Industrial Marketing Management 42 (2013) 1093–1101

Contents lists available at ScienceDirect

Industrial Marketing Management

The transition from products to solutions: External business model fit and dynamics

Fabiana Nogueira Holanda Ferreira [a,*], João F. Proença [a,b,1], Robert Spencer [c,2], Bernard Cova [c,2]

[a] Faculty of Economics, University of Porto, Rua Dr. Roberto Frias, 4200-464 Porto Portugal
[b] Advance-Centro de Investigação em Gestão, ISEG, UTL, Portugal
[c] Kedge Business School Marseille, Domaine de Luminy, BP 921, 13288 Marseille cedex France

ARTICLE INFO

Article history:
Received 14 December 2012
Received in revised form 25 June 2013
Accepted 30 June 2013
Available online 3 August 2013

Keywords:
Business model
Complex engineering firm
External fit
Product–service interplay
Solution

ABSTRACT

This article provides empirical evidence and contributes to theory building concerning business model fit and dynamics in the area of solutions business. Business models are seen in this context as going beyond considerations such as offerings and internal processes or even relationships, and as including network and market considerations. Indeed the paper highlights the fact that a business model is not firm-focused, nor dyad-focused, but rather network-, and even market-focused, demonstrating that a business model is not static, but dynamic. Manufacturer and customer continuously shift form and content of their respective business models to adapt both to the needs of the counterpart and to market context. A qualitative case study approach is adopted, with subsequent content analysis. The case study relates to the aerospace industry with focus on a complex engineering firm, one of the largest aircraft manufacturers in the world, its customer — a national airline — and their network partners of various kinds. The data were collected through multiple face-to-face interviews with managers in both companies, as a part and parcel of a network of actors that influences and is influenced by the supplier–buyer relationship. Relationships over time between these firms and network partners are described, highlighting the interplay of products and services related to the provision of solutions. Findings highlight the dynamic nature of business models over the relationship lifecycle between supplier and customer in a complex engineering environment, and the need for reciprocal adjustment of models.

1. Introduction

Market complexity is forcing traditional product-manufacturing companies to change their position in the goods–services continuum by continuously extending the service business dimension of their offer (Campbell-Kelly & Garcia-Swartz, 2007; Chesbrough & Rosenbloom, 2002; Grönroos, 2006, 2007; Kindstrom, 2010; Oliva & Kallenberg, 2003; Reinartz & Ulaga, 2008; Salonen, 2011; and Teboul, 2006). Salonen (2011) emphasized this, highlighting the challenge to move from a goods-based logic to a service-centered logic. According to Spring and Araújo (2009), however, what counts as a product or as a service relates more to the nature of producer–user interaction and the institutional structure of production and networks rather than to the attributes of products or services themselves. Tuli, Kohli, and Bharadwaj (2007) and Kapletia and Probert (2010) take this product–service discussion into the arena of solutions or integrated solutions (Davies, Brady, & Hodbay, 2006; Windahl, Andersson, Berggren, & Nehler, 2004), which they see as a customized and integrated combination of goods and services for meeting a customer's business needs. Some demonstrate, however, that it is necessary to go beyond the dyads/focal networks perspective to incorporate a market-based approach to marketing solutions: "A solution situation is not a buyer–seller dyadic 'island'. It is multi-partite and not isolated from the 'rest' of the market" (Spencer & Cova, 2012, p.12).

Integrated solutions are offerings that require complex organizational responses and hence specific business models which demand further attention (Davies et al., 2006). In the opinion of Spring and Araújo (2009), the notion of business model is useful as an integrating concept, with focus on four areas: network structure, how transactions are made, how revenue models and incentives interact, and how capabilities are accessed. In this context, what are the features of the business models of firms involved in the provision of solutions? How are the business models of firms adapted for the provision of solutions over time? The aim of this paper, then, is to contribute to this discussion and to provide empirical evidence and theoretical development relative to the adjustment and external fit over time of business models in the solutions field. External fit is the appropriateness of a configuration given the environmental conditions a firm faces, whereas internal fit concerns the degree of internal coherence among a firm's elements (Siggelkow, 2002). From a solution perspective, the essence of the notion of environment is captured by the network concept and milieu (Cova, Mazet, & Salle, 1996), the focus of attention here.

* Corresponding author at: Rua José Vilar, n°1582, apto 1101, 60.125-000, Fortaleza, Brazil. Tel.: +351 225 571 100, +55 85 99879273.
E-mail addresses: fabiana@fep.up.pt, fabianaporemail@yahoo.com.br (F.N.H. Ferreira), jproenca@fep.up.pt (J.F. Proença), robert.spencer@kedgebs.com (R. Spencer), bernard.cova@kedgebs.com (B. Cova).
[1] Tel.: +351 932680301, +351 226003569.
[2] Tel.: +33 491827348.

0019-8501/$ – see front matter © 2013 Elsevier Inc. All rights reserved.
http://dx.doi.org/10.1016/j.indmarman.2013.07.010

This research is qualitative and exploratory in nature, developed using a case study approach (Byrne & Ragin, 2009; Ragin, 1992; Yin, 2003) as method to investigate a contemporary phenomenon within its real life context and in which multiple sources of evidence are used. The paper presents a case study involving one of the leading aircraft manufacturers worldwide and its counterpart. Data were collected through multiple interviews with managers of the manufacturing firm and managers of a customer firm, an airline operating in the commercial sector.

The paper begins by presenting a theoretical review on the concepts of products and services in delivering benefits to customers. We discuss the recent conceptual evolution of services marketing literature, extending to the concept of offerings and solutions. We highlight the evolution of the concept from business solution to customer solution to market solution. The Business Model literature is then discussed in order to frame action and reveal connections about how firms can offer solutions in business-to-business networks. The case is then described, providing empirical evidence of the interplay of products and services by manufacturing firms of complex engineering products, resulting in the development of market solutions. These findings are subsequently discussed.

2. Transitioning from products to services to solutions

A recent trend of capital goods producing companies is to refocus from a "waiting for problems to emerge" approach or model, to a proactive approach (Windahl et al., 2004). With this new approach, traditional structures and capabilities have to be transformed and continuously refined, and firms come to learn that the new model is all about systems integration and the provision of service. (Davies et al., 2006, p.40). The predominant view in the literature integrating a customized and integrated combination of goods and services for meeting a customer's business needs is the concept of solution (Araújo & Spring, 2006; Kapletia & Probert, 2010; Tuli et al., 2007); (Ford, Gadde, Håkansson, & Snehota, 2003) or integrated solution (Davies et al., 2006; Windahl et al., 2004). Tuli et al. (2007) argue that customers view a solution as a set of customer–supplier relational processes comprising: (1) customer requirements definition, (2) customization and integration of goods and/or services and (3) their deployment, and (4) post-deployment customer support, all of which are aimed at meeting customers' business needs. The relational process view, thus, can help suppliers deliver more effective solutions at profitable prices. In addition, Tuli et al. (2007) suggest that the effectiveness of a solution depends not only on supplier variables (contingent hierarchy, documentation emphasis, incentive externality, customer interaction stability, and process articulation), but also on several customer variables (adaptability to the supplier's offerings and political and operational counseling that a customer provides to a supplier).

Today, when we talk about solutions, the notions of service integration and coordination are critical. Business solutions refer essentially (Nordin & Kowalkowski, 2010; Sawhney, 2006) to an offering that incorporates a number of integrated services into the customer's value chain and that forms a non-dissociable whole. Indeed, business solutions represent the type of value proposition (Ceresale & Stone, 2004) which best marries improved integration into the value chain with increased coordination among the elements which go to make up the offering. The first point is related to the content of offerings and more particularly the service dimension of offerings. This point stresses the degree of integration of the offering within the customer's value chain (Storbacka, 2011). Customers expect a solution to include processes aimed at understanding their requirements, customizing and integrating products, deploying them, and supporting them on an ongoing basis (Oliva and Kallenberg, 2003; Tuli et al., 2007). The second point deals with the combination of the elements which make up these offerings. This point concerns more specifically on the degree of coordination of these elements with each other, giving rise to a unique and indivisible solution (Davies et al., 2006; Stremersch & Tellis, 2002; Stremersch, Wuyts, & Frambach, 2001). For Gebauer, Paiola, and Saccani (2013), the service components included in the solution drive the formation of the network along the vertical and horizontal dimensions. Gebauer et al. (2013) identified four different types of service networks involved in the provision of solutions, and the capabilities necessary for forming and utilizing such networks. These are: a). vertical after-sales service network, b). horizontal outsourcing service network, c). vertical life-cycle service network, and d). horizontal integration service network. Analyzed through the perspective of the "focal firm", these network types promote understanding of the movement towards providing integrated solutions for products and services. The formation and utilization of each service network type require a specific set of dynamic capabilities (to initiate a specific network formation), and operational capabilities (that allow the network firms to develop, integrate and deliver the service components of the solution).

Fig. 1 shows how, when going from a commodities-based offering to a product-based one, then on to a systems offering and/or full service contract, and finally a solution offering, the suppliers have progressively increased both the degree of service integration in the customer's value chain, and the degree of coordination for the different service components included in the offering. This is in fact an evolution from a goods-dominant to a service-dominant logic (Ng, Parry, Smith, Maull, & Briscoe, 2012).

In a similar vein, Davies et al. (2006) analyze how collaborating companies are changing wider organizational capabilities to provide integrated solutions, i.e, how the collaborating companies deliver integrated solutions in practice. For Davies et al. (2006), firms have to demonstrate four key capabilities: systems integration, operational services, business consultancy and financial services. For the provision of these four key capabilities, firms have to rethink organizational-structure: comprising front-end customer-facing units, building modular offerings at the back-end and developing strong strategic centers, that allow adjudication between the front-end pull of customization and the back-end push for standardization. For Davies et al. (2006), an integrated solution provider has "to move through three levels of organizational capabilities: at level 1, the company must build a new face to the customer; at Level 2, it needs to strengthen its back-end capabilities and, at Level 3, the organization – front and back – must be refocused around customer's needs and around repeatable, integrated solutions delivery" (Davies et al., 2006, p.44).

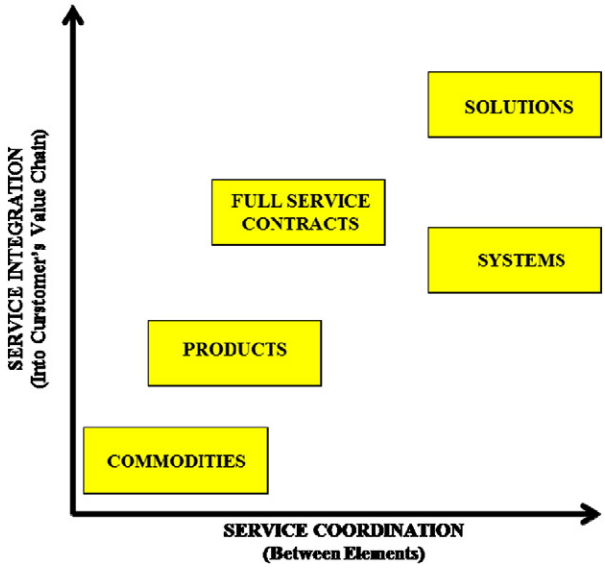

Fig. 1. Degrees of Integration and Coordination of Offerings.