Service-Based vs. Goods-Based Positioning of the Offering: Effects on Customer Perceived Value

Fabio Cassia
Department of Business Administration, University of Verona (Italy)
email: fabio.cassia@univr.it

Marta Ugolini
Department of Business Administration, University of Verona (Italy)
email: marta.ugolini@univr.it

Nicola Cobelli
Department of Business Administration, University of Verona (Italy)
email: nicola.cobelli@univr.it

Liz Gill
Rehabilitation Studies Unit, Northern Clinical School, Sydney Medical School,
The University of Sydney (Australia)
email: liz.gill@sydney.edu.au

Abstract

To counteract increasing competition and satisfy evolving customers' needs, many firms are changing the positioning of their offering, from being product-based into service-based. Despite the increasing relevance of this shift, it is still unclear if this choice has a differential impact on customer perceived value.

Therefore the purpose of this paper is to analyze customer perceived value for a firm's offering being positioned either as service-based or product-based. An experiment was conducted using stimuli from two different product categories (hearing aids and bicycles) and measuring customers perceived value through the PERVAL scale's four dimensions (quality value, emotional value, price value, social value).

The results show that presenting the product as service-based instead of good-based can enhance customer perceived value (in particular: quality, emotional and social value), but only if customers are not familiar with the product.

Keywords
Service-dominant logic; servitization; perceived value

1. Introduction

In an effort to differentiate and counteract increasing competition, and to satisfy the evolving customers' needs (Kindström, 2010; Ferreira et al., 2013), several firms are reorienting their product-based offerings into service-based offerings (Vandermerwe & Rada, 1988; Baines et al., 2009). This shift involves that:

- the immaterial part of the offering (information, customization, customer assistance) is emphasized (Vandermerwe & Rada, 1988);
- the need to transfer property rights to the buyer is overcome by the possibility to offer access to goods, facilities, staff only when necessary (Godlevskaja et al., 2011);
- customer participation to service co-creation becomes a critical issue (Gill et al., 2011);
- interactions with service staff, with other customers, with physical evidence emerge as an integral part of the offering (Baines et al., 2013);
- value creation does not occur inside a single transaction between supplier and customer but along a long-term relationship (Martinez et al., 2010);
- the ability to make the customer feel reassured (through brand, service, guarantees) has an important role (Baines et al., 2010).

Many examples of this orientation toward service-based offerings may be mentioned. In automobile post-sale assistance, some providers offer now a service that includes domicile pick up and drop off of the car under maintenance. This represents a time saving solution for car owners willing to pay money to avoid the effort of taking the car to the garage .

Other examples are those represented by offers based on renting and sharing, such as space renting and car renting (Godlevskaja et al., 2011). These solutions emphasize the advantages of gaining benefits from a product, without the need of owning it (for example, "just drive" is the claim of the contract hire and fleet management company Arval, which promises "we deal with all the buying, maintenance and selling issues saving you time and money, allowing you to focus on your core business" and hence is "hassle free" (http://www.arval.co.uk/).

Firms are moving toward service-based offerings because they recognize that the customers are not primarily interested in the goods they buy, but in what they can do with that goods (Grönroos, 2008). In particular, by adopting a service-based perspective, firms try to enhance customer perceive value, by either providing more benefits (functional, utilitarian, symbolic, hedonic, aesthetic and emotional) or reducing sacrifices (price, time and efforts for information collection, for procurement, for learning, maintenance, psychological costs related to risk) required to customers (Ulaga & Chacour, 2001; Menon et al., 2005). Nonetheless, despite the popularity of service-based offerings, knowledge on customer's perception of service-based vs. goods-based offerings is scarce (a significant exception is the study by Edvarsson et al., 2011). Hence there are not enough evidences to conclude that a service-based offering is generally perceived more favorably than a goods-based one.

The purpose of this paper is to contribute to advance knowledge on this issue, by comparing customer perceived value for a firm's offering being positioned either as service-based or goods-based. For this purpose we conducted an experiment, using stimuli from two different product categories (hearing aids and bicycles). In addition, we decided to measure customers' perceptions through the PERVAL scale (Sweeney & Soutar, 2001; Walsh et al., 2014) because this scale registers four distinct dimensions of customer perceived value: quality value (technical benefits), emotional value (psychological benefits), price value (satisfaction compared with cost, time and effort to obtain the product) and social value (social utility). The use of this scale will allow an in-depth analysis of customers perceptions of service-based vs. goods-based offerings.

The results of this study will therefore offer relevant managerial implications by showing how alternative positioning strategies (service-based vs. product-based) differently impact on customer perceived value.

The remainder of the paper is articulated as follows: in the next paragraph relevant literature is reviewed; after that the method is explained and the results are presented and discussed; conclusions and limitations complete the paper.

2. Literature review

There is a rich body of literature that deals with the process of creating value by adding services to products, with pioneering research dating back to the 70s (Levitt 1976; Chase & Garvin 1989; Coyne 1989; Quinn 1990; Voss 1992). A milestone in these studies is represented by the seminal paper by Vandermewe and Rada, who in 1988 introduced the term *servitization* to describe a global phenomenon pervading almost all industries: "Swept up by the forces of deregulation, technology, globalization and fierce competitive pressure, both service companies and manufacturers are moving more dramatically into services" (Vandermerwe & Rada, 1988, pp. 315). Since then, many different labels have been used to indicate the good-service integration resulting from the servitization process, including: bundling, solution, product-service system, full service, service package, solution, and others (Park et al, 2012). From the point of view of manufacturing companies, the move into services has been also labeled as "going downstream" by Wise and Baumgartner (1999), highlighting that services required to operate and maintain products are performed at the final stages of the value chain.

The stream of research about good-service integration mainly developed in the late 1980s and along 1990s, with its main focus on the motives and the benefits of such integration (Vandermerwe et al., 1989; Mattehews & Rada, 1989; Martin & Horne, 1992; Samli et al., 1992; Mathe and Shapiro, 1993; Anderson & Narus, 1995; Frambach et al., 1997; Cook et al., 1999; Tellus Institute, 1999).

The body of literature has been continuing to expand since 2000. Oliva and Kallenberg (2003) have advised scholars to focus their attention on the implementation of the servitization process, with the related organizational challenges (Davies, 2004; Gebauer et al., 2005; Brady et al., 2006). In 2009 servitization research has come into its maturity phase with the publication of the first complete literature review (Baines et al., 2009), which includes 58 papers that are narrowly related to servitization.

In addition, another relevant literature stream that offers interesting insights for studying servitization is the service-dominant logic (SDL) developed by Vargo and Lusch (2004, 2008). This is a groundbreaking theoretical approach (a mind-set) based on 10 propositions, of which the most relevant for the purpose of our study are the following (Vargo and Lusch 2008 p. 7):

P 1: Service is the fundamental basis of exchange;

P 3: Goods are a distribution mechanism for service provision;

P 6: The customer is always a co-creator of value;

P 7: The enterprise cannot deliver value, but only offer value propositions;

P 10: Value is always uniquely and phenomenologically determined by the beneficiary.

In sum, this approach states that value is not created by the firm and then exchanged with the customers through the product (value-in-exchange), but it is co-created with the customer during consumption (value-in-use). The SDL has gained rapidly popularity: in their systematic and comprehensive review of research related to SDL, Kryvinska et al. (2013) have identified almost 140 papers since 2004.

Whilst there is a large number of studies focusing on servitization, analyses of the impact of the decision to adopt a service-based instead of a goods-based approach are limited. Moreover the results are often obtained from the analysis of one or few case studies. The cases chosen for the studies tend to be those of large companies supplying high-value capital equipment (for example Xerox, ABB, Ericcson, Nokia, Rolls Royce). Among the others, the work of Neely (2008) should be mentioned because it provides empirical evidence that in small firms servitization appears to pay off while larger servitized firms generate lower profits than pure manufacturing firms. These findings imply that servitization is not always the best way to competitiveness.

Therefore, as Baines et al. (2009) suggest in their review of servitization research, there is a need to study how customers value the offerings provided by the firms, so that it may be possible to understand when servitization is an effective strategy. In this perspective, Edvardsson et al. (2011) conducted an experiment on a group of habitual bus travelers, comparing a service system design informed by a service-dominant logic with a service system design informed by good-dominant logic (GDL). Results highlight the superior performance of SDL. In 2013 the same authors did a further study to understand why the SDL offering was perceived more favorably than the GDL one and found three key differentiators (intangibles, operant resources, information symmetry).

Following this stream of studies, we suggest that further insights about the sources of the different perception of service-based vs. goods-based offerings may be derived by focusing on the distinct dimensions of perceived value. According to the PERVAL scale developed in 2001 by Sweeney and Soutar and widely applied in both services and goods contexts (Walsh et al., 2014), customer perceived value comprises four dimensions:

-Quality value: the utility derived from the perceived quality and expected performance of the product;

-Emotional value: the utility derived from the feelings or affective states that a product generates;

-Price value: the utility derived from how satisfactory a product compares with cost, time and effort to obtain the product;

-Social value: the utility derived from the product's ability to enhance social self-concept.

Therefore in this paper we compare service-based vs. goods-based offerings along each of these four perceived value dimensions. Moreover, to enrich results, we perform two different comparisons: one for a hearing aid offering (positioned as either service-based or goods-based) and one for a bicycle (positioned as either service-based or goods-based).

3. Method

An experiment was conducted among a sample of 38 undergraduate students. To create the stimuli, two products were selected, a hearing aid and a bicycle. We firstly decided to include a hearing aid in the experiment because previous studies show that it is usually promoted through a good-centric positioning and this is one of the main reasons for its low adoption rate (Cobelli et al., in press). To enrich the analysis, we then added a second product, the bicycle. This choice was motivated by the intention to select a product to which respondents were more familiar, compared with the hearing aid. In addition, differently from previous studies, both products are business-to-consumer durable products, instead of business-to-business high-value capital equipment (e.g. Neely, 2008). For both the hearing aid and the bicycle, a product concept (Shocker & Srinivasan, 1979) was created and manipulated to generate either a goods-based positioning or a service-based positioning. Hence, each participant was asked to evaluate two couples of concepts: a hearing aid with a goods-based positioning and a

hearing aid with a service-based positioning; a bicycle with a goods-based positioning and a bicycle with a service-based positioning. The order of presentation of the four products to the participants was randomized. After the description of each product, the respondents were asked to rate their perceived value using the short form of the PERVAL scale (Walsh et al., 2014), which includes 12 items. Each item was measured through a 7-point Likert scale with endpoint "strongly disagree" and "strongly agree" (Sweeney & Soutar, 2001; Walsh et al., 2014). Similarly to Edvardsson et al. (2011), at the end of each evaluation, participants were also asked to rate their perception of the product concept on a 10-point scale, with endpoints "this concept has mainly the characteristics of a good" and "this concept has mainly the characteristics of a service". After the evaluations of the four concepts, data about the profiles of the respondents and their familiarity with hearing aids and bicycle were collected.

4. Results

The manipulation check confirmed that the experiment worked well, with a significant difference ($t(37)=4.67$, $p<0.01$) between the service-based hearing aid ($X=5.87$) and the goods-based hearing aid ($X=4.47$), and a significant difference ($t(37)=4.69$, $p<0.01$) between the service-based bicycle ($X=5.50$) and the goods-based bicycle ($X=3.21$). Moreover, respondents were significantly ($t(37)=7.33$, $p<0.01$) more familiar with the bicycle ($X=2.58$) than with the hearing aid ($X=1.37$).

When then comparing the overall perceived value (given by the mean value along the four dimensions), a significant ($t(37)=2.84$, $p<0.01$) higher preference for the service-based hearing aid ($X=4.72$) over the goods-based hearing aid ($X=4.34$) emerged. On the contrary there was no significant difference ($t(37)=0.71$, $p>0.10$) between the service-based bicycle ($X=4.16$) and the goods-based bicycle ($X=4.22$).

As regards the analysis along the four dimensions of perceived value, first of all the factor analysis with varimax rotation and principal component analysis confirmed the extraction of the four expected factors and showed that each item loaded well on the intended factor (Table 1).

Table 1. Results of the factor analysis (factor loadings greater than 0.40 are displayed).

Items	Factors			
	Quality value (α=.82)	**Emotional value (α=.86)**	**Price value (α=.87)**	**Social value (α=.86)**
Has consistent quality	.824			
Is well made	.879			
Has an acceptable standard of quality	.797			
Is one that I would enjoy		.886		
Would make me want to use it		.882		
Would make me feel good		.645		
Is reasonably priced			.874	
Offers value for money			.897	
Is a good product for the price			.833	
Would help me to feel acceptable				.821
Would improve the way I am perceived				.937
Would make a good impression on other people				.851

Source: our analysis

After having checked the validity of the scales, following tradition, the averages of the sets of three items were used in the analysis for each of the four constructs. Mean values were then compared. The results for the hearing aid and for the bicycle are respectively shown in table 2 and 3.

Table 2. Goods-based vs. service-based hearing aid.

	Goods-based	Service-based	Level of significance of the difference (t-test)
Quality value	5.37	5.71	0.05
Emotional value	4.28	4.85	0.01
Price value	4.05	4.24	not significant
Social value	3.68	4.09	0.05

Source: our analysis

Table 3. Goods-based vs. service-based bicycle.

	Goods-based	Service-based	Level of significance of the difference (t-test)
Quality value	5.80	5.22	0.01
Emotional value	4.41	4.69	not significant
Price value	4.14	4.67	not significant
Social value	2.30	2.31	not significant

Source: our analysis

The findings show some statistically significant differences in several of the dimensions of customer perceived value. In the case of the hearing aid, quality value, emotional value and social value are higher when the product is presented as service-based. For the bicycle, the only significant different regards quality value, which is higher when the product is goods-based. In both cases, the perception of price value does not vary.

5. Discussion

The findings of our study contribute to available knowledge about servitization, by showing that a service-based positioning of the product is sometimes, but not always, able to create higher customer perceived value than a goods-based positioning. In particular, this research suggests that when familiarity with the product is low, a service-based positioning of the product may enhance customer perceived value. This result can be interpreted by considering the four dimensions of perceived value. In particular, when familiarity is low, the service-based positioning is able to increase both emotional value and social value. Therefore the customer may feel reassured not only about the quality aspects of the offering, but, most importantly, also about the intangible benefits s/he could gain from the adoption of the product. On the contrary, if familiarity with the product is high there is no difference in customers' overall perceived value of service-based positioning vs. goods-based positioning. It should also be noted that, if familiarity is high, a goods-based positioning is able to increase the perceived quality value of the product.

These findings enrich the literature stream about servitization in several other ways. First, contrary to the vast majority of previous studies, the effect of servitization in a business-to-consumer context, instead of a business-to-business context, is highlighted. Second, the analysis is based on an experiment and not on the analysis of a case study, thus allowing higher generalizability of the findings. Third, to our knowledge, this is the first research to evaluate the effects on customer perceived value of reorienting a product which has been traditionally goods-based (such a hearing aid and a bicycle) into service-based. The previous studies by Edvardsson et al. (2011; 2013) followed an opposite pattern, i.e. they investigated the effects a service informed by the goods-dominant logic.

Our findings have relevant managerial implications, as well. As the study shows that servitization is not always effective, the firm may decide to emphasize either the service-based aspects or the good-based aspects of its positioning, depending on the targeted segments of customers. When the firm targets customers that are not familiar with the product, a service-based positioning may improve the perceived value. On the contrary if the target consists of customers that are familiar with the product, a good-dominant positioning is able to increase the perceived quality.

6. Conclusions and limitations

This study has demonstrated that presenting the product as service-based instead of good-based can enhance customer perceived value, but only if customers are not familiar with the product. Nonetheless, as these findings are based on an experiment, there is the need to complement them with results from real-world studies. In addition, the number of participants to the experiment was small, therefore attention should be paid before generalizing the results. Nonetheless several research opportunities emerge from this work. For example, further studies could investigate whether other variables –in addition to product familiarity- may influence customers perceived value of service-based vs. goods-based offerings. Similarly new research is needed to verify whether the results may differ, depending on the type of product/industry.

References

Anderson, J., & Narus, J. (1995), Capturing the value of supplementary services, *Harvard Business Review*, 73(1): 75-83.

Baines T. S., Lightfoot H. W., Benedettini O., Kay J. M. (2009). "The servitization of manufacturing: a review of literature and reflection on future challenges", *Journal of Manufacturing Technology Management*, 20(5): 547-567.

Baines T. S., Lightfoot H., Benedettini O., Whitney D., Kay J. M. (2010). "The adoption of servitization strategies by UK-based manufacturers", *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, 224(5): 815-829.

Baines T., Lightfoot H., Smart P., Fletcher S. (2013). "Servitization of manufacture: Exploring the deployment and skills of people critical to the delivery of advanced services", *Journal of Manufacturing Technology Management*, 24(4): 637-646.

Brady T., Davies A., Hobday M. (2006). "Charting a path toward integrated solutions", *MIT Sloan Management Review*, 47(3): 39-48.

Cobelli N., Gill L., Cassia F., Ugolini M. (forthcoming). "Factors that influence intent to adopt a hearing aid among older people in Italy", *Health and Social Care in the Community*, in press.

Cook D., Goh C., Chung C. (1999). “Service topologies: a state of the art review”, *Production & Operations Management*, 8(3): 318-38.
Coyne K. (1989). “Beyond service fads – meaningful strategies for the real world”, *Sloan Management Review*, 30(4): 69-76.
Davies A., (2004). “Moving base into high-value integrated solutions: a value stream approach”, *Industrial and Corporate Change*, 13(5): 727-756.
Edvardsson B., Ng G., Min C. Z., Firth R., Yi D. (2011). “Does service-dominant design result in a better service system?”, *Journal of Service Management*, 22(4): 540-556.
Edvardsson B., Ng G., Choo Z. M., Firth R. (2013). “Why is service-dominant logic based service system better?”, *International Journal of Quality and Service Sciences*, 5(2): 171-190.
Ferreira F. N. H., Proença J. F., Spencer R., & Cova B. (2013). “The transition from products to solutions: External business model fit and dynamics”, *Industrial Marketing Management*, 42(7): 1093-1101.
Frambach R., Wels-Lips I., Gundlach A. (1997). “Proactive product service strategies – an application in the European health market”, *Industrial Marketing Management*, 26(4): 341-52.
Gebauer H., Fleisch E., Friedli T. (2005). “Overcoming the service paradox in manufacturing companies”, *European Management Journal*, 23(1): 14-26.
Gill L., White L., Cameron I.D. (2011). “Service co-creation in community-based aged healthcare”, *Managing Service Quality*, 21(2): 152-77.
Godlevskaja O., Iwaarden J.V., Wiele T.V.D. (2011). “Moving from product-based to service-based business strategies: Services categorisation schemes for the automotive industry”, *International Journal of Quality & Reliability Management*, 28(1): 62-94.
Grönroos C. (2008). “Service Logic Revisited: who creates value? And who co-creates?” *European Business Review*, 20(4): 298-314.
Kindström D. (2010). “Towards a service-based business model - Key aspects for future competitive advantage”, *European Management Journal*, 28(6): 479-490.
Kryvinska N., Olexova R., Dohmen P., Strauss C. (2013). “The SD logic phenomenon-conceptualization and systematization by reviewing the literature of a decade (2004–2013)”, *Journal of Service Science Research*, 5(1): 35-94.
Levitt T. (1976), “Industrialization of service”, *Harvard Business Review*, 54(5): 63-74.
Martin C., Horne D. (1992), “Restructuring towards a service orientation”, *International Journal of Service Industry Management*, 3(1): 25-38.
Martinez V., Bastl M., Kingston J., Evans S. (2010). “Challenges in transforming manufacturing organisations into product-service providers”, *Journal of Manufacturing Technology Management*, 21(4): 449-469.
Mathe H., Shapiro R. (1993). *Integrating Service Strategy in the Manufacturing Company*. London: Chapman & Hall.
Menon A., Homburg C., Beutin N. (2005). “Understanding Customer Value in Business-to-Business Relationships”, *Journal of Business-to-Business Marketing*, 12(2): 1-38.
Neely A. (2008). “Exploring the financial consequences of the servitization of manufacturing”, *Operations Management Research*, 1(2): 103-118.
Oliva R., Kallenberg R. (2003). “Managing the transition from products to services”, *International Journal of service Industry Management*, 14(2): 1-10.
Park Y., Geum Y., Lee H. (2012). “Toward integration of products and services: Taxonomy and typology”, *Journal of Engineering and Technology Management*, 29(4): 528-545.
Quinn J., Doorley T., Paquette P. (1990). “Beyond products: services-based strategy”, *Harvard Business Review*, 68(2): 58-67

Samli A.C., Jacobs L.W., Willis J. (1992). “What presale and postsale services do you need to be competitive”, *Industrial Marketing Management*, 21(1): 33-42.

Shocker A.D., Srinivasan, V. (1979). “Multiattribute approaches for product concept evaluation and generation: A critical review”, *Journal of Marketing Research*, 16(2):159-180.

Sweeney J.C., Soutar G.N. (2001). “Consumer perceived value: the development of a multiple item scale”, *Journal of Retailing*, 77(2): 203-220.

Tellus Institute (1999). *Servicizing: The Quiet Transition to Extended Product Responsibility*. Boston, MA: Tellus Institute.

Ulaga W., Chacour S. (2001), “Measuring Customer-Perceived Value in Business Markets: A Prerequisite for Marketing Strategy Development and Implementation”, *Industrial Marketing Management*, 30(6): 525-540.

Vandermerwe S., Rada J. (1988). “Servitization of business: adding value by adding services”, *European Management Journal*, 6(4): 314-324.

Vandermerwe S., Mattehews W.H., Rada J. (1989). “European manufacturers shape up for services”, *Journal of Business Strategy*, 10(6): 42-46.

Voss C. (1992). “Applying service concepts in manufacturing”, *International Journal of Operations & Production Management*, 12(4), 93-99.

Walsh G., Shiu E., Hassan L.M. (2014). “Replicating, validating, and reducing the length of the consumer perceived value scale”, *Journal of Business Research*, 67(3): 260-267.