Value-Based Pricing
- The perception of value

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“Everything is worth what its purchaser will pay for it”
– Publilius Syrus (Latin writer of maxims, first century B.C.)
Acknowledgement

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Abstract

During recent years corporations have been focusing on revenues rather than profits. This led to decreased margins and unstable financial performances. To increase profits, new pricing strategies have emerged. One promising pricing strategy that focuses on increasing profits is value-based pricing, which constitutes the monetising of customer perceived value. The purpose of this paper is to identify what factors influence customer perceived value in the global high-tech service industry. With this knowledge corporations can draw precise evaluations of customer perceived value and hence utilise value-based pricing in the best possible way. A qualitative method was used to study the case of MB Services, the service division of the Meyer Burger Technology Group, and the global high-tech service industry represented at the Hannovermesse 2011, an industrial exhibition in Hanover, Germany. The empirical data collected was analysed together with the theoretical framework. The findings are that customer perceived value of high-tech services is influenced by the overall benefits the customer can obtain from the service, the sacrifices in terms of costs the customer has to pay for the service, competitors’ offerings, different segments, subjective judgments of distinctive people within a corporation, and the industries’ and customers’ level of maturity. Customer perceived value is an under researched subject, which requires further investigation.

Key words: Value-based pricing, customer perceived value, service, global, high-tech
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<td>Business to Consumer</td>
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<td>COGS</td>
<td>Costs of Goods Sold</td>
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<td>LCC</td>
<td>Life Cycle Cost</td>
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<tr>
<td>R&amp;D</td>
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<tr>
<td>SGP</td>
<td>Solar Grid Parity</td>
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<td>SG&amp;A (costs)</td>
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Nähring, 2011
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1 Introduction

1.1 Background
What keeps a business running? It is revenues calculated by multiplying price with sales volumes. Revenue alone may keep the business running, but it neither indicates the corporation’s overall success, nor how profitable it is. When determining profit, one has to place a corporation’s earnings in relation to costs. Profit covers forthcoming costs, e.g. costs associated with research and development (R&D), to ensure future business. The renowned economist Peter Drucker (1909-2005) puts it: “earning today the cost of staying in business tomorrow”. Furthermore, profit makes the corporation attractive to new shareholders and satisfies existing ones. Therefore, companies should not only focus on increasing revenues (sales volumes), but, more importantly, on the profits they generate (Beaton, 2008).

This brings us to the importance of what a corporation charges for its product (price), and all costs incurred from running the corporation’s operations. Price and cost are two highly adjustable elements of business. However, even the slightest adjustments to either of these parameters influence the corporation’s competitiveness, profitability and financial success (Beaton, 2008; Cressman, 2002; Baker et al., 2010). Obviously, if one can decrease costs and increase price while sustaining sales, the impact on the corporation’s profits would be significant. This thesis will exclusively focus on pricing, as it is interesting from a sales point of view. Prices are presented to customers, whilst costs are not, or better should not be disclosed to them.

A study undertaken by McKinsey & Company in 2010 revealed the potential of pricing: “A one-percentage-point improvement in average price of goods and services leads to an 8.7 percentage increase in operating profits for the typical Global 1200 corporation” (Baker et al., 2010:1) (The world’s largest 1200 publicly held corporations by market capitalisation). The McKinsey study argues that well executed pricing strategies and programs commonly result in the corporation being able to raise prices of products by 2-4%, and therefore increase the total profit by 15 to 25 % of a typical corporation (Backer et al., 2010).
To exemplify this phenomenon I provide a brief cost-based pricing calculation. Cost-based pricing is an old fashioned way to set prices. It computes price by total self-costs (direct and indirect costs) added with a desired profit. If the costs to produce a product are 80 USD, and the desired profit add-on is 20 USD, the price of the product would be 100 USD ($80 + 20$). If one could charge the customer a price of 101 USD by leaving costs unaffected, the profit would increase with 5% ($1 / 20$ USD). In conclusion, a corporation can increase its profit by 5% when increasing price by 1%.

In the article *Pay for Profit*, Beaton (2008) describes the issue of Arctic Spas Oakville Group Inc. that commissioned retailers based on revenue. These, in turn, focused on selling volumes by neglecting margins, which resulted in financial difficulties. When the sales commission was configured to be profit based, profit margins during economically bad years were sustained and increased during good years (Beaton, 2008). Although my thesis will not study how to incite retailers, this article holds an interesting essence and communicates the importance to focus on margins and profits, not revenues.

Germanys small- and medium sized industrial corporations created a strategy to maintain margins and being profitable when they differentiated themselves with innovative products and focusing on niche markets (The Economist, 2011a). The purchasing price of a specialised machine that satisfies a certain demand is less important than the purchasing price of an undifferentiated machine (The Economist, 2011a). It is often more suitable for companies to focus on smaller market segments, differentiate, request higher prices, and thereby be more profitable. Rather than to be undifferentiated, suffer from severe competition, with declining margins as a result.

Allstate, an American insurance corporation, gained a competitive advantage under the CEO Tom Wilson, who developed a sophisticated pricing model, which became an innovation in the automobile insurance industry. The problem for most insurance agencies was low differentiation. The price of the insurance was set according to the risk level of the signee – a common approach in the industry. Hence, most consumers view price as the only differentiator between companies. When Tom Wilson decided to study the target market more closely, he learned the demand of the different
segments. In 2005 Allstate launched their innovative product called *Your Choice Auto*, where consumers could select from several tiers of insurance with different features and price levels (Kash & Calhoun, 2010). The financial impact for Allstate was significant. The corporation could differentiate itself from competition, creating more value for the customer, capturing higher return – just like the bulk of Germany’s industrial companies as explained above.

### 1.2 Problematisation

Pricing is one of the most powerful strategies available to manufacturers (Bruck, 2010). Yet, pricing is underutilised, underrecognised and not taken seriously enough in general (Bruck, 2010; Baker et al., 2010). Time, energy and talent is allocated elsewhere (Baker et al., 2010).

With globalisation corporations are becoming increasingly integrated with each other. This creates opportunities but also competitive threats (The Economist, 2011b). Mochtar & Arditi (2001) anticipate markets to be more globalised and competition to grow fiercer in this millennium.

This ultimately leads to the increasing need for corporations to differentiate from their rivals. Today, modern companies that managed to differentiate their offerings are competing in a monopolistic manner where only a small number of providers supply most of the market (The Economist, 2011b). In the short-run, monopolistic competition can lead to excess profits (The Economist, 2011b). However, as competition is though it requires substantial investments to sustain the barriers for new suppliers to enter the market and to keep a monopolistic market position (Investment Week, 2011). For industrial corporations these investments are mainly associated with R&D, which ideally distinguishes the product from competition with new innovative features that should be valued by customers (The Economist, 2011a).

When competition is intense I believe that many companies make hasty evaluations of customer perceived value, which leads to incorrect assessments, and ultimately unprofitable R&D investments that may ruin the corporation. Thus, to increase price by 1% to increase profit by 5% (what could easily be realised in a monopolistic market position) is perhaps not as easy to do, as it is to calculate. If there is no monopolistic market position, a 1% price increment may result in customers selecting competitors’ offerings, resulting in lost sales. Hence, price is one of the most
important aspects of an offering as it is ultimately linked to revenues and profits. But what is the correct price that customers are willing to pay for a product or service and what gives the highest profit? In addition, what pricing strategy should be followed?

Hinterhuber (2008b) has identified four major pricing strategies, which are: cost-based, customer-based, competition-based, and value-based pricing. A detailed description of these will be given in section 2.2. Traditional strategies to pricing, such as the old-fashioned cost-based pricing strategy, still dominate business practices, as they can be applied easily (Harmon et al., 2009b). Modern pricing strategies, such as value-based pricing, are rarely applied as they are difficult and time consuming to implement (Hinterhuber, 2004; Harmon et al., 2009b).

Mohammed (2010b) states that most managers are reluctant to set prices. “Instead of a driver of new profits, prices are a mix of marking-up costs, maintaining margins, fly-by-the-seat analyses, and matching competitors” (Mohammed, 2010b:63).

To set what customers call acceptable prices, corporations must understand market conditions and other influencing factors that could limit the success of a chosen strategy. These include understanding what their target market is prepared to pay for their product, forecasting demands, as well as analysing competitors and substitute products. All this information is needed when determining the correct price. A holistic and qualitative view of this information will result in good understanding of the market, and hence, help to determine the most profitable outcome for any corporation (Harmon et al., 2009a). Harmon et al. (2009a) claim “comprehensive knowledge of the customer can result in more appropriate approaches to pricing strategy” (p.8). However, this information has to be obtained from extensive and continuous market research.

When selecting a pricing strategy managers should take the long-term perspective into account. A pricing strategy should be persistent and not altered during slow business cycles when demand is low. Mohammed (2010b) argues that once the price has been discounted to ensure sales in a recession, the product has been devalued in the eyes of the customer. “Once devalued, it is tough to raise prices when the economy recovers” (Mohammed, 2010b:63).
Yet, the perception of price differs between customers. Some are prepared to pay more for the same product or service than others. Not every customer is price sensitive (Mohammed, 2010b), making the question of what is the right price more difficult to answer. In addition, most crucial pricing decisions differ distinctly between companies and industries (Baker et al., 2010).

Notable is the modest academic attention to pricing – despite of the vast impact it has on profitability. In my review on business related books on Amazon.com, I realised that few marketing books are written about pricing. The result is shown in Figure 1-1. Most marketing books are directed towards advertising and promotion. Little attention is given to distribution and pricing.

At a meta-level, the reasons why I concentrate my thesis on the field of pricing are simple and evident. Pricing is one of the dominant elements of a corporation’s profitability. But pricing is also, surprisingly, the least researched element of marketing. On a specific level, various researchers have increasingly discussed value-based pricing in recent years. They claim it is the most profitable and sustainable pricing strategy, because it focuses on customer perceived value (Hünerberg & Hüttmann, 2003; Dutta et al., 2003; Piercy et al., 2010).

1.3 Purpose

The purpose of my thesis is to:

- Identify what the customer perceives as value in the context of value-based pricing in global high-tech service industries
2 Theoretical framework

This section starts with a brief summary of research conducted on pricing. Afterwards, the most common pricing strategies (see Figure 2-1) are listed and examined. The value-based pricing strategy is discussed in more detail with a special focus on customer perceived value, which is the core element of that pricing strategy (Hinterhuber, 2004; Harmon et al., 2009b). At the end a state-of-the-art description on customer perceived value is given, concluding with the research question.

![Figure 2-1: Overview over examined pricing strategies, own illustration](image)

2.1 Research about pricing

The results of my Amazon review of pricing related books may be questioned. Today, most research is presented in forms of articles distributed over internet-based databanks, not in books available on Amazon.com. Nonetheless, researchers as Hinterhuber (2004), Piercy et al. (2010) and Shipley & Jobber (2001) support my finding, concluding that pricing has been neglected in scientific business related studies, and more alarmingly in profit-oriented corporations in spite of its major impact on profitability.

Hinterhuber (2004) claims that price increases are not the only means to higher profitability. An overview on various methods to increase earnings before interest and taxes (EBIT) is illustrated in Figure 2-2. The methods Hinterhuber (2004) examined are:

- Increased prices
- Increased revenues
- Decreased costs of goods sold (COGS)
- Decreased costs associated with selling, general and administration (SG&A)
- Decreased research and development (R&D) costs
Hinterhuber’s (2004) illustration eliminates all doubts about the significance of pricing. When increasing price by 5%, EBIT increases by 22%, whilst other methods e.g. higher revenue from increased sales and decreased COGS only account for a 12% or 10% increase, respectively. Ding (2007) supports Hinterhuber’s findings: “Pricing is one of the most powerful levers a corporation can use to affect revenues and profits” (p.1).

However, according to Shipley & Jobber (2001), today most companies operate in monopolistic markets. These are markets where a small number of providers supply most of the market. The primary issue in such markets is the interdependence of corporations. Every competitive action of a player in the monopolistic market has impacts on competition (Shipley & Jobber, 2001). Thus, prices cannot merely be increased by 5% without triggering a reaction from competition. Furthermore, when customers are not realising any increase in the value of the offering, or not accepting the reasons for a price increment, they would be dissatisfied, demanding to renegotiate price, or even turn to competition (Dutta, 2003). When corporations give in to weak market conditions (such as the recent economical downturn), or just handle pricing issues in an ad hoc way, they will end up with irrational prices and angry customers (Dutta et al., 2002).
Valuckaitė & Snieška (2007) conclude, “*Pricing in B2B markets is very complex, but it can help to go ahead competitors and gain tremendous competitive advantage*” (p.108).

Extensive knowledge of the customer and the market results in more appropriate pricing strategies (Harmon et al., 2009a) that are aligned with evolving market conditions, reinforce the corporate strategy (Dutta et al., 2002; Dutta et al., 2003), increase the barriers to imitate and thus is a source of sustainable competitive advantage (Dutta et al., 2003).

### 2.2 Pricing strategies

The awareness of price sensitivity may be the main reason why so many pricing strategies have emerged. Nagle et al. (2011) refer to price sensitivity as the markets change in demand of a product or service given various price levels. For commodities the price sensitivity is rather inelastic, which means that customers are not inclined to purchase a commodity at a much higher price than what is charged by other suppliers. For capital goods, however, the customers’ price sensitivity is rather elastic, which means that the market’s demand varies greatly depending on the price level and the value delivered (Nagle et al., 2011).

I will explain the four major and most commonly used pricing strategies: cost-based pricing, customer-based pricing, competition-based pricing and value-based pricing (Hinterhuber, 2008b).

#### 2.2.1 Cost-based pricing

In a cost-based pricing situation price is computed by direct and indirect costs of one product or service, multiplied with a profit add-on (Noble & Gruca, 1999; Shipley & Jobber, 2001) Cost-based pricing is the most widely used pricing strategy on a global scale (Shipley & Jobber, 2001; Nagle et al., 2011). After the price is set the perceived value of the product can be identified and apprehended by the customer, as illustrated in Figure 2-3 (Harmon et al., 2009a).

![Figure 2-3: The cost-based pricing strategy, revised from Harmon et al. (2009a), own illustration](image)
Exploiting this pricing strategy, profit mark-ups are maintained and prices can easily be justified internally as costs are covered (Shipley & Jobber, 2001). The biggest advantage of this model is the simplicity to calculate the price. Information that is needed “… relies on more readily information from the cost-accounting system” (Harmon et al., 2009b:2).

The major pitfall to this pricing strategy is the lack of customer and market involvement. The interests of the supplier are placed over the interests of the customer (Dutta et al., 2002; Noble & Gruca, 1999; Shipley & Jobber, 2001). In addition, cost-based pricing is rather short-term and solely tactical in nature (Dutta et al., 2002). The goal of the suppliers adopting this pricing strategy is to recover costs and ensure margins rather than setting prices on customer perceived value (Harmon et al., 2009a).

In spite the criticism of several researchers, there is the question if cost-based pricing is still a profitable pricing strategy. Harmon et al. (2009a) argue, “As markets have become more competitive and providers are moving to more service-based revenue models, cost-based pricing models that ignore customer-value requirements can no longer ensure a favourable rate of return…” (p.7-8). Shipley & Jobber (2001) state “cost-plus is not the most profitable pricing method” (p.310).

2.2.2 Customer-based pricing

Customer-based pricing is the practice to set prices according to what the customer is willing to pay for a product or service.

According to Nagle et al. (2011) there are problems when prices are set to what customers are willing to pay, because professional B2B purchasers do rarely indicate to the seller what they are willing to pay.

Nagle et al. (2011) found that truly innovative products tend to be under-priced when purchasers are ignorant of the product’s value. There may be a limited amount of purchasers that openly state what they are willing to pay for a product. Then again, customer perceived value differs between segments and distinctive corporations (Ding, 2007; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004).
2.2.3 Competition-based pricing

Competition-based pricing can be performed in two ways. Either a corporation uses this strategy to match the prices of rivals, or, which is more usual, match competitors’ price adjustments proportionally to preserve the preferred price difference (Shipley & Jobber, 2001).

Shipley & Jobber (2001) claim that this pricing strategy may be easy to implement and anticipates price wars, but it ignores the fact that price similarities do not ensure equal competitiveness, which is rather affected by customer perceived value of non-price characteristics (Shipley & Jobber, 2001).

2.2.4 Value-based pricing

Value-based pricing is the practice to set prices according to customer perceived value of a product or service (Nagle et al., 2011).

Various researchers share the notion that value-based pricing is the most profitable pricing strategy (Hünerberg & Hüttmann, 2003; Dutta et al., 2003; Piercy et al., 2010). Nagle et al. (2011) surveyed 200 corporations on the impact of pricing strategies on the corporations’ profitability. They found that companies, which implemented sophisticated value-based pricing strategies, earn 31% higher operating income than competitors basing pricing strategies on market share goals or target margins. Key to this success is the fact that prices derived from value-based pricing depend on customer perceived value requirements rather than those of the supplier (Harmon et al., 2009a; Hinterhuber, 2008a; Harmon et al., 2009b; Ding, 2007). Customers will not feel neglected in the process of pricing the product and may accept to buy a somewhat more expensive product if it delivers higher customer perceived value (Hinterhuber, 2004).

Moreover, value-based pricing is highly applicable to services (Ding, 2007). “Value-based pricing is an important conceptual approach for services that leverages the benefits of the service offering in order to match the buyer’s willingness to pay with the value received” (Ding, 2007:7). This is an interesting aspect, considering the increasing need for services when industries are becoming more market oriented (Yu et al., 2008).
In contrary to cost-based pricing – which is short-term and tactical in nature because the customer perspective is not taken into account – value-based pricing takes customer perceived value as the point of departure. Hence, value-based pricing is strategic and long-term in nature (Harmon et al., 2009a). It emphasises the monetising of customer perceived value through the pricing method, as illustrated in Figure 2-4 (Dutta et al., 2002; Harmon et al., 2009b). Harmon et al. (2009) believe that a “Value based pricing strategy is market segment specific, since value perceptions vary between customer groups. After choosing the target market, marketers must determine the value that customers perceive in the product” (p.17).

Hinterhuber (2008a) claims that companies adopting value-based pricing have slightly higher prices than those who do not use this strategy. This can have significant impacts on the corporation’s profit. When the price can be increased, profit margins will increase significantly (Hinterhuber, 2004). A sophisticated framework to implement value-based pricing is found in appendix 9.1.

**Limitations**

Even if value-based pricing is the most profitable pricing strategy there are some drawbacks to it. The major drawback is the difficulty to obtain and interpret data needed from customers, competitors and even from the own corporation to evaluate customer perceived value (Hinterhuber, 2004). Harmon et al. (2009b) add that value-based pricing “… is often perceived to be too expensive or time consuming to collect such data from actual or potential customers” (p.3).

Another limitation to value-based pricing is the collaboration required to implement this pricing strategy. A single manager should not take the decision and determine the price in solitude. He or she must engage sales personnel and other important individuals that are directly affected by a price increase or decrease into the
discussion. Only then value-based pricing can be sustainably implemented in the corporation and not only performed by a single employee (Hinterhuber, 2004).

One should not think that customer perceived value analyses, required in a value-based pricing situation, could be done once and for all. Shipley & Jobber (2001) indicate that corporation- and marketplace conditions are everything but static. In an ever-changing environment extensive and continuous analyses are essential to get the most effective and accurate prices (Shipley & Jobber, 2001).

2.3 Customer perceived value

Harmon et al. (2009b) and Hinterhuber (2004) claim that the concept of examining customer perceived value is central to the value-based pricing strategy. Further, “… A solid understanding and quantification of customer value is a key to profitable pricing. This understanding can suggest where to increase prices without risking losing sales. Customer value analysis is a tool, which can be used to justify price increases to customers...” (Hinterhuber, 2004:777). Moreover, customer perceived value is significant to competitive advantage and long-term business success (Khalifa, 2004). Consequently, there is a great deal of importance attached to this model. I will extensively examine this phase of value-based pricing.

Nagle et al. (2011) differentiate between several layers of customer perceived value. Value “… refers to the overall satisfaction that a customer receives from using a product or service offering ... This is called use value – the utility gained from a product” (p.34). When the use value is put in relation to the price of other offerings that satisfy the same customer demand (the reference value), we extract the economic value of an offering. Nagle et al. (2011) use the drink vendor walking the beach as an example. When it is extremely hot and you are lying on the beach, the use value of your favourite soda in that particular moment might be substantially higher than in a “normal” situation. However, the drink vendor on the beach might not be able to sell at the price of your perceived use value when a kiosk charging the normal price for the soda is nearby. This relation is called economic value (Nagle et al., 2011).

To capture additional economic value companies can differentiate their offering from competition (Nagle et al., 2001). This is called differentiation value and exists in two
forms: monetary value (such as total cost savings and income enhancements), and psychological value (other criteria that create satisfaction, such as the prestige and beauty derived from a luxury good) (Nagle et al., 2011). Consumer goods often create more psychological than monetary value as they emphasise on creating satisfaction and pleasure. In some cases, however, B2B exchanges focus on psychological value, and B2C exchanges focus on monetary value for the customer. “… It can be challenging to discern which is more important to the purchase decision” (Nagle et al., 2011:35).

“A product’s total economic value is calculated as the price of the customer’s best alternative (the reference value) plus the worth of whatever differentiates the offering from the alternative (the differentiation value)” (Nagle et al., 2011:35; Hinterhuber, 2008b). This relationship is illustrated in Figure 2-5.

![Figure 2-5: Economic Value (Nagle et al., 2011:36)](image)

Hinterhuber (2008b) has summarised the characteristics of customer perceived value in a B2B situation as: “Value is (1) a subjective concept (it is a belief which is distinctive between individuals), value is (2) a trade-off between benefits and sacrifices, value is (3) multidimensional, value is (4) defined relative to competitors, value is (5) segment specific, and value is (6) future oriented” (p.390). Future oriented, because B2B transactions usually require substantial investments that are directed towards future profits.
Khalifa (2004) has summarised the value exchange model, which measures customer perceived value according to benefits and costs. In this model, the total utility value and psychic value constitutes the total benefits or total customer perceived value. The costs or customer sacrifices consist of both financial and non-financial costs – the total cost of ownership.

Blocker (2010) proposes a similar approach to quantify customer perceived value. He has created a conceptual framework to measure customer perceived value. Benefits and costs are the core of this framework. Benefits include quality, personal interaction, service support and know-how of a supplier, whereas customer sacrifices are direct costs (costs for acquiring a product or service), and operation costs (Blocker, 2010). Blocker’s (2010) conceptual framework is illustrated in Figure 2-6.

![Figure 2-6: Framework for measuring customer value, Blocker (2010:534)](image)

According to Hinterhuber (2004), an economic customer perceived value analysis should identify the real value – in monetary and economical terms – of a product or service to a specific customer or to segments of customers.

Hinterhuber (2004) has identified the following steps to quantify economic customer perceived value:

1. Identify the cost of the competitive product and process that the customer views as best alternative
2. Segment the market
3. Identify all factors that differentiate the product from the competitive product and process
4. Determine customer perceived value of these differentiating factors
5. Sum the reference value and the differentiation value to determine the total economic customer perceived value
6. Use the value pool to estimate future sales at specific price points (Hinterhuber 2004:769-770)

Nagle et al. (2011) give their suggestion of how to evaluate the total economic customer perceived value. They have identified the following five steps:
1. Competitive reference prices
2. Estimating monetary value
3. Estimating psychological value
4. Customer value modelling (CVM), which is an analysis that “relies on customers’ subjective judgments about price and product attribute performances. It assumes that customers seek to purchase the product that gives them the greatest perceived benefit – which might be quantified in monetary terms, but need not be – per unit price” (p.52)
5. Value-based market segmentation

Another suggestion of how to measure customer perceived value is given by Ulaga & Chacour (2001). They define the following steps when determining customer perceived value:
1. Identification of benefits (quality-related) and sacrifices (price-related)
2. Value creation as a trade-off between quality and price. “Price potentially conveys two opposite functions: on the one hand, it may be perceived as a sacrifice and on the other hand as a symbol for extra quality, value, or prestige” (Ulaga & Chacour, 2001:530). They further indicate a positive correlation between quality and price in a B2B setting, i.e., price usually increases when the quality does (Ulaga & Chacour, 2001)
3. Distinction between customer segments and specific-use situation
value perceptions of different employees and departments have to be captured (Ulaga & Chacour, 2001)

5. Comparison with alternative suppliers’ offerings (competitive analysis)

In a later research Ulaga (2003) has identified the following value drivers of B2B relationships as shown in Figure 2-7.

![Figure 2-7: Value drivers in B2B relationships (Ulaga, 2003:682)](image)

As we can see from the various definitions, researchers have identified several techniques to monitor and compute customer perceived value. This might cause confusion. However, researchers generally agree on two factors to measure customer perceived value in a B2B setting. These are trade-offs between benefits (value) (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Blocker, 2010; Graf & Maas, 2008), and sacrifices (price) of suppliers’ offerings (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Blocker, 2010; Graf & Maas, 2008) – as perceived by key executives of the customer’s corporation. In addition, the price and value of competitive offerings have to be taken into account (Hinterhuber, 2008b; Ulaga & Chacour, 2001; Nagle et al., 2011; Hinterhuber, 2004; Ding, 2007). Ulaga & Chacour (2001) state that customer perceived “value is relative to competition ... offering better value than the competition will help a corporation to create sustainable competitive advantage” (p.529). Chatain (2011) has elaborated further on the importance of competitive factors when buyers determine the value of a product or service. “… Buyers with access to other suppliers, which offer superior alternatives, gain an advantage over a single supplier” (p.97). Chatain (2011) claims that customers with high awareness of competitors’ offerings can effectively exploit this knowledge in playing a single supplier against other suppliers and thereby reducing costs.
2.4 State of the art

The following state of the art description is exclusively concentrated on the core element of value-based pricing which is customer perceived value (Hinterhuber, 2004; Harmon et al., 2009b).

Anderson & Narus (1998) found that few suppliers in industrial markets understood how customer perceived value could be defined, and more alarmingly how it could be measured. This is a significant disadvantage considering that identifying value of a product or service has never been more important (Anderson & Narus, 1998; Hinterhuber, 2008b). However, there is also confusion in the academic world. Numerous researchers have studied value-based pricing (see Hinterhuber, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Harmon et al., 2009a; Harmon et al., 2009b; Ding, 2007; Dutta et al., 2002), but not all researchers share the same idea of a methodological framework to implement value-based pricing. There are further discrepancies and contradictions towards the quantification of customer perceived value, and, more precisely, the economic value analysis. However, there is a shared notion that value to the customer is subject to:

(1) Benefits – including monetary cost-savings, performance increases, and other monetary and non-monetary improvements – that can be realised with the product or service (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Blocker, 2010; Graf & Maas, 2008).

(2) Sacrifices – the sacrifices the customer has to overcome, which is the price charged for the product or service and the total cost of ownership (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Blocker, 2010; Graf & Maas, 2008).

(3) Competition – the price and value derived from competitive offerings (Hinterhuber, 2008b; Nagle et al., 2011; Hinterhuber, 2004; Ding, 2007; Ulaga & Chacour, 2001; Chatain, 2011).
(4) Segments – different customer segments and perhaps even distinctive corporations might have dissimilar value perceptions as they use the product or service in distinctive ways (Ding, 2007; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Harmon et al., 2009).

(5) Subjective judgments – the distinctive value perceptions of different individuals within a corporation (Hinterhuber, 2008b; Ulaga & Chacour, 2001).

La et al. (2007) claim that “The definition of value is often vague, and the interpretation might be different between the client and the supplier” (p.275). They further indicate that more importance should be placed on how the customer determines the value of a product or service instead of the supplier (La et al., 2007). To determine and measure customer perceived value is key to value-based pricing (Hinterhuber, 2004; Harmon et al., 2009b). There is, however, only limited empirical validation to how value is perceived by customers (La et al., 2007). Hinterhuber (2008b) states, “Further validation of the proposed model and measurements to quantify value are the next critical steps which are urgently required” (p.440). Graf & Maas (2008) add, “The biggest deficit and challenge in customer value research lies in its empirical research. Unfortunately, ... there is not much sound, empirical research into customer value” (p.10). Khalifa (2004), who extensively reviewed extant literature on customer perceived value, claims the concept offers a wide theoretical support. However, they need empirical testing before the methods can be used as guidelines for managers (Khalifa, 2004).

In conclusion, according to the above authors whom indicate that customer perceived value is an underresearched subject I believe this is an emerging element of value-based pricing. I therefore carry out a study in customer perceived value to provide essential empirical findings.

However, limited theoretic attention has been given to B2B services (La et al., 2007; Graf & Maas, 2008; Khalifa, 2004; Hinterhuber, 2008b).

In my opinion this is a significant gap, considering that value-added services are becoming more important than industrial goods (Yu et al., 2008). As industries are becoming more market oriented, the demand for flexible, efficient and customer-supplier cooperative industrial services is increasing (Yu et al., 2008). Moreover, customers often need services, such as training, to operate sophisticated industrial machines and entirely utilise their advanced technology (Yu et al., 2008). “International services are defined as the application of specialised competencies (skills and knowledge) through deeds, processes and performances across international borders for the benefit of another entity. They are reported to be the fastest-growing component of the global economy” (La et al., 2009:274). Figure 2-8 illustrates the vast growth in the service sector measured in percentage of accumulated world GDP data from 1971 until 2007.

2.5 Research question

What factors influence customer perceived value in the global high-tech service industry?
3 Methodology

3.1 Research design

The research design creates a framework for collecting and analysing data (Bryman & Bell, 2003). The framework for collecting data for my thesis was divided into two phases: The first phase was a research conducted at an industrial exhibition. The second phase was a case study research of MB Services. In both phases I qualitatively researched what factors influence customer perceived value of global high-tech services. Qualitative research methods seek to explain the particular (Hyde, 2000). They are used when a researcher intends to use exploratory research methodology based on a small number of samples, which would provide an insight and understanding of the context of the problem (Malhotra, 2004; Hyde, 2000). This understanding is necessary because customer perceived value is an underresearched subject, which requires empirical validation (La et al., 2007; Hinterhuber, 2008b; Graf & Maas, 2008; Khalifa, 2004). More information about qualitative and quantitative research methods can be found in appendix 9.6.

Throughout the two phases I used depth interviews to collect data. The data I obtained was of primary source, which means that it was originated by my research for the specific purpose of addressing my research question (Malhotra, 2004).

The primary data will be analysed using keywords the interviewees mentioned during the depth interviews. These keywords are bundled together into generic keywords (first pattern finding). I will then try to identify and group different interviewees that answered similarly (second pattern finding). Finally, other patterns that are interesting to analyse are examined (third pattern finding).

This framework for analysing my primary data will determine whether the theoretical state of the art definition in section 2.4 is validated, rejected or has to be revised. This approach to research whether a theory is correct or not and to give suggestions to improve the theory is called abduction (Haig, 2008).
More information about abductive, inductive and deductive methods to test a theory is found in appendix 9.5. My research design will define what factors influence customer perceived value of global high-tech services, and thus answer my research question.

My abductive research design can be summarised in the six steps as illustrated in Figure 3-1. I have (1) identified what researchers today know about the subject of how to define customer perceived value; I have (2) selected the appropriate research method: depth interviews and a case study; I have (3) researched my subject in two-phases (exhibition and case study); I have (4) reflected on the empirical data and found different patterns; I have (5) analysed the patterns with the established theory; I have (6) drawn conclusions of these findings and given suggestions to improve the current theory.

3.2 Research method

The case study is a qualitative research method (Hyde, 2000), which is being increasingly selected as an appropriate and flexible research method (Rosenberg & Yates, 2007). It became necessary and important in social sciences (Flyvbjerg, 2004), because it generates managerially relevant knowledge (Gibbert, 2008).

Yin (2009) claims: "A case study is an empirical inquiry that

- investigates a contemporary phenomenon in depth and within its real-life context, especially when
- the boundaries between phenomenon and context are not clearly evident” (p.18)
The case study is a detailed examination of a single example or a case, which focuses on a corporation or a community (Flyvbjerg, 2004; Hyde, 2000; Bryman & Bell, 2003; Yin, 2008).

A case study method is research in the context of real-life events in close interaction with practitioners (Yin, 2008; Gibbert et al., 2008; Flyvbjerg, 2004). Yin (2008) identified that the most important source of information in a case study is interviewing. The two ways of interviewing are either rigorous structured or unstructured interviews using open-ended questions (Engwall, 1983). Yin (2008) claims that interviews in a case study should be guided with open-ended questions to ensure fluid conversations. Depth interviews are one form of conducting interviews with open-ended questions that ensure fluid conversations (Malhotra, 2004; Yin, 2008).

3.3 Population

The population I wanted to study was the global high-tech service industry. I defined the global high-tech service industry as all corporations that purchase or sell high-tech services, which are B2B services that are directed towards industrial purposes.

As one can imagine, the population with the specifications mentioned above encompasses almost every industrial corporation on the planet. To grasp the vast population I provided an example of the specific case of the Meyer Burger Technology Group, which competes with manufacturing equipment in the solar, semiconductor and optical industry. They have around 500 customers and another 870 potential customers, which mainly are located in Europe, Northern America and Asia (Mäder, personal communication, 2011).

3.4 Sampling

I wanted to study a fraction of this population in two phases: the Hanover exhibition 2011 and the case study of MB Services. With limiting my research to these phases I was able to conduct many face-to-face depth interviews. Especially valuable to my research was to conduct interviews with purchasing managers that are experienced in purchasing high-tech services and employees that are experienced in selling high-tech services.
3.5 Sample

3.5.1 Phase one: Hanover exhibition

As most exhibitors at the Hanover exhibition were technicians and sales representatives, the sampled population during the Hanover exhibition did not include purchasers. However, I managed to conduct 23 depth interviews with technicians and sales representatives that were experienced in selling high-tech services and thus aware of customer perceived value requirements.

A list of the interviewees at the Hanover exhibition is illustrated in Table 1. The names of the interviewees and the corporations they worked for are anonymised. Interviews at the Hanover exhibition were between 20 and 35 minutes long. More information about the Hanover exhibition is presented in Appendix 9.3.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Corporation</th>
<th>Field</th>
<th>Country</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviewee 1</td>
<td>2011.04.07</td>
<td>Corporation 1</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 2</td>
<td>2011.04.07</td>
<td>Corporation 2</td>
<td>Marketing</td>
<td>China</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 3</td>
<td>2011.04.07</td>
<td>Corporation 3</td>
<td>Engineering</td>
<td>Sweden</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 4</td>
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<td>Corporation 4</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 5</td>
<td>2011.04.07</td>
<td>Corporation 5</td>
<td>Engineering</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 6</td>
<td>2011.04.07</td>
<td>Corporation 6</td>
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<td>Italy</td>
<td>Face-to-face</td>
</tr>
<tr>
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<td>Corporation 7</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 8</td>
<td>2011.04.07</td>
<td>Corporation 8</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 9</td>
<td>2011.04.08</td>
<td>Corporation 9</td>
<td>Engineering</td>
<td>France</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 10</td>
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<td>Corporation 10</td>
<td>CEO</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
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<td>2011.04.08</td>
<td>Corporation 11</td>
<td>Chemist</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 12</td>
<td>2011.04.08</td>
<td>Corporation 12</td>
<td>CEO</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
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<td>Corporation 13</td>
<td>Sales</td>
<td>India</td>
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</tr>
<tr>
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<td>2011.04.08</td>
<td>Corporation 14</td>
<td>Engineering</td>
<td>Switzerland</td>
<td>Face-to-face</td>
</tr>
<tr>
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<td>Corporation 15</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 16</td>
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<td>Corporation 16</td>
<td>Marketing</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 17</td>
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<td>Corporation 17</td>
<td>Engineering</td>
<td>Singapore</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 18</td>
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<td>Corporation 18</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 19</td>
<td>2011.04.08</td>
<td>Corporation 19</td>
<td>CEO</td>
<td>France</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 20</td>
<td>2011.04.08</td>
<td>Corporation 20</td>
<td>Engineering</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 21</td>
<td>2011.04.08</td>
<td>Corporation 21</td>
<td>Sales</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 22</td>
<td>2011.04.08</td>
<td>Corporation 22</td>
<td>Consultant</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Interviewee 23</td>
<td>2011.04.08</td>
<td>Corporation 23</td>
<td>Consultant</td>
<td>England</td>
<td>Face-to-face</td>
</tr>
</tbody>
</table>
3.5.2 Phase two: Case study MB Services

The case study was conducted as part of an internship with MB Services between the 3rd of January and the 31st of May 2011. MB Services is the service division within the Meyer Burger technology Group. MB Services’ key competence is delivering value-added services for group-wide and partner products. More information about the Meyer Burger Technology Group and MB Services is presented in Appendix 9.2.

During the case study of MB Services I conducted interviews with employees and customers. The interviewees could all provide valuable information to my research, as they were experienced in either purchasing or selling high-tech services.

Anonymised lists of the interviewees of the case study are illustrated in Table 2 and Table 3. The depth interviews with employees of MB Services were between 30 – 45 minutes long, and the depth interviews with customers during customer visits were with 2 – 3 hours considerably longer.

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Role</th>
<th>Country</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee 1</td>
<td>2011.04.05</td>
<td>Sales Asia</td>
<td>Switzerland</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Employee 2</td>
<td>2011.04.18</td>
<td>Project Manager for Value Adding Services</td>
<td>China</td>
<td>Telephone</td>
</tr>
<tr>
<td>Employee 3</td>
<td>2011.04.19</td>
<td>Service Location Manager Singapore &amp; Taiwan</td>
<td>Singapore/Taiwan</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Employee 4</td>
<td>2011.04.19</td>
<td>Technical &amp; Process Manager</td>
<td>China</td>
<td>Telephone</td>
</tr>
<tr>
<td>Employee 5</td>
<td>2011.04.21</td>
<td>Sales Engineer</td>
<td>China</td>
<td>Telephone</td>
</tr>
<tr>
<td>Employee 6</td>
<td>2011.05.02</td>
<td>Service Location Manager</td>
<td>USA</td>
<td>Telephone</td>
</tr>
<tr>
<td>Employee 7</td>
<td>2011.05.09</td>
<td>Process Support &amp; Training Global Service</td>
<td>Switzerland</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Employee 8</td>
<td>2011.05.09</td>
<td>Head of Global Services</td>
<td>Switzerland</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Employee 9</td>
<td>2011.05.10</td>
<td>PM &amp; Sales Global Service</td>
<td>Switzerland</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Employee 10</td>
<td>2011.05.10</td>
<td>Service Location Manager</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
</tbody>
</table>
Table 3: Interviewees of MB Services' customers, own illustration

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Corporation</th>
<th>Role</th>
<th>Country</th>
<th>Type of interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer 1</td>
<td>2011.04.11</td>
<td>Corporation 1</td>
<td>Engineer / Procurement</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Customer 2</td>
<td>2011.04.11</td>
<td>Corporation 1</td>
<td>Engineer / Procurement</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Customer 3</td>
<td>2011.04.11</td>
<td>Corporation 1</td>
<td>Engineer / Procurement</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Customer 4</td>
<td>2011.04.11</td>
<td>Corporation 1</td>
<td>Engineer / Procurement</td>
<td>Germany</td>
<td>Face-to-face</td>
</tr>
<tr>
<td>Customer 5</td>
<td>2011.04.12</td>
<td>Corporation 2</td>
<td>Director Equipment &amp; Technology</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 6</td>
<td>2011.04.21</td>
<td>Corporation 3</td>
<td>Procurement Manager</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 7</td>
<td>2011.05.18</td>
<td>Corporation 4</td>
<td>Chief Financial Officer</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 8</td>
<td>2011.05.18</td>
<td>Corporation 4</td>
<td>Head of production</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 9</td>
<td>2011.05.20</td>
<td>Corporation 5</td>
<td>Director Supply Chain</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 10</td>
<td>2011.05.20</td>
<td>Corporation 5</td>
<td>Head of production</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
<tr>
<td>Customer 11</td>
<td>2011.05.20</td>
<td>Corporation 5</td>
<td>Vice President Manufacturing</td>
<td>China</td>
<td>Via sales representative</td>
</tr>
</tbody>
</table>

3.6 Operationalisation

As discussed in section 3.1, my research was conducted using depth interviews. Such interviews should be flexible and carried out using unstructured questions that are adapted to the conversational flow (Malhotra, 2004; Yin, 2008). Thus, no rigid survey protocol should be followed. In unstructured interviews it is usual that the interviewer only has a list of topics or issues, which is called an interview guideline (Bryman & Bell, 2003). The style of conducting the interviews is often informal and the phrasing of questions might differ between interviews (Bryman & Bell, 2003).

The interview guideline I used is illustrated in appendix 9.7 and 9.8. This guideline encompassed only a few questions that were significant to my research. To get a qualitative answer on these questions I did not necessarily stick to the interview guideline. The conversation with the interviewee was always open and I adjusted my questions according to the interviewees’ replies. However, the interview guideline helped me to steer my interviews and made sure that I would get all the information I planned to gather.

Bryman & Bell (2003) claim that an interview can be conducted by telephone rather than in person, especially when a sample is geographically dispersed. Because I
conducted interviews with geographically dispersed interviewees, telephone interviews were crucial.

Unfortunately, direct communication with MB Services’ customers is only permitted with the responsible sales representative present. Due to time, cost and geographical constraints I therefore handed my questionnaires over to regional sales representatives. This created the possibility to conduct my research on a global scale and researching different customer segments, which was important because customer perceived value differs between segments (Ding, 2007; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Harmon et al., 2009). An exception was one visit to a German customer, which I could participate personally.

To get another aspect of the case study and reduce possible misunderstandings derived from interviews via sales representatives, I conducted interviews with MB Services’ employees as well, whom I could meet face-to-face.

It is interesting to interview both employees from MB Services and purchasers from customers, because the perception of value might be different between the supplier and customer (La et al., 2007) and even between different people within a corporation (Uлага & Chacour, 2001; Hinterhuber, 2008b).

To get the most from my interviews – with MB Services’ employees, global customers, and exhibitors at the Hanover exhibition – I tried to create a relaxed environment before and during the conversations. Rather than a rigid interview, the interviewees were supposed to perceive my depth interview like a genuine conversation. Yin (2008) claims that interviews in case studies should be carried out like conversations.

My interview guideline consisted of many open-ended questions that respondents answered in their own words. The influence on the response from unstructured questions is less biased as the response from closed questions. A respondent is free to express any views, and therefore provide the interviewer with richer insights. Thus it is common in exploratory research (Malhotra, 2004).
When a question was not properly answered by an interviewee I used a technique called probing. This is a technique where the interviewer does not take a brief “yes” or “no” for an answer but tries to follow up by stating open questions such as: “Why do you say that?” (Malhotra, 2004). Probing techniques generate meaningful responses and uncover hidden issues (Malhotra, 2004).

3.6.1 Operationalisation of the interviews

After I selected a suitable interviewee according to the sample specifications I booked a time for conducting an interview or came to see the interviewee directly. Prior to every interview I introduced my field of research and thanked the interviewee in advance for the time that was allocated for me. After a little small talk I found out what role the interviewee has in the corporation – if that was not already evident. This was essential because customer perceived value differs between individuals in different positions (Hinterhuber, 2008b; Ulaga & Chacour, 2001).

Malhotra (2004) claims that a depth interview should start with a general open-ended question about a subject. Using this technique, the interviewer encourages the interviewee to talk freely about the researched subject (Malhotra, 2004). Thus my first interview-related question to the interviewee was as follows:

“**What do you understand under the business term value?**”

After the first question the interviewer must use an unstructured format (Malhotra, 2004). The interviewees’ answer on the first question determines the subsequent direction of the interview and probing techniques must be used for elaboration (Malhotra, 2004).

To get a general idea about what the interviewee values in a service I asked:

**How do you define the value of a service?**

This question was essential to get a general idea about customer perceived value. The interviewee’s answer to this question often disclosed one or several factors from the
reviewed literature on customer perceived value (see section 2.4). From there on I adjusted further questions or I just went ahead with my interview.

The next step of the interview was to research whether the interviewee viewed benefits, sacrifices, competition, segments and distinctive value perceptions of different people – if the interviewee had not already specified one or several of these factors – as the main factors that influence customer perceived value. This was an essential step in my research because customer perceived value is depending on these factors according to researchers (see section 2.4; Hinterhuber, 2008b; Ulaga & Chacour, 2001; Ding, 2007; Nagle et al., 2011; Hinterhuber, 2004; Harmon et al., 2009; Blocker, 2010; Graf & Maas, 2008; Khalifa, 2004).

If the interviewee indicated that these factors influence customer perceived value, but did not specify any further details, I asked:

**Can you add more criteria that the perception of value is depending on?**

If the interviewee did not agree to the definition, or if he or she viewed some factors as being incorrect, I asked:

**What is a services’ value depending on in your opinion (e.g. what criteria is influencing your perception of value)?**

All influencing factors to customer perceived value that were not specified in my theoretical definition were added for each interview in the comments. When the interviewee did verbally agree to my definition but when he or she still had some conflicting answers to my theoretical definition, I carefully wrote down those comments.

### 3.7 Validity

The validity of my study can be regarded relatively high, because I have chosen the most conceivable research design and collected relevant data from experienced interviewees.
In section 2.4 I established that customer perceived value is an underresearched subject. According to Yin (2008), case studies are the most appropriate research method in the early stages of a new economic theory when the relationships of key variables are being studied.

Furthermore, I concluded that customer perceived value is a complex model, which is distinctive between different segments and individuals within a corporation (see section 2.4). The case study research method offers flexibility when researching highly contextualised phenomena (Rosenberg & Yates, 2007; Flyvbjerg, 2004). A case study is a useful application in social sciences where predictive theories and universals are rare (Flyvbjerg, 2004). The knowledge of case studies is thus more valuable than the vain search for universals and predictive theories (Flyvbjerg, 2004).

The primary source of data in a case study is derived from interviews, which should be conducted as fluid conversation with open-ended questions (Yin, 2008). During my research I used depth interviews to collect data. I followed an interview guideline with few open-ended questions to ensure a conversational interview flow. Open-ended questions have the advantage of gaining unexpected information from interviewees (Engwall, 1983). This was crucial to uncover customer perceived values.

The combination of the case study research method and depth interviews is the most conceivable approach to identify interviewees’ opinions, norms and values (Bitektine, 2008; Malhotra, 2004; Yin, 2008).

However, there are some issues that are influencing the validity of this paper negatively. I did not conduct more than 11 interviews with purchasers. This limits the validity because customer perceived value is all about the customer’s perception of value and not the supplier’s perception. Moreover, 7 of these interviews were conducted via sales representatives.
3.8 Reliability

When utilising a case study and open-ended questions in research one might get unexpected information, but the reliability of the analysis is expected to decrease (Engwall, 1983; Flyvbjerg, 2004). The relationship between open-ended questions and rigorously structured questionnaires is illustrated in Figure 3-2.

![Figure 3-2: A comparison of two approaches to data collection, own illustration revised from Engwall (1983)](image)

To summarise, a case study is often difficult (Flyvbjerg, 2004). The consequences of choosing a case study research method and depth interviews consisting of open-ended questions might be that other researchers would get dissimilar results.

There is a risk that when handing over my interviews to sales representatives may distort my findings, because the lack of structure in a depth interview makes the results “…susceptible to the interviewer’s influence, and the quality and completeness of the results depend heavily on the interviewer’s skills” (Malhotra, 2004:150). Other researchers that can meet global purchasers face-to-face might get dissimilar results.

Yin (2008) and Bryman & Bell (2003) define the reliability of a study to be the repeatability by other researchers to do the same study when using the same data collection procedures and thereby getting the same results. The aim of reliability is to minimise the errors and bias in a study, which can be reduced if a protocol and a database of the findings is established (Yin, 2008). I believe I have carefully followed and documented my research design, which is described in section 3.1 and that I have transcribed my interviews in the best possible way (see Appendix 9.9) and displayed
every interviewees’ keywords to my questions (see section 4.2). Thus, I believe when other researchers would undertake the same study with the same methods they would get similar results.

### 3.9 Research model

The research model is illustrated in Figure 3-3. It starts with identifying the theoretical concepts that define customer perceived value. Researchers claim that customer perceived value of a product or service is influenced by the below factors:

- The benefits;
- The sacrifices;
- The competition;
- The segments; and
- Subjective judgments

During my depth interviews I asked two specific questions that would give a general idea about customer perceived value and I used probing techniques to get qualitative answers related to the theoretic definition.

During the interviews I wrote down the interviewees’ answers in key words to each factor and reflected upon the interviewees’ answers directly after the interview was conducted.

![Figure 3-3: Research model, own illustration](image-url)
4 Empirical study

4.1 Analysing the empirical data

When conducting the depth interviews I wrote down the interviewees’ answers to each factor on my interview guideline. I used probing techniques to uncover the interviewee’s opinion on a factor when his or her answer was not clear to me. With these techniques I was able to document qualitative answers relating to the five factors.

After the interviews were conducted and the documentation of each interview was finalised I took some time and reflected on the interviewees’ answers to find specific keywords for every factor. I marked those keywords for every conducted interview and gathered the findings in a matrix. The names of the interviewees were presented as rows and the five factors that I studied were presented as column heads in the matrix.

4.1.1 First pattern finding

After finishing the matrix I highlighted all keywords in the interview guideline, analysed structures in the keywords and found generic keywords (first pattern finding). The generic keywords were umbrella terms for the keywords that had a similar meaning. The generic keywords are briefly explained below:

- **Financial benefits** – benefits that have a financial value for customers
- **Strategic benefits** – benefits that have a strategic value for customers
- **Supplier benefits** – benefits that are related to the supplier
- **Delivery benefits** – benefits that are related to the quickness of a service
- **Production benefits** – benefits that are related to enhanced production performance
- **Overall costs** – costs customers have when purchasing a service
- **Competition** – competitors’ offerings that influence customer perceived value
- **Market condition** – market conditions that influence customer perceived value
- **Segment** – different segments that influence customer perceived value
- **Level of maturity** – the customers’ and the industries’ level of maturity that influences customer perceived value
Distinctive corporations – the differences between distinctive corporations that influence customer perceived value

Regional differences – regional differences that influence customer perceived value

Individual perceptions – individual differences of employees that influence customer perceived value

4.1.2 Second pattern finding
I created sub-rows for every factor in the matrix according to the generic keywords and filled in the interviewees’ keywords in the corresponding generic sub-rows. I highlighted the interviewees’ keywords to the corresponding colour of the generic keywords. Given the large number of interviewees presented in the column head, this made it easier to analyse and find similarities between different interviewees. Thereafter I moved around the interviewees in the column heads and grouped those with similar answers next to each other (second pattern finding).

4.1.3 Third pattern finding
Last but not least I tried to find patterns that were not related to two people only but to all of the interviewees and to the two different phases of my research (exhibition and case study). Furthermore, the perception of employees compared to the perception of customers was interesting to analyse.

4.2 Results
The results from my empirical research are presented the below tables. The generic keywords are presented as column heads and the interviewees (listed as numbers) are presented as rows. I have inserted every interviewee’s actual keyword into the field that is corresponding to the generic keyword. I have also highlighted the keywords correspondingly to the generic keywords colour, which increases the possibility for the reader to draw conclusion of the raw data. The answers during the interviews conducted at the exhibition are found in Table 4 and Table 5. Interviews with MB Service’s employees are illustrated in Table 6 and Table 7. The results during customer visits are illustrated in Table 8 and Table 9.
Table 4: Exhibition interviews, own illustration

<table>
<thead>
<tr>
<th>Interviewee</th>
<th>Financial Benefits</th>
<th>Strategic Benefits</th>
<th>Supplier Benefits</th>
<th>Delivery Benefits</th>
<th>Production Benefits</th>
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<td>Size, Reliability</td>
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<td>Service quality</td>
<td>Know-how, Reliability</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td></td>
<td>Flexibility</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
<td>Reliability, Image, References</td>
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</tr>
<tr>
<td>5</td>
<td>Quality</td>
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<td>6</td>
<td>Service quality</td>
<td>Image, Relationships</td>
<td></td>
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<td>7</td>
<td>Reduced risks</td>
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<tr>
<td>8</td>
<td>Quality</td>
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<tr>
<td>9</td>
<td>Reduced risks, Service performance</td>
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<td>Fast response time, Fast service</td>
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Table 5: Exhibition interviews, own illustration

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<th>Market condition</th>
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Nähring, 2011
### Table 6: Employee interviews, own illustration

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<th>Employee interviews</th>
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<td>Service quality, Resources</td>
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<td>Yield, Uptime</td>
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### Table 7: Employee interviews, own illustration

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<th>Employee interviews</th>
<th>Overall costs</th>
<th>Market condition</th>
<th>Segments</th>
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<th>Regional differences</th>
<th>Level of maturity</th>
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<td>Segments</td>
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<td>Costs, Oppor-</td>
<td>Competitors</td>
<td>Segments</td>
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<td>Regional differences</td>
<td>Industry maturity, Customer maturity</td>
<td>Distinctive people, Weightings</td>
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<td>Comparing with competitors</td>
<td>Weightings, Different perceptions</td>
<td>Industry maturity, Customer maturity</td>
<td>Different perceptions, Weightings</td>
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<td>Segments</td>
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<td></td>
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<td>Different perceptions, Distinctive people</td>
</tr>
<tr>
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<td>Price</td>
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<td>Segments</td>
<td>Individual corporations</td>
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### Table 8: Customer interviews, own illustration

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<th>Customer interviews</th>
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<th>Supplier Benefits</th>
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<td>Inexpensive</td>
<td>Service quality</td>
<td></td>
<td>Fast response</td>
<td>Availability</td>
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<td></td>
<td></td>
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<td></td>
<td>time, Fast service</td>
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</tr>
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<td>2</td>
<td>Inexpensive</td>
<td>Quality</td>
<td></td>
<td>Fast response</td>
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<td>time, Fast service</td>
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<tr>
<td>3</td>
<td>Cost reduction</td>
<td>Service quality</td>
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<td>Fast response</td>
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<td>Fast response</td>
<td>Productivity</td>
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<td>Meet demands,</td>
<td></td>
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<td>Service quality,</td>
<td>Know-how,</td>
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<td>Training</td>
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<td>Profit, Cost</td>
<td>Reduced risks,</td>
<td></td>
<td>Yield, Uptime</td>
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<tr>
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<td>reduction</td>
<td>Resources, Service</td>
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<tr>
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<td></td>
<td>quality, Assistance</td>
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<td>LCC</td>
<td>Service quality</td>
<td></td>
<td>Yield, Uptime</td>
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<td>Yield, Uptime</td>
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### Table 9: Customer interviews, own illustration

<table>
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<th>Customer interviews</th>
<th>Overall costs</th>
<th>Competition</th>
<th>Market condition</th>
<th>Level of maturity</th>
<th>Individual perceptions</th>
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</tr>
<tr>
<td>1</td>
<td>Costs</td>
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</tr>
<tr>
<td>2</td>
<td>LCC</td>
<td>Comparing with competitors</td>
<td></td>
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<tr>
<td>3</td>
<td>Costs</td>
<td>Opportunity cost</td>
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<tr>
<td>4</td>
<td>LCC</td>
<td>Comparing with competitors</td>
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<tr>
<td>5</td>
<td>Price</td>
<td>Comparing with competitors</td>
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<tr>
<td>7</td>
<td>Total cost of ownership</td>
<td>Comparing with competitors</td>
<td>Difficult market condition</td>
<td></td>
<td>Distinctive people, Weightings</td>
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<tr>
<td>8</td>
<td>Total cost of ownership</td>
<td>Competitors</td>
<td>Difficult market condition</td>
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<td>Distinctive people, Weightings</td>
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<td>Comparing with competitors</td>
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<td>Total cost of ownership</td>
<td>Comparing with competitors</td>
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<td>Total cost of ownership</td>
<td>Comparing with competitors</td>
<td>Difficult market condition</td>
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<td>Different perceptions, Weightings</td>
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</tbody>
</table>
5 Analysis

In section 2.4 I have identified five factors that are influencing customer perceived value. These factors are benefits, sacrifices, competition, segments and subjective judgments. All five factors were included in my depth interviews. I will now analyse the qualitative answers I got from interviewees.

5.1 Benefits

Interviewees’ keywords relating to the first factor benefits were mentioned in all 44 interviews as factors that influence customer perceived value. The theoretical definition of this factor is: benefits – including monetary cost-savings, performance increases, and other monetary and non-monetary improvements – that can be realised with the product or service (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Blocker, 2010; Graf & Maas, 2008).

In my research I found that the factor benefits could be divided into five generic keywords. These were: financial benefits, strategic benefits, supplier benefits, delivery benefits, and production benefits.

5.1.1 Financial benefits

Financial benefits encompass the keywords: profit, inexpensive, cost reduction, and win-win situation. These are all benefits that are directly connected with financial incentives to the customer. According to the interviewees this should be realised by the service provider offering services for the customer that would reduce the costs of production, increase the earnings and thus increase the customer’s profitability.

During the interviews conducted at the exhibition only 3 of 23 mentioned financial benefits, but 4 of 10 employees of MB Service and 6 of 11 customers mentioned financial benefits in their value statements. However, this is not a new insight because Khalifa (2004), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004), Blocker (2010), and Graf & Maas (2008) have already included this aspect in their theoretical definition, stating that customer perceived value is depending on the cost savings and other monetary improvements.
5.1.2 Strategic Benefits

Strategic benefits encompass the keywords: reduced risks, service quality, service performance, assistance, resources, convenience, USP for the customer’s customer, competitive advantage, and uncomplicated. I grouped these keywords together because they have a strategic value for the customer. One interviewee mentioned that customers do evaluate a service according to three aspects: What are the implications if the customer insources a specific service function (does it himself)? What are the implications if the customer outsources this specific service function (someone else does it for him)? And what are the implications if the customer does not carry out this specific service function at all? The strategic benefits mentioned above are concerned with better service quality and performance, reduced risks, convenience, uncomplicatedness, and assistance that a customer would acquire when outsourcing the specific service function to a professional service provider. Strategic benefits help to create competitive advantages.

In the theoretical definition made by Khalifa (2004), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004), Blocker (2010) and Graf & Maas (2008), strategic benefits are not explicitly mentioned. However, given the significant number of interviewees (14 of 23 at the exhibition, 9 of 10 of MB Services’ employees and 9 of 11 of customers) that have highlighted strategic benefits in their value statements, I believe that it is central to customer perceived value and should be included in the theoretical definition.

5.1.3 Supplier Benefits

Supplier benefits encompass the keywords: flexibility, trust, size, reliability, physical facility, loyalty, image, references, relationships, market leadership, meet demands, collaboration, know-how, global network, training, innovations and soft benefits. These keywords are all connected to the superiority of the supplier. According to interviewees, the more supplier benefits a service provider can deliver the higher is the perceived value of that supplier’s offering to the customer.

19 of 23 interviewees at the exhibition and 8 of 10 MB Services’ employees stated that supplier benefits are central to customer perceived value. However, only 1 of 11 customers mentioned supplier benefits in their value statement.
This is a significant gap. According to La et al. (2007) the perception of value may differ between the customer and the supplier. My findings create a strong case for validating that assumption.

5.1.4 Delivery Benefits
Delivery benefits encompass the keywords: response time, reaction time, and fast service. These keywords are all related to the ability of a service provider to quickly deliver a service. In an industry time is what matters. Various interviewees stated that when the production is halted the service provider must act fast and get the production running within no time. Every hour of delay can result in a significant amount of costs, they claimed.

5 of 11 customers, 4 of 10 MB Services’ employees and 5 of 11 interviewees at the exhibition did explicitly mention delivery benefits in their value statements. Therefore, delivery benefits are key factors that influence customer perceived value, especially in an industrial high-tech setting. However, Khalifa (2004), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004), Blocker (2010) and Graf & Maas (2008) do not include this aspect in their theoretical definition. My research has built a strong case for including this aspect in the definition of factors that influence customer perceived value.

5.1.5 Production Benefits
Production benefits encompass the keywords: production efficiency, machine yield, machine uptime, productivity, availability, and optimisation. Interviewees mentioned these keywords for the enhanced production efficiency that must be delivered by a service provider's offering. In the case of MB Services with customers competing in a highly competitive business, every percentage of increased machine running time and yield holds a significant value to the customer and creates a competitive advantage.

9 of 11 customers indicated that production benefits are central in their value statements. In addition, 5 of 10 MB Services’ employees and 8 of 23 interviewees at the exhibition mentioned production benefits during the depth interviews. This is another aspect that must be included in the theoretical definition of factors that influence customer perceived value.
5.2 Sacrifices

All keywords relating to the second factor sacrifices were mentioned in all but three interviews as an aspect that influences customer perceived value. The theoretical definition of this factor is: sacrifices – the sacrifices the customer has to overcome, which is the price charged for the product or service and the total cost of ownership (Khalifa, 2004; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Blocker, 2010; Graf & Maas, 2008).

Keywords of the factor sacrifices were grouped into one generic keyword, which is: overall costs.

5.2.1 Overall costs

Overall costs encompass the keywords: costs, price, LCC, opportunity costs, and total cost of ownership. Costs are sacrifices that do influence customer perceived value. They do exist in two forms: either short-term and transactional oriented, or long-term and service life cycle oriented.

Overall costs were highlighted during all case study related interviews and during 20 of 23 interviews that were conducted at the exhibition as a factor that influences customer perceived value. Hence it was one of the central elements during my research and it reinforces the theoretical definition by Khalifa (2004), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Blocker (2010), and Graf & Maas (2008).

5.3 Competition

Keywords relating to the third factor competition were mentioned in all but seven interviews as an aspect that influences customer perceived value. The theoretical definition of this factor is: competition – the price and value derived from competitive offerings (Hinterhuber, 2008b; Nagle et al., 2011; Hinterhuber, 2004; Ding, 2007; Ulaga & Chacour, 2001; Chatain, 2011).

In my research I found that keywords on the factor competition could be divided into two generic keywords. These were: competition and market condition.
5.3.1 Competition
The keywords that were mentioned by interviewees were: competitors’ offerings, competitors, competition, comparing with competitors, and opportunity costs.

Customers are inclined to view competition and competitive offerings as factors that influence customer perceived value. If competitive offerings deliver more benefits at the expense of fewer sacrifices, the value of the residual offering will decrease significantly. Furthermore, interviewees indicated that the more knowledgeable a customer is in terms of competitors and opportunity costs the more pressure the customer can exert on the service provider in, for example, negotiations about prices.

During my customer visit to the German account I was experiencing this phenomenon. During negotiations the customer exploited the technique of comparing MB Services’ offering with that of competitors to get an advantage on his counterpart. This was reflected during customer visits at two Chinese customers, who exploited the same technique of comparing MB Service’s offering with that of competitors. During my 11 depth interviews with purchasing managers 8 explicitly mentioned competitors in the negotiations. This finding reinforces the theoretical definition from Hinterhuber (2008b), Nagle et al. (2011), Hinterhuber (2004), Ding (2007), Ulaga & Chacour (2001), and Chatain (2011).

5.3.2 Market condition
The keyword that was mentioned by customers was difficult market conditions. Interviewees referred to customers’ different priorities in exceptional market conditions. This was indicated during the customer visit of the Chinese customer. This customer was encountering significantly difficult market conditions and thus emphasised in new services that would decrease their costs. In this situation the customer valued financial benefits superior to other benefits and factors. As a result, customer perceived value is influenced by various market conditions. Studies in this area have so far neglected this phenomenon.

5.4 Segments
Keywords relating to the fourth factor segments were mentioned in all but 11 interviews as an aspect that influences customer perceived value. The theoretical definition of this factor is: segments – different customer segments, and perhaps even
distinctive corporations, might have dissimilar perceptions of value as they utilise the product or service in distinctive ways (Ding, 2007; Hinterhuber, 2008b; Nagle et al., 2011; Ulaga & Chacour, 2001; Hinterhuber, 2004; Harmon et al., 2009).

In my research I found that the factor segments could be divided into four generic keywords. These were: segments, level of maturity, regional differences, and distinctive corporations.

5.4.1 Segments
Interviewees commonly stated the keyword segments as an influencing factor to customer perceived value of a service. They argued if the same service was delivered to two distinctive customers within different segments, the perception of value might differ between them given their distinctive contexts.

Unfortunately, the corporations I have examined during my case study research were all competing in the same segment. I cannot draw conclusions about this phenomenon from my empirical research of customers. However, given the large amount of interviewees that have validated this aspect (15 of 23 interviewees at the exhibition and 7 of 10 employees at MB Services) I have built a strong case for reinforcing the theoretical definition from Ding (2007), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004) and Harmon et al. (2009) that customer perceived value may differ between segments.

5.4.2 Level of maturity
Keywords that two experienced MB Services’ employees mentioned were customer and industry level of maturity as factors that influence customer perceived value. The more mature an industry has become, they argued, the more do players in this industry outsource their activities to professional service providers to gain competitive advantages. The value of a professional service is significant in those industries compared to immature industries where outsourcing of activities to service providers is less common.

Unfortunately, I did not find any information about this phenomenon during customer visits. However, I believe it is plausible that customer perceived value depends on the...
level of customer and industry maturity, and thus it could be included as a factor in the theoretical definition of factors that influence customer perceived value.

5.4.3 Regional differences
Two MB Services’ employees mentioned the keyword regions when indicating that customer perceived value is not only subject to the dissimilar perception of distinctive segments, but also of different regions in the world. During my case study of customers I was able to spot some regional differences between a German customer and a Chinese customer. Whereas the Germans emphasised in financial and delivery benefits, the Chinese emphasised in their difficult market situation. The theoretical definition by Ding (2007), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004) and Harmon et al. (2009) does only support the different perceptions of value derived from different segments and individual corporations, not from different regions in the world.

5.4.4 Distinctive corporations
Distinctive corporations was the generic keyword for individual corporations, different perceptions, and weightings. They are grouped together because they share the similar meaning that customer perceived value and the weighting of the five factors do differ between distinctive corporations. My research results reinforce the theoretical definition from Ding (2007), Hinterhuber (2008b), Nagle et al. (2011), Ulaga & Chacour (2001), Hinterhuber (2004) and Harmon et al. (2009) that customer perceived value is not only subject to different segments, but also to distinctive corporations.

5.5 Subjective judgments
Keywords relating to the fifth factor subjective judgments were mentioned in 7 of 10 case study interviews as an aspect that influences customer perceived value. The theoretical definition of this factor is: subjective judgments – the distinctive value perceptions of different individuals within a corporation (Hinterhuber, 2008b; Ulaga & Chacour, 2001).

In my research I found that the factor subjective judgment could be represented by one generic keyword, which is individual perceptions.
5.5.1 Individual perceptions

Interviewees mentioned the keywords different perceptions, different judgments, distinctive people, and weightings to describe that customer perceived value by one corporation is not necessarily universal for all employees within this corporation, and that distinctive employees have dissimilar weightings for the five factors.

In the depth interview with a large Chinese customer, I found that the Chief Financial Officer was cost-driven and therefore yield oriented, whereas the Head of Production was production-driven and stressed the machine uptime. This was reflected during the customer visit with another large customer in China, where the Vice President of Manufacturing and the Head of Production were production-driven and thus emphasised in details of maintenance and machine uptime, whereas the Director Supply Chain focused on the equality of all derived benefits and not solely on production benefits. This finding reinforces the theoretical definition from Hinterhuber (2008b) and Ulaga & Chacour (2001), stating that customer perceived value is different between individuals within a corporation.
6 Conclusions

I cannot claim that I can draw inferences from the studied sample to the entire global high-tech service industry. During my case study of MB Services solely factors influencing customer perceived value in the solar panel manufacturing industry were examined and not to the global high-tech service industry in general. Although I tried to examine a broader population at the exhibition, the number of interviews conducted is too little to generalise my findings.

However, my findings provide defining factors that influence customer perceived value, which are: benefits, sacrifices, competition, segments, and subjective judgments that influence customer perceived value in the high-tech service industry. In addition, the customer and industry level of maturity and market conditions should be considered as factors that influence customer perceived value. However, one has to bear in mind that the perception of value might differ between distinctive corporations and corporations from different regions.

Furthermore, it was interesting to find discrepancies between the studied sample of the Hanover exhibition, MB Services’ employees and customers. The vast majority of interviewees at the exhibition and employees of MB Services indicated that supplier benefits are decisive to customer perceived value. On the contrary, only one customer of MB Services’ mentioned supplier benefits in the value statement. This implies differences between how a supplier believes their customers perceive value of their service offerings and how the customers essentially perceive value.
7 Reflections

To generalise this phenomenon more qualitative and quantitative empirical research in this area is required, especially in other industries than the solar panel manufacturing service industry. A comprehensive study of globally dispersed service corporations is required to give conclusions about the global high-tech service industry. My study was limited to Asian and European corporations.

Furthermore, the gaps that I have identified between the interviews conducted at the Hanover exhibition, MB Services’ employees, and customers are interesting to study. These are gaps between customer perceived value of financial benefits, supplier benefits and production benefits.

In addition, I found that the level of industry and customer maturity, market situations and regional differences were stated as factors that influence the perception of value. I view these aspects as interesting for future research.

However, prior to all of these researching areas one might consider studying the phenomenon that may be the most fundamental barrier to value-based pricing, which is not how customers perceive value, but, more importantly, if customers’ understand what is value.
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9 Appendix

9.1 Value-based pricing framework

Hinterhuber (2004) has constructed a sophisticated framework for value-based pricing. The framework consists of analyses of key elements of pricing decisions, followed by a selection of what is the profitable pricing range, and finally price changes that have to be implemented. This framework is illustrated in Figure 9-1. During the initial phase of the framework extensive research on the customer, the corporation, and competition shall be conducted (Hinterhuber, 2004). In a second step a range of profitable prices is selected, and finally contemplated price changes are implemented. A detailed explanation of these steps are found in appendix.

![Diagram of Value-based Pricing Framework](Figure 9-1: Framework for value-based pricing, Hinterhuber (2004:768))

9.1.1 Analyse key elements of pricing decisions

According to Shipley & Jobber (2001), the importance of pricing is too significant to omit extensive analyses of the relevant corporation and influences of the marketplace. The full ranges of variables that influence pricing effectiveness have to be analysed in a comprehensive process.
This is why Hinterhuber (2004) in the initial phase of his framework focuses on a series of sophisticated analyses, which will constitute the knowledge foundation needed throughout the value-based pricing. These analyses include extensive research in three dimensions:

- The customer;
- The corporation; and
- The competition.

A detailed description of how to conduct this research and what aspects should be covered during these analyses is presented for every dimension.

**Economic value analysis**

This step is explained in depth in section 2.3.

**Cost volume profit analysis**

After having analysed the customers’ perception of value, the next step is to examine the corporation and its cost structure. This can be done using a cost volume profit (CVP) analysis. A CVP analysis creates the understanding of implications derived from price and volume changes on corporation profitability.

Hinterhuber (2004) claims, “The CVP analysis is a simple, yet powerful tool to assess whether contemplated price changes have any chance of being profitable for the corporation. Low-margin products usually require fairly large volume increases for price reductions to be profitable; it should thus be considered to either increase/maintain the price.... For high-margin products, on the other hand, price increases can be quite profitable, if volumes are expected to decline less than the amount in Figure 9-2” (p.774-775).
Competitive analysis

The last step when analysing key elements of price decisions, according to Hinterhuber’s (2004) framework, is an analysis of the competition. A competitive analysis should enhance the understanding of trends in competitive pricing, product offerings and strategies. This should be done in six categories, which, according to Hinterhuber (2004), are:

1. Threat of new entrants
2. Price trends in existing markets
3. Competitive strategies
4. Information about distribution channels
5. Reference values for customer groups
6. Likely competitive reactions to price changes

There are several methods to analyse competitive factors in an industry or a business setting. Michael E Porter, an American economist renowned for his publications on corporate strategy, composes a well-known and acknowledged competitive analysis. Porter created the five forces model based on information that existed for a long time in the market. Porter (1998) claims, “The essence of formulating competitive strategy is relating a corporation to its environment... The intensity of competition in an industry is neither a matter of coincidence nor bad luck. Rather, competition in an industry is rooted in its underlying economic structure and goes well beyond the behaviour of current competitors” (p.3). In today’s competitive industries, competition exceeds direct competitors. (1) The threat of new entries, (2) the threat of substitution, (3) the bargaining power of suppliers and (4) customers, and (5) the
rivalry among existing competitors do all together shape industry competition (see Figure 9-3) (Porter, 1998).

![Diagram of the five forces that shape industry competition](http://hbr.org/9.1.2)

**Figure 9-3: The five forces that shape industry competition, http://hbr.org/**

### 9.1.2 Determine a range of profitable prices

The economic value analysis together with the CVP and the competitive analysis create the foundation of data that is needed for value-based pricing (Hinterhuber, 2004). “With this information in mind, the justification, the magnitude, and the impact of price increases can be estimated” (Hinterhuber, 2004:776).

If information from the economic value analysis indicates the product should be repositioned and prices increased by e.g. 30%, the CVP calculations can specify the maximum amount of volume losses that are affordable and would have a profitable impact on the business (Hinterhuber, 2004). Subsequently, feedback from sales representatives, marketers, distributors and a sample of customers is gathered to determine whether the actual price increase would be more or less than what is suggested from the CVP analysis. If an exploratory research shows a discrepancy, which indicates that volume losses are less than what the CVP analysis identified as affordable, managers should seriously consider a 30% price increment (Hinterhuber, 2004). On the contrary, if exploratory research indicates a discrepancy, which specifies that volume losses would be higher than what is known to be affordable from CVP analysis, managers should reconsider the price increment, or re-evaluate its extent (Hinterhuber, 2004).
9.1.3 Implementing price changes
Once the magnitude of the most profitable price for the corporation is determined, the price change has to be implemented. Hinterhuber (2004) states that during this phase several aspects have to be taken into account to ensure that the price change is sustainable and not only a fad.

The perhaps most essential aspect is involving sales representatives in the pricing decision and new product development phase (Hinterhuber, 2004). Hinterhuber (2004) indicates that sales representatives are reluctant to obey price increments that have been determined by a general manager without any context to the sales fieldwork.

9.2 Meyer Burger Technology Group

9.2.1 Background
The world as we know it has changed. Today we are more likely to be struck by a disastrous natural disaster then ever before. Heavy precipitation events, areas affected by droughts, heat waves, extreme high sea levels and intense tropical cyclones are more likely to occur on a daily basis as we continue to pollute our environment at such extents. Greenhouse gases such as carbon dioxide have significantly increased in concentration in our atmosphere as a result of human activities since 1750, as illustrated below in Figure 9-4. The increase in carbon dioxide in our atmosphere is primarily derived from the use of fossil fuel (Solomon et al., 2007).

![Figure 9-4: The recent increase in carbon dioxide and radioactive forcing in our environment (Solomon et al., 2007:3)
The awareness of our climate has never been greater than today. As a result, many movements against global warming have emerged. Global companies such as Volvo and IBM even use their efforts for a greener environment as marketing campaigns to win conscious customers, and to create goodwill.

The research of alternative solutions to fossil fuel started early, perhaps earlier than most people think. Already in 1941 was the first silicon power cell described by Ohl. From his description of the device, a 1% efficiency rate was measured (Green, 2009). The photovoltaic cell described by Ohl was just an attempt towards an alternative solution. It could have never been commercialised due to the low efficiency rate (1%), but it was the start of what was going to become the most promising alternative to fossil fuel, nuclear reactors and other harmful ways to energy production. Ohl’s concept has been developed over 70 years, and today a 25% efficiency rate has been reported using monocrystalline silicon (mono-Si) solar panels and 20% efficiency rate with multicrystalline (poly-Si) (Green, 2009). With this accomplishment a commercialisation of the photovoltaic industry could be achieved.

Even though the silicon solar module has taken the significant step to commercialisation, the major benchmark has not been reached yet. I am talking about the so called “solar grid parity” (SGP). Dan Lewis (2009) defines the SGP as “... the point at which the lifetime cost of an installed photovoltaic electricity system is equal to or cheaper than mains supplied electricity to the customer” (p. 50). When the SGP is reached the photovoltaic industry will enjoy significant growth due to extraordinarily increased demand of solar panels. Dan Lewis (2009) argues that the SGP will not be reached in sunny countries like Greece, Cyprus, Spain, Italy and Portugal, for another 10 years, if grid energy prices continue to increase at an annual rate of 3%. 10 years, he argues, is a pessimistic estimation when taken in mind the fast advancement of the solar panel technology. If major technological innovation can be made that would expand the solar panel lifetime, or increase its efficiency, the SGP will be reached earlier. To increase the solar panel efficiency, and to reduce the total cost of ownership of manufacturing machines for the solar industry is one of the paramount objectives of the Meyer Burger Group, the corporations in which I complete my internship.
9.2.2 Meyer Burger Technology Group

9.2.3 Meyer Burger Technology Ltd.

The following description of the Meyer Burger Technology Group is taken from the Meyer Burger financial report (2010):

“Meyer Burger Technology Ltd. is one of the world’s leading providers of innovative systems and production lines for photovoltaics in the solar industry, and for the semiconductor and optics industries. The globally active technology group employs more than 1,200 people across three continents. In photovoltaics, Meyer Burger offers its customers complete systems, comprehensive solutions and complementary technologies along the entire value chain including wafering, cells, modules and integrated solar systems” (p.1).

Figure 9-5 illustrates the five phases of the solar system manufacturing value chain. The manufacturing phases that are filled in can be supplied entirely by machines from the Meyer Burger Technology Group.

MBT’s business expanded significantly inline with the increasing demand of solar panels. This staggering growth is illustrated in Figure 9-6.
Net sales, Earnings before interest, taxes, depreciation and amortisation (EBITDA), the total balance sheet, and the MBT group’s equity have all increased by more than 100% in 2010 compared to the fiscal year 2009. Gerber (personal communication, 2011) indicated that key to this success is, amongst others, a tax reduction, mergers and acquisitions, innovative products, yet another year of prosperity for the photovoltaic industry, increased sales, lowered production costs, and the low USD and EUR rates that benefit MBT because the Group purchases more in EUR and USD than what they sell. The strong CHF is another important factors for the group’s financial success (Gerber, personal communication, 2011).

During MBT’s growth many companies were acquired, and now the group as a whole can deliver the majority of equipment needed in the solar panel manufacturing process. This was a strategically necessary step for the MBT Group, because customers demanded vertically integrated suppliers that could deliver the majority of manufacturing machines in the whole value chain (Gerber, personal communication, 2011). The holding corporation is illustrated in Figure 9-7. Today, MBT accounts for 10% of Swiss exports to China and 1% of global Swiss exports (Gerber, personal communication, 2011).

Figure 9-7: MBT group corporation chart

In 2010 a strategic decision was made to outsource the corporations service department into a Group-wide service division within the Meyer Burger Technology

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Group. Among creating superior customer satisfaction and long-term partnerships, this service division was of another strategic advantage for the Meyer Burger Technology Group, because it would differentiate their products from low-cost Asian substitutes and illegal copies that were increasingly spotted in the Asian market (Diaz, Gerber & Wolpert, personal communication, 2011).

9.2.4 MB Services

MB Services provides top of the class services for the Meyer Burger Technology Group and partner products, setting the industry benchmark while delivering the best and most professional service and support network to group-wide customers (Wolpert, personal communication, 2011). MB Services owns and supports several service locations in different parts of the world. There are in Japan, China, Taiwan, Singapore, Korea, USA, Spain, Germany and Norway, as well as one that is currently set up in India. These service locations are located where the group’s key customers are present (Diaz, personal communication, 2011).

9.2.5 History

The Meyer Burger saga started almost 60 years ago. The Meyer & Burger Ltd. was founded in 1953 in Steffisburg, Switzerland (Annual Report, 2011). The main market was the Swiss watch industry, for which they produced watch jewel manufacturing machines. Since then, Meyer Burger has been developing and manufacturing cutting machines for incredibly hard and porous material, a core competence that has been maintained and developed ever since. In 1999, Meyer & Burger Ltd. was incorporated to the Meyer & Burger Holding Ltd. (MB) with headquarters in Zug, Switzerland (Annual Report, 2011). That same year, MB launched the first band saw for the solar, and wire saw for the semiconductor industry. These industries too needed extremely thin slices of hard and porous materials, so called wafers, for their manufacturing processes. Meyer Burger maintained its core competence of slicing brittle, hard materials into thin wafers, and developed and applied their cutting machines to fit the semiconductor and solar industries.

The solar industry is the most prosperous, and the demand for Meyer Burger slicing equipment for silicon became the most interesting business area for the corporation (Gerber, personal communication, 2011). As the world’s largest production of solar panels is located in Asia, especially China, MB’s key accounts are located there. MB
founded their first subsidiaries in China and Japan in 2003. Agreements, collaborations and joint ventures opened doors to the Russian, American and other parts of the Asian market.

2006 was an important year for MB, as the holding name was changed to Meyer Burger Technology Ltd. (MBT), incorporated in Baar, Switzerland, and the Initial Public Offering (IPO) was made on the Swiss Exchange (SWX). From then on several manufacturers with different core competencies and applications to the solar industry were acquired to decrease the gaps of the solar panel manufacturing value chain.

9.3 Hanover Exhibition
The Hanover exhibition 2011 took place in Hanover, Germany, between the 4th and the 8th of April 2011. The Hannovermesse 2011 (German for Hanover exhibition 2011) is “the world’s foremost technology event” (Hannovermesse, 2011). This year’s exhibition resulted with the best outcome in ten years: more than 230 000 visitors and over 6 500 businesses from 65 countries displaying their technological solutions in Hanover (Hannovermesse, 2011).

9.4 Primary and secondary data
Data can be obtained from primary and secondary sources (Malhotra, 2004). “Primary data ... are originated by the researcher for the specific purpose of addressing the research problem” (Malhotra, 2004:37). Secondary data, on the contrary, are data that originates from sources other than the researcher for purposes other than the research problem exclusively (Malhotra, 2004). In my research solely primary data collection strategies were used. Malhotra (2004) has identified two research methods to collect primary data in a research situation, which are quantitative and qualitative research methods (see section 9.6).

9.5 Deduction, induction and abduction
There are deductive, inductive (Bitektine, 2008; Hyde, 2000; Flyvbjerg, 2004; Bryman & Bell, 2003) and abductive methods (Haig, 2008) to test a theory.

To put it crudely, a deductive method takes the established theory as point of departure and seeks to see whether the theory applies to specific instances (Bitektine,
Deductive methods are generally more common in quantitative research methods (Hyde, 2000; Bitektine, 2008; Bryman & Bell, 2003).

Inductive methods test a certain phenomenon or hypothesis and seek to construct a generalising theory about the phenomenon under investigation (Bitektine, 2008; Hyde, 2000; Flyvbjerg, 2004; Bryman & Bell, 2003). Inductive methods are generally more common in qualitative research methods (Hyde, 2000; Bitektine, 2008; Bryman & Bell, 2003).

Bryman and Bell (2003) indicate, “just as deduction entails an element of induction, the inductive process is likely to entail a modicum of deduction” (p. 12). Thus, deductive and inductive methods should not be thought of as absolutes, rather as tendencies (Bryman & Bell, 2003). Both methods are required in research endeavours (Hyde, 2000). When findings from deductive research indicate that the established theory is incorrect, researchers will argue to revise the theory (Bryman & Bell, 2003). According to Haig (2008), this type of inference to research whether a theory is correct or not and to revise the theory is called abduction.

9.6 Qualitative and quantitative research

There are qualitative and quantitative research strategies (Malhotra, 2004; Bryman & Bell, 2003; Yin, 2009; Hyde, 2000; Bitektine, 2008). These two research methods should not be in competition with each other, they should rather be viewed as complementary (Malhotra, 2004). Both methods are necessary for a sound development of social science (Flyvbjerg, 2004).

A quantitative research method is based on a substantial amount of samples, seeking to quantify the data and applying some form of statistical analysis, recommending a final course of action (Malhotra, 2004; Hyde, 2000). Quantitative research methods ignore the details of each element studied and attempt to construct generalisations of the population as a whole (Hyde, 2000).

A qualitative research method seeks to explain the particular (Hyde, 2000). They are used when a researcher intends to use exploratory research methodology based on a
small number of samples, which would provide an insight and understanding of the context of the problem (Malhotra, 2004; Hyde, 2000). Qualitative research has the ability to adjust to surprises and to study an issue in depth (Bitektine, 2008; Hyde, 2000). Bitektine (2008) further indicates that qualitative research methods are more linked with deductive theory testing. Qualitative research is more commonly concerned with the generation rather than the testing of theories (Bryman & Bell, 2003). But within an overall research project qualitative and quantitative research can be combined (Bryman & Bell, 2003).

In a research situation, Malhotra (2004) claims that qualitative research must precede quantitative research. Qualitative research can build a general idea about a certain phenomenon before quantitative research can generalise the results from the sample to the population of interest (Malhotra, 2004). In section 2.4 I concluded that customer value is an under-researched subject, which lacks empirical validation (La et al., 2001; Hinterhuber, 2008b; Graf & Maas, 2008; Khalifa, 2004). Therefore, I believe that qualitative research on customer’s value perception must be carried out prior to quantitative research.
9.7 Interview guideline exhibition and customers

Date: 
Company: 
Role: 
Country: 

1. **What do you understand under the business term “value”?** → Arrive at a common understanding of “value”

2. **How do you define the value of a service?**

3. **Some say that value (on a theoretic level) is depending on:**
   - **the benefits you get from the service** (customer loyalty, increased production performance, etc.)
   - **the sacrifices you have to pay for the service** (the price you have to pay for a service or the total cost of ownership, etc.)
   - **the offerings from competitive suppliers,**
   - **different use situations** (different customer segments that use the service in distinctive ways, and hence realise unique values),
   - **Distinctive value perceptions of different people within a corporation** (e.g. production managers might want to spend more money on a service for highest possible Yield, whereas purchasers would focus more on price than benefits)

   **Do you agree?**

   - **Yes:** Can you add more criteria that the customer’s perception of value is depending on?
   - **No:** What is a services’ value depending on in your opinion (e.g. what criteria is influencing your value-perception)?

5. **Comments:**
9.8 Interview guideline employees

Questions to the Meyer Burger employee

Date:
Name:

4. What is your role in the company? (E.g. sales manager for region x, etc.)

5. How would you define the value of a service? (Value is the worth of a product or service as determined by the customer)

6. How do our customers define the value of our services?

7. Some say that value (on a theoretic level) is depending on:
   - the benefits you get from the service (customer loyalty, increased production performance, etc.)
   - the sacrifices you have to pay for the service (the price you have to pay for a service or the total cost of ownership, etc.)
   - the offerings from competitive suppliers,
   - different use situations (different customer segments that use the service in distinctive ways, and hence realize unique values),
   - Distinctive value perceptions of different people within a corporation (e.g. production managers might want to spend more money on a service for highest possible Yield, whereas purchasers would focus more on price than benefits)

   Do you agree?

   - Yes: Can you add more criteria that the customer’s perception of value is depending on?
   - No: What is a services’ value depending on in your opinion (e.g. what criteria is influencing your value-perception)?

5. Comments:
9.9 Transcribed interviews

9.9.1 Exhibition interviews

Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
Too theoretic to specify any elements value is depending on. It’s varies from customer to customer. Usually customers select a supplier, apart from benefits, on the risk level, size and reliability.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Marketing
Country: China

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Chinese customers value services strongly; they like to have good maintenance, a good spare part distribution network, and a reliable supplier – hence, it’s important to have sales references, preferably from large accounts.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering
Country: Sweden

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
Because Power Cell is a rather small company, their customers value their flexibility.
## Exhibition interview

**Date:** 2011.04.07  
**Company:** – (Known to the author)  
**Name:** – (Known to the author)  
**Field:** Sales  
**Country:** Germany

### Value of a service is depending on:

- The benefits you can realise with the service  
- The price you have to pay for the service  
- The offerings from competitive suppliers  
- Different segments  
- The subjective perceptions of distinctive people

### Comments:

A supplier’s reliability and image is one of the most important decision criteria for purchasers. It’s very important to have good sales references.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering / Sales
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:

Services and after sales support is perhaps the most critical decision criteria for purchasers.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Italy

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Services, after sales support and a supplier’s image, as well as the interpersonal relationship are the most important decision criteria for purchasers.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales / Management
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
A supplier’s reliability (the risk level for the purchaser) and interpersonal relationships are the most important decision criteria for purchasers.
Exhibition interview

Date: 2011.04.07
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:

Services, after sales support, a supplier’s reliability (the risk level for the purchaser), and the interpersonal relationships are the most important decision criteria for purchasers.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering
Country: France

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
The purchaser regards a supplier’s risk level as the most important decision criteria. A long-term service agreement does usually encompass high risks. A service provider must deliver competitive advantage as benefit.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering / Management
Country: Germany

Value of a service is depending on:

- The benefits you can realize with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
The best benefit a service provider can offer its customer’s is a highly qualitative service at faster reaction times. In other words, one should be better and quicker than competition.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering / Management
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
The best benefit a service provider can offer its customer’s is the quickest possible service. In an industry, when production is halted, a significant amount of money is lost every hour. Hence, purchasers, even before the costs, regard the quickest possible service as the most important decision criteria.
# Exhibition interview

**Date:** 2011.04.08  
**Company:** – (Known to the author)  
**Name:** – (Known to the author)  
**Field:** Management / CEO  
**Country:** Germany  

**Value of a service is depending on:**
- The benefits you can realise with the service  
- The price you have to pay for the service  
- The offerings from competitive suppliers  
- Different segments  
- The subjective perceptions of distinctive people

**Comments:**
When a service provider has established a loyal relationship with a customer through many years of successful collaboration, the value of a service will not be dependent on competition. Further to loyal customers, innovative solutions and technical leadership are viewed as the main benefits.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: India

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
-
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering
Country: Switzerland

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
In addition to the benefits, price, competition and segments, the service suppliers’ reliability and the risk level are among the most important decision criteria of purchasers.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
The quality of a service is the most important benefit.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Marketing Director
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Also, reliability, the risk level, know-how and productivity of a service supplier are influencing the value perception of purchasers.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering / Management
Country: Singapore

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:

The most important benefit of a service supplier is to provide a quick service, i.e. fast reaction times, and, according to what market, it is highly desirable to have a global service network.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:

Reliability of a service supplier is highly regarded by purchasers.
Exhibition interview

Date: 2011.04.08
Company: — (Known to the author)
Name: — (Known to the author)
Field: Management
Country: France

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:

-
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Engineering
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:

Value is subject to the different perspectives of distinctive people within an corporation. Purchasers regularly focus on costs and in keeping these down to a minimum. Production managers, on the other hand, focus on the production uptime and are more likely to buy a somewhat more expensive service product if it results in a higher uptime, etcetera. In many cases, the benefit of a service is very hard to be defined, as a service is intangible with many soft factors, other than an industrial good.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Sales
Country: Germany

Value of a service is depending on:
- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
The perception of value differs between distinctive individuals within an corporation.
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Consulting
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
-
Exhibition interview

Date: 2011.04.08
Company: – (Known to the author)
Name: – (Known to the author)
Field: Management Consultant
Country: England

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:

Value is depending on the benefits minus the sacrifices and different segments and subjective judgments influence this perception. Competition is only partly influencing the customer’s perception of value when determining what service to buy. The more the customer knows about competition the broader knowledge he has and the more precise judgments of value he can make.

The benefits are perceived differently between different people within a corporation and between different corporations. If a corporation seeks for sustainability a benefit would be to deliver an environmentally friendly service, etc. Other benefits might be the quickness (to solve downtime issues in a production), and the decrease of the costs. Among the sacrifices are costs (the price of a service), the time of the customer, etc.
9.9.2 Customer interviews

Customer interview

Date: 2011.04.11
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Engineering / Procurement
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
-

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Customer interview

Date: 2011.04.11
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Engineering / Procurement
Country: Germany

Value of a service is depending on:
• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
-
Customer interview

Date: 2011.04.11
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Engineering / Procurement
Country: Germany

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
-
Customer interview

Date: 2011.04.11  
Company: – (Known to the author)  
Name: – (Known to the author)  
Position of interviewee: Engineering / Procurement  
Country: Germany  

Value of a service is depending on:

- The benefits you can realise with the service  
- The price you have to pay for the service  
- The offerings from competitive suppliers  
- Different segments  
- The subjective perceptions of distinctive people  

Comments: 
-
Customer interview

Date: 2011.04.21
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Procurement of diamond wire
Country: China

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
After sales service is the most important aspect in the consumables business.
Customer interview

Date: 2011.04.12
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Equipment & Technology Director
Country: China

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
The customer is price insensitive if the benefits are higher than the costs. A win-win situation must be accomplished.
Customer interview

Date: 2011.05.18
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: CFO
Country: China

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
Benefits: Higher Uptime and Yield with Service as target, therefore SLA signed in April 2011. Uptime guarantee of a Service Level Agreement is not enough, in times of a more difficult market especially a Yield guarantee is wished (which is quite a challenge for MB)

Sacrifices: Total Cost of Ownership, considering equipment and services / process support

Competition: Customer compared TCoO with other service providers

The CFO is very much cost-driven and therefore yield oriented (yield is the amount of wafers produced vs. the theoretically possible amount).
Customer interview

Date: 2011.05.18
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Head of Production
Country: China

Value of a service is depending on:
- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Benefits: Higher Uptime and Yield with Service as target, therefore SLA signed in April 2011. Uptime guarantee of a Service Level Agreement is not enough, in times of a more difficult market especially a Yield guarantee is wished (which is quite a challenge for MB)

Sacrifices: Total Cost of Ownership, considering equipment and services / process support

Competition: Customer compared TCoO with other service providers

The Head of Production is cost-driven and therefore yield oriented (yield is the amount of wafers produced vs. the theoretically possible amount), but he places more significance to uptime issues (uptime is the machine availability).
Customer interview

Date: 2011.05.20
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Director Supply Chain (Purchasing)
Country: China

Value of a service is depending on:
- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Benefits: Higher uptime and yield with service as target, therefore SLA signed in June 2010. MB managed to increase uptime and yield for customer, and decrease TCO. Uptime guarantee was reached. Now in times of a more difficult market situation, customer is even more cost-focused and demands a cost reduction of the monthly maintenance costs. Moreover, interested that MB manages spare parts for customer (target: short reaction time on parts, save supply chain energy, save costs). Now hard negotiations on costs will follow.

Sacrifices: Total Cost of Ownership, considering equipment and services / process support

Competition: Compared MB with competitors. Statement that competition is cheaper than MB, therefore MB has to make cost reductions.

Highly cost-driven due to difficult market situation. Director Supply Chain very focused on broad picture.

Nähring, 2011
Customer interview

Date: 2011.05.20
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Head of Production
Country: China

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Benefits: Higher uptime and yield with service as target, therefore SLA signed in June 2010. MB managed to increase uptime and yield for customer, and decrease TCO. Uptime guarantee was reached. Now in times of a more difficult market situation, customer is even more cost-focused and demands a cost reduction of the monthly maintenance costs. Moreover, interested that MB manages spare parts for customer (target: short reaction time on parts, save supply chain energy, save costs). Now hard negotiations on costs will follow.

Sacrifices: Total Cost of Ownership, considering equipment and services / process support

Competition: Compared MB with competitors. Statement that competition is cheaper than MB, therefore MB has to make cost reductions.

Highly cost-driven due to difficult market situation, and interested in details of maintenance and machine uptime.
Customer interview

Date: 2011.05.20
Company: – (Known to the author)
Name: – (Known to the author)
Position of interviewee: Vice President Manufacturing
Country: China

Value of a service is depending on:
- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Benefits: Higher uptime and yield with service as target, therefore SLA signed in June 2010. MB managed to increase uptime and yield for customer, and decrease TCO. Uptime guarantee was reached. Now in times of a more difficult market situation, customer is even more cost-focused and demands a cost reduction of the monthly maintenance costs. Moreover, interested that MB manages spare parts for customer (target: short reaction time on parts, save supply chain energy, save costs). Now hard negotiations on costs will follow.

Sacrifices: Total Cost of Ownership, considering equipment and services / process support

Competition: Compared MB with competitors. Statement that competition is cheaper than MB, therefore MB has to make cost reductions.

Highly cost-driven due to difficult market situation, and interested in details of maintenance and machine uptime.
9.9.3 Employee interviews

Employee interview

Date: 2011.04.18
Name: – (Known to the author)
Position: Project Manager of Value Adding Services
Country: China

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
Good, qualitative maintenance is the most important benefit to the customer.
Employee interview

Date: 2011.04.19
Name: – (Known to the author)
Position: Service Location Manager Singapore & Taiwan
Country: Singapore / Taiwan

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
It is correct to say that all above factors are influencing the value perception of a purchasing corporation. However, one must be aware of different weightings to these factors, i.e., a customer in Taiwan and China is usually more concerned with the price of a service than a customer in Singapore, who focuses more on the benefits that can be realised with a service rather than what must be paid for it.
Employee interview

Date: 2011.05.09
Name: – (Known to the author)
Position: Head of Global Services
Country: Switzerland

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
All of these factors influence the value perception. However, value cannot be generalised. It varies extremely between industries, countries, regions, etcetera. Usually, the value of a service is depending on the industry- and customer maturity. The lower the maturity the lower demand on services (i.e., in an immature industry, customer's tend to in source rather than outsource, leaving little attention and hence little value to services). In a mature industry, such as the car industry, corporations usually outsource non-core activities, leaving a high value of qualitative services. Furthermore, when a customer is a global actor on the market it is hard to give distinctive value-based prices to different regions; because the customer can compare prices globally and would be dissatisfied if a service costs more for him than in other countries. On the other hand, same prices in China and the US might cause dissatisfaction as well, because the labour costs are lower in China. Hence, it is very important to consider cost-based pricing before a value-based price is selected.
Employee interview

Date: 2011.04.21
Name: – (Known to the author)
Position: Sales Engineer
Country: China

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
A quick and qualitative service is the most important aspect for customers. Service is very important, because it can bring higher customer satisfaction and long-term partnerships that will be beneficial for future sales activities.
Employee interview

Date: 2011.05.02
Name: – (Known to the author)
Position: Service Location Manager
Country: USA

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Availability of service engineers and spare parts, fast response times, and the price are very important to customers. Price does rarely matter when the quality of a service is high. Customers do not mention competition when it comes to price. However, some claim that competitors offer a higher service quality.
Employee interview

Date: 2011.05.09
Name: – (Known to the author)
Position: Process Support & Training Global Service
Country: Switzerland

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:

Other important aspects that influence the customer's value perception are:

- Physical facility (hard contextual, such as good looking facilities, etcetera)
- Interpersonal relationships (soft factors, a qualitative service might not be perceived that way when the interpersonal relationship to the service supplier is weak)
- Quality delivered (this is a very important aspect after the service is conducted. The customer must feel satisfied with the service, which will result in a better value perception and might trigger new sales).

The value perception of customer's cannot be generalised, as they differ between industries, segments, countries, regions, and even different customers. Usually, the customer's demands on a service are proportional to his experience in a certain area. When he is experienced in a certain area he has higher demands on a service than an inexperienced customer has.
Employee interview

Date: 2011.04.19
Name: – (Known to the author)
Position: Technical & Process Manager
Country: China

Value of a service is depending on:

- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
-
Employee interview

Date: 2011.05.10
Name: – (Known to the author)
Position: PM & Sales Global Service
Country: Switzerland

Value of a service is depending on:
- The benefits you can realise with the service
- The price you have to pay for the service
- The offerings from competitive suppliers
- Different segments
- The subjective perceptions of distinctive people

Comments:
Among the most important aspects of benefits are:
- Service quality
- Time (when the service is conducted and the reaction time)
- Competitive advantage (how can the service provide USP’s for the customer's customer)
- Profit (benefits - costs).

Further, opportunity costs are significant for customers. They elaborate on: what if I in source this service activity? What if I outsource this service activity? And what if I don't conduct the service at all? These are all considerations that take place in a buying situation and thus influence the value perception. These considerations do, however, take place in the consideration of benefits, price, and competitive offerings.
Employee interview

Date: 2011.04.05
Name: – (Known to the author)
Position: Sales Asia
Country: Switzerland

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:
Value can't be generalised. There are different aspects to value for different people within a corporation. The purchaser might see price and competition as the only aspects, whereas production managers might focus on the benefits a service entails on the production, i.e. better production performance, and is thus inclined to purchase more costly services if the benefits are higher.
Employee interview

Date: 2011.05.10
Name: – (Known to the author)
Position: Service Location Manager
Country: Germany

Value of a service is depending on:

• The benefits you can realise with the service
• The price you have to pay for the service
• The offerings from competitive suppliers
• Different segments
• The subjective perceptions of distinctive people

Comments:

Missing in this description is only the value when a service provider entirely understands the customer's demands. When the customer feels that his issue is understood he will get a larger trust in the service provider and it will thus increase the value perception of the supplier's offering.

Price does only play a larger role when the value of two service providers is similar. In this situation purchasers usually go for the cheaper service. Otherwise all factors do matter for purchasers when they determine the value of an offering.
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