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## **The role of facilitators as partial signalers in the context of value perception**

### **Abstract**

**Purpose.** This paper investigates the role of qualified professionals acting as facilitators. These intermediaries can help to reduce information asymmetry between the manufacturer and the customer and to transfer knowledge in order to evaluate the quality of a product or service before use by the customer.

**Design/methodology/approach.** This study utilized a two-stage research design consisting of a qualitative study with semi-structured qualitative interviews. The results were used to conduct the second quantitative study using an empirical survey.

**Findings.** Using the information asymmetry and signaling theory, the facilitator in this study represents the partial receiver, whereas the manufacturer is the signaler, and the focus is on understanding the value and ‘signals’ perceived by the receiver with respect to the manufacturer’s overall offerings.

**Originality/value.** The study provides a framework that highlights the main value drivers’ categories that professional service providers consider important for value creation.

**Keywords:** asymmetry of knowledge; complexity; qualified professional services; signaling theory, B2B context, value drivers.

## 1. Introduction

Knowledge and information transfer in the service industry is important to ensure customer satisfaction through informed decision making. Typically there is a significant asymmetry of knowledge between the manufacturer and the customer, along with knowledge transfer difficulty and the complexity of evaluating the quality of such a service after use (Laszlo Sajtos et al., 2015; Sweeney et al., 2011; Webster and Sundaram, 2009). Professional service providers can bridge the knowledge and information gap by reducing this asymmetry. Such professionals are considered relational in nature and can affect value creation during exchange relationships by sharing knowledge and expertise (Abdelzaher, 2012; Apfelthaler and Vaiman, 2012; Lapierre, 1997; Schertzer et al., 2013) and acting as facilitators. These facilitators can be professional organizations whose primary value-creating activities include the accumulation, creation and dissemination of knowledge and information to provide a customized service or solution that satisfies clients' needs (Aarikka-Stenroos and Jaakkola, 2012; Eggert et al., 2014; Nordin and Kowalkowski, 2010). Despite the importance of facilitators as holders of information in the supply chain, little is known about such players, who act as 'partial receivers' of manufacturers' 'signals', and how they calibrate perceived value when driving customers to make better decisions (Boksberger and Melsen, 2011).

There have been calls for more research that explores the roles of different types of intermediaries and co-marketers, including professional service providers, sales personnel and retailers, as well as their perception of value in both business-to-consumer (B2C) and business-to-business (B2B) contexts (Grönroos and Ravald, 2011; Hammervoll, 2012; Jacob and Ulaga, 2008; Mi Dahlgaard Park et al., 2013; Nätti et al., 2014; Songailiene et al., 2011). Based on service dominant logic (S-D logic) perspective and signaling theory, this article analyzes what

value drivers cues influence facilitators decisions. However, previous research has predominantly focused on physical products without examining perceived value in complex service offerings (Keränen and Jalkala 2013). A notable exception is Aarikka-Stenroos and Jaakkola (2012), who studied reciprocal value creation in buyer–seller relationships in the intensive business service context. Thus, more research is required regarding the different roles, specifically the intermediaries, in complex and customized offerings.

In order to deliver better value throughout the chain to the end consumer, it is important to understand these players' intermediation of value proposition and complexity reduction between the manufacturer and the customer. This role might help in reducing information asymmetry (Grönroos and Voima, 2013; O'Cass and Ngo, 2012). A better understanding of the value categories that intermediaries base their choices on, as well as their advice as specialized and qualified key players, will highlight their role in reducing information asymmetry and will advance research in the industrial marketing literature. This is also relevant for service organizations, marketers and managers. We apply two different perspective, the S-D logic and signaling theory, to explain value perception and creation by professional service providers and focus on the role of signaling in perceiving and calibrating how they act as middlemen. Therefore, the research questions for this study are:

RQ1. What is the role of service providers in reducing information asymmetry? What type of information regarding product/service attributes do they consider critical when recommending a purchasing decision?

RQ2. How do they consider/weight these attributes/drivers to better address customers' needs?

This paper will review the existing literature relevant to the research questions, discuss the methodology and findings, and conclude with implications of the study and future areas for research.

## **2. Theoretical background**

### **2.2 Professional service providers and their role in value creation and the S-D Logic**

Understanding the combination and exchange of products and services represents one of the main focuses in the customer value debate (Mele et al., 2010).

Value creation for the actors involved constitutes a central goal of business and marketing, and service represents the way to achieve this goal (Grönroos and Voima, 2013; Mele and Polese, 2011). Moreover, in service marketing research, Martelo Landroquez *et al.* (2013) show the existence of different views and ways of thinking about customer value, depending on the point of view that is adopted; namely, perceived value (according to customer perspective) and value creation and appropriation (according to firm perspective).

The complexity and information asymmetry inherent in knowledge intensive business services challenges both manufacturers and customers in value co-creation: it might be difficult for the manufacturer to communicate the value proposition in advance and to manage the service process to achieve the best service outcome; on the other hand the customer might find it difficult to understand and evaluate the value potential (Lapierre 1997; Aarikka-Stenroos & Jaakkola 2012; Olsson et al. 2013; Falkheimer, 2014).

In detail, a review of the emerging literature on value in B2B markets reveals several unresolved research issues (e.g., mechanisms of value facilitation, co-creation of value, and the ways in

which suppliers and customers conduct their roles and influence each other in value creation). One such issue is whether B2B relationships can deliver value along several dimensions and different units of analysis in which relationships are constructed (Biggemann and Buttle, 2012).

In fact, relational components constitute the core of the service marketing literature, generating the S-D logic (Lucia-Palacios et al., 2014; Martelo Landroque et al., 2013; Vargo and Lusch, 2007).

Within this perspective, although goods still play an important role, services are the key resources that create value. These resources are intangible and dynamic (Lucia-Palacios et al., 2014). Professional services are a suitable example in which to apply the S-D logic, where there is no transfer of goods per se; instead, there is the transfer of the service utilizing the supplier's assets and staff. This perspective recognizes that delivery of products in any marketing channel usually involves essential services (Cantù et al., 2012; Confente et al., 2015) and intangible dimensions such as brand reputation and corporate image (Mi Dahlgaard Park et al., 2013).

Professional service providers can be seen as members of a channel and intermediaries between the suppliers and customers. It is true that value facilitation represents an activity performed by the customer to try to integrate and to help the manufacturer create value. However, this is not restricted to manufacturers and customers, but also involves these intermediaries acting as service providers, through all their actions and interactions with users (e.g. customers), strive to support users' everyday processes in a way that facilitates (or contributes to) users' value creation (Grönroos and Voima, 2013; Gummesson et al., 2010)

This is in line with much of the network literature in marketing where all parties are both value-creators and value beneficiaries (Edvardsson et al., 2013), which involves communication

between all network participants to co-create value through trust, learning and adaptation (Ballantyne and Varey, 2007).

Professional services are defined as organizations that meet specific criteria (Kotler et al. 2002) and can provide value beyond traditional intermediary activities such as distribution and reselling. In essence, professional service providers view themselves as independent practitioners; as such, they have different work styles and values and are relational in nature, and the technical and functional aspects of service play a critical role (Sweeney et al. 2011; Schertzer et al. 2013). From the service-dominant perspective, such providers can serve as a resource that acts on other resources. A provider that serves as a collaborative partner, co-creating value with the firm (Maglio et al., 2009) and promoting a 'market with' philosophy, is called an 'operant' (Lusch et al., 2007) who acts as a 'facilitator'. Customers in turn enjoy higher-value solutions to their problems as professionals gain intimate knowledge of their context and provide more reliable services (Ngee Goh, 2014).

Moreover, in a professional service business context, it has been argued that buyer–seller co-creation of value is critical for competitive advantage, and the usefulness of any particular potential resource from one source is moderated by the availability of other potential resources from other sources and the beneficiary's ability to integrate them following S-D logic theory (Edvardsson et al., 2013; Vargo and Lusch, 2007). In this way, firms can deliver value propositions because they are no longer sole value generators. This can be better understood when there is a better exploration of how all actors in the marketing channel perceive the value being delivered to themselves and others, and how they would differ the role they play in other business contexts (Aarikka-Stenroos and Jaakkola, 2012). Additionally, Aarikka-Stenroos and Jaakkola (2012) show that suppliers of complex offerings often lead the process given their

expertise and experience. Such capabilities could help manufacturers to deliver appropriate value through services and products, but they have to understand facilitators' specific signals and drivers in order to reduce information asymmetry of what they perceive is the most valuable for the market.

### **2.3 Information asymmetry and signaling theory**

This business context reflects the recommendations of signaling theory (Bergh et al., 2014; Spence, 2002), which proposes that a service professional guarantee, similar to a product warranty, provides an essential element to potential customers about the quality of the service/product (Meyer et al., 2014). From an information business perspective, signaling theory is based on the assumption that the different level of product/service information flows between consumers and firms causes a problem of information asymmetry (Hyun Baek and Whitehill King, 2011; Martin, 2005). Information asymmetry implies consumer uncertainty about the quality of the product or service provided by firms and it represents one of the most important resources for individuals, firms and governments when making decisions (Connelly et al. 2010). Organizations struggle to find sufficient and correct information that is easily accessible. For instance, information asymmetry exists between manufacturers and customers, as manufacturers may hold more information about their offerings than customers (Kirmani and Rao, 2000). At the same time, companies may not be able to obtain maximum benefits because of the information asymmetry arising from consumers' inability to understand the value of manufacturers' offerings, particularly in the complex industrial context and for credence goods (Alejandro et al. 2011). These are defined as those goods and services sold within relationships characterized by high levels of information asymmetry, where the buyer has a limited understanding of the



product/service and she/he is often trusting the supplier about several elements of the core offering, such as efficacy, quality standards and product design.

One possible solution to reduce this asymmetry is the use of signals. A signal is defined as “an action that the seller can take to convey information credibly about unobservable product quality to the buyer” (Rao et al., 1999, p. 259).

This study focuses on asymmetry regarding quality signaling. To understand how parties resolve information asymmetry about this latent quality, this study also examines signaling theory, which management scholars have applied to help explain the influence of information asymmetry in a range of research contexts (Connelly et al. 2010; Bergh et al. 2014; Lucia-Palacios et al. 2014).

Signaling theory proposes that the quality of products (and, as a corollary, service products or offerings), unobservable to a customer, may be communicated in a variety of ways including the brand name and reputation, warranties, external accreditation, advertising, level of service, quality and price (Bergh et al., 2014; Kirmani and Rao, 2000; Rao et al., 1999; Walker and Johnson, 2009). Then the intrinsic quality of what is produced and offered, whether observable to the customer or not, is grounded in the design and management of what is offered and how (Walker and Johnson, 2009). In a market characterized by information asymmetry, an exchange partner communicates unobservable elements in a transaction by providing an observable signal (Rao et al., 1999). Any action of a firm that conveys information about its true characterization (e.g., intention, ability, and skill level) represents an important signal (Walker and Johnson, 2009).

In complex supply chains, signaling theory suggests mechanisms for the transfer of information to another party with the aim of resolving information asymmetries (Spence, 2002;

Stiglitz, 2000). Managing in an information asymmetry environment may require ‘signaling’ and other information theories (Sarkis et al., 2011). The fundamental assumption here is that information asymmetry works in two directions. Receivers desire information about signalers, and signalers desire information about receivers so they know which signals are most reliable, the signals that receivers are paying the most attention to and how receivers are interpreting the signals. Signalers that heed such countersignals can adapt future signals to improve reliability (Gulati and Higgins, 2003). When multiple producers use the same sign, collective signaling enhances interpretability by a specific receiver (Negro et al., 2014).

In the context of this study, receivers are the customers and signalers are the manufacturers. However, not all receivers interpret information in the same way; they can perceive quality information signals in many ways. Within this context, an important role can be executed by external referents, such as other receivers (i.e. business consultants or engineers or the role of installers and heating specialists or architects) , who can also change the relationship between receivers and signalers (Connelly et al. 2010). They are considered ‘facilitators’ who calibrate signals sent by signalers, and they can act as ‘partial receivers’ in selecting and driving the receiver’s choice.

In our study, signals convey information about facilitators’ perceptions and manufacturers examine these signals to better understand the facilitators’ value perceptions. In this context, facilitators can act as consultants to match customers’ needs with corresponding products or services without taking ownership of the product. Thus, facilitators help consumers to better understand manufacturers’ value offerings; thereby, reducing the asymmetry between these two players.

[Insert Figure 1 Here]

### **3. Methodology**

Given the objective of this study and the research questions, we utilized a two-stage research design consisting of a qualitative study with semi-structured qualitative interviews. This approach follows similar research in the existing literature with an exploratory nature (e.g., (Gebauer et al., 2005; Ulaga and Eggert, 2006). Specifically, we conducted one- to two-hour semi-structured interviews with key professionals in the Italian heating industry, and we used the information obtained as a baseline for adapting previously employed items to the national and industry contexts. The sample size for pre-evaluation is commensurate with sample size conventions for this type of qualitative research (McCracken 1988).

Thus, the first part of our research examined several questions related to professional service providers' roles in the heating industry and identified key value drivers for serving the potential market. The heating industry was selected for two main reasons. First, as a result of product and service complexity, this sector is heavily dependent on services from a variety of independent players, which could be helpful in identifying the value perceived by industry qualified service providers. Second, Italy is the fourth-largest exporter of heating units in the world (Joint Research Centre of the European Commission 2012).

The professional service providers that we investigated included heating specialists, architects, installers and project managers who not only ensured product delivery and facilitation from the manufacturer to the customer, but who also provided services, technical advice and activities based on information and knowledge sharing. Our units of analysis are the professional service providers those were independent with respect to manufacturers, so they were free to

change the manufacturers or the suppliers based on their own interests; consequently, they acquired considerable power relationships through the marketing channel.

Using the results from study 1, we conducted follow-up research using an empirical survey with a sample of industry qualified service providers to better explore the importance and priority that facilitators gave to the identified value drivers.

### **3.1 Study 1**

We conducted interviews with professional service providers from the heating industry in Italy using a qualitative approach (Strauss and Corbin 1998). In doing so, we selected the method of face-to-face interviews, which provided a robust opportunity to explore complex issues in a detailed manner because it allowed the participants to elaborate on specific processes, problems and implementation (Omar et al., 2012). Data collection began with secondary data, which included industry analysis reports and a thorough analysis of websites that provided profiles of the industry sector. We also conducted bracketing interviews, whereby we preliminarily presented our expectations of the interviews and research to avoid the emergence of preconceptions that might have induced the interviewees to back our theory. Next, we conducted in-depth interviews through site visits to each participant.

Our final sample included 33 interviews with key professionals in the Italian heating industry who provide advice and consulting services to end consumers and who are not directly involved in product sales on the behalf of manufacturers. Our objective was to obtain the facilitators' perceptions regarding their role. The interviews were open-ended and discovery-oriented, lasting from 30 to 90 minutes. Each profile was considered representative of the various weights of different heating professionals and business typologies within the Italian market in

relation to know-how, management, skills and marketing channels (Joint Research Centre of the European Commission 2012). We selected them from a nationwide online industry community, and we pre-qualified them by asking about their experience in the heating field and their role in the supply chain.

Debriefing sessions were conducted to solidify the researchers' perceptions with respect to the participants' thoughts and observations. To maximize internal validity, we contacted professionals who had at least five years of experience in their roles. We ensured that we used a variety of qualified professional service providers (balancing the different roles) to maximize external validity. Our interview guide was composed of three sections following the main topic in qualified professional services. In particular, we asked the participants how they perceived their role of facilitating manufacturers to give customers more information and assist them in making better decisions, and what characteristics or components they considered helpful in successfully delivering customer value on the behalf of manufacturers (Boksberger and Melsen 2011; Aarikka-Stenroos and Jaakkola 2012; Schertzer et al. 2013).

To ensure rigor in the data collection and analysis, we employed two sets of trustworthiness criteria that are appropriate for qualitative methodology. The interviews were analyzed with QDA Miner software, which permits digital processing of written data. First, criteria related to credibility, transferability, dependability, confirmability and integrity were used to assess the quality of the research design (Flint et al., 2002). Second, we applied the criteria of generality, understanding, control and fit from the qualitative research literature (Strauss and Corbin 1998). The researchers independently analyzed the interview notes for common concepts expressed by the participants. Interviews were transcribed after the interview to improve data quality and reliability in the analysis. Additional notes were taken during and

immediately after the interview at a debriefing meeting of the research team. In addition, we obtained and reviewed company documents from interview participants when possible (Omar et al. 2012).

### 3.2 Findings of Study 1

In addressing the objectives of the first research question (i.e., the role of service providers in reducing information asymmetry), the heating industry professionals described their role as that of a service provider, which is much more than simply an intermediary passing on goods to end consumers. Value for a business customer does not emerge from one resource (the core product), but from the whole spectrum of manufacturer–customer interactions, and it involves a complex system of networks that involve the industrial facilitator, as opposed to dyads or a sequential chain.

The participants explained the importance of serving the heating industry so customers have better purchasing outcomes and manufacturers achieve a stronger competitive position in the market. Customers with access to independent experts can benefit throughout the purchasing process and improve their chance of a satisfactory purchasing decision. This was echoed by several participants. As highlighted by Jason:

*The more complicated the device is, the stronger the need by the customers to get us [service providers] involved in order to find the most appropriate product and service for themselves. Trusting us as facilitator and our experience is key to all of this.*

Participants also described how their role has changed as industry and customer patterns have evolved. Customers are more educated, but at the same time, products are

more complex. Thus, industry qualified service providers ensure that customers experience few, if any, problems before, during and after purchasing the product. According to Andrew:

*Fifteen years ago, the customer needs were very different than nowadays; lifestyle and habits have changed so much. The customer is looking for advice due to his basic knowledge of the characteristics of the products. He doesn't want any problems during the ownership of the product, so my role is crucial to get the right product and service for the customer.*

Participants also described their role as a facilitator in reducing complexity and information asymmetry. The success of the relationship between the manufacturer and the customer depends on the knowledge and information shared between them; the larger the information gap, the more the customer and the manufacturer might benefit from a third party's competencies and skills. As Lucas stated:

*Price is important, but at the end I have to offer to the final customer a value proposition based on striking an optimum trade-off between different product and manufacturer characteristics, something that would be difficult for the customers to do on their own. This involves a lot of trust by the customer, as the final customer is available to give a premium price for a valuable product (and manufacturer) based on trust.*

In attempting to address customers' decision-making processes, professional service providers seek specific value drivers/attributes. The second research objective of this study was designed to understand some of these drivers and their relative importance.

The interviews revealed 11 value drivers/attributes that were considered in addition to price (see Table 1).

[Insert Table 1 Here]

### 3.3 Study 2

Given the limited amount of previous research on value perception among these members of the value chain (Boksberger and Melsen 2011; Aarikka-Stenroos and Jaakkola 2012; Schertzer et al. 2013), we conducted open coding in Study 1 to determine actual measures for value. In Study 2, we provided validity for these value items and asked the respondents to evaluate the importance of each value driver. One objective of the survey was to integrate the findings from Study 1 to provide an understanding of how qualified professional service providers weigh and rank value drivers. We conducted a nationwide online survey among professional service providers from the heating community in Italy and analyzed their level of expertise in the industry, their demographic features and their opinions about the value drivers we generated from the qualitative study.

#### *Questionnaire development and sampling procedure*

To participate, respondents had to meet minimum requirements with respect to their position, tenure with the company and size of company. We also asked respondents for a self-assessment of their expertise within the heating sector and market on a five-point scale. We recruited participants by collecting their e-mail addresses from an online heating industry community they belonged to. A pilot survey (constructed in Italian by native Italian speaking



researchers, subject to survey design best practices as suggested by Dillman, 2011) was administered to a convenience assessment sample of 20 potential participants through which some refinements to the survey were applied. To develop the questionnaire, the double translation protocol was used. The questionnaire was first prepared in English and it was translated into Italian by the researchers. Then, the Italian version was translated back into English by a bilingual faculty specializing in service business. The two English versions had no significant differences. The two Italians member of the research team provided additional validation when interpreting the meaning of the translated interviews.

Once prequalified, participants were asked to complete an online survey. A total of 250 participants responded (16 percent redemption with respect to industry qualified service providers without ownership of the product), including architects (47 percent), heating specialists (47 percent), installers (6 percent) and project managers (6 percent), and we validated 248 questionnaires (two were incomplete). Respondents were 82.5 percent male and 17.5 percent female. All participants are independent respect the manufacturers.

The survey included two parts. First, mirroring the approach we adopted in Study 1, we asked respondents to evaluate the 11 value drivers related to a product or service received by a manufacturer that were important for them in their industry. All items used a five-point rating scale (1 = ‘not important at all’ to 5 = ‘strongly important’). We then asked participants to answer questions to allow us to collect demographic data.

### *Measure development*

We used several measures to ensure the validity of the content (Churchill 1979; DeVellis 2003). First, based on the qualitative study, we developed definitions of each value driver and

generated a pool of value drivers. We discussed each driver in a focus group with heating specialists, whose input helped us to validate each definition. We asked eight specialists who had worked in the sector for at least 10 years to assist us in validating each definition, and we invited them to identify items that were not applicable to their industry. The participants accepted some of the drivers, while others were excluded from being drivers of value. As a result we obtained 11 value driver labels.

### 3.4 Findings of Study 2

Study 2 first examines the importance/weight assigned to each value driver specified by the professional service providers in Study 1. All drivers were evaluated above the average mean; however, the highest means were assigned to the following drivers: energy efficiency (mean = 4.81), heating effectiveness (mean = 4.63) and heating distribution (mean = 4.58) (see Table 2), while the lowest means were given to delivery lead time (mean = 3.36) and personal experience (mean = 3.34). These differences were also confirmed by non-parametric analysis, which showed the existence of a statistical difference among the means of the drivers.

[Insert Table 2 Here]

Another goal of Study 2 was to explore the phenomenon of interdependency between drivers to show whether significant relationships exist among the varying degrees of importance attributed to the drivers. In doing so, we calculated correlations between the drivers. From the correlation table (see Table 3), we found that some drivers are linked to other drivers.

[Insert Table 3 Here]

For this reason, Study 2 strived to empirically test whether the drivers under consideration might be rationalized and reduced into fewer categories (constructs) in order to rationalize and identify a set of value driver constructs that included several value drivers. To probe this, we subjected the exploration sample to principal component analysis (see Table 4), which attempts to discover the nature of the constructs influencing a set of responses. We sought to not only achieve a data reduction, but also to make statements about the factors that are responsible for a set of observed responses/variables (Jolliffe 2002).

Table 4 shows that all drivers can be grouped into five main categories, explaining 68 percent of the variance. The first group (29 percent of variance explained), *core product performance*, includes heating effectiveness, heating distribution and loudness. The second group (13.53 percent), *service support*, is formed by the ease of installation and delivery lead time. The third group (10.11 per cent), *resource utilization*, includes energy efficiency and compatibility with other devices. The fourth group (8.61 percent), *peripheral attributes*, embraces style/appearance and the space occupied by the product. The final group (7.21 percent), *brand confidence*, includes personal experience and product reliability. The respondents suggested that they were more interested in core product performance attributes and better resource utilization than brand reputation and peripheral attributes. All of these groups were tested for internal consistency, showing a Cronbach's alpha above .70.

[Insert Tables 4 and 5 Here]

#### 4. Discussion and implications

We began this paper with two questions pertaining to the perceived role of professional service providers in reducing information asymmetry between customers and manufacturers. The second question involved exploring their perception of the value drivers that are important to them when addressing customers' decision making.

In addressing these research questions based on signaling theory firstly our study makes a significant theoretical contribution through the framework of professional facilitators acting as partial receivers and signalers within the framework of signaling theory (see Figure 1). Secondly according to the S-D logic, we examined the role of those facilitators between the manufacturer and the final customer by shedding more light on different value dimensions. Our findings also have significant implications for how non-traditional intermediaries can influence the value proposition delivered by manufacturers in a B2B context, particularly for "credence goods".

Evidence from the qualitative interviews (Study 1) provides insights into the relative importance of qualified professional service providers in calibrating manufacturers' signals and addressing customers' decision making. In addition, Study 1 contributes to the understanding of what facilitators perceive as being important value attributes in manufacturers' offerings that are relevant for customers' decision making. The empirical testing done in study 2 provides a better understanding of the relative importance of each of the value drivers.

To summarize our contribution to the existing literature, this study first explored the role of qualified professional service providers as facilitators—specifically, the value perceived by the facilitator and the key components involved in the process of perceived value where its role is to calibrate signals sent by signalers and in parallel it is also a partial receiver of signals in reducing complexity and information asymmetry across the supply chain (Figure 1).

Consistent with S-D logic theory, facilitators are part of the value-generation process and play a crucial role in addressing customers' decision making by acting as 'partial signalers' to help the manufacturer deliver value for customers—particularly when customers need advice in decision making for “credence goods”. Facilitators play a critical role because they formulate the best-fitting value proposition from the manufacturer to the customer. In addition, facilitators as a partial receiver and partial signaler hold a substantial information advantage over manufacturers, who might find it difficult to evaluate customers' needs. In fact, as manufacturers aim at attracting and maintaining customers, it is up to them to signal them potential value. However, they first might need to know from the facilitators' perspective what creates value using signals. This might lead manufacturers to have a better understanding of what facilitators perceive as being the most important in manufacturers' value propositions, and what providers choose to communicate as being the most important attributes to drive consumers' decision making. This is consistency with our framework (see Figure 1), it complements current research on signaling theory (Calderon-Monge and Huerta-Zavala, 2014; Lucia-Palacios et al., 2014), highlighting the overwhelming importance of the facilitator as a partial signaler in reducing information asymmetry in the B2B context.

Findings from this study also reveal that facilitators identified, evaluated and assigned a weight or a relative importance to specific drivers that can be categorized as macro-variables (see Table 5). Through this categorization, the study provides a framework that highlights the main value drivers that a professional service provider considers important. The first value driver is *core product performance*, which contributes to perceived value from the facilitator's perspective in the context of product complexity with different features and variants. Core product performance, along with the second macro-value driver, *peripheral attributes*, becomes

part of the values that facilitators perceive as strategic. We then identified *service support* as a critical value driver for facilitators. They also perceived *resource utilization* as an important category for improving their efficiency and ability to satisfy customers without wasting resources. This is important in the context of scarce resources, where an organization can show that it uses resources in a cost-efficient manner. Another important category of the value dimension is *brand confidence* in an industrial marketing context, which is based on personal experience and reliability in dealing with a specific manufacturer and product brand.

Facilitators perceive that their role is mainly to help customers reduce choice complexity and to address value drivers such as brand confidence, service support and product performance. The facilitators also discussed their important role in helping customers understand aspects of product functionality—particularly as they reflect customers’ preferences. The facilitators perceived themselves as being qualified providers of economically sustainable solutions (i.e., resource utilization and brand confidence) by helping customers make selections based on improved resource utilization in the short and long term. Improving purchasing decision outcomes (i.e., product fit, service, product performance and resource utilization) enables customers to make better purchasing decisions because facilitators use their knowledge and experience to identify the optimum product for the customer given a specific price range. This contributes to existing research by developing new knowledge about the value drivers in the complex service offering (Aarikka-Stenroos and Jaakkola 2012; Keränen and Jalkala 2013; Nätti et al. 2014).

Finally, by exploring the role of qualified professional service providers as facilitators, we understand how they perceive, interpret and act upon information and knowledge, which is

important for the success of members higher in the value chain in order to reduce information asymmetry.

The managerial and theoretical contributions of this study are closely linked. The results indicate the value categories upon which facilitators base their perceptions, which is critical for managers seeking to understand the best-value proposition to deliver to their industrial customers. Information on how these members perceive value for themselves and which value drivers they perceive as being the most important for their customers could be beneficial to manufacturers by helping them to understand what these members communicate to the final customer as being valuable. Such information could provide insights for manufacturers on how to become more competitive in the market. Given that these players perceived differences across manufacturers, manufacturers may want to customize their marketing strategy and/or product and service offerings depending on which type of facilitator they engage with. In summary, manufacturers can utilize their resources to design and market products according to the attributes that the facilitators value the most.

The results also provide industrial marketing managers with core fundamental drivers that facilitators perceive as value-generating properties or characteristics. In a constantly changing environment, desired value may also change and shift (Flint et al. 2011). The value drivers presented may shift, or their relative importance may change across industries, but the core properties of those drivers will remain constant and can be utilized by marketing managers in several ways.

## **5. Limitations and future research**

This research enters several uncharted territories regarding the role of service providers in the value chain. The findings are restricted to the limitations of the study design. This research focused on facilitators from the heating industry in Italy. Other industries may have similar value chain structures, but different contextual conditions; thus, further investigation is warranted to determine the similarities and differences with the findings of this study. Future research should investigate other industries (e.g., electronics, technology and heavy industry) from a service and value perspective, which would enrich our framework.

Results may be different in countries with unique cultures, habits and business practices. Accordingly, it is important to gain a better understanding of the effects of national characteristics and cultural distance in the context of global operations. There is an ongoing academic and practitioner debate about the effect of globalization on these differences—one of which is linked with the effect of cross-culture on value drivers in an international context (Russo et al., 2016); unfortunately, the business literature on the topic is still limited.

Participants reported the perceptions of their experiences working with manufacturers and customers. Although we mitigated potential bias in the accuracy of responses by qualifying participants and asking about their level of confidence in their answers, perceptual data are still dependent on respondents' ability and willingness to retrieve and accurately report on their mental processes. Future research would benefit from obtaining company data that tracks coordination mechanisms and document collaboration efforts and other relevant data.

The next future study could be to investigate perceptions of the same value drivers from the perspective of other players, such as manufacturers or end consumers using signaling theory. Data from one side of the dyad may not provide the full picture, and different or similar value drivers may be found when both parties of the dyad are investigated.



Finally, future research should examine additional B2B marketing management specific concepts to better understand sources of change in the signalers, such as how to anticipate value (Flint et al., 2011).

## References

- Aarikka-Stenroos, L. and Jaakkola, E. (2012), "Value co-creation in knowledge intensive business services: A dyadic perspective on the joint problem solving process", *Industrial Marketing Management*, Vol. 41 No. 1, pp. 15–26.
- Abdelzaher, D.M. (2012), "The impact of professional service firms' expansion challenges on internationalization processes and performance", *The Service Industries Journal*, Taylor & Francis, Vol. 32 No. 10, pp. 1721–1738.
- Alejandro, T.B., Kowalkowski, C., da Silva Freire Ritter, J.G., Marchetti, R.Z. and Prado, P.H. (2011), "Information search in complex industrial buying: Empirical evidence from Brazil", *Industrial Marketing Management*, Vol. 40 No. 1, pp. 17–27.
- Apfelthaler, G. and Vaiman, V. (2012), "Challenges and opportunities of internationalization in professional service industries", *The Service Industries Journal*, Vol. 32 No. 10, pp. 1589–1592.
- Ballantyne, D. and Varey, R.J. (2007), "The service-dominant logic and the future of marketing", *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 11–14.
- Bergh, D.D., Connelly, B.L., Ketchen, D.J. and Shannon, L.M. (2014), "Signalling Theory and Equilibrium in Strategic Management Research: An Assessment and a Research Agenda", *Journal of Management Studies*, Vol. 51 No. 8, pp. 1334–1360.
- Biggemann, S. and Buttle, F. (2012), "Intrinsic value of business-to-business relationships: An empirical taxonomy", *Journal of Business Research*, Vol. 65 No. 8, pp. 1132–1138.
- Boksberger, P.E. and Melsen, L. (2011), "Perceived value: a critical examination of definitions, concepts and measures for the service industry", *Journal of Services Marketing*, Vol. 25 No. 3, pp. 229–240.

- Calderon-Monge, E. and Huerta-Zavala, P. (2014), "Brand and performance signals in the choice of franchise opportunities", *The Service Industries Journal*, Routledge, Vol. 34 No. 9-10, pp. 772–787.
- Cantù, C., Corsaro, D. and Snehota, I. (2012), "Roles of actors in combining resources into complex solutions", *Journal of Business Research*, Vol. 65 No. 2, pp. 139–150.
- Churchill Jr., G.A. (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol.16 No.1, pp.64-73.
- Confente, I., Buratti, A. and Russo, I. (2015), "The role of servitization for small firms: drivers versus barriers", *International Journal of Entrepreneurship and Small Business*, Inderscience Publishers (IEL), Vol. 26 No. 3, pp. 312–331.
- Connelly, B.L., Certo, S.T., Ireland, R.D. and Reutzel, C.R. (2010), "Signaling Theory: A Review and Assessment", *Journal of Management*, Vol. 37 No. 1, pp. 39–67.
- Devellis, R.F.(2003), "Scale Development, Theory and Applications", 2nd Edition, Sage Publications, Thousand Oaks, CA.
- Edvardsson, B., Ng, G., Min Choo, Z. and Firth, R. (2013), "Why is service-dominant logic based service system better?", *International Journal of Quality and Service Sciences*, Emerald Group Publishing Limited, Vol. 5 No. 2, pp. 171–190.
- Eggert, A., Hogreve, J., Ulaga, W. and Muenkhoff, E. (2014), "Revenue and profit implications of industrial service strategies", *Journal of Service Research*, SAGE Publications, Vol. 17 No. 1, pp. 23–39.
- Falkheimer, J. (2014), "The power of strategic communication in organizational development", *International Journal of Quality and Service Sciences*, Vol. 6 No.2/3, pp. 124-133.
- Flint, D.J., Woodruff, R.B. and Gardial, S.F. (2002), "Exploring the Phenomenon of Customers'

Desired Value Change in a Business-to-Business Context”, *Journal of Marketing*, Vol. 66 No. 4, pp. 102–117.

Gebauer, H., Fleisch, E. and Friedli, T. (2005), “Overcoming the Service Paradox in Manufacturing Companies”, *European Management Journal*, Vol. 23 No. 1, pp. 14–26.

Grönroos, C. and Ravald, A. (2011), “Service as business logic: implications for value creation and marketing”, *Journal of Service Management*, Vol. 22 No. 1, pp. 5–22.

Grönroos, C. and Voima, P. (2013), “Critical service logic: making sense of value creation and co-creation”, *Journal of the Academy of Marketing Science*, Springer, Vol. 41 No. 2, pp. 133–150.

Gulati, R. and Higgins, M.C. (2003), “Which ties matter when? The contingent effects of interorganizational partnerships on IPO success”, *Strategic Management Journal*, Wiley Online Library, Vol. 24 No. 2, pp. 127–144.

Hammervoll, T. (2012), “Managing interaction for learning and value creation in exchange relationships”, *Journal of Business Research*, Elsevier, Vol. 65 No. 2, pp. 128–136.

Hyun Baek, T. and Whitehill King, K. (2011), “Exploring the consequences of brand credibility in services”, *Journal of Services Marketing*, Vol. 25 No. 4, pp. 260–272.

Jacob, F. and Ulaga, W. (2008), “The transition from product to service in business markets: An agenda for academic inquiry”, *Industrial Marketing Management*, Vol. 37 No. 3, pp. 247–253.

Keränen, J. and Jalkala, A. (2013), “Towards a framework of customer value assessment in B2B markets: An exploratory study”, *Industrial Marketing Management*, Vol. 42 No. 8, pp. 1307–1317.

Kirmani, A. and Rao, A.R. (2000), “No pain, no gain: A critical review of the literature on

signaling unobservable product quality”, *Journal of Marketing*, American Marketing Association, Vol. 64 No. 2, pp. 66–79.

Kotler, P., Hayes, T. J., and Bloom, P. N. (2002). "Marketing professional services: forward-thinking strategies for boosting your business, your image, and your profits". Prentice Hall Press.

Lapierre, J. (1997), “What does value mean in business-to-business professional services?”, *International Journal of Service Industry Management*, MCB UP Ltd, Vol. 8 No. 5, pp. 377–397.

Laszlo Sajtos, D., Plewa, C., Sweeney, J.C. and Michayluk, D. (2015), “Determining value in a complex service setting”, *Journal of Service Theory and Practice*, Emerald Group Publishing Limited, Vol. 25 No. 5, pp. 568–591.

Lucia-Palacios, L., Bordonaba-Juste, V., Madanoglu, M. and Alon, I. (2014), “Franchising and value signaling”, *Journal of Services Marketing*, Emerald Group Publishing Ltd., Vol. 28 No. 2, pp. 105–115.

Lusch, R.F., Vargo, S.L. and O’Brien, M. (2007), “Competing through service: Insights from service-dominant logic”, *Journal of Retailing*, Vol. 83 No. 1, pp. 5–18.

Maglio, P.P., Vargo, S.L., Caswell, N. and Spohrer, J. (2009), “The service system is the basic abstraction of service science”, *Information Systems and E-Business Management*, Vol. 7 No. 4, pp. 395–406.

Martelo Landroguéz, S., Barroso Castro, C. and Cepeda-Carrión, G. (2013), “Developing an integrated vision of customer value”, *Journal of Services Marketing*, Emerald Group Publishing Limited, Vol. 27 No. 3, pp. 234–244.

Martin, S.S. (2005), “Consumer Reactions to Firm Signals in Asymmetric Relationships”,

*Journal of Service Research*, Vol. 8 No. 1, pp. 79–97.

McCracken, G. (1988), "The long interview " (Vol. 13). Sage.

Myers, M.B., Borghesi, A., Russo, I. Assessing the global environment (2007) Handbook of Global Supply Chain Management, pp. 39-50.

Mele, C., Russo Spena, T. and Colurcio, M. (2010), "Co-creating value innovation through resource integration", *International Journal of Quality and Service Sciences*, Emerald Group Publishing Limited, Vol. 2 No. 1, pp. 60–78.

Mele, C. and Polese, F. (2011), "Key dimensions of service systems in value-creating networks", *The Science of Service Systems*, Springer, pp. 37–59.

Meyer, J., Gremler, D.D. and Hogreve, J. (2014), "Do Service Guarantees Guarantee Greater Market Value?", *Journal of Service Research*, SAGE Publications, Vol. 17 No. 2, pp. 150–163.

Mi Dahlgaard Park, S., Dadfar, H., Brege, S. and Sarah Ebadzadeh Semnani, S. (2013), "Customer involvement in service production, delivery and quality: the challenges and opportunities", *International Journal of Quality and Service Sciences*, Emerald Group Publishing Limited, Vol. 5 No. 1, pp. 46–65.

Nätti, S., Pekkarinen, S., Hartikka, A. and Holappa, T. (2014), "The intermediary role in value co-creation within a triadic business service relationship", *Industrial Marketing Management*, Elsevier Inc., Vol. 43 No. 6, pp. 977–984.

Negro, G., Hannan, M.T. and Fassiotto, M. (2014), "Category Signaling and Reputation", *Organization Science*, Informs, Vol. 26 No. 2, pp. 584–600.

Ngee Goh, T. (2014), "Professional preparation for service quality and organizational excellence", *International Journal of Quality and Service Sciences*, Emerald Group

Publishing Limited, Vol. 6 No. 2/3, pp. 155–163.

Nordin, F. and Kowalkowski, C. (2010), “Solutions offerings: a critical review and reconceptualisation”, edited by Stauss, B. *Journal of Service Management*, Vol. 21 No. 4, pp. 441–459.

O’Cass, A. and Ngo, L.V. (2012), “Creating superior customer value for B2B firms through supplier firm capabilities”, *Industrial Marketing Management*, Vol. 41 No. 1, pp. 125–135.

Olsson, R., Gadde, L.-E. and Hulthén, K. (2013), “The changing role of middlemen — Strategic responses to distribution dynamics”, *Industrial Marketing Management*, Vol. 42 No. 7, pp. 1131–1140.

Omar, A., Davis-Sramek, B., Myers, M.B. and Mentzer, J.T. (2012), “A Global Analysis of Orientation, Coordination, and Flexibility in Supply Chains”, *Journal of Business Logistics*, Vol. 33 No. 2, pp. 128–144.

Rao, A.R., Qu, L. and Ruekert, R.W. (1999), “Signaling unobservable product quality through a brand ally”, *Journal of Marketing Research*, JSTOR, pp. 258–268.

Russo, I., Confente, I., Gligor, D.M. and Autry, C.W. (2016), “To be or not to be (loyal): Is there a recipe for customer loyalty in the B2B context?”, *Journal of Business Research*, Elsevier Inc., Vol. 69 No. 2, pp. 888–896.

Sarkis, J., Zhu, Q. and Lai, K. (2011), “An organizational theoretic review of green supply chain management literature”, *International Journal of Production Economics*, Vol. 130 No. 1, pp. 1–15.

Schertzer, M.B. Schertzer, S.B. C. and Dwyer, R. F. (2013), “Value in professional service relationships”, *Journal of Business & Industrial Marketing*, Vol. 28 No. 8, pp. 607–619.

Songailiene, E., Winklhofer, H. and McKechnie, S. (2011), “A conceptualisation of supplier-

- perceived value”, edited by Bourlakis, M. *European Journal of Marketing*, Vol. 45 No. 3, pp. 383–418.
- Spence, M. (2002), “Signaling in Retrospect and the Informational Structure of Markets”, *American Economic Review*, Vol. 92 No. 3, pp. 434–459.
- Stiglitz, J.E. (2000), “The contributions of the economics of information to twentieth century economics”, *Quarterly Journal of Economics*, Vol. 115 No. 4, pp. 1441–1478.
- Strauss, A., and Corbin, J. (1998) "Basics of qualitative research". Thousand Oaks.
- Sweeney, J.C., Soutar, G.N. and McColl-Kennedy, J.R. (2011), “The marketing practices-performance relationship in professional service firms”, *Journal of Service Management*, Vol. 22 No. 3, pp. 292–316.
- Uлага, W. and Eggert, A. (2006), “Relationship value and relationship quality”, edited by Zolkiewski, J. *European Journal of Marketing*, Vol. 40 No. 3/4, pp. 311–327.
- Vargo, S.L. and Lusch, R.F. (2007), “Service-dominant logic: continuing the evolution”, *Journal of the Academy of Marketing Science*, Vol. 36 No. 1, pp. 1–10.
- Walker, R.H. and Johnson, L.W. (2009), “Signaling intrinsic service quality and value via accreditation and certification”, *Managing Service Quality: An International Journal*, Emerald Group Publishing Limited, Vol. 19 No. 1, pp. 85–105.
- Webster, C. and Sundaram, D.S. (2009), “Effect of service provider’s communication style on customer satisfaction in professional services setting: the moderating role of criticality and service nature”, *Journal of Services Marketing*, Vol. 23 No. 2, pp. 103–113.



**TABLE 1**  
**Perceived Value Drivers**

<b>Perceived Value Drivers</b>	<b>Frequency by Respondents</b>	<b>Representative Quotes</b>
Heating Effectiveness	23	“The functionality of the product plays an important role in the selection process and the value offered by a specific supplier.”
Heating Distribution	12	“Heating distribution can influence the value proposition of a specific product or supplier.”
Loudness	14	“I’m used to evaluating product or supplier characteristics based on the level of noise of the device.”
Ease of Installation	15	“Ease of installation is a valuable characteristic that I usually suggest to my customers.”
Delivery Lead Time	3	“The delivery time and the stock availability have to be according to customer requirement.”
Style/Appearance	17	“Appearance and style are valued by the end customer so we have to pay special attention to those elements.”
Space Utilization	12	“Customers do not just look for a product that’s functional but also one that will look good and not overtake the space.”
Personal Experience	8	“Brand reputation is a key driver for my view in the market channel.”
Product Reliability	23	“Reliability is an important driver for my recommendations.”
Compatibility	22	“Compatibility with other devices it is important.”
Energy Efficiency	18	“Heating efficiency is critical when I recommend anything to my customers.”

**TABLE 2**  
**Value Drivers Measurement: Descriptive Statistics**

<b>Value Drivers</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Energy Efficiency	1.00	5.00	4.8145	.55275
Heating Effectiveness	2.00	5.00	4.6382	.61295
Heating Distribution	2.00	5.00	4.5813	.65471
Product Reliability	2.00	5.00	4.5388	.63272
Compatibility	1.00	5.00	4.4818	.74657
Loudness	1.00	5.00	4.4634	.78748
Space Utilization	1.00	5.00	3.9673	.88565
Style/Appearance	1.00	5.00	3.7336	.92137
Ease of Installation	1.00	5.00	3.7097	1.04764
Delivery Lead Time	1.00	5.00	3.3629	1.05581
Personal Experience	1.00	5.00	3.3548	1.07751
N=248				

**TABLE 3**  
**Correlation Analysis**

	Energy Efficiency	Ease of installation	Style/Appearance	Space Utilization	Loudness	Heating Distribution	Heating Effectiveness	Compatibility	Personal Experience	Product Reliability	Delivery Lead Time
Energy Efficiency	1										
Ease of Installation	.125*	1									
Style/Appearance	.066	.179**	1								
Space Utilization	.126*	.321**	.366**	1							
Loudness	.213**	.273**	.132*	.272**	1						
Heating Distribution	.273**	.235**	.082	.249**	.471**	1					
Heating Effectiveness	.220**	.184**	.079	.145*	.344**	.569**	1				
Compatibility	.360**	.153*	.046	.167**	.303**	.369**	.364**	1			
Personal Experience	.016	0.064	.121	.097	.201**	.196**	.241**	.160*	1		
Product Reliability	.192**	.239**	.129*	.224**	.259**	.378**	.336**	.272**	.266**	1	
Delivery Lead Time	.038	.369**	.127*	.188**	.197**	.147*	.157*	.067	.243**	.271**	1

\*\*Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

**TABLE 4**  
**Principal Component Analysis**

<b>Rotated Component Matrix<sup>a</sup></b>					
	Component				
	1	2	3	4	5
Energy Efficiency	.066	-.002	<b>.877</b>	.087	-.066
Ease of Installation	.231	<b>.771</b>	.051	.221	-.187
Style/Appearance	-.077	.018	.031	<b>.880</b>	.147
Space Utilization	.309	.271	.035	<b>.699</b>	-.036
Loudness	<b>.793</b>	.164	-.021	.144	.068
Heating Distribution	<b>.780</b>	.030	.288	.083	.118
Heating Effectiveness	<b>.615</b>	.082	.322	-.076	.284
Compatibility	.358	.070	<b>.617</b>	-.034	.118
Personal Experience	.153	-.007	-.064	.111	<b>.860</b>
Reliability	.265	.354	.237	.022	<b>.503</b>
Delivery Lead Time	-.014	<b>.808</b>	-.004	.040	.336

Extraction Method: Principal Component Analysis.

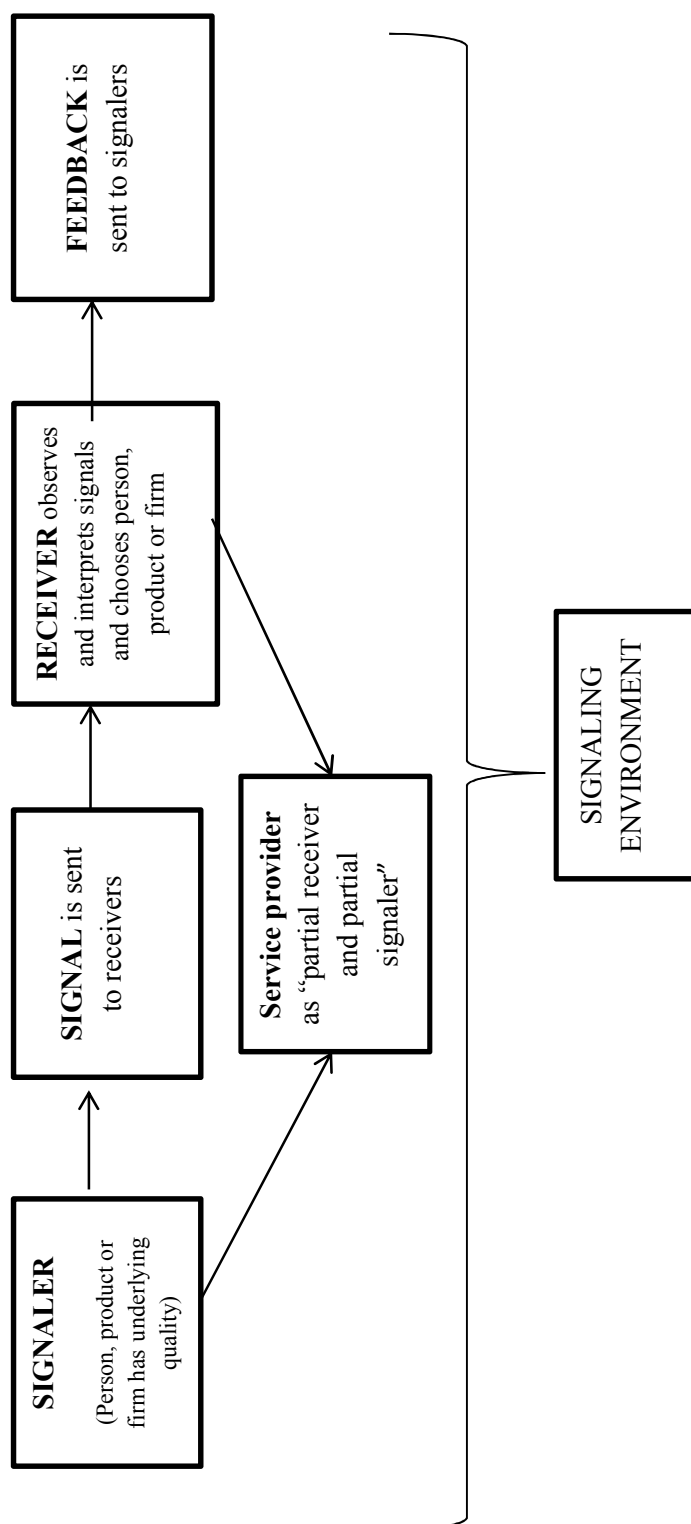
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

**TABLE 5**  
**Categories of Value Drivers**

<b>Value Categories</b>	<b>Perceived Value Drivers</b>	<b>Definition by Participants</b>	<b>Representative Quotes</b>
<b>Core Product Performance</b>	Heating Effectiveness	Performance of the device in terms of achieving its heating objectives	"The functionality of the product plays an important role in the selection process and the value offered by a specific supplier."
	Heating Distribution	Ability of the device to heat evenly in the area of interest	"Heating distribution can influence the value proposition of a specific product or supplier."
	Loudness	Ability of the product to perform with a minimum level of noise	"I'm used to evaluating product or supplier characteristics as based on the level of noise of the device."
<b>Service Support</b>	Ease of Installation	Simplicity and ease of installing the device without causing an inconvenience to customers	"Ease of installation is a valuable characteristic that I usually suggest to my customers."
	Delivery Lead Time	Cycle time it takes between placing an order and getting the product	"The delivery time and the stock availability have to be according to customer requirement"
<b>Peripheral Attributes</b>	Style/Appearance	Aesthetic element related to the external design or appearance of the product	"Appearance and style are valued by the end customer so we have to pay special attention to those elements."
	Space Utilization	Ratio between the space occupied by the device and the surrounding space	"Customers do not just look for a product that's functional but also one that will look good and not overtake the space."
<b>Brand Confidence</b>	Personal Experience	General experience in dealing with a specific supplier and product brand	"Brand reputation is a key driver for my view in the market channel."
	Product Reliability	Consistency of product performance compared to competitors	"Reliability is an important driver for my recommendations."
<b>Resource Utilization</b>	Compatibility	Ability of the device to fit with other heating/conditioning devices	"Compatibility with other devices is important."
	Energy Efficiency	Using the least amount of energy to achieve the desired heating	"Heating efficiency is critical when I recommend anything to my customers."

Figure 1. Service provider as partial receiver and partial signaler



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