



Antecedents of functional integration during new product development: The purchasing–marketing link



Carmen Gonzalez-Zapatero ^{*}, Javier Gonzalez-Benito, Gustavo Lannelongue

IME, Universidad de Salamanca, Campus Miguel de Unamuno, Edificio FES, 37007 Salamanca, Spain

ARTICLE INFO

Article history:

Received 10 April 2014

Received in revised form 5 May 2014

Accepted 15 May 2015

Available online 26 July 2015

Keywords:

New product development

Functional integration

Purchasing–marketing integration

ABSTRACT

In response to different economic and business trends, companies are becoming increasingly dependent on external resources and capabilities as they seek to cater for an ever more complex and challenging demand. Such dependence has led an important group of scholars to draw attention to the inevitable integration of the purchasing and marketing functions. We stress here the need for such integration during new product development, and seek the mechanisms that may promote purchasing–marketing integration. Accordingly, this study describes two essential components underlying the concept of purchasing–marketing integration, and tests the effect of different integration mechanisms gathered from the literature on these two components. The model is tested on a sample of 141 Spanish industrial companies. Our results show that each one of these integration mechanisms varies in its effectiveness in promoting each key component of purchasing–marketing integration. Taking these asymmetric effects into account is crucial for selecting the appropriate purchasing and marketing integration devices within companies.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

New product development (NPD) is one of the key factors behind the success, survival and renewal of industrial organisations, particularly in more competitive environments (Brown & Eisenhardt, 1995). The development of successful products, however, is by no means guaranteed. This has led researchers to investigate the drivers of NPD success (e.g., Brown & Eisenhardt, 1995; Carbonell & Rodríguez, 2006; Chen, Damanpour, & Reilly, 2010; Digout, Azouri, Decaudin, & Rochard, 2013; Montoya-Weiss & Calantone, 1994).

One such determinant of success has been identified as the integration of the functions involved in the process (e.g., Brown & Eisenhardt, 1995; Chen et al., 2010; Griffin & Hauser, 1996; Leenders & Wierenga, 2002; Montoya-Weiss & Calantone, 1994; Souder & Sherman, 1993). Along these lines, several contributions have been made regarding the integration of different functions: marketing, R&D, and operations (Griffin & Hauser, 1996; Gupta, Raj, & Wilemon, 1986; Karmarkar, 1996; Khan & Mentzer, 1998; Swink & Song, 2007; Tsai & Hsu, 2014; Yu, Ramanathan, & Nath, 2014). The literature has focused less on the need for integrating purchasing with other functional areas during NPD (Di Benedetto, Calantone, Van Allen, & Montoya-Weiss, 2003; Williams, Giunipero, & Henthorne, 1994), and so far no empirical contributions have been forthcoming on this link.

However, different circumstances in recent decades have drawn attention to the importance of the purchasing function: (1) The growing percentage of products manufactured by suppliers. For example, at Honda of America, over 80% of the materials used to assemble its automobiles are purchased from suppliers (Carr & Pearson, 1999). Boeing is responsible for only about 10% (in value) of the actual manufacturing of Boeing 787s, with the rest being undertaken by a global network of 900 suppliers (Piercy, 2009); (2) The increasing practice of outsourcing manufacturing towards countries with low labour costs (Sheth, Sharma, & Gopalkrishnan, 2009); (3) Intense global competition for raw materials in which the emergent economies are participating very aggressively (Sheth et al., 2009); (4) The growing awareness of the potential of collaboration relationships with suppliers through which companies could develop competitive advantages based on relational features that are difficult to replicate (Lawson, Cousins, Handfield, & Petersen, 2009); (5) The trend to seek knowledge and innovation beyond the company's boundaries through networking and open innovation initiatives (Piercy, 2009; Pulles, Veldman, & Schiele, 2014; West, Salter, Vanhaverbeke, & Chesbrough, 2014); or (6) The increasing need to provide flexible and personalized solutions to customers (Sharma & LaPlaca, 2005; Sheth et al., 2009).

All these trends stress the increasing dependency companies have on their purchasing ability to provide external resources and capabilities both for manufacturing and R&D, which within ever more complex and demanding markets (Sheth et al., 2009; Souder & Sherman, 1993) have led several authors (Ivens, Pardo, & Tunisini, 2009; Piercy, 2009; Sheth et al., 2009; Smirnova, Henneberg, Ashnai, Naudé, & Mouzas,

^{*} Corresponding author.

E-mail addresses: carmengz@usal.es (C. Gonzalez-Zapatero), javiergb@usal.es (J. Gonzalez-Benito), lannelongue@usal.es (G. Lannelongue).

2011; Williams et al., 1994) to highlight the “inevitability” (Sheth et al., 2009) of integrating the purchasing and marketing functions.

This “inevitability” clearly has an influence on one of the main areas of interaction between purchasing and marketing, namely, NPD (Williams et al., 1994). Marketing’s customer-consulting role (Sheth et al., 2009) has become crucial in NPD to understanding these more demanding customer preferences and extending this knowledge to NPDs (Souder & Sherman, 1993). Purchasing and marketing therefore need to constantly share information to ensure an optimal alignment between consumers’ preferences and suppliers’ resources and capabilities during NPDs. At General Motors, for instance, purchasing turns to the supplier community with a set of initial and general customer-oriented specifications (e.g., the component should not fade, wrinkle or twist after repeated use), even before beginning product design. This information enables suppliers to launch their own component R&D and manufacturing process (Carbone, 1995). Other examples can be found in other sectors, such as mobile phones (Mikkola & Skjøtt-Larsen, 2004) and fashion (Christopher, 2000; Christopher, Lowson, & Peck, 2004). In these cases, and in order to accomplish postponement strategies, information on real and recent demand travels upstream on the supply chain, whereby the generic and flexible inventory held by suppliers can be transformed into products that fit the customers’ latest preferences.

However, for decades, marketing and purchasing have played very different roles during NPD processes. Purchasers often claim that when they interact with marketing it is not as equals, which means the quality of the interaction process (Williams et al., 1994) may be severely affected. Purchasing professionals have also traditionally received information precisely during the final stages of the NPD process, when the supply requirements were “thrown over the wall” to them (Carbone, 1995, p. 38). These traditions may have an impact on the behaviour of different integration mechanisms in the case of the purchasing–marketing link that needs to be studied.

In addition to the need to provide empirical evidence on the behaviour of integration mechanisms in this particular case of purchasing–marketing, other information gaps call for additional investigation on functional integration. The first gap is that the very concept of functional integration has been addressed in considerably different ways in the literature, whereby its boundaries have become somewhat blurred (Chen, Daugherty, & Roath, 2009; Frankel & Mollenkopf, 2015; Khan & Mentzer, 1998; Pagell, 2004). The concept has been described by several authors as a multidimensional one (e.g., Chen et al., 2009; Frankel & Mollenkopf, 2015; Khan & Mentzer, 1998). However, their underlying dimensions, often referred to as “components” (e.g., Chen et al., 2009; Khan & Mentzer, 1998), have been described and operationalized in different ways. It therefore seems opportune to delve further into an analysis of this concept. The second gap refers to the antecedents of functional integration. There are only a few studies that compile different functional integration antecedents or “integration mechanisms”, as the literature has denominated them (e.g., Khan & Mentzer, 1998; Moenaert, Souder, De Meyer, & Deschoolmeester, 1994), allowing for comparisons among them (e.g., Leenders & Wierenga, 2002). The few that do (e.g., Leenders & Wierenga, 2002; Song, Neeley, & Zhao, 1996) do not reflect the trend for the separate analysis of integration components that are conceptually different (Chen et al., 2009; Khan & Mentzer, 1998). Finally, another important issue is that some articles have used integration mechanisms to operationalise integration components (e.g., Chen et al., 2009; Khan & Mentzer, 1998), highlighting the need to further develop this concept, especially when the aim is to identify these antecedents of functional integration. As Pagell (2004) affirms, more research on integration drivers is much in need. Our paper contributes to the state-of-the-art by seeking to fill the above-mentioned gaps.

With these questions in mind, our research here has a threefold purpose: firstly, to break the concept of integration down into its main components (Chen et al., 2009; Khan & Mentzer, 1998); secondly, based on a

review of the literature (Griffin & Hauser, 1996; Leenders & Wierenga, 2002; Mintzberg, 1979; Song, Montoya-Weiss, & Schmidt, 1997), to identify a series of integration mechanisms as their potential antecedents, and thirdly, conduct an empirical analysis of the dominating role those mechanisms exert over functional integration in the specific case of the purchasing and marketing functions.

The remainder of the paper is organised into the following parts: Section 2 reviews the different theoretical antecedents of relevance, with Section 3 introducing our model of integration mechanisms and the components of functional integration. Section 4 describes the methodology used for comparing the model, and presents the results obtained. These results are discussed in Section 5, and the paper closes with a summary of the main conclusions in Section 6.

2. Literature review

2.1. The NPD process

The main streams in the literature have conceptualised NPD as communication networks, problem-solving or decision-making chains (Brown & Eisenhardt, 1995; Song & Montoya-Weiss, 2001). These chains or sequences have been summarised in a series of stages. For example, Urban and Hauser (1993) report the following stages: business/market analysis, technical development, product testing, and product commercialization. Different firm functions (marketing, R&D, production, purchasing, finances...) participate or take the lead during these stages, and coordinate with all the other functions to accomplish the new development. Depending on multiple factors, such as industry context or the kind of innovation (incremental vs. radical), this participation may take a sequential or a concurrent approach during the different NPD stages (e.g., Swink & Song, 2007; Valle & Vázquez-Bustelo, 2009). Otherwise, using the metaphor proposed by Takeuchi and Nonaka (1986), the different stages can be undertaken either as in a “relay race” or as in a “game of rugby”.

In a sequential view of NPD, no stage begins until the one immediately before it has finished. The coordination and integration between functions would largely arise between the functions responsible for adjacent stages. Thus, marketing would coordinate with R&D to transcribe customer preferences into product specifications, R&D with production in order to design the process that generates this product and, finally, those responsible for purchasing would receive a series of requirements on the components and raw materials with which to visit the procurement market. Or, in other words, as it has been described by purchasing literature: R&D would develop a design and “throw-it-over-the-wall” (Carbone, 1995; p. 38) to purchasing. This expression reflects the scant shared information and integration with this latter function involved in the process (Carbone, 1995; Dyer, 1996; Piercy, 2009; Sheth et al., 2009).

In a more concurrent or simultaneous approach to NPD, the different functions involved in the process take place in earlier stages, receiving information sooner on what is expected of them, improving their response time, and also guaranteeing them the opportunity to contribute their own ideas and requirements right from the onset of the process (Sheth et al., 2009; Swink & Song, 2007; Takeuchi & Nonaka, 1986; Umemoto, Endo, & Machaco, 2004; Williams et al., 1994). Under this approach then, different functions work together from start to finish, as in the dynamics of a rugby game, and emphasis is placed on the importance not only of integrating each function with the one immediately following it according to the process’s traditional NPD sequence, but also of sharing information and continuously adjusting decision-making to the functions that will come into play later. Within this context, it is especially pertinent to analyse the link between marketing and purchasing, as they constitute the beginning and end of the NPD process from a sequential or relay race perspective.

Download English Version:

<https://daneshyari.com/en/article/1027379>

Download Persian Version:

<https://daneshyari.com/article/1027379>

[Daneshyari.com](https://daneshyari.com)