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Professional MBA
Entrepreneurship & Innovation

INTERNATIONAL PRICING

a Model to Efficiently Arrive at a Regional Price Differentiation Strategy

A Master's Thesis submitted for the degree of
"Master of Business Administration"

supervised by
Prof. Dr. Christian Lüthje

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Affidavit

I, **DOMINIK N. HOHL**, hereby declare

1. that I am the sole author of the present Master's Thesis, "INTERNATIONAL PRICING", 51 pages, bound, and that I have not used any source or tool other than those referenced or any other illicit aid or tool, and
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Signature

Für Marion, Werner und Florentina

PREFACE

The present work emerged from my working practice: how do you price products for many different markets without sufficient available data and with dedicating minimum resources to obtain the additional data required to come to a pricing decision. This work turned out to be an interesting journey into economics theory about customer value and other aspects more. The result is the proposal for a Price-Corridor-Model requiring minimum data to deliver indications on target market prices.

The process in creating the present work was not easy and I wish to thank my father because without his support at work I could not have finished this thesis in time as well as working. Thank you! Thank you to my mother for taking care of my many daily tasks during the production time and my friends Katia and Christoph for giving me their critique on concept and structure – I am certain it helped make this a better paper. I also wish to thank Salma for giving me the motivation to push through!

Finally I wish to thank my supervisor Prof. Dr. C. Lüthje for his constructive critique and advice on the present thesis.

In the present work whenever a reference is made to “he/his” it shall be equaling either gender.

ABSTRACT

Today it is common for Small Medium Enterprises (SME) to be active in the global markets. In the EU 81% of all exporting enterprises are SME. Often these companies are specialized and offer solutions to a limited but profitable market. The international trade comes with the need to price products for customers all operating under different conditions making even a globally used product subject to price differentiation.

How can SMEs selling specific niche products in several regional markets reach appropriate pricing strategies? SME often do not have the resources to carry out extensive market research. The present thesis has the objective to develop a model which allows SMEs to efficiently arrive at a regional price strategy.

Price driving conditions are investigated and segmented into 4 sections, customer value, market structure, regulatory factors and cost structure. These factors are evaluated and variables derived to form a Price-Corridor Model. The model gives an indication on a price for a product in a target market based on minimum- and maximum price. Optional price sensitivity by customer segment can be evaluated.

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1. INTRODUCTION

Pricing a product or service is one of the – if not the – most important factors of any offering. Looking at the famous Four P's; Product, Promotion, Place and Price (McCarthy, Jerome E. 1960) in the marketing mix price is the only component that creates revenue – the others require spending i.e. advertisement, rent, research and development. (Breidert, 2015, p. 9)

Per definition price is the quantity of payment or compensation given by one party to another in return for the benefit of goods or services (Kotler and Armstrong, 2011, p. 290). But why do we price goods or services in the first place? Pricing is a constant requirement to allow us to exchange goods or services – it is the basis for all trade. In all cultures and places pricing takes and took place. (Menger et al., 2007, p. 175)

> *"The exchange relation is the fundamental social relation. Inter- personal exchange of goods and services weaves the bond which unites men into society."*
>
> (Mises, 1998, p. 195)

Trade can take place anywhere and requires only two parties willing to exchange and coming to an agreement at which ratio to do so. Here the price is a direct result of the negotiation of the trade and potentially unique to that very trade. (Menger et al., 2007, pp. 191 – 192).

Together with a standardized medium of exchange – i.e. money – pricing allows to ask for a set compensation for goods or service without requiring a negotiation process. The set price affects the buying behavior of the customers as not all are willing to pay the same, pre-set price. In order to account for the different customers companies tend to differentiate their prices in order to optimize their sales and profits. The `right prices´ rather than a single price are therefore key to a profitable business – mentioning that other factors play their role.

Belz found that the price for the same product in the business-to-business (B2B) market can vary as much as 300% between the lowest price in Asia and the highest in Europe (Belz and Mühlmeyer, 2000, p. 92).

The OECD reports on the pharmaceutical industry's global pricing policies that the ex-factory prices vary significantly between countries. Interestingly the price differences are not consistent in its direction relative to single- vs multi-source prescription drugs, generics and over the counter (OTC) products – i.e. Danzon and Furukawa found in their *2005 ex-factory prices, all out- patient drugs available in the United States and each comparator country* survey that prices for single source/ multi source drugs cost in Mexico 90%/ 87% compared to US but generic drugs cost in Mexico 216% and OTC even 218% compared to the US market (OECD Publishing, 2008, pp. 78 – 82).

All these figures impressively demonstrate that for the same product the price varies even in multiples and that the direction of price differences is bi-polar not only between countries but even within industries.

Pricing is directly linked to revenue and market volume it is at the same time heterogeneous not only in different customer groups but very much so between markets. Companies use differentiated pricing to adapt their prices to customers and markets in order to optimize their profits (Belz and Mühlmeyer, 2000, pp. 17 – 18).

1.1. PROBLEM DISCRIPTION - THE FOCUS ON SMES

In today's globalized world small and medium size enterprises (SMEs) are more and more engaging in markets other than their home market. In the EU SMEs account for 81% (!) of all exporting enterprises (Cernat, et al., 2014).

Often SMEs are market or even global market leaders in specific products or a specific application. Yet this does not necessarily mean that it is easy to adapt to the broad field of price levels that inevitable are to be addressed with global distribution. The niche SMEs are more active in offering a competitive advantage of perhaps few strong competitors however at the same time the total market potential is limited. This implies that SMEs that look to fine-tune prices need to find ways to do so with a restricted budget. Consumer products often have extensive market research carried out to capture as much value as possible. For SMEs this strategy may not be economically viable or simply the resources to perform such research are not yet at hand. SMEs are faced with this tragic situation repeatedly in the need of means to find the 'right' price in the 'new' place.

Therefore the problem to be solved herein is how SMEs selling specific niche products in several regional markets can reach appropriate pricing strategies. The present thesis investigates how firms can efficiently arrive at a regional price differentiation. By this, the present work contributes to reach better returns compared to a strategy charging a uniform price in all countries.

As exemplary company we look at BeeVital GmbH. BeeVital is a small Austrian enterprise internationally active in the sector of bees' health. This is a very narrow field of business however due to the global occurrence – minus the Polar Regions – of bees the market is potentially global and indeed BeeVital makes over 95% of its sales with export. Bees – like humans and animals – suffer from diseases caused by microbes and parasites. The parasite Varroa destructor causes most harm to bees worldwide. It is a mite which feeds on bees blood and reproduces within the bee brood. By now it is pandemic - spared only from Australia. BeeVital offers the product HiveClean to treat and control the mite infestation based on the principle that the company's products must not contaminate the honey which the bees produce in the hive in any way. It must be functionally excellent, safe for humans, bees and the environment and also easy to use.

BeeVital is already present in several European markets and during the last years has also entered North African and recently the USA.

The company follows a cost-based-price strategy and maintains the same price regime in all its current markets. Nevertheless the distribution partners have concerns about the price e.g. price concerns are reflected in the sales development of Chile – while other partners like in the UK sold at prices we were surprised that the market accepted them.

BeeVital realized that its pricing strategy is sub-optimal, expected sales in some markets were not achieved and in others the margin could have been higher.

1.2. OBJECTIVE OF THE MASTER THESIS

BeeVital acknowledged that their pricing strategy is not optimal – see previous chapter. More precisely its single price regime did not reflect the different price-value relations in the different regions where the products are sold. Yet at first sight the single price regime did seem a good strategy: distribution partners have the same basis for their price structure and hence little quarrels – i.e. re-imports due to significant price differences in neighboring countries. Another benefit is that prices were immediately available for a new market. But perhaps more importantly BeeVital offers a solution to an identical problem – the bee's mite – in the different countries.

In the end these arguments did not hold true. BeeVital discovered re-imports from Belgium to Portugal and Spain, UK to Greece. The price had to be negotiated more often as bigger distributors would demand price reductions for larger sales volumes. However, the fact that BeeVital's product solves the same problem in all active markets did not mean that all customers had the willingness to pay the same price.

This situation brought the company to the decision to adopt a regional pricing strategy. Only how would prices be adjusted? In order to price accordingly the market specific value proposition of the product information on the market and customers is required. Due to the fact BeeVital is globally active in a very narrow market segment BeeVital does not possess data for all its active and future markets. Carrying out brought market research was not an option either due to the company and market sizes.

These circumstances led to the objective of this present master thesis:

- Prices should be established by region/market.
- Prices should be optimized to reflect the customer value the products deliver.
- Assessment of market structure and competitors.
- Inevitable macroeconomic regulations are to be respected.
- The regional value proposition of products is to be evaluated by least effort.

This means the estimation of the value proposition of products under certain regional conditions has to be carried out without a major market research and rather by identifying key parameters. These parameters will be applicable to all/most markets and the required data shall be easily available ideally via the Internet. Based on these parameters a value proposition and a price indication will be generated. The evaluation of the customer's willingness-to-pay – respectively ability-to-pay – shall act as a control mechanism and assure that the pricing favors market share over the highest possible margin.

1.3. CONCEPT OF THE THESIS

In order to develop pricing strategies that help SMEs adjust their pricing to regional market differences, the present master thesis is structured in five blocks. These are grouped into an investigation part and a proposition part.

The Investigation part - chapter 2: *Customer Value, Customers and Markets* covers the blocks

1) Customer Value
2) Market Structure and Competition
3) Monetary and Regulatory Factors

4) Production and Cost Structure

Where Customer Value and Market Structure belong to the value capturing side - and where Production and Regulatory factors contribute to the costs and expenses, see diagram 1-1.

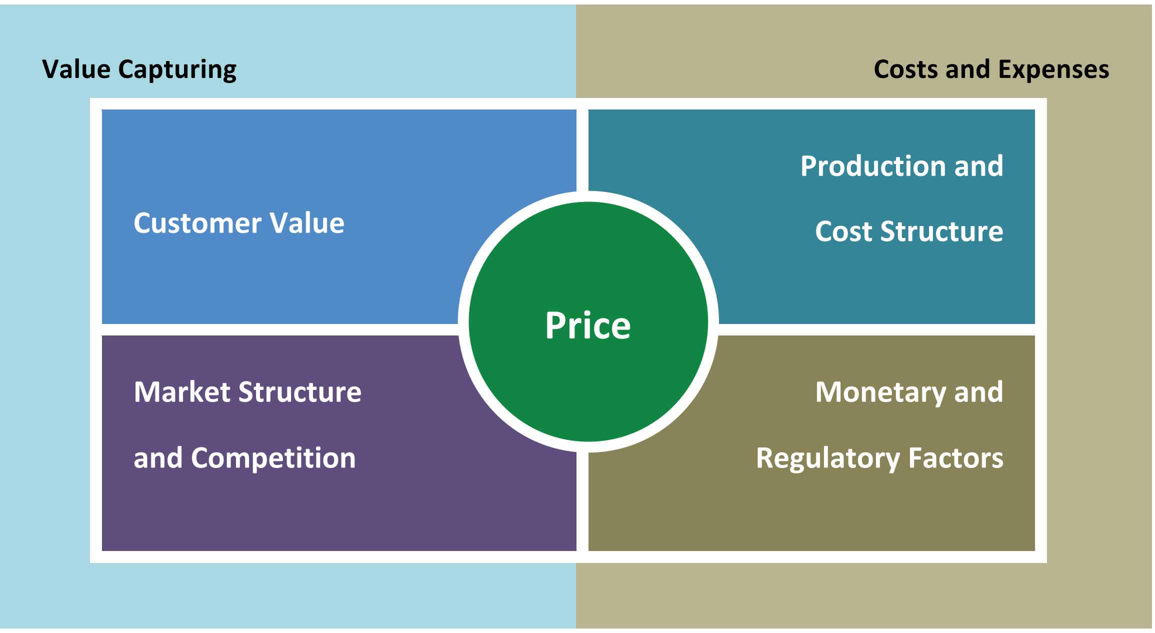

Value Capturing
Costs and Expenses
Customer Value
Production and Cost Structure
Price
Market Structure and Competition
Monetary and Regulatory Factors

Figure 1-1 : Value and Cost side of Price

5) Model for a pricing proposition

This section builds on the findings from the investigation part and by using selected factors identified in the four previous blocks proposes a model for the pricing adaption to target market conditions for SMEs active internationally. This block relates especially to Market Structure and Competition.

2. CUSTOMER VALUE, CUSTOMERS AND MARKETS

Prior to the development of a mechanism to adjust prices according to markets' differences we will have to understand what we need to adjust to. The objective of this chapter is therefore to find out what customer value is and identify influencing factors that create value for the customers. In the next step we will look into how to measure value in order to translate it into a price and capture it monetarily. This leads us to have a look into the market structure and competition as well as regulatory factors to see their influence in the price structure.

At the same time this chapter is a preparation to carry out the objective of this thesis – namely to optimize the international pricing strategy for SMEs – this chapter shall define and discuss the theory scope of the subject matter value including the concepts of value respectively customer value, value-chain, cost-based and value-based pricing, willingness-to-pay.

2.1. VALUE AND PRICE – DEFINITIONS

Goods and services have value. This value becomes accessible in a moment of exchange. Exchange is the basis of all value capturing – or the potential hereto. (Mises, 1998, p. 195)

The initiative for exchange to happen is according to Mises human action – let us call it a stimulus.

> *"Action is an attempt to substitute a more satisfactory state of affairs for a less satisfactory one. We call such a willfully induced alteration an exchange."*
>
> (Mises, 1998, p. 97)

The stimulus triggers an exchange of a good with a value to it to be compensated by `paying the price´.

In this chapter we will discuss the different concepts of this process on the way to developing the right price for certain markets. We will see that customer value is related to the needs of a customer. It is further relative to how the customer perceives his need and can have more dimensions than only serving a specific need.

Customer Value can be understood as satisfaction to the needs, wants and demands of the clients (Kotler and Armstrong, 2011, pp. 5 – 6) or in a more technical term “a cognitive tradeoff between perceived quality and sacrifice” (Dodds et al. 1991, p. 316) here sacrifice is a synonym for the price.

Customer Value is relational to our needs what makes it relative to them - meaning customer value comes into existence for a specific good when we need this specific good. How important the need is to a buyer translates into how valuable he perceives the solution (Menger et al., 2007, p. 120). This means customer value is a perceived value by the customer for a product and therefore the customer defines the value. Consequently like needs are personal to a customer so is customer value personal to the individual customer too (Woodruff 1997).

Customer value progressed to a more holistic perspective after Holbrook and Hirschman (1982) observed a neglect of the hedonic component of value in research to that time. This led to the concept of *utilitarian and hedonic value* to explain consumption and the related customer value. The concept acknowledges two parallel dimensions of customer value as they serve different intentions:

- Utilitarian value addresses the functional, instrumental, task-related, rational, functional, cognitive, and a means to an end value

This is similar to the one-dimensional customer value approaches.

- Hedonic value is affective, non-instrumental and experiential

It reflects the entertainment and emotional worth of shopping (Sanchez-Fernandez and Iniesta-Bonillo, 2007, after Babin et al., 1994). An example is buying cloths where the utilitarian value of a summer dress – i.e. more comfortable and fresh on a hot day than pants and blouse – is only one and perhaps the secondary reason for the purchase. The act of shopping – the trying-on and the imagination of wearing the dress on holidays – reflects the hedonic value to the dress. In this example the hedonic value to the dress may actually be the relevant factor for the total customer value and therefore define the price.

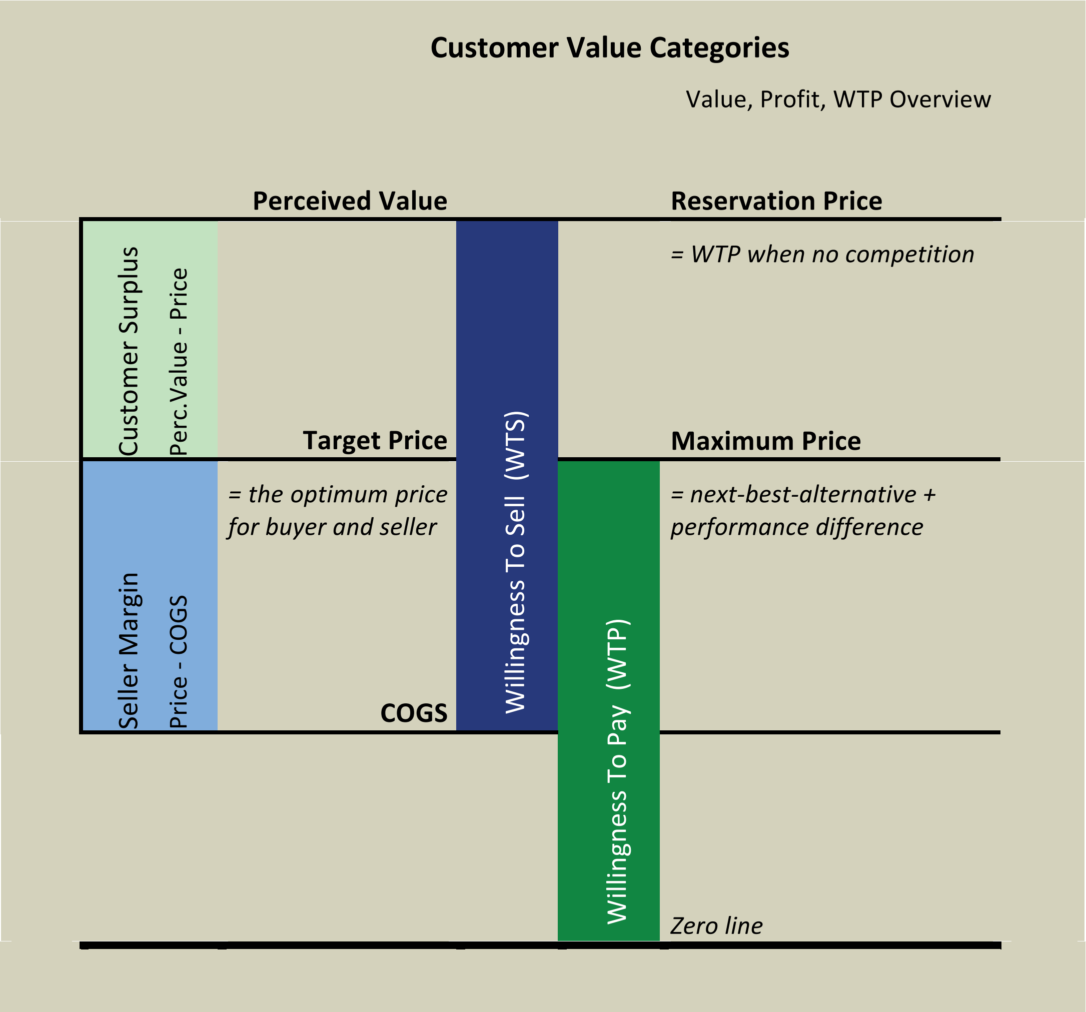

Customer Value Categories
Value, Profit, WTP Overview
Perceived Value
Reservation Price
= WTP when no competition
Customer Surplus
Perc.Value - Price
Target Price
Maximum Price
= the optimum price for buyer and seller
= next-best-alternative + performance difference
Seller Margin
Price - COGS
COGS
Willingness To Sell (WTS)
Willingness To Pay (WTP)
Zero line

Figure 2-1 : Value, Profit, WTP Overview

Holbrook (1999, p. 5) defined customer value as “an interactive relativistic preference experience”. What seems little precise is the idea of a multi-dimensional interrelated nature of customer value. He determines efficiency, excellence, status, esteem, play, aesthetics, ethics and spirituality as potential variables for Customer Value which can be relevant also all of them together for the experience of customer value.

In the present work we will refer to customer value mainly as one-dimensional. One-dimensional means in this context that only the dimension of use/functionality of the product is measured. The reason lies within the fact that we are looking at a business-to-business (B2B) environment. B2B involves mainly sales of products within the value generation process.

There are different approaches on how to assess value and how to translate it into a price. The way the value of a good or service is understood also has an influence on how and where the value is measured.

2.1.1. INTRINSIC VALUE – COMMODITY VALUE AND COST-BASED PRICING

The concept of intrinsic value explains why we attribute value to objects even if we do not necessarily make use of them. Intrinsic value is based on the idea that any good has a utility and therefore a value. The focus is on the good itself - the value is intrinsic to the good. A representative of the concept of intrinsic value was Léon Walras’. His idea of utility of goods reflects this concept by arguing that anything has a value if it can serve a purpose or allow the fulfillment of any need (Walras, 1874, p. 23).

Today we can apply the model of intrinsic value best in commodity value. Commodity value is the intrinsic value of goods however limited to the actual definite value – like the metal value of a coin – or the optimal use of a good to create most possible value – i.e. the yield per acre of land can be 100 for wheat and 200 for corn than the commodity value of the land is 200. Commodity value does not consider any `intangible´ value like the beauty of the coin or the location of the land.

As intrinsic value lies within the good itself it facilitates a cost-based pricing strategy. Cost based pricing establishes a price by determining the variable costs - the cost of goods sold (COGS) – and by adding a reasonable margin which contributes to the fixed costs and creates a profit. The price of the good is established from the manufacturer’s view of its value. (Kotler and Armstrong, 2011, p. 295)

Cost-based pricing is the strategy our example SME has applied so far. As identified this does not take into account the different market – or customers – situation. It is therefore a strategy that leaves out profit opportunities in order to offer customer value to the broad of the market. (Silk, 2006, p. 151). In this concept the actual customer value offered is not necessarily known and it is indeed a practical approach when dealing with heterogeneous or unknown customer value conditions. (Breidert, 2015, p. 10).

2.1.2. OBJECTIVE VALUE – COST-STRUCTURE PRICING AND MAXIMUM PRICE

A product delivers to the customer a benefit. This reflects in the value to the customer - the objective value or true value (Silk) or economic value (Holden and Nagle) of the product. In contrast to the intrinsic value, objective value is the tangible value the product offers to the customers – not the manufacturer. (Silk, 2006, p. 152)

The aim is to identify the maximum price for a good, rather than have a cost-based margin. The maximum price is not static and depends on the situation. However it is measurable and can be determined i.e. through cost structure studies where

Objective Value = Maximum Price = Cost of Next-Best alternative + performance difference

The critical point with the objective value is that the customer receives performance/productivity and has a reference i.e. the next best competing product or simply an increase in production yield. The performance is the differentiating factor to the best alternative – and this performance has a monetary value to it. The best alternative, the reference, plus the differentiation in performance together make the economic value of the product and so define the Maximum Price (Holden and Nagle, 2002, p. 75).

The assessment of the reference, the next best alternative, is relatively easy as it has a price. To assess the differentiation is more difficult. The differentiating factors between the seller’s product and the next best alternative need to be identified and evaluated. The differentiation in value has to be estimated for each factor – positive or negative factors. This can be functional differences or running costs differences – i.e. two projection beamers have basically the same technical functionalities however one has a lamp lifetime of 4000h and the other 6000h. A spare lamp costs approx. $300 this means the performance difference is worth $150. (Breidert, 2015, p. 27)

2.1.3. PERCEIVED VALUE - MAXIMUM PRICE AND WILLINGNESS TO PAY

Perceived value – in contrast to intrinsic value or objective value – is literally what the customer perceives as value: the value of goods and the utility therein are subjective. The concept of Perceived Value acknowledges that the market and customers are heterogeneous. The focus is on the situation and the use for the customer. (Silk, 2006, p. 152) This also means that without a need or desire for a product by the customer there is no value in it whatsoever.

> *"The value of goods arises from their relationship to our needs, and is not inherent in the goods themselves. With changes in this relationship, value arises and disappears."*
>
> (Menger et al., 2007, p. 120)

Value becomes subject to the context and in consequence relative to a situation, to time. This is in combination with the availability of the product – it must be limited in order for a product to have a perceived value. In other words scarcity becomes a condition for the existence of value: If a good or resource is available in excess it has no value as the related need can be satisfied in its total – i.e. the excessive water of a village's well. If this condition changes and the good is only limited available to satisfy the needs – i.e. the well provides only limited water due to a draught – than the unsatisfied need will create awareness and the good becomes valuable. Again this means that time becomes a factor to value – depending on the availability or lack/limitation of a good value can be non-existent or existent respectively. (Menger et al., 2007, p. 115)

> *"Value is thus the importance that individual goods or quantities of goods attain for us because we are conscious of being dependent on command of them for the satisfaction of our needs."*
>
> (Menger et al., 2007, p. 115)

Menger took into consideration that once the value of a good is perceived it may remain in place even if the limitation is resolved and the dependency on the availability revoked – i.e. after the draught the well provides enough water again but the villagers remain conscious that the water is precious as they learned limitation or absence is fatal. Menger describes this as the phenomenon of *imaginary value* (it is equal to the term *perceived value* herein) and argues that the knowledge about the value provokes this error in human perception as the existence of the economic value depends on the relationship of availability and need. But is this really an error of human perception? A definition of value is required.

Menger delivers us this definition of value:

> *"It is a judgment economizing men make about the importance of the goods at their disposal for the maintenance of their lives and well-being."*
>
> (Menger et al., 2007, p. 121)

When we consider this definition it actually does not inhibit the idea of perceived values as a concept: it is of great importance that we humans value goods also in moments of excess availability for two reasons (1) a situation in which a good is only limited available might occur repeatedly for whatever reason – this cannot be reliably predicted and (2) perhaps another individual or area has a limitation while oneself has excess – this allows for trade and the possibility to exchange resources to better satisfy one's diverse needs. This is based on the assumption that no individual has excess availability of every good it needs or desires.

In our example this means that the villagers – aware of the value of water – might build a reservoir or a pond, so they can get through the next draught without a shortage in water. They might even sell some of the reserve water to their neighbors as they have excess and their neighbors need water in a draught.

Perceived value is absolutely focused on customer value though there is a significant difference to the mentioned objective value – it is subjective. Therefore it is necessary yet not even enough to understand what a product is worth to a specific customer, however it is more important to understand how much the customer is willing to pay – what is the maximum price the customer is willing to accept.

> *"The willingness-to-pay is the highest price an individual is willing to accept to pay for some good or service. "*
>
> (Breidert, 2015, p. 30)

The willingness-to-pay (WTP) of a customer depends on the perceived value and the maximum price. The maximum price can be lower than the perceived value or reservation price i.e. when a similar competitive product is sold for less than the reservation price. In this case the customer will be willing to pay only the maximum price which reflects the price of the competitor's product.

In the case that a customer has no alternative than to buy a specific product i.e. a cold beer on a mountain peak at the only kiosk than the WTP equals the customer's perceived value of the cold beer (Breidert, 2015, pp. 28-29).

WTP is unfortunately even more complex: not only does the market and competitors field influence the maximum price but also price sensitivity of the individual customer. The latest technology tennis racket is likely to have a higher perceived value for the professional player than for the amateur. The same customer is likely to be less sensitive about 10% price difference between toothpastes and more likely to be sensitive about 10% price difference between cars he or she plans to buy (Silk, 2006, p. 158). Customers can also be sensitive about the absolute amount a product costs them momentarily. A successful example is Unilever which could build markets among the world's poorest consumers with its high value products. Already more than 20 years ago Unilever realized in India that its products were out of reach to millions of people. By introducing smaller packaged products with a significantly lower absolute price Unilever could make their products accessible to consumers living on as little as $2 a day (Kotler and Armstrong, 2011, p. 325).

For the selling part it is not easy to correctly assess the actual WTP of customers as it is heterogeneous among them and not consistent over time i.e. ice cream will sell much better in summer. Also can different customer groups look for a different utility in a product and hence a customer group targeted pricing may be beneficial. (Kotler and Armstrong, 2011, p. 292)

BeeVital has not yet employed a corresponding strategy and we will look into methods of how to measure perceived value and optimize the capturing of it. The challenge will be to incorporate the heterogeneity of the customers as well as the regional differences the example SME faces.

We conclude that products' value can be judged form the products', the sellers' or the buyers' perspective. At the end the customer's perspective prevails as their need for a good defines the customer value of the same. We understood this value is perceived by the individual with the need to be satisfied and the desire to obtain satisfaction will trigger the individual to take action and attempt to alter its situation. It ends in the exchange between individuals or parties all attempting to minimize their costs (or optimize their benefits) via trade. The availability of a product affects the price as less availability leads to a higher willingness to pay. Finally the next-best-alternative has a direct impact on the willingness to pay as customers will relate to it as price reference.

2.1.4. METHODS FOR CUSTOMER VALUE ESTIMATION

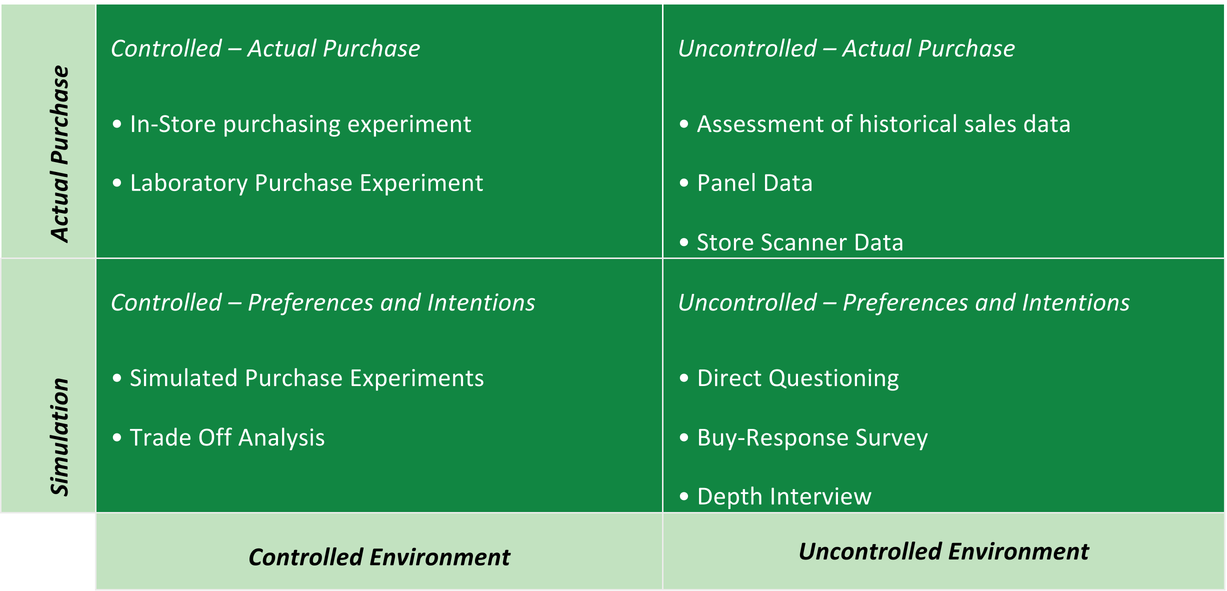
Measurement of customer value and willingness to pay requires at the beginning an understanding for the customer and the product relation. Estimations of price sensitivity cannot replace knowledge on the buyer (Nagle and Holden, 2002, pp. 365 – 366): There are no two identical customers which means that from a theoretical point of view the perceived customer value is somewhat different for each customer. In practice this means that the potential customers are heterogeneous and at the beginning stands the understanding of the customer groups (Kotler and Armstrong, 2011, p. 8).

Although no absolute Customer Value can be determined there are techniques for estimating price sensibility and WTP in order to find an approximation to the customers and their CV. For each product the applied technique should be chosen not by finding a cheap method but an appropriate means of estimation – prior to the beginning of investigation. (Nagle and Holden, 2002, p. 332).

MODELS

The proposed models in literature are multifold. An extensive overview can therefore not be provided.

Nagle and Holden capture in a well comprehensive model a two dimensional approach to estimate price sensitivity (1) condition of measurement and (2) the variable to be measured. The condition of measurement is defined as controlled or uncontrolled study and the variable as actual purchase or preferences and intentions – this leads to a matrix of four described fields of measuring price sensitivity:



Actual Purchase	*Controlled – Actual Purchase* • In-Store purchasing experiment • Laboratory Purchase Experiment	*Uncontrolled – Actual Purchase* • Assessment of historical sales data • Panel Data • Store Scanner Data
Simulation	*Controlled – Preferences and Intentions* • Simulated Purchase Experiments • Trade Off Analysis	*Uncontrolled – Preferences and Intentions* • Direct Questioning • Buy-Response Survey • Depth Interview
	Controlled Environment	***Uncontrolled Environment***

Figure 2-2 : Customer Value Estimation Model

Uncontrolled data - i.e. retain scanner data - is readily available once a product is on the market however the researcher has no influence on the conditions under which the buyer makes a purchase. When controlled measurements are taken researchers can manipulate variables – i.e. price – and observe what influence they have on the consumer behavior. In actual purchase situations researchers can measure actual buying behavior however this is more costly than simulations. Also only simulations allow for research on products prior to market launch.

UNCONTROLLED – ACTUAL PURCHASE

This includes all historical sales data from different sources.

- Assessment of historical sales data

A company normally collects sales data. It is ready available and can give a good impression on customers' behavior if the company sells directly to consumers. This is partly as the price is under control of the company. In case the distribution has intermediaries the data may reflect wholesalers stocking patterns only indirectly and little precise linked to consumer demand. In this case actual retail data can be acquired i.e. from Nielsen. However this data is often only available in aggregated levels and therefore is not as effective for understanding price sensitivity. For certain industries like Airlines working with real-time historic data can help to understand current price sensitivity and optimize prices instantaneously (Nagle and Holden, 2002, p. 334).

- Panel Data

Marketing research companies collect purchase data for thousands of households on a daily basis collected weekly. This data provides insight into actual purchases of own and competitors' products and lets the analyst draw conclusions on behavior and price sensitivity of different customers including segmenting them. The pitfall on panel data is the fact that the participants may not adequately reflect the distribution of consumer types of the while market. A very useful tool to collect panel data is loyalty programs where consumers collect points for bonuses with every purchase while the store records the purchase history. This is an effective model to measure price sensitivity and consumer behavior on existing products (Nagle and Holden, 2002, p. 334).

- Store Scanner Data

Readily available at almost any store, the real-time record of the sales at a store location allows drawing conclusions on geographic preferences – i.e. the fraction of brand vs. white-label products sold. However this data lacks any consumer specifics because it is generated with the check-out without additional cost. This data is also valuable from an operations point of view as it shows in real time stock and demand changes (Nagle and Holden, 2002, p. 336).

CONTROLLED – ACTUAL PURCHASE

This category encompasses estimates of price sensitivity from experiments where customers don't know of their participation or from laboratory experiments with price sensitivity.

- In-Store purchasing experiment

In this experiment, actual purchase data is collected without the knowledge of the participants – i.e. researchers change prices over time and observe the change in purchase behavior to assess price sensitivity. The pitfall on this type of research – it requires several store locations and it can takes time in order to collect sufficient data – it is expensive (Nagle and Holden, 2002, p. 339).

Today this logic is easily applicable in online-shops where the costs are minimal and the data collection can be automated and so can the price changing algorithm.

- Laboratory Purchase Experiment

These experiments are intended to duplicate in store experiments without the high costs. Further beyond price, other parameters such as competitors' prices, shelf location and availability can also be controlled. Participants can be intercepted on the street and the distribution of the demographics – i.e. sex, age, family size, income – can be easily adjusted to reflect the desired target market. Also it is possible to change prices constantly which allows a rather fast assessment of price sensitivity (Nagle and Holden, 2002, pp. 341-342).

UNCONTROLLED – PREFERENCES AND INTENTIONS

To estimate price sensitivity the survey of purchase intentions is the most common technique for several reasons: (1) to carry out a survey is less expensive than experimentally collecting purchase data (2) surveys of intention can be applied on goods where purchase price changes are not desired – i.e. cars (3) Survey data can be collected prior to development of a good ! (4) The data collection can be fast.

A downside is that answers are not very reliable especially regarding price questions.

- Direct Questioning

Should not be used as interviewees may state prices to low or to high compared to a real purchasing decision. Some interviewees may want to bargain, others don't want to seem cheap (Nagle and Holden, 2002, p. 344).

- Buy-Response Survey

Similar to direct questioning surveys but the results are plausible. The interviewee is asked if he would buy a good at a preselected price. It better reflects an actual purchase situation and generates purchase probability curve (Nagle and Holden, 2002, p. 345).

- Depth Interview

Rather than asking about value directly the researchers ask consumers about how they use products and how they may value different features of products in order to understand the value attribution. In B2B environments this technique aims to understand how businesses gain revenues or reduce costs by using a product. The information gathered from the interviews allows us to make assumptions about price sensitivity (Nagle and Holden, 2002, p. 345).

CONTROLLED – PREFERENCES AND INTENTIONS

To control bias and external factors in the measuring process researchers may want to control the environment in which respondents are presented a purchase situation.

- Simulated Purchase Experiments

These experiments are commonly used to test for pricing of new product concepts. Consumers are asked to think about a purchase situation and are presented with different products all possible purchases in the imagined situation. The interviewee is asked to decide what product he would choose. As the interviewee has no knowledge about the intentions the researcher is interested in he cannot alter his decision to please or not the research. The products cannot be kept yet an indication of price sensitivity for the new concept should be accomplished (Nagle and Holden, 2002, p. 350).

- Trade Off Analysis

Trade-off or conjoint analysis is an experimental technique popular for measuring price sensitivity and sensitivity to products attribute. The strength of this analysis is that a product's price can be divided into values related to the different attributes consumers seek in a product. This type of analysis can therefore help to understand the attributes that contribute most to willingness to pay. Furthermore this technique can be used to identify the attributes consumers want and are willing to pay for and develop products accordingly. Trade off analysis work via questioning consumers' preferences rather than directly asking for their purchase intentions (Nagle and Holden, 2002, p. 351).

USE OF TECHNIQUES

Each of the techniques has an area where it is best applied. One should not choose the easiest or cheapest but rather on the applicability of the technique. Historic data for products already on the market is available and should be considered. Uncontrolled and experimentally controlled actual purchase observations are probably most suitable in this case i.e. could marketers perform an in-shop experiment with varying the price to find WTP limits of clients.

For products that are in development or to be priced for the first time historic data simply is not available which leaves survey techniques to assess WTP. The advantage of surveys is that in contrast to actual purchase, negative buying decisions are also recorded. However the experimental nature and the knowledge of the probands of their participation in a test may lead to biased results (Nagle and Holden, 2002, pp. 332); (Breidert, 2015, p. 57).

Sanchez-Fernandez and Iniesta-Bonillo grouped the models for perceived value assessment into one-dimensional and multi-dimensional highlighting that one-dimensional methods work via the concept that in order to obtaining value a resource has to be given up – and by analyzing the probands willingness-to-pay by recording and comparing these two values on one axis.

Multi-dimensional methods acknowledge that more dimensions influence customer value. The concept of *Utilitarian and Hedonic Value* perhaps demonstrates best that dimensions other than the value for resource play a role in customers purchase decisions and willingness to pay. The pleasure related to the process of purchase – shopping – is acknowledged value to the customer (Sanchez-Fernandez and Iniesta-Bonillo, 2007, p. 436)

Holbrook (1999) has introduced a typology of customer value in multiple-dimensions where the customer experience originates of any or all of them and by this goes well beyond the classical understanding of “one-dimensional” customer value delivering only monetary customer surplus (Leroi-Werelds et al., 2013, pp. 431 – 432). Holbrook’s typology consists of the following eight interrelated, “consumption-orientated” value dimensions:

- efficiency
- excellence
- status
- esteem
- play
- aesthetics
- ethics
- spirituality

(Holbrook, 1999)

The Holbrook typology involves the co-existence of different types of customer value, meaning that a consumption experience can entail many—or even all—of the value types identified in the typology.

Methods for customer value estimation depend on whether historic data is available and require an understanding of the product and customers. Than a suitable technique is used to estimate the customer's expected return, buying intentions or even willingness to pay can be selected.

In the literature exist different models for laboratory - and field experiments as well as customer surveys and analysis. To note that complexity increases by increase of dimensions of customer value. This circumstance requires techniques which are capable of capturing not only the tradeoff in value for sacrifice but also the quantifying customer surplus but as well as capturing the emotional value(s) in the purchase as such.

Critically important is to know and understand the customer as the experiment or survey can only capture what it is intended for.

For the target of this work the interested lays in the price differences on the markets level. We will seek to understand the different types of customers before looking at the market differences themselves.

2.1.5. CONCEPTS OTHER THAN ESTIMATION TECHNIQUES

After looking at techniques to assess the customer value via WTP or price sensitivity it is worth mentioning that perhaps the best method to find out what a product is worth to a customer may not necessarily be a study or survey.

Kaschek proposes the concept of *True Value Selling* – working with the customer in a partnership like relationship in order to best understand how to help create customer value and make the customer understand what he obtains from purchasing the product – Mutual Benefit Creation System. He recommends that one should perform inter alia an \`external analysis´ consisting of the following sections

- **a.** the market analysis
- **b.** the environmental analysis
- **c.** the analysis of the competitive structure
- **d.** the analysis of competitors and
- **e.** the analysis of the company's key account customers

(Kaschek, 2014, pp. 97 – 98)

This will help to understand how it is best to serve the customer as well as understand potential sales and prices.

Nagle and Holden see True Value customers (value buying customers) as the most attractive group of customers but warn that these are not likely to become relationship customers as they are constantly reassessing the value they buy. In contrast to Kaschek a much more competitive environment is pictured between seller and buyer. Although the understanding of the customer is also seen as an important step towards value selling the discrepancy of power over price in favor of the buyer - e.g. The buyer has access to the different sellers' prices – this is explained as a disadvantage because the seller should handle the pricing policies strictly and avoiding buyer traps to give discounts. One way to counter the buyers pressure for discounts is to show the value the product generates within the operations of the very buyer - the value generating processes – what happens to be better understood by suppliers than the customers themselves (Nagle and Holden, 2002, pp. 200 – 219).

Leroi-Werelds et al. come to the conclusion that in B2B environments the interaction of the seller and the buyer generates an opportunity for customer value co-creation by the seller as he can influence/help optimize the customer's value generating process. In said constellations personal interaction should be considered when measuring customer value. (Leroi-Werelds et al., 2013)

In principle Nagle and Holden, Kaschek and Leroi-Werelds et al. have all pointed to the importance of the relation between supplier and customer (in B2B environments) for the transmission and proper exploitation of customer value – for both sides. Furthermore all three emphasize the possibility of the supplier understanding the – and leveraging on - customer's value generation process.

2.1.6. VALUE CHAIN PRICING

Measuring value created should consider the client's value creation chain and henceforth even the next stations down the value chain. The reason is that it is not always possible to understand the customer value of a product with the direct customer. In B2B environments a product (product A) is often bought to use in production of another product (product B). Now product A may be only a piece in the puzzle of product B but perhaps it is of high importance for the proper functioning of product C - product C being built with product B. In this case the value generated by product A for product C should be the basis for the price of product A to the producer of product B.

Hintze proposes to apply a marketing strategy where the value creating effects of a supplier's innovation are not obvious to the customer as the real beneficiary - in terms of customer value - of the supplier's product is the customer's customer or even further down the value chain (Hintze, 2014, p. 3, pp. 13). The challenge in this approach is to properly assess the upstream and downstream relations between parties in the different processes that are affected in their value creation by the product to be sold. Value chain management could be a basis for customer value measurement in B2B environments.

David Walters describes the value-chain management:

> *"Value Chain Management seeks to understand, to design and to control the entire network of relevant business partners in order to provide superior customer value and to ensure sustainable economic development of those partners as well as other interest groups. Value Chain Management Conference 04/05 May 2011"*
>
> (Jodlbauer et al., 2012, p. 4)

2.2. MARKET STRUCTURE AND COMPETITION

In the previous chapter we have discussed value and price. While their relation is dominant other surrounding conditions like the different types of customers, the activities of the competition and specialties to the specific industry one is working in have to be considered as well. The cost side of price is also looked at briefly for completeness.

2.2.1. PRODUCTION AND COST STRUCTURE

The cost share of the final price of a product is important as it determines the least economically viable price – namely covering all variable and fixed costs and all overheads. Costs are controllable and should be optimized where possible.

In the international context the different price-levels are relevant not only to sales prices but for the cost structure. The company’s operations cost structure can be a competitive advantage or disadvantage – depending on if the costs are lower or higher than in the target market. A company faced with higher costs in production in its home market than in the target market must be aware that the local competitors have a cost advantage.

2.2.2. CUSTOMERS

Customers play *the* center role in the sales process. Previously we have discussed the customer value as it is the crucial aspect influencing price. In the market assessment we regard the customer as an important factor– not only because the customer needs to make a purchase decision but also in order to understand which group(s) of customers is to be addressed – customer segmentation.

Related to customer segmentation is the aspect of ability to pay or buying power. Certain customer groups have limited availability of liquidity. This is to be accounted for else a viable product may fail sales by absolute price (remember the Unilever India-example).

CUSTOMER SEGMENTATION

Customer segmentation is the response to what we have found earlier – namely that customers are heterogeneous regarding their needs and wants as well as their willingness to pay. The former requires companies to identify which requirements a certain customer (group) has in order to serve him (them) best. The latter is the fact that different customers are willing to pay different prices. A company might therefore not seek to serve all customers but rather those it can serve well and profitably (Kotler and Armstrong, 2011, p. 8).

Companies tend to differentiate their prices in order to optimize their sales and profits. Little differences in price can have a tremendous effect as the price always affects the profit per unit and units sold in the market. Together this is determent to the overall profit. See the example in table 2-1

Price	Unit demand needed to break even	Expected unit demand at given price	Total Revenue (A x C)	Total costs*	Profit (D – E)
14	75'000	71'000	994'000	1'010'000	-16'000
16	50'000	67'000	1'072'000	970'000	102'000
18	37'500	60'000	1'080'000	900'000	180'000
20	30'000	42'000	840'000	720'000	120'000
22	25'000	23'000	506'000	530'000	24'000

* assumes fixed costs of 300'000 and constant unit variable costs of 10. (after Kotler and Armstrong, 2011)

Table 2-1 : Break-Even Volume and Profits

We can see that in the example different prices lead to different results in profit in function of the expected demand. The variable in demand must have a reason: if in the theoretic example 71,000 customers would buy the product for a price of $14 but only 23,000 customers for $22 than we can assume that out of the 71.000 – who would buy the product for $14 – 23,000 would also buy it for $22. Why not sell the product to those customers who are willing to buy it for $22 and the ones willing to buy it at $14 at the respective price? To address this issue companies differentiate their prices for the same product to sell to each customer group – or segment – as close to its individual's willingness to pay (WTP). By doing so a company can optimize value capture and sales volume (Kotler and Armstrong, 2011, pp. 298 – 299).

Price differentiation also comes with complications: when different markets or groups are charged different prices, arbitrate situations occur. Depending on transport costs and customs regulations re-imports from the low-price to the high price market are common.

The `right´ price is therefore key to a profitable business – mentioning that other factors play their role (Breidert, 2015, p. 9).

Different customers have different willingness to pay yet our theoretical example also shows that there is a price range – $16 to $20 – where the product can be sold overall profitably. This suggests that one `right´ price can be established. We could say yes – under the condition that the target customers are homogeneous in all target markets. And this is unlikely the case.

In the example in diagram 2-3 we see that with increasing prices the market demands decreases. Nagle and Holden (2000) explain that the response of the supplier should be a pricing strategy according the customer groups. Each group has a different WTP. In consequence once the price is above one group's WTP it is lost for sales and only the groups with a WTP still higher than the price will buy. At the same time the customers segments with a WTP higher than the price do not pay as much as they would – lost profit. Even worse the customers with a significant higher WTP might not buy as they are looking for a more expensive product. These pitfalls in pricing can be overcome with customer segmentation. Sales and profits can be optimized by price differentiation - pricing according the customer segments WTP (Nagle and Holden, 2002, p. 227).

SEGMENTATION TECHNIQUES

How can customers be segmented? Nagle and Holden (2000) give a strategic and "segmented" insight into segmentation and how to realize it in different industries.

- Segmenting by buyer identification (Nagle and Holden, 2002, p. 229).

Under certain conditions it is easy to distinguish the customers of different segments i.e. children and seniors can be easily identified and are generally less financially affluent as the working generation. Students too, they can be identified by their student ID. Restaurants, theaters and software companies are known to offer special prices to these groups. Software is often sold considerably cheaper to academics and students as they have less income but are customers with reach i.e. teaching professors may use the software in their presentations or recommend them for assignments.

In order to practice segmentation by identification of buyers the critical factor is to obtain the information to which segment a customer belongs. If this is not possible other ways of segmentation have to be used. An example is a restaurant next to a military base: it can offer special menus for staff of the army – as their uniform can easily identify them.

- Segmenting by purchase location (Nagle and Holden, 2002, p. 232); (Kotler and Armstrong, 2011, pp. 198-199).

In principle this means to categorize buyers by area and set prices accordingly.

It is valid on a small scale i.e. may the same supermarket chain charge higher prices in a fancy inner district of a city and lower prices in the suburbs. Here even the offering may be adapted to the segment – cheaper family packs in the suburbs, smaller but fancier packs in the center.

And it is valid on a large scale. This is a field which interests us particularly in the scope of this work: prices can vary significantly between countries i.e. cars generally sell cheaper in the US than in Europe. This is partly due to the tariffs and taxes, still the WTP refers to the final price – and it is different between the US and Europe. In contrast wine used to be more expensive in the USA than in Europe – in Europe it is a typical beverage in many regions while in the USA it used to be more for special occasions.

In order to react to the different market situations companies adapt their prices to respond to these differences. The core concept behind the segmentation by area is the drive to optimize sales everywhere a product is sold. Heavy goods are subject to high shipping costs what gives an advantage to the local supplier as the customer needs to pay less transport costs. To respond to this situation companies may use a pricing strategy where the shipping costs are absorbed in the product price – i.e. steel companies may sell for the same price – including transport costs – in their local market and at a distant market. By doing so the distant customer gets a price that offers comparable value for money as from a local competitor while the local customer pays more – as the distant competitor needs to charge for transportation.

It is common that in different markets different languages are spoken. Too many products – especially consumer products – the product presentation and documentation depend on the language of the target market. Accordingly the product variants are offered according language i.e. in Spain and Latin America in Spanish, while in France in French. With this adaption comes the ability to charge different prices for the different language presentations. The French consumer will want to have his product with a French documentation and will not buy it a little bit cheaper in Spanish.

Arbitrage opportunities arise out of price differentiation for different regions. Re-imports are common when the same product can be bought for a cheaper price in another market. Here product adaption to local market conditions – i.e. language – can help justifying the price differences and make exploitation of arbitrage opportunities less attractive.

Segmentation by area can be relatively easy yet it is generalizing drastically: Swiss may be generally wealthier than Portuguese but there are poor Swiss and rich Portuguese too.

- Segmenting by time of purchase (Nagle and Holden, 2002, p. 234).

Theaters and cinemas often have lower prices for the afternoon presentations. The logic behind is that seniors, students and unemployed customers having a higher price sensitivity can easily organize to take advantage of these cheaper prices - else they may not visit the show at all. While the working population cannot easily attend during these times.

- Segmenting by purchase quantity (Nagle and Holden, 2002, p. 239).

When different customers buy different quantities they can be segmented accordingly if the parameters price sensitivity, costs and competition play a role.

Volume discounts are used to retain larger customers but also follow the rational that the effort for serving an account does not proportionally increase by its size. This means that the allocated costs per unit decrease with the increase in volume.

Order discounts are common. It is fairly the same effort to process a small and a large order. Therefore it is beneficial for the supplier to give the buyer an incentive to place few large rather than several small orders. An excellent example is printing companies – the price per printed unit dramatically decreases with volume per order as the set up of the printing line is exactly the same effort for 100 or 100.000 copies. Order discounts can be applied in combination with volume discounts as they are each a discount due to increased efficiency by quantity.

- Segmenting by product design (Nagle and Holden, 2002, p. 243).

Often it is not easy to segment by place or time. Segmenting by different products is an option in this case offering the basically the same product in different variations. It is important to remember that the manufacturing costs should remain the same or almost the same.

Oil companies offer regular fuel and premium fuel which is normally bought by owners of premium cars. Premium fuel costs about $0.04 more in production however is sold for about $0.15 more than regular grade.

Airlines always creative in pricing strategies differentiate their product i.e. by a required stay over the weekend. Business travelers are not willing to spend the weekend away from their families so they pay the full fare. Price sensitive customers often do agree to spend a week end or entire week away from home to get a better price.

- Segmenting by bundling (Nagle and Holden, 2002, p. 244).

Bundling may not seem very obvious as a segmenting tool however it is broadly applied. Restaurants commonly offer lunch bundles or sometimes even dinner bundles and á la carte menus. The rational: midday people look for lunch in their work break. It is a repeated action and has no emotional or representative component. Price sensitivity is high as a sandwich is seen as next best alternative. At the same time food can be á la carte at a higher price for customers not willing to accept the reduces choice and the pre-set combination for the lunch bundle.

Value-added bundling too can serve excellent for segmentation. Quantas had the offer "land package" for 1$. This package was only available as a bundle with a Quantas flight and included a 5 day stay in a tourist class hotel in Australia or a camper-van in New Zealand. This meant significant added value to tourists going to Australia or New Zealand and made it attractive to fly Quantas even with Quantas having higher rates than charter flights. At the same time the business travelers had no use from this bundle but still paid the full airfare – something they had not if Quantas had simply reduced the airfare instead of bundling.

Different buyers have different availability of funds and bargaining power. This does not change the customer value of a product but it affects the selling process. Consumers often have limited liquidity and no bargaining power as an individual consumer does not have any important influence on the overall sales. In contrast business buyers – i.e. wholesalers – often have considerable buying power and price negotiation power. However even the individual consumer has no high stake in the price bargaining the final consumers together determine if a product is successful by buying it or not. In consequence the best situation for the supplier is a strong consumer demand as the business demand is a derived demand from the former (Kotler and Armstrong, 2011, p. 167). In particular a high consumer demand will strengthen the suppliers negotiation position with wholesalers as to those the demand means profits for the business and a shorter time on stock – what means payment terms can be shorter.

One factor to consider here – beside the customer value vs. price as discussed in chapter 2 – is the absolute amount the product costs the consumer. It should be carefully considered that the offered packaging sizes correspond to the consumers' ability to pay.

2.2.3. COMPETITION

Competition has a major influence on price. In chapter 2.1.3 we see that the Willingness To Pay is limited by the maximum price (next best alternative + difference in performance).

When considering a market for entry the competing products on the market should be investigated and the prices obtained to establish a price line. As the target here is to achieve the price for different markets with the least amount of effort, the competitors analysis should be performed efficiently by involving distribution partners and personal networks to understand prices and margins in the distribution chain. Competitors' prices can nowadays often be found on the internet.

The next best alternative should be rigorously investigated. Is a close alternative available in the target market? If so, does it set the reference for price and also for customers' expectations. It can further help to understand customers' habits – i.e. if organic or sustainable products are preferred. To quantify the next best alternative it has to be measured. This requires knowing the prices in the market for the next-best-alternative and identifying the difference in performance between the two products. The prices can be inquired either via public offers (Internet) or by requests for quotations. The assessment of the differentiation of the alternatives requires an understanding for the products and the customers' expectations. One way to do so is by a "best-in-class" analysis of the market. The completion of the assessment can be performed either by experts or via customer surveys.

In any case a differentiation to the next best alternative is required and needs to be communicated to the customers. It should be mentioned that one competitor's product is not necessarily in all markets the next best alternative.

When going to foreign markets strategic assets – i.e. distribution network – can be under firm control of competitors. Virgin drinks could not get into the cola and soft drink market as shelf space of the major supermarket chains was under control of Coca- and Pepsi cola (Kotler and Armstrong, 2011, p. 542). For many products strategic assets are needed and it is important to assess the access to them. Are they generically available or under control of certain parties? This will help with understanding their influence on the cost structure.

2.2.4. MARKET PARTICULARITIES

Markets themselves are heterogeneous just as their customers are. This requires assessing parameters relevant to the targeted field of activity

INFRASTRUCTURE AND COMPLEMENTARY ASSETS

Different goods need different infrastructures for distribution. While some services don't need an infrastructure however products do need to reach the clients. Software services nowadays generally depend on a stable and fast Internet availability. Products need logistics and infrastructure such as a reliable road networks. Heavy goods may require rail tracks for cost efficient transportation. Companies should be observing carefully if the required structures for their business model are generically available, limited or under control of certain parties. This allows understanding of their influence on feasibility, delivery times and cost structure.

SIZE – ECONOMY OF SCALE

Market size is relevant as together with the set price defines the market potential. The identification of the market size should close in on the particular market and the customer segments to be served. The more realistic this assessment the more accurately it can be planned and the fixed and variable costs per unit projected. SMEs should also pay attention to the cost advantage that comes with volume – scale benefits. This can become a competitive advantage especially against local competitors in foreign markets which do not have the economies of scale of serving several markets. (Ghoshal, 1987, p. 434)

MARKET SPECIFIC SPECIALTIES

A product may serve in different markets to offer a solution to the same problem yet there may be particularities specific to a market. Such can be additional profit opportunities, bourdons or requirements the customers have. In Brazilian cities a car owner needs a secure garage or live in a gated community to be sure that he maintains ownership of his car over night while in northern countries a build in park heating may be a functionality which customers value. In the US owning a car is in many areas essential to be able to commute to the workplace.

CONSOLIDATION AND DOMINATION

Foreign markets may have different power structures. We consider a) the consolidation of the target market and b) the degree of domination in required complementary businesses i. e. transportation.

Market consolidation is a common phenomenon. Growth and a market share are factors relevant for successful businesses. Oligopolies – a few big sellers control the market and divide it among them – create a barrier for new entrants as their interest is to protect the market and the elevated prices they can charge (Hannaford, 2007, pp. 1 – 3). Markets controlled by oligopoly may impose considerable barriers although the price level may seem very attractive.

Besides the actual target market and field of business complementary fields, it may be necessary to conduct ones business. These could be transport companies or retail chains. If these complementary fields are highly consolidated or even oligopolies the services required may have an unforeseen impact on the cost structure what can have a severe effect on competitiveness. I.e. in Austria the electricity grid has to be shared to allow different companies to sell electricity to the end consumer. However the owner of the grid has the right to collect a service fee – which can be higher than a small households actual cost of electricity

PAYMENT CULTURE DAYS OF OUTSTANDING RECEIVABLES

Payment moral has a practical relevance for doing business. The differences can be significant and may have a severe influence on a company's liquidity. Subran, L. (2012) presented that in 2010 customers' payment periods (date of invoice to date of payment) varied from 24 days in Germany, to 61 days in France and even 79 days in Spain. The author knows from the sales manager of a German pharmaceutical company that the payment period for trade with Cuba can be easily 180+ days in practice. The difference in working capital and the related cost of capital should be considered.

TIMING – SEASONAL PRICING

In certain industries seasonal differences in pricing are common. This normally happens when either demand or supply are volatile. In order to successfully capture value from the sellers side, timing has to be incorporated into the pricing strategy.

2.3. MONETARY AND REGULATORY FACTORS

International trade is not only an opportunity but a challenge for sellers, it involves interest and interference by governments. International trade always involves flows of goods and or currency in exchange. It is understandable that governments get involved as the out-flow of foreign currencies is due to effect the monetary situation of a country.

2.3.1. POLITICAL & LEGAL FACTORS

The difference in the political and or legal environment can be significant between countries. Certain countries welcome foreign companies and trade others are more reserved and even protective. The political stability can be a challenge for foreign companies. Venezuela has been volatile over the past including privatizations of foreign investments. Argentina has renationalized the oil company YPF after a dispute with than the majority owner Repsol of Spain.

TRADE BARRIERS

Trade barriers generally have the intention to protect the local industry against foreign companies. This protective attitude can reflect in tariffs on goods entering the country by imposing a competitive disadvantage on the foreign company. To protect the market shares of local companies governments sometimes impose import quotas on foreign competitors (Kotler and Armstrong, 2011, p. 557).

Regulations are often used as indirect barriers against foreign companies as they can be easily adapted to favor a local design or discriminate a foreign one.

Likewise countries have the desire to support their economies' export activities. Trade regulations often trigger an action-reaction mechanism creating an overall trade unfriendly environment. The opposite is true for economic communities: The European Union founded in 1957, has as its core principles the free flow of products, services, finances, and labor. It has grown over the years and become one of the biggest economic regions in the world with the Euro as common currency. Other examples of free trade blocks are the North American Free Trade Agreement (NAFTA) and the union of South American nations (UNASUR) (Kotler and Armstrong, 2011, p. 555)

MONETARY POLICY

International trade regularly involves the home and target market using different currencies. This implements a risk associated to exchange rate volatility. While a depreciation of the home currency means that the traded goods become less expensive in the target currency the opposite is true for an appreciation of the home currency. When operating in high volatility currencies an active currency and price management may be required.

Besides controlling the exchange rate governments may impose other monetary regulations. Buyers may be obliged to pay in their local currency while the seller may not even be allowed to transfer the payment out of the country. With any currency restrictions it incorporates additional costs or efforts to receive the value of the goods at the sellers side (Kotler and Armstrong, 2011, p. 557).

2.3.2. CULTURAL FACTORS

Cultural differences are present everywhere. Most of us know them from our own experience – often from a somewhat embracing one, when the cultural differences between the parties where not understood. These differences can cause misunderstandings and obstacles but also enclose the opportunity for advantages when they are understood.

2.3.3. ECONOMIC FACTORS

Economic factors also affect trade on a more general level than the market and industry specific. Kotler and Armstrong divide the economic environment into a country's industrial structure and income distribution. The industrial stages are

- Subsistence economies: economies mainly engaging in agriculture and practicing barter trade.
- Raw material exporting economies: rich in natural resources exported to generate income.
- Emerging economies: fast industrial and overall economic growth generating new wealth.
- Industrial economies: major exporter of finished goods and services, importer of raw materials.

While this is a rather general categorization the author links it to the income distribution stating that while in subsistence economies families live mainly on a very low income industrial economies have low medium and high income groups. At the same time the stages in-between may seem a generally low income population but have high income groups with the emerging economies building up a middle class (Kotler and Armstrong, 2011, pp. 556-557). This plays a role for all trade as it gives a – generalized – view on potential customers ability to pay.

3. THE PRICE-CORRIDOR MODEL

Up until this point it became clear that the customer finally defines *customer* value. The customer perceives the value in a product and is willing to pay accordingly. Since customers are heterogeneous regarding their preferences, culture and income customer value is too. In this chapter a model is established by which the complexity of pricing is reduced to the core factors identified herein. This allows for SMEs to use the model in their pricing strategy to achieve appropriate pricing for different markets with minimum efforts and costs.

3.1. TAKE AWAY FROM CHAPTER 2

In the investigation part – Chapter 2 – we discussed factors and parameters which are relevant for the price structure of a product in general and related to the market. We saw that customer value, willingness to pay, ways of Customer Value estimation, customer segmentation, competition, political- and cultural factors and cost structure all play a role. Therefore it is no surprise that no single factor is dominating the price determination. The price related factors can all have their influence but also can single factors be particularly relevant in specific situations. Willingness to pay is perhaps the price-establishing factor that is most likely to be more dominant than the others as it relates to the customer value and the action, the willingness of purchase. How the factors affect price is closely related to the target customer. To generalize customers can be grouped into segments. This helps to understand the segment related price sensitivity. Competition has a significant influence on price via the reference alternatives on the market establish – especially the next-best-alternative. The author had a meeting, 2015/07/15 with the Manager of the veterinary business unit of a medium size Austrian Pharmaceutical Company active especially in the EU. He explained that not only are the price levels different but there exists severe differences in margins in the distribution channels between countries. This therefore requires different Ex-Factory prices for each EU state in addition to the pricing concept for the customers.

3.2. CONCEPT

In summary of 3.1. we can say that everything we looked at in chapter 2 is in one way or another relevant for a price establishment. However we require a model that can cope with the complexity and reduce it to a level where SMEs can come to a pricing strategy with reasonable effort, ideally by using the information they have on hand or can find out very quickly. This means a model must provide propositions which are useful in practice and can be replicated for almost any market.

Here a Min-Max corridor model is proposed. The idea is to establish a corridor, a price range min to max that can give an indication where the `right´ price is likely to be found. The range allows that the user can obtain more or less precise results depending on the detail of information input – however even with very little available data a result can be generated. This means the model should offer enough flexibility and general ability to provide results for any market and honors the core concepts herein: This includes to carry out the assessment without a major market research but rather by identifying key parameters. The critical question is what are the right parameters to focus on. It helps to remember what the target is: The parameters shall be applicable to the market and the required data shall be easily available ideally via the Internet and from the company's records. Simultaneously based on the selected parameters the model must deliver results differentiated enough to be of practical use and helpful in producing a pricing model for the target market.

Coming back to the min-max corridor – this allows to look at a very reduced set of parameters which by itself may not be sufficient to come to a significant statement of a price. By introducing only as little as two opposing parameters – one with the direction of the lowest, one with the highest price – a statement can be made. Any of the parameters regarded by itself would probably lead to a false price assumption.

3.3. MIN - MAX CORRIDOR IDEA

The idea is to set a range where prices are profitable and most likely within willingness to pay. This can be achieved by defining the limits of the range: the lower end – the minimum price – and the top end – the maximum price.

Critical will be the defining of the limits. Here we will use the parameters that we identify as relevant for the specific target market, customer segment or season et cetera. For the usefulness of the parameters it will be crucial that they can delivery a value for the min- and max limits. This aspect will be addressed in the next paragraph 3.4. Model Proposition where min and max factors are identified and their application discussed.

The min/max values will not make a definite price indication but rather allow the user to understand the price range in a market. This can help answering questions like

- does it reassemble a situation known from a different market?
- if the product is on the market does the price fall within the corridor?
- is the max-price similar to markets with a `good´ product price?

Based on the min-max corridor and the references to historic experience in (other) markets the appropriate price will become clearer and still the corridor will allow adjustments to expert judgment.

The downside could be the potentially large spread between min-/ and max-price. In other words the results are likely going to be little precise. Yet this must be tolerated under the condition that here the aim is to provide a model that helps SMEs in pricing niche products in regional markets. The data required should be obtained by what the company has on hand already and by having the data easily and cost efficiently available – the Internet and the company's contacts and insights.

This condition can be fulfilled as the min/max model and does not need to give very precise results but rather needs to capture the markets `price environment´.

3.4. MODEL PROPOSITION

The price corridor model has to deliver a minimum-price and a maximum-price and requires therefore input for both variables. In chapter 2 we discussed 4 blocks which contribute to the price structure:

- **a.** Customer Value
- **b.** Market structure and competition
- **c.** Monetary and Regulatory Factors
- **d.** Production and Cost Structure

While **a.** and **b.** are relevant for the maximum-price as both treat with price limiting factors – **c.** and **d.** contribute to the costs and investments required to have the product available in the market and therefore together establish the minimum-price.

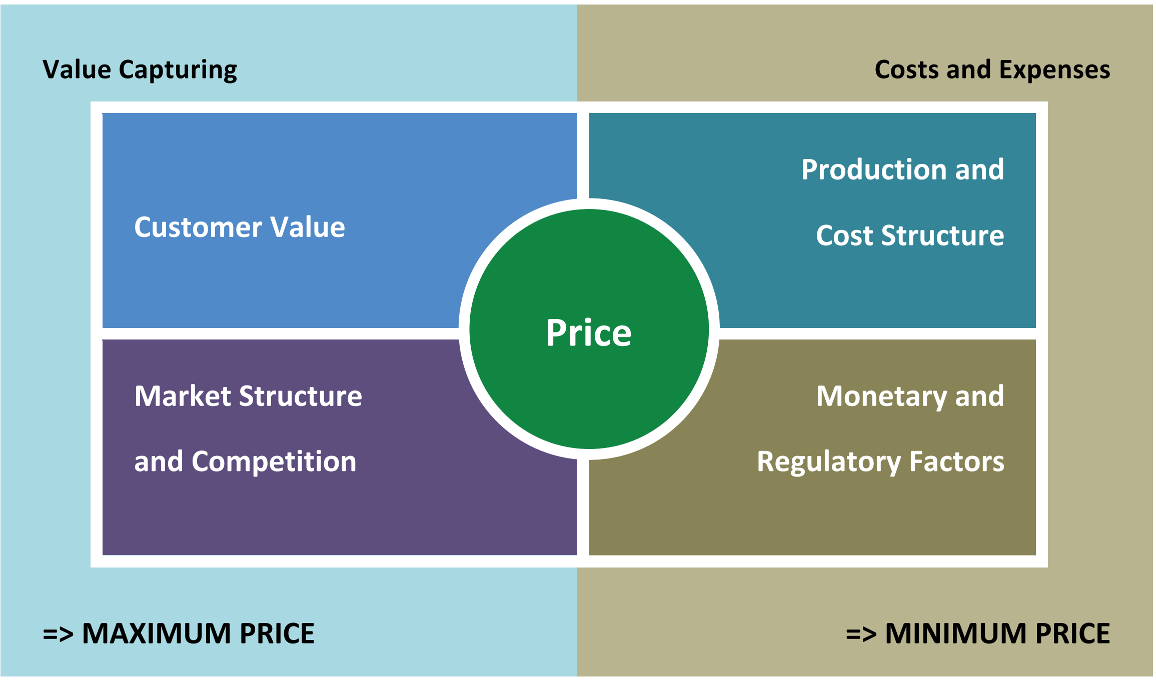

Value Capturing
Costs and Expenses
Customer Value
Production and Cost Structure
Price
Market Structure and Competition
Monetary and Regulatory Factors
=> MAXIMUM PRICE
=> MINIMUM PRICE

Figure 3-1 : Minimum/Maximum Price

This simplicity is the power of the model. With minimum data availability the model can be used. The opposing ends – min/max – will not make the model failsafe however they will help when the data is not sufficient as even in this case a spread will be plotted and that still has some usefulness to it. In contrast a model that delivered a single point indication was highly inaccurate with insufficient data.

In addition to the determining the limits of the price corridor other parameters may be influencing the price structure. These may only give a qualitative indication but can help to give a better understanding in the price field. This variable is optional in its nature.

Based on this concept the following variables can be derived:

- Minimum-Price
- Maximum-Price
- Optional factors

3.4.1. MINIMUM-PRICE

The min-price is composed by the production costs, COGS (Costs Of Goods Sold), and the costs and investments required for bringing the product to the market – in the present context this is tariffs and possible costs for regulatory approvals or permits, MoReFa (Monetary and Regulatory Factors).

This data should be available to the company as it is own information and legal requirements – no additional data collection effort for the SME.

In case there is knowledge on the lower end of market price levels, this needs to be incorporated: the lowest-price-alternative is a reference which can be relatively easy investigated. For many products this can be done by a search on the internet on the target market + the (known) cheapest alternatives from competitors.

Remains to assure that the min-price does not become unprofitable or even a loss-business. To prevent this the lowest-price-alternative is ignored if below the actual costs to market.

The result is the following variable:

Min-Price			
IF	COGS + MoReFa	≥	lowest-price-alternative
=	COGS + MoReFa		(result A)
ELSE			
=	lowest-price-alternative		(result B)

Table 3-1 : Variable Min-Price

In case the lowest-price-alternative is not known the variable can be set as min-price = COGS + MoReFa (Monetary and Regulatory Factors).

3.4.2. MAXIMUM PRICE

While the min price can be obtained easily – perhaps it even equals the cost base for the product – the max-price is the more interesting one and the one definitely requiring external data.

Under the proposition that the required research and spending on data is to be minimized it would be ideal to work with what is easiest available to the company. Therefore the max-price should be established by either of the value capturing - aka. price limiting - factors customer value, market structure and competition. In chapter 2 we have identified different parameters which influence customer value and different methods for customer value estimation. In theory any method that can deliver the max-price can be used however here shall be proposed:

a. Objective Value: Next-Best alternative + performance difference
b. Value Creation Chain: capturing value created down the value chain
c. Customer Value Estimation: i.e. Trade-Off Analysis, Depth Interview

Option A and B are applicable when the monetary value or at least the scope of the monetary value of a product can be obtained by indicators or measurable values. This is A either to the fact that there is a market price level customers relate to or B the product is part in a value chain and its value contribution can be assessed. If no clear value indication can be obtained option C becomes necessary.

OPTION A. OBJECTIVE VALUE

As we propose a model for SMEs active in a niche market the competition is likely manageable and the company has most likely a clear picture of its competitors – at least the most direct ones. This means the next-best-alternative (see chapter 2.2.2. Competition > Next Best Alternative) should be known. In case it needs to be investigated or is the known competitors' offering close alternatives are not present in the target market it should be possible to find information on these on the internet or via a contact that knows the industry and market – i.e. local distribution partner.

The functional value of the SMEs product and the next-best-alternative can be compared and the difference determined – if the SME has not already done so in a competitors analysis. This will lead to amount x which may or may not be quite accurate. What is most important here is to have a clear understanding if the next-best-alternative offer higher or lower customer value as this will help taking a pricing decision in practice. The data set can be improved by comparing to more than one close competitor's product.

Option **a.** effort for data inquiry: Minimal.

OPTION B. VALUE CREATION CHAIN

In contrast to option A. which relates to the product value to final customers option B. targets situation where the creation of customer value is not immediate. This is a common scenario in B2B environments where a company sells a product that is used in the production of another product. Even the other product may not be the final product. Here it is important to understand where value is created – i.e. down the value chain where the product is part of a final-product. Than the fraction the product actually contributes to the final value needs to be estimated. This may not be easy and the client might be very reserved about sharing information about its production and further utilization of its products. One possibility is to bring the customer aboard and try to assess the value chain together with him. This may be especially helpful in multistage value chains where perhaps the customer is not even delivering to the final-product producer. A side effect of a common effort is that the customer will know what the product is worth what may help tremendously in reaching an agreement on how the value captured is shared.

Option **b.** effort for data inquiry: Moderate.

OPTION C. CUSTOMER VALUE ESTIMATION

When options a. and b. are not appropriate – i.e. when introducing a new product – then data regarding the max-price needs to be collected involving the target customers in the target market.

This option is time consuming and comes with a cost. Still under certain conditions it may be appropriate and it has the positive side effect that more attributes than only price/customer value can be recorded – i.e. brand awareness. This is the most workload and cost producing option. It requires execution of Customer Value Estimation discussed in Chapter 2.1.4.. However it may be the only solution as there are situations where it is not possible to derive the data of the monetary value of a product but rather it is necessary to investigate the customer value with experiments or surveys

Option **c.** effort for data inquiry: Elevated.

3.4.3. Maximum Price Variable

The maximum price variable depends on which of the 3 options from 3.4.2. applies best to one's initial position. It should be briefly assessed if indicators or values for **a.** or **b.** are available else **c.** becomes the way to go and this requires considerable more data procurement.

In the present work we will focus on option **a.**. It is applicable in many situations always when a product is introduced into an existing market and consumers have a price expectation due to the competitors' field. Furthermore this variable is also best relevant for the example in chapter 4..

Therefore option **a.** – Objective Value – is used in the model to determine max-price where

- Maximum-Price =
  Objective Value = Cost of Next-Best alternative + performance difference

The result is the following variable – considering several data points:

Max-Price			
=	*Average* next-best-alternatives	+	*Average* performance-differences
Example			
=	(A+B+C) / 3	+	(a+b+c) / 3
WHERE	A;B;C	=	lowest-price-alternative 1;2;3
WHERE	a;b;c	=	performance-difference to A;B;C

Table 3-2 : Variable Max-Price

3.4.4. OPTIONAL VARIABLES

In addition to min-price and max-price other factors may be of interest such as customer segmentation or price seasonality. This variable is not obligatory for the model however it brings in one more dimension of information which can help getting a better understanding of the price variations.

For the example in chapter 4 customer segmentation is interesting because among different customers different price sensitivity can be found. This allows us to add a perspective to the min/max range: When i.e. a company has identified three customer segments for the product in question – i.e. hobbyists, amateurs and professionals – each segment has different expectations and price sensitivity. The min/max range together with the price sensitivity perspective can help understanding where a customer segment is to be found in the price range and in consequence price differentiation could be incorporated.

For the example the variable shall have the following outline:

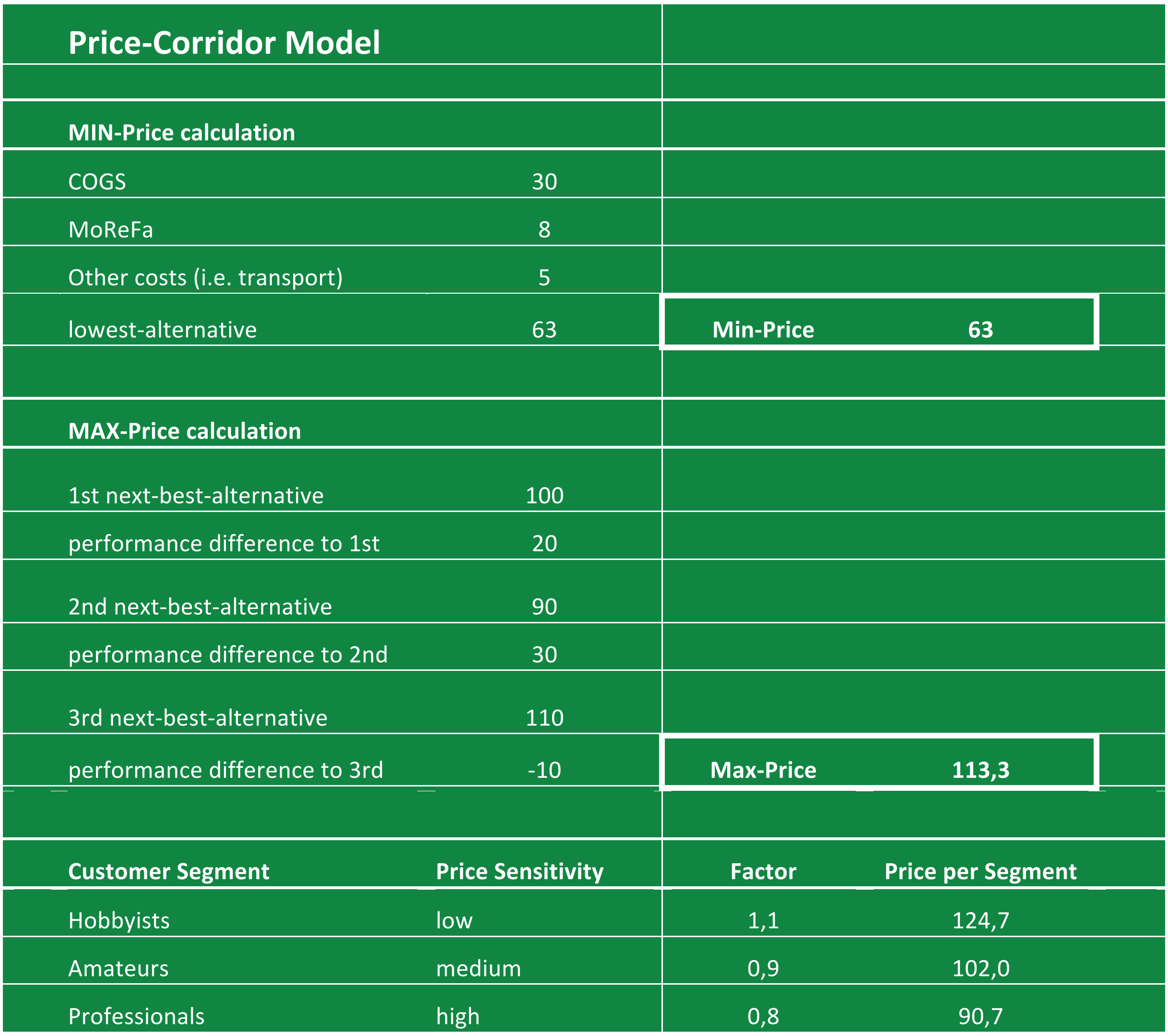
	Customer Segment	Price Sensitivity	Sales Priority
A	Professional	high	Volume
B	Amateur	medium	Price
C	Hobbyist	low	Price

Table 3-3 : Variable Customer Segments – Price Sensitivity

Where customer segment is the information variable and price sensitivity and sales priority are qualities to the customer groups.

3.5. THE COMPOUNDED MODEL

The values for the 2+1 variables are fed into one global model for user convenience. The findings for min-price, max-price and the optional customer segmentation variable are entered into the Price-Corridor Model. All values in the model are sample values.



Price-Corridor Model			
MIN-Price calculation			
COGS	30		
MoReFa	8		
Other costs (i.e. transport)	5		
lowest-alternative	63	**Min-Price**	**63**
MAX-Price calculation			
1st next-best-alternative	100		
performance difference to 1st	20		
2nd next-best-alternative	90		
performance difference to 2nd	30		
3rd next-best-alternative	110		
performance difference to 3rd	-10	**Max-Price**	**113,3**
Customer Segment	**Price Sensitivity**	**Factor**	**Price per Segment**
Hobbyists	low	1,1	124,7
Amateurs	medium	0,9	102,0
Professionals	high	0,8	90,7

Table 3-4 : The Price-Corridor Model

In the section price per segment a proposal for the actual price to the related customer group is made. These values are to be regarded as indication and should carefully be evaluated by a knowledgeable person with industry insight.

4. MODEL APPLIED AT BEEVITAL

BeeVital is an Austrian SME specialized in the sector of bees' health. The market is potentially global and indeed BeeVital makes over 95% of its sales in export.

The parasite Varroa destructor is the cause of most harm to bees worldwide. BeeVital offers the product HiveClean to treat and control the mite infestation in bee colonies. The company is already active in over 20 countries and constantly looking to increase its global presence. With each new market a price has to be established and the existing prices have to be reassessed at times - as stated in Chapter 1 – BeeVital realized that a uniform pricing regime is not optimal.

We will apply the model to our example SME BeeVital – more precisely to BeeVital's product to treat the bees' parasite Varroa: HiveClean.

This requires as a first step making the required market data available and in a second step the application of the price corridor model under practical conditions.

4.1. THE STARTING POSITION

BeeVital HiveClean is a product to treat a bee disease and therefore the clients are beekeepers. The beekeepers have a clear understanding of the value proposition: HiveClean controles the parasite and by doing so helps the bees survive what means less losses to the beekeeper and even more gains as living hives also produce honey! As there is a clear customer value at the end client side measurable the max-variable is executed in option **a.** – objective value.

Option **a.** can serve well with competitors data from the market or internet.

The Min variable reflects all production costs including tax and transport and the optional variable considers 3 customer segments: hobbyists, amateurs and professionals.

Market Selection

Before data can be collected the target market(s) must be decided on. For the BeeVital example we look at the USA and Italy. In theory one market is sufficient however we wish to have a comparison of the results in two markets quite different from each other: The USA is a market dominated by professional beekeepers handling 5000 beehives plus. These are businessmen and are concerned about the effective cost per year and bee colony.

In Italy also big beekeepers can be found however the majority is at amateur level. We will run the model on both in order to later compare the results and see how much the difference is between those markets.

In order to apply the Price-Corridor-Model it is required to have the necessary data for the variables

- Min-price and
- Max-price

available. For the min-price variable it is mainly company data – cost positions – and the alternative with the lowest price that is required while for the max-price variable market data is obligatory.

Additionally there is the optional variable of customer segment and price sensitivity.

For the BeeVital example the cost structure data is available (it is not disclosed herein). For the USA the lowest-price alternative on the market is also known – it is an open industry secret in this case and amounts to approx. 0,50 USD per treatment.

The **max-price data** requires the knowledge of at least the next-best-alternative. For the USA this data could be easily found on the Internet by inquiring the online shops of strong distribution companies – see table 4-1.

USA market prices				
Competitor product	Source	Price	Treatments	Price/Trmnt
Apivar	Mann Lake	130	25	5,2
Apistan	Mann Lake	210	50	4,2
ApiLifeVar	Mann Lake	300	100	3
Apiguard	BeeCommerce	33	10	3,3

Table 4-1 : USA market prices

More difficult is the assessment of the performance difference between the next-best-alternative and one's own product. A competitors analysis can help establishing a scale for the performance differences to the individual competitor's products. This can be performed by identifying several parameters which are relevant to the product category and than weighing each product in all parameters.

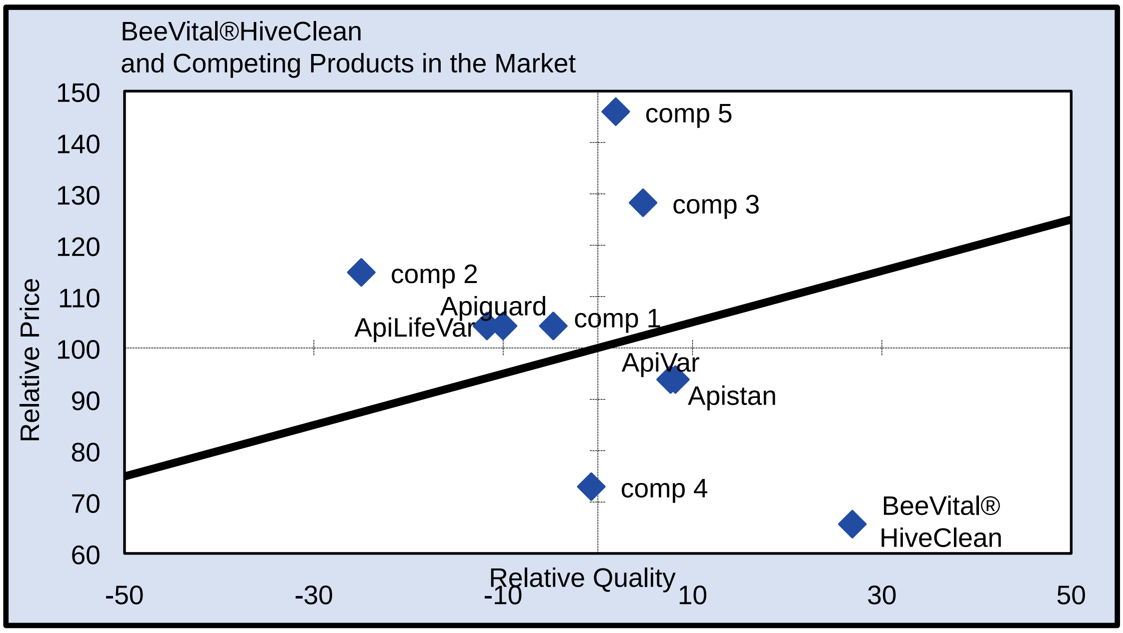


Table 4-2 : position relative to the competition in price and quality

At BeeVital a competitors analysis is available which plots the relative quality for the products. The analysis is based on a set of factors and derives at the ranking as shown in table 4-2.

This value was mapped to reference at the BeeVital product and converted into percentile deltas – see table 4-3.

USA Competitors price and performance delta		Price	rel. Quality	Delta
BVHC		0,0	26,9	0,00
Apiguard	3rd alternative	3,3	-10,0	0,37
Apistan	2nd alternative	4,2	8,2	0,19
ApiLifeVar		3,0	-11,7	0,39
ApiVar	1st alternative	5,2	7,7	0,19

Table 4-3 : USA performance deltas

This approach may not bring the quantitative most accurate delta but it delivers the basis to run the data through the model without market research. This is precisely the concept of the model – to be able to use it with least effort in data collection.

For Italy the data was derived from in-house data of BeeVital – see table 4-4 and table 4-5.

Italy market prices				
Competitor product	Source	Price €	Treatments	Price/Trmnt
Apivar	BV in-house	29,0	5	5,8
Apistan	BV in-house	21,5	5	4,3
ApiLifeVar	BV in-house	2,2	1	2,2
Apiguard	BV in-house	2,2	1	2,2

Table 4-4 : Italy market prices

The performance delta for Italy has been derived from the same competitors analysis as the next-best alternative products are identical in both markets.

Italy Competitors price and performance delta		Price	rel. Quality	Delta
BVHC		0,0	26,9	0,00
Apiguard	3rd alternative	2,2	-10,0	0,37
Apistan	2nd alternative	4,3	8,2	0,19
ApiLifeVar		3,0	-11,7	0,39
ApiVar	1st alternative	5,8	7,7	0,19

Table 4-5 : Italy performance deltas

The optional variable of customer segment and price sensitivity is available at BeeVital: in the company's field of business the end-customers are beekeepers. BeeVital segments them into

- hobbyists – keeping 1 to a few bee-colonies

- amateurs – keeping up to 300 colonies
- professionals – keeping normally above 1000 up to several thousand colonies.

Accordingly is the price sensitivity lowest with hobbyists, moderate with amateurs and high with professionals. Professionals will do their own calculations on cost/benefit of products used in their operations.

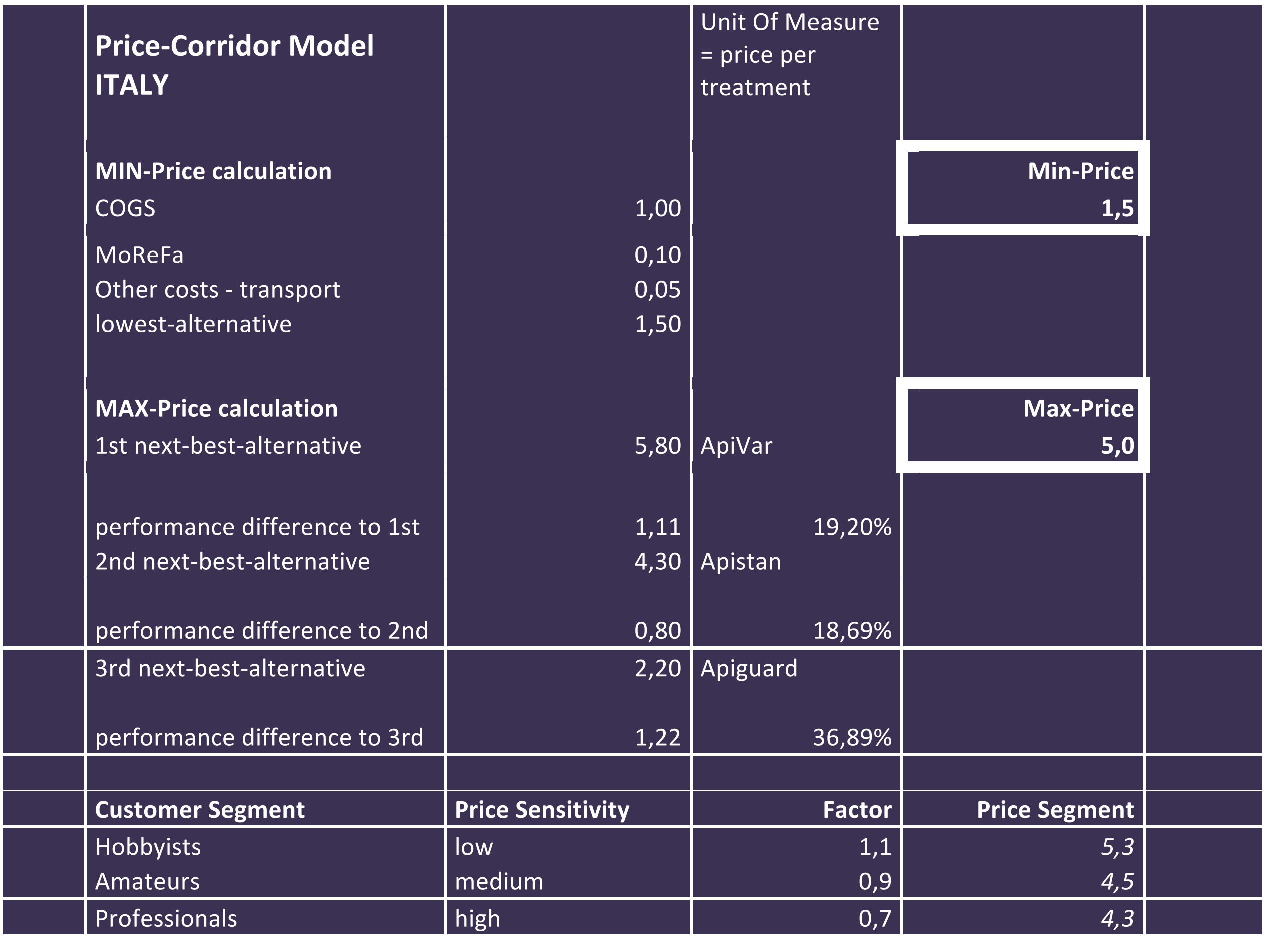
4.2. APPLICATION ON TWO EXAMPLE COUNTRIES

Once the data for the model variables is available – see chapter 4.1.1. – it is entered into the model for USA:

Price-Corridor Model USA		Unit Of Measure = price per treatment	
MIN-Price calculation			**Min-Price**
COGS	1,00		**1,15**
MoReFa	0,10		
Other costs - transport	0,05		
lowest-alternative	0,50		
MAX-Price calculation			**Max-Price**
1st next-best-alternative	5,20	ApiVar	**5,2**
performance difference to 1st	1,00	19,20%	
2nd next-best-alternative	4,20	Apistan	
performance difference to 2nd	0,78	18,69%	
3rd next-best-alternative	3,30	Apiguard	
performance difference to 3rd	1,22	36,89%	
Customer Segment	**Price Sensitivity**	**Factor**	**Price Segment**
Hobbyists	low	1,1	*5,8*
Amateurs	medium	0,9	*4,7*
Professionals	high	0,7	*3,7*

Table 4-6 : Price-Corridor Model USA

As well as Italy:



Price-Corridor Model ITALY		Unit Of Measure = price per treatment	
MIN-Price calculation			**Min-Price**
COGS	1,00		**1,5**
MoReFa	0,10		
Other costs - transport	0,05		
lowest-alternative	1,50		
MAX-Price calculation			**Max-Price**
1st next-best-alternative	5,80	ApiVar	**5,0**
performance difference to 1st	1,11	19,20%	
2nd next-best-alternative	4,30	Apistan	
performance difference to 2nd	0,80	18,69%	
3rd next-best-alternative	2,20	Apiguard	
performance difference to 3rd	1,22	36,89%	
Customer Segment	**Price Sensitivity**	**Factor**	**Price Segment**
Hobbyists	low	1,1	*5,3*
Amateurs	medium	0,9	*4,5*
Professionals	high	0,7	*4,3*

Table 4-7 : Price-Corridor Model Italy

The model is built in Microsoft Excel and incorporates the conditions discussed in chapter 3.3.. The automation in Excel delivers the results instantaneously.

4.3. RESULTS FROM PRICE-CORRIDOR MODEL

The results from the first experiment with BeeVital give the impression that they are useful in the sense of the concept to deliver a quick and low effort pricing indication. With BeeVital we looked at a rather homogeneous market as the bees' parasite causes globally the same problems. The results reflect this situation as the market price situation is also similar among the 2 example markets what delivers very similar indications.

Still in a direct comparison differences can be seen. Besides the little difference in the variables min-price and max-price the price of the next-best-alternative , ApiVar, is considerable higher than the max-price variable – 135%. See table 4-7.

Comparison	USA	ITALY	ApiVar Italy
Min-Price	1,15	1,5	
Max-Price	5,2	**5,1**	**6,91**
Price Spread	4,05	3,6	
Price by Segment			
Hobbyists	5,8	**5,4**	
Amateurs	4,7	4,6	
Professionals	3,7	4,4	

Table 4-8 : Comparison USA & Italy

Taking into consideration that the max-price should be at the maximum and the performance delta between next-best alternative and BeeVital's product favored actually the max-price. However the unexpectedly off-value clearly shows that selection of next-best alternatives may in combination lead to a skewed picture as the average may be far –requirement for improvement.

5. DISCUSSION, FUTURE PROSPECTS

The generated price-corridor model shows in the application with BeeVital that it can deliver results quickly and easily. Naturally with the proposal of the model it is not proven yet that it will fold true to its promise in practical application. Testing the model is the only way to reliably find its actual relevancy for price strategy.

5.1. DISCUSSION

The proposed model has a clear structure of three variables. While the data for the min- and max-variable is obtained with little effort the user can set a third variable to incorporate a factor relevant to his conditions – here price sensitivity via customer segments.

We found that the model delivers results quickly as it is only one step from data entry to the results. The model is to a certain degree tolerant to the quality and availability of data: it can delivers results on the basis of knowing the costs per unit to the market – something any serious company knows about its products – and the price of the next-best-alternative product in the target market. This means that the model complies with the core requirement – market-research is to be minimized.

Due to its simplicity and tolerance to data quality this model brings a tool to market research which helps to cut effort and time tremendously where a fast, economic and repeatable price determination is required. The model could help especially SMEs that do not carry out customized pricing in the various markets yet. These companies may otherwise not benefit from the optimized sales and profit proper pricing can achieve. The model therefore expands pricing tools by a simple yet effective model and could help mainstreaming customized pricing in market areas of little volume or activity – niche markets – especially international ones where it is simply not feasible investing into market research for all markets.

At BeeVital we have found the model surprisingly congruent with our price data. As of now we can assume that the model will deliver useful results for initiating the pricing process in a new market. This is already useful as we can now very easily do a primary market attractiveness check. For the future we would like to incorporate the transport and customs costs in order to have a more transparent comparison of min-price and max-price margin.

The quality of the model could not yet be sufficiently assessed. Feedback for use in practice or an experiment is still outstanding to comment on the validity of the model – in the functionality as well as for different industries.

One aspect that was encountered in the example model raised concerns. The use of several next-best-alternatives led to a max-price result for `Italy´ where even for the least price sensitive customer segment a price significantly lower than the highest price alternative was indicated – see table 4-7. This needs additional attention in the future and perhaps an indication on how to select the next-best-alternatives for use in the model.

In summary the model is easy to use and delivers an indication on price per market with little effort for data collection. The price indication is a range and henceforth allows the author to draw conclusions on possible price positioning. If combined with additional means of price assessment – i.e. expert opinion – it could be the basis of a pricing strategy.

5.2. EMPIRIC TESTING

Empiric testing of the model is required to confirm its validity as well as finding possible weaknesses perhaps arising out of specific circumstances. The challenge is to obtain the information if the price decisions taken based on the proposed model are optimizing profits. In order to answer this question a comparison with different strategies for price-finding applied individually to the same pricing question could give insights if the model results are comparable. However in order to know the end-benefit of the applied model and where the overall gain is higher real market tests are necessary. Only after use and evaluation of sales figures a statement regarding economic benefit can be made for the model.

If empiric testing is not possible a survey could be conducted where the model is used to generate a price indication for a certain product of a company and then their relevant employees are interviewed about their insight into the price structure for the respective product – without them knowing about the model results.

5.3. OUTLOOK

If the model can reliably indicate prices is yet to be confirmed. Besides this core question to be answered we believe the model has the potential to be of use in the assessment of market attractiveness. If the Price-Corridor Model was integrated as the first part of a twostep model to assess market attractiveness the second part could build on the findings of the Price-Corridor model. For the 2nd part the additional integration of market size is relevant.

This could be further developed into a model where the combination of min/max-price, market potential, market share and product life cycle are combined to delivery an indication of the returns for a target market over the predicted product lifetime.

Finally the results of several countries or markets can be combined and a ranking can be established.

	A	B	C	D	E	F	G	H	I
				Market Potential		Sales by market share			
Market	**Min-Price**	**Max-Price**	**Market Size**	**minimum (A x C)**	**maximum (B x C)**	**3% min**	**3% max**	**8% min**	**8% max**
A	100	200	1000	100000	200000	3000	6000	8000	16000
B	150	250	1200	180000	300000	5400	9000	14400	24000
C	200	300	500	100000	150000	3000	4500	8000	12000

Table 5-1 : Outlook - Market Attractiveness Assessment

This may be as straight forward way for products to have a general relevance without adaption to local needs or conditions. In this case that product adaption may be necessary the related change in the cost-structure must be carefully incorporated as else the possible profits will not reflect theses differences in cost and the results will be skewed.

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