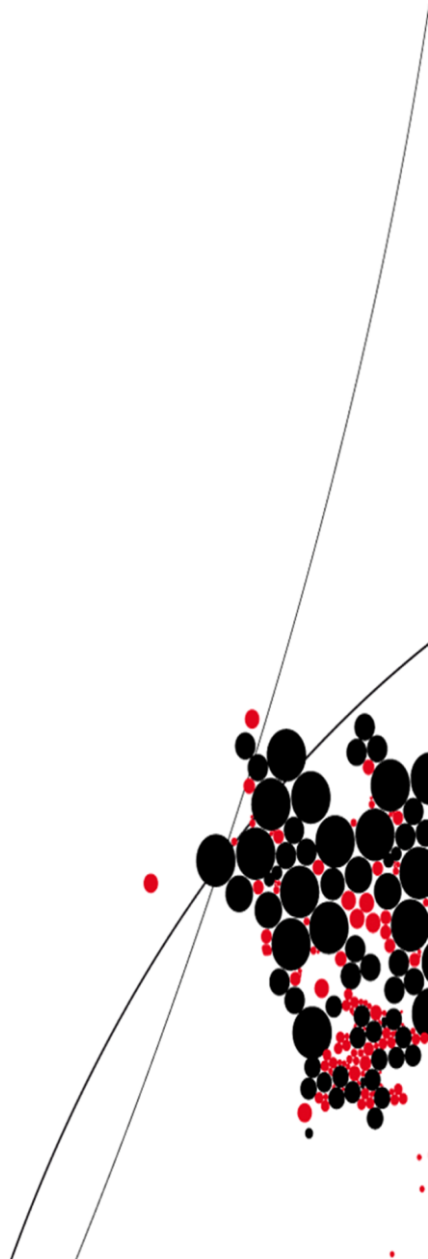


The extent that manufacturing small-and- medium sized firms apply value-based pricing for their products



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Abstract

The purpose of this study is to discover the extent that manufacturing small-and-medium sized firms apply value-based pricing for their products. In doing so, how the firms apply VBP and which obstacles they face have been revealed. The literature indicates that the usage of value-based pricing is superior compared to other pricing strategies such as competition-based pricing and cost-based pricing. However, the literature does not portray how small-and-medium sized manufacturing firms apply value-based pricing and to which extent the firms apply value-based pricing. This study uses an exploratory approach with semi-structured interviews. In the end, 17 firms were interviewed and the data was analysed with open coding. The results of this study indicate that most of the firms apply a combination of value-based pricing with another pricing strategy. In general, there are many methods in how the firms apply value-based pricing. The most often named methods are communication with the customer, using quality as a factor and discovering the latent needs of the customer. The extent that the firms apply value-based pricing is various. The usage of value-based pricing is dependent on the situation. Many of the firms have encountered situations in which their other pricing strategies are more applicable. There are two main obstacles that the firms have faced while attempting or trying to use value-based pricing. Namely, internal struggles within the firm and not being able to establish how to translate the value into a price with the customer. In order to overcome these obstacles, a few firms have facilitated further training for their employees and negotiate with their customers in order to create a better understanding. This study further imparts with theoretical contributions that indicate that the pricing strategy is dependent on the situation and sheds light on a new area of research, the usage and application of a combination of pricing strategies within small-and-medium sized firms.

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List of abbreviations

VBP	Value-based pricing
CmBP	Competition-based pricing
CsBP	Cost-based pricing
SME	Small-and-medium sized companies

1. Introduction

In today's market, companies try to launch new products to avoid the downfall of pricing power. Despite of launching these new products, it does not guarantee success of overcoming this downfall. What's more, 72% of companies fail to meet profit targets while launching new products due to the neglectance or ignorance of essential pricing and marketing activities (Simon-Kucher & Partners, 2014). These essential marketing practices involve measuring market value and its importance in pricing. There has been extensive literature on value and its role in pricing. Value can be considered in the pricing literature as a keystone in increasing profitability and its usage has different definitions in the literature such as the customer's willingness to pay or value-based pricing (VBP) (Liozu & Hinterhuber, 2013; Hinterhuber, 2008; Ingenbleek, Frambach & Verhallen, 2013; Johansson, Keränen, Hinterhuber, Liozu & Andersson, 2015). Kienzler (2018) considers that VBP is a superior practice compared to other pricing methods, by reason of gaining a competitive advantage via customer value creation. Furthermore Kienzler (2018) states that companies can capture a chunk of that value in the form of profit. This means that companies must understand what customers value in order to apply VBP.

Hinterhuber (2008) indicates from a meta-analytical study that 17% of all the manufacturing firms apply VBP compared to other forms of pricing such as competition-based pricing (CmBP) and cost-based pricing (CsBP). This research focuses on manufacturing firms of all sizes. As stated above the literature indicates the importance of value and its role in the profitability in the pricing strategy. It is therefore peculiar that only 17% of the manufacturing firms apply VBP. According to Hinterhuber (2008) companies face mainly the obstacles of value assessment and the communication of value which could be indicators of why manufacturing firms do not tend to apply VBP. These obstacles were found in 9 companies from Germany, Austria, China and the USA. By the same token, Dost and Geiger (2017) state that the competitive nature within pricing contexts and the indeciveness of customers are the main obstacles that all manufacturing firms face while trying to apply VBP.

Small-and-medium sized companies (SMEs) are known for being situated in complex and ever-changing environments (Carson & Gilmore, 2000). Furthermore, they state that SMEs have to adjust their capabilities, resources and skills to these ever-changing competitive environments. As stated previously by Kienzler (2018), VBP is used to gain a competitive advantage via customer value creation. Therefore, it is interesting to see whether SMEs apply VBP to overcome their continually changing environment.

Although there has been extensive literature on the amount of companies of all sizes that apply VBP, the literature lacks a thorough understanding of more specifically how and thus the extent that manufacturing small-and-medium sized companies (SMEs) apply VBP (Liozu, Boland, Hinterhuber & Perelli, 2011; Ingenbleek, 2007, Hinterhuber, 2008). In addition, in the literature, the obstacles that these SMEs face while trying to apply VBP is in its infancy.

In collaboration with Hugo Wemel, the University of Twente is performing a research project. This research project focusses on the usage of VBP within Dutch and German manufacturing SMEs. In total there are five peers working on this research project. One of the peers will focus on the effect of integrating customer value principles and success rate. Two peers have set their focus on the obstacles SMEs face whether it being internally or externally. Finally,

the last two peers focus on the extent that SMEs use VBP, how SMEs apply VBP and the obstacles they face. This research paper will focus on how Dutch and German SMEs apply VBP, the extent that they apply it and in turn obstacles they face. The research area will be around Enschede in the Netherlands and Münster within Germany. The goal of this research is to discover the extent manufacturing SMEs apply VBP. In total 17 SMEs in the Netherlands and in Germany will be examined to provide Hugo Wemel with strategic insights on VBP in the Dutch and German manufacturing markets.

Based on the literature, there is a gap of the extent of applying VBP of manufacturing SMEs. The aim of this research paper is to fill this gap and to provide rich insights. Thus, the purpose of this study is discovering the extent of the application of VBP of SMEs.

Therefore, the following research question:

“To what extent do manufacturing small-and-medium sized companies apply value-based pricing for their products?” will be answered.

In addition, while answering the research question, the reasoning behind the extent of applying VBP and how the SMEs apply VBP can be found. How SMEs apply VBP will show the extent of the SMEs of their application of VBP. This will in turn reveal whether SMEs face obstacles during or after the application of VBP and how they deal with these obstacles. Therefore, the following sub-questions have been devised:

“How do manufacturing small-and-medium sized companies apply value-based pricing?”.

“What obstacles do manufacturing small-and-medium sized companies face when applying value-based pricing for their products?”

“How do manufacturing small-and-medium sized companies overcome or handle obstacles concerning value-based pricing?”

The aim of this research paper is to develop theory on the extent and how manufacturing SMEs apply VBP with the obstacles they face or have faced while doing so. This study will mainly apply an inductive approach. The inductive approach being to explore how, the extent and which obstacles these SMEs face with the application of VBP. Additionally, this research will also confirm whether manufacturing SMEs apply the same methods for using VBP as indicated in the literature for firms. This research paper sets its focus on manufacturing SMEs, thus providing the literature and Hugo Wemel with managerial implications on the extent, the how and which obstacles SMEs face while applying VBP. Moreover, the practical implications will also be how other SMEs can apply VBP, which obstacles they then might face and in turn, how to overcome them. This research will provide SMEs managerial implications when they want to or are already trying to apply VBP. Although there is a limitation for the managerial implications due to the fact that the scope of this research is focused on the Netherlands and Germany. Therefore, there might be different managerial implications for manufacturing SMEs in other countries.

This paper will provide a theoretical contribution by specifying how manufacturing SMEs apply VBP. Due to the explorative nature of this research, the how and the extent will be defined for the application of VBP. With this information other scholars can further specify how other firms aside from manufacturing SMEs apply VBP. Moreover, this research will further contribute theory on what obstacles firms face with the application of VBP and

validate whether the obstacles in described in the literature also account for manufacturing SMEs.

This research paper is set up as follows. First a theoretical framework will be made based on the existing literature. The existing literature will be used as the foundation for developing the theoretical framework for the extent of the application of VBP. Next the methodology will be discussed of this qualitative research study. The methodology section will first show an overview of the research design. Consequently, the methodology will entail the data collection of 17 SMEs in the manufacturing industry. In addition, the analysis will consist of the usage of open coding in order to analyse how and the extent the firms apply VBP. Furthermore, the results of the transcripts of the interviews will be presented in the results section. After the results are given, an analysis will be made based on these results in relation to the literature. In the end, the research question will be answered, followed by a discussion, theoretical and practical contributions, future research and limitations and finally, the conclusion.

2. Theory

The focus of this study is placed on the application of VBP within manufacturing SMEs. This section will provide the theoretical framework for the key concepts of this study. First the different pricing policies will be described. Second the obstacles of using VBP will be characterized and how firms can apply VBP. Finally, a conceptual framework will be given.

2.1. Product pricing policies

“Pricing decision making is one of the oldest marketing topics, drawing significantly on the economics literature, which certainly predates most marketing pricing analyses” (Cannon & Morgan, 1991, p. 59). Harmon, Raffo and Faulk (2005) state that the product pricing decision is one of the most decisive decisions an organization can make in the launch of a new product. Furthermore, the pricing strategy which a firm chooses should be guided by the pricing objectives and goals of the company to ensure the success of a product (Avlonitis & Indounas, 2005). These examples show that it is important to understand the pricing policies. According to the literature there are three main product pricing policies defined namely CsBP, CmBP and VBP. To understand why companies do or do not apply VBP, it is also important to understand the other two pricing policies. Therefore, first CsBP and CmBP will be discussed and then VBP.

2.1.1. Cost-based pricing

CsBP is one of the oldest pricing strategies. CsBP is the pricing policy which is most used overall by organizations and for the sector of manufacturing firms it is not always the pricing strategy which is deemed most important (Guilding, Drury & Tayles, 2005). To achieve CsBP, every product or service has to be priced to yield a reasonable return over all costs (Nagle, Hogan & Zale, 2016). More specifically CsBP is based on the data from cost-accounting (Hinterhuber, 2008). The cost-accounting simply accounts for all the costs for obtaining and selling the product and in turn provides data that a company can use to cover their costs and make a good return (Gregson, Sparrowhawk, Mauskopf & Paul, 2005). CsBP is advantageous over the other pricing strategies when demand and value is difficult to estimate (Noble & Gruca, 1999). Another advantage of CsBP is that it is easy to implement, one just needs to know the costs of the product and the margin needed (Hinterhuber, 2008). The main disadvantages of CsBP is that it does not consider the exploitable value and does not work well in a low-competitive intensity market (Ingenbleek, Frambach & Verhallen, 2013; Simon, Butscher & Sebastian, 2003).

2.1.2. Competition-based pricing

CmBP is a pricing strategy used when a company interprets the competitors' prices in their market position which is then compared to the position the company is situated (Ingenbleek, Debruyne, Frambach & Verhallen, 2003). Thus, CmBP is used when an organizations' product offers less benefits than the competitors' product, the organization looks at the price of the competitors' product and places their price slightly below that of the competitors'. Furthermore, CmBP is applied by using three different strategies (Noble & Gruca, 1999; Avlonitis & Indounas, 2005). By being a price leader and expecting other firms to follow, matching the price set by the overall market or price leader and finally simply striving to have

the lowest price on the market (Noble & Gruca, 1999; Avlonitis & Indounas, 2005). In the literature CmBP is portrayed as effective when used in low-intensity competitive markets and similar to CsBP, it does not consider the exploitable value (Ingenbleek, Frambach & Verhallen, 2013).

2.1.3. Definition of value

The literature is consistent that the use of VBP is superior to the other two pricing strategies (Hinterhuber, 2004; Cressman, 2010; Baker, 2009). Before VBP can be defined, one must first define value. There are various amounts of definitions for value (Vargo & Lusch, 2004; Vargo & Morgan, 2005; Anderson & Narus, 1998). Value can be defined in monetary terms, benefits or what the customer gets in exchange for the price it pays (Anderson & Narus, 1998). Further, value can also be defined as the quality, graphic shape and the desirability of the products (Alinezhad Sarokolaee, Taghizadeh & Ebrati, 2012). In manufacturing firms value includes product and service attributes. In addition, affordability, timeliness and technical performance are considered as factors for value for manufacturing firms (Browning, 2003). Moreover, value can be defined based on the kind of literature. In the marketing literature value is largely defined as the customer's perception of the costs and benefits from the exchange of the price for a market offering (Grönroos, 2011; Anderson & Narus, 1998). The definition of value used in the pricing literature is different, which defines value as the key lever for increasing profitability and can be defined as the customer's willingness to pay (Hinterhuber, 2013; Liozu, Hinterhuber, Boland & Perelli, 2012). Both of these definitions consider the customer's perception of value and the pricing literature's definition mainly seeks to maximize profit. The definition of value in the marketing literature will be further used, due to the fact that it also considers the benefits of the products while considering the customer's perception.

2.1.4. Definition of value-based pricing

In the literature there are various definitions of VBP. VBP can be defined as an approach and uses the value of a product or service which delivers to a segment of customers for setting prices (Hinterhuber, 2008). This definition is comparable to the definition proposed by Ingenbleek, Frambach and Verhallen (2010). Although Ingenbleek et al. (2010) add that VBP is based on the perceptions of the benefits from the product or service being offered. Furthermore, they add that the perception of the benefits is important for the customers to compare price. The literature also provides definitions of VBP in an alternate offerings' context. Gregson et al. (2005) define VBP more specifically in the context of alternate offerings and setting a price relative to the value of a product or service in that context. The definition of Gregson et al. (2005) is complementary with the definition proposed by Nagle et al. (2016). They define VBP as the customer's relative willingness to pay for a product or service which adds more value than that of a competitor (Nagle et al., 2016). This research paper will further use the definition of VBP as an approach which uses the perceptions of benefits from a product or service, translates those benefits into value and setting a price relative to that value.

2.2. Using value-based pricing

Liozu et al. (2012) describe how firms apply VBP. They found that the conceptualization of VBP within firms varies from firm to firm. This research focuses on small and medium sized firms. Furthermore, firms which use VBP conceptualize value similar to the literature. (Liozu

et al., 2012). When using VBP there are advantages and obstacles which come to light. The main advantages of applying VBP compared to the other two pricing strategies is that VBP considers the needs of the customer (Füreder, Maier & Yaramova, 2014). This will in turn create a long-term relationship with customers, which means a higher profitability for the company (Baker, 2009). The main reason for the endorsement of VBP is the recognition that using VBP leads to sustained profitability by understanding the sources of the value for the customers (Hinterhuber, 2008; Kienzler, 2018). While the literature is saturated with the amount of advantages while applying VBP, there are not many disadvantages or obstacles noted for SMEs. Below the disadvantages and obstacles that the firms face based on the existing literature.

One of the disadvantages of applying VBP is the transition of one pricing strategy to another. The transition to VBP is described as meticulous and the process requires intense organizational transformation (Liozu et al., 2011). Moreover, the perception of value from the customer changes periodically which makes it difficult for companies to predict what customers value next (Flint, Woodruff & Gardial, 2002; Codini, Saccani & Sicco, 2012). These difficulties could be the reasons why companies do not apply VBP. Füreder et al. (2014) have identified obstacles when applying VBP in the Austrian market with medium sized companies. Their main findings could be similar to the obstacles SMEs face; therefore, the main obstacles shall be shortly noted. The main obstacles the companies faced from most significant to least significant were price wars, nature of the product does not allow differentiation, effort of determining customer value and customer resistance from perceived unfairness (Füreder et al., 2014). The obstacles of determining customer value and that the product does not allow differentiation are similar to the obstacles found by Hinterhuber (2008). Further, Hinterhuber (2008) and Töytäri, Keränen and Rajala (2017) add that value communication, expertise and top management support are also viable obstacles. Kienzler (2018) has done a study on the negative impact of cognitive biases on VBP. In total there were five cognitive biases summarized which are obstacles for the implementation of VBP. These five biases are perceived lack of control, herding, fixed-pie bias, ambiguity aversion and egocentric fairness bias (Kienzler, 2018). In the end if the management and employees could overcome or avoid these biases, VBP could be successfully implemented.

Themes which came to light for using VBP has been indicated by Ingenbleek et al. (2003) which describes five themes in their research on VBP of Belgian firms. The five themes of how companies use VBP are: the advantages of the product compared to competitors' products, the customer's perceived value of the product, the advantages the new product offers to the customer, the balance between advantages of the product and price and finally the advantages of the product compared to substitutes (Ingenbleek et al., 2003). Other researchers have also used these themes successfully to identify the usage of VBP in other countries (De Toni, Milan, Saciloto & Larentis, 2017; Liozu & Hinterhuber, 2013). Due to the fact that the previous literature identified the usage of VBP in an essentially global setting and with medium and large sized firms, there is a gap within the literature on the extent of SMEs usage of VBP. Furthermore, the literature has not established a particular focus on how specifically, manufacturing SMEs apply VBP. The five themes proposed by Ingenbleek et al. (2003) will be used to examine the extent of SMEs usage of VBP. Moreover, this framework has been validated and successfully used in other studies. Furthermore, by using these five themes it will be possible to discover how manufacturing SMEs apply VBP. Thus, this research will explore how the manufacturing SMEs apply VBP and reveal the extent of the

application of VBP within manufacturing SMEs. These five themes will be further theoretically developed below in relation to value and pricing.

2.2.1. The advantages of the product compared to competitors' products

As stated previously, Nagle et al. (2016) define VBP which adds more value to the customer than that of a competitor. Petrin (2002) investigated the influences of launching new products with competition. He concluded that in a competitive based environment, the product should be able to differentiate itself from the competition. In addition, the importance of identifying and constructing the advantages of a new product compared to competitors' products ensures that a firm will position the new product well (Gatignon, Xuereb, 1997). Furthermore, for assessing VBP, the advantages of the product compared to competitors' products is a good indicator (Nagle et al., 2016). Nagle et al. (2016) also state that this advantage can be directly translated into value and thus affect the pricing of a product or service. Alinezhad Sarokolaei et al. (2012) state that while customers compare similar products of competitors, they deem to focus on the quality and the desirability of the products. When a firm focuses on these advantages, more value is perceived by the customers. While comparing products with the competition is similar to the usage of CmBP, the main difference lies with the advantages of the product. In sum, the advantages of a product compared to competitors' products is essential for defining VBP within a firm when those advantages translate into value. This is also in accordance with Dost and Geiger (2017). Dost and Geiger (2017) have done a study on the customers willingness to pay based on value-based pricing. They indicate that comparing the firm's advantages of their products with the products of the competition can give a means to increase the value of the products. The methods of gaining value according to Dost and Geiger (2017) with these advantages is based on the customers' indecisiveness. Firms can gain additional value by giving guarantees, reviews or quality labels to their products for their customers benefit.

2.2.2. The customers' perceived value of the product

Perceived value can be defined as the consumer's assessment of the usage of a product which is based on the perceptions of what is given and received (Zeithaml, 1988). This definition of perceived value is in accordance with Kortge and Okonkwo (1993) and Lapierre (2000). Furthermore, because value is subjectively perceived differently by customers, customers perceive different values within the same product mix (Kortge & Okonkwo, 1993). In addition, the perceived value of a product can be roughly translated into a VBP approach (Kortge & Okonkwo, 1993). Companies tend to apply different pricing strategies based on perceived value, such as pricing differentiation on different product lines (Draganska & Jain, 2006). Lapierre (2000) states a significant list of benefits of value-based drivers in which the perceived value can be translated into price within the categories of product, service and relationship. The study of Lapierre (2000) reveals that product, service and relationship are not independent of one another for assessing the customer perceived value. Furthermore, Lapierre (2000) indicates the importance of understanding the customers' perceived value of the product so that an appropriate pricing strategy can be made. This is in accordance with Alinezhad Sarokolaei et al. (2012). Alinezhad Sarokolaei et al. (2012) further indicate that understanding the customers' perceived value of a product leads to comprehending the customers' expectations which, in the end lead to a higher customer satisfaction of a product. In turn the appropriate prices can be determined based on what customers perceive as value such as, the value that the customer wants from a product or service, low price, the correlation

between quality and price and the thing a customer gains in return to something he or she loses (Alinezhad Sarokolaee et al., 1981).

2.2.3. The advantages the new product offers to the customer

When launching a new product, the perceived value and competition is considered for VBP. This also includes translating the advantages of a product into perceived value (Haji & Assadi, 2009). To successfully launch a new product with new advantages, the product should be able to differentiate itself from existing products from the customers perception (Petrin, 2002). When translating the advantages of the new product into value, it is vital to understand and meet the new needs of the users (Gatignon & Xuereb, 1997). Furthermore, understanding the advantages attached to new products attributes permit value-for-money in the perception of a customer (Codini et al., 2012). They also state that this will result in exploiting the profit potential of the products, increasing market share and increasing customer satisfaction (Codini et al., 2012). Thus, the customer's perception of the advantages of the new product is important for considering the perceived value of the customer and translating that value into the price.

2.2.4. The balance between advantages of the product and price

The balance between advantages of the product and price can be considered as the maximalisation of profit (Nagle et al., 2016). This is in accordance with VBP because VBP tries to recognize all the exploitable value and translate that value into the price (Ingenbleek, Frambach & Verhallen, 2013). Furthermore, the balance between the advantages of a product and price has been researched by Haji and Assadi (2009). In their research the advantages of a product are directly linked to the value portrayed by the customer. The more a firm is leaning towards the full balance, the more likely the firm is trying to gain profits. On the other hand, to penetrate the market, a company would set the price lower than the value to give the customers more value for their money (Haji & Assadi, 2009). This balance stated by Haji and Assadi (2009) is in accordance with Lapierre (2000). Moreover, the balance between the benefits of a product and the sacrifices the customer has to make is essential for understanding the advantages of a product compared to its price (Lapierre, 2000). When a firm has the ability to balance the advantages of a product and price, this will in turn be perceived by the customer as fairness of price and lead to more value (Cockrill & Goode, 2010). If there is a misalignment between the advantages of a product and price, lost sales and lost margins may occur due to overpriced and under-priced products (Codini et al., 2012).

2.2.5. The advantages of the product compared to substitutes

The advantages of the product compared to substitutes deviates from the advantages of the product compared to competitors' products on the fact that a company can have several product lines (Draganska & Jain, 2006). The advantages of the product compared to alternative solutions such as substitutes is an important driver for assessing the value of a customer and in monetary terms, the price the customer is willing to sacrifice for a product (Lapierre, 2000). The choice of an organization to expand their lines with more products have a positive impact on the price image which is perceived by the customer (Hamilton & Chernev, 2010). When an organization wants to be deemed cheaper by the customer, they should also add products which are cheaper than the alternatives (Hamilton & Chernev, 2010). To understand the translation of the advantages from one product to a similar product in price, the costs of each product must be compared with the advantages of each product

(Kortge & Okonkwo, 1993; Draganska & Jain, 2006). Customers tend to have a sense of the value between the product and the substitutes but in the end, they may have no idea how to value a product (Cannon & Morgan, 1991). Due to the fact that customers may not have much sense of the value, it is important that the advantages of a product compared to the substitutes are revealed and expressed in value which can be perceived as advantageous by the customer.

2.3. Conceptual framework

Figure 1 shows the conceptual framework for determining the extent of the application of VBP which builds on Ingenbleek (2003). To determine the extent of the usage of VBP it is important to understand how SMEs apply VBP which will in turn reveal the extent that they use it. The five factors of Ingenbleek (2003) are an indication on the usage of VBP within firms. The obstacles that a SME faces might influence the extent of the application of VBP.

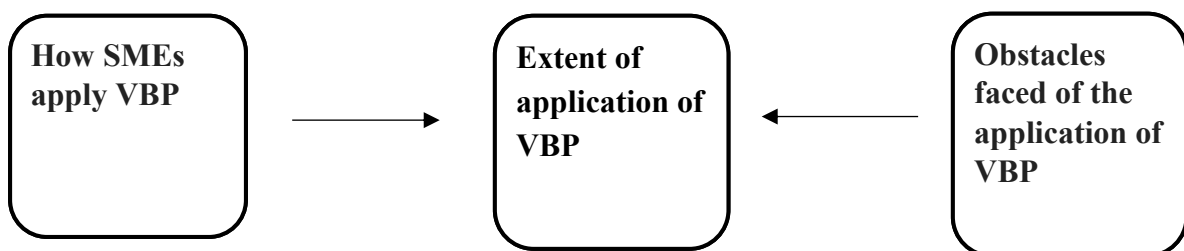


Figure 1 Conceptual Framework

3. Research design

This study used an exploratory qualitative approach with the use of semi-structured interviews. An exploratory approach was chosen to discover how SMEs use value-based pricing, thus the extent of the application of value-based pricing within SMEs. The obstacles will also be revealed and how the firms deal with these obstacles, by this explorative approach. An exploratory approach is well suited for this study because an exploratory approach lays the emphasis on discovery of ideas and insights (Kothari, 2004). Furthermore, an exploratory approach has an advantage, namely, it is a very flexible research approach and is adaptable to change (Saunders, Lewis & Thornhill, 2009). The qualitative approach was chosen to provide an open setting where as the interviewees have the opportunity to give new insights regarding the usage of the five themes by Ingenbleek (2003). In addition, by using a qualitative approach it is possible to make the distinction whether the interviewees have the perception that they use VBP or that they truly do apply VBP by qualitative analysis.

Semi-structured interviews were used due to the flexibility of the approach and that it allows for the discovery of information which was not previously thought of by the research team (Gill, Stewart, Treasure & Chadwick, 2008). According to Gioia, Corley and Hamilton (2013) flexibility is important during the data collection so that the interview protocol can be adjusted according to the responses of the interviewee. Furthermore, “Semi-structured interviews consist of several key questions that help to define the areas to be explored” (Gill et al., 2008, p. 291) which is an indication that semi-structured interviews suit the exploratory nature of this research. In Appendix A you will be able to find the interview protocol which was used as a guideline for this research.

In total, 17 manufacturing firms were investigated due to the willingness of the manufacturing firms for participating in this study. The reason for interviewing manufacturing firms is to gain insight in how value-based pricing is applied with products. Furthermore, Hugo Wemel works is a manufacturing firm and this research will supply him with an understanding of to what extent SMEs use value-based pricing and which obstacles SMEs face while doing so. The sectors in which the manufacturing firms operate in were various and this research did not focus on one specific sector. There were several criteria for the sample selection. A manufacturing firm was considered an SME when they have between 10-100 million (euro) turnover. Other criteria for a SME was that they have between 10-200 employees or less. Moreover, the manufacturing firms had to be situated near Enschede (The Netherlands) and Münster (Germany). Therefore this study will be based on that geographical area and not Germany and the Netherlands as countries as separate entities.

The goal for the interviews was to interview mainly marketing professionals. If the SME did not have a marketing department, the interviewee was someone who holds a corresponding role of a professional of the marketing department. Table 1 depicts the list of manufacturing firms which were investigated.

Firm	Location	Function of interviewee(s)	Industry	Size (employees)
Aerotech 1	The Netherlands	Sales Director	Aircraft, Semiconductor	Not given
Agri 1	The Netherlands	Manager of the plus department	Agricultural machines	Over 100
Agri 2	The Netherlands	1) General Manager 2) Assistant to Business Process Investigator	Agricultural machines	Between 20 and 50
General 1	The Netherlands	CEO	Machines and maintenance of various industries	Between 20 and 50
Iron 1	The Netherlands	Sales Manager	Building, Automotive	Over 100
Mechanical Engineering 1	Germany	Head of Marketing and Sales	Mechanical Engineering, Recycling	Not given
Plastic 1	Germany	Head of Purchasing and Logistics / Commercial Manager	Plastic, Cooling, Water Management	Between 50 and 100
Plastic 2	Germany	Director / Owner	Plastic, Horticulture, Household	Less than 20
Plastic 3	Germany	Sales Manager	Plastic	Between 50 and 100
Printing 1	Germany	Sales Manager	Paper Printing	Between 20 and 50
Semicon 1	The Netherlands	Head of Sales / Sales Engineer	Semiconductor	Between 20 and 50
Semicon 2	The Netherlands	Sales Manager	Semiconductor, Optical	Over 100
Sport 1	The Netherlands	1) General Manager 2) Head of Sales	Sport Facilities	Between 50 and 100
Steel 1	The Netherlands	Co-owner	Construction, Agriculture, Machine Building	Between 20 and 50
Steel 2	The Netherlands	Director	Machine Building, Water Management	Between 20 and 50
Textiles 1	The Netherlands	Director / Owner	Textiles, Fashion, Automotive, Medical	Over 100
Thermoplastics 1	The Netherlands	1) Director 2) Technical Sales Manager	Medical, Automotive, Machine Building	Between 50 and 100

Table 1 General information of the firms

Based on table 1, 12 of the 17 companies were situated in the Netherlands and the remaining 5 of the 17 were situated in Germany. The industries of the companies were various, and the firms that work in the same industry are notably, from the same country. All of the functions of the interviewees had at least a corresponding role to the marketing department.

3.1. Data collection

As stated above this study used a qualitative approach and the data was collected by conducting semi-structured interviews. Concerning the research project, three students gathered their data from the Netherlands and the other two gathered their data from Germany. Each student approached 1-5 firms of their corresponding area. By collecting the data collectively, each student had the advantage of having more data for their corresponding studies. More than 700 manufacturing firms were approached for this study. In the end 17

interviews were collected which is significant amount for this qualitative study. The manufacturing firms were first approached by email. If the firm did not respond or if it was necessary, the firm was further contacted by telephone.

Before the interviews were conducted, each interviewee or correspondent from the firm was given general information on the research project. This general information consisted of the subjects we were researching, the research goals and the benefits for the SMEs in the end. Considering the information could be confidential that the firm would give during the interview, each firm was assured that the research project would be completely anonymous. Aside from the general information, the interviewees were also given the interview questions beforehand. The interview questions can be found in Appendix A.

The means for conducting the interviews were either the student travelling to the firm themselves, using the telephone or by using an application such as Skype. Due to the qualitative nature of this study, the preference was that each student would go the firm themselves so that a recording could be made. By conducting the interview in person, the interviewer could ensure that the recording was audibly clear.

The interviews were held between April 2018 and June 2018. Each student conducted the interviews individually and if there were more participants of a single firm, the firm had the option to have the participants in a joint interview unless there were more than two participants. Before the interviewer started asking the questions, the interviewees were asked beforehand for permission for a recording. Furthermore, notes were taken for the duration of the interview to provide feedback and as a foundation for further in-depth questioning during the interview. The topics of the interview questions were mainly based on VBP. The first questions entailed general information of the firm and the interviewee. Second the interviewee was asked for their definition of value. The interview questions which were further relevant for this study, were respectively about the usage of VBP and the obstacles the firm faced while applying VBP. The interviews ended with thanking the participant for participating in our research. In addition, the participants were informed that they would receive a transcript of the interview for a final check. If there was a minor misconception with the interviewee based on the transcript, then the transcript would be amended. After the interviews were held, transcriptions were made. Several of the interviewees were not fluent in English and therefore several interviews were conducted in Dutch or German. The transcriptions were then further translated into English. To make sure that the transcripts were properly translated, the transcripts were checked by a peer research who was fluent in both the languages and by using the appropriate dictionaries.

3.2. Data analysis

The purpose of this study is to discover the extent that manufacturing SMEs apply VBP. Therefore, the transcripts will need to be analysed. Before the actual analysis of the data, the interview questions need to be divided into different categories. The first category that will be described for the analysis is the definition of value. This category is important because it portrays how the firms consider value and the understanding of value, is the foundation for VBP. The second category is how companies apply VBP. This category will characterize how firms apply VBP and in turn reveal to an extent, whether the firm applies VBP. The category is further divided into several subcategories according to the themes which portray VBP. These subcategories are: the advantages of the product compared to competitors' products,

the customers' perceived value of the product, the advantages the new product offers to the customer, the balance between the advantages of the product and price and the advantages of the product compared to substitutes. The third category describes which pricing strategies, the firms use. How companies apply VBP and their corresponding pricing strategies will in the end reveal the extent that manufacturing SMEs apply VBP. Finally, the fourth category will reveal which obstacles the firms have faced and how the firms dealt with these obstacles while applying or trying to apply VBP. In table 2, the different categories, subcategories and their corresponding interview questions are given.

Category	Subcategory	Relevant Questions
Definition of value		What do you consider to be value?"
How companies apply VBP	The advantages of the product compared to competitors' products	Do you consider the advantages of a product compared to competitor's product in the price? If so how?
	The customers' perceived value of the product	How do you assess what customers value in your products? Do you translate any of that value into the pricing of the products? "If so how? Do you consider the perceived value of the customer in the product's price? If so how?
	The advantages the new product offers to the customer	Do you consider the advantages of the new product offers to the customer in the price? If so how?
	The balance between advantages of the product and price	Do you consider the balance of the advantages of the product and price? If so how?
	The advantages of the product compared to substitutes	Do you consider the advantages of the product compared to substitutes in the price? If so how?
Pricing strategy		Questions from topic: How companies apply VBP What pricing strategy is used for new products? Do you combine different pricing strategies? For how many of your new products do you apply value-based pricing? For how long have you been translating value into the pricing strategy? Are you planning to change your pricing strategy (in the near future)?
Obstacles with VBP		If you don't consider value within the pricing strategy, why not? How are you dealing with challenges in regard to implementing value-based pricing? What kind of obstacles did your company face when implementing the pricing strategy? In what way did you overcome them? Did you face personal challenges? How would you describe the alignment between upper management and staff regarding your pricing strategy? What external obstacles have you faced that had an impact on the pricing strategy?

Table 2 Categories and corresponding interview questions

In order to analyse the data from the results, open coding will be used. Open coding is also known as initial coding and requires a close reading and interrogation of the data (Charmaz & Belgrave, 2007; Gioia et al., 2013). Open coding has two main purposes, conceptualizing and labelling the data (Moghaddam, 2006). Open coding is further applied by examining the text by marking comparisons and asking questions (Gibbs, 2018). Furthermore, according to Elo

and Kyngäs (2008), open coding means that notes and headings are written in the transcripts while reading them. In addition, they state that the written material is continuously read through again until as many headings are necessarily written down in the margins to describe the content. Using open coding will provide a certain sense of theoretical direction for this research and the data can be searched for analytic ideas which can be pursued in further research.

In the end, with the application of open coding with the categories and subcategories as stated above, the results and an analysis can be made for this study.

3.3. Trustworthiness of the research

The interviews will be conducted by five persons, namely five peer researchers. To make the trustworthiness of the research accurate notes will be taken during the interviews.

Furthermore, the transcripts of the research will be checked by sending it back to the interviewee so that the transcripts will be valid. This is to make sure that everything was said right and that the interviewee can highlight any information they deem unworthy or incorrect. Interpretations can vary and therefore it is important that the interviewees give it a check. This respondent validation will prove a means of confirming the individual accounts (Bryman & Bell, 2015). To provide a clear overview of the data, all the interviews will be saved in separate documents or folders. To attain a certain dependability within this research, the analysis of the interviews will be done in steps. After a step is finished, the work will be sent to a peer so that they can review it. Thus, a certain amount of consensus can be met, this will in turn avoid bias. This in turn will show the confirmability of this research according to Bryman and Bell (2015). According to them, the confirmability is that the researcher has not extensively allowed personal values to sway the conduct of the research.

4. Results

This section will describe the results prior to the analysis. The main purpose of this section is to give a representation of the data in tables, an amount of context and thus providing a foundation for the analysis.

4.1. Definition of value

Table 3 reveals the definitions of value presented by the interviewees.

Firm	Definition of value
Aerotech 1	Quality, but as low as possible price for the customer. To think with the customer.
Agri 1	Not stated
Agri 2	Fulfilling custom, special demands, quality of the machine
General 1	We add value by seeing to it that the production of our customers is running.
Iron 1	The products we are selling, a good value is good service, to involve the customer with a lot of information.
Mechanical Engineering 1	Very high quality.
Plastic 1	The advantage the customer has from our products.
Plastic 2	Customer loyalty
Plastic 3	The customer ideas
Printing 1	Not stated
Semicon 1	Experience and know how on production
Semicon 2	Value is an emotional aspect. You get something, it has a value for you.
Sport 1	The offering of opportunity, reliability and availability
Steel 1	Flexibility
Steel 2	Something that you will give something for, free time
Textiles 1	The value of a customer can be high quality products, economic, easy to use products, design products or value can be a service or a quick supply.
Thermoplastics 1	Quality, a sustainable relationship with the customer

Table 3 Definitions of value

Overall the definitions of value stated by the companies are diverse, despite several firms being from the same industry or same country. Quality is often mentioned by the companies namely by, Aerotech 1, Agri 2, Mechanical Engineering 1, Textiles 1 and Thermoplastics 1. Moreover, nearly half of the companies mentioned the customer within the definitions of value. However, their definitions pertaining the role of the customer are various. The most frequently used role for the customer is “to think with the customer” stated by, Aerotech 1 and Plastic 3 phrased this as “the customer ideas”. Additionally, Plastic 2 considers value as customer loyalty while Thermoplastics 1 states that value is a sustainable relationship with the customer. Unfortunately, there is no definition stated by Printing 1 for their definition of value.

4.2 How companies apply value-based pricing

This section is divided into six parts. The first five parts entail the five themes stated within the literature and method. The final part consists of an overall table to give a representation on how the firms apply VBP.

4.2.1. The advantages of the product compared to competitors' products

The advantages of the product compared to competitors' products reveals how the firms might consider value as the advantages of their products in relation to the competitors'

products. Table 4 indicates whether the firms consider the advantages of their products compared to the competitors' products and how they do so.

Firm	The advantages of the product compared to competitors' products
Aerotech 1	Communication with the purchaser, see if the customer has purchased from you before, or does he benchmark with someone. It does depend on the relationship you have with the purchaser.
Agri 1	Not applied.
Agri 2	Contact with the dealers, margins
General 1	Not applied.
Iron 1	The customer is always looking at the prices of course and we are always trying to tell them what our advantages are. We have quite some so what we can do and offer as extra service.
Mechanical Engineering 1	You look what advantages our or the products of the competitors have, where are they worse, we look for those things.
Plastic 1	Benchmarking, display of better performance to customers
Plastic 2	Communication with the customer on quality and design
Plastic 3	Not applied.
Printing 1	Communication with the customers on recommendations and quality, offering of alternatives so that the customer has advantages
Semicon 1	We notice, and our customer feedback tells us.
Semicon 2	We ask our sales people what these benefits may cost and what they think in the market, the customers want to pay extra for this benefit. It depends if the product also is in line with our product portfolio.
Sport 1	Looking at what the competition offers, weaknesses and strengths, quality aspects of the product, placing a premium on unique features
Steel 1	Not applied.
Steel 2	Communication with customer on having better quality
Textiles 1	Technical comparison, cost-saving for the customer, communication with the customer that they get a better products, we have to focus on profit improvement and sell identify products which help sell the customer their products.
Thermoplastics 1	Differentiation between customers which want better or less quality. Customers with higher qualitative requirements tend to negotiate longer and mostly need our help in the products they want.

Table 4 The advantages of the product compared to competitors' products

13 out of 17 firms do consider or use the advantages of their products compared to the competitors' products. Communication with the customer is the most mentioned method for the application of this theme. Further, benchmarking or directly comparing the products is remarked by Plastic 1, Aerotech 1, Mechanical Engineering 1, Sport 1 and Textiles 1, as how they figure out their advantages of their products compared to the competitors'. Another aspect which is interesting, is quality. The firms often mention quality when it comes to the advantages of their products and they do so in numerous approaches. Plastic 2, Printing 1 and Steel 2 reference quality in combination with the communication with the customer. In addition, Sport 1 directly states quality as in the quality aspects of the product while Thermoplastics 1 uses quality as a method to differentiate between the customers. The firms locations and industries compared to the usage of this theme, are diverse and do not show any significant differences based on the location or industry.

4.2.2. The customers' perceived value of the product

Table 5 describes how the firms consider or use the customers' perceived value of the product.

Firm	The customers' perceived value of the product
Aerotech 1	We get scorecards from our customers. And in these scorecards, you get an overview about the quality, on time delivery, penalties (due to, such as, late delivery), pricing, all factors like these are evaluated in the scorecards. Based on these scorecards we can evaluate and act on our performance and quality. Delivering documents, evidence materials, assurances you need to deliver to the customers.
Agri 1	It has a lot to do with the feeling what it will bring the customer, by looking for the question behind the question, market research
Agri 2	Not always, assessing latent customer needs but cannot always see all the features of the customer needs.
General 1	Personal relationship with customers, asking customers for feedback.
Iron 1	Not applied.
Mechanical Engineering 1	Customer feedback
Plastic 1	Having direct exchange with customers by independent institutes to confirm the performances of the products.
Plastic 2	Service, personal relationships with customer
Plastic 3	Not applied.
Printing 1	When I am with the customer then I make a needs assessment and then I know in which areas he attaches particular importance, working with the customer at the beginning of a project, Field service, brainstorm sessions
Semicon 1	Knowing the customers (latent) needs, assessing company qualities for maintaining a good relationship with customer.
Semicon 2	Life-time value of the machine, performance, finding the unique selling points, communication with the customers' purchasing and engineering, based on history we know what is usable, what we think the customer was to pay for it. It is always a game between the customer.
Sport 1	Depends on the public tender. Each public tender considers value differently, different value, price and quality. The purchaser does not have the knowledge to describe exactly what they want. The companies try to describe and translate that to what they want. So, we look at what they directly ask for in the document.
Steel 1	Not applied.
Steel 2	Service, delivery, dependability on the product, product is satisfactory if there are repeat orders, customer feedback is when something is not functioning
Textiles 1	Meeting with customers with both a sales and product development / logistics representative. Using margins, we try to look at the whole series of activities that we can deliver to the customer.
Thermoplastics 1	We do focus on the perceived value of the customer by looking and negotiating their requirements.

Table 5 The customers' perceived value of the product

In total, 14 out of 17 firms consider or use the customers' perceived value of the product. Most of the firms discover what the customers perceive as value by communicating with the customer as stated by Semicon 2, Textiles 1 and Thermoplastics 1. The communication with the customer is further specified by General 1, Mechanical Engineering 1 and Steel 2, they ascertain what the customers perceive as value by considering the customer feedback. General 1 does this by having a personal relationship with the customer and then asking customers for feedback. Steel 2 however, only uses the customer feedback as a signal that a product is not functioning. Mechanical Engineering 1 on the other hand, gets customer feedback by using systems and then they get a lot of information on the customers. The firms locations and industries compared to the usage of this theme, are likewise, diverse and do not show any significant differences based on the location or industry.

4.2.3. The advantages the new product offers to the customer

How the firms determine and translate the advantages the new product offers to the customer into value is portrayed in table 6.

Firm	The advantages the new product offers to the customer
Aerotech 1	The ideas and smarts have to be clear beforehand
Agri 1	Not applied.
Agri 2	Growing awareness of the customers
General 1	Not applied.
Iron 1	Not applied.
Mechanical Engineering 1	Not applied.
Plastic 1	By close and long-standing contact with the customers, we see what a customer is willing to pay
Plastic 2	Not applied.
Plastic 3	Not applied.
Printing 1	Not applied.
Semicon 1	By adding to the margin and guessing
Semicon 2	Not applied.
Sport 1	All our salesmen are future sports teachers, so they speak the same language that the real customer is.
Steel 1	Not applied.
Steel 2	Not applied.
Textiles 1	We have a series of products of different product lines, if you take this solution, your garment will look better, nicer, better fit and you can sell it against a higher price.
Thermoplastics 1	Depends on the potential of the relationship/partnership. It also matters for us to learn from new products for future requirements.

Table 6 The advantages the new product offers to the customer

On the whole, 7 out of 17 firms consider or use the advantages the new product offers to the customer and translates these advantages into value. Several of the firms use communication with the customer on how they translate the advantages the new product offers into value. Plastic 1 translates these advantages by having a close and long-standing contact with the customers. Sport 1 is more clear-cut with their communication with the customer. When it comes to value, they make sure that their salesmen can speak the same language that the real customer does. In contrast, Thermoplastics 1 only considers the advantages when there is potential in their relationship/partnership. When comparing the industries of these firms with this theme, it appears that firms which deal in metal such as iron or steel do not apply this theme. The rest of the results remain diverse. In addition, 6 of the 7 firms that apply this theme are situated in the Netherlands and only 1 German firm applies this theme.

4.2.4. The balance between advantages of the product and price

Table 7 exhibits how the firms consider the balance between advantages of the product and price.

Firm	The balance between advantages of the product and price
Aerotech 1	Not easy to balance due to risks and price of expensive tools, we do look at the pro's and con's
Agri 1	Make benefits clear to customer
Agri 2	Customer negotiation and compromise, we give an advice for the price
General 1	Not applied.
Iron 1	Not applied.
Mechanical Engineering 1	Not applied.

Plastic 1	Feeling, our experience
Plastic 2	Receiving feedback and improving their product
Plastic 3	Not applied.
Printing 1	Not applied.
Semicon 1	Customized products that add a lot of value in terms of service. This comes with a higher cost but more added value.
Semicon 2	Not applied.
Sport 1	Every public tender is different, in every public tender they are looking at different things. Different value, price and quality.
Steel 1	Not applied.
Steel 2	Not applied.
Textiles 1	Not applied.
Thermoplastics 1	You do consider a balance of the product and price to meet the requirements of these customers and to keep them in the partnership

Table 7 The balance between advantages of the product and price

More than half of the firms do not consider the balance between the advantages of the product and price. There does not seem to be any relationship between the location the firms with this theme. A notable result is that the metal industries do not apply this theme. The most common aspect of the firms that do consider this balance, is knowing that every public tender is different, they are looking at different things, different value, price and quality, as stated by Sport 1. Thermoplastics 1 adds that you consider the balance to meet the requirements of the customers and to keep them in the partnership. Agri 2 however uses their feeling and experience to consider the advantages of the product and price. In the end, 8 out of 17 firms consider and/or use the balance between advantages of the product and price.

4.2.5. The advantages of the product compared to substitutes

The usage and consideration of the advantages of the product compared to substitutes is displayed in table 8. Furthermore, 6 out of 17 consider and/or apply the advantages compared to substitutes. Based on the frequency that the firms apply this theme, there does not appear to be any relation of the firm's industry or location when compared to this theme.

Firm	The advantages of the product compared to substitutes
Aerotech 1	Negotiation with customers for a price based on net price, technical price. Confidence in my own strength and pricing.
Agri 1	Not applied.
Agri 2	Not applied.
General 1	Not applied.
Iron 1	Not applied.
Mechanical Engineering 1	Not applied.
Plastic 1	Not applied.
Plastic 2	A little, you cannot exaggerate the advantages of the product.
Plastic 3	Not applied.
Printing 1	Not applied.
Semicon 1	Not applied.
Semicon 2	Not applied.
Sport 1	Offering of more functionality with the equipment.
Steel 1	Not applied.
Steel 2	You cannot let the price run high so much that the customer says, we are going to choose a different solution. We also know those alternatives.
Textiles 1	We definitely look into offering other products. If there is a Chinese supplier, crossing our path, we have different grades of quality within our range, we will offer a cheaper product to the customer.

Thermoplastics 1	These are really depended on the requirements of the customer. With requirements of less quality it might be that customers tend to go for less qualitative manufacturers.
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Table 8 The advantages of the product compared to substitutes

Aerotech 1 considers the advantages of the product compared to substitutes by negotiating with customers for a price based on net price, technical price. While Aerotech 1 negotiates a price based on technical price, Plastic 2 states that it is important to not exaggerate the advantages of the product. Steel 2 provides an extension to the statement of Aerotech 1 by stating, “you cannot let the price run high so much that the customer says, we are going to choose a different solution”.

4.2.6. Overall

Table 9 shows which themes the firms use in relation to each other.

Firm	The advantages of the product compared to competitors' products	The customers' perceived value of the product	The advantages the new product offers to the customer	The balance between advantages of the product and price	The advantages of the product compared to substitutes
Aerotech 1	X	X	X	X	X
Agri 1		X		X	
Agri 2	X	X	X	X	
General 1		X			
Iron 1	X				
Mechanical Engineering 1	X	X			
Plastic 1	X	X	X	X	
Plastic 2	X	X		X	X
Plastic 3					
Printing 1	X	X			
Semicon 1	X	X	X	X	
Semicon 2	X	X			
Sport 1	X	X	X	X	X
Steel 1					
Steel 2	X	X			X
Textiles 1	X	X	X		X
Thermoplastics 1	X	X	X	X	X

Table 9 Overall usage of the themes

Principally, the advantages of the product compared to competitors' product and the customers' perceived value of the product is most often used with a corresponding 13 and 14 firms. 7 out of 17 firms apply the theme 'The advantages the new product offers to the customer' and 8 out of 17 firms apply the theme 'The balance between advantages of the product and price'. Another noticeable aspect is that the advantages of the product compared to substitutes is the least often considered, namely, by 6 firms. Based on all the firms, Aerotech 1, Sport 1 and Thermoplastics 1, apply every single theme. In contrast Plastic 3 and Steel 1, apply none. The remaining 12 firms all apply a multitude of themes.

4.3. Practice of value-based pricing or other pricing policies

In order to determine the extent of the usage of VBP, it is crucial to identify which pricing strategies the firms use. Table 10 depicts which pricing strategies each firm uses and whether they apply multiple pricing strategies.

Firm	VBP	CsBP	CmBP	Multiple
Aerotech 1	X	X		X
Agri 1	X	X		X
Agri 2	X	X	X	X
General 1	X	X		X
Iron 1		X	X	X
Mechanical Engineering 1		X	X	X
Plastic 1	X		X	X
Plastic 2	X	X	X	X
Plastic 3		X		
Printing 1	X	X		X
Semicon 1	X	X		X
Semicon 2	X	X	X	X
Sport 1	X		X	X
Steel 1		X		
Steel 2		X	X	X
Textiles 1	X	X	X	X
Thermoplastics 1	X			

Table 10 Practice of the pricing strategies

On the whole, an interesting finding is that 12 out of 17 firms apply VBP. Furthermore, nearly all the firms apply CsBP with a corresponding 14 out of 17 firms. CmBP is the least used pricing strategy with an equivalent of 9 out of 17 firms. Considering the usage of multiple pricing strategies, 4 out of 17 firms apply all three strategies. More specifically, they state that they compare their prices with the competition and frequently the competition also applies VBP. VBP in combination with CsBP is the most used multiple pricing strategy. 5 out of 17 firms apply this combination by first wanting to cover the cost-price and then see whether they can get more profits with the usage of VBP as stated by Agri 1. The other four firms are in unison with this statement. An interesting result is that Thermoplastic 1 is the only firm which solely applies VBP. Plastic 3 and Steel 1 apply exclusively CsBP as their pricing strategy. In turn, there no firms which singularly apply CmBP. A noticeable result is that the firms which are in the metal industries such as iron and steel do not apply VBP.

4.4 Obstacles of value-based pricing

In order to answer the questions on what obstacles the manufacturing SMEs face when applying VBP and how the firms handle these obstacles, the obstacles will have to be clearly determined. Table 11 outlines which obstacles the SMEs have or are still facing with VBP.

Firm	Pricing Strategy	Obstacles
Aerotech 1	VBP + CsBP	Capacity, lack of expertise, other manufactures apply the same tricks, Prices have to be made quickly because of instant gratification Overcome obstacles with negotiations with customer, benchmarking
Agri 1	VBP + CsBP	Hard to explain the benefits or the value

Agri 2	VBP + CsBP + CmBP	Trouble with customers determining price, time consumption, wishes of customer fluctuate, diversity in the market with dealers
General 1	VBP + CsBP	None
Iron 1	CsBP + CmBP	None
Mechanical Engineering 1	CsBP + CmBP	None
Plastic 1	VBP + CmBP	Commodity prices, electricity costs, their competitors have huge advantages in the meantime with their cost structures.
Plastic 2	VBP + CsBP + CmBP	Determining the price with the customer, Not fitting with the customer, you have to justify yourself for the prices again and again
Plastic 3	CsBP	None
Printing 1	VBP + CsBP	Enforce the prices with the customer
Semicon 1	VBP + CsBP	Knowledge, getting the message to the customers and convince them, competition, the added value that we try to present to our customers is also done by other companies. Overcoming obstacle of knowledge by: By getting our knowledge level up and for instance, offering training, gathering experts
Semicon 2	VBP + CsBP + CmBP	Understanding of the dealers, not knowledgeable sales partners Overcome obstacle of understanding by: a lot of talking, joint visits.
Sport 1	VBP + CmBP	knowledge of how to put money value to a product is difficult
Steel 1	CsBP	Unexperienced staff
Steel 2	CsBP + CmBP	None
Textiles 1	VBP + CsBP + CmBP	Expertise. You have to have the guts to ask a price, value-based pricing is a matter of good analysis, good argumentation, you can't sell for a higher price if you do not have the arguments ready. Overcoming the obstacles: By good presentations, illustrations with application movies, we help the customer use our product in a better way.
Thermoplastics 1	VBP	Price/quality ratio Overcoming the obstacle by: It can sometimes be that we need to train our employees and facilitate knowledge more efficiently through our organization

Table 11 Obstacles concerning VBP

Notably, the obstacle questions are more various than the responses given by the firms. Overall the firms do face more obstacles than given in table 11, however, these obstacles are not related to VBP. Furthermore, there does not appear any relation to the location and industries when facing obstacles with VBP.

The fundamental issues that the firms have faced is the lack of expertise and knowledge. Aerotech 1, Steel 1, Textiles 1 and Thermoplastics 1 have all identified that the lack of expertise is the main obstacle with the application of VBP. Aerotech 1 clearly states that the obstacle is lack of expertise while, Steel 1 refers to the lack of expertise as unexperienced staff. In addition, Textiles 1 explains why the expertise is of importance by stating, "You have to have the guts to ask a price, value-based pricing is a matter of good analysis, good argumentation, you can't sell for a higher price if you do not have the arguments ready.". Thermoplastics 1 however mentions the price/quality ratio as the determining factor for the difficult negotiations with the customer due to the lack of expertise. Thermoplastics 1 have overcome this obstacle by offering their employees training and gathering experts. In contrast, Textiles 1 and Aerotech 1 overcome this obstacle by focussing on the customer. Textiles 1 does this by applying good presentations and application movies, the firm shows their customers how they can use their products in a better way. Aerotech 1 however, uses benchmarking and negotiations with the customer.

Knowledge was likewise mentioned as one of the fundamental issues. Agri 1, Semicon 1, Semicon 2 and Sport 1 stated knowledge as a hardship when applying VBP. Internally, Agri 1, Semicon 1 and Sport 1 struggle with a lack of knowledge when starting to apply VBP due

to not knowing what technologies there are or how to translate the value into a price. Agri 1 states that they find it hard to explain the benefits or the value because they do not know how to translate it into a price for the customer. This statement complies with the struggles of Sport 1 and Semicon 1. Semicon 1 handles this obstacle with offering training for their employees and gathering experts. In contrast, Semicon 2 has externally a problem with knowledge. Semicon 2 finds that not knowledgeable sales partners facilitate disputes with determining a price on value. To overcome this obstacle, Semicon 2 applies joint visits with the customer and uses a lot of talking.

Five firms have stated not having encountered any obstacles with the application of VBP. These firms are General 1, Iron 1, Mechanical Engineering 1, Plastic 3 and Steel 2.

5. Analysis

This section will provide an analysis of the results described prior. The evidence will be compared to the theory section and will in turn answer the research questions. First, the definitions of value will be analysed and consecutively be compared to the theoretical definitions. Second, how companies apply VBP and the usage of the pricing strategies will be combined. Thus, the extent of the application of VBP will be revealed. In the end the obstacles will be described including how the firms handle these obstacles, and compared to the theory.

5.1. Definition of value

Before the extent of the usage of VBP can be revealed, it is important to first address what the firms consider as value. Moreover, the definition of value of a firm can affect specifically how firms apply VBP. The definitions of value characterized in the literature are such that value can be defined for example as quality, an exchange of goods or services and desirability. The obstacles that can surface with defining value is that each firm can consider value differently and there is likewise the customers' perception of value which can be various. In order to be able to apply VBP successfully, the definition of value of the firm has to be aligned with the customers' perception. This section will further address how the firms define value in relation to the theory and whether their definitions of value are a good foundation for the application of VBP.

As stated previously, quality is often used in the definition of value by the firms. In total four firms have directly stated that they consider quality as at least a partial definition for value. The firms vary when they mention quality, Textiles 1, Thermoplastics 1 and Mechanical Engineering 1 refer candidly, that quality is dependent on the product, while Agri 2 refers to the quality of the machine. Furthermore Aerotech 1 and Textiles 1 also address the monetary terms when mentioning quality. The definition of value as quality is mentioned in the literature repeatedly, especially in relation to monetary terms for manufacturing firms. The link between considering value as quality with regard to monetary terms is significant for the usage of VBP. Therefore, while Agri 2 applies VBP, the definition of value as simply very high quality without the mention of monetary terms, might be an intimation why Mechanical Engineering 1 does not apply VBP.

Several firms have defined value in relation to the customer. Aerotech 1 finds it important that they think with the customer while Plastic 3 considers the customers' ideas as value. In addition, Iron 1 adds that that value is to involve the customer with a lot of information. However, Iron 1 does not indicate whether the customer considers this information as value. This might be an indication why Iron 1 does not apply VBP. These definitions of value refer to customer value and attempt to link the customers' perceptions of value with the firms' definition of value. Moreover, by thinking with the customers and providing them information, these firms will be able to adapt to the customers' needs. Consecutively, the firms will have the opportunity to align the different perceptions of value of their customers with their own. These definitions are in accordance with the definitions of the customers' perceived value in the literature.

Instead of defining value as considering the ideas of the customer, two firms define value more specifically as creating or sustaining a relationship with the customer. Thermoplastics 1

considers value when the quality of the product is very high, a sustainable relationship with the customer can be met. By using this definition of value, Thermoplastics 1 is able to incorporate the needs of the customer in order to sustain the relationship. In contrast, Plastic 2 considers customer loyalty as the definition of value. As a consequence of defining value as customer loyalty, the firm aims to have customer retention. Therefore, providing the monetary means for the continuation of the firm. This means that either the customers must be satisfied with the products or the advantages of these products. Consequently, by having a relationship with the customer, the expectations of the perceived value of the customer can be satisfied according to the literature.

Four firms define value in regard to the exchange of goods or services. This definition is often used within the literature with pricing. Steel 2 refers to value as “something that you will give something for” and thus corresponds with the literature. Equivalently, Agri 2 adds that they consider value as fulfilling custom and special demands. By fulfilling the demands of the customer, an exchange is made which leads to the satisfaction of the customers. Contrary to fulfilling demands with products, Semicon 1 defines value as the exchange of experience and know how on production. With having an exchange of information as value, it is possible for the firm to create a relationship with the customer which could lead to co-dependability on the production and the optimization of product designs. Semicon 2 adds an interesting definition to value in relation to the exchange of goods, namely the emotional aspect. They refer to value as the trade-off between the emotional value and financial terms. This definition of value corresponds directly with the definition of the perceived value of a customer in the literature and sequentially, the usage of VBP.

Plastic 1 defines value specifically, as the advantage the customer has from their products. This definition complements the definition of value within the literature. Although when the firm only defines value as the advantages, it does not mean they understand the customers’ perception of value or have a means to translate that value into monetary terms.

A considerable number of firms have defined value as a service or an aspect which relates to service. There are many services that the firms can provide as added value such as providing the customers a constant means of capacity. Several firms have defined service as flexibility or on a more qualitative aspect like reliability. Likewise, service is often defined in the literature as a significant factor for the customers’ perception of value. Textiles 1 is the only firm which directly associates service with economic value. This association provides a way and means into translating the value. In the end, if the firms can also form a competent relationship with their customers in addition to their services, an alignment of values can be made.

When considering the location and industries of the firms with their definitions of value, there does not appear to be any significant relationships. A possible explanation is that most of these firms do not solely operate in their own country and even if several firms operate within the same industry, the managers consider value to be different.

As a conclusion, quality and services are often referred to as the definition of value. Several firms link quality and service with monetary terms and thus provide a foundation for the usage of VBP in terms of value. In contrast, many firms do not make a direct link with their definitions of value as an exchange of goods or services. As a consequence, their definitions of value might not facilitate a significant infrastructure for using VBP.

5.2. How and the extent of the application of value-based pricing

In order to answer the sub question on how the SMEs apply VBP and in turn the research question, the extent that they do so, it is imperative that the pricing strategies of the firms will be compared to the five themes which describe the usage of VBP. Furthermore, it will be stated below whether the application of the themes result in the use of VBP. Table 12 shows the pricing strategy of each firm and their usage of the themes.

Firm	Pricing Strategy	The advantages of the product compared to competitors' products	The customers' perceived value of the product	The advantages the new product offers to the customer	The balance between advantages of the product and price	The advantages of the product compared to substitutes
Aerotech 1	VBP + CsBP	X	X	X	X	X
Agri 1	VBP + CsBP		X		X	
Agri 2	VBP + CsBP + CmBP	X	X	X	X	
General 1	VBP + CsBP		X			
Iron 1	CsBP + CmBP	X				
Mechanical Engineering 1	CsBP + CmBP	X	X			
Plastic 1	VBP + CmBP	X	X	X	X	
Plastic 2	VBP + CsBP + CmBP	X	X		X	X
Plastic 3	CsBP					
Printing 1	VBP + CsBP	X	X			
Semicon 1	VBP + CsBP	X	X	X	X	
Semicon 2	VBP + CsBP + CmBP	X	X			
Sport 1	VBP + CmBP	X	X	X	X	X
Steel 1	CsBP					
Steel 2	CsBP + CmBP	X	X			X
Textiles 1	VBP + CsBP + CmBP	X	X	X		X
Thermoplastics 1	VBP	X	X	X	X	X

Table 12 Pricing strategies and usage of the themes

This section will further express how the firms apply each theme individually and in the end the extent that the firms apply VBP.

5.2.1. The advantages of the product compared to competitors' products

As stated previously, 13 out of 17 firms apply this theme. The firms that apply VBP will be discussed first, followed with the firms that use other pricing strategies. Tables 4 and 12 will be used to describe how the firms consider the advantages of the product compared to competitors' products.

Communication with the customers is the most applied method with this theme for firms that apply VBP. Although how the firms communicate with their customers to reveal the advantages varies. Two firms communicate with the customer on the prices in relation to the advantages that they have. According to the theory, it is important to be able to differentiate your products from the competition. Noticeably, Textiles 1 focuses on the cost-savings that they can provide. They further communicate that they can sell products which can help with the identity of the customer. Noteworthy, the identification of the customer suits their versatile definition of value. By identifying with the customer, Textiles 1 is able to differentiate from the competition and significantly express their advantages compared to the competition. The other firm discusses margins with the dealers. Both these firms apply in addition to VBP, CsBP. For this reason, it is not curious that they also consider the pricing.

Another aspect which is often communicated as an advantage by the firms, is quality. The literature states that in focussing on the quality and desirability of your products, more customer perceived value is created. Two out of the five firms show a meaningful method of differentiating from the competition namely, Printing 1 and Thermoplastics 1.

Thermoplastics 1 differentiates between customers of less and high quality. The customers that want higher quality negotiate longer with the firm and add what they consider as necessities for the products. This provides Thermoplastics 1 with the advantage that they can clearly adapt to the needs of their customers in relation to the competition. Furthermore, this fits with how Thermoplastic 1 defines value and their sole use of VBP.

While Thermoplastics 1 differentiates between customers, Printing 1 signifies that they communicate with their customers on recommendations and quality. Based on the wishes of the customers, Printing 1 also offers alternatives. In doing so, Printing 1 is able to show the advantages of their other products and circumvent customers going to the competition. The other three firms communicate with the customers with feedback or interact with the dealers or purchasers. Remarkably, most of these firms also apply CsBP in combination with VBP and it is therefore peculiar that they do not also consider the prices with their interactions with the customer.

Semicon 2 answered that they consider their advantages with assessing the benefits of the products with costs and then comparing the product with their product portfolio. The advantage of first assessing your own products in your product portfolio provides the means to anticipate the market while researching the needs of the customers.

Five firms have stated that they benchmark their products with those of the competitors'. Evidently all five of these firms apply CmBP and four of them combine this pricing strategy with VBP. While comparing the products with that of the competitors' for advantages, it is not striking that the firms also compare the prices and make adjustments.

Three firms apply this theme while they do not apply VBP. However, these three firms do all apply CmBP. Therefore, it is not unusual that firms that apply CmBP also consider their advantages compared to the competitors'. In the end they have to look at the prices of the competitors' and also compare their products.

As mentioned previously, the locations and industries of the firms that consider this theme are diverse. A sole reason why the type of industry or location does not matter with the application of this theme, is due to the fact that according to the literature and in a marketing

sense, it is important to know the products' advantages compared to the competitors' product in order to establish a price.

An interesting result is that two out of the four firms that do not consider this advantage, do apply VBP. Agri 1 states that they solely focus on the customer and that the competitors tend to copy their capabilities. In contrast, General 1's products do not differentiate with advantages compared to their competitors'. Therefore, no advantages can be translated into added value compared to the competitors' products.

5.2.2. The customers perceived value of the product

In total, 14 out of 17 firms consider or use the customers' perceived value of the product, with Thermoplastics 1 as the firm which applies solely VBP. Tables 5 and 12 will be used to describe how the firms consider this theme. An interesting note is that all the firms that apply VBP, use this theme.

Thermoplastics 1 assesses the customers' perceived value by looking and negotiating their requirements. This conforms with addressing quality and creating a sustainable relationship with the customer as their definition of value. Two other firms correspond with the method of assessing the needs or requirements of the customer. Notably, Aerotech 1 uses scorecards to evaluate and act on their price, performance and quality. Evaluating the price suits the multiple price strategy of using CsBP in combination with VBP. In addition, Aerotech 1 considers the customers' perceived value the same as their definition of value. The other firm uses brainstorm sessions and a needs assessment to gather the requirements.

Another method for revealing the customers' perceived value is to send a representative to the customer. Textiles 1 sends a sales and product development/logistics representative to the customer. Consequently, the firm is able to gain information on the customers' perceived value from two different contexts. Thus, providing the customer with the capability of understanding the price and the requirements of the product. In contrast, Semicon 2 communicates with the customers' purchasing and engineering. Moreover, Semicon 2 considers the negotiations as a game with the customer which corresponds with their definition of value.

Three firms take account of the latent needs of the customer in order to translate the customers' perceived value into their product. Two of these firms assess their own qualities while trying to meet these needs. Agri 1 however, discovers the latent needs of the customers by using their feeling, the question behind the question and market research. According to the literature using the latent needs of the customer provides the comprehension of the customer needs and in turn provides customer satisfaction. This is an indication why Agri 1 and the other two firms are able to apply their VBP strategies.

General 1 and Plastic 2 use personal relationships to discover the customers' perceived value. The use of personal relationships fits with Plastic 2's definition of value, namely customer loyalty. Although, the two firms do not add how they use their personal relationships with the customer for discovering the customers' perceived value. According to the literature, solely having a personal relationship does not indicate the understanding of the customers' perceived value. However, this is the essence of how the interviewees described their usage of this theme.

An interesting approach for discovering the customers' perceived value is by confirming the expectations of the customer by using documents. Sport 1 uses documents to find what the customers perceive as value due to the purchasers not knowing what they exactly want. Despite the lack of knowledge of the purchasers, Sport 1 does not indicate that they try to discover the customers' latent needs. If the customer does not know what they exactly want, value is not created by following the requirements of the documents. In contrast, Plastic 1 uses independent institutes for their direct exchange with their customers. The advantage of using independent institutes is that the customer has the assurance of the performance of the products. This leads to customer satisfaction.

Two firms consider the customers' perceived value while not applying VBP. Steel 2 is one of these firms. They consider the customer feedback as the means for discovering the customers' perceived value. Though, Steel 2 only uses the customer feedback when something is not functioning, thus they apply a reactive approach rather than a proactive one. Consequently, Steel 2 loses the added value they might have gained by being proactive. Likewise, Mechanical Engineering 1 also uses the customer feedback as a means. In contrast to Steel 2, they use systems and active negotiation for determining their customer needs. Mechanical Engineering 1 does not translate this value into additional prices but as a means for benchmarking when using their CmBP pricing strategy. Therefore, they do not apply VBP while using this theme.

The three firms that do not apply this theme focus on their CsBP pricing strategy which is not influenced by their customers' perceived value.

5.2.3. The advantages the new product offers to the customer

According to table 12, 7 out of 17 firms consider or use the advantages the new product offers to the customer. How the firms apply the advantages the product offers to the customer to create more value, will be described with using tables 6 and 12.

Thermoplastics 1 considers the advantages that a new product offers as a challenge. Depending on the relationship they have with the customer, they first consider the perceived value and translate these into advantages for their new products. In doing so, they are able to meet the future requirements of the new products and in turn align the advantages of the product with the needs of the customer.

Two firms use communication with the customer to display the advantages of their new products. Sport 1 insures their customers' understanding of the advantages by using employees that work in the same field as the customers. Thus, the salesmen know exactly which advantages are important for the customers. Therefore, Sport 1 is able to translate the added value into the appropriate jargon that the customer identifies with. The other firm focuses on what advantages the customer is willing to pay for.

An interesting note of Agri 2, is that they focus on the growing understanding of the customer. This means that by showing the customer which new advantages the product has, the customer gains more and more understanding why they should buy the product. By adding the theory of the literature, Agri 2 differentiates their products by using the growing understanding of the customer as the means for changing the customers perception. Congruently, Textiles 1 shows the advantages of their new product by comparing it with their different product lines.

In contrast, Aerotech 1 considers the ideas and smarts beforehand when it comes to the new product offers. Despite stating that they consider it, the interviewee has not stated whether they directly associate the planning with new advantages. The interviewee might be focussing more on their CsBP strategy instead of VBP. If the firm does not consider the customer with these advantages, then it is not added value towards the customer. This method also accounts for Semicon 1. Likewise, Semicon 1 applies VBP and CsBP. They also focus on the CsBP in order to consider the advantages of new products with margins and guess what the customer might consider as value.

Remarkably, five firms which apply VBP, do not consider the advantages of the new product offers to the customer. Four of these five firms have not mentioned using it. Printing 1 considers themselves satisfied if the customer has found an optimal product with them. Moreover, they do not care about the advantages of the new products. This means that it is up to the customers to find the advantages of the new products and that Printing 1 relies on their CsBP strategy for new products.

The remaining four firms which includes three firms which deal in the metal industry conjointly do not consider this theme and do not use VBP. Firms which work in the metal industry might forsake the advantages of the new product offers in the reason of focussing solely on the cost prices of the metals and considering the exchange of goods as simple business transactions.

5.2.4. The balance between the advantages of the product and price

Based on the tables 7 and 12, 8 out of 17 firms consider the balance between the advantages of the product and price. These tables will be further used to describe how the firms consider or apply this balance.

Thermoplastics 1 considers the consequences of using this balance. By using the balance of the advantages of product and price, it is possible to meet the requirements of the customers and keep them in the partnership. Their definition of value corresponds with how they consider the balance. Considering that Thermoplastics 1 solely uses VBP, it is not striking that they engage with their customers in achieving a balance.

Two firms focus on customizing their product to balance the advantages between the product and price. Semicon 1 states that “customized products add a lot of value in terms of service” which they then translate into their price. This is a successful approach for considering the balance, if the firm considers the appropriate customers’ perceived value. Semicon 1 considers the latent needs of the customer by assessing their own qualities and thus should be able to use this approach successfully. Plastic 2 adds that they improve their product with the received feedback in order to find the balance.

Agri 1 and Agri 2 use customer negotiation to achieve a balance between advantages of the product and price. Agri 1 adds the importance of making the benefits clear to the customer. If the customer does not understand, they will not buy the product. In contrast, Agri 2 tries to compromise if the customer does not agree with their terms of what value is. If the customer does not agree then they do not make the sale. According to the literature, Agri 1 applies the opportune strategy to have a balance to create maximal value. In opposition, the strategy used by Agri 2 could more often than not, result in the customer perceiving the balance as unfair.

The usage of CsBP by Agri 2, most likely accounts for the method that they use to balance the product and price. With CsBP, the value of the customer is less significant than the price.

A unique way compared to the other firms is to consider the balance by using the firm's experience and feeling. Plastic 1 uses this strategy to have a correct balance between the advantages of the product and price. However, using your own feeling or experience does not immediately translate into knowing the customers' perceived value. As stated in the literature, customer perceptions can change.

Aerotech 1 states that it is not easy to balance due to risks and expensive tools. Aerotech 1 finds it difficult because they cannot measure the tool in terms of output in value. This means that they focus more on the usage of their CsBP strategy rather than VBP with balancing the advantages of the product and price. Although the interviewee does state that they consider it.

Four firms which use VBP do not consider the balance between the advantages of the product and price. Printing 1 and Semicon 2 focus more on using their CsBP strategies with balancing price and product. The interviewee of General 1 had clearly never considered the balance of the advantages between product and price. It is most likely that they also refer to their CsBP strategy in terms of balancing the price and product. Finally, Textiles 1 did not mention that they consider this balance.

The remaining five firms do not apply VBP and do not consider the balance between the advantages of the product and price. As with the theme of considering the advantages of the new product offers, the firms that deal in the metal industry do not apply this theme. A possible reason for this, is the focus on cost prices and disregarding the advantages. The customers of these firms might have given these firms a detailed analysis of the composites for the metals, including the appropriate prices. Another reasoning could be that the customers have benchmarked the prices of the firms' competitors and therefore, the firm does not have to consider the balance of the advantages and price.

5.2.5. The advantages of the product compared to substitutes

The advantages of the product compared to substitutes was the least used theme by the firms, with a corresponding 6 out of 17 firms. Tables 8 and 12 will be further used to describe how the firms consider or apply this theme.

Quality is often considered with this theme. Thermoplastics 1 relies on the type of customer, if a customer wants a less qualitative product, the customer tends to go to the competition. Furthermore, Thermoplastics 1 does consider their advantages compared to the substitutes, but the interviewee does not state how they provide the customers information to circumvent them from buying the substitutes. In contrast, Textiles 1 offers the customer different grades of quality to match the substitutes in pricing. Moreover, Textiles 1 focuses on the relationship with the customer and therefore is able to add value by being a reliable firm. The strategy used by Textiles 1 corresponds with the literature. In addition, when a firm has several product lines, this positively impacts the perception of the customer in terms of pricing.

Three firms indicate that they negotiate with the customer in terms of price and substitutes. Aerotech 1 applies their CsBP strategy in this case. In order to convince the customer of their solutions, they price their products on net price and technical price. However, they do not consider the advantages in these prices, even though the interviewee does state that they

consider the advantages. Plastic 2 emphasizes that they consider the advantages but that the advantages should not be exaggerated to the customer. This fits with their definition of value and the literature, by thinking with the customer. On the opposite side, Steel 2 states that the price cannot run too high and they compare their prices with that of the alternatives. Although, Steel 2 mainly focuses on their CmBP in doing so.

Sport 1 offers more functionality to their products to negate the substitutes. If the requirements of the customer shifts, they adjust their products to meet these needs. Therefore, forgoing the need of the customers to consider the substitutes.

Seven firms which apply VBP do not consider or apply this theme. Three of these firms do not have substitutes in relation to their products. Additionally, Agri 1 does not differentiate between customers and substitutes, while stating that they do not consider the substitutes. The remaining three firms simply do not consider the substitutes. A reason for this being, is that they also apply different pricing strategies in addition to VBP. When using CsBP, the firms focus on their cost prices which can counter the prices of the substitutes.

The last four firms neither consider the substitutes or apply VBP. These firms focus on their CsBP strategies and do not have to consider the advantages of the substitutes, only their prices.

5.2.6. The extent that SMEs apply VBP

Thermoplastics 1 is the sole firm that fully applies VBP. Notably, they also applied all five themes in contrast to the other firms. It was made abundantly clear that with each price they stipulate, they focus first on the added value for the customer. Moreover, Thermoplastics 1 applies the themes in such a fashion that it corresponds with their definition of value and the literature.

Most of the firms apply a multitude of pricing strategies. 11 out of 17 firms apply CsBP and/or CmBP in combination with VBP. Further, these firms all apply a variation of the themes. The firms that apply CsBP and VBP, use CsBP as often as VBP for the themes. These firms aim to gain the advantage of using multiple pricing strategies or simply cannot solely apply VBP.

The advantages of the product compared to competitors' and the customers' perceived value, were the most often used themes by these firms. Communication with the customer and quality are the most often used methods for considering the advantages of the product compared to the competitors'. The firms that concentrate on communicating with the customer, focus on using their VBP strategy rather than using CsBP. In contrast, the firms that negotiate quality with their customers, focus on the usage of CsBP. Thus, the extent that these firms apply VBP varies with the advantages of their product compared to the competitors'. It is dependent on whether the firms consider foremost the quality of the products or the communication with the customer.

All the firms that apply a measure of VBP, consider the customers' perceived value. Two methods are used for exposing the customers' perceived value namely, meeting the requirements of the customers and considering the latent needs of the customers. Most of these firms have the intention of meeting the requirements of the customers. They either discuss the requirements directly with the customer, use representatives for negotiation or use

documents for confirmation and assurance. The alternative method is assessing the customers' latent needs. Consequently, by assessing these needs, these firms are able to create customer satisfaction. Finally, all of these firms focus on their VBP strategy with these methods rather than using the other pricing strategies.

Compared to the two themes described prior, the latter three themes are less considered by the firms. The advantages the new product offers to the customer is revealed to the customers by using the appropriate language, forming a relationship or using different product lines with the customers. These three methods are applied with the VBP strategy. However, a couple of firms focus on their CsBP strategy instead of VBP. These firms apply margins or plan the advantages beforehand. The other firms that apply VBP and not this theme, do not consider or mention this theme. Therefore, the extent that the firms apply VBP varies, with regard to the advantages of the new product offers to the customer.

In order to determine the balance between the advantages of the product and price, the firms consider either, the consequences of the balance, customize their product or negotiate with their customers. 7 of the 8 firms that consider this balance, focus on their VBP strategy instead of the other pricing strategies. The main reason for doing so, is because they focus on the advantages of the product and they translate those advantages into value. However, the other firm which applies VBP and CsBP, fixates solely on the price and rates the customers' perceived value as a lower priority. As a result, this firm emphasizes the use of CsBP. The firms that do not consider this theme and yet apply VBP, concentrate on using CsBP or do not mention this theme. This theme clarifies that balancing the advantages of the product and price, is mostly used by firms which focus on VBP.

5 of the 12 firms that use multiple pricing strategies including VBP, consider the advantages of the product compared to substitutes. The methods used for displaying the advantages are using quality or functionality as a factor and customer negotiation. The firms that negotiate with the customer either focus on the technical price (CsBP) or emphasize the advantages of the product (VBP). The other two methods are used with applying VBP. The firms that do not consider the substitutes, focus on CsBP instead of their VBP. Thus, when firms apply VBP and CsBP, CsBP is more often used when considering the advantages of the product compared to substitutes.

Notably, 3 of the 5 firms that do not apply VBP consider or use several of these themes. It is not striking that the firms which consider the advantages of the product compared to the competitors', apply CmBP as a pricing strategy. With CmBP as their pricing strategy, these firms compare their products with that of the competitors' and it is not a stretch to compare the advantages. Two of these firms consider the perceived value of the customer. In doing so, they either focus on their CmBP strategy or improve their product when it is deemed faulty. 1 of the 3 firms considers the advantages of their product compared to substitutes. In the end they focus on the prices of the alternatives and barely consider the advantages.

The last two remaining firms do not consider these themes and apply solely CsBP as their pricing strategy. Moreover, the singular usage of CsBP does not require the firms to consider or use the advantages of their products. These two firms need to know exclusively, the technical and net costs of their products.

5.3. Obstacles of value-based pricing

This section portrays the obstacles that the firms have faced in relation to using VBP. The main obstacles that the firms have faced are the internal struggles within the firm such as lack of expertise and not understanding how to translate the value into a price with the customers. In general most firms overcome their obstacles by gaining the required expertise, facilitating training for their employees and hiring experts.

The firm that solely applies VBP encountered difficulties with the price/quality ratio. They find it difficult to estimate to what extent they need to make an effort for the customer. Discussing the prices and quality with the customer is a delicate balance. The firm can either offer a product with high quality and an excessive price or offer a product with too little quality, resulting in the customer not seeing the value. In order to overcome this obstacle, the firm stated that they train their employees and facilitate their knowledge more efficiently within the organization.

Lack of expertise is another common obstacle which the firms face internally. Four firms have directly stated that the lack of expertise is one of their main struggles. Consequently, by having a lack of expertise, situations can arise in which the firms have to make assumptions. Such situations can be that prices have to be made quickly because the customer wants instant gratification or facing capacity issues due to unexpected events. This results in firms not being able to correctly adjust their prices into the value that they create. Considering that these firms use multiple pricing strategies, their lack of expertise is often due to the transition of pricing strategies. One firm has overcome the obstacle of capacity, by negotiating with the customer for more time in order to determine the correct prices.

The literature confirms the two obstacles described prior. Moreover, lack of expertise is directly referenced within the literature as an obstacle. The four firms which consider lack of expertise as an obstacle, use multiple pricing strategies. Consequently, when firms apply two or more pricing strategies, the employees can get confused on how they should determine the prices. The confusion of the employees extends as well to the obstacle based on the transition of pricing strategies. According to one firm which has tried to apply VBP, when applying CsBP in addition to VBP, the employees do not understand how they can calculate the value.

Translating the value into a price with the customer, is the most mentioned obstacle of the firms. Seven firms have stated they have problems with this obstacle. Three of these firms have trouble with convincing the customer of the added benefits or value. One firm states that there is a lack of knowledgeable sales partners which makes it difficult to create a certain understanding with the dealer. The main obstacle with having dealer organizations as customers, is that they want low prices in order to profit more from your product. In addition, if the dealer organizations use a different pricing strategy than VBP, the strategies may possibly clash. The other two firms have similar problems with their customers. The customers in these cases know that the firm applies VBP and yet argue for prices which are more suitable for a firm that applies CsBP. One firm overcomes this obstacle by offering training to its employees in overcoming this specific situation.

Another interesting obstacle occurs when translating the value into a price with the customer, namely, when the wishes of the customer fluctuate. Furthermore, this obstacle is confirmed within the literature. One firm has encountered this particular obstacle and stated that it is

very difficult to overcome. The difficulty lies within the fact that when the perception of the customers' value fluctuates, it makes it difficult to predict what the customer values afterwards. This results in a lot of time consumption, especially when the firm is trying to perceive the latent needs of the customer.

An alternative obstacle another firm has encountered, is not being able to fit the customers' organization with their own. The firm further states that even though the customer wants their product, "sometimes you just are not the right man for it". This statement is an indication that personal relationships are a factor which can ease the sale or the translation of value to the customer. A consequence of not being able to fit with the customers' organization is that the firm has to keep justifying themselves for their prices. The aforementioned consequence could also be possibly evidence for non-compatible pricing strategies between firms.

A different firm has stated, that when they have trouble with determining the price with the customer, they enforce the price. According to the literature, enforcing the price with a customer can result in customer resistance from perceived unfairness. Additionally, enforcing the customer with a price is further evidence of faulty value communication.

Three firms have stated that the competition provides a formidable obstacle for using VBP. One firm states that even though they use VBP, the competition uses the same principles with their pricing strategies. This obstacle prompts the firm into using their CsBP strategy instead of VBP. A consequence of using a similar pricing strategy as the competition, are price wars, which in turn will lead to great losses. The firm tackles this issue with benchmarking the competition while in the meantime, trying to differentiate themselves. Likewise, another firm has competition which applies the same VBP principles. However, their difficulty lies on the fact that the competition has more experience and expertise. The more experienced competition has the benefit of being more specialized. Therefore, convincing the customer of buying the product of the firm instead of the product by the other specialized company, proves to be a difficulty.

The last firm which has issues with the competition, faces competition with better cost structures. The obstacle presents itself due to the fact that the firm cannot change the prices of plastic. More specifically, the firm faces commodity prices which can fluctuate. In addition to the commodity prices, this firm sets up contracts three years in advance and therefore several of these projects might not end up in a profit due to the fluctuating prices. This obstacle can affect firms and a multitude of pricing strategies. Therefore, it is not peculiar that the firm also applies CmBP in addition to VBP. The firm after all, has to watch the prices carefully.

The last remaining five firms have not faced any obstacles in relation to VBP. Congruently, these five firms do not apply VBP. The reasoning that these five firms do not apply VBP, is because they focus on their cost prices and therefore they all apply at least CsBP. In addition, these firms are from various sectors, different countries and do not show any other similarities among themselves. Each firm that has tried or does apply VBP, has encountered numerous obstacles. Therefore, it is most likely that either the interviewee does not know whether they have faced any obstacles or that the firms have not tried to apply VBP.

6. Discussion and conclusion

The results and the analysis represent thorough findings in order to answer the research question. Furthermore, this section will first answer the research question and the sub questions. Second, the discussion of the results and analysis will be formed and whether these findings were expected or not. Afterwards, the theoretical contributions, practical implications, future research and limitations of this study will be discussed. Finally, a conclusion of this study will be given.

6.1. Answering the research question

The aim of this study was to answer the research question: *“To what extent do manufacturing small-and-medium sized companies apply value-based pricing for their products?”*. Based on results of the definitions of value and how the firms apply VBP, this research question can be answered. Finally, the sub questions of what obstacles the manufacturing SMEs have faced and how the SMEs have handled these obstacles will be answered.

The results and analysis indicate that one firm solely applies VBP and eleven firms use a combination of VBP with other pricing strategies. Five firms do not apply VBP, which is shown by how they use or apply the five themes. Notably, most of the firms use a combination of VBP and CsBP.

Many of the firms' definitions of value do not provide a significant foundation for the application of VBP. This is obvious with how the firms apply VBP and their other pricing strategies for the five themes. In several cases, the firm's definition of value corresponds with how they consider the customers' perceived value. Consequently, these firms are better able to translate the customers' value into an appropriate price.

Overall, there are many methods in how the firms apply VBP. The sole firm that applies VBP, uses VBP in such a fashion that each price they determine, the main focus is on the added value for the customer. The most often mentioned or effective methods used by the firms are communication with the customer, using quality as a factor and discovering the latent needs of the customer. Communication with the customer is the most often mentioned method. The analysis indicates that not all the firms are able to communicate with the customer correctly in order to attain a significant amount of added value. Evidently, these firms focus on their other pricing strategies in these instances. Likewise, the firms use different pricing strategies when using quality as a means. They portray quality as a means for discussing the value with the customers and differentiating between different customers or the competition. The final method is considering the customers' latent needs. When firms consider the latent needs, they are able to create customer satisfaction. However, not all the firms apply these methods.

The extent that the firms apply VBP is various. The themes clarify that the usage of VBP is dependent on the situation. Many of the firms have encountered situations in which their other pricing strategies are more applicable. It remains difficult for the firms to solely apply VBP when trying to determine the price with the customers. Moreover, the firms that apply CsBP and VBP, use CsBP as often as VBP. The main reason for this usage of pricing strategies is that it is unavoidable to consider the costs and technical costs or the competition. Several firms have stated that the competition or substitutes can instigate lower prices, which makes it difficult to focus on their VBP strategy. The firms tend to rely on their CsBP or CmBP pricing

strategies in these circumstances. The five firms that do not apply VBP, focus either on CsBP as a sole strategy or use CmBP. In the end most of the firms apply VBP, however they do so in combination with CsBP and/or CmBP.

The obstacles which the firms have faced when attempting or using VBP are diverse. The firms have often mentioned the internal struggles within the firm such as lack of expertise as an obstacle. Consequently, this obstacle raises confusion amongst the employees because the firms use multiple pricing strategies. Another obstacle which was often mentioned was not being able to understand how to translate the value into a price with the customer. Several firms have difficulties with convincing the customer of the added benefits or value. The evidence indicates that the customers have either a lack of knowledge or focus more on a different pricing strategy such as CsBP. This obstacle also arises due to the fluctuating wishes of the customer or due to non-compatible pricing strategies between firms. Overall, it is likely that the obstacles in relation to VBP, have influenced the extent that the firms use VBP.

In order to overcome the obstacles of lack of expertise and knowledge, the firms can offer their employees training and by hiring experts. Another method for overcoming these obstacles is to focus on the customer. A firm can apply joint visits, visual applications and negotiations with the customer, in order to create a better understanding with the customer and VBP.

6.2. Discussion

This study's goal was to determine the extent that manufacturing SMEs apply VBP for their products. In order to determine the extent, how the firms apply VBP and the obstacles they have faced in doing so were revealed.

In total 17 manufacturing SMEs in the Netherlands and Germany, were investigated. Unexpectedly, this study reveals that the majority of the manufacturing SMEs use VBP as a pricing strategy. In addition, there was only one firm which solely uses VBP as their pricing strategy. Many of the SMEs have proved to use other pricing strategies in combination with VBP. The literature states the importance of using VBP and in contrast to the results, that not many firms apply VBP. A reason that many SMEs have transitioned their pricing strategy into VBP, is that they have a great deal of communication or relationships with the customers. In contrast to larger firms, SMEs are more likely to have fewer customers and thus it is easier to form more relationships with their customers. This interaction with the customers could have possibly been the trigger for using VBP.

This study has further unveiled how manufacturing SMEs apply VBP. As anticipated, most of the methods found in the results are congruent with the literature. Communication with the customers can be done in so many ways. However, the firms that do apply VBP indicate more personal relationships with the customers than a firm would normally have with estimating value and prices. The usage of quality and considering the latent needs of the customer was coinciding with the literature.

An unexpected result was that many SMEs do not consider the advantages of their products compared to the substitutes while they do consider the competitors. The SMEs have indicated that there are either no substitutes or that they simply do not consider them. The reasoning behind this might be that the SMEs consider their prices already superior to substitutes or their products are specialized. The literature implies that customers may have no idea how to

value a product in comparison to substitutes. This might be an indication why many SMEs do not consider the advantages of the product compared to the substitutes.

Evidently, firms which apply VBP and CsBP, use CsBP as often as VBP. Moreover, this study discovers that the usage of a pricing strategy is dependent on the specific situation. This discovery was not stated within the literature; however, it is an indication that the manufacturing SMEs are still transitioning from one pricing strategy to another. The perception of need to use CsBP or CmBP in combination with VBP was a surprising finding within the results. However, as stated by the firms, when the customers know the different pricing strategies, or the competition is too great, it is not peculiar that the SMEs lean towards their former pricing strategies. Furthermore, this might be evidence why the five other firms have not considered using VBP.

The obstacles have demonstrated why the firms use multiple pricing strategies. The obstacles portrayed in this study are relatively congruent with the literature. This is an interesting find due to the fact that the literature has not researched the obstacles that firms might face when using multiple pricing strategies. In addition, it was not surprising to find that the SMEs have difficulties with translating the value into a price with the customer. Considering that the firms use multiple pricing strategies, the multiple strategies simply invoke confusion with the employees. The literature has stated that the competition might be an obstacle in terms of engaging in a price war with the firm. This study on the other hand, adds that the competition can have more experience or uses the same VBP strategy as the firm.

6.3. Theoretical and practical contributions

This section will first describe the theoretical contributions of the study and subsequently, the practical contributions.

6.3.1. Theoretical contributions

This study adds theoretical contributions by studying how and to which extent manufacturing SMEs apply VBP. Previous literature has not done any research on VBP in relation to SMEs and more specifically manufacturing SMEs. This study discovered that the manufacturing SMEs focus on more personal relationships in order to apply VBP. Furthermore, this study confirms that method wise, manufacturing firms apply VBP in the same manner as other firms. However, a new finding is the usage of a combination of pricing strategies which has not been studied before in relation to how SMEs apply VBP. This research revealed that manufacturing SMEs which use CsBP or CmBP in combination with VBP, apply VBP nearly as much as the other pricing strategies. Therefore, the extent that the manufacturing firms use VBP is various due to the knowledge that the usage of the pricing strategy is dependent on the situation. The study further adds that most of the manufacturing SMEs apply VBP, unlike stated previously in the literature. Finally, the study confirms the usage of the themes stated by Ingenbleek et al. (2003) to describe the extent and how firms apply VBP.

This study confirms the theory in which the firms have faced the obstacles. In addition, the study exposed that the competition can form an obstacle when they have more experience or use the same VBP strategy as the firm.

6.3.2. Practical contributions

There are several practical contributions which can be made based on this study. The study revealed that in the area of Enschede and Münster, most of the manufacturing SMEs that were used in this study, apply VBP in combination with CsBP. The study further shows how SMEs apply VBP and other firms can use these strategies to implement VBP themselves in the surrounding area. Moreover, the study reveals that the transition to solely use VBP can be difficult. Different situations can arise in which a different pricing strategy might be tempting. This study further proves that manufacturing SMEs which specialize in a certain product and can differentiate from the others, have a significant foundation for the application of VBP. The obstacles stated by the firms were noteworthy. Firms which plan on starting to use VBP in the area of the study, can learn from these obstacles and how several of the firms have overcome these obstacles. It could be considered a valuable lesson that the firms which deal with the main obstacles of lack of expertise and knowledge, differentiate between solving them internally and externally. A firm can apply joint visits, visual applications and negotiations with the customer externally and a firm which offers their employees training is an internal solution for the obstacles.

6.4. Future research and limitations

This section will describe areas of research for further research and the limitations of the study.

6.4.1. Future research

For future research, the focus could be on larger manufacturing firms instead of SMEs. It would be interesting to compare the results of this study with the methods and the extent that larger manufacturing firms apply VBP. This study has proven that in certain situations, VBP can be advantageous and it would be enticing to know how larger firms apply multiple pricing strategies as well.

This study focuses on manufacturing SMEs in the area of Münster and Enschede. More research can be done on other areas or countries because they might use different pricing strategies or apply VBP differently. Consequently, the SMEs in this area focus on personal relationships, therefore, other cultures could provide significantly different data.

Another area of research could be a specific industry. This research focuses on various industries such as plastics, agriculture and steel. Other industries could provide a different means of using VBP and their extent of using VBP could be distinctive. Moreover, this study focuses on the perspective of the seller and further research could be focused on the buyers, such as dealerships.

Last, this study found several additions in relation to obstacles and the competition. Additional research could be done on the specific area of obstacles when using VBP in relation to the competition or external obstacles.

6.4.2. Limitations

Several limitations have to be considered within this research. First, while the 17 interviews were significant in number, more than 700 manufacturing SMEs were approached for this study. In addition, the goal was to have 30 SMEs as a sample size. Further, this research was limited to the area of Enschede and Münster. Other areas might have brought significantly

different data and a more decisive conclusion could have been made on the usage of VBP if the sample size was larger.

Another limitation was the language the interviews were conducted in. All of the German interviewees were interviewed in their native tongue; however, this was not the case for all of the Dutch interviewees. This possibly could have influenced the richness of the data due to a lack of terminology or vocabulary of the interviewee.

As a result of the nature of a SME, the interviewees held various functions within the SMEs. Consequently, the limitation is that if all the interviewees held the same function, it is possible that different data could have been collected.

Finally, this research does not focus on a specific industry for the SMEs and therefore, the usage of the pricing strategies could be different if a different data sample would be collected.

6.5. Conclusion

This study reveals that manufacturing SMEs apply VBP to different extents. More specifically, the SMEs apply VBP as much as CsBP when using multiple pricing strategies. Furthermore, there are numerous methods on how the manufacturing SMEs can apply VBP. The key methods of using VBP were found to be consisting of communication with the customer and discovering the customers' latent needs. However, many firms were not able to communicate correctly with the customers, resulting in a loss of added value.

This study further points out that the extent that manufacturing SMEs apply VBP, is dependent on the situation and various. It remains difficult for the SMEs to solely apply VBP when they have been using other pricing strategies. A significant reason for using a different pricing strategy other than VBP was discovered to be the unavoidability to consider the costs and technical costs or the competition.

The obstacles that were encountered in relation to VBP were diversified. The main obstacles involved were internal struggles within the SME and not being able to establish how to translate the value into a price with the customer. In order to overcome these obstacles, a few firms have facilitated further training for their employees and negotiate with their customers in order to create a better understanding. Consequently due to the lack of resolutions on how firms handle their obstacles, the SMEs were prompted to use their other pricing strategies when determining a price with the customer.

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Appendix A Interview Questions

General information on the research:

Goal of the research:

The goal of this research is to find out the extent that small-medium sized firms (SME's) use value-based pricing and what obstacles they face while doing so.

Who we are:

The collaborative research is conducted by 5 attendees, Master students from the University of Twente. Spanning from 5 researchers, the attendees that focus on the related research subjects are: Helena Baniou, Steven Woznicki, Nathan Slok, Clemens Kordes and Burak Kiliç.

General definition of value-based pricing:

This research paper will utilize the definition of value-based pricing as an approach which uses the perceptions of benefits from a product or service, translates those benefits into value and setting a price relative to that value.

General questions:

1. What is your function within the company?
2. What education did you have?
3. How many years have you been working in this area?
4. Which sectors does the organization operate in?
5. What do you consider to be value?"
6. How do you measure the success of new products?
7. What pricing strategy is used for new products?
8. Do you combine different pricing strategies? (If they do not know which pricing strategies, name cost-based pricing and competitive-based pricing)
9. For how many of your new products do you apply value-based pricing?

Value-based pricing questions:

10. How do you assess what customers value in your products?
11. Do you translate any of that value into the pricing of the products?
 - a. "If so how?
12. For how long have you been translating value into the pricing strategy?
13. If you don't consider value within the pricing strategy, why not?
14. Do you consider the advantages of a product compared to competitor's product in the price?
 - a. If so how?
15. Do you consider the perceived value of the customer in the product's price?
 - a. If so how?
16. Do you consider the advantages of the new product offers to the customer in the price?
 - a. If so how?
17. Do you consider the balance of the advantages of the product and price?
 - a. If so how?
18. Do you consider the advantages of the product compared to substitutes in the price?

a. If so how?

19. Have you ever involved customers in the product development process? How?
20. Are you planning to change your pricing strategy (in the near future)?

Market/marketing orientation questions:

21. What does the term „market/marketing orientation” mean to you? What kind of things does a market/marketing-oriented company do?
22. What organizational factors foster or discourage this orientation?
23. What are the positive consequences of this orientation? What are the negative consequences?
24. Can you think of business situations in which this orientation may not be very important?

Obstacle questions:

25. How are you dealing with challenges in regards to implementing value-based pricing?
26. What kind of obstacles did your company face when implementing the pricing strategy? (Emphasis on company). In what way did you overcome them? Did you face personal challenges?
27. How would you describe the alignment between upper management and staff regarding your pricing strategy?
28. What external obstacles have you faced that had an impact on the pricing strategy?
29. What is your personal opinion about the way you currently determine prices?