

Does value-based-pricing engender co-creation practises in industrial small-and-medium-sized enterprises?

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Abbreviations

VBP = value-based pricing

SMEs = small-and-medium-sized companies

CoBP = cost-based pricing

CmBP = competition-based pricing

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1 Introduction

Pricing of products and services is a complex and significant issue for companies. Only if pricing matches the customers' willingness-to-pay, enterprises are able to sell a sufficient amount of products (Alinezhad Sarokolaee, Vahid Taghizadeh, & Ebrati, 2012; Kienzler & Kowalkowski, 2017) and thus being competitive in the market and generate profit (LaPlaca, 1997). And who knows better what customers are willing to pay for a product than customers themselves?

Considering these aspects, the appropriate pricing to choose would be value-based pricing (VBP) as it draws a connection between customer 'values and the willingness-to-pay and attempts to make it quantifiable (Dost & Geiger, 2017). It is crucial for companies to address the right target group and to investigate what the customer expects from the products (Maulana & Rufaidah, 2014).

Literature refers to VBP as the best, but also as one of the most difficult pricing strategies to implement. Dost and Geiger (2017) point out, that although VBP requires complex information and skills to be developed within the company, it is the most successful and desirable pricing method since it unites customer' perceived values with their willingness-to-pay. Nevertheless, only roughly 17% of the companies use VBP (Liozu & Hinterhuber, 2013), which is also the reason, why many authors like Kienzler (2017) and Töytäri, Keränen, & Rajala (2017) put their emphasis on the obstacles and the challenges of VBP. One frequently found obstacle in recent literature is the measurement of customer value and the translation into corresponding prices due to missing analysis capabilities within companies (Töytäri, Rajala, & Alejandro, 2015). In this context, one method to explore customer value is co-creation, which can be defined as the cooperative development of products of firms with their stakeholders (Maulana & Rufaidah, 2014).

As VBP uses the customer value (Forbis & Mehta, 1981) and co-creation is one method to explore customer value (Kohtamäki & Rajala, 2016), there may be a connection between the two concepts. However, existing literature misses on investigating this connection. The connection between co-creation and VBP could be one important factor for the success of VBP, which has not been considered yet. As SMEs have only limited access to resources (Carson & Gilmore, 2000) and VBP needs special capabilities and internal knowledge (Liozu & Hinterhuber, 2013), it is interesting to put the focus of the research on SMEs. Furthermore, the size and scope of a company are important with respect to building up competitive advantages,

as large firms are known to benefit from the superior size, e.g. due to economies of scale, experience and pool of resources (Raju, Lonial, & Crum, 2011). The resources being an important factor for the execution of VBP. This leads to the following research question:

To what extent is co-creation related to the use of VBP of industrial SMEs?

Subquestions:

What are the key obstacles to co-create and to implement VBP?

The goal of this study is to explore, whether industrial SMEs, which use VBP apply co-creation for the identification of customer value and to investigate if the companies face obstacles when involving the customer. By focussing on the obstacles of VBP, this thesis wants to elaborate, if these problems are related to the customer value identification. The involvement of the customer could be the potential key to the success of VBP.

For the identification of VBP, the theory chapter will first elaborate on the understanding of customer value to further assess if the companies use this strategy. The topic of co-creation will be discussed as well as it is supposed to be beneficial to integrate the customer from the beginning in the development of products to meet the customers' requirements and value expectations. In the end of the theory part, the obstacles related to VBP are presented to create an overview of common problems.

The chapter on the exploratory research aims at drawing conclusions about SMEs in the context of co-creation and the use of VBP. The SMEs approached are located in the area around Enschede in the Netherlands and around Münster in Germany. The thesis analysis 17 interviews conducted at industrial SMEs. The industries are various, including the steel, plastic, printing, textile or mechanical engineering branch. The company sizes vary from small to medium. Only one company has less than 20 employees, six of them between 20 and 50, four between 50 and 100 and the other four have more than 100 employees.

This research project is performed in collaboration with the University of Twente and a group of four students. The data collection of this work was done by all four students providing a survey and conducting interviews. The collected data was shared afterwards so that the analysis can be based on a sufficient amount of interviews. The present study focuses on a qualitative analysis of the implications which can be drawn from the generated data collection.

This paper provides theoretical and practical relevance. The former, as literature has not focused yet on the use of VBP with regard to co-creation and SMEs, this study presents novel findings in this field. The research found significant importance and success of the VBP strategy. Along with VBP, it is crucial to determine and measure the customer value, but theory does not clearly define how this is conducted. Therefore, co-creation offers a direct solution for customer value determination and might be beneficial for the special circumstances of SMEs including limited access to resources. This thesis draws a connection between VBP, co-creation and SMEs.

The latter, theory suggests that the determination of customer value is the most challenging part in praxis. This thesis aims to shed light on this phenomenon and points out if this is in line with the experience of the interviewed SMEs. The research will further show, what methods are used for the measurement of customer value and if the customer is involved in the product development and enhancement. Although there have been studies concerning VBP all over the world it is questionable, if studies from other countries are applicable for companies around the German-Dutch border. Different countries imply different political circumstances, laws and cultures. The limitation of the area around the German-Dutch border from Enschede to Münster, therefore, offers only a practical and regional contribution for SMEs in Germany and the Netherlands.

The research approach of the thesis is followed by an overview of the theoretical framework clarifying customer values, the topic of SMEs, VBP and co-creation as well as related possible challenges. Afterwards, the method section follows with an explanation of the single companies selected for the interviews, the procedure of the data collection as well as the measurement and validity of the data. The chapter on the conducted data analysis follows with a subsequent discussion chapter including limitations and further research areas. In the end, the overall conclusion of this research is presented.

2 Theoretical Framework

The chapter provides an introduction to the most essential theoretical designs of the research. It focuses on the general classification of pricing methods, customer value and the explanation of VBP. It further covers the topic of why co-creation and VBP should be linked and applied together. The obstacles in general with regard to VBP and the inhibiting factors for the implementation are elaborated on.

2.1 Pricing methods

Three types of pricing strategies can be identified within the current literature incorporating cost-based pricing (CoBP), competition-based pricing (CmBP) and VBP (Ingenbleek, Debruyne, Frambach, & Verhallen, 2003; Mario Kienzler, 2017). CoBP mainly uses the cost-structure and information from accounting as an indicator for price settings (Hinterhuber, 2008) and encloses a margin on top of the costs (Toni, Sperandio, Busata, & Larentis, 2017). The differentiation is made between unit costs and total costs which represent the main cost driver of a company.

CmBP tries to evaluate the price levels from the competition as a basis (Hinterhuber, 2008) as well as it aims to anticipate the competitors' behaviour to be able to adapt the prices (Toni et al., 2017). In contrast, VBP concentrates on the advantages of the products, what the customer value and thus, customer are willing to pay (Hinterhuber, 2008). Although the author analyses that VBP is the only strategy, which explicitly involves the customer value and, the willingness-to-pay, VBP is the less frequent approach adopted so far.

2.2 Customer value

In general, customer value-based strategy has often been addressed as the application of a competitive advantage strategy (Flint, Woodruff, & Gardial, 2002). Due to this, many phrases and components have been formulated to define customer value. According to DeSarbo, Jedidi, & Sinha (2001) it has often been referred to as a compromise between quality and price all perceived from the customer side, whereupon quality can be interpreted as the “buyers' judgment about a product's overall excellence or superiority” and the price stands for the “consumers' subjective perception of the objective price of the product”. Another idea for the industry is, that value could be defined as “quality at the right price” or “affordable quality” (DeSarbo et al., 2001). A fundamental aspect, which makes examining customer value quite challenging is the price being part of all the definitions, and thus it can change rapidly, for example, the moment when other substitutes enter the market (Hinterhuber, 2004).

Gutierrez, Lopez and Tejeda (2000) specify that today's customers assess every detail of a product instead of just looking for low or high prices. A high price does not automatically mean that the product has a higher quality. Instead, it is essential to find the right balance of price, quality and other benefits. Anderson and Narus (1998) refer to value more detailed by indicating

that it is the account in “monetary terms of the technical, economic, service, and social benefits” which someone receives when acquiring the product.

Beyond the definition of value and its classification, an important aspect is, how customers perceive value. Browning (2003) points out that apart from price and quality, the value depends on the customer's preferences and existing options. Flint et al. (2002) further state that customers usually have multiple elements in mind when considering purchasing a product. These components may include the product itself, the store and the brand behind the product as well as the communication with the sales representative leading to the sale process. Flint et al. (2002) though point out that the values customer perceive may change over a short period of time. Companies are thus forced to re-evaluate their value-based strategies on a constant basis in order to remain competitive. It is named the “customers' desired value change”. Browning (2003) states in this context, that there are two views to distinguish between customer value: the absolute and the relative value. The absolute value refers to the real or the true value of all product characteristics, whereas the relative value entails, in particular, the changes in the perception due to changes in the environment. For example, it is possible that a product becomes more valuable in the sequence of one year so that customers are willing-to-pay more for the same product and thus, the perceived value of the product increases for the customer. Another definition of value found is that customer-perceived value is the trade-off between benefits and costs (Gutierrez, Lopez, Tejada, 2000).

2.3 VBP

VBP is the most difficult strategy to implement because changes within a company are needed, but it has one essential advantage: it combines customer perceived values with the willingness-to-pay and is thus closer to the actual customer needs (Dost and Geiger, 2017). It is the pricing method where the highest margins are expected because of the direct involvement of the customer value (Füreder, Maier, & Yaramova, 2014). Therefore, literature identifies VBP as a customer-oriented pricing method (Mario Kienzler, 2017). Noble and Gruca (1999) concern themselves with industrial pricing and classify customer value pricing as “Product Line Pricing Situation” incorporating complementary product pricing, price bundling and customer value pricing. Within customer value pricing, firms supply products at a very competitive price with different or lower standards than for other offerings of the same product (Noble & Gruca, 1999). Furthermore, the products are often designated to be offered only in particular market segments. The advantage of VBP compared to other pricing methods is, that it assesses what customers

want and expect from the product (Füreder et al., 2014). The figure below shows that there is a range in which the supplier has to identify the perfect balance between the price and the perceived value from supplier's side as well as from the customer side (Töytäri et al., 2015). The customer always assesses the benefits specific products offer, compares them with his individual willingness to pay and consequently decides on, whether the amount of money, at which the product is offered seems to be adequate for him.

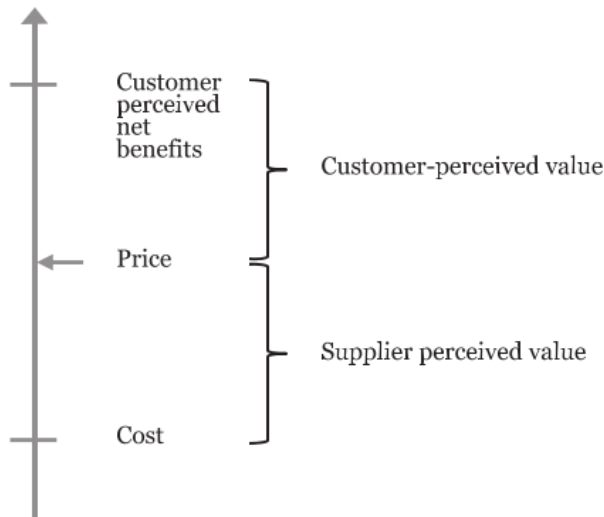


Figure 1: Price relation with customer-perceived value and supplier costs (Töytäri et al., 2015)

2.4 Information gathering of customer value and co-creation

There are different methods on how to gather the required data to define the customers' value for a product. Töytäri, Rajala, and Alejandro (2015) refer to aspects like the product itself, special connection or co-working relationships, which can be the origin of the source of value. Although it is difficult to identify, what values customers expect, suppliers have tried to develop customer-value models to determine and assess customer needs (Anderson & Narus, 1998). Companies incorporate data-driven models to derive a money based value determining the worth of their products. A different approach is, to conduct direct interviews with the customer and directly involving the customer in the pricing process. While this is probably the most effective method, it is not always possible to do so (Anderson & Narus, 1998) as it costs a lot of money and time and not all companies have these resources.

Furthermore, direct and indirect survey questions, conjoint analysis, and focus groups are instruments to collect additional data to formulate values for the customers. Kortge and Okonkwo (1993) explain that for the value identification process not only current customers or

potential customers are needed, but also customers from competitors could be beneficial. Additionally, a closer relationship with the customers eases the communication and the customers are more willing to evaluate products or services to assist the company. Slater (1997) on the contrary argues that it is not only about research from the customers, but rather research about the customers. He suggests methods such as market experiments with subsequent in-depth analysis from professionals or taking advice from universities, partners or consultants. However, learning from experience should not be left unnoted since it may offer a unique contribution to each individual company (Slater, 1997).

In the context of customer value and methods of gathering data, co-creation is an aspect which should not be neglected. As mentioned above, the implementation of a VBP strategy needs an understanding of the customer perceived values, which can be best achieved when including him. Operating market-oriented is not sufficient (O’Cass & Ngo, 2012). Martini, Massa and Testa (2014) specify that “customer represent a fundamental source of knowledge for innvation” which is why the client should be included. The customer as an information source has gained a growing importance as companies have become aware of the value of customer insights. Customer value is not generated by the producer anymore, but created by the consumer himself (Grönroos, 2008).

Hereby, co-creation offers customised development of products according to the customers’ imagination (Ramaswamy & Ozcan, 2018) and enables the customer to develop the value they request themselves by interoperating with the supplier (Lombardo & Cabiddu, 2017). It can also be categorized as “mutual beneficial interaction” (Kohtamäki & Rajala, 2016). In addition, the authors differentiate between coproduction, which means that the customer is involved in the whole development process and just communication after testing of the product, the so called “value experience” which can be explained as user feedback.

2.5 Obstacles of VBP

Since VBP is not implemented that frequently within the industry besides it’s documented value proposal (Liozu, Hinterhuber, Boland, & Perelli, 2012), it might be the reason why obstacles and barriers applying to VBP have already been investigated in detail. As mentioned previously, VBP is the most sophisticated, but also most expedient pricing method (Forbis & Mehta, 1981), which originates from the amount of information, new capabilities and the extra capacities needed to implement this strategy (Töytäri et al., 2017). On this account, various reasons can be found which might be the source inhibiting the companies to make use of VBP. According

to Töytäri et al. (2017), internal requirements can be changes in a companies' business model or the improvement of customer relationship management. Kienzler (2017) defines several challenges hindering firms to adopt VBP. Firstly, the author argues that the top management needs to be supportive and aware of the required changes within the company. Secondly, customer value has to be made quantifiable, so the essential data for VBP can be gathered. Thirdly, managers might have prejudices towards changes within the company which are necessary for VBP (Kienzler, 2017). This discloses that a great measure of effort is needed to make efficient use of this pricing strategy.

2.6 Summary of the theory

To conclude the examined theory, VBP has gained huge interest, as it is supposed to be a very successful pricing approach. Therefore, it is essential to investigate how many SMEs are aware of this pricing strategy and if they utilise this strategy. Additionally, it will be important to monitor, if these companies apply the strategy accordingly as it is crucial to involve the customer to obtain the best results concerning perceived customer value. A closer look will be taken on the methods to gather the information from the customer as there are plenty of ways to conduct it, which leads inevitably to the part of co-creation. Literature reveals co-creating as a way to create the best-customised products, either involve the client from the beginning or just after the customer bought and used the products. In the context of VBP, it will be examined, if there are any obstacles inhibiting companies to implement or to conduct VBP adequately. This thesis investigates if there are some missing internal capabilities like knowledge or missing customer relations or if companies may find it difficult to translate and quantify the gathered information.

3 Methodology

The following subchapters will describe the way the data has been collected. In the beginning, the research design will be described in general, and how the data collection was performed. In the next step, the implementation of the research is described and how the qualitative data will be gathered. Hereby, it will be demonstrated why qualitative research is the best way to approach this research. This is followed by the chapter which incorporates the way the research questions are going to be answered, thus the definition of the measurements. Concluding with

the transfer of reliability and validity into trustworthiness will be discussed, as this topic is a critical element and highly relevant in regards to qualitative data.

3.1 Research Design

In this chapter, a “framework for the collection and analysis of data” is outlined (Bryman & Bell, 2015). As mentioned in the introduction, the purpose of this study is to analyse German and Dutch SMEs by interviewing a responsible person who is involved in the pricing process in order to disclose their pricing methods and the integration of the customer and related obstacles. The following chapter describes the design of the research methodology and the procedure of the data collection. Since the research is of explorative nature the data collection makes use of semi-structured interviews, hence the questions can be formulated quite open (Rabionet, 2011) giving the companies the possibilities to describe their individual way of approaching pricing and the interviewer to go deeper and to ask more about an interesting not suspected outcome. The advantage of exploratory research is the adaptability and thus the potential to reveal structures and patterns within data which may not be assumed in advance (Jebb, Parrigon, & Woo, 2017). Furthermore, this research method entails an inductive approach and thus facilitates the understanding and the interpretation of the collected data. The qualitative approach implemented in this thesis is a “naturalistic approach that seeks to understand phenomena in context-specific settings” (Golafshani, 2003).

The approached firms are German and Dutch SMEs in the manufacturing sector, mainly in the region of North Rhine-Westphalia and around Enschede. SMEs, in this case, are defined to have a turnover between 10 and 100 Mio. € per year and an employee range of 10 to a maximum of 200. In total, the sample size incorporates 17 SMEs of various industries. An overview is provided in the table below.

Company	Industry	Role	Employees
Aerotec 1	Aircraft industry, semiconductor	Sales Director	Not stated
Agri 1	Production of agricultural machines	Manager of the plus department, marketing, product management and communications.	More than 100
Agri 2	Production of agricultural machines	General manager/assistant of the business process investigator	Between 20 and 50
General 1	Machinery and maintenance of all industries	CEO	Between 20 and 50
Iron 1	Building industry, automotive industry, heating suppliers	Sales manager	More than 100

Mechanical engineering 1	Mechanical engineering. Aggregates for the recycling industry.	Marketing and sales	Not stated
Plastic 1	Plastic processing	Head of purchasing and logistics	Between 50 and 100
Plastic 2	Plastic injection molding and plastics processing	Director and owner.	Less than 20
Plastic 3	Plastic processing	Sales	Between 20 and 50
Printing 1	Printing company	Head of sales in the field	Between 20 and 50
Semicon 2	Semiconductor industry	Sales manager	More than 100
Sport 1	School and government building	General manager / Head of sales	Between 50 and 100
Steel 1	Construction, agricultural and machine building	Co-owner	Between 20 and 50
Steel 2	Machine building and water management.	Director and manager	Between 20 and 50
Textiles 1	In textiles, fashion, automotive and medical	Managing Director and owner	More than 100
Thermoplastic 1	Medical sector, automotive related, machine building	Director/ sales manager	Between 50 and 100

Table 1: Company details

Within the research group of four students, everyone interviewed about two to five companies. In the interview process, three students concentrated on Dutch SMEs and the remaining one on German SMEs. The thesis focuses on the overall picture of SMEs so that the full set of gathered data is examined. Since the analysed areas are seamlessly connected across the border, the thesis intends to give a clear picture of SMEs in a geographic area without focussing on an individual country. The designated interviewees were marketing professionals, sales managers, sales employees or employees in a management position who are in charge of pricing decisions.

3.2 Data collection

The study adopts semi-structured interviews as the method for data collection, which are of a qualitative nature. Qualitative studies are defined as "any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss and Corbin, 1990, p. 17). Thus the evidence is not quantifiable, but patterns are found within texts.

The companies were approached via e-mail or telephone with an explanation of the research context, the purpose and the process. If the company expressed interest, a date for the interview was arranged either by Skype, by telephone or in person at their premises. Directly after the phone call, they received further information via e-mail about the study and an additional survey

regarding general data of the company like firm size, operating area and location. All the interviews were individually conducted, which ensured accurate and honest responses. Right before performing the interviews further instructions were sent to the participants, including information regarding their right to remain anonymous and to withdraw participation at any time during the conversation.

The content of the interviews is on different topics of VBP and incorporates the use of it per se, the understanding of value as well as questions about the involvement of the customer and the obstacles related to VBP. The interview questions are provided in Appendix A. However, some of the companies may not use VBP, which is why the questions can be guided in two different directions. Qualitative analysis is the best when the researcher is open-minded but still wants to lead the procedure in one specific direction (LeCompte, 2003). This is why the questions for the interviews were developed to match the topic of VBP, but leaving the interviewees enough space to explain their concepts and approaches (Rabionet, 2011). Semi-structured interviews allow the interviewer to be flexible during the implementation and to go deeper into topics he did not intend to ask. The scheduled duration of the interviews was set at half an hour. The medium was chosen on an individual basis with each participant, but they were informed that interviews in person were preferred. The interviews were recorded with the permission of the participants to avoid misunderstandings and to allow a fluent conversation. Additionally, notes were taken during the interview to ensure consistency of the data. The recorded data was sent to the participants to ask them if they were satisfied and if the entire interview can be used for the thesis. Any annotations were considered and it was noted for a later change in the transcript. After the approval of the recording, the interviews were transcribed in the language they were conducted, either in English, Dutch or German and, afterwards translated into English with an additional check of a native German, Dutch and English speaking person. Further, the transcripts only incorporate the answers, which are relevant for the topic of this research; the remaining part was left out and marked with brackets and dots.

Due to the use of data of German and Dutch companies the interview questions, as well as the survey, had to be translated into German or Dutch in case the interviewee did not speak English. This was done by making use of an English-German dictionary to assure the right translation. The German and Dutch version was given to a person who with a native knowledge of English, German and Dutch to approve the translation and ensure consistency.

As the data gathering was performed by four students, the analysis benefits from a larger database than the self-conducted interviews, leading to 17 interviews in the end. This is a sufficient number of interviews ensuring substantial results.

3.3 Measurement

The objective of this paper is to investigate if SMEs who use VBP also co-create. It aims to identify the obstacles occurring when attempting to involve the customer in the product development or at any other stage. In order to answer these research questions, several interview questions have been formulated asking about these different topics (see Appendix A).

In the beginning, the interviewee was asked about his educational background and his position in the company as well as the operating area of the company. Afterwards, the term value was introduced with concrete questions of the use of VBP. The obstacles concerning pricing strategies were asked as well as how the customer gets involved in the development of products. In this case, the questions about obstacles have been formulated in the direction of the pricing, in general, to avoid distractions when asking directly about obstacles with the customer involvement.

The data gathered from the interviews were grouped into four different topics: understanding of value, use of VBP/perception of use, obstacles concerning VBP and data gathering for VBP/co-creation. These four categories enable a comparison of the different understandings of customer value and the perception of the use of VBP. The questions further offer to draw a conclusion the participants are not aware of. The following table gives an overview of which question of the interview is assigned to which group:

	Group	Questions
1	Understanding of value	What do you consider to be value?
2	use of VBP / perception of use	What pricing strategy is used for new products? For how long have you been translating value into the pricing strategy? If you don't consider value within the pricing strategy, why not? Do you consider the advantages of a product compared to competitor's product in the price? Do you consider the perceived value of the customer in the product's price? Do you consider the advantages of the new product offers to the customer in the price?
3	obstacles concerning VBP	How are you dealing with challenges?

	What kind of obstacles did your company face when implementing pricing strategy? In what way did you overcome them? What kind of obstacles did you personally face when implementing pricing strategy? What external obstacles have you faced that had an impact on the pricing strategy?
4	data gathering for VBP / co-creation Have you ever involved customers in the product development process? How? Do you translate any of that value into the pricing of the products?

Table 2: Topics and interview questions

For the measurement of the above-mentioned categories, this thesis utilises the method of open coding (Gibbs, 2007, p.50). This method is executed by reading the transcripts very carefully to detect the predefined groups within the text. It is required to draw connections, compare the data and formulate questions. Hereby, Babbie (2007, p. 385) states that open coding incorporates “the initial classification and labelling of concepts in qualitative data analysis”. The codes are proposed by screening and requesting the data (Babbie, 2007, p. 385).

To measure if VBP and co-creation are related, it has to be determined at first if the firms have a clear understanding of value and followed by an assessment if the firms apply VBP. The assessment between co-creation and VBP will be performed in the next step since either the involvement of the customer in the development of products, a testing of the products by the customers or a profound market research on customer value has to occur, so that this pricing method is executed correctly. For the identification of the obstacles concerning VBP and co-creation, the participants will be asked in general about obstacles with regard to VBP to further see if the obstacles are linked to co-creation.

3.4 Reliability and Validity

This paragraph regards the topic of reliability and validity of this research. A study loses its relevancy if validity and reliability are not given hence being an important issue to address and to validate (Morse, Barrett, Mayan, Olson, & Spiers, 2002). These aspects have to be ensured from the beginning and during the research, a so-called “constructive procedure” as the results may become invalid at the end (Morse et al., 2002). According to Golafshani (2003), validity and reliability are special factors in qualitative research due to the disclosure of the real interests. This results from the fact that “qualitative methods are highly personal and interpersonal because naturalistic inquiry takes the research into the real world where people

live and work, and because in-depth interviewing opens up what is inside” (Patton, 2002, p. 407). The criteria by Lincoln and Guba (1985) serve as an alternative approach for the evaluation of qualitative research, the so-called trustworthiness: credibility, transferability, dependability, and confirmability. These aspects were defined to replace validity and reliability and to create a better understanding of what is meant by the term trustworthiness (Bryman & Bell, 2015, p. 400).

Credibility replaces internal validity (Bryman & Bell, 2015, p. 401) and makes sure that the findings of the study are “carried out according to the canons of good practice and submitting research findings to the members of the social world who were studied for confirmation that the investigator has correctly understood the social world” (Bryman & Bell, 2015, p.401). As the data collection was executed by more than one student, it is ensured, that the results of the research are reliable.

Transferability means external validity and asks the question if the outcome of the study would be identical when investigating it again within another research (Bryman & Bell, 2015, p. 402). The framework of this study can be used for answering further questions. Therefore, the specific details of the companies and the methods used have to be disclosed which is ensured in this study. Due to this, another observer can easily compare the specifics of the companies he analyses with the specifics of this study, assess if they are comparable and may draw conclusions.

Dependability is a synonym for reliability and ensures a constant record of all stages of the project (Bryman & Bell, 2015, p.403). This study was performed with the utmost care and everything has been recorded, transcribed and explained. Therefore, this study can be repeated and the reproduction of similar results is ensured.

Confirmability can be equated with objectivity. The meaning is that it can be ensured that, although it is almost not possible to be completely objective, the research has not been influenced by personal feelings and values of the researcher (Bryman & Bell, 2015, p.403). To guarantee objectivity, the data collection has to be transparent, so that an external person can judge on his own if the results are biased.

4 Results / Evidence

The following section contains the representation of the textual results of the interviews. This is done for each group defined above in order to get an overview and for preparing the later

coming analysis. While screening the 17 conducted interviews the first time, it turned out that the company “Semicon 1” is not a manufacturer of products, but resells products as a third party. For this reason, this data set was excluded from the results and the analysis as it falls out of the predefined criteria of a producing company. The remaining 16 interviews are presented in the next subsections. In addition, the results are presented shortly in tables as it provides a clear overview.

4.1 Understanding of value

The understanding of the term “value” turned out to be very miscellaneous. The table below gives an overview of the statements of the companies.

Company	Value understanding
Aerotec 1	Value we see and can add is that we operate in a high technology range, which not everybody has
Agri 1	Not mentioned
Agri 2	Quality of machines, customised, can product on demand, special product
General 1	The production of our customers is running
Iron 1	Value is also the service we can offer, also with the products we are selling
Mechanical engineering 1	Quality
Plastic 1	Advantage the customer
Plastic 2	Customer retention
Plastic 3	Ideas from customer
Printing 1	Service we offer
Semicon 2	Value is an emotional aspect. You get something, it has a value for you. But it has a high value or a low value, but it is the emotional aspect you have with the product of it or the price. → advantage for the customer
Sport 1	Reliability and availability of safe sport equipment
Steel 1	Flexible, most things we can manufacture, service
Steel 2	Something that you will give something for. Free time can be considered as value.
Textiles 1	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. Stock levels which you have built to deliver to the customer quicker, those are all aspects of our company where we create value for our customers. That is what I consider value for our customers.
Thermoplastic 1	Qualitative great product with a sustainable relationship with the customer

Table 3: Understanding of the value

One of the most frequent responses to the question on value understanding was the quality of the produced products. Four SMEs stated that quality is the essential value of their products and therefore, for their customers. In this context, “Thermoplastic 1” puts attention on the relationship with the customer in addition to the quality, whereas “Mechanical engineering 1” highlighted the balance between price and quality. The other company indicated that the

customisation of products and, above all, the uniqueness of the products create value within their company. “Aerotec 1” confirms this understanding of value, stating that their special products make them unique and set them apart from the competition. In contrast, Plastic 3 sees his customers as the most essential input in the creation of value as he receives insights for new products. “Textiles 1” mentioned the quality as a superior aspect along with the design of the product.

The second most common perception of value was the offered additional service surrounding the product. One SME pointed out, that their customers especially value their service and that the excellent service sets them apart. In addition to the service, two companies stated that the advantages for the customer are the most important value.

4.2 Use of VBP

In order to investigate whether the SMEs using VBP co-create as part of their strategy it first has to be examined if is VBP applied.

	VBP	CoBP	CmBP	Combination
Aerotec 1	x	x		x
Agri 1	x	x		x
Agri 2	x	x		x
General 1	x	x		x
Iron 1		x	x	x
Mechanical engineering 1	x	x	x	x
	for very special products			
Plastic 1	x			
Plastic 2	x	x	x	x
Plastic 3		x		
Printing 1	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
Thermoplastic 1	x			

Table 4: Pricing strategies

As shown in table 4, 11 out of 16 companies stated to use a combination of two or even three pricing strategies. VBP and CoBP are the most common combined strategies used by six SMEs. All of them pointed out that it is important to know the costs first to be able to add a sufficient margin before being competitive. Hereby, one of the firms explained that VBP is only consulted for special products or niche products. Three other SMEs stated to use a mix of all three

strategies, which means that they, on the one hand, calculate the costs as a solid basis and, on the other hand, attempt to measure value for the customer, so that the margin can be increased. The three SMEs observe the competition and the demand on the market to integrate this information as well. A combination of pricing strategies performed by two SMEs of the 11 companies, namely “Iron 1” and “Steel 2”, is CoBP with CmBP. Only “Sport 1” answered to use a mix of VBP and CmBP. The table also shows that four companies apply one single pricing strategy. VBP is utilised by two companies, “Plastic 1” and “Thermoplastic 1”, as well as CoBP is only used by “Steel 1” and “Plastic 3”. CmBP is not used as a single strategy, but only in combination with other pricing methods.

4.3 Obstacles

Another question to be answered in this thesis is whether SMEs face obstacles utilise VBP and co-creation. For this reason, the table 5 exhibits if the companies employ VBP somehow and related to this the obstacles they face.

	Pricing strategy	Obstacles
Aerotec 1	VBP + CoBP	What we sometimes do get is that the time to come up with prices has to be faster because of instant gratification Capacity has been an obstacle. We need experts for measures, and if I get more projects on my table with a certain timespan, It certainly has, with the lack of expertise we can only rely on assumptions.
Agri 1	VBP + CoBP	Problems to explain VBP to customers
Agri 2	VBP + CoBP	When developing a new idea with the customer, divergent ideas
General 1	VBP + CoBP	No problems
Iron 1	CoBP + CmBP	-
Mechanical engineering 1	VBP + CoBP + CmBP	No problems with the strategy, just price discussions
Plastic 1	VBP	Commodity prices are problems since contracts are made 3 years in advance Further obstacles: energy costs, when comparing to competitors abroad.
Plastic 2	VBP + CoBP + CmBP	Customer want lower prices Personal problems, comes not along with one customer
Plastic 3	CoBP	-
Printing 1	VBP + CoBP	Problems to enforce the prices, when other competitors offer better prices
Semicon 2	VBP + CoBP + CmBP	Issues with choosing the price for a product based on value-based pricing Our sales partners, they also have to understand our idea behind it and the translation to our dealers is more difficult. Because we have more sales people and the owner of this company has to translate this also for his sales partners.

Sport 1	VBP + CmBP	Knowledge of how to put money value to a product is difficult, real value for the customer
Steel 1	CoBP	Based on experience, obstacle could be missing experience
Steel 2	CoBP + CmBP	We look at the end user but we also have customers who are traders. They also want to earn something. Because I have my price on the internet, I sometimes get into a fight with them and then they say yes, then they (the customer) can also get it from you. Then I always have to deal with whether he is going to shop or I will meet him. Those are the obstacles we encounter, the end user who always has a good price with us.
Textiles 1	VBP + CoBP	You have to have the guts to ask a price. There you also see the difference between weak sales people and sales people with some confidence.
Thermoplastic 1	VBP	Price/quality ratio Can sometimes be that we need to train our employees and facilitate knowledge more efficiently through our organization

Table 5: Obstacles with pricing strategy

The main issue mentioned by most of the companies is missing expertise when using VBP. The participants from “Aerotec 1”, “Sport 1”, “Thermoplastic 1” and “Semicon 1” expressed that it is quite difficult because of the expertise required for VBP. They stated that additional knowledge inside the company is needed in order to be able to execute the strategy correctly. “Agri 1” argued that it is difficult if the customers do not have sufficient knowledge in the area of VBP so that the customers do not understand the pricing. Presenting that not only missing expertise inside the company but also with regard to the customer can be observed as a predominant obstacle. Another obstacle listed by “Mechanical engineering 1” is constant price discussion with the customers. This comes along with the statement by two other SMEs agreeing that the most common obstacle is the price itself. In contrast, “Agri 2” stated having problems when the new product is developed in cooperation with the customer often having very divergent ideas. “Plastic 1” conveyed that a significant obstacle is the price of commodities. Since contracts are sometimes made for two or three years in advance, and the prices for plastic, for example, are not fixed but rather volatile, some contracts can become unprofitable. In general, the participant pointed out that costs are a significant issue. However, there were two companies, General 1” and “Mechanical engineering 1”, stating not having any problems at all with their strategy.

4.4 Co-creation

The next part of the research question is to answer whether co-creation is related to VBP. The answers of the participants concerning the involvement of their customers are as follows:

	Co-creation
Aerotec 1	We get scorecards from our customers And in these scorecards you get an overview of the quality, on time delivery, penalties (due to, such as late delivery), pricing, all factors like these are evaluated in the scorecards. We report this every half or full year. Based on these scorecards we can evaluate and act on our performance and quality
Agri 1	Feeling, what benefits the customer? market research, own ideas
Agri 2	Co-creation only in our research and development projects
General 1	Translation of customer needs into new products, analyse the communication
Iron 1	Yes, we always involve them in the development process
Mechanical engineering 1	Feedback from customer after use of machines, co-creation with universities
Plastic 1	Co-creation in 95%, finance together this development with good and long-standing customers
Plastic 2	Ideas come from the customer
Plastic 3	100%, only produce and develop when the customer comes with ideas, but has to invest in the development
Printing 1	Develop products with customer, need assessment when talking to customer
Semicon 2	We have our R&D departments, they have contact with some key account customers and they ask customers
Sport 1	Feedback from customers, sales team
Steel 1	Partially involved, not a lot of contact, "sometimes it is better to not ask too many questions"
Steel 2	We do often speak with clients on the telephone and we do have a lot of repeat orders. So we actually know then, for example from Germany, if you have repeat orders, then you know that the product was satisfying. Normally you only get feedback when something is not functioning
Textiles 1	We collect auto wear fabrics from our customers, such as jackets and shirts and we know from their design department, what kind of fashion they want to make, sometimes even at the design stage of clothing
Thermoplastic 1	We involve them with the development as much as possible Certainly. We evaluate on the specifications and apply these in the pricing Yes, we certainly do involve our customers in the development process to reach an alignment with the customer. This also strengthens our relationship.

Table 6: Involvement of customers of value creation

Utilizing different stages of involvement resulted to prevail among the examined SMEs. Only “Agri 1” stated not to involve the customer at any stage and “Steel 1” even noted that they involved their customers only to a small degree since the benefits to knowing and to questioning everything are limited. In contrast, all other SMEs explained that it is the best method to integrate the customer into either the process of idea gathering, the development per se or to just receive direct feedback after the use of the products. “Aerotec 1” indicated to get scorecards from the customers assessing the products in detail, e.g. the quality, usability, etc. 4 of the companies disclosed to work with the direct feedback and to attempt to incorporate the insights

into the next development or production. “Steel 3” specified that having repeat orders as that is a direct link to satisfaction. “Agri 2”, “Iron 1” as well as “Thermoplastic” 1 affirmed utilizing co-creation, but just in their development and research phase of projects. “Plastic 1, 2, 3” and “Printing 1” disclosed that the product development is in fact triggered by the customers coming with new ideas and requesting new products. “Plastic 1 and 3” stated that the customers always co-invests in the development so that the costs are shared. “Semicon 2” indicated to be in contact with key account customers within their Research and Development Department and “Textiles 1” keeps a constant level of communication with customers to understand what the customers really want from their products.

5 Analysis

In this chapter, the results are connected with the theory described in the theoretical chapter to answer the research questions of this thesis. In the beginning, the general understanding of customer value is analysed. Afterwards, the link is being made between using VBP and the involvement of the customer in the development process. In the end, the obstacles are discussed to understand if they are common, severe or non-existing.

5.1 Understanding of value

The understanding of value is a crucial point when trying to operate with the VBP approach since it is the only method including data on customer value. As presented in theory, many definitions occur attempting to explain customer value, but, as described earlier, the focus rather lies on the quality and the price of the product, which needs to be in accordance with each other. In addition, customer's preferences and existing options have been found to be very substantial leading to the perceived customer value, the relative value. The issue is that everyone assesses products and services differently, making it difficult to clearly define value.

As shown in the results, four companies agree with the literature and stated that value can be seen as quality. “Agri 2” noted that the quality of the machines is essential, which automatically leads to a higher quality of the produced goods. The central insight of the other three companies was that the products have to be superior and in better conditions than competing products or substitutes. Being the closest to the definitions taken from the literature, but all of the four SMEs do not connect the term value with the price component.

A different view from the literature is that value is seen as the trade-off between benefits and costs. The benefits for the customer are broader and can be seen from different angles as it is not only about the quality. For example, two companies explicitly stated offering special products, which are highly individual and convert the value through their specialisation. Hereby, the benefits derived from the fact that not every company is able to produce such specifications, which make the company and the products unique.

Four other companies also specified the term value as the advantage for the customer, meaning that customer value is only given if the purchaser perceives to acquire an advantage with the product. "Printing 1" specified that it is essential to be able to meet the customers' requirements as, for example, in the printing industry, customers can be quite picky with their "house colour" or with special pressed paper.

Some other SMEs did not state advantages per se, but instead defined the benefits of their product, which can be seen as advantages for their customer. "Sport 1", for example, indicated that due to their operating segment their products need to be safe and reliable. So advantages can be defined very differently when looking at different market segments and can thus vary a lot.

"Plastic 2" answered that perceived value translates into customer retention. However, you only have loyal and recurring customers when they are satisfied, which by implication means that the company perceived to have an advantage from the products or are satisfied with any other feature like quality or usability.

Another interesting answer came from "Plastic 3" who just develops products when the customer requests it. The interviewee noted that the ideas of their customers are most important since, without them, there would be no products and thus no value. However, this is a very special case as they work closely with their clients and they already know in the phase of developing new products that the customer will buy them.

Three SMEs perceive to deliver their customer value through the additional service they offer meaning that the target group not only appreciates the quality of the products, but also the additional performance and advantages. One of the companies explained that the customers value the small size of the firm, making everything more personal and familiar. The direct contact with the client and knowing what the customer ordered and how to assist, is highly valued by the customer. Therefore, services can be seen as an additional advantage because it offers more benefits to the customer.

“Semicon 2” revealed to have an interesting understanding of value, stating that value is mostly an emotional aspect and everyone assesses products and services differently. Products and services might present value to one person but another person has a different opinion on its value. This statement comes close to the idea of perceived value as firms can create value, but not everyone has the perceives the value in the same way. The advantages mentioned above can also be evaluated completely different among customers as it is related to the perceived value and advantages with regard to individual and customised products.

In conclusion, value is not understood to be a trade-off between quality and prices or a compromise of both, customer value rather incorporates either quality or advantages for the customer, which is one of the most important components when defining customer value. That the price is not mentioned may be due to the fact, that the companies do not connect customer value directly with prices and see this as a separate matter.

5.2 VBP in combination with co-creation

This section examines the central question of this thesis and assesses whether SMEs really incorporate VBP and if co-creation is connected to it. The previous chapter 5.1 analysed the understanding of the term value showing that the overall thinking is uniform in the direction of quality and advantages for the customer. The issue with VBP is that it is still quite unknown and only a small amount of experts know how it is implemented and executed. This is why the statements of the different companies are examined and questioned with regard to the specifications of this pricing method. It is investigated if the SMEs which indicated not to use VBP maybe apply it without knowing it. A direct comparison to co-creation is being drawn in order to identify if it goes hand in hand with VBP.

As constituted in the literature, VBP can be categorised as a customer-oriented approach implying that the strategy is most successful when companies put their clients in the focus as one of the best sources of information on value for products. The information about customer value is an essential part of this pricing method and thus being crucial in practicing VBP correctly. The following table shows the companies out of the relevant 16 companies which claimed to use VBP as their strategy and presents their statement on how and if they co-create:

	Pricing strategy	Co-creation
Aerotec 1	VBP + CoBP	We get scorecards from our customers And in these scorecards you get an overview of the quality, on time delivery, penalties (due to, such as late delivery), pricing, all factors like these are evaluated in the scorecards
Agri 1	VBP + CoBP	Feeling, what benefits the customer? market research, own ideas
Agri 2	VBP + CoBP	Co-creation only in our research and development projects
General 1	VBP + CoBP	Translation of customer needs into new products, analyse the communication
Iron 1	CoBP + CmBP	Yes, we always involve them in the development process
Mechanical engineering 1	VBP + CoBP + CmBP	Feedback from customers after use of machines, co-creation with universities
Plastic 1	VBP	Co-creation in 95%, finance together this development with good and long-standing customers
Plastic 2	VBP + CoBP + CmBP	Ideas come from the customer
Plastic 3	CoBP	100%, only produce and develop when the customer comes with ideas, but has to invest in development
Printing 1	VBP + CoBP	Develop products with customer, need assessment when talking to customer
Semicon 2	VBP + CoBP + CmBP	We have our R&D departments, they have contact with some key account customers and they ask customers
Sport 1	VBP + CmBP	Feedback from customers, sales team
Steel 1	CoBP	Partially involved, not a lot of contacts, "sometimes it is better to not ask too many questions"
Steel 2	CoBP + CmBP	We do often speak with clients on the telephone and we do have a lot of repeat orders. So we actually know then, for example from Germany, if you have repeat orders, then you know that the product was satisfying. Normally you only get feedback when something is not functioning
Textiles 1	VBP + CoBP	We collect auto wear fabrics from our customers, such as jackets and shirts and we know from their design department, what kind of fashion they want to make, sometimes even at the design stage of clothing
Thermoplastic 1	VBP	We involve them with the development as much as possible. We evaluate on the specifications and apply these in the pricing.

Table 7: VBP in direct comparison to co-creation

Table 7 exhibits that only two companies, “Plastic 1” and “Thermoplastic 1”, indicated to use a VBP strategy and in the direct comparison to the use of co-creation it reveals that these SMEs fully involve the customer and that it is quite important for them. “Plastic 1” expressed that they cooperate almost 95% of the entire process of the product development with the consumer and that they even finance the research projects together with them. This shows that not only the SMEs are interested in acquiring know-how of the value perception in order to generate perfect value for the customer, but also the customers themselves are interested in finding the right product from the beginning and is even willing to pay for it in advance. “Thermoplastic 1” illustrated to integrate the customer into the development process showing that it seems to be essential to utilise the information on value from the beginning of the development process.

In addition, these firms showed to have a good value understanding as the most critical issue for them was quality and the advantage for customers. Another point mentioned in the literature is that VBP is primarily used successfully in particular market segments. “Plastic 1” operates in a very small niche market with many specialised products. The participant stated that a lot of know-how is needed to develop the products, to sell the products and to promote the products. The competition is rather limited as they stated knowing every market participant quite well in the market. “Thermoplastic 1” is active in a special field namely the production of particular thermoplastics for the “medical sector, automotive related, machine building and specials”. “Mechanical engineering 1” stated utilizing VBP only for very special products, which are not common and require an extended knowledge in this field of expertise.

The operating fields of both companies using VBP and the third firm practising VBP for special products, “Mechanical engineering 1” only disclosed the implication of the literature that this pricing method is useful in niche markets or markets exhibiting a low level of competition. Both companies executing VBP agreed not to tend towards changing their pricing method as they are quite successful with it, which confirms the usefulness in niche markets as well.

The ten SMEs who stated to use a combination of pricing methods all explained to integrate the customer somehow expect for “Agri 1” which only relies on market research to gain information to reflect them against their own ideas and perception. However, the participant stated to use, inter alia, VBP as a strategy, which is contradictory since this approach uses customer value information as a basis for pricing. As shown in the literature, it is not enough to just use market research or own insights and, therefore, it is more desirable to combine more than one pricing methods and not just solely a VBP strategy. Nevertheless, the interviewee indicated to use external data to gather information on customer value, so no direct interaction with their clients about the products occurs.

As displayed in table 7, six of the ten companies with a mixed pricing approach answered to integrate the customer from the beginning indicating to involve clients already in the research and development process in order to create a customised and perfectly product fitted to the customers’ needs. Most of them said that the ideas for new products derive from the clients and that the clients initiate the projects. This discloses an quite comprehensive cooperation and even security for the SMEs. The companies can be sure that products will be sold after the production as the clients ask for the development of the products. One of the companies, namely “Mechanical engineering 1”, illustrated to operate a combination of all three pricing strategies and mentioned to even consult with universities for innovation. The participant expressed that

it is beneficial since students have the current know-how and are very creative. Additionally, the company contacts their clients after the use of the products to receive feedback and insights to improve the products.

Two companies, “Plastic 3” and “Steel 1”, pointed out to use a pure CoBP method while the remaining two companies use a mix of CoBP and CmBP. One of them did not state anything about Co-creation, two of them convey that it is important and attempt to integrate the customer at a very early stage of the process. Only “Steel 1” which uses CoBP responded that it is not always beneficial to involve the clients because it may cause more issues than benefits. This reveals that this company has no interest at all in this pricing method as they are not satisfied with the idea of co-creation. However, the statements from the other three companies show that they adopt the knowledge about customer value to a certain degree in order to modify their products accordingly. The missing link seems to be the direct translation of information into prices, which is a requirement for VBP. The examined firms assume to be convinced that their method of value creation is superior to others.

In general, it is illustrated that VBP is a popular but, nevertheless, a difficult strategy to use. Despite the difficulties it comprises, VBP is becoming utilized to a greater extent. The analysis illustrated that only two companies employ a sole VBP approach strategy and these two also showed to have a profound knowledge on customer value as well as taking advantage of co-creation to deliver superior value for the customer. Nine of ten SMEs using VBP in combination with other pricing methods integrate the customer for the value identification assuming high relevance in this field.

Four companies out of 16 do not exercise VBP of any form, although two of them co-create, providing a decent understanding of value, while the third one analyses feedback from their customers. The fourth one showed no interest in co-creation at all and refused integrating their clients.

5.3 Obstacles with VBP

The overall issue with VBP is the required special knowledge in various fields. Literature argues that problems concerning missing internal capabilities of companies and the translation of value into prices. Considering this, the gathering of information about customer value itself represents a fundamental problem, which is related to the second question of this study.

To begin with, the two companies which employ a sole VBP strategy stated to have different obstacles. The first one indicated to experience problems with the pricing because of the not stable prices of commodities and the contracts with its customers are made up to three years in advance. The participant explained it is not possible to forecast the course of the prices and, therefore, the profit of the projects is not secured. Further, the company mentioned that other costs play a significant role, e.g. energy costs, showing that the general composition of costs is the main obstacle in this case. This point reveals that, although the company uses a VBP strategy, it has to monitor the costs, having a direct effect on the margin.

The other SME in comparison stated that it is complicated to find a functioning ratio between quality and the price since you cannot overcharge the customer even if you have the opinion that the products are superior. The translation of value into prices appears to be an issue as well as finding a price that the customer is willing to pay. Further, it was mentioned that the employees have to be trained so that they are able to facilitate knowledge efficiently throughout their organization. If the employees were informed to a great extent about how to practise VBP and how to translate value into prices, the former problem would be solved by illustrating the importance to train human capital within an organisation.

The problems concerning the quality-price ratio and the missing expertise are in line with the obstacles found in literature and confirm that issues exist in the context of VBP, but also in the context of pricing, in general. Since this firm properly employs VBP and thus, has the expected obstacles with the value translation into prices. However, the cost component mentioned by the first company applies for all firms of the producing sector and cannot just be linked to the VBP approach, but to all pricing methods.

When examining the ten companies practising a mix of pricing strategies another picture is revealed. One firm elaborated that no problems exist with their approach. The absence of any issues might derive from the interviewee being an executing employee and not being involved in depth in the pricing procedure. Three of the ten SMEs stated to have problems with the prices in general, so that they often have discussions with their clients. The source of the problems might originate from the wrong translation of information on value into prices. Further, it might be the case that a mixture of pricing strategies may distract the usual intention of VBP leading to unclear price levels. In addition, as not only VBP is applied by this participant, the cost component appears to be an issue as well and it demonstrates that the cost structure of the products and thus, the prices inevitably lead to discussions and obstacles. Another reason could

be that the customer only has a limited understanding of VBP and how this pricing method is exercised.

This fits with the following statement as one participant said that the lack of expertise causes obstacles which lead to incorrect pricing or rather to unsatisfying results on both sides. Another participant stated that a great number of customers do not understand the approach of VBP, and thus do not understand how the prices are derived. This seems to be connected to the statements of the other companies, which revealed to have a general problem with pricing. In the first place, the customers are unsatisfied with the prices, due to a lack of understanding of how VBP works. The firms may also have problems to advertise the additional benefits of the products according to VBP so that the customer is not aware of the advantages and is not willing to pay the advertised price.

Another obstacle that was mentioned is the co-creation process itself which involves the customer having different ideas and approaches of design and development. As found earlier, most of the SMEs integrate the customer to a certain degree in the development process of new products.

One company stated co-creation is not always beneficial as it might provide divergent views. This can be a problem when both parties are confident about their ideas and approaches, which may lead to significant issues such as losing the client. In this regard, one company stated that personal issues with the characteristics of the clients might lead to obstacles. This might not only be the case with pricing or VBP, but rather appears to be a general problem companies have when doing business.

The last interesting obstacle mentioned was that when performing VBP, a certain degree of boldness is required to ask for certain prices. It might seem too high, but in the end, if the products offer an observable advantage than higher prices are justified. As mentioned above, it appears to be important to advertise and offer the products accordingly, so that the customer's willingness-to-pay matches the indicated prices.

The remaining four companies not employing VBP do not face obstacles of VBP per se, except for the missing experience. One company mentioned that it can be hard to implement something the right way due to missing expertise and experience. This illustrates that the companies have thought about switching to VBP, but that apparent barriers are inhibiting these firms to attempt a different approach.

6 Discussion and Conclusion

The conducted analysis of the interviews at industrial SMEs with regard to findings and implications of existing literature provide useful results to answer the research question of this thesis. This final chapter, therefore, answers the research questions, contains a discussion of the result, and provides theoretical and practical implications as well as limitations and implications for further research. Moreover, an overall conclusion will be given to generalizing the topic of this thesis.

6.1 Answering the research question

The main question of the thesis is whether SMEs who use VBP as their pricing approach co-create for the identification of customer value. To answer this question, several questions had been asked to assess first if the approached companies practise VBP and if they co-create.

The evidence illustrated that VBP is employed entirely in only two companies, whereas ten SMEs use a mix of methods including VBP. Four companies stated not to utilise it at all, but the analysis exhibited that two of them incorporate customer value and co-creation to gather information leading to a value-based product development and advancement.

Co-creation is almost used by all companies. The methods to gather information are mainly the direct co-development of products as well as collecting feedback after the purchase of the products. Almost all companies find it quite important to involve the customer in the product development, as they are one of the most reliable sources of information.

Examining VBP and co-creation together reveals that almost all companies using VBP involve the customer. Only one SME who stated to use VBP and another pricing method indicated to only use market research and their own insights. From the four companies not using VBP two practice co-creation, one SME only to a limited degree as they communicate with their clients on the phone occasionally and the fourth firm does not co-create to any extent. The participant explained that most of the time it is not beneficial as the customer has entirely different views which may lead to conflicts. Arriving at the conclusion, that co-creation is related to VBP as almost all of the companies using VBP set a great importance on the ideas of their customers. Additionally, as two of the SMEs which responded not to apply VBP were found to utilise customer value and to involve the customer even enhances the findings.

The obstacles concerning VBP in connection to co-creation turned out to be different among the companies. Lack of expertise and of experience were the most common responds, which

implies limited expertise in the determination of customer value, and thus co-creation. Further, participants elaborated that the main issues were to explain VBP to customers and the necessity of cooperation. One SME explicitly indicated to face obstacles in the co-creation procedure as divergent ideas between the customer and the company can hinder development. Defining the real value for the customer, and thus the collaboration and determination process was found to be another obstacle concerning co-creation. Evidence presents that including the customer into the value determination process is difficult. However, these obstacles are not equally found throughout the entire sample of SMEs.

6.2 Discussion

This thesis investigates if SMEs which practise VBP also co-create and the obstacles that occur when using VBP and involving the customer.

After reviewing the literature and conducting interviews with 17 SMEs in the Netherlands and Germany, it can be determined that the majority of firms which employ VBP practice co-creation and involve the customer in the product development and enhancement. Most of the SMEs stress the importance as it offers customised products and ensures that the products will be sold afterwards.

These findings are in line with the expectations presented in the beginning of the thesis. Based on the theory it was assumed that at least some of the SMEs employ VBP in combination with co-creation, but surprisingly the majority was found to practice it. Theory further illustrated that the customer value has superior importance in the VBP approach, which can be confirmed by the findings as well. Furthermore, it was suggested by the theory that direct involvement of the customer in the form of interviews is the best method to gather information on customer value which was found with the companies as well.

Some issues remain to be discussed and mentioned with regard to the focus on SMEs. Unlike large corporations, SMEs may not have enough capital to perform a sophisticated market research or to use other methods for the information gathering process like focus groups, surveys and conjoint analyses. Moreover, as SMEs have in general less customers than large companies, the greater is the dependency on those customers, and thus the relationship with the customer was often mentioned as an important value factor for the firms. Hereby, co-creation offers an opportunity to involve the customer to extract in-depth knowledge on value perception as well as it allows strengthening the relationship to ensure future sales. The findings show that almost all SMEs co-create and directly involve the customer, which has been anticipated in advance.

Literature suggests co-creation being one of the best methods to collect in-depth information on customer value which can be confirmed by the evidence presented in this thesis as the majority of the SMEs illustrated to co-create.

The obstacles mentioned by the participants are twofold. Almost half of the SMEs stated to have issues concerning VBP in combination with co-creation, which was anticipated to be more prevailing among the companies using VBP. However, many companies indicated having obstacles with general pricing and prices, which may be due to the fact, that VBP is almost never used as the sole pricing method. According to the investigated literature, one of the frequent found obstacles is the translation of value into prices and thus problems with customer value, which is confirmed by the findings of this study. The combination of pricing strategies was not considered within the former studies on obstacles, which is why there might be even significant differences.

6.3 Theoretical and practical contributions

This paper offers theoretical relevance in the area of VBP in combination with co-creation. This study discovered that VBP and co-creation are connected at SMEs. Current literature has not shown this correlation before, which is why this research offers a new approach and a new topic area to be further examined in the future. It further reveals that VBP is successful as all the SMEs are very satisfied with this strategy and integrate customer value with the utmost importance. Further, literature has not attempted measure the effect of combining pricing methods. This thesis illustrates that the majority of the companies practise more than one pricing method which is a valuable finding in the area of pricing.

With regard to the obstacles, this study demonstrates that literature evinces a reliable framework of issues regarding VBP. Most of them were found to be prevailing at the examined companies thereby confirming the findings in literature.

Furthermore, a practical contribution is presented due to the fact that the determination of customer value is the most challenging part in praxis, which was also confirmed to prevail in reality. The research showed that co-creation is employed by SMEs and supports them to create designated values. Further, it revealed that SMEs apply VBP in the area around the German-Dutch border in combination with co-creation. These findings are novel and illustrate that VBP is known by the interviewed sample of companies and even performed to a certain degree by the majority. In addition, this thesis presents the practises of SMEs with regard to pricing and

the involvement of customers into the identification process of value in the area around the German-Dutch border around Enschede.

6.4 Further research and limitations

Due to the amount of 17 interviews with German and Dutch SMEs, this thesis provides a reliable overview of the use of VBP in connection with co-creation. The interviews were conducted semi-structured which allowed going deeper into specific topics where the interviewer suspected some more relevant information.

However, the research revealed additional topics, which are worth investigating. The SMEs analysed were drawn from different industries. An interesting research topic would be to put the focus on certain markets, as VBP is particularly useful in niche markets. The dataset contains companies from the steel industry, thermoplastic processing, printing companies and textiles. These markets of the sample are quite diverse, making it favourable to divide and focus on certain industries, e.g. plastic processing or steel processors, to investigate if similar results can be produced. The special focus on the nature of products might reveal new insights. It may be a significant difference if the companies produce finished products or semi-finished products, if the products are fast-moving-consumer-goods or just industrial goods.

Another interesting topic to be investigated would be the direct comparison of SMEs to large companies with regard to VBP and the involvement of the customer. There might be differences in how the size of the firms affects the way of how VBP is practised and whether VBP provides benefits. As VBP was found in most cases to be performed in combination with other pricing strategies, it could be interesting to develop a new model, which accounts for a combination of pricing methods.

Nevertheless, this study has its limitation, since it was only possible to interview firms which were willing to participate in this study. In larger sample of firms could have been interviewed as the researchers approached quite a large amount of companies. Pricing is a sensitive topic for companies, and when approaching companies, most companies were reluctant to participate in the fear of releasing highly confidential information. Regarding the participating companies it means that not the entire details were disclosed in the interviews as the interviewees were aware of the sensitivity of the information, since an appropriate pricing is essential to generate profit. As some of the interviews were conducted with sales personnel, they may not have an in-depth knowledge on the internal pricing process is composed and how it is calculated in detail. Due to different limitations of knowledge on pricing strategies of the employees interviewed it

difficult to provide a clear overview of how the performed pricing strategies differ from each other.

6.5 Conclusion

This thesis illustrates that VBP and the customer value gains increasingly interest and importance among the methods of pricing. However, as customer value is difficult to measure, co-creation provides a reliable solution for companies to directly involve the customer and reduces the requirement for complicated market analysis. The combination of both, VBP and co-creation is a frequent occurring phenomenon and quite useful for SMEs. Nevertheless, the overall costs are often still included in the pricing process indicating existing insecurities concerning the customer value and how to use it.

The key obstacles for SMEs regarding VBP and co-creation are found to be related with the determination of customer value. A lot of obstacles have been connected to the pricing process in general, illustrating that VBP is not as implemented to the required degree of diligence in order to improve the effectiveness of pricing at SMEs.

7 References

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8 Appendices

8.1 Appendix A: Interview questions

Some general information right before the interview

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 4 attendees. Spanning from 4 researchers, the attendees that focus on the related research subjects are: Helena Baniou, Steven Woznicki, Nathan Slok and Burak Kiliç.

General definition of value-based pricing:

This research paper will utilise 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. What is the most important measure of success for 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 customer's 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?
26. What kind of obstacles did your company face when implementing pricing strategy? (Emphasis on company). In what way did you overcome them?
27. What kind of obstacles did you personally face when implementing pricing strategy (Emphasis on personal obstacles)
28. How would you describe the alignment between upper management and staff regarding your pricing strategy?
29. What external obstacles have you faced that had an impact on the pricing strategy?
30. What is your personal opinion about the way you currently determine prices?