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


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


**eingereicht am:** 15. Oktober 2016

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

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# List of Acronyms

**SMEs** small and medium enterprises 4, 19, 20, 22, 29, 52

**FDI** foreign direct investment 8, 17, 20, 21, 30, 31, 32, 35, 40, 52, 56, 63

**WWII** Second World War 9, 12, 13, 17

**WTO** World Trade Organization 10

**NAFTA** North American Free Trade Agreement 10, 13

**EEC** European Economic Community 10, 18

**ICT** Information and Communication Techonology 10, 11, 15, 32, 42

**ARPANET** Advanced Research Projects Agency Network 12

**BEA** Bureau of Economic Analysis 17

**GDR** German Democratic Republic 17, 18

**FRG** Federal Republic of Germany 17, 18

**NATO** North Atlantic Treaty Organization 18

**GDP** gross domestic product 21

**SLA** service level agreement 26, 28, 31, 50, 52

**KPI** key performance indicator 26, 50, 56

**AMS** Application Management Service 32, 56

# 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.

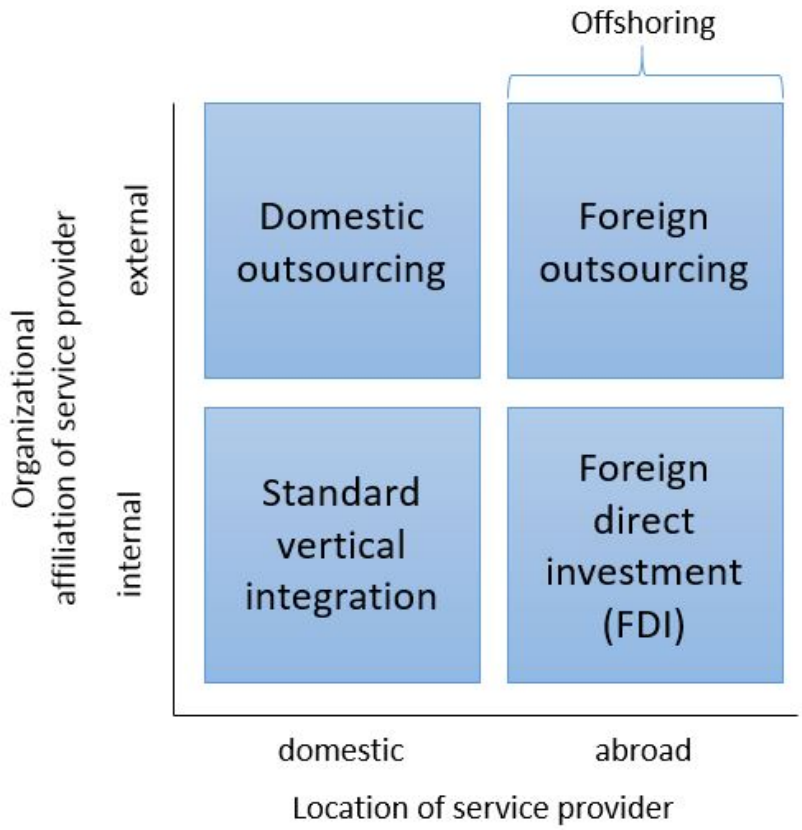


Figure 1: Definition of terms, based on Antràs and Helpman, 2004, pp. 552f

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 companies 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 Techonology (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)

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

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

[3]Established 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 Commission[4].

| Company category | Staff headcount | | Turnover |
|---|---|---|---|
| Micro | $<$ 10 | and | $\leq$ € 2 m |
| Small | $<$ 50 | and | $\leq$ €10 m |
| Medium | $<$ 250 | and | $\leq$ €50 m |
| Large | $\geq$ 250 | and | $>$ €50 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 $6.5[5] per hour[6]. 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.

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

[5]Figures are given with a decimal point.

[6]The 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.

## 2.3. Offshoring in the USA

> "The United States is the world's largest direct investor[...]" (Kozlow, 2006, p. 3)

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 economy[7], 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 wold was open for global trade again. (Winkler, 1994c)

[7] This 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.

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

- Quick economic recovery after WWII
- 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 countries[8] 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 data[9].

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.

[8] USA, Mexico and Canada

[9] For 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

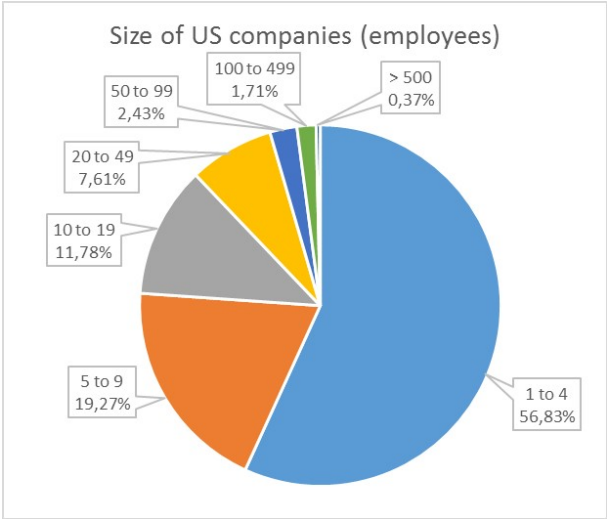


Figure 2: Size of U.S. companies by number of employees[10]

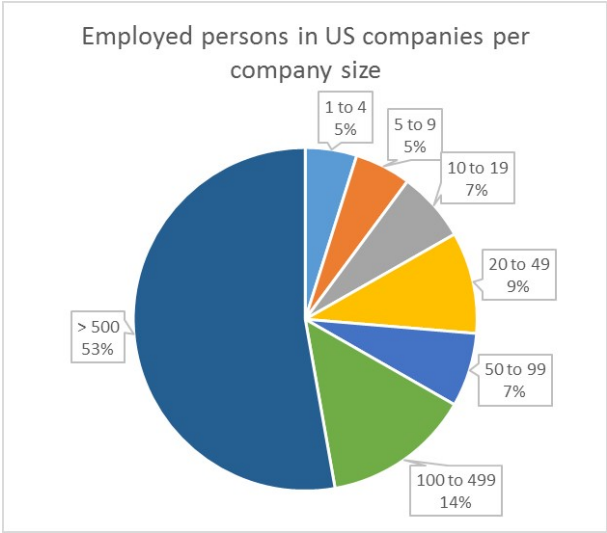


Figure 3: Number of employees per company size in the U.S.[11]

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

[10]Data source: `http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SBO_2012_00CSCB42&prodType=table`, visited on 19. August 2016

[11]Data source: `http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SBO_2012_00CSCB42&prodType=table`, visited on 19. August 2016

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 zones[12]. 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 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.

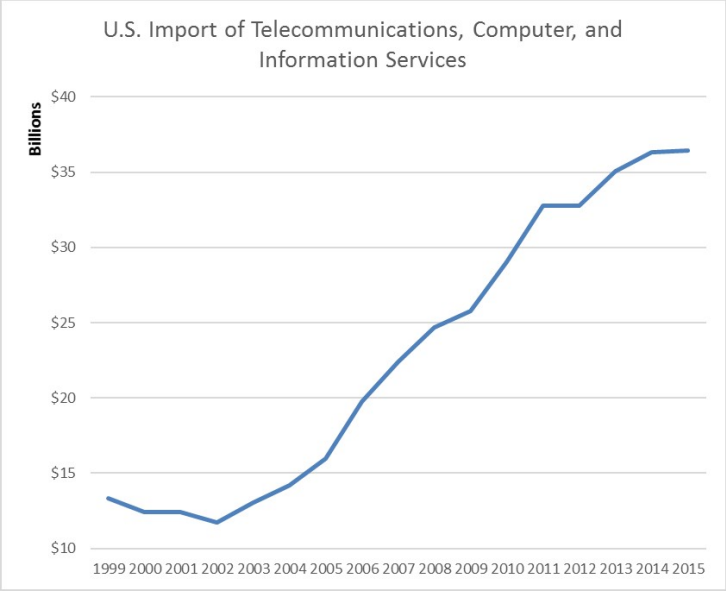


Figure 4: U.S. import of ICT services[13]

[12]Considering no overseas terrorities.

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

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 fuction 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.

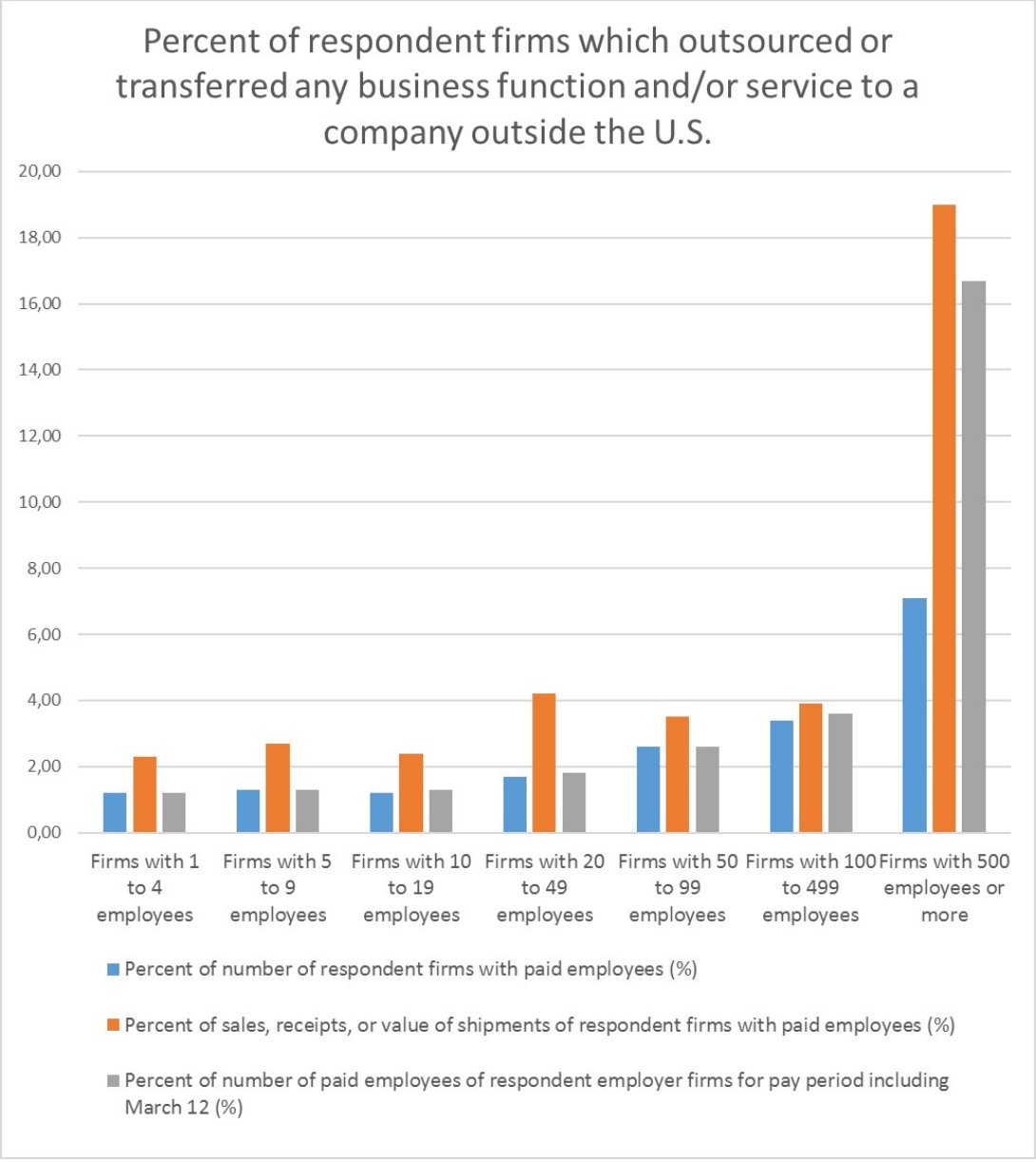


Figure 5: Results of 2012 Survey of Business Owners - U.S. Census Bureau[14]

[14]Data source: `http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SBO_2012_00CSCB42&prodType=table`, visited on 19. 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.

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)

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 communist regime, GDR assumed a similar role in the communist part of the world, exporting machine tools, electronics and chemicals. The 1960s brought firsts 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, 1995[15])

By the 1980s, the intra-German diplomatic relationship hat 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, 1995[16])

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 Union[17], 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.

[15]This 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

[16]Chapter "History: 1945 to 1990, `http://countrystudies.us/germany/3.htm`, visited on 23. August 2016

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

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

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

**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.

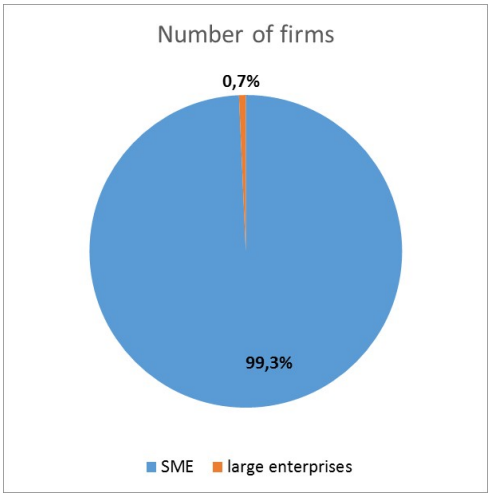


Figure 6: Percentage of SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)

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.

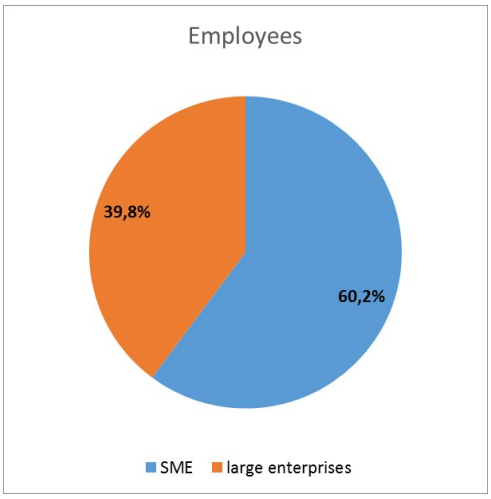


Figure 7: Percentage of employees in SMEs and large companies in Germany, 2011 (Söllner, 2014, p. 42)

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 two[18] 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 conductive 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 2010[19]. This may seem like a very low number, even though it is expected that fewer German companies offshore, compared to the USA. However,

[18]In 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.

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

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 companies[20], 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 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 trillion[21]. 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 years[22]. 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.

[20]The 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.

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

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

**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 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 employees[23] employ 53% of the working population and earn 65% of revenue[24].

**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 farshore[25] 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.

[23] Please 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.

[24] Data source: `http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=SBO_2012_00CSCB42&prodType=table`, visited on 19. August 2016

[25] The 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.

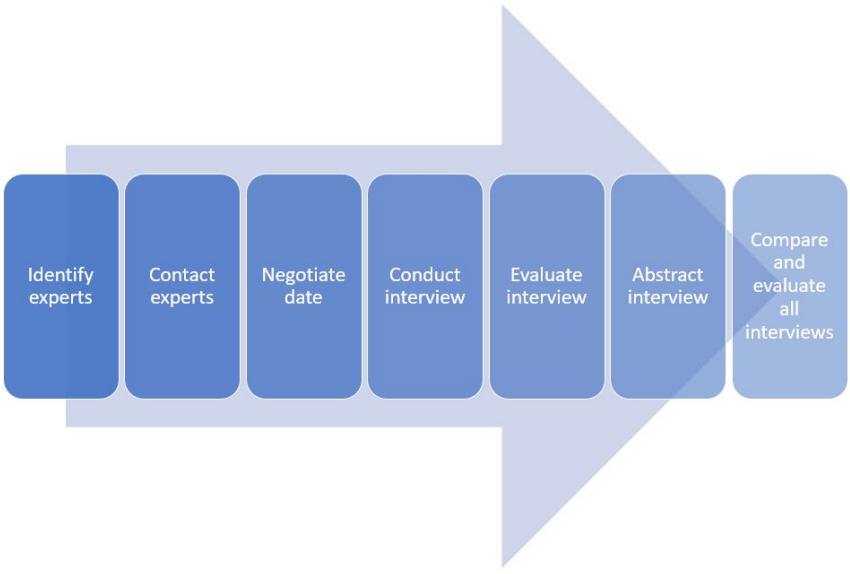


Figure 8: Interview process

**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 questions[26]. 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.

[26]The structure of the interview can be found in the appendix, page 49.

## 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 50.

### 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.

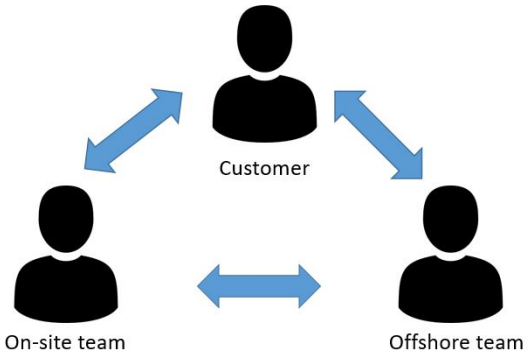


Figure 9: Direct, personal relationships between customer, on-site team and offshore team

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.

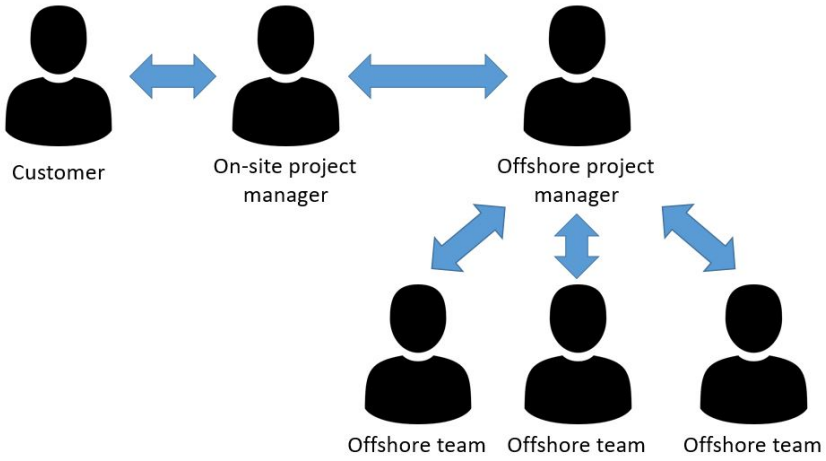


Figure 10: Hierarchical communication between customer and offshore team

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 be interviewed 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 52.

### 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 U.S.** 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 theo 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 services[27], 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.

[27]Hardware, infrastructure support and similar tasks

### 3.3.3. Conclusions

In this interview, Viswanathan described the very different experiences he had with German and American clients. Many of his points are supported by literature research as laid out in section 2. To recap his statements, in table 3 the German and American approach to offshoring according to A. S. Viswanathan are analyzed.

| | **U.S.** | **Germany** |
|---|---|---|
| Job design | Transaction-based, no need of end-to-end process knowledge, specific set of tasks with deep level of | Holistic, process-oriented task which require extensive domain knowledge |
| Employee education | Minimal training | Specialized vocational training, apprenticeship or academic background and years of experience in the company |
| Offshoring approach | Contractual and legalistic focus when setting up offshoring; Emphasis on SLAs | FDI is preferred in order to recreate the own organization in the offshoring destination |
| Expectations | Quality is adjusted in multiple waves of requirements | Very high quality standards from the start |
| Shifting ratio | One American resource to one Indian resource | One German resource to three Indian resource |
| Language | Facilitates communication and collaboration | Rare skill offshore, hard to learn |

Table 3: A. S. Viswanathan's comparison of American and German approaches to offshoring

As shown in the table, German companies in comparison to American have quite a few obstacles to overcome in order to successfully offshore. Some of the characteristics that are unique to German companies and have often proved to be an competitive advantage in global markets are at the same time a disadvantage for offshoring. The most important point is here the difference in job design.

A. S. Viswanathan provided the vast knowledge and experience with offshoring he has gained over the course of his career in this interview. In a pointed way, he determined the differences of American and German companies when it comes to offshoring. Having worked with both American and German clients, he is in a unique position for making this comparison.

## 3.4. A German Global Delivery Expert on FDI Experiences

The interview with Ingo Kümmritz took place on 04. August 2016 at 10:00 h CEST. As a communication tool, Skype was used. The file name of the audio recording on the enclosed CD is 20160804_Ingo_Kümmritz. The written summary is in appendix, page 56.

### 3.4.1. Background

Ingo is German, but went to High School and College in the U.S., which has helped him broaden his horizon when it comes to international delivery. In 2003 he was working at IBM and the country manager approached him, offering him to take responsibility for global delivery. In this time, he was in the role of a principal, which is a topic expert within the IBM organization. Later, after 10 years of working at IBM, he switched jobs and started with Siemens, moving to a customer-facing role. Several years later, he had a short contract at an Indian company and ended up at NTT Data in Germany afterwards. At present, he holds a subject matter expert role again.

All in all, Ingo has been working in the area of global delivery for 13 years, mostly with India. In this time, he was responsible for large projects and Application Management Service (AMS) deals in delivery, sales, and customer-facing positions. This has helped him to understand all partners involved better. In offshoring projects, he has been both in integrated delivery teams and in customer teams that traveled to India to set up offshoring there. His experience pertains to FDI only. Whenever he has worked with an Indian team, they were his colleagues at IBM or Siemens.

Even though he does not have first-hand experience with offshoring from an U.S. perspective, he spent quite some time there and had many American colleagues, considering IBM is an American company. In a way, the work they did at the German subsidiary of IBM could be considered offshoring by the American headquarter.

### 3.4.2. Results of Interview

When talking about global delivery, there is no dedicated location for delivery, but rather a delivering company. This company needs to find the right delivery model with regard to resources and locations. The right location is not necessarily India, but this country is the global powerhouse in the ICT industry. About 90% of the projects and services that included offshoring in Ingo's experience involved the Indian subsidiary. The time zones are very convenient for offshoring, as well, because Central European business hours can be covered from India without needing to use late shifts.

The critical point, regardless of the type of work that is being offshored, is communication and cooperation. It is critical to learn how the counterpart on the service provider side is thinking and reacting to communication. Rather than processes, methods and tools,

interaction is the critical factor in offshoring. Still, the right processes, methods and tools are the basis for successful work in Germany or in an international context.

**Offshoring in the U.S.** There are two main drivers to offshoring in the U.S., to Ingo's knowledge. One of those drivers is the cost arbitrage between employing Indian and American administrators or IT engineers. In U.S. companies, the willingness to take risks in order to take advantage of this is generally quite high when compared to German companies. The second driver is for companies not involved in the IT industry, there is often a high volatility in the business behavior. There need to be large teams set up on short notice and the hiring process takes just too long in the U.S., especially when the needed skills are uncommon. Instead, the company shifts the tasks offshore. For example, DHL used to employ 4000 Indians from Infosys, an Indian-based company, in the U.S.. Then, after Deutsche Post bought the company, service providers were consolidated and did not include Infosys any more. This shows the different approach to offshoring of German and American companies. Business plans of new ventures in the U.S. almost always include out-tasking certain areas.

Supporting this willingness of American companies to offshore is the tendency of having a much higher tolerance for software code that is not 100% perfect, but performs fast, than engineering-oriented civilizations such as Germany, Switzerland, or Nordic countries. This is a sign of a dedication to get new products to the market quickly. American companies are not as concerned about failures as German companies. If a new product fails at an American company, they analyze the mistakes that have been made and start over, whereas German companies try to avoid failures.

But there is not only a demand of American companies seeking to offshore, but also a supply of Indians that like to be working for American companies. Indians have adopted the American way of building their career and CVs based on the reputation of their employers, so they love to join Indian subsidiaries of companies like Dell, HP, IBM, Accenture, or one of the top-tier Indian service providers like Infosys. Also, there is no language barrier between the U.S. and India, as English is an official language in India. Both of those factors contribute to the low barriers American companies face when setting up offshoring.

When it comes to working relationships between American companies and their service providers, there are two main possibilities. The first is a numbers-based approach, where the tasks are handed over and the service provider is managed like a subcontractor, so there is not much of an involvement on a technical or personal level. The other is the approach of building an integrated team. In this three-tier delivery model, on-site staff, people from India on-site and people offshore are working together with defined roles and rotations. Working in this way builds more of a partnership between the customer and the service provider. Both of these approaches work well in the appropriate circumstances. From the customer's perspective, there is also the additional possibility of hiring a global delivery company and collaborating only on a strategic level. The service provider then decides on delivery model and locations.

American companies are better at utilizing dedicated offshore centers. Those are dedi-

cated teams offshore that are reserved for a certain customer. When this customer is an American company, they will get very creative in finding extra work for the offshore team to keep them occupied. In this way, tasks that keep getting postponed because there are more urgent issues at hand will be completed, even if those tasks are not in the initial scope of the offshoring project. American companies approach offshoring centers with a certain level of trust and are willing to pay for the reserved manpower in case something urgent needs to be done.

An example for this is when Ingo was working for IBM, he needed some Indian SAP experts for an upcoming project. He approached the head of the SAP resources in India, he was told there was no one available, because of the 250 people with the required skills, 50 were in existing projects, and 200 were reserved by the American part of IBM. So Ingo could not get anyone for his project, and he thought that it was incredible to have such manpower on the bench, waiting for new projects. Nobody from the German part of IBM was willing to operate likewise, ramping up an Indian team months in advance in order to be able to engage once a new project started.

**Offshoring in Germany** When offshoring started to take off in Germany, there was a myth about offshoring in India that Indians are great and able to deliver any task, based on only the requirement documentation. Of course, there are many highly-skilled professionals in India, and of course, they will deliver when given a task, but that does not imply that all projects where something is delivered are successful. German companies, in the beginning, approached Indians as they would a German factory worker, handing over documentation and checking for results a few weeks or months later. This does not work with India.

So German companies needed to learn how to deal, on a partnership level, with Indians. The first attempts were talking to the service provider once in a while during the projects. When the Indian colleagues were asked if they understood the documentation, they assured that they did, but the projects still failed.

The next wave of learning included trying to understand the cultural background of the Indian colleagues better. When asked to perform a task, they would confirm they could do it because they did not want to fail their customer, regardless if they could actually deliver or not. A German would protest if they could not complete a task because of missing skills or a too small time frame, so German companies assumed Indians would do the same.

Once German teams learned how to hand over tasks to India, check for results and employ trust, they could build an integrated team with the Indian colleagues. With this approach, projects succeeded, and the integrated teams continued to succeed for a long time, because the mutual level of trust and understanding was a great motivation for all participants.

From the Indian side, service providers have made the effort to understand their German customers better, as well. They founded small centers in Germany and hired local people who could make a bridge between India and Germany, in order to be more successful in Germany.

Of course, language is an important factor when talking about offshoring in Germany. Volkswagen, for example, insists on their IT systems being built and managed completely in German. Additionally, they place a lot of emphasis on project teams being directly on-site their headquarters in Wolfsburg. So for a multi-million euro project there are 150 IT engineers needed, of which 100 need to be fluent in German. This creates huge problems with staffing. BMW, on the other hand, is more international and even requires Chinese in some German positions. The Chinese market has become very important for them.

Many Germans, especially the demographic over 45 years, are not very confident in their English skills. They know the language, but they fear making mistakes when using it, particularly in spoken communication. This creates the feeling that they are exploitable and their communication partner will use this weakness to win negotiations. The only way to improve this insecurity is exposing people to situations where they can use the foreign language without high stakes or pressure.

When trying to set up FDI in India, many German companies face the problem that they do not have a brand in India and are not known by the general public. This is an obstacle in attracting enough skilled resources for new offshore centers.

German companies, compared to American companies, are hesitant with using dedicated delivery centers. They do not want to pay for 100 people when the tasks in scope only require 20. This hesitation might stem from a lack of trust on the German side. Also, Germany generally has a risk-avoiding culture which may be aggravating this. Risk-avoiding in this context does not mean that no risks are taken, but German companies have a tendency to perform several rounds of risk-assessment and the need to collect as much information as possible in order to correctly evaluate risks before they are accepted.

Meeting culture in Germany is based on a round-table mentality: everybody gets to contribute their opinion on an upcoming decision. This often prolongs the decision-making process. On the other hand, the quality of decisions in German companies is often very good, as many people have contributed their knowledge.

Germany is a society where an engineer approach to problems is deeply ingrained in the culture. There is a desire to learn why something does not work. As the first bank institutions ran into problems when they started offshoring, they found that their local experts did not get as much relief as anticipated, because offshoring came with additional management overhead. When they switched to integrated teams, they could reduce the communication gap and increase the success rate of projects. Many German companies have gone through the same learning process since, and most have arrived at the integrated team approach as the most successful delivery model.

German companies have needed a long time and lots of experience to learn how to implement offshoring, to use checks and balances, to have a communication plan and how to deal with the Indian colleagues. Once these are in place, offshoring can work very well for a long time in German companies. Ingo's key statement is: "If you are capable of combining German engineering and Indian enthusiasm, then you have a successful team."

### 3.4.3. Conclusions

Ingo outlined in his interview the main points that help American companies in achieving offshoring success, and contrasted them to the obstacles German companies face when trying to set up offshoring. His statements are summarized in table 4.

| | **U.S.** | **Germany** |
|---|---|---|
| Offshoring approach | Numbers-based or integrated team approach | Mainly integrated teams |
| Willingness to take risks | High | Only after several rounds of risk assessment |
| Maturity | High | Learning process about communication and cultural backgrounds |
| Employer brand | Very desirable | Mostly unknown |
| Main drivers | Cost arbitrage and high business volatility | Cost arbitrage |
| Decision making | Prepared by specialists | Round table process |
| Language | English is an official language in India | Limiting factor for availability of resources |
| Resource using | Dedicated offshore centers reserved for one customer, will be used for work backlog if no projects are running | Pay-per-use model |

Table 4: Insert caption here

For German companies, Ingo sees a lot of obstacles when it comes to offshoring. In his experience, once a company has completed the learning process and checks and balances, a communication plan and mutual understanding are in place, it can benefit greatly and over a long time span from offshoring.

The following action items can help German companies to improve their offshoring potential:

- Internationalization of systems and processes
- Encouraging employees to learn and use the English language
- Using and utilizing offshore centers
- Making an effort in understanding the cultural background of the new colleagues

Talking to Ingo offered deep insights into the differences in German and American offshoring ventures that were often illustrated with examples. Even though in his experience, German companies face many obstacles, he provided action items that could help them improve their offshoring processes.

## 3.5. Subir Purkayastha

Subir was interviewed on 06. August 2016 at 10:00 h CEST / 17:00 CST via Sykpe. The written summary of the interview is in appendix page 61. The recording can be found on the enclosed CD, file name: 20160806_Subir_Purkayastha.mp3.

### 3.5.1. Background

After completing his undergraduate studies in engineering back in India, Subir went to the U.S. for graduate studies, initially in engineering. Afterwards he worked for a few years, before going back to graduate studies. He completed a PhD-degree in a Computer Science related field at the University of Michigan.

For 15 years, he worked at AT&T Bell Labs, where he developed network software products. Then, he joined Siemens, where he headed the telecommunications business unit in the IT division of Siemens India. In the duration of his employment, Siemens built up the software division in India from 150 to 7000 people. In his business unit, he managed about 500 people and a revenue of 100 million dollars a year, working extensively with German and U.S. clients.

In 2001, Subir moved back to the U.S. and worked another ten years for Siemens, handling the sales marketing and delivery for the IT division of the company. In this time, he worked mainly with U.S. and South American clients.

After retiring from Siemens, Subir has started working at a local college, managing a small software group.

### 3.5.2. Results of Interview

Subir stresses that even though he has extensive experience both with American and German clients, he can't compare them like to like, because whereas U.S. clients have been both Siemens divisions and external companies, German clients were mostly internal. A comparison can still be made and he tries to generalize as much as possible.

There are four success factors for offshoring projects. The first is the time and attention for the transition phase. There need to be at least six months for more complex projects. Due to the business culture of quarterly budget reviews in the U.S., many business leaders only plan with two to three months for transition. This leads to all kinds of problems

with change and transition management, especially for the client's employees. They need to be shown their next steps, if there are other jobs in the same company for them. If not, ideally there is help for them available in looking for a new job.

U.S. companies in general are not very good in this process, which leads to a state of shock in existing employees, which prevents them from collaborating with the service provider. This makes a smooth transition to offshore operations next to impossible. There is not enough time for the service provider to learn the processes nor for a certain time of parallel operation. This often creates a lot of problems in the first year of new offshore operation.

The second success factor is stability of the delivery team. At Siemens, there was a policy of ensuring stability in teams by deliberately building up domain knowledge in employees. For each team, there were 25 - 30% senior employees, the rest were software engineers and testers. The latter could be replaced if necessary, but the former were key to project success. Keeping this part of the team staple is paramount, because the knowledge they have accumulated can not be replaced by new hires.

This was achieved by giving these important employees good career options beyond an above average salary. They were rewarded with more responsibility and recognition as delivery leader. Over time, they would learn more and more about customer domains and become proficient in several technologies. This has the advantage that new customers get the impression of competent people working for them offshore and enables the delivery leaders to ask the right questions when collaborating with a client. Such domain knowledge can only be built in a company if there is a special focus on retaining senior people in the organization, which are an invaluable asset when it comes to offshoring.

Keeping the senior employees in the company costs time, effort and money, so the cost structure of Siemens and several Indian service providers who employed similar policies is higher than in companies, where one senior employee supervises 20 juniors. If the driver of the customer is cost only, the latter companies have an competitive advantage. On the other hand, they usually have a high fluctuation of junior people who are trying to further their careers and increase their salaries quickly. During presentations with potential clients, Subir and his team tried to emphasize the domain knowledge in the company, but most of the U.S. companies cared more about the bottom line price.

The third success factor for offshoring is the time the customer is willing to spend on explaining the business and the processes. The ideal case was, in Subir's experience, if some employees of the customers were spending three to six months with the delivery team in India. If this is not possible because of budget restraints, the client should at least visit their delivery team once or twice a year. Both possibilities cost time and money, but is invaluable in motivating the delivery team. They get to know the people they are working for and are able to develop an ownership and sense of pride in their work, which would be impossible if the working relationship would be managed completely via email and telephone.

This level of engagement and spending time with each other is a very critical success factor in offshoring. German Siemens divisions were more inclined to put in the effort than U.S.

Siemens divisions or external clients. All the travel costs money which increases the bottom line price, but the investment is rewarded with requirements that are understood better, a more productive working relationship, higher motivation for the delivery team, which ultimately leads to project success and delivery quality.

A fourth success factor is the view senior employees in the customer's organization have on the offshore team. It is very important that the client sees the offshoring team as an extension of the own organization, not only as a tool to cut labor cost. Subir used to organize town hall meeting with the client's business leaders and the delivery team to let the offshore team see who they are working for and feel as a part of the client's team. This was, in Subir's experience, much easier with Siemens divisions, but is equally important for external clients. Everybody involved needs to agree that in a global economy, global delivery and service is needed.

In the hierarchy of customer's organizations, business leaders did not understand this concept of an extended team, but technical employees or business analysts did. So even if they wanted to collaborate with their supplier and build a good relationship, there was often not enough time allocated. Reasonably, for an offshore team of 20 people there need to be one or two full-time employees on the client's side to support them. Typically, clients would allocate one employee half-time or even quarter-time for some weekly calls and the clarification of questions.

In Subir's view, U.S. companies showed the following characteristics with regard to the four success factors:

- Poor transition planning
- Stability of the delivery team is thought to be the problem of the service provider
- Mixed results in investing client's time; companies with a focus on quality understand the need to spend time with their supplier
- View of the delivery team varies by organizational affiliation of the client – only Siemens divisions believe the offshore team to be an extension of their own organization

A strategic approach to careful planning is very common in German companies. Those plans are then often executed with much attention to detail. As a consequence, German companies are more bureaucratic than U.S. companies: Decisions that should take one week often take one month or more. This hurts German businesses in other areas, but in offshoring, the characteristic is contributing to success.

In the last two decades, German companies got more and more exposed to cost pressure, but the business culture still encourages long-term planning and thinking, as opposed to the quarterly business reviews American managers face. This helps in making and executing offshoring decisions, because a stable working relationship can be established.

In Germany, there is generally a higher focus on quality than in most U.S. companies.

Therefore, they are not only looking to reduce cost when considering offshoring, but want to achieve a combination of cost arbitrage and good quality. This leads to suppliers having more leeway in selling a slightly higher cost structure to German clients.

The German Siemens divisions Subir worked with were very involved in supporting their supplier. This goes back to the aforementioned emphasis on quality, which was especially important for the development of software products that would be used multiple times in different scenarios, as opposed to "one-off" projects that were more common with American clients. Of course, in a FDI scenario like this, there is often better camaraderie and team work than in offshore outsourcing, because both sides have stakes in the finished product and project success in terms of time and quality.

When mistakes occur, the supplier should not be afraid to share bad news with their customer. This requires building a good team and a good working relationship. In Subir's experience, German companies are more invested in building an effective working relationship than American companies. In the U.S., people tend to hold positions only for a few years, so they have not as much incentive to invest personal time and involvement into establishing a relationship to an offshore provider.

In software engineering, requirements frequently change in the duration of the project. The reason for this is usually either requirements not being uncovered in requirement analysis, or changes in business necessitate changes in the software. Consequently, both client and supplier need to be flexible in adapting to changes.

Indians are, in general, quick to come up with a solution to unexpected problems. This goes back to India being a developing country, so living conditions are difficult and unpredictable. The people have to adapt to unforeseeable circumstances and innovate every day. This ability is applied for their jobs as well, so Indians tend to be very flexible.

In the U.S., the education system places a lot of emphasis on creative problem solving. So, when faced with completely unfamiliar circumstances where the usual approaches do not work, Americans are better prepared than Germans. Additionally, there is unpredictability in U.S. companies, because businesses keep changing very quickly, resulting in frequent reorganizations. Being flexible and innovative is an important characteristic in this environment.

Germany is a very stable country in comparison, which results in Germans being less flexible and less innovative. Once a decision is made, it is hard to change a German manager's mind, even if there is new data that has not been included in making the decision. It takes a long time for them to absorb the new data and reorient their thinking. This is a handicap in software development projects, but in software support, long-term planning helps. Considering that 70% of work in a software life cycle is support, this disadvantage can also be seen as an advantage.

Even though the success factors for offshoring are better in German companies, they have a much smaller footprint in offshoring destinations such as India than American companies. Subir links this to the different maturities both countries have in offshoring. The U.S. have been offshoring since 30 years, but German companies only started 15

years ago. The thought that competitive IT divisions should only have 20-30 % domestic employees and the other 70-80% offshore is still very alien to German companies, so they are lagging behind. Still, they understand the critical success factors for offshoring better, and German business culture is very conducive especially for software support projects.

### 3.5.3. Conclusions

In the interview, Subir offered an outside view of German companies and their offshoring abilities. Being more familiar with India and the U.S., he had very different experiences and opinions on offshoring in the U.S. and Germany than the other interviewed experts. In table 5, the main statements of the interview are summarized.

| | **U.S.** | **Germany** |
|---|---|---|
| Transition planning | Poor | Good planning and execution |
| Stability of delivery team | Thought to be the problem of the service provider | N/A |
| Client's time | The need of spending time with the supplier is not understood well, especially higher in the hierarchy | Very involved |
| View of delivery team | Tool to reduce cost | Extension of German team |
| Flexibility | High | Low |
| Decision making | Fast | Bureaucratic |
| Maturity of offshoring | Mature | Less mature |
| Type of work | Software development | Software support |

Table 5: Insert caption here

Attributes of German companies, Subir concluded, are very helpful for successful offshoring projects. If he owned a service provider company, he would prefer to work mainly with German clients, because there is a larger chance of success with them. Germany is culturally less inclined to offshore work, but with time, German companies will catch up with American companies in offshoring maturity and footprint.

This interview was very interesting because of the completely different results, compared to the other interviews conducted for this thesis. In an illustrative way, Subir shared the critical success factors for offshoring ventures. Of course, the fact that his experience with German clients pertains almost exclusively to Siemens divisions must be kept in mind when interpreting the results.

## 3.6. Summary and Evaluation

When considering the results of literature research, one could easily come to the conclusion that, when it comes to offshoring German companies are at a huge disadvantage compared to American companies. The interviews presented in the previous sections allow for an analysis looking into business practices.

The interviewees covered a broad array of perspectives, from customer to service provider, and were centered on both the U.S. and Germany. In figure 11, the perspectives of each interviewee are depicted in a matrix of both countries versus customer or service provider.

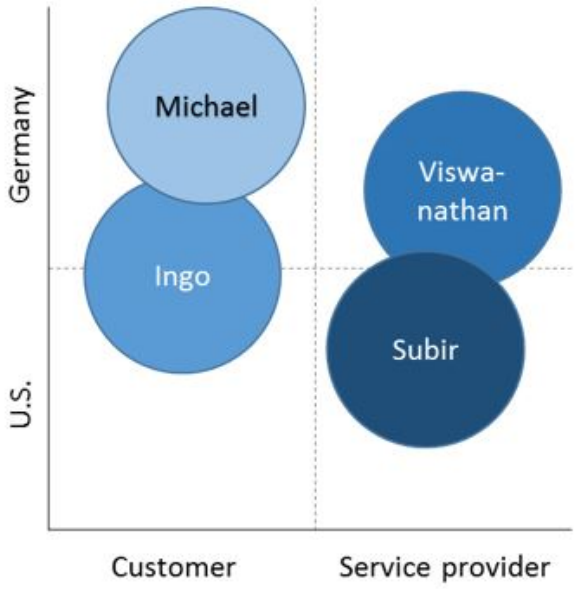


Figure 11: Areas of offshoring expertise for each interviewee

In the four interviews, all possible perspective are covered with the exception of a purely American customer's perspective. This allows for a thorough analysis of offshoring and a comparison of approaches in the U.S. and Germany. Also, the background of experts is important when interpreting their statements and comparing contradicting comments.

The first and most obvious difference between Germany and the U.S. is language. As stated in section 2.5, English is one of the most widely spoken languages in the world, whereas German is more of a niche language. There are still many German companies that prefer operating and maintaining their IT systems completely in their native language, as Ingo mentions. This is a problem American companies do not experience at all. But gradually, many companies in Germany become more international, some even adopting English as corporate language. In ICT generally and in software development specifically, English is already the standard language of the industry. Even though many Germans do not feel confident in their English skills, increasing exposure to the language and employee education will diminish this obstacle for offshoring in Germany.

Education is an important factor that leads to differences in job design in the U.S. and

Germany, which has a great impact on offshoring in both countries. In Germany, employees usually have completed a degree or an apprenticeship specific to their job. Therefore, jobs are designed in an very intrinsic and process-oriented way, whereas in the U.S., jobs tend to be a very specific set of tasks. The transaction, not the process, is the main focus of job design in American companies. This has immense implications for the offshorability of jobs, because the required skills for an American job are much better manageable. Therefore, the ratio of job replacement is one offshore resource for one onshore resource in the U.S., but three offshore resources for one onshore resource in Germany. This produces additional management effort for German offshoring ventures and ultimately decreases cost arbitrage.

Careers in Germany tend to be relatively linear, whereas changes in jobs and fields of employments are more common in the U.S.. This is due to frequent business changes, constant adjustments to markets and an overall more volatile environment of American companies, resulting in a "hire and fire" mentality.

Volatility of businesses in the U.S. has created a working culture that is marked by intense cost pressure. Managers are made responsible for their budgets in a quarterly rhythm and two or more missed targets can be the end of employment for them.

# 4. Conclusions and Limitations

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# Selbstständigkeitserklärung

Hiermit erkläre ich, Veronika Lawrence, dass ich die vorliegende Arbeit selbstständig und ohne fremde Hilfe verfasst und keine anderen Hilfsmittel als angegeben verwendet habe. Insbesondere versichere ich, dass ich alle wörtlichen und sinngemäßen Übernahmen aus anderen Werken als solche kenntlich gemacht habe.

| | |
|---|---|
| Ort: | Unterschleißheim |
| Datum: | 15. Oktober 2016 |
| Unterschrift: | |

# 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* companies[28]. 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.

[28] Small and medium enterprises

26:31 – 28:28 Germans are more used to exporting then 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

[29] Work council

## B.3. Ingo Kümmritz, 08/04/2016

| 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 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 – 10:06 | 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. |

10:06 – 10:46 Even though he has no direct experience with offshoring from a U.S. perspective, he feels comfortable to share what he has learned from his American colleagues. He thinks there is a significant difference between German and American approaches to offshoring.

10:46 – 12:58 There are two main drivers behind offshoring in the U.S., to Ingo's knowledge. One of those drivers is cost. An administrator in the U.S. works for cost level X, while an Indian colleague would cost a fraction of X. For American companies, this cost arbitrage seems very tempting. The willingness to take risks in order to take advantage of the cost arbitrage is a lot higher than in German companies. Since there is no language barrier between the U.S. and India, and the U.S. being a civilization that Indian companies like to be working for, there are not many barriers to American companies that want to offshore.

12:58 – 14:25 The second point is, when looking at companies not involved in the IT industry, there is a high volatility in their business behaviour. That means, often there need to be large teams set up on short notice and the companies would rather not onboard so many people as the needed skills are often uncommon, they are just interested in the results. This increases the willingness of companies to shift tasks offshore.

14:25 – 15:13 Ingo gives the example of DHL, before the company was bought by Deutsche Post. DHL employed roughly 4000 Indians from Infosys, an Indian-based company, in this time. Then, Deutsche Post bought the company, the service providers were consolidated and did not include Infosys any more. This is just a different approach when dealing with new ventures, business plans in the U.S. almost always include outtasking certain areas.

15:13 – 16:49 Another point is, that American companies have a much higher tolerance for software code that is not 100% perfect, but performs fast, than engineering-based civilizations such as Germany, Switzerland or Nordic countries.

16:49 – 17:22 This is a sign of the dedication to getting products to the market quickly. American companies are not as worried about failures as German companies. If a new product does fail at an American company, they learn from it and start over, whereas German companies try to avoid failures.

17:22 – 18:30 There are two main possibilities of working relationships between American companies and their Indian service providers. One is handing the tasks over and managing the service provider as pure subcontractor. This is a more numbers-based working relationship and not much of a partnership or an involvement on a technical level.

18:30 – 19:40 For more sophisticated set-ups, there is the approach of an integrated team. Here, you have on-site staff, people from India on-site (they are called landed), and people offshore, so this is a three-tier delivery model. There are defined roles and rotations. In this delivery model, there is more of a partnership between the customer and the service provider.

19:40 – 20:30 Both of these approaches work very well in the appropriate circumstances. To some American companies, it seems natural to work in distributed teams with English-speaking Indian colleagues, while there are problems working with South America.

20:30 – 21:09 From the customer's perspective, there is the third possibility of contracting a global delivery company and collaborating only on a strategic level. The service provider then decides on delivery model and locations.

21:09 – 23:25 American companies are better at utilizing dedicated offshore teams. When offered a dedicated offshore center, American companies will get very creative in finding extra work for the offshore team to keep them occupied, maybe some backlog tasks that keep being postponed because there are more urgent issues at hand. Germans are very hesitant with this and prefer to "pay per use" of offshoring resources. Ingo thinks that this is something that needs to change in Germany.

23:25 – 24:16 This hesitation of German companies to use delivery centers to full capacity might stem from a lack of trust on the German side. Also, Germany has a risk-avoiding culture which may be aggravating this.

24:16 – 24:59 Ingo clarifies that he does not want to imply German companies are not taking any risks, but there is a tendency to have several rounds of risk-assessment and the need to collect as much information as possible in order to correctly evaluate the risk, which slows down the process. In America, decisions are made much quicker and in a "hand-shake business" manner. So there is an ability of instant execution.

24:59 – 25:40 The issue with the delivery centers is that American companies approach it with a level of trust, but German companies do not want to pay for 100 people when they only have work for 20. American companies are willing to pay for the reserved manpower in case something urgent comes up; otherwise, a backlog of work that may be not in the original scope gets moved offshore.

25:40 – 27:28 When Ingo was working for IBM, he wanted to get some Indian SAP experts for a new project. When he approached the head of the SAP resources in India, he told him there was no one available, as of the 250 persons there, 50 were in existing projects, and 200 were reserved by the American part of IBM for projects to come. That was why Ingo could not get any Indian resources for his project, and he thought it was incredible to put such manpower on the bench. Nobody from the German part of IBM was willing to work likewise, ramping up an Indian team months in advance in order to be able to engage once the project started.

27:28 – 28:47 There has been this myth in Germany that Indians are great and able to deliver any task just based on the requirement documentation. Of course, they will deliver, and considering that in this time 300 000 new IT engineers approached the Indian job market, it is just a matter of statistic that there also were quite a few very good IT engineers, experts and consultants.

28:47 – 29:45 However, German companies never learned to deal, on a partnership level, with the Indians. They approached them like they would have done in a German factory without keeping cultural differences in mind. They would just hand over the documentation and check the results a few weeks or months later. That does not work with India.

29:45 – 30:20 At a company he experienced this, after a badly failed software engineering project, the German team came to the conclusion that they should talk to the Indian service provider once in a while during the project, which mostly also resulted in failures. When the Indian colleagues were asked if they understood the documentation, they assured that they did, but the project still failed.

30:20 – 31:25 The third wave of learning included looking into the cultural background of the Indian colleagues and trying to understand them better. When asked to perform a task, they would confirm they could do it because they did not to fail their customer, regardless if they could actually do it or not. Germans would protest if they were asked to perform a task in an impossibly small time frame. This relates to the German engineering background, including buffers in the planning in order to deal with anything unexpected.

31:25 – 31:54 Once the German team learned how to hand over tasks to India, check for results and employ trust, they could build an integrated team with the Indian colleagues and then, the projects succeeded. Such an integrated team continues to succeed for a long time, because this mutual level of trust and understanding was a great motivation for all participants.

31:54 – 33:18 The trouble with German companies in India is that many do not have a brand there and are not generally known. Indians have adopted the American way of building their careers and CVs based on the reputation of their employers. So German companies have a hard time attracting enough skilled resources when setting up FDI. Instead, Indians loved to join Dell, IBM, HP, Accenture or one of the top-tier Indian providers.

33:18 – 33:55 German companies have needed a long time and lots of experience to come up with a way to deal with offshoring, to implement checks and balances, to have a communication plan, and how to deal with the Indian colleagues. Once these are in place, offshoring can work very well for a long time in German companies.

33:55 – 34:41 From the Indian side, service providers have learned about Germany as well, founded small centers in Germany, and hired local people who could make a bridge between India and Germany. In order to become successful, they want to understand their customer's culture better.

34:41 – 36:20 Of course, there is the language issue as well when talking about offshoring in Germany. Volkswagen, for example, has a lot of IT services, and everything has to be in German. So they have large, multi-million euro projects, completely in German, and they also insist on large teams, sitting right next to their premises in Wolfsburg. This is virtually impossible because Wolfsburg is not a very desirable city. There are only so many German-speaking IT engineers, but with Volkswagen requirements, 100 people in a team of 150 need to speak German, and that is a huge problem.

36:20 – 37:55 BMW, on the other hand, is more international and even requires Chinese in some positions, because the Chinese market has become very important for them.

37:55 – 39:38 One obstacle to German companies becoming more international is many German people not being confident in their English skills. This goes back to trying to not make any mistake when using a foreign language. Also, they fear being ripped off or losing in negotiations.

39:38 – 41:00 Ingo's impression is that the integrated team approach is much more common in Germany. Bank institutions were the first to try and benefit from the cost arbitrage, but they soon found out that offshoring comes with additional management overhead, so their own experts did not get as much relief as anticipated. When they switched to integrated teams, they could reduce this communication gap, even though it cost more.

41:00 – 43:21 From that, German companies have learned that just shipping tasks to India does not work and prefer integrated teams for that reason. Ingo thinks, this approach is also more successful. This may go back to the desire to understand how things work which is a German specialty. In contrast, U.S. companies simply do not care how results are achieved, so they are more KPI-driven. This desire to understand makes things slower.

43:21 – 45:47 If we look at typical German behaviors at meetings, there is a roundtable mentality: everybody gets to say something. In the U.S., the decision-making process is well-prepared and results in a quick decision, which may be not as over-engineered as in Germany. However, the quality of decisions in Germany is often very good, as many people have contributed their knowledge. In the U.S., this may get lost.

45:47 – 48:50 It is astounding how many companies in Germany go through the same learning process with regard to offshoring, first shipping the tasks without much communication, failing and only then learning from their mistakes.

48:50 – 49:55 Ingo's Indian counterpart had the tendency to oversell their services, whereas Germans tend to be overly critical with themselves.

49:55 – 50:25 Ingo's key statement always is: "If you are capable to combine German engineering and Indian enthusiasm, then you have a successful team."

50:25 – 53:05 Thanking the interview partner and finalization

## B.4. Subir Purkayastha

| Time | Summary |
|---|---|
| 00:25 – 03:06 | Introduction and consent to recording |
| 03:06 – 03:59 | Subir did his undergraduate degree in engineering from India, then he went to the U.S. for graduate studies, initially in engineering. Afterwards he worked for a few years, before going back to graduate studies. He completed a PhD-degree in a Computer Science related field at the University of Michigan and his thesis was about data management systems. For 15 years, he worked at AT&T Bell Labs where he developed network software products. Subir then joined Siemens, where he headed the telecommunications business unit in the IT division of Siemens India. |
| 03:59 – 04:30 | During the 16 years Subir worked there, Siemens build up the software division in India from 150 to 7000 people. In his business unit, he worked extensively with German and U.S. clients, which were both Siemens subsidiaries and external companies. |
| 04:30 – 04:53 | In 2001, he moved back to the U.S. and worked another ten years at Siemens, handling the sales marketing and delivery for the IT division of the company. In this time, he worked whit U.S. and South American clients. |
| 04:53 – 05:15 | After retiring from Siemens, Subir has started working at a local collage and managing the software group, which is with about five people really small. But at Siemens, he was responsible for about 500 people and a revenue of 100 million dollars a year. |
| 05:15 – 05:55 | German clients mostly have been Siemens divistions, whereas U.S. clients have been both Siemens division and external companies. Therefore, the comparison will be not completely like to like but he will try to generalize as much as possible. |
| 06:30 – 07:09 | In the U.S., the software development and delivery part of IT industry, the approach of companies over the last 20 years has been reducing cost. |
| 07:49 – 08:30 | Most of the business volume by U.S. companies is from financial services and retail industries. A different group of companies that have a strong focus on quality are the software development companies. They look not only at cost reduction, but software quality as well because for software products, quality is really important. |
| 08:30 – 09:16 | In software industry, 70% of the work is routine support tasks and software development tasks. For the development of software products, quality is paramount. Subir has worked with a few software companies who chose the IT division of Siemens over the major name brands in India and the U.S. for their development, because they had a lot of experience in developing software products for the Indian and German divisions of Siemens, for example in car electronics or telecommunication products. |

09:16 – 09:55 Compared to the U.S., Germany had a strong emphasis on quality. In U.S. companies, the planning cycles are a lot shorter than in German companies. That means, they try to make decisions quickly and go ahead and implement them. They have a lot less bureaucracy and their time frame from idea via decision to implementation is a lot shorter.

09:55 – 11:20 When offshoring a major operation, it could be support or development, a long planning time (at least 6 months) is needed. But in the U.S., companies often give only two to three months for transition. This creates all kinds of problems with change and transition management. Especially for the client's employees it is important to carefully manage the transition to offshoring, breaking the news in a gentle way, showing them their next steps and if possible and necessary help them find new jobs. U.S. companies are not good at this process.

11:20 – 12:10 As a consequence, existing employees are in a state of shock. This prevents them from collaborating with the service provider, who is under time pressure as well. This makes a smooth transition next to impossible. There is not enough time for the service provider to learn the processes or for a certain time of parallel operation. If the transition does not go well, there are a lot of problems in the first year of operation.

12:10 – 12:43 Subir thinks U.S. companies do not fully understand the complexity that comes with offshoring, particularly if there are a lot of people involved.

12:43 – 13:22 So the quick decision-making and implementation time of American companies are, in Subir's view, a big disadvantage when it comes to offshoring.

13:22 – 14:20 Of course, this is a generalization, and not meant to say that there are no companies with more experience or that are more progressive. Usually, offshoring decisions are made by high-level business managers. Technical managers are often against offshoring, are overruled in the decision making and their views are completely disregarded afterwards.

14:20 – 16:20 For example, a vice president of a division in the U.S. who has budget goals to meet sees that employing people in the U.S. is expensive. First, he may try moving the employees within the U.S. to a lower cost area, but when that does not work, the work is offshored to India or the Philippines, for example. Because business leaders in the U.S. are held responsible for budgets quarterly, the vice president is under a lot of time pressure to implement offshoring as quickly as possible, else he could lose his job. This corporate environment in the U.S. is not conductive to sustainable delivery.

16:20 – 18:10 The critical success factors for offshoring are a sufficient transition time frame (as previously mentioned) and the stability of the team who will deliver the service.

18:10 – 19:30 At Siemens, there was a certain delivery culture or philosophy: The stability of delivery teams was very important for them. The knowledge in the team was retained by the top 25-30 % of the team. For example, a delivery team for a software development project consists of 20 people, so the top 25 % are five to six people. These senior people collect all the knowledge about the product, the project and the customer while working in the project.

19:30 – 20:20 The other people in the project are software developers, testers and so on. Those can be replaced if need be, but the senior people are key to project success. So the critical success factor is keeping this part of the team stable, because the knowledge they have accumulated can not be replicated by new hires.

20:20 – 21:50 At Siemens, these important employees were kept with the company by giving them good career options. This is not limited to money, but more in the sense of additional responsibility and recognition as a delivery leader as opposed to a software developer. Over time, they would learn more and more technologies and domain knowledge about customers and their industries. These delivery leaders are an invaluable asset when it comes to offshoring.

21:50 – 23:25 New employees start in a certain domain. After a few years, they can move to a different domain and broaden their knowledge. This has the advantage that new customers get the impression that their offshore software engineers understand their business. This enables the software engineers to ask the right questions and make informed decisions when working for this customer. This knowledge can only be built up in a company if there is a special focus on retaining senior people in the company.

23:25 – 24:30 Besides Siemens, several Indian service providers have recognized the importance of knowledge in the companies and introduced similar policies. The key, senior employees have to be paid well, their careers must be planned and they have to be taken care of in order to keep them in the company. This costs time, effort and money, so the cost structure of such companies is higher than in companies where one senior employee supervises 20 juniors.

24:30 – 25:22 If the focus of the customer is only on cost, companies with only one senior employees in a team of 20 people have an advantage. Those companies usually have a high fluctuation of junior people because they are trying to further their careers and increase their salary quickly.

25:22 – 25:59 During presentations, Subir and his team tried to emphasize the fact that they have a lot of domain knowledge in their teams, but most of the American clients only cared about the bottom line price.

25:59 – 26:35 The third success factor for offshoring is the time the customer is willing to spend on explaining the business and the processes. In order to facilitate this, it was common to invite some employees of the client to India and spend three to six months to explain the business and work as part of the team. This helps to develop a good relationship.

26:35 – 27:12 If this is not possible because of cost issues, the client should at least visit their delivery team once or twice a year.

27:12 – 28:38 This costs time and money, but helps to motivate the delivery team. Also, the service provider would send their project manager and delivery experts to the customer for two tasks: requirement definition and system testing.

28:38 – 29:40 This level of engagement and spending time with each other is a very critical success factor in offshoring. German Siemens divisions were more inclined to put in the effort than U.S. Siemens divisions or external clients. All this travel costs money which increases the bottom line price, but it is a good investment in project success, because requirements are understood better, the working relationship is better and there is more motivation for the delivery team. Once the product is moved in production, the quality is much better.

29:40 – 30:00 That is what is needed for a successful offshoring project. If the focus of the client is only cost, this becomes much harder to sell. If the client is more progressive, they understand the importance of quality and long-term relationship.

30:30 – 32:40 A fourth success factor is having senior people on the client's organization and their view on the offshore delivery team. So Subir used to organize town hall meetings with the client's business leaders and the delivery team to make the offshore team see who they are working for and feel as part of the client's team. This is of course much easier when working for other Siemens divisions.

32:40 – 33:15 Even for outside clients, this is really important. It must not be just a lip service, because offshoring is not just an instrument in cutting cost, but an extension of the client's own team. Everybody involved needs to be on the same page, that in a global economy, global delivery and service is needed.

33:15 – 34:55 In Subir's view, U.S. companies have poor transition planning and think that the stability of the delivery team is the problem of the service provider. With investing client's time, Subir has had mixed results. Companies with a focus on quality understood the need to spend time with their supplier. Only Siemens divisions believed that the offshoring team is an extension of their own organization. External customers were using offshoring just as a cost-cutting tool.

34:55 – 35:36 In the hierarchy of customer's organizations, the higher positions did not understand this concept of an extended team, whereas people in lower positions did.

35:36 – 36:07 Technical persons or business analysts understand the need to collaborate and build a relationship with the service provider, but management often does not allow enough time to be used for this. A reasonable ration would be for an offshore team of 20 people to have one or two full-time employees on-site to support them. Typically, clients would allocate one employee half-time or quarter-time for some weekly calls and clarifying of questions.

36:07 – 36:30 Sometimes, the supplier would place an employee permanently at the client's location, which is a good idea, but the client still has to spend the time in order to support the service provider. So it is not a complete black-box approach to offshoring, but the understanding of effort that is to be brought up by the customer is, especially in higher management, lacking.

36:30 – 37:23 Subir's experience with German companies is 90% Siemens divisions. He thinks that, in German industry, there is a higher emphasis on quality than in the U.S., which helps when it comes to offshoring. In general, German companies are also more bureaucratic. Decisions that should take one week take one month or more. This hurts in other areas, but in offshoring, this characteristic actually helps.

37:23 – 38:18 German people are, in general, good at planning things. Also, execution is good, because they don't mind doing mundane things. Execution includes making sure that minor details are right and, as a culture, Germans are very good at that.

38:18 – 39:30 These two aspects help German companies in the offshoring area. In the last two decades, German companies got more exposed to cost pressure. Also, business leaders are traditionally under less short-term pressure than their American counterparts. This helps in making and executing offshoring decisions.

39:30 – 40:16 German companies are not only looking to reduce cost, but they want to achieve a combination of cost arbitrage and good quality when offshoring. This leads to suppliers having more leeway in selling a slightly higher cost structure to German clients.

40:16 – 41:10 On client's time, Subirs experience with Siemens divisions is that they were very involved because there was a huge emphasis on quality. Usually, products would be developed that were usable in different scenarios, as opposed to "one-off" projects.

42:30 – 43:10 Offshoring in an FDI scenario results in better camaraderie and team work, because both sides have stakes in the finished product with regard to time and quality.

43:10 – 43:44 The first realization has to be for the client that this is a role with certain responsibilities and tasks that have to be fulfilled in order to enable the supplier to perform well. For example, requirements can not be changed in the last minute, transition must be planned well and good communication must be established.

43:44 – 44:53 Requirements in software development change, which is very common either because of missing requirements or because of changes in business have an effect on requirements. So both the client and the supplier need to be flexible in adapting to changes.

44:53 – 46:44 Americans are, in general, more flexible than Germans and react quickly with a decision on how to proceed. When there are mistakes, the supplier should not be afraid to share bad news with their clients. This requires building a good team and a good working relationship. In Subir's experience, German companies believe more in relationship. For example, when visiting a German company, they would make a point of having dinner with Subir. In the context of offshoring, this helps a lot.

46:44 – 47:59 To summarize, German companies have a lot of advantages, but there are also a few disadvantages. In general, Germans are less flexible. Once the scope of offshoring is decided, it is hard to change a German business manager's mind even if there is new data that has not been included in making the previous decision. It takes a long time for them to absorb the new data and reorient their thinking. In software development project, that is a handicap.

47:59 – 48:50 The other aspect is thinking out of the box. When being faced with completely unfamiliar circumstances where the usual approaches do not work, people from the U.S. are better prepared. This goes back to the education system placing a lot of emphasis on creative problem solving.

48:50 – 50:41 Living conditions in India are difficult, so Indians have to adapt to unforeseeable circumstances and innovate every day in order to survive. So they are quick to come up with a solution in case something unexpected happens. Germans, being in a very stable country, do not need to innovate so much. In America, there is unpredictability because businesses keep changing very quickly.

50:41 – 51:52 These characteristics help in software development projects and are a disadvantage that German companies have. But in software support projects, this longer-term planning helps, and software support is 70% of the offshoring market. German companies know how to plan and execute, and they make an effort to establish and maintain good working relationships.

51:52 – 52:27 In the U.S., people tend to hold positions for only a few years, so they have no incentive to invest personal time and involvement into establishing a relationship to an offshore supplier.

52:27 – 55:12 Even though Subir's previous statements point to German companies having an advantage for offshoring, American companies are in a more mature stage of offshoring, so they are better at it. Still, German companies understand the critical success factors for offshoring better, and business culture is in a way that especially software support projects can be very successful, even though German companies are in a less mature stage of offshoring, considering that they only started 15 years ago.

55:12 – 57:10 The footprint of German IT companies in India is much smaller, compared to big U.S. corporations such as Accenture or IBM or Indian suppliers such as Infosys or Tata. Maybe, they still have some mindset issues with setting up large hubs in India, because the thought that IT divisions should only be 20-30 % domestic employees and 70 - 80 % offshore is very alien. Therefore, German companies are lagging behind.

57:10 – 58:49 For example, Atos, former IT division of Siemens, has a yearly revenue of eight or nine billion dollar. A comparable IT service company in the U.S. would have a much larger footprint in India.

61:00 – 61:49 If Subir had an IT service company in India, he would estimate a larger chance of success with German clients, on average, than with U.S. clients. Germany and France are culturally less inclined to outsource work, but with time they will be in a more mature state and more successful with offshoring.

61:49 – 64:25 Subir thinks, in software development, there is not much of a language barrier. German software engineers in general understand English and in projects Subir experienced, everything was developed in English. Still, project documentation in German would be an issue, and older Germans do not know English as well as younger people.

64:25 – 67:48 Thanking the interview parter and finalization