *Mittelstand* companies²⁸. Those grow very organically from family businesses, so they have in-built control of all processes. When it comes to outsourcing within Germany, the service provider does not have the full control of the process, they only provide some parts. But when it comes to offshoring, control must be given up by the customer, which is a very foreign concept for German companies.
- 21:00 – 22:28 Even when it comes to replacing domestic outsourcing with foreign outsourcing, the customer would complain about the offshore service provider, because the local service provider had a very good knowledge of their company. They were entirely dependent on the local service provider, almost like they were an extension of their own company to the extent that if there would be a larger incident, the provider's employees would come running even outside of their normal service hours. Of course, this can't be replicated with an offshore service provider.
- 22:56 – 24:13 Germans display a high degree of detailing, so the standards for the service providers tend to be very high. This has been one of the biggest barriers, and it is important to change the mindset regarding this. Also, Germans tend to prefer FDI over foreign offshoring.
- 24:13 – 25:15 He did recently consult a German company with setting up FDI and remarked to them that this practice is very typical for German companies. Frequently, the objective is recreating the own organization in India ("Mini-Germany in India")
- 25:15 – 26:09 From a business solutions perspective, Germans would love to have the cost arbitrage, but they need to have the cost arbitrage the way the jobs are designed.
- 26:09 – 26:31 Another important point is language. Germany has become more international, but many companies still prefer to have their systems built and maintained completely in German. This is not essentially wrong, because many Indians are learning German as well, but it becomes a handicap. English is more easily learned.

²⁸Small and medium enterprises

- 26:31 – 28:28 Germans are more used to exporting than to importing, so they are not used to other countries selling to them or being better than them in the provision of services. Also, there's the issue of managing the transition with the loss of jobs or the decrease of job security when implementing offshoring. *Betriebsrat*²⁹ and unions make this process slow and difficult, whereas it is much easier in the U.S..
- 28:28 – 29:14 This needs to be accepted and accounted for in the planning of offshoring, both on the side of Germany and India. An American company would be much quicker in making the transition to offshoring, which is a disadvantage for German companies.
- 29:14 – 29:39 The reason for German companies to choose FDI over foreign outsourcing is the inability to change the structure of jobs in a way that makes them easily offshorable ("slice and dice").
- 30:30 – 33:09 A German company which wants to make the most of offshoring needs to think of entire functions in a process or in the company they would offshore, rather than offshoring just some minor roles. The second thing is, IT services can easily be offshored, meaning hardware, infrastructure support and similar tasks. But when it comes to process design, they can divide the job into a different level, so they can separate the decision-making part and the transaction part. Then, the transactions could be done elsewhere without many problems. But as long as processes are looked at in an integral way, there is a problem. So, the very deep level of job slice and dice that is common in America is not needed, but that one level of division could help German companies a lot.
- 33:09 – 33:33 This is one of the biggest issues, because at the moment one person makes the decisions but also posts data sets into SAP modules.
- 33:33 – 35:00 With one customer, shortly before completing the implementation of offshoring they had to send back the work because unions had objected to the project. This was a very difficult scenario for both the service provider and the customer, as the setup in India was already completed.
- 35:00 – 36:48 Application management was identified as one function that is easily offshorable. Change management with respect to other functions was more difficult, but application management could be dealt with by replacing one German resource with three Indian resources. This resulted in a much smaller cost arbitrage in an one-on-one comparison, but as multitasking was done in the Indian site, it yielded economic advantage. The distribution of work was here managed by Indian managers who had enough knowledge of the entire process. This is a lot more management effort than offshoring with American companies would entail.
- 36:48 – 38:49 Thanking the interview partner and finalization

²⁹Work council

B.3. Ingo Kümmeritz

Time	Summary
01:23 – 02:16	Introduction and consent to recording
02:16 – 03:35	Ingo studied in the U.S. (High School and College). This has helped him to broaden his horizon when it comes to international delivery. In 2003, when he was working at IBM, the country manager approached him, asking if he could drive the topic of global delivery. After 10 years of working at IBM, he switched jobs and worked at Siemens. Via a short contract with an Indian company he ended up at NTT Data in Germany.
03:35 – 04:50	He has been working in the area of global delivery for 13 years, mostly with India (90%). In this time, he was responsible for big Projects and Application Management Service (AMS) deals. The critical point, regardless of the subject of the work, is communication and cooperation. It is necessary to learn how the counterpart on the service provider side is thinking and reacting to communication. So interaction between the partners is key, rather than processes, methods and tools.
04:50 – 06:08	Still, processes, methods and tools are the basis for any successful work, be it in Germany or in an international context. Twelve years back, he used to be in the role of a principal, which is a topic expert (as opposed to a people leader). Within Siemens, he moved on to a customer-facing role. At present, he holds a subject matter expert role again with NTT Data. So he has experience in delivery, sales, and customer-facing positions, which helps him understanding the partners involved.
06:08 – 07:21	On the question whether he was involved in offshoring from a customer point of view, he answers “yes and no”. He explains that when talking about global delivery, there is no dedicated location for delivery, but rather a delivering company. This company then needs to find the right delivery model, concerning resources and locations. This is not necessarily India, but this country is the powerhouse in the industry. So he has been both on integrated delivery teams and on customer teams that travel to India to set up offshoring with a company there.
07:20 – 08:10	It is clarified that his experience pertains to FDI. Whenever he has worked with an Indian team, they were his colleagues at IBM or Siemens.
08:22 – 09:00	Although he did not have first-hand experience with offshoring in the U.S., he spent time there and had colleagues there, considering IBM is an American-based company. However, the German subsidiary would probably considered offshoring by the American headquarter, so in this way, he has experience in offshoring for a U.S. company.
09:00 – 09:57	India is a preferred partner when it comes to offshoring because the time zones are very convenient. Central European business hours can be covered from India without needing late shifts from the employees there.

B.4. Subir Purkayastha

Time Summary