

Towards a practical approach to value-based pricing: Development and evaluation of the “ROI calculator tool for SaaS Startups” to improve value quantification & value communication

Working paper
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Abstract

The software-as-a-service (SaaS) market has experienced significant growth in recent years, with business-to-business (B2B) SaaS companies being particularly attractive to venture capitalists. Profit expectations for startups are high, so optimizing pricing based on customer value is crucial. Many startups may encounter challenges in “wanting” to implement value-based pricing—i.e., they face barriers in the decision-making process such as lacking awareness, understanding, or openness to consider value-based pricing—or in “knowing” how to implement it—i.e., they would like to implement value-based pricing but face barriers related to required capabilities to execute it. This study addresses the second hurdle by developing and evaluating a practice tool to improve value quantification and value communication for B2B SaaS startups.

1 Introduction

1.1 Problem identification & motivation

The superiority of value based pricing over other pricing strategies has been found in its positive influence on new product performance (Ingenbleek et al., 2010). Prior research findings suggest that the advantages of value-based pricing result from its extension of cost-based and competition-based pricing concepts by two major elements: value quantification and value communication (Ingenbleek et al., 2003, p. 301; Kortge & Okonkwo, 1993; Töytäri et al., 2015). However, value-based pricing is yet not commonly established in practice, whereas cost- and competition-based pricing is prevalent (Hinterhuber & Liozu, 2014; Liozu, 2017).

The barriers to value-based pricing can be categorized in two sequential steps: first, in the initial “decision-making”, e.g. due to lack of awareness, management support or openness to change organizational mindsets to adopt a value-based pricing approach. Second, in the “execution” of value-based pricing, specifically how to conduct value quantification and value communication. For example, firms often lack the ability to apply value-based pricing and the core element of value quantification in particular due to limited availability of data on customer interaction with their new products or services, and limited experience, resources, and expertise in interpreting and using such data for price decisions (Hinterhuber, 2008; Liozu, 2017). Another difficulty in the implementation of a value-based pricing strategy is communicating the value to the customer, as the last hurdle in the overall process to finally capture the value created (Hinterhuber, 2008, p. 46; Töytäri et al., 2015, 2017).

This study is embedded in the overall research of this dissertation, which set out to contribute to overcoming the barriers to the implementation of value-based pricing, by creating awareness and by providing recommendations how to address major obstacles. In Study 1, we created awareness of the benefits and challenges of value-based pricing by providing a synthesis of research findings and identifying research gaps. Study 2 introduced a practical approach for value quantification, measuring the importance of value signals online. Finally, in this third study, we aim to provide an approach to both value quantification and value communication. We develop a practice tool for software-as-a-service (SaaS) startups who have gained increasing attention by venture capitalists in recent years and who are a relevant target group for value-based pricing: SaaS startups

have the right prerequisites for value-based pricing, being able to develop a pricing strategy from scratch, but they can also greatly benefit from it through their flexibility in creating individual product packages for customers.

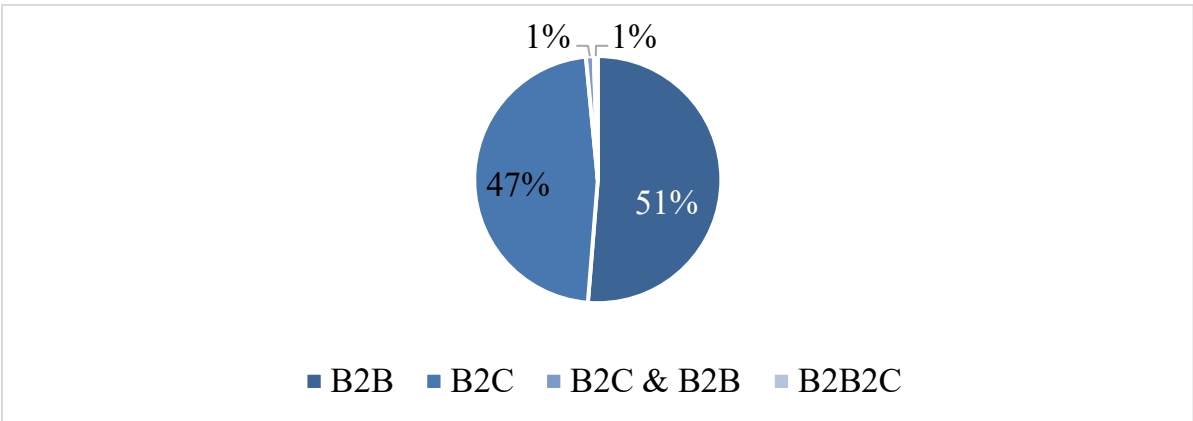
We aim to design a practice tool incorporating successful elements from prior research, providing an approach for firms to help their customers fully perceive the value of their product by effectively quantifying and communicating that value. More precisely, the tool provides an approach to framing price and value, highlighting potential of optimizing prices based on benchmarking insights. Overall, our research addresses the following research question:

RQ3: How can B2B SaaS startups be supported in improving value quantification and value communication?

1.2 Identification of a relevant target group

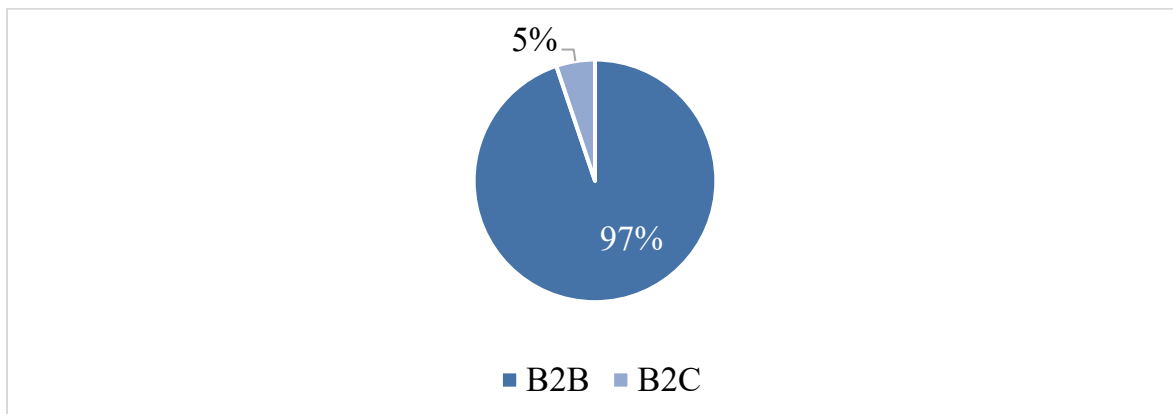
The practice tool is targeted to SaaS startups. The SaaS sector has faced significant growth in recent years, from 31.4 billion US dollars in 2015 to 167.34 US dollars in 2022, and is still expected to grow (Statista, 2023). Due to the flexibility in product structure and therefore individualization opportunities of product packages, SaaS businesses are a relevant target group for value-based pricing. Hence, research on value-based pricing for SaaS businesses is particularly relevant.

Figure 1: Distribution of business models of unicorns in the U.S.



Source: Tamaseb (2018)

Figure 2: Distribution of business models of Series B-funded SaaS companies in DACH



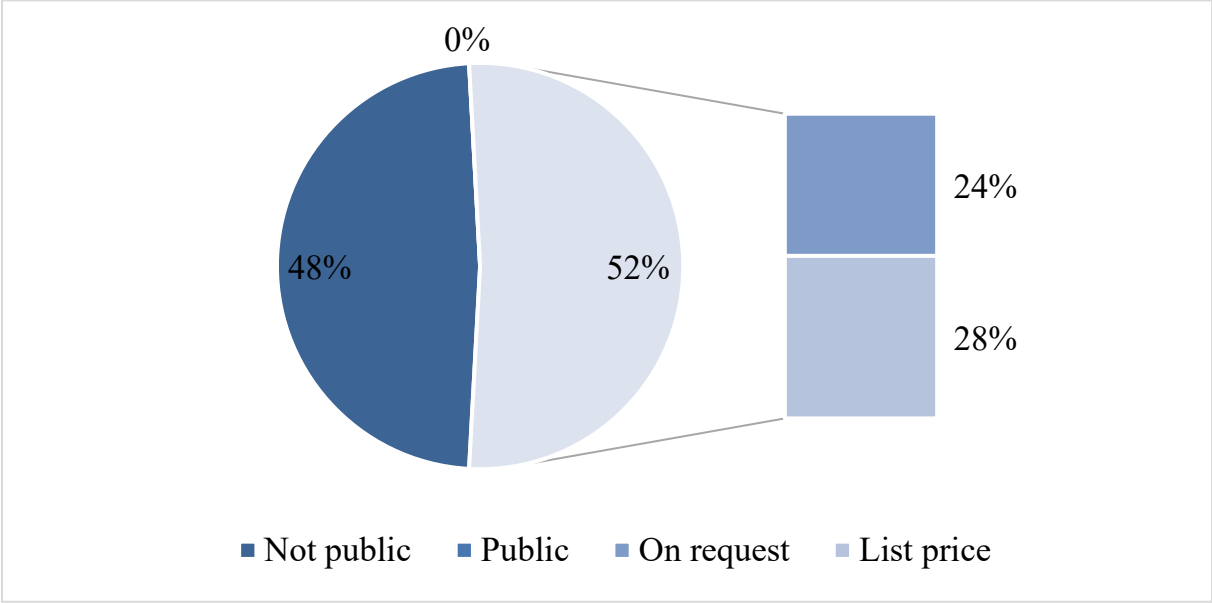
Source: Crunchbase analysis 2021; SaaS businesses in DACH with Series B funding (last funding round); n = 29

In addition, we chose to develop the tool for business-to-business (B2B) SaaS startups who gained increasing attention from venture capitalists in DACH in recent years. In comparison to business-to-consumer (B2C) SaaS startups, the share of B2B SaaS startups who receive funding is relatively higher. Across all product types, the share of VC-funded B2B (versus B2C) businesses is almost 50% (Tamaseb, 2018). But, our Crunchbase analysis of Series-B funded SaaS startups in DACH revealed a clear focus of 97% on B2B SaaS startups (versus B2C SaaS startups) (Crunchbase, 2021). These results are illustrated in Figure 1 and Figure 2.

For B2B SaaS startups, value-based pricing is especially relevant, as they often have deal-based sales processes and know their customer (groups). Our analysis of the official websites of the 29 identified companies revealed that price information was kept scarce: only 52% of the companies provided information on their websites, where 28% stated an actual list price and 24% provided pricing information, but actual prices only on request, as illustrated in Figure 3. Nevertheless, our analysis of publicly available information provided strong indications that the SaaS startups attempted to follow value-based pricing approaches. All of the 15 startups where pricing information was available based their pricing on factors such as product usage, product features and/or service level, and the majority of 80% was providing at least two product packages, as shown in Figure 4. Product usage (87%) was the leading pricing factor among the SaaS startups, closely followed by product features (80%). These are indicators for a value-based pricing approach. At the stage of VC funding, SaaS startups should have required tools

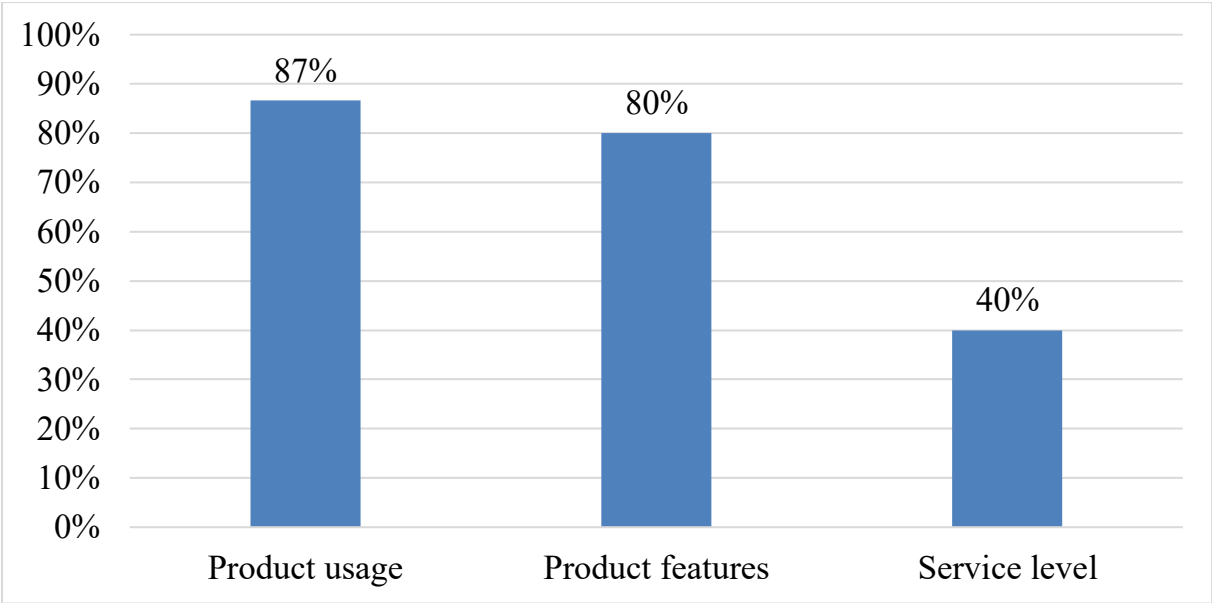
and skills available to successfully implement this superior pricing strategy. Thus, the practice tool is established for B2B SaaS startups, supporting them from early stage to Series-B funding. However, any new business seeking to implement value-based pricing can benefit from the tool, so that the target group is actually broader.

Figure 3: Availability of pricing information on websites of Series-B funded SaaS businesses in DACH



Source: Analysis of company websites, Series-B funded SaaS businesses in DACH (last funding round); n = 29

Figure 4: Usage of pricing factors (double count possible) of SaaS businesses



Sources: Crunchbase analysis 2021; Series-B funded SaaS businesses in DACH (last funding round); n = 15

2 Requirements of the target group & the goal of the tool

2.1 Requirements of the target group

Prior research has identified value quantification and value communication as major hurdles to the implementation of value-based pricing (Liozu, 2017; Töytäri et al., 2015, 2017). Hence, we defined the goal of the tool to provide support for both, the definition of a pricing logic based on value, i.e. value quantification, and the communication of that value to the customer. However, we also found that requirements on the tool functionality differs among the two parts.

Furthermore, the tool should provide a benchmarking indication in order to provide information on pricing levels. The interviews confirmed that benchmarking would be a relevant function of the tool and that ideally the tool would show pricing recommendations based on benchmarking to the user.

2.2 Requirements for value quantification

Due to the nature of B2B businesses, there is a high need to tailor solutions & pricing not only to individual firms and products but also to individual customers. Meeting this need is facilitated in SaaS businesses due to the possibility to differentiate product packages per customer and to set prices respectively. In SaaS businesses it is common to charge different prices for the same product to different customers, for example based on product usage or service level, or even on the size of the company of the customer (Lehmann & Buxmann, 2009; Ojala, 2015). Overall, this flexibility in product packaging enables a large opportunity for B2B SaaS businesses to establish an individual, sophisticated value-based pricing logic. On the other hand, it limits the creation of a generic tool which may be used by a large group of businesses. In our interviews we learned that, however, a tool would contribute by guiding the user through the concept of value-based, stating the right questions and showing the underlying mechanisms which can be used to define the pricing logic.

2.3 Requirements for value communication

The need for individualization is less for value communication than for value quantification, as in the eyes of the customer the purchase decision largely depends on a positive customer(-perceived) value, i.e. a positive the delta between the customer benefit „what the customer gets” (Smith, 2020, p. 482) and the price „what the customer

gives” (Smith, 2020, p. 482; Töytäri et al., 2015, p. 55). Thus, we aimed to provide a general function for value communication in the tool.

Overall, we the tool should meet the requirement of individualization of the value quantification logic on the one hand, and offering benchmarking and best practices for comparison on the other hand. The tool should moreover provide the user an approach to communicate the value of the product.

2.4 The goal of the tool

The identified requirements of the target group can be translated into the following tool specifications, aiming to achieve the overall goal of the tool to support B2B SaaS startups in improving value quantification and value communication:

1. The tool should enable the user to set up value quantification and define a pricing logic. This function needs to be individualizable by the user in order to meet the business situation.
2. The tool should provide the user with an effective value communication. This function should be a standardized approach for users.
3. The tool would benefit from information on value-based pricing best practices and benchmarks.
4. The tool should be particularly targeted to the needs of B2B SaaS startups.

Overall, the individual steps in the tool should be developed with learnings from best practices and expert insights, supporting a solid understanding of influences on the customer’s price and value perception.

2.5 Prior solutions: Value quantification and communication in literature

Prior research provides approaches for both value quantification and value communication. Practitioners are recommended to use such approaches in order to capture customer value: first, by assessing the theoretical customer value (TCV), and, second, by influencing the customer(-perceived) value (CPV) (Backhaus et al., 2010;

Hinterhuber, 2008; Raja, Frandsen, Kowalkowski, & Jarmatz, 2020; Smith, 2020; Töytäri, Rajala, & Alejandro, 2015; Windisch, 2019). Both steps can be facilitated through a co-creation process with the customer (Ingenbleek, 2014; Stoppel & Roth, 2017). Whereas a number of studies exist on practical approaches for value quantification (Codini et al., 2012; Dost & Geiger, 2017; Gale & Swire, 2012; Johnston & Mora Cortez, 2018; Kijewski & Yoon, 1990; Kim, 2018; Wardell et al., 2008; Windisch, 2019), literature on value communication approaches is comparatively scarce (Backhaus et al., 2010; Smith, 2020), see Table 1.

Table 1: Prior solutions for value quantification and communication in literature

Value-based pricing element	Paper	Practical approach
Value quantification / customer analysis	(Windisch, 2019)	Customer-targeted project-specific profit formulas
	(Kim, 2018)	Product attribute pricing
	(Johnston & Mora Cortez, 2018)	Unit value-based pricing
	(Codini et al., 2012)	Conjoint analysis
	(Wardell et al., 2008)	Discrete choice decision making
Value quantification / competitor analysis	(Dost & Geiger, 2017)	Multi-product price response maps
	(Gale & Swire, 2012)	Customer value mapping; product performance scorecard
	(Kijewski & Yoon, 1990)	Price-performance curves
Value communication	(Smith, 2020)	Concept of value-price exchange
	(Backhaus et al., 2010)	Recommendation system / software prototype

The major goal in value communication is to capture the customer value created (Backhaus et al., 2010; Hinterhuber, 2008; Raja et al., 2020; Smith, 2020; Töytäri et al., 2015; Windisch, 2019), which requires the customer to fully perceive the value as well (Hinterhuber, 2008; Raja et al., 2020; Smith, 2020). For example, Smith (2020) suggests to rethink value communication by new ways of framing price and value, with the goal to identify the best way to present the information for the customer decision. Other approaches for value communication have been proposed, such as recommendation

systems similar to Amazon or Spotify (Backhaus et al., 2010) or benchmarking of competitor’s offerings (Dost & Geiger, 2017; Drolet, 2004; Forbis & Mehta, 1981; Gale & Swire, 2012; Kijewski & Yoon, 1990). However, we are not aware of an approach supporting SaaS businesses in improving value quantification and value communication.

2.6 Prior solutions: Value quantification and communication in practice

During our research of practice solutions for value-based pricing, we found that five out of the 29 SaaS companies used the financial indicator “return of investment” (ROI) on their company websites in order to communicate value to customers (e.g., Capmo, Coachhub). Additional research provided us case examples where startups not only communicated the ROI for marketing purposes, but also provided do-it-yourself-ROI calculators for customers on their websites (e.g., Coachhub).¹ In this context, we found one tool, named Outgrow, which allows companies to create a web-based ROI calculator with the purpose of lead generation.² However, the solution did not include benchmarking nor was it particularly targeted to B2B SaaS startups. Furthermore, we found discussions on value-based pricing in SaaS blogs, but, we did not see an actual practice tool solution for value quantification in B2B SaaS startups. Thus, the value quantification and pricing logic function will be an additional value-add of the tool for the defined target group. Moreover, the ROI concept is a promising solution for value communication in practice. Hence, we decided to include the ROI concept in the value communication function in the tool to define the customer(-perceived) value and to enable benchmarking with other SaaS businesses. Thus, we translate customer(-perceived) value into the relative unit ROI, which describes the relation of the gain of the customers to their investment:

$$ROI = \frac{\text{customer benefit} - \text{customer price}}{\text{customer price}} = \frac{\text{customer value}}{\text{customer price}}$$

The tool should guide the user to calculate the ROI of the product in the eyes of the customer. The ROI information can then be used for value communication towards the

¹ Coachhub ROI calculator accessed October 10th, 2023 via <https://www.coachhub.com/roi-of-coaching/>

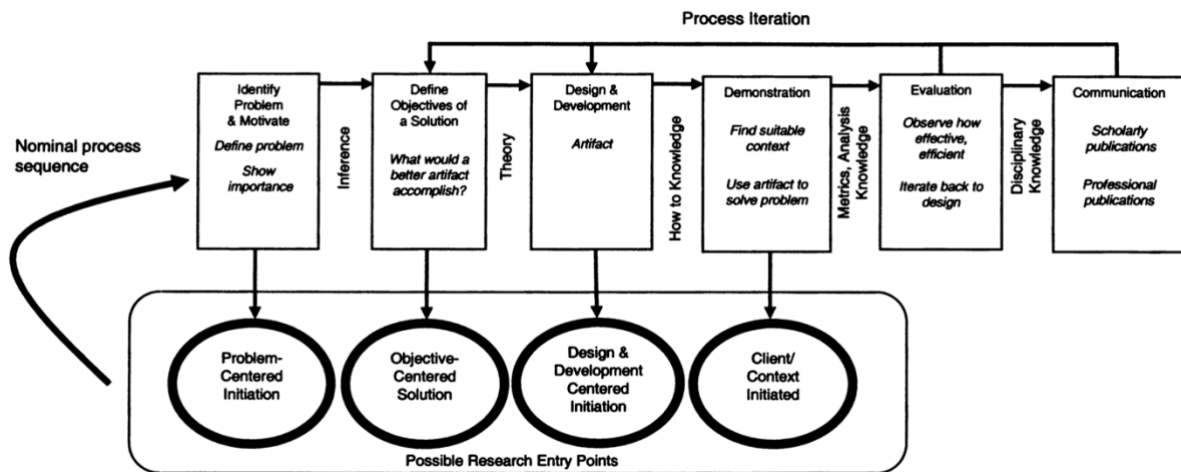
² Outgrow company website accessed October 10th, 2023 via <https://outgrow.co/>

customer, but also as an indicator for potential price adjustments compared to other SaaS businesses.

3 Methodology

To create a successful tool, we followed the process model described in Peffers et al. (2007). The authors synthesized findings of prior research and proposed a six-steps-approach for doing, presenting & evaluating design science research, illustrated in Figure 5.

Figure 5: The six-steps-approach by Peffers et al. (2007)



Source: Peffers et al. (2007)

Step 1: Identify problem & motivate

Our study built on the research findings from the structured literature review (Study 1) as well as our analysis of B2B SaaS startups. To select a group of relevant startups, we used the Crunchbase database to identify all current series-B-funded SaaS businesses in DACH. The funding state as well as the regional focus was chosen in order to compare a similar group of startups. Our analysis revealed 29 companies in total of which nearly all were offering a B2B software; only one of them was operating in B2C (*Crunchbase*, 2021). In a next step, we researched publicly available information on the websites of the identified companies to create an understanding of their use of value-based pricing, in particular in their pricing logic and in their value communication towards the customers. Literature insights and results of our analysis framed the overall goal and motivation of this study.

Step 2: Define objectives of a solution

The objectives of the solution, i.e., the defined goal of the tool, grounded in the problem motivation. Furthermore, we detailed out the tool requirements based on literature research and insights from a total of seven expert interviews with founders of B2B SaaS businesses. Finally, we assessed existing solutions in literature and practice for the defined problem and leveraged established methods which were promising to improve our solution.

Step 3: Design & development

We chose an iterative development process for the tool, which has developed over a time period of 4 years from initial ideas to the final iteration. The tool is spreadsheet-based in order to allow required calculations and retain flexibility for individual formula adjustments by the user. The tool development has continuously been informed by literature insights gained throughout the dissertation project and by practice insights, e.g., best practice case examples and the expert interviews with founders of B2B SaaS businesses. The six iteration stages of the tool are described in Table 14. Furthermore, one core function we aimed to develop was the ROI benchmarking. In order to collect relevant ROI benchmarks, we searched the websites of the 29 SaaS businesses identified via the Crunchbase database for ROI information used in their value communication.

Step 4: Demonstration

Our results include a step-by-step demonstration of the tool. The demonstration shows screenshots and a manual-like description of an example tool application with illustrative data.

Step 5: Evaluation

We tested the tool in two ways. First, we analyzed the fulfillment of the defined requirements. Second, we demonstrated the tool to experts and asked for their feedback and improvement opportunities. We conducted seven expert interviews over a time period from March 2022 to December 2023 which influenced the last two iteration stages of the tool. From these interviews, four experts were guided through an actual tool demonstration to provide their feedback on the tool functions and identify improvement opportunities.

Step 6: Communication

We aimed to reach two target groups: the defined target group of the tool as well as researchers. Hence, we structured this paper as an empirical research process with particular focus on the discussion and contribution section for future research. Furthermore, we created a prototype of the tool in order to provide a self-service application for the implementation of the described approach.

Table 2: Development stages of the ROI calculator tool

Version	Description	Insights / Change requirement	Source of insight
Iteration 1 2020/02	Pricing tool for accommodation bookings	Existing solutions; target group too narrow	Literature review / Company websites
Iteration 2 2020/05	Step-by-step questionnaire & predictive pricing tool for value quantification	Linked to competition-based pricing; undefined target group; lack of data access	Literature review / Research
Iteration 3 2021/04	Step-by-step questionnaire for value quantification to define pricing logic / SaaS	Initial concept of the ROI calculator	Literature review / Research
Iteration 4 2021/10	Value-based pricing navigator	Alternative tool with broader perspective; need clearer focus on specific aspect	Literature review / Research
Iteration 5 2022/03	ROI calculator / SaaS iteration 1	Adding benchmarking data and more flexibility in calculation logic	Expert interviews / Company websites
Iteration 6 2023/11	ROI calculator / SaaS iteration 2	Detailing out value factors	Expert interviews

4 Results

4.1 Design & development

The tool was developed in an iterative process over a period of four years and 6 iteration stages, from which iteration stages 5 and 6 represent the ROI calculator tool in its current form. Iteration stages 2 and 4 already included relevant parts of it, whereas iteration stages 1 and 3 were alternative pricing tool ideas. The development was shaped by literature findings as well as by practice insights and co-creation with experts. The iteration stages are shown in Table 2: Development stages of the ROI calculator tool

4.2 Demonstration of tool functionality

The tool is spreadsheet-based and guides the SaaS startup through a two-step process to calculate the ROI of the software. The process is described for the SaaS startup in the following, but could also be done in a co-creation process between the SaaS startup and the customer who is buying the software.

Step 1: Value quantification

The SaaS startup defines the value quantification. The SaaS startup needs to select the appropriate category of customer value creation for the software and define how the value is created for each category. The initial question in this step is to decide, if the software creates value through cost decrease, through revenue increase, or both.

Step 1: Value quantification for SaaS products					
How does your product generate value to your customer? See Case example					per month
Value proposition	Description	unit	value per unit	no. of units	sum
Cost decrease					
Time saving	How much time does the customer save by using the software? <i>product feature 1</i> <i>product feature 2</i> <i>product feature 3</i>	saved hours	40,00 €	15	600,00 €
Risk reduction	Does the software help the user to reduce risk? E.g. through automated controls. How much is the financial risk? <i>risk source 1</i> <i>risk source 2</i>	reduced financial risk	0,00 €	1	0,00 €
Cost saving (other)	Are there other cost that the user saves with the software?	reduced other cost	0,00 €	1	0,00 €
Revenue increase					
New customers	Does the software help the customer to sell more products? <i>increase of leads</i> <i>increase of conversion rate</i>	new customers	100,00 €	10	1.000,00 €
Revenues per customer	Does the software help to sell products at higher prices? <i>upsell opportunities</i> <i>cross-sell opportunities</i>	increase in CLV	10,00 €	10	100,00 €
Revenue increase (other)	Are there other ways of revenue generation that the user has with the software? <i>customer experience</i> <i>brand value</i>	increase in other revenues	0,00 €	1	0,00 €
Total value					1.700,00 €
Next					

Step 2: Pricing logic

The SaaS startup defines the pricing logic for the software by setting individual pricing formulas. This should be done for each product feature.

Step 2: Pricing logic for SaaS products

How do you define the price for your SaaS product?

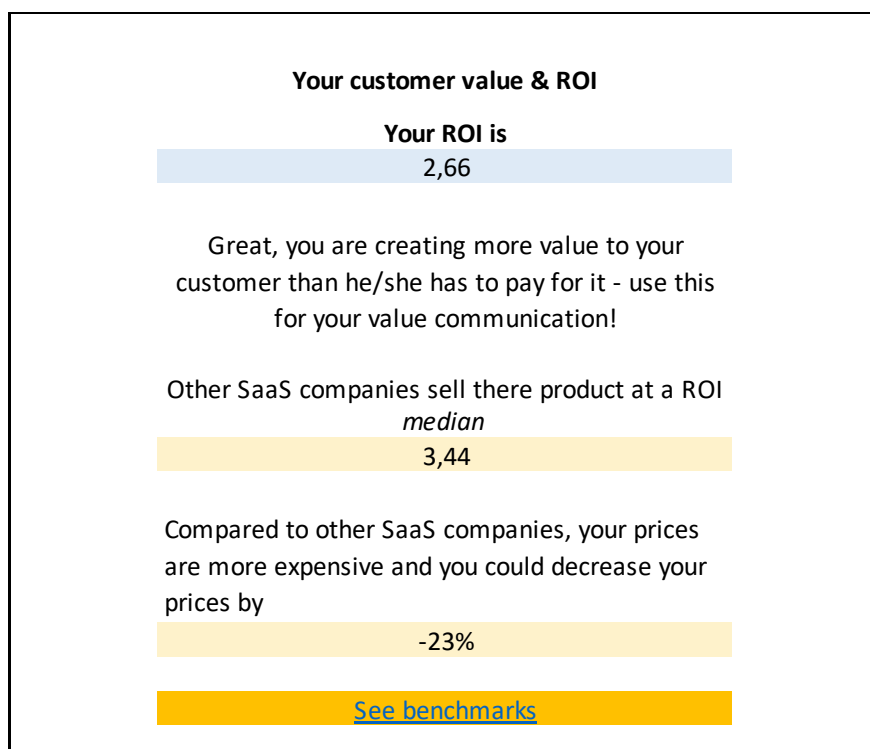
per month

Price factors	Description	unit	per unit	no. of units	sum
base price	Is there a fix base price? (e.g., monthly, yearly)	base price	195,00 €	1	195,00 €
additional user account		per user	9,00 €	25	225,00 €
additional storage (GB)		per GB	20,00 €	6	120,00 €
product feature 1		add-on	99,00 €	1	99,00 €
<i>product feature 2</i>		other	0,00 €	1	0,00 €
<i>product feature 3</i>		other	0,00 €	1	0,00 €
Total price					639,00 €

[Calculate ROI](#)

Result: ROI benchmarking

The tool calculates the customer value based on the ROI for the customer and provides benchmarking information. This information can be used by the SaaS startup to adjust pricing level and to communicate the value of the software to the customer.



4.3 Insights of the ROI benchmarks

We found ROI information in five of the 29 cases (17,2%)—namely for CoachHub, BRYTER, Capmo, Camunda, and quantilope—from which four benchmarks where

stated on the website and one benchmark was stated in a report. During our online research, we came across an article on ROI used for value communication by the SaaS company Zoom, which we added in the list of benchmarks. The ROI benchmarks are listed in Table 3.

Table 3: List of ROI benchmarks

Case example	Value proposition (main)	ROI	Source
CoachHub	outcome (employee skills)	2,60	www.coachhub.com
BRYTER	time saving	3,68	www.bryter.com
Capmo	time saving, risk reduction	33,00	www.capmo.com
Camunda	time saving	3,89	www.camunda.com
quantilope	time saving	3,19	www.quantilope.com
Zoom	time saving (productivity)	2,61	www.zoom.us

Source: Company websites

4.4 Evaluation of the tool

4.4.1 Fulfillment of requirements

We defined four requirements of a successful solution, which we were able to address with the developed tool. First, the tool should enable the user to set up value quantification and define a pricing logic. This function needed to be individualizable by the user in order to meet the business situation. This requirement is incorporated in step 1 and step 2 of the tool. Furthermore, the tool offers a standardized tool box for value factors and pricing formulas but still provides room for adjustments to meet the individual business situation.

Second, the tool should provide the user with an effective value communication. This function should be a standardized approach for users. This requirement is reflected in the result of the tool by calculating the ROI based on value and price.

Third, the tool would benefit from information on value-based pricing best practices and benchmarks. This requirement was incorporated in both the value quantification and value communication part of the tool which were developed with practice insights and initial benchmarking data. The benchmarking data could further grow through application of the tool.

Fourth, the tool should be particularly targeted to the needs of B2B SaaS startups. This requirement is met as value factors and pricing formulas were pre-filled with common factors identified in SaaS B2B companies.

Table 4: Overview of expert interviews

Interview partner	Software description	Interview insights
Expert A	Fleet management	Development
Expert B	Real estate sales management	Development, Evaluation
Expert C	Construction management	Development
Expert D	Machine troubleshooting	Development
Expert E	Health care management	Evaluation
Expert F	Construction management	Evaluation
Expert G	Market data provider	Evaluation

4.4.2 Expert feedback

We received valuable insights from seven experts, all of them founders of B2B SaaS businesses, for the development and evaluation of the tool, listed in Table 4. Six of the interviews were conducted as semi-structured interviews, one expert provided a written statement. Three interviews were conducted during the development phase of the tool and did not include an actual tool demonstration. Four experts were guided through a tool demonstration and provided feedback on the individual parts of the tool. The feedback from the four experts on the tool demonstration is synthesized in Table 5.

Overall, we received positive feedback on the three functions of the tool: value quantification, value communication and benchmarking. Whereas the concept of using ROI for value communication was evaluated positive by all interview partners (the ones we demonstrated the tool, but also the others, who agreed to the benefits of using ROI in general), we also received valuable feedback on improvement opportunities for the functions value quantification and benchmarking.

In general, the structuring of the value quantification and pricing logic was found informative and helpful, even ready-to-use by one of our interview partners who was open to use this approach in ongoing customer discussions. Improvement opportunities were identified in terms of making it more sophisticated, i.e. further detailing out the

value quantification and pricing logic and highlighting further best practices or use cases how this could be applied.

Table 5: Evaluation of the tool

Tool benefits	Improvement opportunities
<p>Value quantification</p> <ul style="list-style-type: none"> • That’s “how we think” pricing • Helpful to learn the logic how value quantification can be done and which value factors are relevant for SaaS business • The part with the value quantification is most helpful; would take that into the discussion with the customer • That’s very “logical” • Great idea to show this to the customer <p>Value communication / ROI</p> <ul style="list-style-type: none"> • ROI calculation relevant and helpful for value communication <p>Benchmarking</p> <ul style="list-style-type: none"> • Benchmarking data interesting if they do not vary too broadly • Benchmarking would help to show the customer that the price is fair (because it is in relation to value) 	<p>Value quantification</p> <ul style="list-style-type: none"> • Highlighting more best practices to understand what value factors can be used • Could be more sophisticated to meet individual business situation <p>Benchmarking</p> <ul style="list-style-type: none"> • The tool could suggest the price via the benchmarking data instead of asking the price from the tool user • Benchmarking data should show companies in same industry, but is already interesting across industries • Benchmarking difficult in terms of comparison, would need to be similar companies

The value communication via the ROI was confirmed to be relevant by our interview partners. We heard that ROI calculations were often requested by customers and that ROI calculations were already used by three of our interview partners.

The benchmarking idea was evaluated positive in terms of transparency and arguments of fairness towards the customer, but would benefit from specifications. For example, it would be interesting if the data did not vary too broadly, and if data within the same

industry (versus across industries) was available. Also, one suggestion was to use the benchmarking to calculate the price in step 2 instead of using it only as a benchmark.

Table 6: Insights from the expert interviews on the implementation of value-based pricing

Success factors to value-based pricing	Hurdles to value-based pricing
<p>Overall</p> <ul style="list-style-type: none"> • A simple solution would be very “cool” to meet the customer’s individual willingness to pay <p>Value quantification</p> <ul style="list-style-type: none"> • Pricing for extra features works well • Pricing depends on customer revenues; the more revenues, the higher the cost for the product • Conducting a customer survey revealed actual time saving by using the software and was used to estimate willingness to pay <p>Value communication</p> <ul style="list-style-type: none"> • Three interview partners already use ROI calculation together with the customer 	<p>Value quantification</p> <ul style="list-style-type: none"> • Estimating the value is extremely difficult, depending on the product-customer use case • Complexity due to many factors influencing the value • Customer do not communicate the value to the company • Difficult to estimate the value of “risk reduction” <p>Value communication</p> <ul style="list-style-type: none"> • Difficult to have-subscription based pricing industry due to customer acceptance • Customers do not understand value of the product, needs to be explained • Difficult to convince customer from pay-per-use as they don’t know the final price then • Customers do not appreciate the value of software <p>Competitor prices</p> <ul style="list-style-type: none"> • Customer have competitor prices in mind • Competitor prices are strongly influencing willingness to pay of the customer, which makes value-based pricing difficult

Beyond that, the expert interviews revealed further learnings about the implementation of value-based pricing in startups, summarized in Table 6. First of all, no one of our interview partners questioned the benefits of value-based pricing. Even the ones who were reluctant to implement value-based pricing confirmed that a simple solution to

capture individual willingness to pay of customers would be highly desired. The reasons for not having focused on the implementation of value-based pricing were named to be the difficulties of estimating the value (i.e., value quantification) or convincing the customer of the value (i.e., value communication). On the other hand, we heard of many pricing strategies that already took value-based pricing elements into account. For example, setting prices for individual software features, setting prices depending on customer revenues, and even setting prices based on an estimate of customer value through a calculation on how much time the customer saves by using the software. Overall, the desire to further optimize pricing and, thus, the need for a practice tool to help overcoming the barriers of value-based pricing was strongly confirmed in the expert interviews.

5 Discussion

We found positive resonance on the core functionality of the tool and the goal which it intends to achieve: to support B2B SaaS startups in improving value quantification and value communication. All of our expert partners agreed that value-based pricing is a desirable approach to optimize profits, even though not all of them agreed that it is suitable as solely pricing approach for their product. For example, we found the same phenomenon that is described for many firms also in our group of startups: the tendency to avoid value-based pricing due to the underlying assumption that the own product-customer situation is too complex and not allowing a pricing approach accounting for individual customer value case by case. However, we seemed to have triggered a thought-process in the expert partners to whom we demonstrated the tool how to further adjust the suggested value quantification logic to their own product and how to use the tool in future customer discussions. Hence, the tool has a high potential to help startups to adopt the elements of value-based pricing.

We draw several findings from the expert interviews. First, the tool is most effective for startups who are already beyond the first hurdle of actually “wanting” to implement value-based pricing but who need support to apply the approach to their business. Second, the effectiveness of the tool depends on the potential stage of implementation of value-based pricing in the startup, as similar value calculations or ROI calculations may already be in place so that some elements of the tool could be redundant. Third, we learned in the expert interviews that the tool may not be a pragmatic or “quick” solution

for all types of software product due to complexity of product-customer use cases. Hence, the tool works best for startups who have a software product which targets homogeneous customer groups and addresses a standardized process (e.g., it is more suitable for a software to support a standardized administration processes than for a machine troubleshooting software).

Overall, we found that the tool is an efficient solution for a certain target group which can be addressed by a self-selection process: startups for whom the tool is most effective would be more open to search for and apply such a practice tool. However, expectation management when promoting the tool could further help to set the right expectation what the solution offers: a tool to trigger thinking how to conduct value-based pricing, how to set up value quantification (ranging individually from simple to complex calculations) and how to use this for the value communication towards the customer.

5.1 Contributions

Our study contributes to two research streams by applying findings on value-based pricing to an entrepreneurial context. We developed and evaluated a practice tool to improve value-based pricing in B2B software startups. The tool emphasizes the customer value perspective and leverages research-based recommendations. With this, we aimed to build a bridge from pricing and marketing research to entrepreneurship literature, where research on value-based pricing has been scarce.

Moreover, our study makes contributions to practice. The developed tool provides startups with an approach to improve value quantification and value communication. Through the spreadsheet-based design it is accessible for a broad range of users, easy-to-use and adjustable which optimizes the relation of input (i.e., time and cost spent by the user) and output (i.e., improving value-based pricing). In addition, the application of the tool does not require a high amount of resources or historic data, i.e., is suitable for startups already in early stages or who face limited resources to develop sophisticated pricing strategies in-house.

In particular, B2B SaaS startups may benefit in three ways. First, our study increases awareness of the superiority of value-based pricing. Second, it provides a ready-to-use tool for value quantification and value communication and shows how it can be translated to software products. Finally, we provide a solution to improve pricing—and

thus, profit—in the long-term. Thus, we encourage practitioners to use our tool and apply it to their own businesses.

Through the combination of an evaluation study based on a design science research approach and a practice tool for startups we contribute to the literature on value-based pricing on the one hand and increase the reach of our research findings to practitioners on the other hand. With the development of a practice tool for startups our study further contributes to entrepreneurship research, such as the St. Galler Startup Navigator by Grichnik et al. (2017).

5.2 Limitations and future research

Despite the contributions that we make, our study has limitations and offers opportunities for future research. Even though we received positive feedback by tool users on the core functionality and mechanism on the tool required to fulfill the goal of this study, we also learned that there could be further elements to improve the user experience: e.g., the tool could highlight best practices and case examples on value factors. Thus, future research could conduct case studies on the tool application and directly measure the improvement of value-based pricing, either through feedback surveys or through the assessment of sales data.

In addition, the feedback on benchmarking was two-sided. On the one hand, benchmarking was confirmed to be interesting, on the other hand our interview partners were critical of the meaningfulness of results (e.g., the relevance of such a comparison). Nevertheless, in order to create the potential of a meaningful benchmarking database, the tool could be setup as an online version in combination with a company survey—e.g., asking for industry and product characteristics—to collect benchmarking data for future research.

Finally, we decided to focus on a defined target group. Future research could transfer our tool—in particular the value quantification and the selection of value factors—to other groups of businesses: e.g. non-SaaS companies, or B2C companies.

6 Conclusion

Our study is embedded in prior research on the interface of entrepreneurship and marketing. The need for research on value-based pricing for entrepreneurs is high as this

superior pricing strategy is a promising approach for startups: they can define their pricing from scratch, not encountering the need of an organizational transformation to change how pricing is conducted. Our specific focus is on B2B SaaS startups, a sector that has experienced significant growth and venture capitalists' attention in recent years. Overall, this study presents an efficient solution for B2B SaaS startups seeking to adopt value-based pricing already in the early stages of their business.

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