

Strengthening Competitiveness of Multinationals through Relocation of Production to Asia

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Abstract

This article asks whether a strategic opportunity exists for a company producing products with the label ‘Made in Germany’ to relocate production to Asia while retaining German engineering. This article focuses on the prevailing market situations of several multinational corporations based in Germany, which are encountering growing competition from Asia due to disadvantages in product price, delivery costs and transportation time that are related to a non-adapted and non-future oriented sourcing concept. Through an empirical research study, respondents from Asia were asked about their willingness to accept the price of a ‘Made in Germany’ product, the importance of price, their opinion about delivery issues, and their acceptance of local production in Asia. Total responses of N = 636 (100.0%) were collected, including n = 108 (17.0%) responses from Asia. The results are addressed to strategic management for German companies that can gain competitiveness through a relocation of production to Asia while considering long-term requirements. The results of the study suggest that the fundamental strategy of pairing German engineering with local production in Asia is worth pursuing in which the market conditions of tomorrow are considered.

Keywords: business strategy, competitiveness, made in Germany, operations management, procurement strategy, plant location, sourcing

1. Introduction

In today’s globalized world, corporations require a progressive consideration to strengthening competitiveness. This article is based on the prevailing situation of several German multinational corporations that need to gain competitiveness following a broad handling of markets. Due to the limited growth potential in European markets, the focus has turned to emerging markets. According to a study by Oltmanns (2013), Western companies expect to achieve 70% of their future profits in these emerging markets. Especially the growth potential in the Asian region is of interest. Compared to developed markets, Asian emerging markets display divergent consumer behavior, different market conditions and different financial power. International exporting corporations from Germany manufacture products under the classification ‘Made in Germany’, and German engineering quality is seen as an important success factor (Ahlert, Backhaus, Berentzen, & Tegtmeier, 2007).

This research investigates an adapted sourcing concept for German multinationals that face growing competition in which disadvantages in product price, delivery time and transportation costs have been revealed. Therefore, the strategy of having a production site located in Germany can be seen as disadvantageous due to production cost factors (i.e., labor costs or facility costs) and distance to markets (i.e., transportation or taxation) (KPMG, 2014). Brunke, van Dongen, and Downey (2013) report that, especially in emerging markets, consumers prefer cheap and simple products. However, Ahlert et al. (2007) report that international customers have appreciated products being manufactured at German production sites and connect a certain level of quality with this origin. Therefore, the concept to pair the German quality identification with a local production can have great potentials to multinationals. Herewith, companies face a number of challenges in finding the right strategy, which should at least reflect customer needs and conditions. Thus, it is necessary to analyze both the potential market in Asia and customer needs in order to gauge to what extent production relocation into Asian markets is accepted, and to what extent there is a need to retain German engineering.

This research investigates existing negative aspects faced by several German multinationals in price and delivery in international markets, which are related to their prevailing sourcing concepts. The aim of this research is to present a customers’ perspective to guide current sourcing strategies into an adapted concept to relocated the

production to Asia. The emphasis of this research is placed on aspects of price for products classified as 'Made in Germany', particularly the importance of price as an influence on customers' buying decisions, transportation time, and delivery and importation costs. Furthermore, to reshape manufacturing to meet emerging market conditions, we consider the acceptance of local production and customers' expectations of lower prices when local production is accepted. This article is based on a comprehensive literature review following the main topics of consumer behavior, the classification of 'Made in Germany', competitive advantages, acceptance criteria to generate advantages through local production and the implementation by means of operations management. In order to enable the application of the results to long-term strategic decisions, customers' opinions and expectations represent a major focus. Through an empirical research study with a total response of $N = 636$ (100.0%), respondents from Asia $n = 108$ (17.0%) were asked about their willingness to accept the price of a 'Made in Germany' product, the importance of price, their opinion about delivery issues, and their acceptance of local production in Asia. The goal of this article is linked to a long-term profitability strategy with regard to production relocation that addresses decision managers with fundamental data about customers' acceptance and expectations.

2. Literature Review and Hypotheses

2.1 Globalization and Effects

In recent times, the concept of globalization has influenced economic and political debate more than any other factor. The term 'globalization' is rarely defined or unilaterally reduced to certain positive or negative economic impacts (Clegg & Grey, 1996). Technological and cultural developments are accompanied by the deregulation of capital and product markets and by international trade liberalization, respecting the framework of the World Trade Organization (WTO). Levitt (1983) describes the deregulation of markets as a convergence of markets. This makes it easier to realize business advantages and enables activities through large-scale production in countries where the greatest economic benefits can be achieved. As a result, companies' cross-border activities grow systematically. Globalization was triggered in particular by revolutionary inventions in the field of microelectronics, optoelectronics and telecommunications (Albert, 1996; Dunning, 1997; Giddens, 1996; Schneider, 1996). These inventions led to a dramatic reduction in costs and enabled global communication. At the same time, improvements in the field of transportation hugely increased the worldwide mobility of people and goods. Modern transportation technologies greatly decrease the subjective and emotional distance between countries and positively affect how the term 'globalization' is characterized. From a company's political point of view, globalization primarily increases opportunities and risks. Furthermore, globalization causes an intensification and spatial expansion of competition, customers and suppliers, which massively increases the cost and pressure to perform effectively. Thus, through the effective implementation of economies of scale and economies of scope, beneficial results can be achieved. In particular, the convergence of technological, economic and legal conditions facilitates the global standardization of products and promotes the development of global brands. Globalization affects not only large companies, but increasingly small and medium-sized companies, too. Following Prahalad and Hamel (1994), a growing number of micro multinationals are integrated in international networks through strategic alliances and other forms of cooperative organizations. They are able to increase their world market share through specialization and flexibility advantages to compete against large companies or nationally oriented companies (Naisbitt, 1994).

Nowadays, globalization has new rules and presents diverse circumstances for multinational corporations. The governments of emerging countries tend to display limited willingness to open industries to multinationals, because they find it risky to do so. According to Bremmer (2014), they rather try to protect local interests. Furthermore, governments build exchange reserves to raise exports, redefine national security according to global topics, which become more political issues, and create diverse business environments that provide advantages to local corporations. This 'rise of state capitalism' shifts the characteristics of globalization in a new era and represents a break with the past. Governments thus control markets through politically loyal, public-sector companies (Bremmer, 2014). This is why multinationals face local competition that receives governmental support. Multinationals have to consider the strategic effects of state capitalism, and ask whether the industry sector is strategically important to the government of the target market and the domestic market. Following Bremmer (2014), multinationals will find opportunities in this new era of globalization; however, permanent strategic adaptation is still mandatory.

According to Abonyi and Van Slyke (2010), the main challenges of globalization are linked to finance and production. The globalization of production allows international businesses to reconstruct structures, relations, and performance, and to generate revenue. Globalization, following Dicken (2011), is the reconstruction of international production, investment and trade. It thus offers opportunities and modifies the competitive

environment. Following Bremmer (2014), with regard to the empowering of government, Abonyi and Van Slyke (2010) highlight four drivers of the globalization of production from a governmental point of view. The first is policy liberalization, which reduces constraints in investments, importation and exportation. The second is technological change, controlled via investments and regulations. The third is capital mobility, which enables foreign direct investment to take advantage of local differences and production costs. The fourth is the demand for competition, which forms products with lower costs, better quality, faster delivery, and diversity. Within a globalized production context, multinationals aim to generate benefits through an established global value chain that includes geographically scattered production networks. It is a matter for debate, however, whether a global sourcing concept is able to gain competitiveness without local manufacturing (Abonyi & Van Slyke, 2010).

2.2 Strategies and Positioning of Multinationals

Porter (1985) develops two fundamental questions in his research about competitive possibilities. The first is the attractiveness of the business area and the second is the relative position of the company within the business area. Strengths and weaknesses combined with the activity scope lead to three possible generic strategies: focus, cost leadership, and differentiation. The aim of the generic strategy 'focus' is to gain competitiveness, i.e., concentrating on an individual aspect of a product within a dedicated segment and market. This strategy works perfectly when competitors follow different segments or strategies. Porter (1985) specifies several ways to achieve objectives of cost leadership, for instance, economies of scale. Grant (2001) specifies economies of scale, economies of scope, economies of experience, managing cost cutting, residual and operational effects, and an appropriate value chain. To become a cost leader and to enhance the competitiveness level within the dedicated industry sector, companies need to understand the possibilities and opportunities of cost advantages. Differentiation within the generic strategies creates different attributes compared to the competition. Companies achieve success for their product within their market by choosing the right generic strategy (Porter, 1985). It can be difficult to follow more than one generic strategy at the same time. With regard to this research study, differentiation strategies and cost strategies offer possibilities to collaborate under certain circumstances, especially when competitors are not clear about their strategy. However, a company has to understand its own company-specific value chain to actively use generic strategies to gain competitiveness.

Strategic positioning, following Porter (1980), is separated in broad markets and narrow markets. The strategic advantages of a corporation that follows a broad market target can be characterized as uniqueness through differentiation or through cost leadership. Within larger organizations a combination of strategies is often used to integrate different business units into a common strategy. Following Zook and Allen (2003), profitable growth can be achieved when a corporation overcomes the limitations of its core businesses. Growth opportunities are possible through penetration along the external value chain, establishing new products or services, or through entering new markets or regions. Successfully implemented strategies in corporations often simultaneously mix different strategies for business units, products or services, in addition to the core business (Ginter, 2013).

Focusing on strategic management, multinational companies can achieve competitive advantages by optimizing their international activities and thoroughly considering all global activities. Thus, companies are confronted with two opposite requirements: the simultaneous exploitation of the benefits of local adaptation following differentiation advantages and the benefits of global integration following unification or standardization advantages (Welge & Holtbrügge, 2006). According to Welge and Holtbrügge (2006), a transnational strategy is the ideal strategy for multinational companies, which combines the advantages of localization and differentiation with the advantages of globalization and standardization. The central objective of the transnational strategy is to simultaneously exploit economies of scale, economies of scope and national differences. This is also called a dual or opportunistic strategy (Meffert, 1986) or a multifocal strategy (Scholl, 1989). An identified benefit of this strategy is the realization of price differences and company-specific advantages with resource management. The transnational strategy represents an ideal alternative. Implementing it enables multinational companies to exploit competitive advantages.

2.3 Sourcing and Operations Management

Following the categorization of Wannenwetsch (2010) regarding sourcing strategies, numerous relations between purchaser and distributor can be developed as part of successful long-term sourcing strategies. Which of them is the best option for the company and product depends on the sourcing material and on the competitiveness level. However, all of them have different potentialities and present different opportunities. With regard to the negative product aspects of price, transportation cost and delivery time, the crucial factors are the categorization of lower costs in terms of price and higher flexibility, as well as the aim of to produce better and cheaper to meet future market requirements in emerging markets. The characteristics of globalization today do not necessarily require a

production site established in the target markets, as Abonyi and Van Slyke (2010) argue. A global sourcing strategy allows worldwide acquisition of products. With the internationalization of acquisition, a wider scope of sourcing is possible. It is essential to choose the right suppliers with a focus only on the purchasing price, but also on the capacity (Wannenwetsch, 2010). However, comparing the most effective sourcing methods relating to the research topic, local production offers a future-sourcing concept to multinational companies of German origin under prevailing disadvantages, and proactively combats the problem statement. According to Wannenwetsch (2010) are the advantages of local sourcing:

- Local mentality (i.e., adaptation to local market conditions)
- Lower transportation costs
- No importation taxes
- Possibility of high quality
- Possible better price conditions (i.e., labor costs)
- Flexibility in changes
- Suppliers close to the production

The disadvantages of local sourcing according to Wannenwetsch (2010) are:

- Mostly high price
- Customer trust is changeable
- Lower foreign quality standards
- Less international know-how

Local sourcing offers great possibilities and also provides companies with the opportunity to use several suppliers. The achievement of a local sourcing concept can have the possibility to transform disadvantages into advantages. Local sourcing facilitates lower transportation time and costs, importation taxes are inapplicable, local mentality and language can be considered, and high quality and better pricing conditions are possible. For a multinational company, local sourcing from the local subsidiary point of view is linked to the purchase or production of products locally to respond to specific market requirements that offers a better price level due to local price standards.

Although the literature suggests that opportunities exist in several dimensions to improve competitiveness to counter product disadvantages in price, delivery time and delivery costs, it is still important to consider strategic implementation. Based on successful implementation, operations strategy aims to generate customer values. Following Slack and Lewis (2008), the term 'operations' refers to the management of resources and processes to deliver and manufacture products. Within the operations strategy, four dimensions should be considered. These are the corporate strategy, market requirements (i.e., quality, costs, or flexibility), operational experience and operations resources (i.e., capacity, technology, or sourcing networks). The management of resources and processes, which simplistically transform input into output, can grant success to survive in competition and is furthermore able to satisfy customers' needs. According to Slack and Lewis (2008), this is possible with four strategic objectives:

1. Cost reduction due to an efficient input-output transformation;
2. Increase profit due to customer satisfaction delivered through quality, flexibility and reliability;
3. Investment reduction due to a higher innovation grade and efficient use of existing capabilities;
4. Efficient use of capabilities to generate a solid fundament of future innovation.

Operations strategy concentrates on environmental changes to compete successfully. In order to meet future challenges and requirements, there is a further interest in implementing operations resources and processes appropriately in order to generate advantages. Behind all business opportunities are different markets that require different resources. Therefore, any kind of business opportunity represents a compromise between markets and resources. However, operations strategy should correspond both to operations resources, to build capabilities, and market requirements, to satisfy markets. Overall, according to Slack and Lewis (2008), operations strategy has the commonly used performance objectives quality, time, dependency, flexibility, and cost. According to Slack and Lewis (2008), cost is the most important performance objective, because the lower the costs of production, the lower the selling price can be. Lowering costs is important for competitiveness, but also enables higher earnings. According to Nordstrom and Ridderstrale (2000), in their simple explanation of customers'

wants, a product should be cheaper, better and faster delivered than others. However, Slack and Lewis's (2008) five dimensions are competitive factors and commonly describe things customers' recognize. Transferring these performance objectives to the problem statement, the operations strategy confirms possibilities to compete within the changing market environment when a successful adaptation has been considered. According to Boyer, Swink, and Rosenzweig (2005) in their review of the literature on operations strategy, a consideration of behavioral elements can be beneficial for a future-oriented production concept. Thus, customers' level of acceptance, opinions and expectations can help to correctly set the sourcing strategy.

Nowadays, markets are broadly fragmented and targeted marketing is difficult. Product innovations and product life cycles also spin faster. According to S. Brown, Bessant, and Lamming (2013), there are several terms that describe the modern era of production, which is a combination of size, diversity, quality and innovation. These are mass customization (Pine, 1992), flexible specialization (Piore & Sabel, 1984), lean production (Roos, 1990), agile manufacturing (Kidd, 1993), and strategic operations (Hill, 2004). However, it is observable that the manufacturing situation is changing to meet current customer and market demands. Therefore, manufacturers face divergent requirements that not only consider economies of scale, but progressively smaller economies. With the focus on relocating production as part of procurement strategies, the location of production is, according to S. Brown et al. (2013), an important aspect linked to the strategic capacities. The problem with manufacturing is that capability and performance have declined in several industries. Therefore, the service aspect becomes more important to companies with sourcing intentions. However, services cannot veil low manufacturing quality. With regard to the changing manufacturing situation, operations management has a broad range of functions across the complete range of supplier and distributor networks. According to S. Brown et al. (2013), understanding the principles enables manufacturers to compete effectively.

To compete effectively, corporations need to develop and deliver customer value. In principle, the more values top price, the more benefits a product provides. The goal of operations strategy is therefore to add value to a product. This is possible, for instance, through cost reduction, faster service, additional information, or customization in accordance with customers' needs. However, these goals are threatened by global effects, new technologies, and simultaneous competition. According to Davis, Aquilano, and Chase (2002), the global village is seeing lower trade barriers, overarching connectivity, rapid transactions, lower transportation costs, and the rise of newly industrialized countries (Naisbitt & Aburdene, 1990). To further distinguish a product from competition, future trends use environmentally-friendly products and processes, as well as information (Davis et al., 2002). Managerial implementation of operations strategy in the cores of corporations meets some challenges in terms of competition. It enables companies to enhance competitiveness, continue technological improvements, develop efficiency, reduce costs, and prepare for the future. Operations strategy is rightly integral to business strategy (Reid & Sanders, 2009); manufacturing is, according to Skinner (1969), the missing element in corporate strategy.

2.4 Origin Identification

The Country-of-Origin effect (COO) is nowadays a frequently used concept in research examining consumer behavior in international markets (Amine, Chao, & Arnold, 2005). The aim of the term 'Made in' is to transfer information about a product's geographical origin (Jaffe & Nebenzahl, 2001). The COO effect is in this way country-specific, but it can also have a wider scope in indicating regions, e.g., Asia or Europe (Bilkey & Nes, 1982). The definition of the COO effect is a positive or negative impact on consumers' behavior resulting from the country of origin (Elliott & Cameron, 1994). The preferences and behavior of consumers offer many possibilities for studies into the relevance of the COO effect, which demonstrate that quality is equated with the country of origin (White & Cundiff, 1978), and is thus an essential purchasing factor (Johansson, Douglas, & Nonaka, 1985). Consequently, the COO effect for a product and its production site influences clients' purchasing decisions and acts as a seal of quality and a factor in risk reduction (Cordell, 1992). These are extrinsic factors, like price or warranty, and are distinct from intrinsic factors such as weight, taste or design (Ahmed, Johnson, Ling, Fang, & Hui, 2002). Following Thorelli, Lim, and Ye (1989), clients use intrinsic factors for their decisions in cases where extrinsic factors are imperfect or difficult to estimate. That is why the COO perception is an alternative when quality and performance are lacking in a product. Clients are not used to valuing products from other countries correctly (Parameswaran & Pisharodi, 1994). The research of Verlegh and Steenkamp (1999) shows that the COO effect is not limited to evaluating products and quality, but is rather more complex and may be used for determining symbolic and emotional relevance.

Customers hold certain attitudes about brands and products from different countries (Gurhan-Canli & Maheswaran, 2000). However, COO perceptions directly or indirectly affect their decision-making. In terms of marketing, COO perception must be considered from the foreign as well as the domestic perspective (Kotler &

Keller, 2006). However, a company must use COO perception effectively in cases where the origin of a product has negative connotations for customers. Furthermore, the perception of quality is linked to the product's specification (Ashill & Shinha, 2004; Jaffe & Nebenzahl, 2001). This means that specific country of origin identifications positively or even negatively differs from product group to product group. This is why the quality image of Germany with reference to the automotive sector, for instance, is much better than it is for the fashion sector. Thus, not all studies and results can be combined into a generalized statement, because normally studies are focused on a specific product group. The COO effect and its influence on the decision to purchase a preferred product are strongly confirmed by the literature. But there are also critical reviews to consider. Johansson et al. (1985) suggest that the COO effect exists, but has much less influence than expected. They also argue that the COO effect has more influence on product specifications than the product in general. The overrating of the COO effect is a result of the well-known 'single-cue' valuation, in which a respondent has to evaluate a product only with regard to its origin. The empirical study by Verlegh and Steenkamp (1999) proves that the country-of-origin effect with 'single-cue' valuation is much stronger than with 'multi-cue' valuation. In a 'multi-cue' valuation, the information is not limited to the origin of a product, and more details, e.g., price or warranty, will be communicated (Chao, Wührer, & Werani, 2005). Similar results were achieved by Thorelli et al. (1989), who researched the relations between extrinsic COO factors, warranty and business image. However, 'multi-cue' valuations achieve a variety of results relating to the importance of COO (Jaffe & Nebenzahl, 2001). To summarize the multiplicity of studies and their results, the COO effect has a considerable effect on product evaluation (Ahlert et al., 2007).

Especially, the indication of a product's origin with 'Made in Germany' becomes an important issue for German corporations. Consumers, when they are in the process of deciding to purchase a product, automatically start to construct reasons to justify their particular choice to others and to themselves (Shafir, Simonson, & Tversky, 1993; Simonson & Nowlis, 2000). The term 'Made in' is an identification of a product's manufacturing origin, which essentially influences the client's perception of quality (Schooler, 1965). The term 'Made in Germany' has been used in various industries for a long time as a synonym for high quality and reliability (IHK, 2013). With regard to the COO effect, products engineered and produced in Germany still have an excellent reputation around the globe (Ahlert et al., 2007).

In addition to the country-of-origin identification is the foreign branding effect. Choosing an appropriate name for a product is crucial for its success (Aaker, 1995; Keller, Heckler, & Houston, 1998). This strategy can be applied not only for the transmission of the positive properties of a country to boost the image of a product, but also for using a specific image to establish attitudes. This is why companies use foreign branding of a product proactively, in the hope that the name will define certain qualities or attitudes (Melnik, Klein, & Völckner, 2009). Today, customers are more and more often faced with brand names that are suggestively products from a developed country. The reason for this can be twofold. First, the production site might have moved from a developed country to an emerging country with the aim of minimizing production costs. Second, emerging countries, i.e., India or China, might have started producing domestic brands with the aim of international selling (Brown & Hagel III, 2005). Consequently, understanding customers' reaction to the relation between developing countries and foreign brandings is always important for marketing.

With foreign-sounding brand names, positive and beneficial associations can be transferred, affecting the perception and assessment of a product, and achieving a higher acceptance and perception of quality of the product. However, foreign-branding strategies also result in negative effects. Where the name is only of borrowed origin, the danger is that consumers will recognize that the country-of-manufacture is not the same as the suggested country-of-origin, which can also affect consumer behavior. Consumers can thus feel cheated by the brand provider (Klein & Völckner, 2012). The risk that consumers will discover the real origin of a product is significant. In conclusion, a product name that is foreign-sounding should be chosen when the country's image within the product category is beneficial, but negative aspects need to be considered as well. Overall, foreign branding and origin identification of a product are beneficial in advertising features that positively influence customers' buying behavior. The 'Made in Germany' classification has a well-established reputation. With regard to relocating production to meet specific market and customer requirements, a concept to retain crucial characteristics such as engineering enables corporations to maintain the perception of quality and reliability whilst being able to respond more appropriately to target-market conditions. Thus, value propositions can be delivered and competitiveness improved.

2.5 Customer and Market Change

As regards customers' buying behavior, we can see that a clear understanding of the customer and identification of their needs and wants is essential. It is difficult to determine the exact reasons behind customers' buying

decisions and preferences, which are sometimes guided by emotional influences; however, in principle, seeking to understand and respect customers helps achieve long-term business success. According to Dru (2002), companies can achieve success through adopting a clear vision that transmits an adequate sense of direction using advertising, product innovation, or other marketing tools. Kotler and Keller (2012) suggest that the marketplace is not what it used to be. The marketplace of today is influenced by societal forces that create new forms of consumer behavior, as well as new challenges, possibilities and opportunities.

Today's technology is shifting society from an industrial age to an information age. The industrial age was linked to mass production and consumption. More accurate production levels characterize the information age with better-targeted communications and pricing, mostly through using digital networks. In the information age, customers are now able to seek and evaluate products or services according to their needs. Offering a customization of a product combines customized marketing with customized production. In this way, customization-oriented companies do not need to collect customer information, but can respond with a customized product (Anderson & Narus, 1995). However, the information age requires a rethinking of marketing and a rethinking of product attributes to meet customers' needs and wants. According to Rust, Moorman, and Bhalla (2010), corporations need to reorganize their strategy to compete successfully, shifting product customization according to customer relations. Creating value propositions in times of increasing international competition becomes more important for corporations that face pressure on costs. According to Anderson, Narus, and van Rossum (2006), each value proposition should be measurable, sustainable, and distinctive. Thus, customer-value propositions contribute significantly to performance and strategy.

In principle, globalization offers better and different types of transportation, production and communication. This creates a more extensive environment for companies to start foreign business activities, at least offering consumers the possibility to buy products and services from global markets. This is why corporations on the international stage face changing market requirements and growing competition, which requires an improvement in their operational efficiency along the value chain. This is necessary for slow-growing countries, as well as for emerging countries. Therefore, adaptation to customers' product needs should be considered, taking products' specific disadvantages into account in order to compete successfully. The study results of Knapp, Günther, and Rinn (2013) confirm that the growth of emerging markets will continue, but at a lower rate than expected. In order to adapt to customers' buying behavior in slow-growth markets efficiently, the above authors suggest companies need to adjust products' attributes to what customers' really need, and set the right price. On the other hand, Kotler and Keller (2012) state that, from a marketing point of view, it might be unwise to give customers just what they want. Knapp, Günther and Rinn (2013) found that only 38% of respondent companies offered products meeting customers' expectations. Therefore, product adaptation to customers' buying and manufacturing preferences can probably identify hidden growth opportunities. Considering customers' attitudes in slow-growth markets to enable products to be developed that meet customers' needs at an acceptable price (Knapp et al., 2013).

2.6 Hypotheses

Nowadays, almost all products are subject to fast-changing industry. New technologies and an intensification of quality require continuous product developments. Fulfilling the latest technology and quality standards requires a high amount of investment for product development and manufacturing, which in turn increases product costs. A high price for a product 'Made in Germany' generally reflects the highest quality level (IHK, 2013). From that assumption arises the question of whether the price for products 'Made in Germany' is acceptable. Based on German corporations' attitudes and due to the well-established quality identification of 'Made in Germany', the first hypothesis (H1) is: *The price of products classified as 'Made in Germany' is acceptable.* It is expected that Asian respondents accept the price of products classified 'Made in Germany'.

In order to analyze the importance of price from a customer point of view, we can ask whether price influences purchasing decisions. Based on to the fact of customer and market changes and different requirements, the second hypothesis (H2) is: *The importance of price influences the purchasing decision.* It is expected that respondents from Asia rate the importance of price as above average in their purchasing decisions.

With regard to the above-stated negative factors related to price, delivery time and costs, it is not clear whether customers share the same opinion. The third question addresses whether delivery time and cost have a negative influence on purchasing decision. Therefore, the third hypothesis (H3) is: *Delivery time and costs are disadvantageous and thus influence purchasing decision negatively.* Due to the fact that the delivery time to markets is seen as presenting a disadvantage to German corporations in competition, it is expected that Asian responses agree with the majority. Delivery costs and importation taxes will also be seen as disadvantageous.

Globalization and the shift to emerging markets has led most German corporations to launch or to intend to launch production sites abroad in order to achieve better strategic results and gain opportunities. This is mostly related to global change and companies trying to spread their activities simultaneously in different markets, close or far from their origin. Furthermore, the literature review argues that an adapted local sourcing concept while respecting emerging market conditions can offer positive characteristics to strengthen competitiveness for multinationals. Unfortunately, it is not clear whether customers from Asia will accept local production that retains German engineering. We therefore ask whether customers will accept a local production site. The fourth hypothesis (H4) is: *Customers accept local production sites while retaining German engineering*. It is expected that a majority of minimum 90.0% accept the conception of German engineering paired with local production.

Due to several statements that customers' seek for cheap product, the additional question arises of whether customers expect a lower price for products that are produced locally. The fifth hypothesis (H5) is: *For customers who accept local production while retaining German engineering, the importance of a lower price increases*. It is expected that the majority of Asian respondents to expect a lower price.

3. Methodology and Research Design

The central question in this study is how German multinationals can strengthen competitiveness through relocation of production to Asia while considering values of their origin, and respecting market and customer behavior. The emerging Asian region is a low-price market and producing locally presents an interesting opportunity in terms of price, transportation time and delivery costs. This study is based on a comprehensive literature review and an empirical research study. It is crucial to ask for clients' opinions in order to correctly address the decision management with regard to the strategic opportunity of local production while keeping German attributes.

This research study is designed according to the paradigm of positivism, which tends to be concerned with the testing of hypotheses by using a large sample size (Kumar, 2014). It also produces results with high reliability, thus making generalizations possible (Collis & Hussey, 2009). The primary data were collected via face-to-face survey at the MEDCIA exhibition in Germany in November 2013. According to Krejcie and Morgan (1970), sample size requires $N = 382$ (100.0 %) positive responses out of all respondent origins. The question design requires pre-selection based on the origins of respondents, because only the opinions and expectations of international visitors to the fair are of interest. Consequently, German native responses are sorted out. The primary data collection considers the origin of respondents, separated into North America, Central and South America, Western and Central Europe, Eastern Europe and Russia, Middle East and Gulf Countries, Africa, Australia and Asia. With regard to this article, the major focus lies on the Asian region.

4. Results

This research survey was conducted at the Düsseldorf MEDICA exhibition in Germany in November 2013, which is one of the world's biggest fairs for healthcare-related products. The medical device industry has a very high standard in quality and technology where products 'Made in Germany' enjoys great reputation around the globe. Because of reference attitudes of the medical device industry, the results are therefore transferable to other industries. However, this empirical study is not limited to medical products (Note 1) and respondents were specifically asked for their opinions and expectations about non-medical products. The study is limited to international visitors to the fair. German responses are not included in the data. Only the Asian responses are of interest in this article. Due to the fact that Asian customers and market behavior are differentiated, customers' expectations and opinions constitute a major focus in this study.

Based on former MEDICA visitor data from 2011 and 2012, it was to be expected that a majority of the responses would come from Europe. Total responses of $N = 636$ (100.0%) as illustrated in Figure 1 were collected, including $n = 108$ (17.0%) responses from Asia, representing the second largest group of respondents in this study.

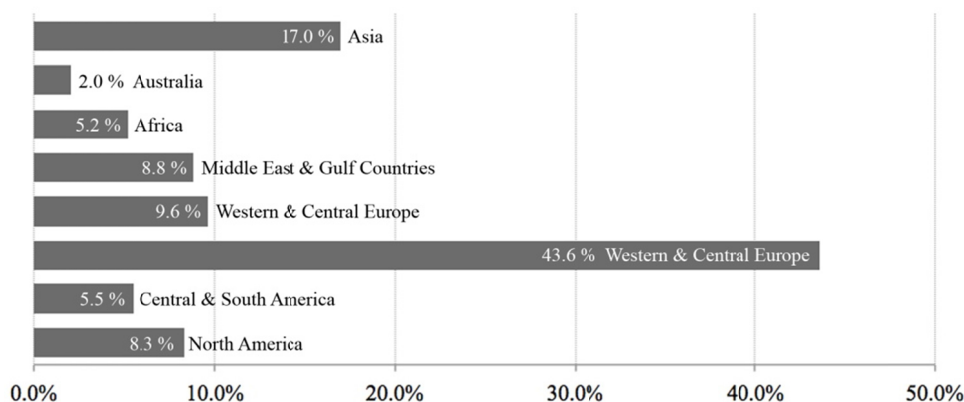


Figure 1. Respondents' origins

The median of Asian responses is 54 and the median of the overall responses 318. With regard to the previously defined hypotheses, the results for specific questions consistently illustrate the responses from Asia in relation to the overall responses.

- Acceptance of price for products 'Made in Germany'

According to Table 1, following the first hypothesis (H1), the price of products 'Made in Germany' for Asian respondents is n = 62 (57.4%) out of a total of N = 108 (100.0%), not acceptable. Comparing the overall responses with the Asian responses, n = 323 (50.8%) out of a total of N = 636 (100.0%), the acceptance rate of the price among Asian respondents is with a deviation of 6.6% more negative.

Table 1. Acceptance price level following hypothesis 1

Q1: Is the price for products MADE IN GERMANY acceptable to you?	No. of respondents			
	ASIA		TOTAL	
Yes	46	(42.6)	313	(49.2)
No	62	(57.4)	323	(50.8)
Total	108	(100.0)	636	(100.0)

Note. Figures in parenthesis are percentages.

Not only for the Asian responses, the collected primary data show that the price for products classified as 'Made in Germany' is with an average of 50.8% not acceptable. With a majority of 57.4%, respondents from Asia do not accept the price. It was expected that Asian responses would significantly accept the price of products 'Made in Germany'. The response is not significant, because the p-value is >0.05. Comparing Asia with the overall responses, there is a larger negative tendency for Asian markets detectable. This result shows that 'Made in Germany' products tend to be seen as having a high price. This could mean that quality, technology, or even delivery aspects that cause a high price of products militate against a product meeting emerging-market requirements. A majority of customers around the globe rate the high price of products from Germany as a negative aspect; the price is therefore disadvantageous for competitiveness.

- Importance of price for purchasing decision

As to the importance of price to respondents' purchasing decisions, Asians rate 'important' with n = 57 (52.8%) and 'very important' with n = 37 (34.3%), as presented in Table 2, following the second hypothesis (H2). With a sum of n = 94 (87.1%) out of a total of N = 108 (100.0%), the responses present a clear message that the price is indeed important to the purchasing decision. Comparing the overall responses of 'important' with n = 379 (59.6%) and 'very important' with n = 182 (28.6%), which are in sum n = 561 (88.2%), the tendency is similar to the responses from Asia.

Table 2. Importance of price following hypothesis 2

Q2: How important is the price for your buying decision?	No. of respondents			
	ASIA		TOTAL	
Very important	37	(34.3)	182	(28.6)
Important	57	(52.8)	379	(59.6)
Neither important nor unimportant	10	(9.3)	55	(8.6)
Unimportant	3	(2.8)	18	(2.8)
Very unimportant	1	(0.9)	2	(0.3)
Total	108	(100.0)	636	(100.0)

Note. Figures in parenthesis are percentages.

The mean value of Asian responses is 21.6 and the median 10; the mean value of the overall responses is 127.2 and the median 55. The response from both groups fulfills the expectation that the price would influence customers' purchasing decision more than average. However, Asian respondents rate the importance with a difference of 1.1% as less important than the average. In the Asian responses to the question about the importance of price (Q2) and the question about the price of products 'Made in Germany' (Q1), there is no difference between the groups detectable, because the p-value is >0.05 . The mean value for those responses that accept the price is 4.02, and for those who do not 4.27. However, the importance of price is evident for the Asian responses as well as the overall responses.

Once again, the result shows that price level is disadvantageous for products classified as 'Made in Germany'. Overall, high price obstructs success in competition and shows a tendency for product attributes not to meet customers' and even market requirements. The finding of Knapp, Günther and Rinn (2013) showing that only 38% of corporations offer products that meet customers' expectations is symptomatic of wider failures.

- Disadvantage delivery time

According to Table 3, following the third hypothesis (H3), the delivery time from Germany to the Asian region is with $n = 65$ (60.2 %) out of a total $N = 108$ (100.0 %) not seen as disadvantageous by a small majority of respondents. The results from the Asian respondents are almost similar to the overall response, with $n = 405$ (63.7%) out of $N = 636$ (100.0%).

Table 3. Aspect delivery time following hypothesis 3

Q3: Do you rate the DELIVERY TIME from Germany as a negative aspect?	No. of respondents			
	ASIA		TOTAL	
Yes	43	(39.8)	231	(36.3)
No	65	(60.2)	405	(63.7)
Total	108	(100.0)	636	(100.0)

Note. Figures in parenthesis are percentages.

It was expected that a majority of Asian respondents would rate the delivery time as disadvantageous and therefore confirm the loss of competition due to delivery time to markets. The results therefore contradict the expectation. For the Asian responses there is no relationship between the delivery time (Q3) and the price of products 'Made in Germany' (Q1), because the p-value is >0.05 .

- Disadvantage delivery costs and importation taxes

According to Table 4, with regard to the third hypothesis (H3), with $n = 58$ (53.7%) out of $N = 108$ (100.0%), the majority consider delivery costs and importation taxes as disadvantageous. The results of the Asian respondents are contrary to the overall responses, with $n = 271$ (42.6%) out of $N = 636$ (100.0%).

Table 4. Aspect delivery costs following hypothesis 3

Q4: Do you think the DELIVERY COSTS and IMPORTATION TAXES are disadvantageous?	No. of respondents			
	ASIA		TOTAL	
Yes	58	(53.7)	271	(42.6)
No	50	(46.3)	365	(57.4)
Total	108	(100.0)	636	(100.0)

Note: Figures in parenthesis are percentages.

It was expected that responses with regard to the disadvantages of delivery costs and importation taxes (Q4) would be comparable with those related to delivery time (Q3). These results also contradict the expectation. Furthermore, Asian respondents see no significant relationship between delivery costs and importation taxes (Q4) and the price of products 'Made in Germany' (Q1), because the p-value is >0.05 . However, there is significance in the relationship between delivery costs and importation taxes (Q4) and delivery time (Q3), because the p-value is <0.05 .

Figure 2 illustrates the negative aspect of delivery time (Q3) in relation to the disadvantages of delivery costs and importation taxes (Q4) from Asian responses $N = 108$ with the overall responses $N = 636$.

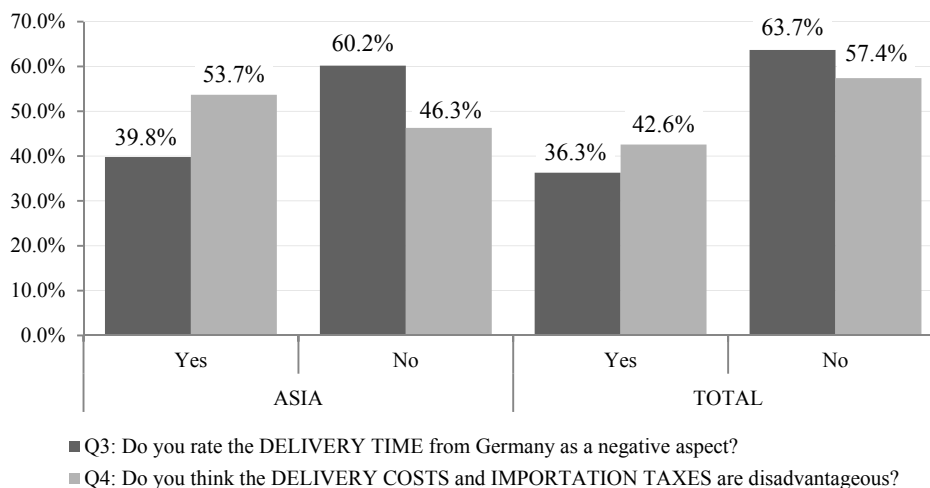


Figure 2. Delivery time and delivery costs - relation between Asian and overall responses

According to those results, the delivery time (Q3) is not seen as a disadvantage by a majority of Asian respondents. However, the delivery costs and importation taxes (Q4) are seen as a more negative aspect. Both delivery time and delivery costs and importation taxes are rated differently than expected. The result shows that customers from Asia are able to deal with long transportation time for products coming from Germany. This could mean that these customers appreciate the product attributes of products classified as 'Made in Germany', such that they feel these products are worth waiting for, perhaps because comparable products are not available locally or because customers seek aspects that help them improve their image. Furthermore, corporations with target markets in Asia face barriers to importing goods. This aspect is transferable to governmental-control issues with local market conditions, and supports Bremmer (2014) in his observations on changing globalization characteristics.

- Acceptance of local production

The result of question 5 (Q5) as illustrated in Table 5 shows that a local production of products under German engineering standards in Asia is with $n = 101$ (93.5 %) out of $N = 108$ (100.0 %) accepted by a large majority. This result shows similarity with the overall responses, $n = 574$ (90.3 %) out of $N = 636$ (100.0 %). The median

is for Asian responses 54 and for the overall responses 318.

Table 5. Acceptance of local production following hypothesis 4

Q5: Would you accept a product engineered in Germany, but locally produced?	No. of respondents			
	ASIA		TOTAL	
Yes	101	(93.5)	574	(90.3)
No	7	(6.5)	62	(9.7)
Total	108	(100.0)	636	(100.0)

Note. Figures in parenthesis are percentages.

As the positive answers demonstrate, Asian respondents as well as all other respondents, appreciate the concept of German engineering paired with local production. It was expected that Asian responses would show an acceptance of local production with a majority of minimum 90.0%. According to the chi-square distribution table the p-value is <0.05 ; therefore, the results from the Asian respondents are significant.

With regard to the COO effect, the normative mechanism determines the influence of social and personal values on a client's decision (Verlegh & Steenkamp, 1999). Thus, clients prefer local products to support the economy (Klein, Ettenson, & Morris, 1998). Furthermore, customers may bear in mind that products meet local requirements when locally produced. Customers' may also expect better pricing due to local production cost factors while keeping the positive attributes of German engineering to prevent a loss in technology and quality.

- Importance of a lower price when locally produced

According to Table 6, following the fifth hypothesis (H5), a lower price is rated 'important' with $n = 40$ (37.0%) and 'very important' with $n = 39$ (36.1%). In sum, 73.1% of respondents show a tendency towards perceiving importance. The median is 20 for Asian respondents and 143 for the overall responses.

Table 6. Importance of price with local production following hypothesis 5

Q6: How important is a lower price for you when products are locally produced?	No. of respondents			
	ASIA		TOTAL	
Very important	39	(36.1)	206	(32.4)
Important	40	(37.0)	251	(39.5)
Neither important nor unimportant	20	(18.5)	143	(22.5)
Unimportant	6	(5.6)	27	(4.2)
Very unimportant	3	(2.8)	9	(1.4)
Total	108	(100.0)	636	(100.0)

Note. Figures in parentheses are percentages.

The Asian responses show no difference between the groups of acceptance of local production (Q5) and the importance of a lower price (Q6), because the p-value is >0.05 . The mean for those who accept a local production (Q5) is 4.02, for those who do not it is 3.43. There is no difference between the price of products 'Made in Germany' (Q1) and the importance of a lower price (Q6), because the p-value is >0.05 .

The result shows a tendency for customers to expect lower pricing for products that are produced locally in their markets.

5. Scientific Implications and Limitations

The purpose of this study was to investigate disadvantages that multinationals from Germany face in growing international competition. Disadvantages in product price, delivery time and transportation costs have been revealed. Therefore, the strategy of having a production site located in Germany can be seen as disadvantageous due to production cost factors and distance to markets. Comparing findings against the literature, the results are mostly in line. A majority of 57.4% of Asian respondents consider the price of products classified as 'Made in Germany' to be too high. Price is important for customers' purchasing decisions. The delivery time from

Germany to Asian markets is not seen as disadvantageous by 60.2%, but delivery costs and importation taxes are seen by 53.7% to have a negative impact on the success of German products. The results support the hypothesis that significant acceptance would be found for production relocation to Asia while retaining German engineering. Lower price tends to be seen as important for products produced in local Asian markets. Overall, the analysis of responses from Asia revealed little divergence from the overall responses. The results confirm that products classified as 'Made in Germany' suffer disadvantages on the world market due to product price, delivery costs and transport time. The results are not all significant, but show that products tend to encounter competitive disadvantages. This study therefore suggests that corporations facing growing competition in international markets can gain competitiveness through production relocation to Asia.

The recommendations of this study address brand marketing, product management, as well as strategic management related to future sourcing plans. This research study provides essential inputs for improving competitiveness at different levels.

The participants in focus in this survey are limited to international visitors to the MEDICA fair who have been asked for non-medical products. Furthermore, German respondents' are not of interest and have been sorted out before the survey started. Unfortunately, the opinions of respondents throughout this survey may be different for other industries. However, the results conducted within the medical device industry are due to its high standards and requirements for technology and quality transferable to other industries.

6. Conclusions

This article has examined the relationship between German corporations, which are losing competitiveness despite of the 'Made in Germany' hallmark, and the acceptance of local production relocated to Asia while retaining German engineering and attributes. In relation to sourcing and manufacturing, the positive attributes of 'Made in Germany', those of quality, technology and reliability, are great selling arguments for competing against others and delivering real value to customers. Furthermore, it offers competitive advantages through adjusting product characteristics to meet local requirements paired with local manufacturing.

Based on these results, a worthwhile future research topic would be how multinational companies can implement a strategy that considers local production in Asia while retaining German engineering.

For German corporations, this study points out opportunities to gain competitiveness by meeting the market conditions in their target markets in Asia; for Asian corporations, we have revealed opportunities to open local production sites adhering to German engineering. The results show also, that prevailing sourcing strategies of German multinationals may be wrong and therefore require an adaptation due to future market and customer realities. In conclusion, retaining German engineering while relocating production to Asia can be worth pursuing to gain competitiveness, and can accommodate the market conditions of tomorrow.

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Note

Note 1. ISO 13485:2003: International standard for design and manufacturing medical products

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