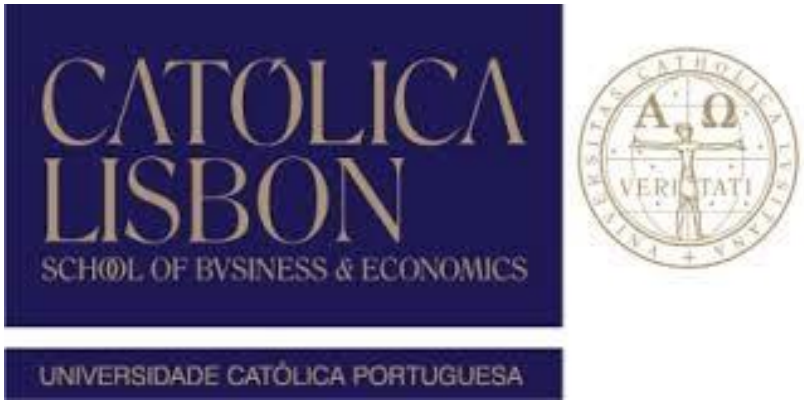

MSC IN BUSINESS ADMINISTRATION

Re-shoring: A real trend or a fad? – An analysis of the German Fashion Industry

Author:
Pauline Josepha Margrit Emilie Freiin von Nostitz

Supervisor:
Céline Abecassis-Moedas

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ABSTRACT

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Author:

Pauline Josepha Margrit Emilie Freiin von Nostitz

In recent times academics claim the rise of the so-called re-shoring trend. According to them, re-shoring - the moving of manufacturing back to the country of its parent company - has been made possible due to the change of global economic indices such as wages, transportation costs or government trade policies. Especially the fashion industry, being a dynamic and ever-evolving industry seems a suitable candidate for this apparent trend. However, trying to detect this trend throughout the real fashion world, one has difficulties finding multiple successful re-shoring attempts. The object of the paper is to examine this disparity between theory and reality by highlighting the factors influencing manufacturing location decision through in-depth interviews with German fashion companies as exploratory case studies. A detailed literature review concerning re-shoring is followed by five interviews conducted with managers of German fashion companies. Those were in turn analyzed to determine to which extend the apparent trend has arrived in the real fashion industry or which other future developments can be detected. Despite some of the interviewees showing great interest in the re-shoring trend in theory, data analysis revealed that in practice none of them have participated in the trend mainly due to high costs and uncertain outcome concerns. Yet other strategies frequently used by companies to overcome the problems of decentralized supply-chains could be detected and a future rise of the re-shoring trend is not out ruled.

Recentemente, académicos têm realçado o crescimento da tendência denominada de re-shoring. De acordo com a sua opinião, re-shoring, o retorno do processo de produção ao país de origem de uma empresa, tem sido possível devido à evolução de índices económicos globais tais como salários, custos de transporte ou políticas comerciais governamentais. Especialmente sendo a indústria da moda considerada dinâmica e em constante transformação, esta parece ser uma candidata apropriada face a esta tendência. No entanto, a tentativa de encontrar múltiplos casos de sucesso na aplicação do fenómeno re-shoring nesta indústria têm sido em vão. O objectivo deste estudo tem por base examinar a disparidade entre a teoria e a realidade, compreendendo os factores que influenciam a processo de escolha do local de produção. Para isso, foram elaboradas entrevistas com empresas de moda alemãs como casos de estudo exploratórios. Para isso, após uma revisão literária detalhada, cinco entrevistas foram realizadas com profissionais de empresas deste sector no sentido de apurar até que ponto esta aparente tendência veio para ficar na indústria da moda ou outros futuros desenvolvimentos que possam ser detectados. A análise destes dados revelou que apesar de alguns dos entrevistados demonstrarem grande interesse no conceito teórico de re-shoring, nenhum deles lidou directamente com este fenómeno devido a custos elevados e incerteza face aos potenciais resultados. Contudo, outras estratégias frequentemente utilizadas por

estas empresas puderam ser identificadas de modo a ultrapassar os problemas de cadeias logísticas descentralizadas. Para além disto, uma futura ascensão da tendência re-shoring não está descartada.

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1. Introduction

"In previous decades, investments mainly went to Asia. Wages were low. The price of oil was low. And new factories sprung up out of the ground [in Asia]. But today, some of those investments are nearing the end of their useful lives, and manufacturers are making decisions about where they will invest next." (Simon, 2013)

This statement made by Walmart CEO Bill Simon in 2013 highlights one of the seemingly most recent trends of the worldwide manufacturer and retailer industry: *Re-shoring*. This trend, also known as near-shoring or back-shoring, was first defined as *"a re-concentration of parts of production from own foreign locations as well as from foreign suppliers to the domestic production site of the company"* (Kinkel and Maloca, 2009). More recently, the definition has broadened to the *"moving [of] manufacturing back to the country of its parent company"* (Gray, Skowronski, Esenduran and Rungtusanatham, 2013).

Big retailers like Walmart followed the re-shoring trend early and announced already in 2013 that it planned to increase its sourcing from within the U.S. by $50 billion by 2013 (Walmart, 2013). Besides the retail giant Walmart, other big U.S. companies such as General Electrics have made similar manufacturing and sourcing location changes, mainly for goods being sold within the North American market (Gray et al., 2013).

The main reasons cited for this trend are increasing wages, supply chain risks and higher transportation costs due to the high oil price, leading many supply chain / production managers to review their manufacturing location strategy (Gray et al., 2013). And whilst the "hot" topic plays a very important role for managers and regulators already, academic research concerning the topic is surprisingly rare. Also, turning ones attention to Europe, it can be observed that the trend is not as developed as in the U.S. yet.

Having detected this disparity between theory and practice and between the U.S. and Europe concerning the diffusion of re-shoring, the French University *ESCP*, the Portuguese University *Católica Lisbon* and the company *Lectra* have decided to establish a new '*Fashion & Technology'* chair.[1,2] Its aim is to create a center for research and transmission of knowledge whereby technology and innovation interact in the fashion and luxury goods sector. In order to do so, an European-wide research project was started to examine the possibility of the rise of the re-shoring trend within the European fashion industry and to question what role modern technologies play within the manufacturing location decision. To uncover the true motivation behind location decisions and to determine whether the re-shoring trend does indeed play an important role within this decision, interviews with fashion companies located all over Europe were conducted. The following thesis outlines the results of the interviews conducted within Germany and its main findings.

Firstly, the thesis will provide a contemporary understanding of re-shoring, its recent history and continue with an overview of the presently available literature covering arguments in favor of and against the re-shoring trend across *all* industries. Subsequently, an outline of the methodology used to conduct and develop independent case studies as outlined above will follow. Finally, the most important findings from the data analysis and based on them recommendations and final conclusions will be presented.

[1] see Appendix II - „Lectra – Corporate Profile"

[2] see Appendix III - „Fashion & Technology Chair – Re-shoring in the European Fashion Industry"

2. Literature Review

I. Re-shoring: A contemporary understanding

As the popular press has begun to pay an increasing amount of attention to the topic of re-shoring in recent times, a lot of confusion about what re-shoring is or is not exactly, and how it differs from classical location decisions has surfaced. In order to fully eliminate misunderstandings, Gray et al. (2013) have developed a number of informed assertions about re-shoring, which serve as a starting point for the authors' efforts to jump-start an intellectual discourse about the new "hot" topic of re-shoring.

Besides being concerned with the exact definition of re-shoring, the *first assertion* also classifies different types of re-shoring. Fundamentally, re-shoring is concerned with *where* manufacturing activities are to be performed and is therefore a *location* decision, independent of *who* is performing them. The term does *not* imply whether the manufacturing is being brought home from a wholly owned facility in an offshore location or from the factory of an offshore supplier. For this very reason, in the following thesis the term re-shoring will always refer to Gray et al.´s (2013) overarching definition of re-shoring ("*moving [of] manufacturing back to the country of its parent company").* Its different subtypes will not be considered in depth (see Appendix I for further information).

The *second assertion* aims to demonstrate why the *"re-shoring phenomenon should not be examined in isolation but rather as a reversion of a prior offshoring decision"* (Gray et al., 2013) and therefore shows, how it differs from classical location decisions. According to the authors, different from the typical location decision, re-shoring can *only* occur if a previous offshoring decision is reversed. This shifts the starting point of a re-shoring decision compared to a classic location decision and therefore cannot be considered in isolation from this starting point. The rational behind the prior offshoring decision needs to be fully understood and re-evaluated before pursuing the re-shoring decision. However, this starting point shift also entails some danger as there is always the possibility that the original as well as the subsequent re-shoring decision was / is flawed based on wrong considerations (*third assertion*). Only a careful examination of both decisions can detect whether biases such as for example the "*availability bias*" (Tversky and Kahnemann, 1973) or the "*bandwagon effect*" (Abrahamson and Rosenkopf, 1993) have led to defective

decisions in the past, possibly leading to wrong decisions in the future. The *fourth* and *fifth assertion*s go deeper into the drivers and possible consequences of the re-shoring trend and will be discussed within the next chapter (2. Literature Review).

Despite being treated as an only recently occurring trend, re-shoring has already been present for over a decade. The *European Manufacturing Survey (EMS)* measures diffusion of advanced production technologies and organizational concepts in the European manufacturing industry and its analysis of German data of multiple survey rounds (1997, 1999, 2001, 2003, 2006, 2009, 2012) shows that re-shoring is not only a current ordeal (Kinkel, 2014). On average 400 to 700 German companies perform re-shoring activities per year and 2% of all German manufacturing companies have been active in re-shoring from 2010 to mid 2012 (Kinkel and Zanker, 2013). However, Kinkel (2014) claims *"a steady decline of [re]-shoring frequency since the end of the nineties"* could be detected despite every fourth to sixth offshoring activity being reversed within two to five years through re-shoring activities.[3] This past development however, is now counter steered in the opposite direction again by a recent rise of the re-shoring frequency according to the same author.

Kinkel and Maloca (2009) classify 90-100% of those re-shoring efforts as *"short-term correction[s] of prior location misjudgments."* However, this statement is challenged by the analysis of recent data indicating: *"approx. 20% of German companies´ [re]-shoring decisions might be characterized as mid-term or long-term reactions to a changing local environment and its location advantages, whereas 80% can still be characterized as a short- to mid-term correction mechanism"* (Kinkel, 2014).

Most researchers approach the re-shoring trend by trying to identify the multifaceted factors influencing companies manufacturing locations decisions. In the following paragraphs, the results of those research attempts will be outlined. Most research attempts can be classified in either pro or contra re-shoring argumentations, providing the two parts of the following chapter.

[3] see Appendix I - Figures: „Relocation and [re]-shoring activities in the German manufacturing industry over time"

II. Contra Re-shoring: Arguments in favour of continuous offshoring

Re-shoring critical authors include Rice and Stefanelli (2014). The authors claim that despite various reasons speaking for the re-shoring trend in the U.S. in theory (e.g. increasing wage levels in Asia, high transportation costs, cultural differences, increased need to tailor products to local consumer demand), in practice hardly *any* U.S.-companies have actually followed through. Reviewing related research, they find that solely very big companies have re-shored (e.g. GE, Apple, Whirlpool) and that most other companies, which were quoted to have participated in such activities, only plan to re-shore, however, have not actually done so yet. According to the authors, rather a diversification of production locations is on the march to reduce geographic concentration risk combined with the then given possibility to offer customized and rapid-response service to local markets.

Similarly, despite on the one hand being a believer of the re-shoring trend, Fine (2013) also defends the opinion that it is not necessarily *exclusively* the re-shoring strategy that will prove to be the best for companies but possibly the strategy of "*intelli-sourcing" – "the company with the most intelligent sourcing team wins."* In order to reach the best sourcing team, according to Fine, a company needs to combine local knowledge, attained through the employment of team members from different nationalities, with a global network, reached through the spreading of those employees across the globe. Alongside this component, *"relationships in the supply chain that enable collaborative cost reductions even when the exchange rate push sourcing costs into the wrong direction"* are necessary to successfully *intelli-source* and ultimately lead to innovation. The author believes that as long as the global network of local employees is technically connected, making a constant exchange of information possible, a company does not need to re-shore in order to successfully operate.

Just like Rice and Stefanelli (2014) and Fine (2013), Gray et al. (2013) also shine a light onto the re-shoring trend from a critical perspective with their *fifth* and final *assertion*. They argue that today´s re-shoring efforts in order to be closer to the majority of the present demand can in the long run lead to a *"loss of jobs in the [home country] and other developed nations."* The reasoning behind this stream of thoughts is that the future demand of developed economies will stagnate, whereas

the one of emerging economies will continue to grow. Therefore, there might be a point in the future when it is necessary to move the manufacturing back to those emerging countries. This would lead to a decreasing number of exports from the developed countries, ultimately costing jobs in these economies. This scenario shows that this trend should not blindly be followed without taking *all* the possible (long-term) consequences into consideration.

Similarly, despite arguing in favor of the rise of re-shoring in the U.S., the authors Sirkin, Zinser and Hohner (2011) admit that their examinations show an important *limitation*. They conclude that: *"while China will remain an important manufacturing platform for Asia and Europe, the U.S. will become increasingly attractive for the production of many goods sold to consumers in North America."* Therefore the authors agree that an economic trend pointing towards a U.S. manufacturing renaissance is clearly noticeable as *"Chinese [mainland plants capacities] will be devoted to supplying the country´s enormous domestic market,"* which will lead to the opening of U.S. plants to serve the domestic U.S. demand. However, Europe and other parts of the world are not *as* strongly affected by the new emerging trend. Therefore, according to Sirkin et al., the trend *only* occurs in certain regions / nations and within certain industries, however, cannot be applied at a global macro-economic level.

III. Pro Re-shoring: Arguments in favour of re-shoring

Contrastingly, Fine (2013) argues in favor of re-shoring by following a holistic, ethical perspective, however, he has *only* used secondary data when examining it. In his opinion, the *"Chinese wage inflation"* and *"companies' desires for supply chain responsiveness, reliability and resilience"* have led to China forfeiting some of its manufacturing location appeal. Moreover, he predicts that in the future companies will not put as much emphasis on the chasing of the lowest price manufacturing location but rather re-shore in order to protect their corporate image. In today's digitalized world, in which consumers have more and more access to information and are increasingly interested in the origin of their purchased goods, companies try to *"take a more balanced, long-term and ethical perspective"* (Ellram, 2013) regarding their manufacturing location, benefiting the rise of the re-shoring trend. Lastly, Fine concludes that the new re-shoring trend could possibly be used *"[…] to optimize the*

sourcing footprint for quality, service and innovation [...]," rather than saving a company large amounts of money.

Similarly, Ellram, Tate and Petersen (2013) conclude that "*organizations are beginning to look at their manufacturing location decisions from a broader lens than simply cost, giving more weight to supply chain issues as well as strategic factors*." Especially supply chain *interruptions* move into the focus of this decision, as interruptions can increase the overall costs (due to recovery process) and simultaneously decrease revenues (due to lost sales), ultimately reducing the firm´s profit (Bode, Wagner, Petersen and Ellram, 2011). Moving the manufacturing closer or into the company's home country can reduce this potentially risk and cost increasing factor and therefore speaks in favor of re-shoring.

However, different from Fine (2013), Ellram et al. (2013) used extensive primary empirical survey data to examine the perceived attractiveness of various regions as locations for owned manufacturing facilities (319 usable surveys from U.S. companies). The authors used the principles of prior theories such as the "*Internalization Theory*" by Casson (2013), the "*Transaction Cost Economies (TCE)"* (McIvory, 2013) and Dunning´s "*Theory of International Production*" (Dunning, 1998) to develop the survey used for the study. Using a factor analysis and a multiple ordinary least square regression, results were generated and split by region. One reoccurring theme across all regions, which will make regions more attractive within the next three years, was Government Trade Policies (e.g. tax advantages, subsidies countertrade requirements). Similar, Sirkin, Zinser, Hohner and Rose (2012) also listed national / regional subsidies as one of the main motivations for re-shoring, partly because favorable subsidies are coming to an end in previously preferred offshore countries (e.g. Chinese subsidies for Foreign Direct Investment) or because the companies' home-countries governments are introducing favorable regulations in order to strengthen the country's domestic manufacturing industry such as for example President Barack Obamas efforts to "insource" manufacturing jobs to America (The White House, date published unknown).

Moreover, Ellram et al. (2013) state that the delivery of value to customers located in the associated regions grows to be a larger decision making driver within the manufacturing location decision. This argument that increasingly strategic factors such as for example value creation are becoming more important, is further supported by other authors, such as Mudambi (2008). He argues that in order to catch up with the rising competitors from developing economies, offering value-added supply chain activities such as marketing and distribution besides traditional manufacturing services is necessary. In order to do so, companies should re-integrate the manufacturing process into their value chain and possibly re-shore it to facilitate this process and ensure the mentioned value creation, supporting the continuous rise of the re-shoring trend further.

Similarly, Kinkel (2014) was one of the first authors to take a more comprehensive quantitative approach based on data from the *European Manufacturing Survey (EMS)* (see 2. I.). In the following figure the results of the collected data analysis can be seen separated by the main modes of exit (Captive vs. Outsourced Re-shoring).

Reasons for backshoring according to the backshoring mode ($n=34$).

Reasons for Backshoring (2007 to mid 2009)	Captive Backshoring (%)	Outsource Backshoring (%)	Sig.
Quality	57.9	80.0	
Flexibility, ability to supply	52.6	53.3	
Coordination efforts	31.6	6.7	*
Transport/logistics costs	26.3	46.7	
Availability of qualified personnel	21.1	20.0	
Labour costs	21.1	33.3	
Know-how loss	5.3	0.0	
Proximity to home-base R&D	0.0	6.7	

Figure 1: Reasons for Re-shoring

Source: Kinkel, S. (2014). Future and impact of backshoring – Some conclusions from 15 years of research on German practices. *Journal of Purchasing & Supply Management*, 20, 63-65.

This early attempt to categorize the re-shoring motivations, however, does not show significant differences of the importance of the reasons between Captive and Outsourced Re-shoring. Solely the *"coordination efforts"* reason shows a statistical significance at the ten-percept level. This and the overall validity of the results are incomplete partly due to the small total number of re-shoring companies (n=34) and need to be confirmed by more robust models and empirical results.

Nevertheless, based on those results the author concludes that: *"overall, it is not very likely that [re]-shoring initiatives of manufacturing companies will be a major lever to restore industrial competitiveness in many high-wages countries"* as suggested at the beginning of his paper. However, the current changing economic factors such as for

example increasing wages in China and the rising oil price will lead to companies beginnig to follow a new *"strategic imperative of local manufacturing in important markets, with a strong focus on regional concentration and specialization of the necessary engineering and manufacturing competences,"* supporting the suggested rise of the re-shoring trend further.

In cooperation with other academics, Kinkel has researched other pro re-shoring factors rather related to *operational* elements than *cost* related motivations. Increased operational flexibility as a main reason in favor of re-shoring decisions was detected throughout those research attempts (Kinkel, Lay and Maloca, 2007; Dachs and Kinkel, 2013; Kinkel and Zanker, 2013). Moreover, especially in the fashion industry, the production and delivery time aspect impacts the manufacturing location decision strongly and successful examples of local manufacturing such as e.g. Zara and Max Mara lead to companies consider re-shoring (Ritter and Sternfels, 2004).

Another detected main factor influencing the manufacturing location decision and benefiting the rise of re-shoring is quality. Poor quality has led some manufacturers to reconsider their manufacturing location and decided to re-shore as a means to improve it (Kinkel, 2014; Kinkel et al., 2007; Leibl, Morefield and Pfeiffer, 2011). Some of the same authors have additionally named a lack of available competences in developing economies as a main driver of re-shoring efforts. The lack of well-educated or skilled workers is especially a factor driving re-shoring within the technical and engineering industry (Ritter and Sternfels, 2004; Kinkel, 2012; Kinkel, 2014). Despite huge efforts of emerging countries to close this educational gap within recent years, some of them have failed to catch up to their American or Western European role models.

However, despite the authors repeated focus on strategic and supply chain factors, cost factors should not be ignored or underestimated. Those do ultimately influence the manufacturing location decision, highlighted through their gapless examination within this context. Multiple authors name the increase of labour costs in former low-labour cost countries and of freight costs as factors benefiting the rise of the re-shoring trend. Former low-cost advantages of primarily Asian countries are being eroded, making local production just as expensive yet at the same time reducing

transportation costs and increasing supply chain control (Sirkin, Zinser, Hohner and Rose, 2012; Goel, Moussavi and Srivatsan, 2008).

As mentioned before, Gray et al.´s (2013) *fourth assertion* still needs to be exhibited. The fourth assertion examines the role of the environmental regulations within the manufacturing location decision and demonstrates how those push the re-shoring trend further. According to the authors, as those regulations become more synchronized and standardized across the globe, the "*pendulum should swing in favor of re-shoring.*" Due to formerly unstandardized environmental regulations, a number of firms offshoring to countries with laxer regulations could have been observed in the past in order to save regulatory costs, known as the "*pollution-haven hypothesis*" (Jeppesen and Folmer, 2001). However, this assertion only applies to a certain structure of the regulation, namely if the companies are charged in case the regulation considers the *whole* supply chain ("*carbon labeling*"). In this case, re-shoring is the favored option, as "*offshoring for domestic demand requires shipping products across oceans, often from plants using dirty coal*" (Gray et al., 2013), leading to an increased carbon label, which needs to be labeled and eventually paid for. As more and more countries participate in the mentioned carbon-labeling program (e.g. United Kingdom, Canada, Japan), leading to more awareness and conscious end-customers, this assertion wins validity and ultimately this "*transition will encourage firms to engage in less offshoring and more re-shoring*" according to the authors.

Besides academics, also corporate companies, such as *The Boston Consulting group (BCG)* defends the rise of the re-shoring trend in one of their reports (Sirkin, Zinser and Hohner, 2011). According to BCG, the roots of re-shoring mainly lie within the changing economic conditions of the Chinese economy. For the past decades, decisions as to where to source and manufacture goods were simple due to China´s *"seemingly limitless supply of low-cost labour […], an artificially low currency and significant government incentives to attract foreign investment."* However, recently China´s cost advantage is being eroded by changing Chinese economic forces such as increasing expenses for wages and benefits (15-20%)[4] as well as transportation duties, supply chain risks and industrial real estate costs. Moreover, the report

[4] see Appendix I – Figures: „China´s wages rates are growing rapidly"

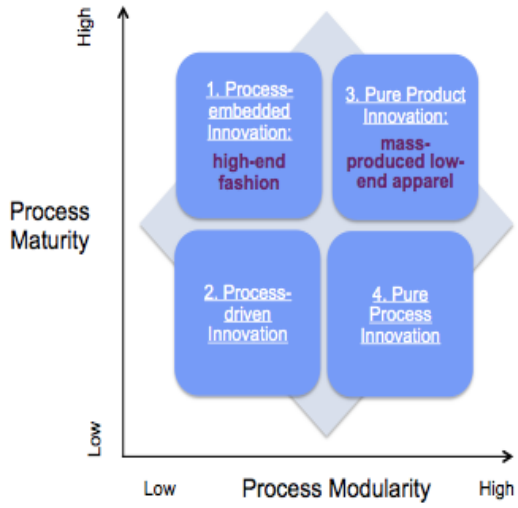
predicts that rising income levels in China and the rest of developing Asia will lead to increased domestic demand, which will be served using Chinese factories capacities, leading to bring some production work for the U.S. market back home. Also, the often predicted anti re-shoring move from labour intensive productions in China to less labour cost intensive countries such as for example Vietnam and Indonesia, is slammed by the authors referring to those countries as having *"inadequate infrastructure, [short come of] skilled workers […] as well as political and intellectually property risk".* This further fuels the potential rise of the re-shoring phenomenon.

A summary of the above outlined arguments in favor of re-shoring present throughout academic literature can be found in the table below:

Category of Factors benefiting Re-shoring	Author(s)	Influencing Factors benefiting Re-shoring
❖ Cost Factors	➢ Fine (2013) ➢ Kinkel (2014) ➢ Sirkin, Zinser, Hohner and Rose (2012) ➢ Goel, Moussavi and Srivatsan (2008) ➢ Sirkin, Zinser and Hohner (2011)	✓ Chinese wage Inflation ✓ Increase of transportation / labour / logistic costs ✓ Increase of transportation / labour / logistic costs ✓ Chinese wage inflation ✓ Increase of transportation / duties / real estate expenses
❖ Supply Chain Related Factors	➢ Fine (2013) ➢ Ellram, Tate and Petersen (2013) ➢ Mudambi (2008)	✓ Companies' desires for supply chain responsive-ness, reliability and resilience ✓ Increased focus on supply chain issues rather than costs ✓ Calls for vertical integration in order to protect value-creating supply chain activities
❖ Corporate Social Responsibility Factors	➢ Fine (2013)	✓ Relocation in order to protect corporate image
❖ Laws (Taxes, Benefits & Environmental) Factors	➢ Ellram, Tate and Petersen (2013) ➢ Sirkin, Zinser, Hohner and Rose (2012) ➢ Gray, Skowronski, Esenduran and Rungtusanatham (2013) ➢ Sirkin, Zinser and Hohner (2011)	✓ Favourable Government trade policies (U.S. & Europe) ✓ National / regional subsidies (U.S. & Europe) ✓ Environmental Regulation *(„carbon labelling")* ✓ Decrease of favourable Chinese Government trade policies & Government Incentives
❖ Insurance of Product Quality Factors	➢ Kinkel (2014) ➢ Kinkel, Lay and Maloca (2007) ➢ Leibl, Morefield and Pfeiffer (2011)	✓ Poor Quality
❖ Operational Flexibility / Speed Factors	➢ Kinkel (2014) ➢ Kinkel, Lay and Maloca (2007) ➢ Dachs and Kinkel (2013) ➢ Kinkel and Zanker (2013) ➢ Ritter and Sternfels (2004)	✓ Flexibility, ability to supply ✓ Increase of Flexibility ✓ Increase of Flexibility ✓ Increase of Flexibility ✓ Production & Delivery time
❖ Human Resource Related Factors	➢ Ritter and Sternfels (2004) ➢ Kinkel (2012, 2014)	✓ Lack of well educated & skilled workers in host country
❖ Macro-economic Factors	➢ Sirkin, Zinser and Hohner (2011)	✓ Increasing Chinese domestic demand & currency

IV. Additional argument in favour of re-shoring based on innovation: The Modularity-Maturity Matrix

Just like Sirkin et al. (2011), being convinced of a continuous rise of U.S.-related re-shoring, the authors Pisano and Shih (2012) are following a related narrow U.S. approach. According to them, U.S.-companies nowadays still *"base decisions about how to source manufacturing largely on narrow financial criteria, never taking into account the potential strategic value of domestic locations."* The authors call for a close consideration and assessment of a companies *manufacturing process* when deciding about its localization. In detail, whether this process is critical for the company´s ability to reach innovation, meaning it should be manufactured close to the R&D / design location, or whether it can safely be outsourced to lower costs and reduce capital outlays.



In order to answer this rising issue, the authors have developed a two-by-two *Modularity-Maturity Matrix* for future manufacturing decisions. With this framework, they are trying to find an answer to the questions, when it is efficient to long-term move *"[manufacturing] halfway around the world, far away from Research & Development (R&D) operations at home"* (Pisano and Shih, 2012).

Figure 2: The Modularity-Maturity Matrix

Source: Pisano, P., Shih W.C. (2012). Does America really need manufacturing? *Harvard Business Review,* March 2012, 94-102. -65.

The two dimensions "Process Maturity" and "Process Modularity" of the matrix aim at answering this question. Process maturity is hereby defined as *"the degree to which the process has evolved"*, whereas modularity stands for the *"the ability of R&D and manufacturing to operate independently of each other"* (Pisano and Shih, 2012).

When R&D / design and manufacturing are highly modular, the major characteristics of the product such as e.g. features, functionality are not determined by the production processes, and the two activities can be located far apart without any consequences and vice versa (low modularity means far apart location of R&D / design and production is not efficient). Maturity, the degree to which *"a process has evolved rather than the age of a technology"* (Pisano and Shih, 2012), evolves around the possibility of improvement of a process. In general, *"immature processes offer the greatest opportunities for improvement"*, whereas for mature processes, *"the opportunities for improvement usually become more incremental."* Viewing relationships between R&D / design and manufacturing through the two dimensions of the modularity-maturity lens, they can possibly fall into one of the shown four types of innovation pictured in the matrix above.

Applying the matrix especially to the fashion apparel industry, which is the focus of this work, the two extreme ends of the spectrums are "Process-embedded Innovations" which include e.g. haute couture - a manufacturing process so delicate and manual labour intensive that it does not make any sense to separate it from the design process – the co-location of R&D / design and manufacturing is critical. Fronting this type of process are the "Pure Product Innovations" – processes where offshoring manufacturing makes a lot of sense as here the *"value of tightly integrating product innovation with manufacturing is low, and the opportunities for improving processes are few" (Pisano and Shih, 2012).* Applying this to the fashion apparel industry, it would apply to mass-production processes such as cheap t-shirts. The other two quadrants, "Process-driven Innovation" and "Pure Process Innovation" are variations of the two outlined extreme cases, with one dimension differing from the outlined ones. However, the authors warn that the matrix does *not* obviate the need for rigorous financial analysis of manufacturing investments, nor that other factors influencing sourcing decisions such as for example proximity to customer etc. should not be considered at all anymore.

This framework is one of the *only* tools so far developed aiming at helping managers to think more strategically about the consequences of geographically separating R&D / design and manufacturing. The authors conclude that the majority of the worldwide fashion industry is a *process-embedded* industry, for which design *cannot* be separated from manufacturing for firms to innovate.

3. Methodology & Data Collection

With the purpose of understanding the factors determining the manufacturing location decisions of the German fashion industry, it was important to gather information directly from its involved actors, namely German fashion companies, and by doing so ultimately building theory from multiple case study research. Using the exploratory case study approach, which is defined as *"a research strategy which focuses on understanding the dynamics present within single settings"* (Eisenhardt, 1989*),* as a primary data source of information, is an approach commonly used for fields for which previous data collections appears rare, which is the case for re-shoring.

The idea of exploratory case study research is that only the intimate connection with empirical reality permits the development of a testable, relevant and valid theory (Glaser and Strauss, 1967). With the purpose of creating this connection, five interviews with managers of German fashion companies were conducted. The requirements the companies needed to fulfill were no others than being based / having a subsidy in Germany besides offering (possibly amongst others) apparel such as shirts, trousers, blouses etc. The managers, gathered through personal contacts and recommendations, did not need to prepare for the interview in any way.

In order to develop a valid interview guide for the exploratory case study research and build a fundamental knowledge base concerning re-shoring as a whole, secondary data such as for example the different companies websites were visited. This study of secondary research laid the grounds for the core study. However, as Gray et al. (2013) pointed out, since the unit of analysis on re-shoring is often *"below the level of plant (at the product or component level), public secondary data will be difficult if not impossible to obtain"* and therefore, the conclusions and recommendations of this work will mainly be based on the through interviews collected primary data.

The interviews were conducted between January and March 2015 and lasted between 35 and 55 minutes, depending on the interview time offered by the interviewee. Three of the interviews were conducted personally, whereas two had to be done over the phone due to geographical distance. The interview was semi-structured by the interview guideline, however, the answers were open. The used

interview guideline can be found in the appendix IV.[5] Despite not having to prepare for the interview, it is nevertheless important to mention that *all* the interviewed managers were in some way involved in or contained knowledge about the firm specific supply chain and manufacturing process, which made a detailed preparation unnecessary. Further information about the exact responsibilities of the interviewees can be found in the table below and in the interview transcripts (Appendix V). The interviews were recorded and transcribed.[6] The information collected throughout the interviews will be compared to the findings of the literature review and final conclusions and recommendations will be based on those. Finally, in order to increase the works validity, a personnel consultant specialized in staffing supply chain and sourcing position, has read the data analysis and conclusion part of this work and commented on the observed findings and its degree of compliance with her observations concerning re-shoring made through her job in the "real world". Her opinion will be outlined in the discussion part of this work.

5 see Appendix IV – „Interview Guideline"

6 see Appendix V – „Interview Transcripts"

Company	Interviewee / Job Title	Responsibilities
A	❖ Member of the executive team & Head of Sourcing	❖ Oversees company as a whole ❖ Determines strategies & future objectives ❖ Head of 16 people central sourcing team
B	❖ CEO, CFO, Head of Sourcing	❖ Leads company jointly with wife ❖ Responsible for Sourcing ❖ Continuous screening of potential new suppliers & cost-benefit analysis concerning sourcing
C	❖ 2 interviewees: o CEO, Head of Design & Sourcing o Head of Marketing	❖ Oversees company as a whole ❖ Responsible for all Designs as well as Sourcing & Manufacturing decisions ❖ Development & execution of current & future marketing campaigns
D	❖ Head of Sourcing & Product Manager	❖ Sourcing of company´s D women collection ❖ Oversees manufacturing as a whole (shares responsibility with Head of Design & Technic)
E	❖ Head of collection preparation & CAD-Manager	❖ Oversees all internal preparations concerning collections (cuts, size tables, HR- / manufacturing requirements, nominating documents etc.) & development of CAD documents

4. Data Analysis

In order to understand the manufacturing location determining factors of a large range of fashion companies, fashion companies offering different types of apparel were chosen to conduct interviews with. Besides all of them being German, the five companies differ greatly from each other concerning for example size, revenue, type of merchandise, positioning and manufacturing location.

The table below summarizes the most important indexes of the interviewed companies. Note that for company D the total annual revenue as well as the number of employees are group wide and not brand based figures, however, the interviewee did not want to provide further brand related details. In 2012 the formerly family owned and operated company was sold to the Tom Tailor Group due to age reasons of the owner / founder. Moreover, it is important to point out that whereas the companies A and B sell the majority of their products for a premium price, company C, D and E price their items at a medium price range. All companies offer their merchandise for women as well as for men. Also, as the only one, company E supplies uniforms for a number of German (corporate) institutions such as for example the German police or Lufthansa. Some of the companies, which offer all merchandise through one brand, still offer differing product lines, however, all branded the same. For example company B sells company B men, company B baby etc., making a connection to the mother brand easily possible, however, at the same time distinguishing it from it.

Company	**A**	**B**	**C**	**D**	**E**
Products	Sportswear apparel & accessorize	Cashmere apparel & accessorize	Alpine apparel & accessorize	Discrete every-day-use fashion apparel & accessorize	Men shirts
Product categories	3 product categories: ❖ Basic („Reoccurring classics") ❖ Evolution (Updated versions of old products) ❖ Revolution (Newly created products) → 2 collections / year	3 product categories: ❖ Basic (Reoccurring classics") ❖ Unsaleable Fashion-Show pieces ❖ Mixed-products: Contemporary innovative pieces reflecting the seasons trends	Main product: ❖ Traditional Bavarian dress („Dirndl") ❖ Sub-products: Jumper, shirts, wedding dresses, hats & Accessorize	2 product categories: ❖ Men ❖ Women → 12 collections / year → For both genders D offers wide range of apparel (e.g. shirts, trousers, shoes, scarfs, jackets etc.)	2 product categories: ❖ Men shirts ❖ Men knit wear
# of brands	5 brands	1 brand with 5 sub-brands	1 brand	1 brand	2 brands
Revenue	250 Mio. € / year	15-20 Mio. € / year	0,2 Mio. € / year	Group: 300 Mio. € / year	225 Mio. € / year
# of employees	❖ 800 employees	❖ 20 employees	❖ 3 employees	❖ Group: 6400 employees	❖ 860 employees
System of distribution	❖ 17 own stores ❖ 50 franchise partners	❖ Through 800 corporate customers in 40 countries ❖ 2016: First own store in Monte Carlo, Monaco	❖ 1 own shop (2016: 2 shop planned) ❖ Pop-up-Stores ❖ Approx. 10 corporate customers	❖ Only wholly-owned (online) shop(s) (1300)	Mix of: ❖ Own retail shops ❖ Own online shop ❖ Shop-in-shop-systems
Markets	❖ Germany ❖ Austria ❖ Switzerland ❖ USA ❖ Future: Asia	❖ Worldwide ❖ Most important: ❖ Germany ❖ Austria ❖ Switzerland ❖ Australia ❖ Future: Asia, USA	❖ Germany ❖ Austria ❖ Northern Italy ❖ Future: Russia	❖ Germany (1000/1300 shops) ❖ Austria ❖ Switzerland ❖ Netherlands ❖ Poland ❖ Belgium	❖ Worldwide
Target customer	Stylish & sporty men and women of any age willing to pay premium price for excellent quality (→End-customer)	Multi-label stores selling high-end premium / luxury apparel & accessorize (→Corporate customers)	❖ Fashionable men & women (30-50) living in urban / sub-urban areas ❖ Feeling close to nature ❖ Price-conscious rather than stingy (→End- & Corporate customers)	❖ Niche market: Men & women 40+ (→End-customers)	❖ Men ❖ 30+ ❖ Looking for classic & gentle but also fashionable & chic shirts for everyday use (→End- & Corporate customer)
Shareholder	100% Family owned & operated	100% Family owned & operated	100% Family owned & operated	100% Tom Tailor Group	100% Family owned & operated

I. Value chain activities: Design & Manufacturing

For all companies the design is happening 100% internally. For company A 15 full-time designers and two freelancers constantly design new looks for their five brands in tight connection with other departments at their Munich based headquarter. Similarly, 5-6 internal employees design the pieces for the two annual collections of company B at the Munich head quarter in tight collaboration with CEO and head of design Mrs K. and the internal design of company C is all carried out by the CEO and Head of design Mrs v. F., also in Munich, Germany. Company D and E also employ 12 / 13 internal designers, which work under the supervision of one head designer at the respective German head offices.

Design appears to play an important differentiating role for *all* five companies, however, for some more than others. Especially company E highly relies on distinctive designs due to the simplicity of their product (Company E: *"A shirt remains a shirt – we need innovative designs to stand out. Using high-quality material just isn't enough, all our competitors do that as well!").* Similarly*,* design plays a major differentiating role for company C: The cut and parts (dress, blouse, apron) of their main product, the traditional Bavarian dress called "*Dirndl",* are pre-determined since centuries, making design one of the *only* differentiating means out there.

Others, such as for example company B*,* also strive for innovative design, however, still have other differentiating possibilities such for example their items being made out of cashmere. Besides design, quality plays a major differentiating role for company B according to their CEO: *"Quality is our greatest good – Great design without superb quality cannot survive long!"* This is however, a realization of recent times: At the time company B started business, innovative and disruptive design was their main trademark, however, due to multiple copycats copying their design straight from the runways, more recently premium quality has become the company´s main focus.

Moreover, company A emphasizes the importance of internal design: *"In our company, everybody influences the designers and vice versa -The buyers, the sales people, the marketers. This constant exchange of information, inspiration and ideas*

leads to everybody understanding the company´s handwriting, what the current collection stands for and how it is best marketed and therefore creates a aligned brand image." However, all interviewees stated that it couldn't be claimed that internal design – or any other single value chain activity – is solely important. To them, the seamless connection of all single activities is the key to success (Company D: *"All the components of the value chain create value within itself, however, only the seamless connection of the single components allows the chain to fully show its potential.")*

Just like all companies show an *internal* design, all companies show *external* manufacturing, yet some show a higher "degree of outsourcing" than others. Company A for example collaborates with three manufacturers in Eastern Europe which solely and all year long work for company A since decades – a form of collaboration which comes closest to wholly-owned plants. Since the beginning high knowledge as well as financial investments have been made into those partners, having lead to the development of a flawless collaboration. In other regions (Asia) however, company A does collaborate with external manufacturers also serving other customers but even with those manufacturers company A is highly involved in the manufacturing process by nominating materials & processes and pre-screening suppliers, thereby ensuring high quality. Merely a 40-member team of tailors located in Munich, Germany carries out the manufacturing of sample pieces internally.

Similarly, company B collaborates with some external manufacturers since decades and has its own cashmere yarn produced in one plant and its final products in other plants, mainly located in China due to it being the world´s largest cashmere supplier (85% of worldwide cashmere production). Besides China´s long-standing cashmere tradition, making it an excellent manufacturer and processor, the low costs of local manufacturing contribute to company´s B decision to source and produce there (Company B: *"At the end of the day, its all about the money! And even if we pay a lot for transportation and duties – in sum we still pay less if we have our products produced in China compared to Europe.")*.

Just like company A, company C only produces sample pieces in Germany due to time saving reasons, however, through the help of an external tailor based in Munich. The main production of cuts is happening in Austria, which is then sent to two manufacturers in Bulgaria, which manufacturer 100% of the merchandise externally. Company D has outsourced production to multiple, mainly Asian countries, using manufacturing capacity from more than one plant per country in order to sustain a healthy competition and reduce manufacturing interruption risks. Similar to company A & C, company E solely has sample pieces produced in Europe (Macedonia, Croatia), whereas the mass production is outsourced to Asian countries (1 manufacturer per country). Again, long-standing collaborations (20+ years) aim to ensure flawless processes and build "*relationships of trust*".

II. Manufacturing countries: Percentage composition and corresponding arguments

The manufacturing countries and % distribution for each company is as follows:

<table>
<tr><th>Company</th><th colspan="2">Country</th><th colspan="2">% of production / # of manufacturers</th><th>Arguments for location decision</th></tr>
<tr><td rowspan="6">A</td><td>Czech Republic</td><td rowspan="5">EU</td><td rowspan="5">Between 3-10 manufacturer per EU-country</td><td rowspan="5">30% EU (of total production)</td><td rowspan="6">→ Quality
→ Low labour costs
→ Location of Sourcing
→ CO2-Emission
→ Feasibility
→ Speed & efficiency
→ Proximity to potential new clients (Asian)</td></tr>
<tr><td>Romania</td></tr>
<tr><td>Portugal</td></tr>
<tr><td>Turkey (partly EU-Continent)</td></tr>
<tr><td>Italy</td></tr>
<tr><td>China</td><td>Asia</td><td>35 manufacturers</td><td>70% Asia (of total production)</td></tr>
<tr><td rowspan="3">B</td><td>China</td><td>Asia</td><td>88%</td><td>88% Asia (of total production)</td><td rowspan="3">→ Location of Sourcing: China = largest cashmere supplier
→ Quality
→ Low labour costs
→ Speed & efficiency
→ Low labour costs + great handcraft skills
→ Availability of special cashmere blends</td></tr>
<tr><td>Romania</td><td rowspan="2">EU</td><td>10%</td><td rowspan="2">12% EU (of total production)</td></tr>
<tr><td>Italy</td><td>2%</td></tr>
</table>

C	Bulgaria	EU	100% / 2 manufacturers (1 for woman / men apparel)	100% EU (total production)	→ Quality → Cost-Benefit-Ratio → Quantity
D	China	Asia	50%	70% Asia (of total production)	→ Core competencies → Certifications (most important) → Capacity → Low labour costs → Speed & efficiency
	Bangladesch		10%		
	India		5%		
	Sri Lanka		3%		
	Vietnam		2%		
	Turkey	Partly EU-Continent	100%	30% EU (of total production)	
E	Macedonia	EU	15% combined	15% EU (of total production)	→ Low labour costs → Feasibility → Speed & efficiency → Certifications → Quality → Location of Sourcing
	Croatia				
	Indonesia	Asia	25-30%	85% Asia (of total production)	
	Bangladesh		20-25%		
	Vietnam		30% (Majority China)		
	China				

Across all companies it is revealed that a majority of the external manufacturing is happening in Asia, mainly China. Company A, B, D and E all manufacture in Asia as well in Europe, merely company C produces 100% in Eastern Europe (Bulgaria). Despite arguments for the locations of the manufacturing differing, reoccurring themes can be detected. Especially the low labour costs of Asian manufacturers are repeatedly mentioned. However, also other factors influencing the manufacturing location decision are mentioned. Interestingly, some factors claimed by academics to highly influence the manufacturing location decision are not mentioned at all by the responsible managers.

Company´s B manufacturing strategy for example is highly influenced by the sourcing location *(Company B: "Due to our purchase of our main raw material Cashmere in China, our production sites are located in China too.").* Therefore, most sourcing & manufacturing decisions are made together: If raw material is sourced in

China, production will be located in China and vice versa the case with Europe. With China being the world´s largest cashmere producer, a location of the majority of the manufacturing in the same country does make scene. Rare non-compliance of this strategy has to be justified with valid reasons (e.g. unavailability of manufacturing skills for in Italy sourced yarn → manufacturing in China). Similarly, company A makes most sourcing and manufacturing locations together by following a similar manufacturing strategy (Company A: *"We try to locate the manufacturing where we buy the raw material."*) and non-compliance only occurs in rare cases. As sourcing costs for multiple components of company´s A merchandise is lower in China, it is sourced over there, resulting in the manufacturing to be located in Asia as well. Besides the sourcing, the low wages for fast and high quality labour offered by Asian workers, as well as the proximity to the potential future client – Asians – motivates company A to focus on China as a manufacturing country.

Contrastingly, being a small start-up (founding 2012), company C did not have much of a choice when deciding for Bulgaria as its only manufacturing location due to small quantities and low investment capital. The decision to produce in Bulgaria was mainly based on recommendations from other designers and an attractive cost-benefit-ratio, as well as the locally offered quality of handcraft. Moreover, in this case the type of product itself highly influences the manufacturing location decision according to the CEO of company C: *"Even if one day we will produce large enough quantities to be able to produce in Asia, we will never do so. Imagine a traditional German dress (Dirndl), which is "Made in China". People wouldn't be happy about it and wouldn't buy it."* Bulgaria is still an acceptable choice as the Eastern European country shows a long-standing folklore tradition itself, including dresses similar to dirndls. Moreover, being a traditional dress, a *Dirndl* lives of the idea of being handmade. Being produced in Asia would, according to company C, destroy this idea of manual labour, leading to a lower perception of quality, ultimately not allowing the company's high margin of 60% (before tax) to be charged. Company´s C sourcing is mainly happening in Italy (80%), France and Germany (20%) and does therefore not influence the manufacturing location at all.

Conversely, the products of company B being made out of cashmere have determined China as the most suitable manufacturing location for them. As 85% of the worlds cashmere is sourced from China and Chinese workers enjoy an excellent reputation when it comes to its manual processing, offered at a very good price, it would be a fatal mistake to re-shore the manufacturing to Germany / Europe according to the CEO. A "*Made in Europe*" label of those products would decrease its perceived quality as it is linked to its Chinese / Asian origin in the minds of the customers.

For company D not the product itself, however, the costs and (speed of) accessibility of raw materials and additional materials needed highly influence the manufacturing location decision. At the moment their two main manufacturing countries (China & Turkey) do offer needed materials and ingredients (buttons, zippers etc.) at very low prices and therefore qualify as manufacturing locations. However, if in in the future this cost benefit shifts to other countries, after an in-depth cost analysis, company D would consider changing manufacturing location decision (closer) to Germany. Moreover, capabilities of the manufacturers determine the manufacturing location decision. For similar reasons, company E favors Asia as a manufacturing location. Most of the sourcing is happening in China, resulting in a local accumulation of manufacturing. The small productions in the two EU countries Macedonia and Croatia are mainly used for sample-piece production and less for mass production due to its geographic proximity to Germany, whilst at the same time offering low cost work. Similarly, company E would change sourcing and subsequently manufacturing countries if in-depth financial analyses show cost benefits occurring in other European countries whilst showing similar quality standards.

Another frequently mentioned factor influencing the manufacturing location decision was quality. Company B, C, D and E claimed that their company is more than content with the quality of labour / handicraft there are currently using in Asia. Moreover, they (e.g. Company B) claim that Asian workers show a higher level of handicraft skills and are able to produce larger quantities in shorter time intervals as for example German workers. However, they also admitted that this speed is possible related back to the worker´s fear of loosing their job or being replaced by more efficient workers easily, as their work place is in no way protected by any laws and / or unions

like it's the case in many European countries. Merely company A reports that the lack of quality of one of their suppliers has lead to a close-shoring of small parts of production to Europe. Similarly, company C states that they changed manufacturing location from Hungary to Bulgaria after they were not happy with the there offered level of quality – however, none of the two considered to relocate the manufacturing to Germany, which would be true re-shoring. Moreover, none of the interviewees is convinced that a comparable level of quality / manual labour quality will be available in Europe / Germany in the near future for a comparable price compared to Asia, which would make them consider re-shoring more intensely.

Reasons which were *not* or only occasionally mentioned when asked about current manufacturing location decisions were multiple, for example Corporate Social Responsibility (CSR). None of the companies is re-shoring / plans to do so in order to improve its CSR efforts or has made past manufacturing location decisions based on this factor. Rather, using certified offshored manufacturer is a mean to ensure CSR. Nevertheless, all but company´s B and E managers admit that the CSR-factor will probably become one of the main close- / re-shoring benefiting drivers of the near future. In today´s digitalized and transparent world, customers pay an increasing amount of attention to the roots of their products. News about child labour and inhuman working conditions of Asian manufacturers has alerted the public in the past (e.g. child labour scandal of Nike in 2001) has lead to an increase of demand for locally sourced and manufactured products. Company B does not see this as an issue as their raw material is inevitably associated with the Asian culture, making a local production tenable. Contrarily, company E admits they should pay an increasing amount of attention to this rising issue, however, other challenges like regaining its once provided level of quality are more important in a short- to medium-term timeframe, not leaving much resources / time for such efforts.

Moreover, none of the interviewed companies named the current *retail* locations to influence the manufacturing location decision. Through the means of ships, trucks and planes, the far produced merchandise reaches Europe – the main target market of the five companies – quickly. The companies are not convinced the volatile oil price, resulting in the high current fuel price, will ever long-term influence the manufacturing location greatly as for most the achieved cost advantage through an

offshored manufacturing surpasses the through an EU-based manufacturing reached transportation cost savings.

Similarly, only one company mentioned environmental regulations to influence the manufacturing location decision. Company A reported that in an attempt to decrease the company-wide CO2-emission, parts of production were kept in Europe, however, no parts were ever re-shored based on this factor. All of the remaining companies (B-E) did not mention this driver at all or stated that due to too high costs, this factor is not being considered. Similarly, none of the interviewees mentioned any type of government trade policies playing a role in their manufacturing location decision. Some of them even admitted that government trade policies such for example the high import duties of in Asia produced goods into Germany do not make production over there less attractive. Rather, those costs are being considered within cost-benefit-analyses comparing the possibilities of manufacturing in both regions (Europe vs. Asia) and still point towards Asia as a cheaper manufacturing location.

Interestingly, going against Pisano and Shih's (2012) opinion that fashion is an industry for which the colocation of R&D / design and manufacturing is inevitable (see 2. Literature review), all interviewees report that the geographic separation of design and manufacturing is *not* a problem at all and is overcome by multiple means. Comparing the multiple means described to overcome this geographical separation of R&D / design and manufacturing of the five companies, certain reoccurring patterns can be detected. In total five different strategies could be developed from the gathered data:

1. "Close manufacturing": Especially Eastern European countries are considered as alternatives to truly distant manufacturing countries such as e.g. China. This decrease of distance facilitates transportation and handling of the merchandise due to most of the "close" countries being EU-members (no / lower import duties), whilst at the same time still offering a cost advantage compared to true re-shoring. Company´s D 70%-Asia / 30%-Europe manufacturing distribution for example is an adaption of a formerly more Asian-focused manufacturing distribution. In order to decrease the lean time of the annual 12 collections, a higher percentage of production was close-shored to Turkey. Also, company A used this strategy by

relocating parts of production for their Woman collections to Eastern Europe due to lacking capabilities of Asian manufacturers concerning special requirements.

2. "Travel": Multiple of the companies described how they send CEOs, product / supply chain managers or even the designers themselves to the far offshored manufacturing sites in order to understand the manufacturing process in depth and exchange ideas and thoughts with the manufacturers. Company A for example sends their designers occasionally to visit manufacturing sites in order for them to understand what manufacturers can and cannot do – highly influencing their design ideas. Moreover, regular meetings between product managers, which regularly visit the manufacturers, and designers are scheduled, aiming at reaching a constant exchange of information (Company A: *"Process of mutual fertilization"*).

3. "Intermediaries": Some companies described they are not going as far as sending the designers itself to the manufacturing locations, rather using intermediaries to transmit the needed information between the manufacturers and designers. Company B for example makes their designers aware of the current manufacturing possibilities by setting up meetings between the designers and the for the manufacturing responsible employee and the CEOs, which regularly visit the plants.

4. "Information- and Communication Technologies (ICT)": Other companies relinquish the use of personal meetings between designers and manufacturers at all by upholding a constant electronic stream of communication between those. The CEO of company C for example is in constant contact with the external manufacturing manager during the time of the production (approx. two weeks / year), making personal meetings redundant.

5. „Partnerships": Similarly, companies producing rather „easy" products do not feel the urge for their designers to understand the manufacturing process at all, making above-mentioned means redundant. Company E for example reported that due to the simple nature of company E´s products, simple men shirts, no need for the designers to understand the manufacturing process is necessary. The manufacturers, most of

them being used since decades, know the companies' requirements and therefore, no further exchange of information are needed.

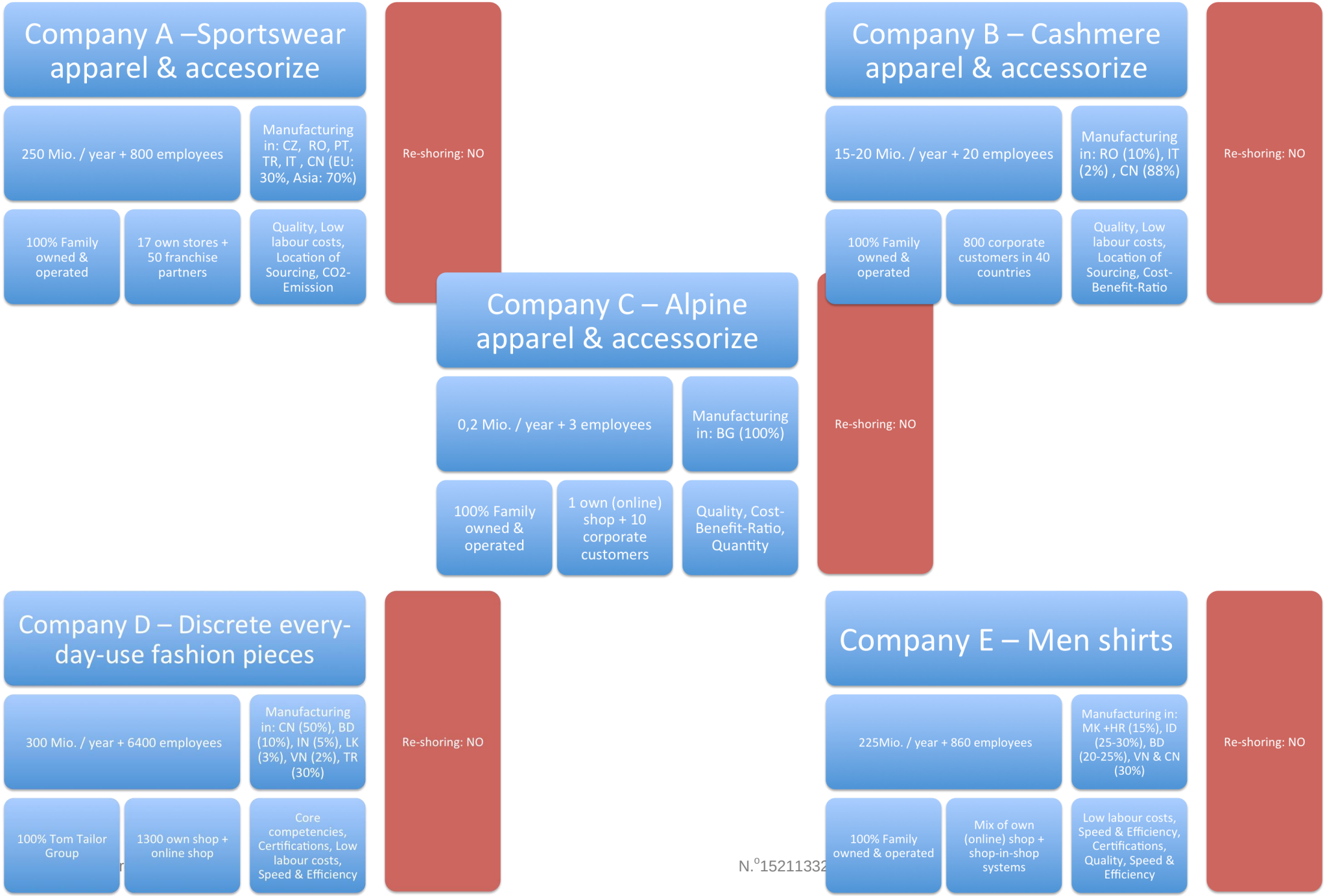
Already today, some companies use a mix of such strategies and in the future possible more strategies are likely to appear, making the potential rise of re-shoring even *less* likely.

Examining the technical progressiveness of the manufacturing companies, it can be detected that four out of the five companies nowadays use state-of-the-art ***communication & design*** technologies such as electronically data exchange (e.g. "*Lectra"*) or Computer-aided-design (CAD). Company E does not even use the latest communication technologies yet, however, the introduction of new state-of-the-art communication software is currently being prepared (Company E: *"We are aware, [...] that most [fashion] companies do not work like this [only using email to exchange data] anymore and we are currently changing this, trying to connect and communicate with our manufacturers through latest technologies.")*.

However, only one (Company A) uses manufacturers with highly technological ***manufacturing*** technologies – simply due to the reason it is not necessary for the majority of them. Company A admits that they use a handful of technically highly advanced manufacturers, all located in Asia for the manufacturing of their most complicated products. Some of them have developed the ground-breaking machineries themselves, which are only available in Europe with a delay of up to one year (e.g. Asian embroidery machines with 24/36 needles vs. 8/12 needles machines in Europe). However, for some products company A does also work with solely manual manufacturers, which are - machinery wise - technically less advanced. Similarly, company B and C employ manufacturers with "simple" manufacturing technologies due to the simplicity of their products – company´s B cashmere is all manually knitted and company´s C *Dirndl* are all manually sewed. Also, company E uses manufacturers with rather simple machinery due to the simplicity of their main products – men shirts.

Summarizing, it can be said that the data analysis leads to the conclusion that neither of the here interviewed companies is currently participating in re-shoring despite the

companies offering their merchandise at *different* prices, serving *different* target customers and showing *different* dispersions of manufacturing locations:


Company A –Sportswear apparel & accesorize
250 Mio. / year + 800 employees
Manufacturing in: CZ, RO, PT, TR, IT , CN (EU: 30%, Asia: 70%)
100% Family owned & operated
17 own stores + 50 franchise partners
Quality, Low labour costs, Location of Sourcing, CO2-Emission
Re-shoring: NO
Company B – Cashmere apparel & accessorize
15-20 Mio. / year + 20 employees
Manufacturing in: RO (10%), IT (2%) , CN (88%)
100% Family owned & operated
800 corporate customers in 40 countries
Quality, Low labour costs, Location of Sourcing, Cost-Benefit-Ratio
Re-shoring: NO
Company C – Alpine apparel & accessorize
0,2 Mio. / year + 3 employees
Manufacturing in: BG (100%)
100% Family owned & operated
1 own (online) shop + 10 corporate customers
Quality, Cost-Benefit-Ratio, Quantity
Re-shoring: NO
Company D – Discrete every-day-use fashion pieces
300 Mio. / year + 6400 employees
Manufacturing in: CN (50%), BD (10%), IN (5%), LK (3%), VN (2%), TR (30%)
100% Tom Tailor Group
1300 own shop + online shop
Core competencies, Certifications, Low labour costs, Speed & Efficiency
Re-shoring: NO
Company E – Men shirts
225Mio. / year + 860 employees
Manufacturing in: MK +HR (15%), ID (25-30%), BD (20-25%), VN & CN (30%)
100% Family owned & operated
Mix of own (online) shop + shop-in-shop systems
Low labour costs, Speed & Efficiency, Certifications, Quality, Speed & Efficiency
Re-shoring: NO

III. Re-shoring & its future - Personal estimations

When asked about their personal estimation of the development of the re-shoring trend the managers showed quite different opinions. Company A for example claimed it could think of a wide range of possibilities revitalizing the European fashion industry, ultimately possibly resulting in re-shoring. According to company´s A manager industry-wide collaborations of German apparel manufacturer such as for example company A, Escada and Hugo Boss could be a step into the right direction. Investing jointly into Germany-based, technologically highly advanced manufacturing sites, which then could be shared amongst its financiers, would be one of those. By sharing the high investments, the cost disadvantages of local production could be shared, therefore being decreased for the single companies. At the same time, benefits from local manufacturing such as e.g. low transportation costs and reduced delivery times could be used by all members. At the same time company A admits that such a high-scale collaboration would need great planning and attention to detail and would be difficult to implement in reality.

Company B says it would happily re-shore, however, the costs are currently still too high. Having tried to re-shore before, by setting up a manufacturing site in Apolda, Germany, which needed to be closed down again, company B truly knows what it is talking about. However, in its opinion the re-shoring for non-cashmere companies would make sense and should be government-founded as it in the long term could benefit the German economy as a whole. Contrastingly, company C has never ever heard of the term re-shoring before and is not interested in participating either. However, company C admits that this is possibly due to their small company size. It claims, the company is happy with their current manufacturers and neither considers offshoring production further or re-shoring closer in the near future.

Another opinion is shared by company D: The company has just recently launched an initiative which is aimed at refocusing the manufacturing back to Europe – however, this was solely started due to quality deficits of Asian manufacturers and not in the course of the recent re-shoring trend. If company D would find Asian producers delivering the same level of quality, they would happily offshore again – completely going against the contemporary re-shoring claims of academics. Lastly,

company E shares a similar point of view. For them, re-shoring does not play an important role within their manufacturing location decision at all and they are even increasing the Asian manufacturing volume due to still existing costs advantages of offshored production.

5. Discussion & Limitations

Comparing the arguments presented in the literature review with the findings from the data analysis, it can be seen that a great gap between theory and practice seems to exist.

I. Discussion: Factors influencing the manufacturing location decision in Theory vs. Empirical Reality

Authors in favor of re-shoring such as for example Fine (2013), Kinkel (2014), Ellram, Tate and Petersen (2013) name factors such as “Costs”, “Corporate Social Responsibility” (CSR), “Insurance of product quality” and “Operational flexibility” amongst others as the main arguments in favor of re-shoring. However, when comparing those factors to the drivers behind the case study manufacturing location decision factors, great differences between the effects of those factors can be detected.

Based on the data analysis, the general conclusion can be drawn that the cost factor in reality does work *against* re-shoring. Current cost advantages of the Asian market will also in the future contribute to its location as a preferred manufacturing location. Moreover, the importance of this factor differs greatly between academic and empirical reality: Whereas academics claim that the cost factor should be paid less attention to and rather strategic factors should be considered (Fine 2013; Ellram et al., 2013), in reality the cost factor is one of the *single most important* manufacturing location decision factors as being reinforced by the managers. Similarly, another general conclusion based on the data is that - other than claimed by academics such as for example Kinkel (2014) and Sirkin et al. (2012) - the retail location does in general *not* influence the manufacturing location. Also the often-quoted pro re-shoring factor CSR (Fine, 2013) cannot be confirmed in real life as a general importance of this factor could not be confirmed by the gathered data.

Another throughout the literature frequently mentioned pro re-shoring driver was “operational flexibility”. Academics believe that the local concentration of supply-chains leads to a less disruptive and more flawless connection of the single activities (Mudambi, 2008). In reality however, the local delocalization of the manufacturing part of the supply chain does not appear to embody a problem. As outlined above, modern companies seem to have developed a whole portfolio of strategies in order to overcome this geographical distance without limiting its operational flexibility. Rather, the very interlinked supply chain activities of sourcing and manufacturing seem in many cases to be located within the same country / region, in order to reduce transportation costs and achieve cost advantages.

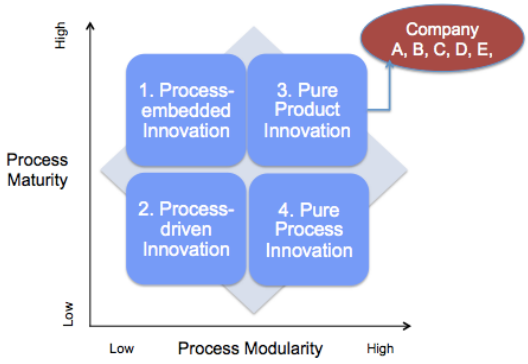
Another factor, which academics claimed to benefit the rise of the re-shoring trend, were environmental regulations (Gray et al., 2013). However, as outlined above, in general no special attention in connection with manufacturing location decisions is paid to this factor. Also by academics frequently mentioned to positively contribute to the re-shoring development were quality (Kinkel, 2014; Kinkel et al., 2007) and / or the lack of skilled workers in emerging countries (Ritter and Sternfels, 2004; Kinkel 2012; 2014). Again, those claims could not be confirmed by the general opinion deduced from the data analysis. Rather the opposite, a general content with the quality and a surplus of talented workers in Asian countries, could be detected throughout the interviews. Moreover, the extreme work commitment and flexibility of Asian countries was praised in general. Lastly, Kinkel´s (2014) as well as Fine´s (2013) view that re-shoring has been present for over a decade is hard to believe, considering the general lack of knowledge of most of the managers concerning the re-shoring topic as a whole.

Summarizing, it can be said that the factors claimed by the academics to benefit the future rise of the re-shoring trend in reality rather contribute to the diffusion of the *reverse* of re-shoring – namely continuous offshoring. Overall, academics do mention a much wider range of factors supposedly influencing the manufacturing location decision, which cannot be confirmed by generalizations deducted from the gathered data. Multiple by academics as highly influential branded factors are not even or hardly mentioned by real companies when asking those about manufacturing location-determining factors (e.g. retail location, environmental regulations,

government trade policies). This possibly shows that academics are much more advanced when it comes to the examination of the manufacturing location decision factors than real-life (supply chain) managers. However, it is very likely that in the future those until now unnoticed factors will move into the focus of managers considering the personal estimations of the managers and that some factors currently benefiting the continuous offshoring trend in the future will possibly shift and contribute re-shoring.

II. Modularity-Maturity Matrix

In order to place the companies within one quadrant of the Modularity-Maturity Matrix, besides the role of technology (Process Maturity), the degree to which the manufacturing can be separated from the design needs to be examined (Process Modularity). As outlined in the Data Analysis part, companies are following multiple strategies to overcome the geographical distance between design / R&D and manufacturing instead of re-shoring, whilst at the same time working with low to medium technologically advanced manufacturing processes / manufacturers, leading to a placement of all five companies within the third quadrant of the matrix.



Nevertheless, company A predicts that in the future a manufacturer´s technological degree of manufacturing-related progressiveness will possibly become a disqualifying manufacturing location decision factor in case he does *not* work with future ground-breaking technologies, such for example 3D-printing, for designers working with technical-intensive designs.

III. Re-shoring: A real trend or a Fad? – A first answer

Summarizing this contrast, it is safe to say that despite multiple academics being convinced of a current and future rise of the re-shoring trend, the reality paints a different picture: Out of five interviewed managers, none of them seriously considered re-shoring as a mean to improve business activities, despite some of them being positively-minded towards the trend (see company A). All of them blame the high costs, which would inevitably follow the decision to re-shore, especially driven by the high labour costs in Germany, to be the number one anti re-shore reason. However, it also would be false to claim that none of them is interested in finding ways to reduce the complexity of global supply chains and geographical decentralized manufacturing. As mentioned before, most companies today - more than ever - apply multiple strategies to overcome geographic and cultural gaps created by offshored manufacturing. Especially “Information and communication technologies” (ICT), besides regular trips of responsible employees to the plants (“Travels”), are means to decrease the mentioned distance. Moreover, the strategy of “close manufacturing” seems to gain importance. Relocating risk contingent manufacturing processes (e.g. lack of quality / competencies) back to Europe has already been done by some interviewed companies (A, D), however, only in the within Europe low labour costs countries such as e.g. Macedonia. Based on the gathered data and personal estimations of the interviewees, a true re-shoring trend still has a long way to go.

Furthermore confirming this conclusion does the experience of Mrs Natascha Bendixen. Being the founder and CEO of *Bendixen Consulting*, a personnel-consulting company specialized in the Fashion and Retail industry, Mrs Bendixen has staffed multiple supply chain and sourcing positions over the years for companies such as Tom Tailor Group, Esprit, Olymp, Jack Wolfskin, Charles Vögele in Switzerland, C&A in Belgium, Street One and other. Having read the Data Analysis & Discussion part of this thesis, she can confirm first hand that the current and short- to medium-term focus of companies concerning manufacturing is and will remain on Asia. Existing cost advantages, highly skilled workers and technologically advanced manufacturing plants embody advantages a re-shored manufacturing can just not keep up with.

IV. Limitations

Considering this first answer, however, multiple limitations need to be outlined which possibly can partly explain this extreme disparity between theory and reality. Firstly, using the explanatory case study approach can lead to default conclusions. Despite its founders claiming a low case number as low as 4 cases – in this case 5 – is enough to gather valid data and based on it conclusions and final recommendations, in the world of research this is a extremely low number and the gather and analysis of more cases would have possibly lead to differing results. Moreover, the researched companies all sold their products at medium to high prices. The consideration of companies offering their merchandise at very low prices or the most extreme form – for discount prices – or companies offering their luxury-quality goods at extremely high prices would have possible deformed the picture. For example most of the international luxury brands such as e.g. Gucci, Prada, Hermès etc. have their precious goods designed and manufacturers in Europe in order to ensure high quality and the illusion of handcraft & artistry.

Moreover, academics tend to “discover” trends earlier than the broad mass – in this case the fashion companies itself. Whereas academics start to gather data and draw conclusions from an early stage onwards, the “real-world” business most often only starts picking up on those trends later and considering those for themselves. One company for example, company E, admitted it had never ever heard of the trend re-shoring and currently even increases its Asian based manufacturing volume. Having only survived the finical crisis, most companies currently do not have enough resources (money, Time, HR) available to consider re-shoring in depth and possible will not do so in case re-shoring truly turns out to only be a fad over the next few years.

6. Conclusion

By having outlined an extensive literature review and by analyzing the through case study approach gathered data, the aim of this work, which was to review the manufacturing location decisions factors of the German fashion industry and by doing so evaluate the current and future development of the re-shoring phenomenon, can be fulfilled.

Within the German fashion industry, the manufacturing location determining factors align partly with those factors claimed by academics. Especially labour cost-related factors, operational flexibility, quality, availability of skilled workers besides the location of sourcing, speed & efficiency and certifications can be found to also in reality influence the manufacturing location decision. Academics additionally claim government trade policies and environmental regulations to highly influence this decision. However, interestingly, the effects of those drivers seem to differ between theory and reality: Whereas academics claim that the future development of most of those factors *benefit* the continuous rise of the re-shoring trend, interviewed managers of five German fashion companies claimed all of those factor´s developments to *work against* the fast diffusion of re-shoring.

Moreover, most of the interviewees showed a non-existing to limited knowledge about the allegedly “hot” topic re-shoring compared to America, where knowledge about it seems to be highly diffused, having lead to some of the big American players (e.g. Walmart, GE) following the trend already. However, it would be false to claim European, or more exactly Germany companies, do not show *any* interest in optimizing their supply chain by applying strategies in order to reduce the geographic as well as cultural distance of it. Using regular trips, modern information and communication systems or the mean of relocating manufacturing closer to the companies home country, however, not back into the companies home country, are only a few strategies used by the interviewed companies to reach this objective.

Furthermore, some of the interviewees showed some knowledge and a positive attitude towards the trend, having already discussed with colleagues and co-workers possible strategies making the trend feasible in the long run. For example industry wide collaborations and the establishment of shared, technology highly advanced manufacturing plants are proposed. Others claim that current and future modern technologies will make the co-location of design & manufacturing completely dispensable and a development rather towards the even further local separation of those two – in search of even cheaper manufacturing locations – is on the rise.

Finally, after having gathered all this information about the current status of the re-shoring trend, in my opinion a further diffusion of it – at least within the European

manufacturing industry – seems unlikely. Today more than ever companies fight for survival in an extremely competitive world, simply leaving no resources (money, time, HR) for the true implementation of the costly re-shoring trend.

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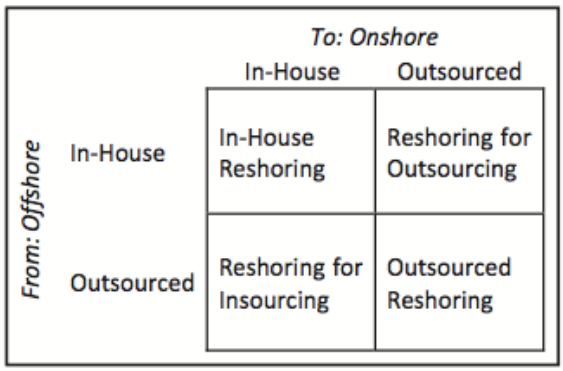
8. Appendix I - Figures

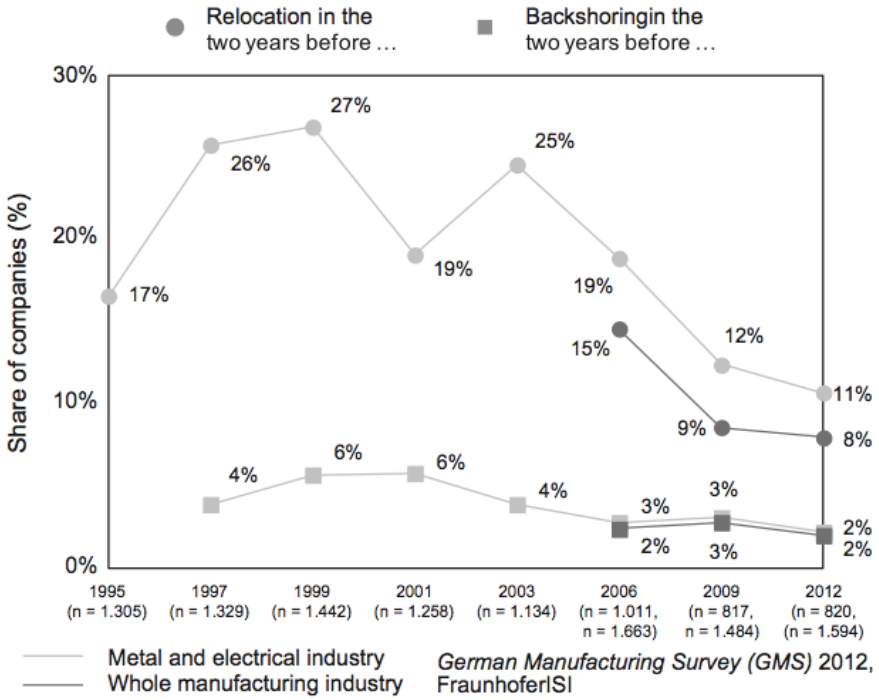
- „Re-shoring Options“



- In-house Re-shoring: A firm fulfils demand in its local market by relocating manufacturing activities being performed in a wholly owned offshore facilities back to wholly owned [home country]-based facilities
- Re-shoring for Outsourcing: A firm fulfils demand in its local market by relocating manufacturing activities being performed in wholly owned offshore facilities back to [home country]-based suppliers
- Re-shoring for Insourcing: A firm fulfils demand in its local market by relocating manufacturing activities being performed by offshore suppliers back to wholly owned [home country]-based facilities
- Outsourced Re-shoring: A firm fulfils demand in its local market by relocating manufacturing activities being performed by offshore suppliers back to [home country]-based suppliers

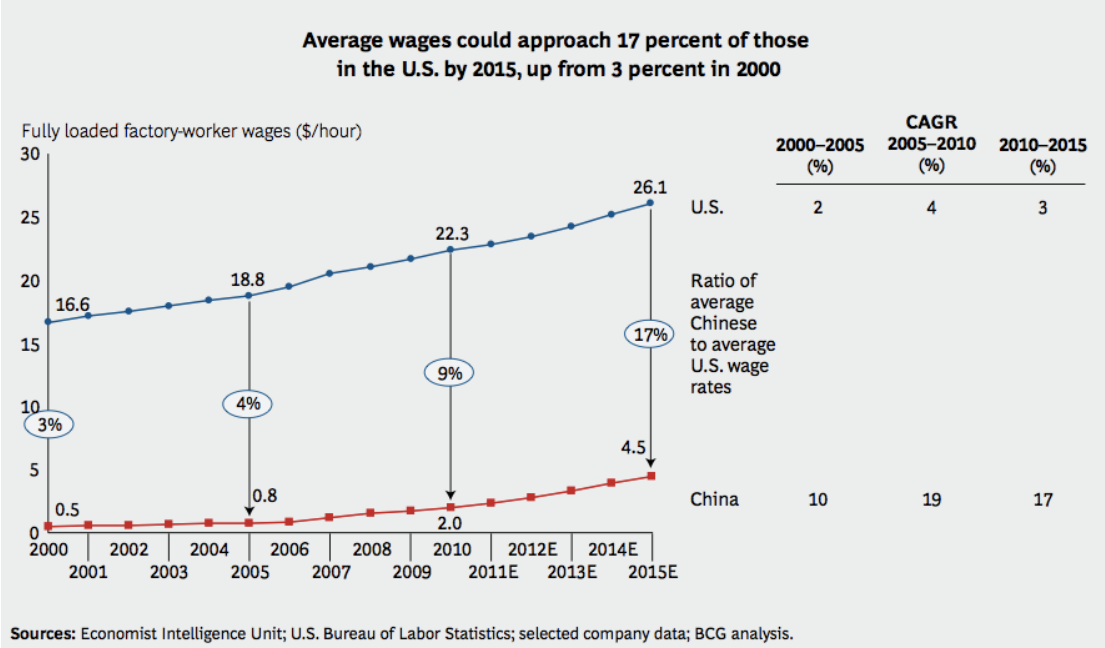
Source: Gray, J. V., Skowronski, K. Esenduran, G. & Rungtusanatham, M.J. (2013). The reshoring phenomenon: What supply chain academics ought to know and should do. *Journal of Supply Chain Management*, 49 (2), pp. 27-33.

- „Relocation and [re]-shoring activities in the German manufacturing industry over time“



Source: Kinkel, S. (2014). Future and impact of backshoring – Some conslusions from 15 years of research on german practices. Journal of Purchasing & Supply Management, 20, 63-65.

- "China´s wages rates are growing rapidly“



Source: Sirkin, H. L., Zinser, M. & Hohner, D. (2011). Made in America, Again Why Manufacturing will return to the U.S.. The Boston Consulting Group Report, 1-19.

9. Appendix II - "Lectra – Company Profile"

Lectra

CORPORATE PROFILE

December 2014

One single business for worldwide markets

Lectra is the world leader in integrated technology solutions —software, CAD/CAM equipment, and associated services— specifically designed for industries using fabrics, leather, technical textiles, and composite materials to manufacture their products. It serves major world markets: fashion and apparel, automotive, and furniture, as well as a broad array of other industries (aeronautics, marine, wind power, etc.). A transnational company of more than 1,400 employees, Lectra has developed privileged relationships with prestigious customers in more than 100 countries, contributing to their operational excellence.

A French company, Lectra has built up a unique worldwide presence. Through its network of 31 subsidiaries, it generates 92% of its revenues outside France and 90% directly. Lectra has preserved its DNA by keeping R&D and production in France.

Building for the future in the reset economy

Continuing to focus on the long term, the Lectra 3.0 strategy initiated in late 2009 continues to fully demonstrate its relevance, the strength of the company's business model and its strong resilience. Lectra has renewed its offer, bolstered its premium positioning, increased its lead over its competitors and won market share.

Lectra's five strategic objectives are:

1. **Accentuate technological leadership** and the high-value of the product and service offer
2. **Strengthen the competitive position** and long-term relationships with customers
3. **Accelerate organic growth** and preserve cash for future acquisitions
4. **Boost profitability** by regularly increasing the operating margin
5. **Generate free cash flow** serving to finance future growth

A solid, proven business model. Completely self-financed development

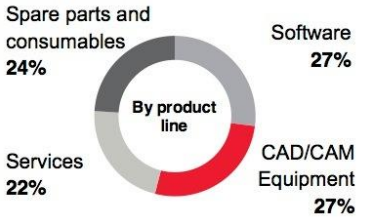
Lectra's business model generates an annual free cash flow exceeding net income(3). It is based on two main pillars. 1. A balance of activity-related risks, which benefit from natural hedging by their distribution over market sectors with cycles that are different from each other and a very large number of customers throughout the world—taking advantage of the dissimilar growth rates of emerging countries and developed countries. 2. A balanced revenue mix between revenues from new systems sales, company growth drivers, and recurring revenues—a stabilizing factor—that provide a cushion in periods of difficult economic conditions.

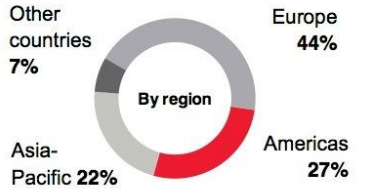
Lectra has radically transformed its balance sheet. With zero-debt, bolstered by solid operating fundamentals, its development is completely self-financed, enabling a sustainable dividend policy.

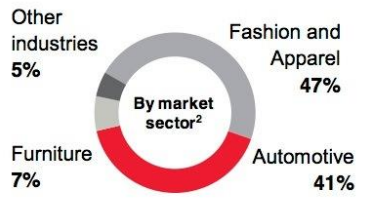
2013 Key figures

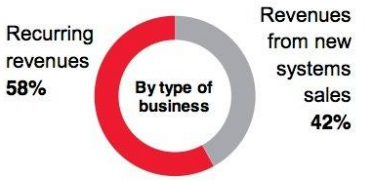
Revenues	€203.0 m
Income from operations(1)	€17.5 m
Operating margin(1)	8.6%
Net income	€21.8 m
Free cash flow(1)	€6.5 m
Net cash	€28.6 m
Shareholders' equity	€83.8 m
Research & Development	€19.1 m
Capital expenditure	€4.8 m
Employees	1,430

Breakdown of 2013 revenues









(1) Before non-recurring items.
(2) Revenues from new systems sales.
(3) Assuming utilization or receipt of the research tax credit and competitiveness and employment tax credit.

40 years of expertise
For the benefit of customers

A will to accelerate growth

The post-crisis world will be different, with upheavals in regulation, a new distribution of global growth, transformations in companies' value propositions and business models, and a redistribution of positions in all geographic and industrial markets.
Eight emerging countries are expected to account for half of global growth in the present decade. Lectra is well armed to turn this new situation into a vehicle for dynamic growth. The other half of global growth will still take place in developed countries, where Lectra already holds a significant market share.
The acceleration of the company's transformation plan (including a major recruitment plan to strengthen sales, marketing and R&D teams), supported by €50 million in investments for the future over the 2012-2015 period, will enable it to prepare for new challenges in the post-crisis economy and seize the resulting opportunities.
Furthermore, Lectra will benefit from five growth accelerators:

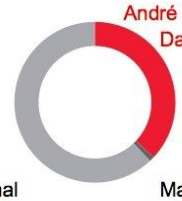
1. **Emerging countries**, together with the industrial revival in the United States and other developed countries
2. **The automotive market**, an industry currently experiencing far-reaching technological and geographical change
3. **Leather**, thanks to Lectra's revolutionary new ranges of automated cutters
4. **PLM for fashion and apparel**, collaborative solutions facilitating collection management
5. **3D for fashion and apparel**, a new universal language for professionals

A highly committed, experienced management team

Under the leadership of **André Harari**, Chairman of the Board of Directors, and **Daniel Harari**, Chief Executive Officer—who hold nearly 40% of the capital, guaranteeing a stable shareholder structure—, Lectra's management is fully determined to provide the company with particularly solid financial fundamentals, enhance its competitiveness, and pursue the company's long-term entrepreneurial strategy.
The Executive Committee is comprised of:

- **Daniel Harari**, Chief Executive Officer, Chairman of the Committee
- **Jérôme Viala**, Chief Financial Officer
- **Véronique Zoccoletto**, Chief Human Capital and Information Officer
- **Edouard Macquin**, Executive Vice President, Sales

Breakdown of capital
(November 30, 2014)



Institutional investors and general public **62%**

Management and other employees **1%**

Clear and ambitious 2016 financial goals

33⁺% **revenue growth rate over the 2013-2016 period**

15% **operating margin**

2x **more than double income from operations and net income in four years**

75⁺% **percentage of annual fixed overhead costs covered by gross profit on recurring revenues**

(Before non-recurring items. Exchange rates at February 1, 2013. Like-for-like change.)

Financial calendar

Feb 11, 2015	FY 14 results release
Feb 12, 2015	Analyst Conference

Stock information
(November 30, 2014)

Ticker	LSS
Market	NYSE Euronext (Compartment B)
Share price	€8.89
52 weeks %	+20.6%
Number of shares (million)	30.3
Market cap.	€269.4 m

Lectra is eligible for inclusion in French SME equity savings plans "PEA-PME".

10. Appendix III - "Fashion & technology Chair – Re-shoring in the European Fashion industry"

Fashion & Technology Chair
"Re-shoring in the European fashion industry"

ESCP Europe

ESCP Europe is a European business school of French origin. European campuses are in Paris, London, Berlin, Madrid and Turin.

The ESCP Europe Lectra Chair "Fashion & Technology"

The "Fashion & Technology" Chair objective is to create a center for research and transmission of knowledge where technology and innovation interact in the fashion and luxury goods sector.

The Research Project

The research project deals with the question of the role of technology in location decisions (offshoring, re-shoring, back-shoring, relocation, double sourcing,…) of manufacturing operations or subcontractors in the fashion industry.

Benefit for the European fashion industry

The project should bring up findings that contribute to a better understanding of characteristics of European fashion industry, its network of suppliers, its core competencies, the role of technology and the rationale behind location decisions. The findings should support European Fashion industry to better understand successful business models by leveraging local specific competencies and technologies. Our study should also contribute to strengthen European fashion industry and its specificities.

Our request

In order to realize this research project we are looking for managers who are involved in manufacturing and supply decisions who are ready to participate in a personal interview of about 45-60 minutes on location decisions (offshoring, re-shoring, back-shoring or relocation). The interview would take place in the surroundings of the interviewee or by phone to avoid inconveniences. The interview does not require any preparation.

All data are evaluated anonymously. The results of the study can be provided after finishing the project.

11. Appendix IV – "Interview Guideline"

Interview guidelines

- Brief presentation of the interviewee: Responsibilities and involvement in sourcing / manufacturing location decisions.

- Brief presentation of the company:
  - Main characteristics : products (type, brands and market positioning), target customers : luxury, high end, low end…; highly fashionable products vs. basics ;
  - Geographical coverage: local, international, specific countries ; number of countries for sales, manufacturing, …
  - Shareholders, history of the group
  - Size: Sales, number of employees

- Description of the value chain and organization of operations:
  - Value chain: position of the company in the value chain and key strategies regarding outsourcing vs. insourcing for different activities: creation, sourcing, manufacturing, logistics, distribution, retail. Location of different activities: close vs. far. (cf matrix insource/ outsource ; far away / nearby)
  - Perception of activities bringing more value: what activity is creating the more value? Different vs. competition?
  - Description of manufacturing process and role of technologies and information systems.
  - Role of technologies (IS, PLM, CAD and CAM,..) in the decision of manufacturing / sourcing location?

- Description of relationship between creation/design and manufacturing. Role of technologies. Involvement of stylists/designers in manufacturing process, technologies.
- Description of relationship between sourcing and manufacturing
- Description of relationship between manufacturing and distribution/ retailing/ markets
- Positioning of activities on the modularity / maturity matrix (Pisano & Shih 2012 HBR): Is it important that stylists understand the manufacturing process and are involved in sourcing / manufacturing decisions ? Level of product standardization? I it difficult for stylists to get relevant information on the manufacturing process?

- <u>Detailed analysis of close operations vs. far operations</u>
  - Reason for choosing one vs. the other (different types of costs, access to specific resources and competences, location and access to raw materials, targeted markets, image, protection of IP, specialized cluster, competition pressure,…)? How is the decision process organized? Who is in charge? What criteria are considered? Lessons learnt from previous experiences?
  - Relative role of different activities of the value chain (raw materials/ raw materials suppliers, creation/ style/ R&D, markets)
  - Role of organizational structure (insource vs outsource)
  - Role of technologies? Any recent change of operation location following technology evolution / development? Other reasons?

12. Appendix V – "Interview Transcripts"

- **Company A**

Place	Munich, Bavaria, Germany
Date	30.01.2015
Company	Company A
Interviewer	Pauline von Nostitz
Interviewee & -position	Mr B., Member of the executive Team / Sourcing
Time frame	09:00:00 – 09:55:00

The does NOT wish to be disguised within the scope oft he Project. Data was collected with the promise to not publish the company´s name in any project report.

1. Introduction: Presentation of the Interviewee & Company

1.2 Interviewee

Name: Mr B.

Responsibilities: Member of the executive Team & Head of Sourcing

- Team sources all raw materials & non-product related materials (e.g. Heating-oil for headquarter) → Centralised sourcing department
- Size of Team: 16

Role and involvement in manufacturing location decision:

- Manufacturing location decision:

  - ➢ Manufacturing Strategy: *"We try to locate the manufacturing where we buy the raw material!"*
  - ➢ Team proposes potential suppliers / raw materials sources (dependent on manufacturing locations) to Designers & Product Managers and discusses them with those
  - ➢ Influencing manufacturing location factors: Costs, Feasibility, CO2 Emission, Efficiency

1.3 Company A – An Overview

Products & Product lines

- Sportswear apparel & accessorize retailer
- 5 internal Product lines:

  - Company A Sport
  - F. & I. (younger sports line)
  - Company A Woman
  - S. Company A (Designer collection of Company A Woman)
  - Company A Man

  } Company A Woman & S. Company A: Account for 45-50% of sales combined

- Licenses for men shirts, watches, perfumes, shoes, gloves, skiing glasses, skies, skiing helmets

Lifestyle brand trying to cover 100% of customers needs related to core product of sportswear apparel

Product categories

- 3 categories of products:
  - Basic: “Reoccurring classics”
  - Evolution: Modified “old” products / updated versions of “older” products
  - Revolution: Newly created products by Company A

Size of Company / Revenue

- Revenue of 250 Mio. / year
- 800 employees worldwide
- 17 own stores
- 50 Franchise partners

Division of markets

- Most important markets: Germany, Austria, Switzerland
- Smaller markets: USA, other European countries
- Future focus: Asia due to high sales potential

Target customer

- Stylish and sporty customer willing to pay price premium for apparel of excellent quality

Positioning

- High-end / premium sportswear manufacturer
- Not comparable to “true” Luxury brands such as Louis Vuitton, Hermès etc. but close desired positioning

Company History & Ownership

- Founded 1932 by W. Company A Sr.
- Family owned by W. Company A Jr. and S. Company A

2. Value Chain

2.1 Degree of vertical integration of Value Chain

□ Design / Creation: Internal (Munich, Germany) □ Sourcing: Internal (Munich, Germany) □ Quality management: Internal (Munich, Germany) □ Manufacturing: EXTERNAL (Europe & Asia) □ Logistics: Internal □ Distribution: Internal (fully owned subsidiaries in Hong Kong, China and USA) □ Marketing: Internal (Munich, Germany) □ Retail: Internal & Franchise partners (Worldwide)

- After initial founding: 100% of manufacturing in one of nine wholly-owned plants (Germany: 7, Malta: 1, USA: 1)

- Development of multiple economic factors (increase of wages, transportation costs, government trade policies, sourcing location) over the past 35 years → production today is 100% outsourced
- Solely a small team (40 tailors) still located in the head office in Munich, Germany, responsible for the creation of samples of the newly designed collections

Design

- Mostly internal designers
- Design happening in Munich, Germany
- Collaboration with two freelancers since decades solely working for Company A
- Team size: 15 people

Manufacturing: Different Levels of Outsourcing

- 100% of manufacturing outsourced different *BUT* different levels of outsourcing
- Eastern Europe: Company A collaborates with three manufacturers solely working for Company A (closest to wholly-owned production plants), high financial & knowhow related investments into those manufacturers
- Other regions: Collaborations with manufacturers serving other customers besides Company A *BUT* even with those manufacturer: Company A is highly involved in the manufacturing process (supplies the manufacturers with nominations concerning the materials useable e.g. only buttons of by Company A pre-screen suppliers can be used in the final product + "dictates" the manufacturing process) → Done to ensure the highly level of quality Company A stands for

2.2 Manufacturing countries / regions by product lines

❖ Company A Woman / S. Company A:

➢ Mainly Europe (Sourcing & Manufacturing): Czech Republic, Rumania, Portugal, Turkey, Italy*

*

- Italy takes a special stand here: under normal circumstances sourcing & manufacturing costs within this country would be too expensive
- ***However:*** due to the Italy´s long-standing proximity to fashion and occurrence of high-end artisans, collaborations are being entertained for a handful of very special products of this collection

❖ Company A Man

➢ 2/3 of sourcing / manufacturing in Europe

➢ 1/3 of sourcing / manufacturing in Asia

- Asia: Especially Japan due to local technically highly advanced fabrics;
- ***However***: highly valued advantage is in danger due to Japanese fabric manufacturers outsourcing their own manufacturing sites to China / Korea lately due to cost advantages leading to quality disadvantages
- Company A tries to minimize this danger by making Japanese suppliers / manufacturer sign a clause in the contracts, stating that in case those sell their products as Japanese ones, they also have to be manufactured within the Japanese boarders
- ***However***: risk of non-domestic production will decrease as South Korea, Taiwan as well as China will soon have caught up with Japan regarding technological state-of-art

❖ Company A Sport

➢ 50/50-Distribution:

Technological sophisticated fabrics	→	Sourcing & manufacturing: Asia (especially Japan)
Easy / fashionable fabrics	→	Sourcing & manufacturing: Italy

- Both locations can also occur mixed: In rare cases materials sourced in e.g. Japan will be shipped to and manufactured in Europe and vice versa
- As this goes against Company A's Strategy (*"We try to locate the manufacturing where we buy the raw material!")* → possibility is tried to be used as little as possible & requires special approval from the management board

❖ *F. & I.*

➢ Whole sourcing / manufacturing outsourced to Asia

NOTE: For the two collections F. & I. and COMPANY A SPORT a recent trend of re-shoring of Company A of the sourcing as well as manufacturing sites can be detected. However, according to Company A, this is due to quality deficits of current Asian suppliers / manufacturers and not due to any *technological* advantages of the European fashion industry. When asked whether those quality deficits can not be eliminated by working closer together with those insufficient suppliers, Company A referred to Company A´s history to answer this question.

Company A used to manufacturer 100% of their goods themselves during the 1980s. They owned seven manufacturing plants close to Munich, Germany, one on Malta and one in the USA. However, due to rising wages and the development of the textile industry as a whole, production was outsourced and moved firstly to the "outer skirt" countries of Europe (Portugal, Turkey etc.) and eventually to Asia. Some of those then found partners still work for Company A today, meaning they have over 30 years of experience with the "Company A quality" and the expected level of quality / standards of Company A. Trying to work together with new manufacturer for the two younger / more sportive collections (Company A Sport + F. & I.), who lack this kind of experience, appears very difficult and is a long-term learning process (approx. 2 years) and has led to Company A recently re-shoring parts of those less cost-intensive / easier collections back to Europe as the danger of losing quality and the extreme high required investments in order to "teach" lacking Asian manufacturers the required know-how level appears to high.

- In general, Company A tries to control the problem of lacking quality by using so called “product managers”
- Those travel the world and visit all the manufacturers working for Company A
- Product managers are of extreme importance trying to ensure Company A’s high quality level as well as its exclusivity (two of Company A’s main points of differentiation leading to a competitive advantage)
- Exclusivity: created by limiting the number of production of each piece to a below the market average number

2.3 Distribution of Manufacturing

Collection	Sourcing / Manufacturing Location
Company A Woman	Mainly Europe: Czech Republic, Rumania, Portugal, Turkey, Italy
S. Company A	Mainly Europe: Czech Republic, Rumania, Portugal, Turkey, Italy
Company A Man	2/3: Europe 1/3: Asia
Company A Sport	½: Asia → Technological sophisticated fabrics ½: Italy → Easy / fashionable fabrics
F. & I.	Asia

- 100 external manufacturers used by Company A *(small number compared to offered number of product categories according to Company A)*
- China: 35 manufacturer
- Rest distributed across Europe: Portugal, Turkey, Rumania, Czech Republic, Italy
- Between three and 10 manufacturer per country in Europe
- Main selection criterion: *Quality*

3. Value Chain – Relative importance of single activities for Value Creation

According to Company A, the following activities of the Company A specific value chain create the most value:

Internal Design

- Enables aligned design of different collections & ultimately brand image
- Designers share same floor of building leading to creative interchange

External Manufacturing

- Saves (fixed) costs
- Reduced risks due to multiple manufacturer usage
- Increases flexibility
- High level of quality ensured by nominating great parts of process (Design, raw materials, procedures)

Internal Quality Management

- In-house laboratory
- Each single material used by Company A tested in own labs in order to ensure high quality
- Company A's main competitive advantage: High level of product quality → Aspired to keep it up through cost-efficient, external manufacturing, which is at the same time greatly nominated combined with a very strict internal quality management,
- Competitive retailers: often simply buy predesigned quantities which are then produced in only "superficially" checked manufacturing plants leading to a lack of quality and a missing brand-breaching signature

4. Role of Technologies in the decision of manufacturing process

- Most partners technologically highly advanced & connected to Company A's IT-System in terms of communication technology
- Exclusively electronic transfer of designs across the globe (Exceptions: Single, very special manufacturing)

- Technologies used by Company A / external manufactures: PLM, CAD, CAM, Laser cutting
- Currently access to machines in Asia which are only presented to the European market at fairs up to a year later in Europe (e.g. Embroidery machine with 24/36 needles in Asia vs. Embroidery machines with “only” 8/12 needles)
- Some of external manufacturers develop latest technology machinery themselves
- ***However***: Also usage of solely manual tailors knitting pieces manufacturers, no use of technology whatsoever
- Degree of technological advance: Potentially very important criterion for future manufacturer research / possibly one of most frequent disqualification reasons of potential manufacturers in case groundbreaking technology will appear
- Despite the usage of non-technological manufacturers for some product categories, technology appears highly relevant in manufacturing location decisions for Company A
- Asia - especially China - shows a great technological advantage over its competitors and is therefore a for Company A preferred manufacturing location (35/100 manufacturers located in China, remaining 65 distributed across Europe with between three to maximum ten manufacturer per country)
- Company A has developed a Matrix: divides current suppliers into different categories along multiple criterion depending on product group, a handful of potential manufacturers will be considered and finally the best suited one will be chosen
- One of the matrix-dimensions: technological progressiveness of this supplier
- Others: cost, time, quality and specialization of manufacturer
- Besides China and Japan Company A does not consider any other Asian manufacturing locations as this would go against Company A’s Corporate Social Responsibility guidelines (fear of in-human working conditions in remaining Asian countries)

5. Geographic Relationships – Manufacturing & other Value Chain Activities

5.1 Manufacturing Location & Design Location

- Designers (Munich, Germany) start designing completely independently

- Designer, Product managers and buyers jointly visit fairs around the world to source and collect inspiration → Impulse coming mainly from the "creative" department
- Designers *also* have to visit production sites in order to gain idea of technological progressiveness of manufacturers which highly influences design possibilities
- Company A: "Process of mutual fertilization" between designers & product managers / buyers idea wise; geographic separation of design & sourcing / manufacturing *not* problematic at all
- Regular joint meetings between design & product managers / buyers scheduled in which an exchange of the latest technological advancement of manufacturer & design ideas are happening

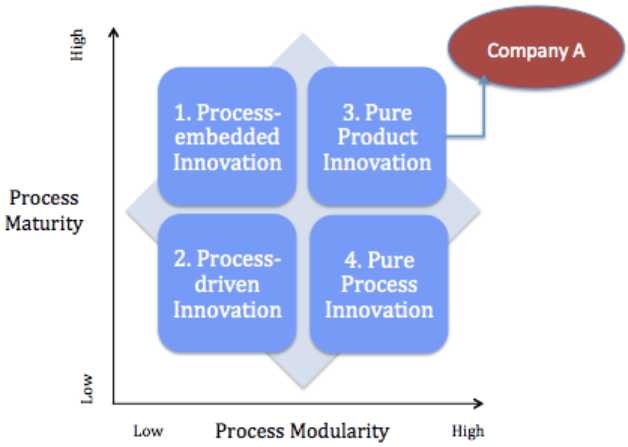
5.2 Manufacturing Location & Sourcing Locations

- Desired Strategy: *"We try to locate the manufacturing where we buy the raw material!"*
- Most sourcing / manufacturing decisions made together
- Non-compliance in rare cases due to mainly e.g. technological / cost advantages of sourcing / manufacturing separation

5.3 Manufacturing Location & Retail Locations

- In Europe produced materials reach Company A's most important target markets very quickly via trucks / trains (Germany, Austria, Swiss)
- Goods produced in Asia will reach assigned target markets via plane / ship
- Despite recent high oil price and therefore high transportation costs, Company A does *not* consider re-shoring manufacturing sites as they have not detected a sufficient cost-advantage by doing so when comparing both options
- Moreover, risk of loosing access to viable technologies too high + fluctuation of the oil price does not convince the Company A management team enough to re-shore

6. Level of product standardisation



- Quality: Standardisation across all collections
- Design: Each collection should speak own "language"
- Each collection contains highly standardised basic pieces besides very few highly specialized fashion pieces
- Company A: located within the third section (pure product innovation) of the modularity / maturity matrix
- Reasons: Outsourcing of manufacturing does make sense due to overall high level of product standardization very across all collections
- Designers are from the beginning involved in the sourcing / manufacturing process, making it easy for them to obtain information concerning this process.
- Despite the crucial constant exchange of designers and product managers / buyers, it is ***not*** necessary to locate the design and sourcing / manufacturing process very close to each other
- The physical distance between the in Munich located designers and the across the world spread manufacturers is being overcome by the mentioned constant exchange of ideas across departments
- This exchange helps the designers to understand which of their ideas can be fulfilled by the multiple manufacturers and vice versa does it help understand buyers what they should source in order to fulfil the creators design ideas

7. Close vs. Far Manufacturing Operations

7.1 Close vs. Far Manufacturing – Reasons

- Time: New product development cycle only 4 months, no product time difference between Asia and Europe
- Quality: Company A's main competitive advantage

- Sourcing influences manufacturing location and vice versa: *"We try to locate the manufacturing where we buy the raw material!"*
- Logistics: Good produced in Asia can quickly be transported to Europe with planes
- Proximity to customer
- Wages

- Due to all the reasons outlined above Company A's manufacturing locations are spread across the world, ***however***: main focus on Asia
- Company A: *"Asian manufacturers do work very fast, most of them show a high level of quality and due to a considerable cost advantages a lot of the sourcing still located there, leading to local manufacturing. In the past wages have been a great contributor to this cost advantages making Asia a popular manufacturing location, however, the recent introduction of labour agreements under the international pressure has lead to rising wages, resulting in minimizing / eliminating this advantage making wages in China comparable to European ones. We will observe this situation further and in case this advantage vanishes after all, adjust out sourcing / manufacturing strategy."*

7.2 Close vs. Far Manufacturing – Decision Process

- Own department for sourcing decisions: *Product sourcing department*
- Department decides sourcing & manufacturing location with approval of top management team due to Company A's tight connection between sourcing & manufacturing
- Search for "perfect manufacturing location" depending on perfect quality, logistics, price
- Current suppliers divided into different categories with the help of matrix-system; best of one category chosen for one product category

7.3 Close vs. Far Manufacturing – Relative importance of single value chain activities

- Design shows greatest importance in decision
- Front-end of chain (Retail, Marketing) does not show great deal of influence as for them high quality and in-time delivery of product most important

7.4 Close vs. Far Manufacturing – Role of organizational structure

- Company A shows steep hierarchy
- Product sourcing team makes sourcing / manufacturing propositions
- Present those to top management team which then approves / disapproves those

8. Roles of technologies – Influence of recent technological evolutions / developments on manufacturing location decision

- Recent re-shoring initiatives launched due to decreasing cost advantages of manufacturing in Asia and *not* due to technological advantages
- Re-shoring based on technological advantages currently NOT happening for Company A due to Asia´s state-of-the-art offering of technology within the fashion industry
- Company A: Re-shoring based on technology not possible at the moment as local European manufacturers simply do not provide enough technological progressiveness
- ***However:*** Company A would be interested in re-shoring in the future due to cultural advantages, simplified logistics, proximity to the customer and the possibly to react quicker to changes of the market but currently the technological advantages of China / Japan succeed
- Asked why Mr B. thinks those technologies are only available in Asia and not in the – in many other industries – technological highly advanced European market, he referred to the history of the European textile industry
- The decline of the European textile industry since 30-40 years has led to people not investing into it and thereby having paved the way for other countries e.g. China, Japan to become the industries' most important players
- Even until recently profitable European suppliers / manufacturers have finally relocated / off-shored to Asia, therefore making the industry over there even more attractive.
- Company A does indeed feel a slight re-shoring trend, however, in his opinion it will take quite some time (5-10 years) until this will actually happen and a majority of the industry will follow the brave first-movers

9. Re-shoring – Additional possible influencing factors

9.1 Corporate Social Responsibility & consumer´s desire for a transparent local supply chain

- Customers desire for a transparent supply chain does influence sourcing & manufacturing location decisions to a certain extend
- ***However***: not enough to lead to re-shoring
- Company A frequently checks manufacturing locations themselves and makes blind tests trying to ensure working and quality standards
- Manufacturers need to update Company A on the collaboration with any third-party subcontractors used when outsourcing own production capacity due to time shortage & await Company A's approval of subcontractor

10. Re-shoring in the future – Personal estimation

In Mr B.´s opinion are there a handful of different options to revitalise the European fashion industry, ultimately resulting in re-shoring. One of them is the collaboration of multiple big German fashion companies such as for example Company A, Escada, and Hugo Boss. Investing jointly in a technological highly advanced production site and sharing it could be one of the most realistic options. He says Company A does detect a clear trend of German retailers trying to regain control over manufacturing by insourcing it again. Italian brand such as Prada have already started doing so by re-shoring the manufacturing site to Italy, serving as an example to the rest of the industry. However, a jointly used, technological highly advanced manufacturing plant would bear many problems. Issues such as *"Who is allowed to produce when?", "I need more time than expected to produce - will I be able to occupy the plant a bit longer as planned?"* and so on will arise and will require meticulous planning. Despite it so far only being an idea, Mr B. says that him and his colleagues from other German fashion companies are actively discussing this and similar ideas and in case they come to an agreement soon, re-shoring could come sooner than later.

- **Company B**

Interview

Place	Munich, Bavaria, Germany
Date	06.02.2015
Company	Company B
Interviewer	Pauline von Nostitz
Interviewee & -position	Mr K., Executive Director
Time frame	10:50:00 – 11:20:00

The Company does NOT wish to be disguised within the scope oft he Project. Data was collected with the promise to not publish the company´s name in any project report.

1. Introduction: Presentation of the Interviewee & Company

1.1 Interviewee

Name: Mr K.

Responsibilities: Executive Director, shares position with wife Mrs K.

- Oversees the company as a whole
- Special Focus: Corporate Finance, Sourcing / Manufacturing, Quality Control

Role and involvement in sourcing - / manufacturing location decision:

- Manufacturing location decision:

  - ➢ Manufacturing Strategy: *"Due to our purchase of our main raw material Cashmere in China, our production sites are located mainly in China too."*
  - ➢ Company B buys & manufactures "own" Cashmere in China
  - ➢ Rare cases of buying & manufacturing of Cashmere in Italy
  - ➢ Pure manufacturing in Rumania

➢ Influencing factors: Costs, Quality, Speed & Efficiency, Access to raw Material, Craftsmanship

1.2 Company B - An Overview

Products & Product lines

- Cashmere apparel & accessorize wholesaler
- Single German fashion company showing a yearly collection which is listed on the official Paris Fashion-Week-Calendar
- 5 internal Product lines:
  - ❖ Company B Woman
  - ❖ Company B home accessorize (pillows, blankets)
  - ❖ Company B Man
  - ❖ Company B Baby
  - ❖ Company B care (Cashmere Comb, Shampoo and Conditioner)

Company B buys & tests the raw Cashmere and has its own Cashmere yarn produced unlike most other Cashmere companies buying ready-to-manufacturer Cashmere yarn.

Product categories

- Each collection is comprised of pieces falling into the following 3 categories:
  - ❖ Basic: “Reoccurring classics” made out of 100% Cashmere
  - ❖ Unsaleable Fashion-Show-Pieces: Unique handmade pieces which do not go into mass production
  - ❖ Mixed-products: Contemporary innovative pieces reflecting the seasons trends made out of pure Cashmere and Cashmere-blends

Size of Company / Revenue

- Revenue of 15-20 Mio. / year

- 20 employees working at the Headquarter in Munich, Germany
- External consulting sourcing office in Shanghai, China
- No direct sale to end-customers
- 800 corporate customers (Multi-Label-Stores) selling to end-customer in 40 countries
- 2016: First privately-owed Mono-Label-Store in Monte Carlo & Online-Shop
- Manufacturing of approx. 250.000 pieces / year

Division of markets

- Most important markets: Germany, Austria, Swiss
- Smaller markets: Other European countries & Australia
- Future focus: Asia & America due to high sales potential
- Worldwide offer of assortment through outsourced distribution Show-Rooms working on commission basis (Showrooms in Munich, Paris, Amsterdam, Antwerp, Dusseldorf, Copenhagen, Milano, New York, Vienna, Salzburg)

Target customer

- Multi-Label-Stores selling high-end premium / luxury apparel & accessorize

Positioning

- High-end Premium / Luxury Cashmere manufacturer

Company History & Ownership

- Founded 1992 by Mr K. and Mrs K. in Munich, Germany
- Family owned by Mr K. and Mrs K.

2. Value Chain

2.1 Degree of vertical integration of Value Chain

□ Design / Creation: Internal (Munich, Germany) □ Sourcing: Internal (Munich, Germany) □ Quality management: Internal (Munich, Germany) □ Manufacturing: EXTERNAL (Europe & Asia) □ Logistics: Internal □ Distribution: External (External showrooms working on commission basis) □ Marketing: Internal (Munich, Germany) □ Retail: External (High-end premium / luxury Multi-Label-Stores)

Design

- 5-6 internal designers
- Design happening in Munich, Germany

2.2 Manufacturing countries

- Main manufacturing location (88%): China due to 85% of the world´s Cashmere originating from China
- 6 external Manufacturing plants located in China
  - 1/6: Manufacturing of Company B-specific Cashmere yarn
  - 5/6: Manufacturing of Cashmere end-products (apparel & accessorize)
- 10% of manufacturing: Rumania
- 2% of manufacturing: Italy → Rarely Italian sourced yarn is processed further in Italy
- Manufacturing location determined by sourcing location:
  - Sourcing in China → Manufacturing in China
  - Sourcing in Europe → Manufacturing in Rumania / Italy
- Sourcing location determined by raw material:
  - China Sourcing of “pure” Cashmere yarn
  - Italy → Sourcing of “rare” yarn not available in China (mostly Cashmere-blends)
  - No sourcing of pure Cashmere yarn in Italy due to high prices
- Main sourcing / manufacturing criteria: *Quality & Cost-Benefit-Ratio*

2.3 Distribution of Manufacturing

Country	% of total Manufacturing	Material
China	88%	Mainly pure Cashmere
Rumania	10%	Cashmere-blends (unavailable in China)
Italy	2%	Cashmere-blends (unavailable in China)

- Company B´s main motivation to manufacture in China: Desire to have Company B specific Cashmere yarn produced (unlike most other Cashmere companies, Company B buys and tests raw Cashmere and has own Cashmere yarn manufactured for further processing)
- According to Company B China is the best country to have the yarn produced as 85% of the worlds Cashmere originated from China → Therefore, the Chinese Cashmere manufacturer enjoy an excellent reputation for processing it and appear to be the best sourcing and manufacturing location for Company B since 20 years
- Small parts of the manufacturing: Rumania due to relatively low labour costs compared to the rest of Europe, great handcrafts skills of employees and the use of high-tech knitting machines + Italy due to availability of very special yarn / Cashmere-blends
- In case yarn is sourced in Italy → it will also be processed further in Italy or Rumania in order to avoid high transportation to and duty costs in China
- Despite China also offering the possibility to use high-tech knitting machines, Company B mainly uses manual knitting machines over there

Note: Trying to stay true to their German roots, Company B tried to establish a German-based manufacturing site in Apolda, Germany, once one of the most

important German textile cities. However, due to high manufacturing costs resulting in higher than normal market prices and non-acceptance of the market of those, Company B soon heavy hearted decided to close down that manufacturing site again.

3. Value Chain – Relative importance of single activities for Value Creation

- Company B: relative importance of the single activities for value creation has changed over the years
- During Company B's early days 20 years ago: disruptive, innovative Design
- ***However***: due to many copycats, high end quality developed to be the value chain´s most important current value contributor
- Company B: No single activity plays an overarching role but the value chain as a whole acts as a value-"destroyer" or -"contributor" itself

→ The most important components of some of the single activities are outlined below:

Internal Design

- Small size of design team allows team-wide idea and inspiration exchange & symbioses
- Designers work very close with creative director and executive director Mrs K. who travels a lot and brings back design inspirations from each journey to team
- Fashion Show in Paris allows designs of non-mass market Show-pieces showing the designers extraordinaire talent & creating enormous PR (Costs of some fashion-show pieces up to 8.000 €)
- Employment of only handful, talented and highly-educated Designers ("Crème de la Crème"-Designers)
- Employment of "Expert-Designers": Each Company B designer is specialised in certain area leading to a diversified Design Team

External Manufacturing

- Saves (fixed) costs
- Reduced risks due to multiple manufacturer usage
- Increases flexibility
- Manufacturing in China allows access to world´s largest Cashmere source & highly-skilled employees

Internal Quality management

- Internal quality control of raw Cashmere and other materials (e.g. Cashmere-blends)
- High level of quality ensured by providing own Company B Cashmere yarn (internally sourced & pre-tested)
- Company B: *"Quality is our greatest good – Great design without superb quality can not survive for long!"*

External Distribution

- Selling of products to corporate customers (not end-customers) allows Company B feedback from "fashion-experienced" experts advising them on upcoming trends they feel from the market side compared to end-customers "unqualified" feedback
- Facilitates After-Sales activities due to reduced number of "end-customers" (B2B vs. B2C)

4. Role of Technologies in the decision of manufacturing process

- Strength: Modern technologies crucial for making innovative designs wearable
- Weakness: Modern technologies lead designers to design not wearable designs

→ ***Challenge****: Incorporate modern technologies into design process to make former impossible designs possible without overstepping the boundaries of mass-wearable fashion*

- Designers at Headquarter own miniature computer knitting machines to manufacturer samples / try out possible revolutionary designs
- Some designs only viable using computer machines, some only hand knitting machines
- Company B uses highly-technologies manufacturers besides purely manual manufacturers
- Technology-degree of manufacturing process of design determines final manufacturer-selection (high-tech vs. manual manufacturers)
- ***HOWEVER***: Technologies play minor role in determine manufacturing location due to Cashmere´s "simple" nature → can "only" be knitted
- Company B: Cashmere as a product does not necessarily need highly technologized processors / manufacturers as Company B's mass-markets pieces are only being knitted
- Some of more extreme, unique Show-pieces require high-tech computer machines to be produced → custom-build pieces provided by expensive, highly-technologized experts, which Company B would not be able to pay to use for their entire collection
- Therefore, the main criterion determining the manufacturing location remains mainly a good cost-benefit-ratio, the access to the raw material Cashmere and the manufacturer´s employee´s craftsmanship

In Company B´s understanding "ground-breaking technologies" within the Cashmere industry would be new and innovative yarns rather than computerised machines

5. Geographic Relationships – Manufacturing & other Value Chain Activities

5.1 Manufacturing Location & Design Location

- Designers (Munich, Germany) start designing completely independently
- Designer and Mr & Mrs K. jointly visit fairs around the world to source and collect inspiration → Impulse coming mainly from the "creative" department
- Mr & Mrs K. and the employee responsible for production Mrs B. *regularly* visit production sites in order to gain idea of technological progressiveness of manufacturers which partly influences design possibilities

- After visits collected information about progressiveness is communicated to designers
- Designers also report to Mr & Mrs K.s and Mrs B. about technological innovations they experience through their function as designers which Company B incorporates into new potential supplier research
- Geographic separation of design & sourcing / manufacturing *not* problematic at all
- ***However:*** Crucial that designers understand manufacturing process & are updated concerning technologies as it influences feasibility of their design ideas

5.2 Manufacturing Location & Sourcing Locations

- Desired Strategy: *"Due to our purchase of our main raw material Cashmere in China, our production sites are located in China too."*
- Most sourcing / manufacturing decisions made together (Sourced in EU → Manufactured in EU, Sourced in China → Manufactured in China)
- Non-compliance in rare cases due to mainly technological advantages of Chinese manufacturers: Some yarn unavailable in China sourced in Italy and processed in China

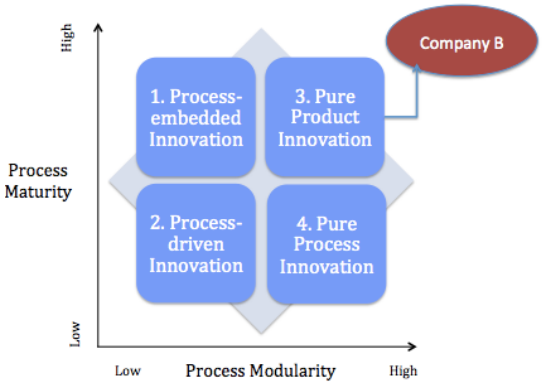
5.3 Manufacturing Location & Retail Locations

- Corporate customers spread all over world
- Any produced piece firstly shipped to warehouse in Munich, Germany
- Any order packed & send from headquarter warehouse
- Retail locations completely independent of sourcing / manufacturing locations as target market is world wide & Cashmere mainly available in China

6. Level of product standardisation

- Quality: Standardisation across all collections / seasons
- Each collection contains highly standardised basic pieces and innovative mass-production pieces besides very few highly specialized, unsaleable Fashion-Show-pieces

- In the future desire to show less unsaleable Show-Pieces during Fashion-Show due to high-demand for those leading to unsatisfied customers after told they can not buy pieces
- Fashion-Show: Trend towards innovative, saleable pieces
- Approx. 20 slightly adjusted basics looks are carried from season to season
- Approx. 400 - 450 pieces / collection
- Company B be located within the third section (pure product innovation) of the modularity / maturity matrix as an outsourcing of manufacturing does make sense



- The level of overall product standardization is very high across collections besides the unique Fashion-Show-pieces
- Designers are partly involved in the sourcing / manufacturing process though visiting fairs, however, they do not visit production sites; solely Mr & Mrs K. and the employee responsible for production Mrs B. are visiting those → impressions the three gather during those trips are however directly communicated to the design team (possible due to the small number of designers (5-6)), making sure the designers are provided with all the necessary information concerning technological innovations so those can be incorporated into their latest designs
- At the same time any news concerning the mentioned innovations coming from the design team is being paid attention to by Mr & Mrs K. and Mrs B. and incorporated into potential new manufacturer research
- Due to this crucial constant exchange, it is not necessary to locate the design and sourcing / manufacturing process very close to each other
- Physical distance between the in Munich located designers and the mainly in China spread located manufacturers is being overcome by the mentioned constant exchange of ideas across departments → this exchange helps the designers to understand which of their ideas can be fulfilled by the multiple manufacturers and vice versa does it help

understand Company B what he should look for in potential new manufacturers in order to fulfil the creators design ideas

7. Close vs. Far Manufacturing Operations

7.1 Close vs. Far Manufacturing – Reasons

- Costs: Company B operates wherever it gets best cost-benefit-ratio (currently: China)
- Quality: Company B's greatest good (Company B: *"Quality is our greatest good – Great design without superb quality can not survive for long!")*
- Sourcing influences manufacturing location: *"Due to our purchase of our main raw material Cashmere in China, our production sites are located mainly in China too."*
- Speed & Efficiency: Chinese manufacturers produce large quantities of e.g. samples much quicker compared to European competitors (Mr K.)
- Craftsmanship: Due to the countries long-standing Cashmere tradition Chinese workers show excellent artisan skills regarding the precious yarn.

- Due to all the reasons outlined above Company B´s manufacturing locations are located mainly in China
- Despite having small quantities sourced and produce in Europe (Rumania & Italy), this is more due to unavailability of those products (special Cashmere-blends) in China than due to possible location advantages
- Company B praised the Chinese manufacturers for their incredibly fast work and said most Chinese manufacturers show a high level of quality
- Moreover, due to cost advantages and access to the raw material Cashmere, most of the sourcing is still located in China, leading to local manufacturing
- In the past wages have been a great contributor to cost advantages making China a popular manufacturing location, however, the recent introduction of labour agreements under the international pressure has lead to rising wages, resulting in minimizing / eliminating this advantage making wages in China comparable to European ones

- Despite this development, Company B does not see a reason to re-shore, as in his opinion; the advantages still do predominate in China compared to Europe

7.2 Close vs. Far Manufacturing – Decision Process

- Mr K. mainly responsible for sourcing / manufacturing locations
- Partnerships with some Chinese suppliers & manufacturers for over 20 years → "*Relationships of trust"*
- Mr K. discusses sourcing / manufacturing location decision with wife, whole design team & Mrs B. and takes opinions & experiences into account
- Search for "perfect manufacturing location" depending on perfect cost-benefit-ratio, quality, speed & efficiency, craftsmanship
- Regular review of current suppliers → "Are they still the *best* option?"
- Regular review of sample pieces of potential new suppliers → "Could they possibly *replace* one of our current suppliers due to better cost-benefit-ratio etc.?"
- In the past: Only very few supplier / manufacturer changes due to long standing relationships & good cost-benefit-ratio of most partners

7.3 Close vs. Far Manufacturing – Relative importance of single value chain activities

- Sourcing / access to raw material & Design shows greatest importance in decision
- Sourcing determined by China being world´s largest Cashmere source
- Design determines which manufacturer within China (in rare cases Rumania / Italy) will be chosen to produce final product → Best cost-benefit-ratio offer
- All other activities are outweighed by those two
- Despite China not providing wage benefit any longer, still offers best cost-benefit-ratio compared to other possible manufacturing countries

7.4 Close vs. Far Manufacturing – Role of organizational structure

- Company B shows very flat hierarchy
- Mr & Mrs K. and Mrs B make sourcing / manufacturing decision

- Design team regularly updated on sourcing / manufacturing decisions and are allowed to give input

8. Roles of technologies – Influence of recent technological evolutions / developments on manufacturing location decision

- Recently attempted re-shoring initiative to Germany failed due to too high production costs
- Technologies only plays minor role in Cashmere sourcing / manufacturing process → Will most likely not contribute greatly to re-shoring considerations
- Company B: Innovative technologies within Cashmere industry would mainly concern innovative yarn more than machines as material can "only" be knitted
- Few disruptive technologies concerning cashmere (e.g. machines able to knit jumpers without a seam): too new and expensive for Company B + no need as current suppliers offer sufficient services to satisfy Company B's demand
- Re-shoring based on technological advantages currently *not* happening for Company B due to China being worlds main Cashmere source and its state-of-the-art craftsmanship within the cashmere industry

According to Mr K. a re-shoring based on technology is not possible at the moment, as local European manufacturers simply do not provide enough cost-benefit-advantages. Company B could source and process Cashmere in e.g. Italy, however, for much higher prices and as this Cashmere ultimately does originate from China too, Company B rather sources and manufacturers from the "direct" source China – despite thereby having to pay transportation and duty costs due to China´s excellent cost-benefit-ratio, speed & efficiency and high quality of the offered raw material and processing. Moreover, he stated that technologies do not play a major role within the Cashmere industry as the precious garn can only be knitted in certain ways and too much technology would possibly compromise the yarns quality.

9. Re-shoring – Additional possible influencing factors

9.1 Corporate Social Responsibility & consumer´s desire for a transparent local supply chain

- Customers desire for a transparent supply chain does not influence sourcing & manufacturing location decisions due to customer´s knowledge about most Cashmere originating from China → "Made in China" makes sense for customer
- Cashmere´s "Made in China": Associated with high quality instead of "cheap labour country-image" in this case due to origin of raw material
- Small quantities of goods produced in Rumania & Italy: "Made in Europe / Italy" → Partly compensates for main parts of goods produced in China & appeals to *"country-of-origin-conscious-Shoppers"*

10. Re-shoring in the future – Personal estimation

When asked about whether Mr K. could imagine a re-shoring back to Germany, he said that him and most of his colleagues would happily re-shore the manufacturing to Europe, however, the prices are just too high and the disadvantages are currently still too hindering. Moreover, he believes that - at least within the Cashmere industry - a re-shoring to Europe will possibly *never* pay off as due to China being the world´s largest Cashmere source it will always stay the country with the most attractive cost-benefit-ratio concerning Cashmere sourcing and processing. Furthermore, according to Mr K. 95% of former Italian manufacturing sites have now far-shored to China due to cost advantages, which makes the re-shoring possibility even more unlikely in the near future. However, in his opinion the re-shoring trend does make sense for non-Cashmere apparel retailers / manufacturers, which are not necessary forced to source in China.

- **Company C**

Interview

Place	Munich, Bavaria, Germany
Date	18.02.2015
Company	Company C Fashion OHG
Interviewer	Pauline von Nostitz
Interviewee & -position	Mrs v. F., Executive Director & Head Designer Mr v. F., Head of Marketing
Time frame	19:00:00 – 19:40:00

The Company does NOT wish to be disguised within the scope oft he Project. Data was collected with the promise to not publish the company´s name in any project report.

1. Introduction: Presentation oft he Interviewee & Company

1.2 Interviewee

Name: Mrs v. F.

Responsibilities: Executive Director & Head Designer

- Oversees the company as a whole
- Special Focus: Sourcing / Manufacturing, Design

Name: Mr v. F.

Responsibilities: Head of Marketing

- Responsible for marketing of Company C (off- and online)
- Special Focus: Marketing, consults wife in other business related questions

1.3 Company C – An Overview

Products

- One brand: Company C
- Current main product: Traditional Bavarian dresses called dirndl

- Sub-products: Jumpers, T-Shirts, Shirts, Lederhosen, Hats, Accessorizes (Scarfs, foulards etc.), Traditional Wedding dresses (custom made on request)
- Offer apparel for men & women

Company C got famous for producing hand-made traditional dressed called dirndl. In the future, its aim is to become one of the biggest alpine lifestyle brands of Germany offering stylish apparel and accessorize with a traditional yet cool look within the medium to high price range.

Product categories

- Woman: Dirndl, Shirts, Blazer, Dresses, Cardigans, traditional Wedding dresses
- Men: Blazer, Vest, Shirts, Jumpers, Polo shirts
- Accessorizes: Hats, Foulards, Bags, Jewellery
- Accidental focus on traditional German clothing
- 2015: Plans to introduce knitwear collection (Men & Women)

Size of Company / Revenue

- Revenue of 200.000 Euros / year
- 3 employees working in Munich, Germany
- Direct sale to end-customer & B2B-sales to German department stores (25-30 corporate customers)
- Currently one own Company C store on Munich, Germany (2015: Plans to open second shop)
- Own shop most important sales channel (highest revenue), however, corporate partners important to merchandise Company C as a brand
- Pop-Up Stores during “Traditional cloths high season” (Oktoberfest, “Waldfeste”)

Division of markets

- Most important markets: Germany, Austria, Northern Italy
- Smaller markets: Eastern European countries, Russia
- Future focus: Russia due to traditional German cloths appeal & high sales potential

Target customer

- Men & women between 30-50 living in urban / suburban areas yet living in close touch with nature
- Medium to high monthly income
- Price-conscious rather than stingy
- Fashion-conscious, liked to wear branded cloths, however, does not engage in major fashion experiments
- Likes to buy fashion classics which differentiate themselves from the mass by style / colour

Positioning

- Alpine fashion company offering stylish, contemporary versions of traditional apparel and accessorises at a medium to high price

Company History & Ownership

- Owner-operated family business
- Nationality of Company: German
- 2012: Officially founding by Mrs v. F.
- 2012: First exhibition of collection at a fare in Salzburg, Austria
- 2012: First corporate customer “Ludwig Beck“ (famous German department store in Munich)
- 2014: Award for best Munich Start-Up company

2. Value Chain

2.1 Degree of vertical integration of Value Chain

□ Design / Creation: Internal (Munich, Germany) □ Sourcing: Internal (Munich, Germany) □ Quality management: Internal (Munich, Germany) □ Manufacturing: Cuts & actual production EXTERNAL (Bulgaria) □ Logistics: External □ Distribution: Internal □ Marketing: Internal (Munich, Germany) □ Retail: Internal (wholly owned physical store & online store) + External (Department stores = corporate customers)

Design

- One internal designer (Mrs v. F.)
- Design happening in Munich, Germany

Sourcing

- Purchase of cloth mainly in Germany, Austria, Northern Italy
- Identification of latest cloth during fair visits

2.2 Manufacturing countries & 2.3 Distribution of Manufacturing

- At first outsourcing of manufacturing to a Hungarian producer
- Due to quality issues & increasing costs changing of outsourcing location to Bulgaria
- Manufacturing: Cuts are developed externally in Austria, then sent to Company C / Bulgarian producer to allow final production
- Manufacturing: Production of sample pieces in Munich, Germany due to speed issues with far-shored manufacturing
- Knit wear collection (planned for 2015): Future German based manufacturing, pick of manufacturer determined by quality of sample pieces & competences + due to too little production size no possibility to manufacture in Bulgaria / Asia despite lack of quantity discount across German manufacturer industry → *Advantages of close-shored knit production*: Increased efficiency due to mutually shared culture, language & Know-How (*Classic* new product category development: New category → Few pieces → Local / close-Shored

→ manufacturing → Steady increase of sold pieces → Far-shoring of pieces due to breach of critical mass for far-shore manufacturing)

- Main manufacturing location (100%): Bulgaria
- 2 external Manufacturing plants located in Bulgaria
  - ❖ One manufacturing plant for women
  - ❖ One manufacturing plant for men
- Main sourcing / manufacturing criteria: *Quality & Cost-Benefit-Ratio*

- After initial founding: Company C´s internal designer continued to manufacture the hand-made pieces in her own atelier
- Soon increasing order sized forced them to switch to external / outsourced production
- Being a brand offering traditional German cloths, in a first step manufacturing was outsourced to a German manufacturer → ***However:*** soon the company realised that the already high and constantly increasing prices of German producers were not feasible and based on recommendations and the fact that their too little order sizes prohibited an outsourcing of production to Asia, a Hungarian manufacturer was chosen
- Recent quality shortcomings of the Hungarian producer and increasing prices lead to a second change of manufacturing location to Bulgaria
- ***However:*** even if the order size would be / at some point in the future might be large enough to admit an Asian outsourcing, Mrs v. F. (head designer) says she would not move manufacturing to there as is would not correspond to the traditional image of the brand and their goal to become one of the biggest alpine lifestyle brands, a topic not at all related to the Asian culture & lifestyle

3. Value Chain – Relative importance of single activities for Value Creation

Internal Design

- Design most important part of value creation as many traditional cloth designers in southern Germany
- Cloths main differentiation tool as cut / parts of traditional cloths predetermined (main dress, blouse, apron)

- Tight link between Design & Sourcing: Material / texture of cloths somehow influence design (not possible to process all cloths the same)

Sourcing

- Mentioned differentiation possible through use of cloths other designers do not have access too / combine differently
- Mrs v. F.: *"Money lies in sourcing"* - through exclusive collaborations with suppliers other designers are hindered to copy cloth styles
- Factors influencing Sourcing decisions: "Beauty" of cloths, Quality & Availability of cloths for other producers (Exclusivity)
- 80% of sourcing happening in Austria (Cloths made & sold in Austria → Mrs v. F.: *"Very expensive but very high quality!"*)
- Rest of sourcing in France / Germany of cloths produced in France / Germany
- Delivery of sourced materials directly to office in Munich, then further delivery of cloths to manufacturer

External Manufacturing

- Saves (fixed) costs
- Reduced risks due to multiple manufacturer usage (2 manufacturers)
- Increases flexibility
- Manufacturing in Bulgaria corresponds to Company C´s traditional / folklore image: Dindl also found in Eastern European culture

Internal Quality management

- Return and refund managed from Munich, Germany
- Head of Design Mrs v. F. reviews few returns personally & determines refund conditions
- Overall high level of quality due to hand-made nature of merchandise
- Quality tests of purchased cloths in office in Munich, if passed, onwards delivery to Bulgarian manufacturer

Internal & External Distribution

- Selling of products to corporate customers (not end-customers) allows Company C feedback from “fashion-experienced” experts such as department stores, advising them on upcoming trends & end-customer feedback
- Own shop allows highest margins & direct contact with end-customer

4. Role of Technologies in the decision of manufacturing process

- “Easy” mode of production: Dirndl = traditional piece of clothing, not much technology involved in manual manufacturing process
- Dirndl are traditional pieces of clothing living from the hand-made manufacturing feature
- Seamstresses use sewing machines to produce dresses, no other technologies directly involved in manufacturing process
- Weakness: Comparatively high (manual) manufacturing costs, small deviations between same designs due to hand-made nature

→ ***Challenge****: Design contemporary versions of traditional pieces which manual manufacturing process does not drive selling costs into an unbearable range*

- Only technical part of supply chain: Electronically transmission of cuts from cut makers located in Austria to manufacturers located in Bulgaria (through Company C), usage of LECTRA software to transmit computer-aided-designed cuts
- ***However:*** Technologies play minor role in determine manufacturing location due to manual manufacturing process
- Selection of manufacturer depended on ability to receive CAD-cuts electronically
- Bulgarian producer owns machines to print CAD-cuts internally → Saving of delivery & wear out costs of cuts + risk reduction due to electronically rather than physical transmission

5. Geographic Relationships – Manufacturing & other Value Chain Activities

5.1 Manufacturing Location & Design Location

- Designer (Munich, Germany) start designing completely independently
- All three employees visit fairs jointly and discuss ideas for new collection
- Geographic separation of design & sourcing / manufacturing *not* problematic at all
- ***However:*** Designer would NEVER consider non-European manufacturing due to personal conviction that brand image (Tradition) should be found across whole value / supply-chain
- Bulgaria as country of manufacturing usable due to "similar" importance of traditional cloths compared to Germany
- All countries further away: Company C does not produce enough to be considered as a customer from producers + not compliant with ethical conviction of designer
- Europe fits personal, moral and professional conviction of owner & head designer Mrs v. F.: *"Even if one day Company C will reach critical mass to be able to produce in China, would rather employ two European manufacturer instead of one Chinese! I am proud of our "local" production and will keep it in the future!"*

5.2 Manufacturing Location & Sourcing Locations

- Manufacturing completely independent of sourcing
- Sourcing: Italy (80%) / France + Germany (20%) → Delivery of purchased cloths to Company C office in Munich → Internal quality testing → If passed, delivery to Bulgarian manufacturer

5.3 Manufacturing Location & Retail Locations

- Corporate customers mainly in Germany
- No direct relationship between manufacturer & corporate customers
- ***However:*** Corporate customers interested in origin / manufacturer location of cloths to be able to inform conscious end-customers more efficiently
- Retailers appreciate "local" sourcing and manufacturing of Company C

- Local sourcing / manufacturing makes Company C´s high margin (60% before tax) possible
- High margin based on highest quality promise → *Quality* can only be ensured by using top European cloth supplier & manufacturer (Europe / near = more easily controllable)

6. Level of product standardisation

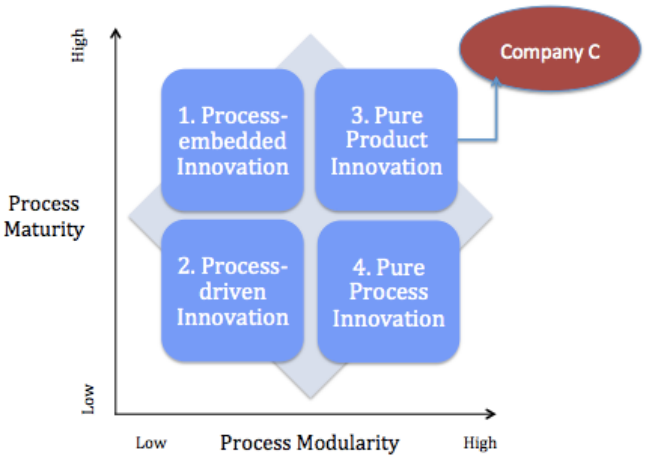
- Quality: Standardisation across all collections / seasons
- Manual production process: Every piece is unique (small deviations)
- Very little custom-made orders, steady decrease since founding of company
- Design & Manufacturing can easily be separated due to Mrs v. F. overseeing both (Design & Manufacturing), studies Design & Cut Design (="editing design")
- During time of production: Mrs v. F. stands in permanent contact with Bulgarian production manager (email, phone)
- Normally: Employees travel to manufacturer to oversee production process, however, due to manpower shortage (3 employees) not possible for Company C → Mrs v. F.: *"Despite not having been there since the initial control visit, we haven't been but so far this was not to our disadvantage!"*
- Mrs v. F. (Head Design) knows capabilities of seamstresses & designs accordingly *("There is nothing they cant do! First of all are all of them very good and secondly are the designs of the dresses very "easy" as it's always the same!)*
- Easy for Mrs v. F. to access product-process related information at any tie due to permanent contact with product manager during time of production process
- ***However**:* A local consolidation of the final manufacturing & the manufacturing of the cuts (samples according to which cloths are cut) would make sense (Advantages: Saving of time, faster communication & more efficient value chain)
  - ***Currently:*** Design of cuts happening in Austria & Manufacturing of end pieces in Bulgaria

Design (Munich) → Design of cuts (Austria) → End Manufacturing (Bulgaria)

- ***Future:*** Relocation of cut design to Bulgaria

Design (Munich) →Design of cuts (Bulgaria) → End Manufacturing (Bulgaria)

But: Initial design completely independent of end manufacturing!



7. Close vs. Far Manufacturing Operations

7.1 Close vs. Far Manufacturing – Reasons

- Costs: Recent change of manufacturing location due to increasing costs (Hungary → Bulgaria)
- Quality, Location & Access to special resources: Mrs v. F.: *"Within Europe quality standards appear coherent. Bulgarian seamstresses do their job just as good as German or other European ones. It wouldn't matter whether the production would be in Germany or Bulgaria. As we work with small quantity producers, the quality of labour and production is very high! The only tiny disadvantage of working with this special Bulgarian producer it its location: after a three-hour plane rise you need to take a bus for another 4 hours. However, as we do not need to go all the time anyways, this is not too bad!"*
- Closeness to current target markets: Not given, completely independent
- Closeness to potential future target market (Russia): Due to their geographical closeness, a serving of the Russian market would be an easy task for Company C → Russians would "accept" Bulgaria as a country of (production)

of origin for this special type of clothing, would not be ready to pay same price for same dress if would have been produced in China / Asia (Europe = Quality → Higher willingness to pay)

- Protection of IP: Hard to protect Company C´s designs as they are a "reinvention" of a very traditional piece of clothing *("You can hardly protect our designs. Instead of suing copy-cats, we just always try to come up with more innovative designs, colours and patterns!")*
- Access to specialised cluster: If cut and final manufacturing will both be located in Bulgaria in the future, during the time of the production the cut makers will be available around the clock as well → Has happened in the past that production needed to be paused due to missing input from cutters which could only be delivered at a later point *("If we would centralise the cutting and the production, both would be there for us 24/7 during the time of production, a great advantage saving time and eventually costs!")*
- Competition: Early differentiation from other dirndl designers through the use of furniture cloths for designs → No pressure from competitors determining manufacturing location
- MOST important factors influencing manufacturing location decision: Human resources & Quality of Cloths (*"Good cloths will not fulfil their full potential when not processed well. Bad cloths will not get any better when processed badly. In Bulgaria we are able to combine the great quality of our sourced cloth with high quality manual labour allowing a perfect symbioses to happen for a good price! "*)

7.2 Close vs. Far Manufacturing – Decision Process

- Brother of designer (accountant) responsible for sourcing / manufacturing decisions together with Mrs v. F.
- Very unhappy with Hungarian producers in the past, identification of current Bulgarian producer through recommendations
- Very content with Bulgarian producer despite not choosing it based on "special" criteria
- Bulgaria part of European Fashion / Textile Cluster: Turkey, Bulgaria, Hungary, Portugal (relatively expensive), Czech Republic, Romania

7.3 Close vs. Far Manufacturing – Relative importance of single value chain activities

- Sourcing / access to raw material & Design shows greatest importance in decision
- Sourcing determined by China being world´s largest Cashmere source
- Design determines which manufacturer within China (in rare cases Rumania / Italy) will be chosen to produce final product → Best cost-benefit-ratio offer
- All other activities are outweighed by those two
- Despite China not providing wage benefit any longer, still offers best cost-benefit-ratio compared to other possible manufacturing countries

7.4 Close vs. Far Manufacturing – Role of organizational structure

- Company C shows very flat hierarchy
- Corporate structure: No real influence due to very flat structure (3 employees)

8. Roles of technologies – Influence of recent technological evolutions / developments on manufacturing location decision

- Little to no influence → Only technical part of manufacturing process: Electronically transmission of cuts

9. Re-shoring – Additional possible influencing factors

9.1 Corporate Social Responsibility & consumer´s desire for a transparent local supply chain

- Public Image: Company C is aware that “Made in Germany” would lead to best public image, however, Germany as a manufacturing location is simply too expensive → Bulgaria second best choice for “affordable image protection”

10. Re-shoring in the future – Personal estimation

No member of the Company C team had heard of the re-shoring trend before the interview. Furthermore, Company C does not see itself moving production "even" closer to Germany, nor does Company C plan to off-shore its manufacturing further away from Germany. As mentioned before, Mrs v. F. – head designer and founder of Company C – is convinced that Chinese produced dirndl would not be accepted by the wide mass besides not allowing Company C´s extremely high margins. Moreover, this production location would go against the personal convictions of her and the whole team, which are worth more than eventual cost saving resulting from Asian production. Company C would love to produce in Germany in order to be completely aligned with the image surrounding their traditional product, however, too high labour costs stand in the way of this wish. Unless the costs of Bulgarian production increase immensely or the costs of producing in another European land decrease substantially, Company C will stick to its current manufacturing location. To them, re-shoring does not play a very important role and – according to Mrs v. F. – *"[…] will not in the future as up to date we could make the manufacturing location decision without ever heard of this trend!"*

- **Company D**

Interview

Place	Munich, Bavaria, Germany
Date	18.02.2015
Company	Company D
Interviewer	Pauline von Nostitz
Interviewee & -position	Mrs S., Product manager & Head of Sourcing
Time frame	18:00:00 – 18:42:00

The Company does NOT wish to be disguised within the scope oft he Project. Data was collected with the promise to not publish the company´s name in any project report.

1. Introduction: Presentation of the Interviewee & Company

1.1 Interviewee

Name: Mrs S.

Responsibilities: Product manager & Head of Sourcing (Eastern Europe & Asia)

- Responsible for Sourcing for Company D Woman
- Overseas Production as a whole
- Shares responsibility for production as a whole with Head of Design & Head of Technic

1.2 Company D – overview

- Since three years does Company D belong to the German Tom Tailor Group (2 brands: Tom Tailor & Company D)
- Tom Tailor Group: 6400 employees

Products & Product Categories

- One brand: Company D

- Company D Woman (1979): T-Shirts, Jumpers, Jackets, Coats, Trousers, Jewellery, Scarfs, Shoes, Accessorizes
- Company D Man (2009): T-Shirts, Jumpers, Shirts, Jackets, Coats, Trousers, Blazers, Shoes, Accessorizes
- 12 collections / year

Size of Company / Revenue

- Revenue of 300 Mio. / year

Division of markets

- Only wholly-owned retail store & wholly owned online shop
- 1300 stores, approx. 1000 in Germany
- Stores in Germany, Austria, Switzerland, Netherlands, Poland, Belgium

Target customer

- Company D tries to serve niche market: Men & Women 40+
- Market served by few other brands in Germany (e.g. Gerry Weber)
- Counterpart to majority of brands offering fast-fashion (e.g. Zara, H&M etc.)
- Medium price range

Positioning

- Company D sells discrete Fashion-pieces (apparel & accessorizes) for everyday use for the fashion-conscious yet understatement woman and men above 40

Company History & Ownership

- Owner-operated family business until 2012
- Nationality of Company: German
- 1979: Officially founding
- 2012: Acquisition of Company D by Tom Tailor Group due to age of founder
- Tom Tailor Group: 100% Shareholder

2. Value Chain

2.1 Degree of vertical integration of Value Chain

□ Design / Creation: Internal (Germany) □ Sourcing: Internal (Germany) □ Internal Quality Management: Internal (Germany) □ Manufacturing: EXTERNAL (Asia & Europe) □ Logistics: External □ Distribution: Internal □ Marketing: Internal (Germany) □ Retail: Internal (*only* wholly owned physical store & online store)

Design

- 1 Head of Design & 12 Designers

Sourcing

- 12 Buyer maintaining communication with external producers
- 70% of sourcing done through Tom Tailor Group
- 30% of sourcing done directly through Company D

2.2 Manufacturing countries

- Today: 100% external production
- Before acquisition: Nearly 100% of production in Europe / Buying from Importers
- Only after acquisition enter of Asian manufacturing Market
- 70% Asia
  - China (Main country): 50%
  - Bangladesh: 10%
  - India: 5%
  - Sri Lanka: 3%
  - Vietnam: 2%
- 30% Europe
  - Turkey: 100%
- More than one manufacturer per country
  - Sustaining of a healthy competition

- ❖ Risk reduction

- o External Manufacturer selection criteria
  - ❖ Core competencies
  - ❖ Social / Working conditions standards / Certifications (Most Important criterion)
  - ❖ Capacity
  - ❖ Price

2.3 Distribution of Manufacturing

Country	% of total Manufacturing
China	50%
Bangladesh	10%
India	5%
Sri Lanka	3%
Vietnam	2%
Turkey	30%

3. Value Chain – Relative importance of single activities for Value Creation

→ According to Mrs S. all the components of the value chain create value within itself, however, only the seamless connection of the single components allows the chain to fully show its potential.

Internal Design

- o Nice market design: Company D wants to serve the fashion-conscious men and women above 40
- o Design compensates long lean times & medium range prices compared to cheap fast-fashion

Sourcing

- Company D wants to stand for excellent quality
- *Mrs S.: "After the acquisition Company D lost its "good quality" focus for a while. At the moment we are trying to return to this once very, very high quality."*
- High quality can only be guaranteed through use of high quality raw materials
- *Mrs S.: "Sourcing is the single most important activity of the value chain – without good sourcing a good production is not possible. Only by offering this top quality we can win and maintain a large customer base willing to pay for new pieces out of the annual 12 collections."*

External Manufacturing

- Saves (fixed) costs
- Reduced risks due to multiple manufacturer usage (multiple manufacturers / country)
- Increases flexibility

Internal Quality management

- Strict quality management done internal – Mrs S.: *"Only by doing it ourselves, we can guarantee for it!"*

Internal Retail

- Only wholly-owned shops & online shops in order to better control brand image & quality
- Europe-wide same store design & merchandise plan → One face to the customer

4. Role of Technologies in the decision of manufacturing process

- External producers & logistics are electronically attached to Company D
- Most communication / exchange of data is happening electronically: Transmission of cuts, orders etc.
- Current suppliers, manufacturers and logistics maintain a very high standard of modern technologies (CAD, CAM, PLM)

- ***However***: Potential new manufacturer will not *not* be considered if technically not very advanced as sourcing & manufacturing market is currently changing
  - ❖ Companies taking sourcing & manufacturing back to Europe / closer to Europe "away" from Asia
  - ❖ Especially in the Eastern European market many suppliers / manufacturers do not appear to maintain very high technical standard
  - ❖ Company D interested in establishing long term cooperation with those which would entail jointly development of state-of-the-art technological systems

→ ***Challenge***: *Forming long-term relationships with Eastern European suppliers & manufacturers whilst at the same time maintaining the previous high quality & medium prices*

- Technical backwardness not a ultimate dismissal criterion for potential new suppliers & manufacturers

5. Geographic Relationships – Manufacturing & other Value Chain Activities

5.1 Manufacturing Location & Design Location

- Completely independent of each other: 100% of design happening in Germany vs. 70% of production happening in Asia, 30% in Turkey
- Mrs S.: *"More importantly than that two components are located close to each other, the designers should understand the manufacturing process – even if happening far away. Unfortunately, I have come to realise those past years that this is not at all the case anymore. Designers work completely unaware of how their designs influence the manufacturing process. However, this overarching knowledge is of great importance. I have studied Design & Production myself and therefore know of the importance of integrating those two components."*
- According to Mrs S. knowledge exchange between two departments should be encouraged much more independent of geographic distance → electronically data transmission easily possible

- ***However***: Due to top management determining design strategy, a third instance would need to join alliance between design & sourcing / Manufacturing → Would be a highly complex process which would need detailed planning and surveillance ultimately increasing costs and reducing operational flexibility; trade-off – ***Mrs S. not sure top management would think its "worth it"***

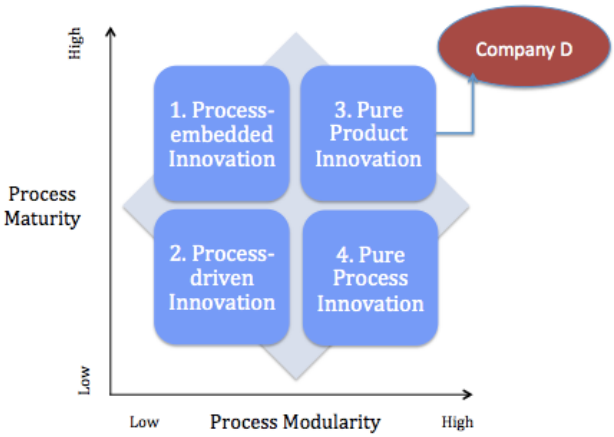
5.2 Manufacturing Location & Sourcing Locations

- Manufacturing partly conjugated with sourcing: China as well as Turkey offers all necessary raw materials (fabrics, buttons etc.)
- Close relationship between Buyer & product / manufacturing managers, however, no influence on each others location (Buyer: Germany, Manufacturing: Turkey & Asia)
- Main decision criterion: Costs → Longer transportation ways accepted for lower purchase costs of sourced material
- If sourcing would be cheaper somewhere else than China / Turkey, Company D would consider adapting sourcing strategy independent of manufacturing location (after intensive cost-analysis)
- Buyer regularly visit manufacturers
- Daily technical connection per mail / telephone / transmission of data

5.3 Manufacturing Location & Retail Locations

- Company D – just like all other companies – is driven by achieving high margins → Explains offshoring to Asia years ago
- Current development (partly due to Dollar exchange rate): Sourcing / Production in Turkey and China show same price range
- Quicker transportation of produced goods from Turkey to Germany compared to China due to shorter geographic distance
- Mrs S.: *"Apparel market as a whole is a difficult market: It's a saturated one, all companies know customer´s demands very well and one needs to produce / source quicker and quicker by the minute! Long transportation ways hinder this fast-fashion approach which we try to reduce transportation ways lengths."*

→ Shift from far-shoring to "closer"-shoring: Advantages of the Asian manufacturing are still being exploited, however, the 70/30% (Asia / Europe) distribution is beginning to slowly but surely shift: More manufacturing is being brought to Turkey → Strategy of *"Close Manufacturing"* according to Mrs. S. only strategy to survive in this fast-moving fashion market



- Mrs S.: *"We have made the experience that actually the production processes in Chinese manufacturing companies are slower compared to e.g. Turkish ones. This is due to the large size of the Chinese manufacturers: They entertain big head offices and standardized processes in order to manage this enormous size which are hard to adapt as they are very gridlocked."*
- Turkey: From first development of idea until manufactured product arrives in Germany → 5 Weeks vs. 10 weeks for same process in China (more complicated processes, process are very standardized / hard to change, long transportation distance, only few Chinese manufacturers can even produce repeat orders quickly as production time is sold long-time ahead)
- Mean of transportation: Turkey → Truck (1 week) → Germany vs. China → Ship (4-6 weeks) → Germany; only in case merchandise is late: airplane

6. Level of product standardisation

- 100% standardisation: Each item available in certain number of sizes
- No customization of any type of product *at all*
- Exchange of information between designers and buyers not optimal
- Top Management introduces "Design Strategy": Certain look according to which designers should create designs → Rather top management than buyers / production manager influence design
- Designers design completely independent of sourcing / manufacturing strategy / location

- Depending on design Strategy possible adaption of sourcing / manufacturing strategy / location, However: as this strategy is introduced by top management itself, designers not involved in this process

7. Close vs. Far Manufacturing Operations

7.1 Close vs. Far Manufacturing – Reasons

- Most important decision criterion: Costs / Margins
- Speed: How fast do I have access to needed raw materials → Fast access in Asia & Turkey to raw materials such as fabrics, buttons etc. (Mrs S.: *"Production in Turkey quicker than Asia **even** if sourced material purchased in other locations outside of Turkey."*)
- Capabilities: Which Manufacturer shows best capabilities for special type of clothing → e.g. Best T-Shirt producer in Turkey, Company D has not been able to find comparable alternative within Asia (Best value-for-money-ratio)
- ***However:*** Even if comparable producer would be available in Asia → Market develops into opposite direction: Company D needs to become fast as it has very long development processes (from first idea to final product being available in stores: 9 months) → Manufacturing in Turkey allows Company D to achieve its goal to deliver "fast-fashion" more easily than Asia
- Even cost advantages of Asian producer could not reverse this trend: Company D is ready to pay slightly more for nearer manufacturing in order to become faster
- Seemingly "cheap" manufacturing locations are immediately being detached if problems appear: Company D will end manufacturing partnership with Vietnamese producer due to not fulfilling of publicised price advantage and other operational difficulties → Company D ready to pay more for top quality & efficient manufacturer partnership

7.2 Close vs. Far Manufacturing – Decision Process

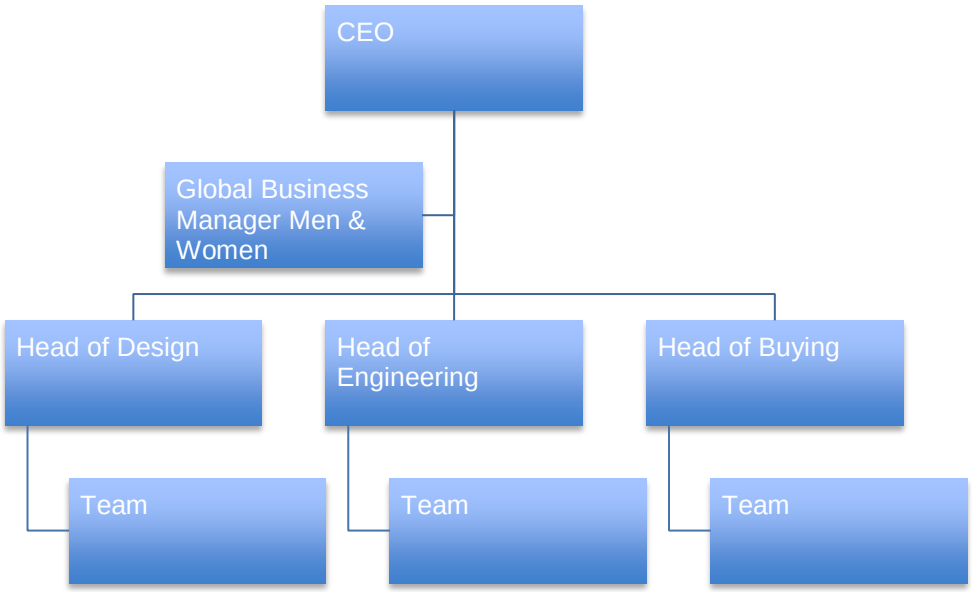
- Management determines how much (in %) is shored far (Asia) / close (Turkey) → Predetermines rough distribution

- Currently: In order to become faster → Re-shoring of some % of manufacturing to Turkey
- Head of Buying responsible for "Fine-Tuning": How much % of Asia manufacturing / sourcing distributed to each plant, Collaborations with which manufacturers etc.

7.3 Close vs. Far Manufacturing – Relative importance of single value chain activities

- Price & Quality Company D´s most important "core value": High quality → Higher price
- Quality ensured by sourcing best raw materials and using reliable high-quality manufacturers
- Price only chargeable if quality align
- Company D hast lost "core values" a bit in past → Mrs S.: *"Currently our main focus is to return to those central values we want to delivery each and every customer through our pieces."*
- Value chain activities collaborating the most: Design & Sourcing / Manufacturing + Sourcing & Distribution (Distribution provides sourcing with real-time market data concerning sales etc. → Sourcing for manufacturing will be adjusted)
- Also close collaboration: After-Sales Services & Sourcing
    - ❖ Company D regularly conducts focus groups
    - ❖ Gathered data will be presented to sourcing
    - ❖ Quality, Colors, Styles etc. will be adjusted according to uncovered customer needs

7.4 Close vs. Far Manufacturing – Role of organizational structure



- Global Business Managers decided together with CEO about manufacturing / sourcing locations

8. Roles of technologies – Influence of recent technological evolutions / developments on manufacturing location decision

- see 2.5
- No recent technological evolution have had a major impact on Company D´s sourcing / manufacturing location decision
- Rather the opposite the case: Company D even considers re-shoring to technologically less developed manufacturers in Eastern Europe in order to become faster

9. Re-shoring – Additional possible influencing factors

9.1 Corporate Social Responsibility & consumer´s desire for a transparent local supply chain

- No problems with theft of IP in the past
- Does not influence sourcing / manufacturing location decision in any way

- Mrs S. hast made experience that manufacturers are keen to protect IP of all customers → not allowed to take pictures if visiting producer which is currently producing other companies garments
- No plans to introduce sustainable / organic product lines
- Customer´s desire for use of local raw materials & manufacturing does not at all influence Company D´s sourcing / manufacturing location decision

10. Re-shoring in the future – Personal estimation

- Company D already participated in close-manufacturing (70% Asia, 30% Europe is results of recent manufacturing location change efforts, before higher Asian %
- Company D recently started to intensify collaborations with existing European manufacturers and plants to do so in the future
- For the future even more close-manufacturing planned in order to become faster even if slightly more expensive than Asian Production

- **Company E**

Interview

Place	Munich, Bavaria, Germany
Date	25.03.2015
Company	Company E
Interviewer	Pauline von Nostitz
Interviewee & -position	Mrs D., Supervision of Collection preparations / CAD-Manager
Time frame	10:00:00 – 10:36:00

The Company does NOT wish to be disguised within the scope oft he Project. Data was collected with the promise to not publish the company´s name in any project report.

1. Introduction: Presentation of the Interviewee & Company

1.1 Interviewee

Name: Mrs D.

Responsibilities: Supervision of all preparations concerning one collection & CAD-Manager

- Internal preparations of all manufacturing-related processes & documents but *external* production
- Cuttings are designed and gradated internally in order to ensure quality → after generation sent to external manufacturers via Email
- Head of 3 teams, responsibility of teams:
  - Generation of production related documents (piece list, guidelines of production, technical sketches)
  - Sending out of production related documents to manufacturers
  - Constant communication with manufacturers a
  - Generation of HR related documents (salary plans)
  - Supervision of sample manufacturing
  - Check of raw materials

- Initiation of embroideries and prints
- CAD (Generation of cuttings, gradation of cuttings)

Role and involvement in sourcing - / manufacturing location decision:

- Sourcing location decision:

  ➢ Influencing factors: Costs, Feasibility, Time & Speed, Efficiency, Certifications

1.2 Company E – An Overview

Products & Product categories

- Specialist for men shirts (Business shirts + Fashionable Shirts)
- *"High-quality shirts for a very attractive price-value-ratio"*
- 5 product categories:

  ❖ Business: Simple & chic design

  ❖ Casual: More young & fashionable designs

  ❖ Small knit wear section

  ❖ Special customer division: Company E manufacturers non-branded shirts for other brands

  ❖ Corporate Fashion: Company E manufacturers uniforms for the German police & justice employees, multiple airlines (Lufhansa, Germanwings), cruise ship employees (AIDA)

- 2 brands:

  ❖ Company E: Specialist for classical men shirts → Slightly more sophisticated / higher price
    - Different product lines: Level 5 (aiming at younger customers), Tendenz, Luxor

- ❖ Marvelis: Specialist for more fashionable men shirts “Cheaper” brand for younger target customer
  - o Different product lines: Business (chic but cheaper than Company E) & Casual lines

2 major brands (Company E & Marvelis) - each offering multiple sub-categories to cover the entire differing customer needs

Size of Company / Revenue

- o Revenue of 225 Mio. / year
- o Approx. 860 employees worldwide
- o Own stores: Germany, Austria, Switzerland, Czech Republic, Slovakia
- o Shop-in-Shop Systems (big department stores, small boutiques etc.): Europe, North & South America, Middle East, Near East, Russia, Japan, New Zealand)

Division of markets

- o Most important market: Germany
- o Worldwide offering of merchandise though mix of own retail shops, Online-shop, Shop-in-Shop-Systems
- o Company E: Slightly more sophisticated than Marvelis

Target customer

- o Men
- o 30+
- o Men looking for classic & gentle but also fashionable & chic shirts for everyday and every situation

Positioning

- Specialist for men shirts offering shirts of all levels of qualities for all types of occasions for adult men of any age

Company History, Nationality & Ownership

- German company
- Founded 1951
- Owner-operated family business

2. Value Chain

2.1 Degree of vertical integration of Value Chain

□ Design / Creation: Internal (Germany) □ Sourcing: Internal (Germany) □ Quality management: Internal (Germany) □ Manufacturing: EXTERNAL (Europe & Asia) □ Logistics: Internal (since 2013 fully owned Logistic-Center) □ Distribution: Internal □ Marketing: Internal (Germany) □ Retail: Internal (On- and Offline) & Shop-in-shop partners (Worldwide)

→ *Only production of far- and offshored, rest happening on Domestic grounds*

Design

- Internal design
- Design happening in Germany
- 1 Head of design for Company E & 1 for Marvelis
- Team size: 13 people

Manufacturing

- Solely internal manufacturing of sample pieces
- Rest all produced in external factories, in no way attached to manufacturers: true *external* manufacturers

- Long-standing collaborations with manufacturers (Indonesia: since 20 years, Macedonia & Croatia: since 25 years)
- New manufacturers are only “added” in case capacity of old ones is exhausted due to increasing demand
- 1 manufacturer per country, Exception in Macedonia: 2 manufacturers

2.2 Manufacturing countries

- Manufacturing countries (Shirts):
  - ❖ Indonesia
  - ❖ China
  - ❖ Bangladesh
  - ❖ Vietnam
  - ❖ Macedonia
  - ❖ Croatia

  } Decrease of high quantity production, rather used for manufacturing of samples due to closeness to Germany / samples needs to be produced quickly
- Manufacturing countries (Knit wear):
  - ❖ Asia

2.3 Distribution of Manufacturing

Country	% of total Manufacturing
Macedonia & Croatia	15% combined
Indonesia	25-30%
Bangladesh	20-25%
Vietnam & China	30% (more China)

→ Numbers can differ slightly from season to season due to different specialities of manufacturers

3. Value Chain – Relative importance of single activities for Value Creation

- Each activity contributes to total end value created by chain according to Mrs. D.
- Due to simple nature of product (shirt), design plays most important role concerning differentiation
- Mrs D.: *"In my opinion distribution / retail is also highly important as from there we are able to get direct feedback from our customers, our most important stakeholder."*
- ***However***: Mrs D. evaluated each single activity as equally important and essential for survival for a company → each has its own right to exist

External Manufacturing

- Saves (fixed) costs
- Reduced risks due to multiple manufacturer usage
- Increases flexibility
- High level of quality ensured by long standing collaborations with manufacturers (Manufacturers know what Company D wants)

4. Role of Technologies in the decision of manufacturing process

- Nealy 100% of communication with manufacturers via Email (piece lists, guidelines of production, technical sketches) → Mrs D.: *"We are aware of the fact that most [fashion] companies do not work like this anymore and we are currently changing this, trying to connect and communicate with our manufacturers though latest technologies."*
- Introduction of new software planned & currently being prepared (communication platforms for manufacturers & retailers, PLM-systems,
- Company E is aware that electronically connection is the future / modern technologies need to be used to speed up & facilitate communication
- However: At the moment technical level of manufacturers do NOT influence manufacturer selection process; sometimes technical backwardness even benefit for manufacturer as it means less risk of manufacturer changing / adapting technical plans & guidelines through shared software

5. Geographic Relationships – Manufacturing & other Value Chain Activities

5.1 Manufacturing Location & Design Location

- Designers in Germany design completely independent from manufacturing location
- Communication between designers & producers not necessary due to simple nature of product → simple shirt
- No exchange of information between designers & producers needed due to long standing collaborations → manufacturers know Company E´s needs & guidelines
- Distributors know which manufacturer is good for production of different types of shirts
- Designers rather communicate with retail department due to possibility of offering direct customer feedback

5.2 Manufacturing Location & Sourcing Locations

- Somewhat co-dependent → Location of manufacturing partly influenced by sourcing location as most of the sourcing happens in Asia (purchase of yarns, fabric, buttons, labels etc.) → Less distance means shorter manufacturing times
- Designers & Buyers jointly visit fairs around the word to get inspired (new materials, technologies, yarns, prints, embroideries)
- Designers do not stand in direct contact with manufacturers → Distribution allocates manufacturing orders
- If sourcing would be cheaper else where further away from production, Company E would adapt Sourcing location after in-depth financial analysis
- Company E`s sourcing department constantly researches best price-quality ratio sourcing locations and adapts sourcing strategy accordingly
- Company E prides itself with offering very flexible production (e.g. if corporate customers make re-order, Company E able to re-produce order quickly due to proximity of sourcing & manufacturing locations)

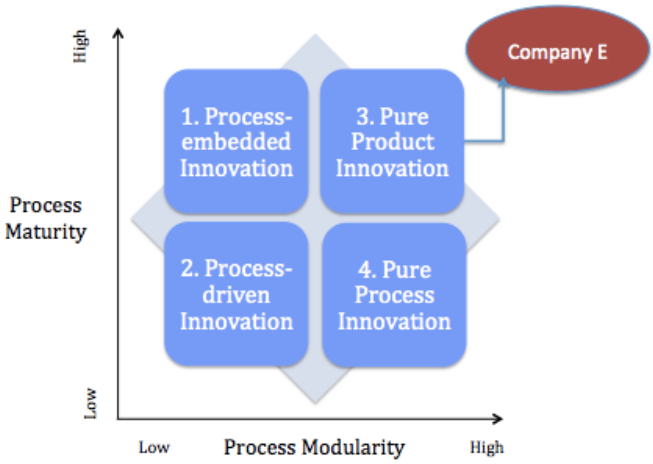
5.3 Manufacturing Location & Retail Locations

- Completely independent → Some manufacturing countries no retail countries for Company E (e.g Bangladesh & Indonesia)
- Manufacturing Countries chosen based on other factors than proximity to retail locations (e.g. costs, speed, certifications)
- Produced goods transported to Europe via trucks / plans into own logistic centre → from there further transported into rest of the world

6. Level of product standardisation

- Quality: Standardisation across all collections
- Design: Each collection for each brand should carry *"Company E-Handwriting"* but at the same time embody innovation & modernity

    - Designers do not need to understand manufacturing process in depth → simple product = simple manufacturing process → Mature process
    - Designers roughly understand manufacturing process / are provided with basic knowledge concerning process but are in NO way involved in manufacturer selection process
    - However: In case designers would like to gather knowledge concerning the manufacturing process → No problem: *Mrs D.: "In case a designer asks, we are happy to provide him with any needed information. We do regularly discuss the manufacturing process with designers, however, due to its simple nature – shirt remains shirt – it is just not necessary for the designers to be highly involved."*



→ *A highly mature process and the possibility to separate the manufacturing from the design very easily results in Company E falling into the "Pure Product Innovation"-field of the Modularity-Maturity-Matrix*

7. Close vs. Far Manufacturing Operations

7.1 Close vs. Far Manufacturing – Reasons

- Costs: Current manufacturing countries offering very good price-quality-ratio
- Quality: Long-standing collaborations with manufacturers ensure high-quality
- Sourcing: Influences manufacturing location and vice versa (longest transportation distance the one of the produced shirt to the logistic Center in Europe) → short distances = short transportation costs = lower costs
- Protection of Intellectual Property: Long-standing collaborations with manufacturers in place in order to protect IP ("*Relationship of trust*")

7.2 Close vs. Far Manufacturing – Decision Process

- Head of Sourcing & Company CEO / Owner responsible for manufacturer selection process → Jointly visit new potential manufacturer and ensure human & efficient working conditions / negotiate conditions of collaboration
- Head of Manufacturing: All year long travels around the world and reviews new manufacturers, proposes potential new ones to CEO & Head of Sourcing

7.3 Close vs. Far Manufacturing – Relative importance of single value chain activities

- Due to simple product nature (shirt) design plays great role which however does not truly influence manufacturing location decision
- Sourcing to a certain extend influences manufacturing location decision Cheaper sourcing in Asian countries possible, makes sense to locate manufacturing close by

7.4 Close vs. Far Manufacturing – Role of organizational structure

- Steep hierarchy
- Manufacturing location partly determined by owner (see above) → Highlights importance of decision

8. Roles of technologies – Influence of recent technological evolutions / developments on manufacturing location decision

- No manufacturing location chances in the past / currently due to technological evolutions / developments
- Low to medium degree of technology needed for Company E manufacturing process → Simple product *“Shirt remains shirt!”*
- Therefore, manufacturing location decision made independently of degree of technology of manufacturer

9. Re-shoring – Additional possible influencing factors

9.1 Corporate Social Responsibility & consumer´s desire for a transparent local supply chain

- Customers desire for a transparent supply chain does not influence sourcing & manufacturing location decisions at the moment
- Mrs D. however aware of rising importance of issue in the future
- ***However***: Mrs D. disbelieves topic issue will in the future have great impact on manufacturing location decision due to Company E only working with certified manufacturers

10. Re-shoring in the future – Personal estimation

- Re-shoring does *not* play important role within Company E´s manufacturing location decision so far
- Mrs D.: *"Our product is too simple in order for us to be affected by re-shoring. We need simple manufacturer with a low degree of technological advancement – and there are plenty of those out there in Asia, which offer great work at good prices. We would never be able to find the same within Europe, let alone in Germany."*
- Company E is currently increasing its Chinese manufacturing volume by employing further manufacturers in the Chinese hinterland (lower wages due to long distance to Chinese costal cities)
- Only "Re-shoring" that Company E participated in: Re-shored manufacturing of sample production to Macedonia / Croatia in order for samples to be delivered more quickly to German offices → Countermeasure: Trying to find even cheaper raw material supplier (e.g. buttons etc.)