

Business Model Objectives' Effects On Marketing Innovation Initiatives: A Comparative Analysis Of Manufacturing And Service Companies

Zainul Wasik¹

zainul.wasik-2022@feb.unair.ac.id

Department of Management, Faculty of Economics and Business, Airlangga University, Surabaya, Indonesia

Muchammad Saifuddin²

saifuddin@uinsby.ac.id

Department of Management, Faculty of Economics and Islamic Business, University State Islamic of Sunan Ampel Surabaya, Indonesia.

Imelda Sitinjak³

imelda.sitinjak@uhn.ac.id

Department of Management, Faculty of Economics and Business, University of HKBP Nommensen, Medan, Indonesia.

C. Candraningrat⁴

candra@dinamika.ac.id

Department of Management, Faculty of Economics and Business, University of Dinamika, Surabaya, Indonesia.

Info Article

History Article:

Submitted

Revised

Accepted

Keywords:

Manufacturing Industries;

Services Companies;

Business Model; Marketing

Innovation;

Abstract

This research aims to examine the distinctions and overlaps that exist between manufacturing and service companies concerning how business model goals affect marketing innovation initiatives. The goals of business models and marketing innovation initiatives are the main topics of this study. According to the Oslo Manual, innovations in marketing entail adjustments to pricing, location, promotion, and product design. The study examines the connections between marketing innovations and business model objectives by analyzing data from 3,240 organizations, of which 1,986 are service providers and 1,254 are manufacturers. The implementation of marketing innovation yields different outcomes based on the goals of the business model and the types of businesses (manufacturing or service) that are taken into consideration. By pinpointing the specific distinctions between the service and manufacturing industries more precisely than previous research, this study goes beyond previous research. The size and age of the company do not significantly limit the introduction of fresh approaches to marketing in the production or service industries. On the other hand, most of the time, marketing innovations are motivated primarily by the intention of the company concept to enter a new market. It's innovative to concentrate on business impact of model objectives on marketing innovations.

Pengaruh Tujuan Model Bisnis Terhadap Inisiatif Inovasi Pemasaran: Analisis Perbandingan Perusahaan Manufaktur dan Jasa

Abstrak

Penelitian ini bertujuan untuk menguji perbedaan dan tumpang tindih yang ada antara perusahaan manufaktur dan jasa terkait pengaruh tujuan model bisnis terhadap upaya inovasi pemasaran. Tujuan model bisnis dan inisiatif inovasi pemasaran merupakan topik utama penelitian ini. Menurut Oslo Manual, inovasi dalam pemasaran memerlukan penyesuaian harga, lokasi, promosi, dan desain produk. Studi ini meneliti hubungan antara inovasi pemasaran dan tujuan model bisnis dengan menganalisis data dari 3.240 organisasi, di mana 1.986 di antaranya adalah penyedia layanan dan 1.254 adalah produsen. Implementasi inovasi pemasaran menghasilkan hasil yang berbeda berdasarkan tujuan model bisnis yang dikejar dan jenis organisasi (manufaktur atau jasa) yang menjadi pertimbangan. Dengan menunjukkan perbedaan spesifik antara sektor manufaktur dan jasa secara lebih tepat daripada penelitian sebelumnya, penelitian ini melampaui penelitian sebelumnya. Ukuran dan usia perusahaan tidak secara signifikan membatasi pengenalan inovasi pemasaran baru dalam industri manufaktur atau jasa. Di sisi lain, sebagian besar waktu, inovasi pemasaran didorong terutama oleh tujuan model bisnis untuk masuk ke pasar baru. Sangatlah inovatif untuk berkonsentrasi pada tujuan model bisnis dan bagaimana hal tersebut memengaruhi inovasi pemasaran.

INTRODUCTION

Over the past ten years, there have been a considerable increase in the amount of studies on business models. Scholars and executives concur that additional investigation is required to acquire a precise characterization (Clauss, 2017) and assessment methodology for business models. This will allow researchers to proceed with investigating their relationship with more related factors found within the organization. According to Teece (2010), a business model is often seen as the fundamental reasoning behind an organization, serving as a guide for how it allocates resources and conveys value to clients. Foss and Saebi (2018) performed a thorough examination and concluded that it is unclear whether a corporation possesses a business model or whether a specific design effort led to the creation of a business model. A business model is a straightforward, intuitive characterization of an organization that explains how it operates to achieve its objectives (Massa et al., 2017). According to business models serve as the structural blueprints that outline how organizations should run and grow. Comparably, business models are setups that combine specific dimensions, as Clauss (2017) succinctly put it. Foss and Saebi (2018) put it this way: a business model is a collection of particular actions carried out in order to meet partner requirements and market demands. Our strategy aligns with Clauss's (2017) definition of the value proposition business model dimension. The broad business goal that a company seeks while creating or establishing its

business model is what we mean when we speak to a "business model objective."

The corporation views the goals of its business model as extremely important (Chamberlin et al., 2010). Depending on the nature of the enterprise, the environment, rivals' tactics or the organization's size, businesses can have a variety of goals for their business models. Our research aims to investigate and verify the relationship between marketing innovations and business model objectives.

Few studies have examined how firms effectively create non-technical innovations, often known as novel approaches to marketing (Ajayi and Morton, 2015). Prior research has looked at how companies create technological advancements (Mohnen and Hall, 2013). The Oslo Manual (OECD, 2005) defines a marketing innovation as the use of an innovative marketing approach, which could include changes to pricing (Soman and Gourville, 2001), product placement (Zimmermann et al., 2016), product design (Mugge and Dahl, 2013), product promotion (Pauwels et al., 2004), or product design (Mugge and Dahl, 2013).

There is evidence to suggest that business model objectives and marketing innovations might have a significant relationship although there are still some unanswered questions. According to earlier studies in this field, marketing innovations give businesses a competitive edge and are influenced by learning abilities and organizational memory (Camisón and Villar-López,

2011). According to Ajayi and Morton (2015), customer relationship management, referral marketing, and customer partnership are the three elements that facilitate marketing innovations. In a similar vein, several writers have also linked business model goals to marketing innovation, like working together with partners (Doloreux et al., 2015).

An further significant contribution of this study is the analysis of the distinctions between businesses that provide services and those that manufacture goods. For service-oriented firms, innovation is essential as well as manufacturing ones. Asikainen (2015) and Biemans et al. (2016) have both made recent contributions to this topic pointing out that various business kinds may employ various innovation tactics and that service firms have received less attention than manufacturing firms. Coombs and Miles (2000) expounded on the synthesis method, which pertains to innovation in services and elucidates the need to integrate research on service organizations with manufacturing innovation. A growing number of businesses are putting a clear emphasis about service innovation (Koelling et al., 2010), and they might behave innovatively in ways that are distinct from industrial innovation (Tether, 2005). For instance, R&D may be comparatively less significant in service-oriented industries than it is in manufacturing-based industries, where it is acknowledged as being essential to the success of innovation (Chamberlin et al., 2010). Businesses in the industrial sector, on the other hand, place less

emphasis on organizational innovation than do businesses in the service sector (Tether, 2005). Therefore, these reasons imply that the connection between marketing innovation and business model objectives should also be compared to that of manufacturing and service firms. We created a model to connect numerous marketing innovations (product design, product placement, product promotion, and product price) with business model objectives (gain market share, target new clients, enter new markets) for manufacturing and service organizations in order to better analyze this relationship. The structure of this document is as follows. First, a review of pertinent literature is conducted on the topics of goals of business models, new developments in marketing, and the differences between manufacturing and service companies. Following that, theories are presented for every marketing innovation. The paper's approach and the process used to gather data from 3,240 organizations are described in the third section. After that, data analysis is explained and the outcomes are talked about. Lastly, limitations and recommendations for further research are discussed along with a summary of the findings' managerial implications.

THEORETICAL CONTEXTS

Goals Of The Business Model

Bellman et al. (1957) introduced the concept that underpins business models when they discussed the subject of business games. The concept was not often addressed after this first

contribution until the dotcom disaster of the late 1990s, when it was brought up (Osterwalder and Pigneur, 2010). Since then, researchers and business executives have concurred that a sound conceptualization of a business model is necessary for a company to survive (Massa et al., 2017; Velu, 2015). According to Teece (2010), a business model is "the design or architecture of the value creation, delivery, and capture mechanisms of a company," which is the description that is most often accepted. While there are many different parts to a business model (Taran et al., 2015), the objectives of the business model will be the main focus of our study.

According to research on business models, companies may strive to accomplish a variety of goals depending on their resources and competencies (Leiponen and Helfat, 2010; Yang and Hsiao, 2009). (Mezger, 2014). To accomplish their goals, businesses must properly manage or carry out their objectives (Damanpour, 2010). According to Guan et al. (2009), a company may choose to explore innovation for a variety of objectives. For instance, the corporation introduces a process innovation in response to business model goals such as enhancing production flexibility to shorten lead times for deliveries (Leiponen and Helfat, 2010). (Damanpour, 2010).

Clauss (2017) recently compiled the various forms of value (value production, value proposition, and value capture) inside an organization utilizing content analysis. A company's utilization of its resources to produce value is referred to as value creation

(Achtenhagen et al., 2013). A company's the objectives are displayed in the value proposition (Morris et al., 2005). Value capture (Baden-Fuller and Haefliger, 2013) is the process of converting a value offer into income or cost savings.

The present study employs Clauss's (2017) proposed value proposition method, which involves extending into new markets, focusing on new customers, and gaining market share. The value proposition dimension encompasses client acquisition, target customer selection and segmentation methods, and an effective offering for the customer in the form of goods and/or services (Ghezzi et al., 2015). As a result, our method of achieving business model objectives has nothing to do with the internal and external organizational procedures that a company uses to generate value by utilizing its resources and abilities (Achtenhagen et al., 2013). According to this logic, the research does not examine how a company generates income to pay for expenses or how this affects the organization's overall success (Johnson et al, 2008).

Over the past two decades, the marketing paradigm has changed from being service-centered as opposed to good-centered. The widely used service-domain logic (SDL) introduced by Vargo and Lusch (2004) aligns nicely with our focus on business model theory these days. Customers are able to recognize and assess value in use, whereas businesses are limited to creating value propositions, SDL states that (Vargo and Lusch, 2004). We emphasize how important the value proposition is as the

cornerstone of a company's business plan.

Marketing Innovations

There is room for disagreement regarding the differences while defining marketing innovations (Mohnen and Hall, 2013), particularly in light of the fact that businesses frequently use mixed innovation strategies, combining combining product and process advances with marketing innovations (Asikainen, 2015). Product innovations are products or services with useful qualities that are noticeably better than those of current products (Calantone et al., 2010). However, a modification to an existing product's design falls under the category of marketing innovation rather than product innovation (Creusen and Schoormans, 2005). A product is said to be non-technologically innovative if the manufacturer does not alter its functional or user qualities (Pires et al., 2008). A technological innovation is defined as one that modifies certain functional or user properties (Armbruster et al., 2008). Nonetheless, a lot of businesses innovate both in marketing and product development at the same time (Asikainen, 2015). This is because marketing innovations can enhance the effectiveness of product innovations (Mohnen and Hall, 2013). A new type of marketing innovations that are associated with new marketing techniques was presented by the Oslo Manual (OECD, 2005). These innovations are sometimes referred to as non-technological or commercial inventions. These innovations can take the form of adjustments to product positioning, promotion, design, and

packaging, as well as adjustments to how goods and services are priced.

Innovation In Businesses That Provide Services And Manufacture Goods

Innovation is frequently examined from a variety of angles. This tendency has been validated by studies that carried out meta-analyses in the realms of products (Calantone et al., 2010) and services (Storey et al., 2016). There is a difference between "innovation in services," which is defined as well as innovations produced by companies in the service industry, and "service innovation," which is the creation of new services connected to the production of goods (Un and Montoro-Sanchez, 2010; Gallouj and Djellal, 2010). We compare the innovation produced by service sector businesses to that of manufacturing enterprises. The manner that manufacturing companies innovate (Cortimiglia et al., 2016; Wang et al., 2015) and service providers innovate (Maglio and Spohrer, 2013) diverge greatly in several areas.

HYPOTHESIS

According to earlier research, each form of innovation might be associated with a distinct set of company objectives (Leiponen and Helfat, 2010). However, only a small amount of study has been done on marketing innovations, and most research on the connection between business model goals and innovation choices has focused on technological innovation (Guan et al., 2009). There is little question that technology innovations (Hu, 2014) and marketing innovations (Stampfl, 2016)

are closely related, but research on the various marketing innovations still require their antecedents (Ajayi and Morton, 2015). In a similar vein, Damanpour (2010) proposes that various innovations react to various business model goals.

Effects Of Business Model Goals On Product Design-Related Marketing Innovation

It is anticipated that business model objectives would drive modifications to product design (Camisón and Villar-López, 2011). Product shape, packaging, and appearance modifications are examples of product design marketing advances; functional aspects of the item remain unchanged (Creusen and Schoormans, 2005). In addition to its innovative design for marketing, a new product's technological features are showcased when it is introduced to the public (Mugge and Dahl, 2013). These endeavors enable companies to introduce novel ideas concerning product interpretations or consumer attitudes (Luchs et al., 2016).

Regarding innovation, the manufacturing and service sectors differ greatly from one another. It's possible that the talents required for industrial innovation differ from those needed for service innovation (Chesbrough, 2007). The goals of innovation and the motivations behind them differ for manufacturing and service organizations (Asikainen, 2015). For instance, it has long been known that R&D expenditures are essential to the creative operation of companies in manufacturing-related industries. Tata

Motors had to change the way cars were designed in order to satisfy customers' value propositions (Johnson et al. 2008). For businesses in the service sector, however, it is comparatively less significant (Chamberlin et al., 2010). Businesses in the service industry, emphasize organizational innovations than on product and/or process improvements, compared to manufacturers (Tether, 2005). Depending on organizational activities, the assistance the industry could be less inclined to use cutting-edge techniques (Koelling et al., 2010) and may have fewer options than manufacturing organizations (Van Cruysen and Hollanders, 2008). Furthermore, most service firms are seeing a blurring of the lines resulting in a reverse product life cycle for services as opposed to the typical product life cycle, between advances in products and processes (Gallouj and Savona, 2009). Collaboration with clients is frequently necessary for marketing advances in product design (Ajayi and Morton, 2015). To sum up, there is proof to suggest that, in the case of manufacturing companies as opposed to service organizations, the following business model objectives may have a more direct impact on product design:

H1: *For manufacturing enterprises more so than for service organizations, the influence of business model goals for product design-related marketing innovation will be significant.*

Effects Of Business Model Goals On Product Promotion-Related Marketing Innovation

Promotion of products-related marketing innovations are strategies used by businesses to draw in new or current clients (OECD, 2005). Adjustments to product advertising are typically part of business strategies that seek to identify and connect with new clientele. Naidoo (2010) links the benefits of being a market pioneer to various acts pertaining to the marketing of products, such as preannouncement tactics and advertising techniques (Lee and O'Connor, 2003). Comparably, creative product promotion efforts may aid a company in achieving its goals of attracting new clients (Matzler et al., 2015) or expanding its market position (Pauwels et al., 2004) in the face of significant switching costs for customers (Burnham et al., 2003). According to Ajayi and Morton (2015), a company's capacity to implement novel marketing techniques, particularly those involving the promotion of products, underscores the necessity for it to oversee and modify its customer interactions. Therefore, product promotion-related marketing innovations may result from business model objectives.

According to Edvardsson et al. (2010), there may be a distinction between the use of innovation in manufacturing organizations and the advertising of products to draw in clients in the service industry. It is anticipated that there will be variations between marketing advances in manufacturing and service organizations. According to Asikainen's (2015) research, a lot of businesses in particular manufacturing sectors such as autos, other transportation equipment, recycling, etc. concentrate mostly on fusing product and marketing

techniques under a tactic known as active innovation marketing. On the other hand, process and organizational innovations and innovation strategy are rivals for supremacy in the financial services industry (Campolongo et al., 2015). With this in mind, we proposed the following theory:

H2: *For manufacturing enterprises more so than for service organizations, the influence there will be a substantial impact from business model objectives on marketing innovation related to product promotion.*

Effects Of Business Model Goals On Product Placement - Related Marketing Innovation

The ability of a company to strategically position its items in the market is critical to its survival (Naidoo, 2010). Various approaches to commercializing the same technology could result in various outcomes (Chesbrough, 2010). Establishing suitable business model goals can be essential for the company to have a competitive edge in terms of product positioning. According to Amit and Zott (2001), the market is the focal point of the company plan. Markides and Sosa (2013), for example, investigate the value of company plans in expanding into new areas. Therefore, we expect new tactics for product positioning and sales channels to be influenced by the objectives of the business model.

According to recent research, companies in the manufacturing and service industries alter their distribution channels to achieve a variety of goals, including finding new markets for their

products and services and focusing on unexplored client groups (Hacklin et al., 2018; Berends et al., 2016). The manufacturing and service sectors differ in additional ways. In service organizations, marketing innovations are typically focused on creating new channels of distribution (Halpern, 2010). Bohnsack et al. (2014) provide another example, indicating such a rise will help new sales channels for sustainable technology to appear in the market if the company moves from a product-based to a service-based business model. Similar to this, businesses engaged in tourism also integrate marketing techniques with additional innovation tactics (Hoarau and Kline, 2014). After taking into account each of these points, we came to the conclusion that, compared to manufacturing companies, service companies will be more affected by product placement:

H3: *For service organizations more so than manufacturing firms, the influence the company model's goals for product placement and marketing innovation will be crucial.*

Effects Of Business Model Goals On Product Price-Related Marketing Innovation

The goals of the business model may also encourage modifications to the way that product pricing is marketed. Price has always been seen as an important factor since it denotes a superior product when it debuts in a new market. efforts for price-related marketing innovation, including price promotions, assist businesses in achieving their objectives (Pauwels et al., 2004). Price bundling, for instance, influences the

possibility of drawing in new clients (Soman and Gourville, 2001). According to several writers, price innovation in marketing aids companies in achieving their business model goals, such as expanding market share or breaking into new markets (Pauwels et al., 2004; Stankevica, 2015). Thus, creating price innovations may be of importance to a company looking to grow its market share or draw in new clients.

It is also projected that the manufacturing and service sectors will diverge from one another. Shi et al. (2016) compare three popular business models employed by mobile network providers and come to the conclusion that, given the influence of price fluctuations on post-paid user numbers in mobile network services, ideal pricing techniques may vary within the context of business models. Changes to pricing strategies might make a company more vulnerable to risk and uncertainty since consumers might find the new price model to be less appealing than the previous one (Schneckenberg et al., 2017). Depending on the industry being studied, a company may have a limited number of options when deciding on suitable pricing systems and tactics; this is particularly true for services (Sainio and Marjakoski, 2009). For instance, in the airline industry, new price strategies are thought to be the most crucial instrument for expanding into new markets and acquiring new clients (Halpern, 2010). In light of the previous conversation, we propose:

H4: *For service organizations as opposed to manufacturing firms, the influence of business model objectives on marketing*

innovation about product price will be more significant.

THEORITICAL MODEL

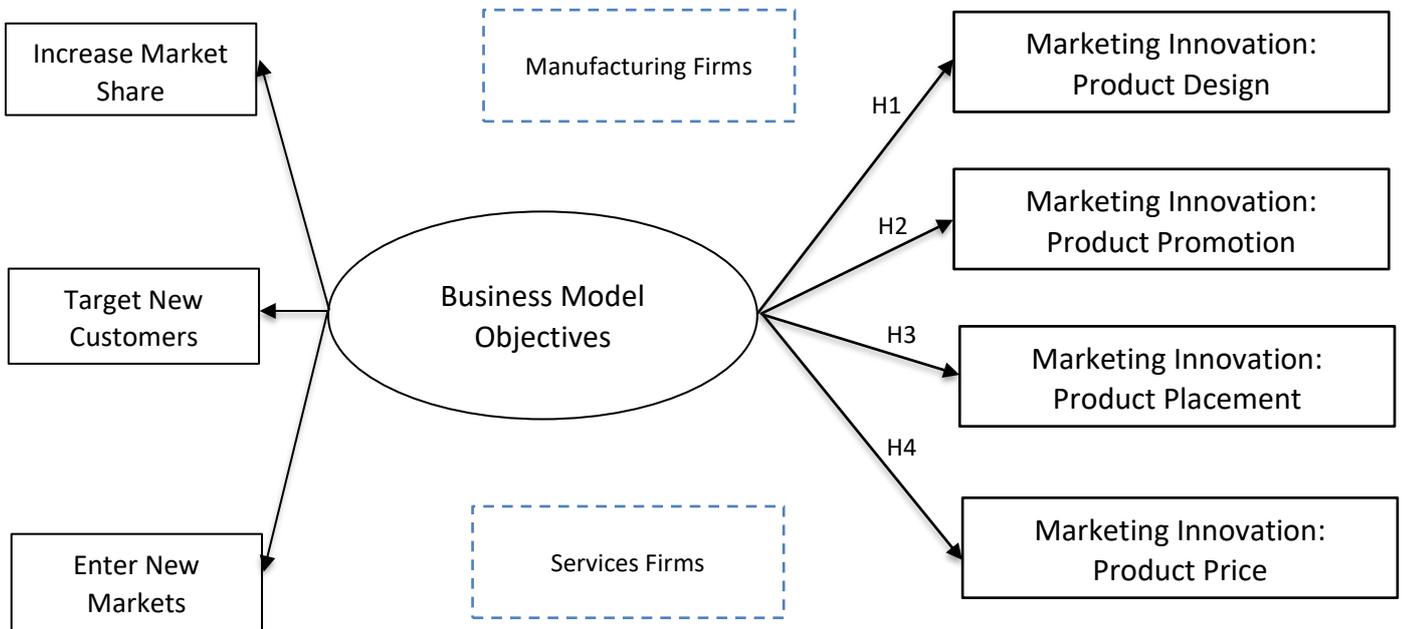


Fig. 1 Theoretical Model

METHODOLOGY

The Community Innovation Survey is the source of our data set (CIS). It is based on a long legacy of innovation research. The innovation process's structure, businesses' technology strategy, and inventive capacity are all examined in the survey. The Spanish National Statistics Institute is the organization conducting this poll. A chosen and representative sample of businesses involved in innovative activity receives questionnaires through the mail. The database contained information from 3,240 Indonesia businesses, comprising the manufacturing 1,986 (61.30%) and service 1,254 (38.70%) sectors. 25 years old is the average age (standard deviation: 17.5). In terms of size, 26.8

percent of businesses employ 200 people or more, compared to 73.2 percent of businesses with fewer than 200 employees. Because the survey was required, the final sample indicates a response rate of 93,0 percent of all targeted firms. It is true that there could be some selection bias in the CIS questionnaire. Working with a subsample of businesses that might not be typical of the public will result in that situation. This is not the case in our study, as all of the responses originate from the businesses that are part of the CIS sample. As a result, despite using secondary data that has already been obtained, our study does not face the same risks as studies using primary data, including the possibility of common

technique bias, as noted by Podsakoff et al. (2003).

There are two types of measures that were employed in this study (Appendix). According to the Oslo Manual (OECD, 2005), a Yes/No question was used to assess each marketing innovation's product design, promotion, location, and pricing (0 = no, 1 = yes). As many writers have discussed in-depth, we are evaluating innovation rather than innovativeness (Calantone et al., 2010; Lee and O'Connor, 2003). Consequently, using the metrics from the Oslo Manual in conjunction with a dichotomous answer, we concentrate on whether the companies were implementing new marketing innovations. The three business model objectives (gaining market share, targeting new customer groups, and entering a new market) were assessed using a single-item Likert scale (range from 1 to 4), in compliance with the Oslo Manual's recommendations (OECD, 2005). Clauss (2017) used items from Jansen et al. (2006), Reinartz et al. (2004), and Osterwalder and Pigneur (2010) to measure the things related to "new markets," "new customers," and "new channels."

This study examines how different goals for business models affect a number of marketing innovations. Each of the four marketing innovation categories—product design, product location, product promotion, and product price—was subjected to four logit regression analyses in order to test the correlations. Age and size are the two control variables included in each model. We do a series considering each

marketing innovation variable in our research (product design, product promotion, product location, and product pricing) in the form of binary logit regressions because the dependent variable is dichotomous. A facilitator of adoption is the independent variable in a logit regression if the coefficient is substantial and positive. Accordingly, the independent variable's marginal impact is not the regression's parameter in a logit model (Green, 2007).

Remember that because of the size of our data set, we did not anticipate bias. The maximum likelihood estimation (MLE), which yields reliable and consistent estimates, has been employed. The term "robustness" describes the likelihood that estimates will change in the event that the data contains an outlier. The quality that estimates won't change as the sample size grows is known as consistent estimations. Oversampling data has little effect on estimations, based on a 2003 study by Rousseeuw and Christmann that employed a technique called the "hidden logistic model." Put otherwise, the sample size has no bearing on the logistic regression's values. Similarly, in a small sample, robust/resistant estimates are considerably more skewed than the average logistic estimate according to Carroll and Pederson's (1993) research. Lastly, issues resulting from multicollinearity were also examined using a correlation analysis, which revealed no issues because all correlations were greater than the 0.7 cut off.

RESULTS

The majority of the associations suggested in the study model are validated by logistic regressions. There is a strong correlation between the independent and dependent variables when the LR is substantial. Every marketing innovation can accurately categorize observations into their appropriate groups and, according to the Hosmer-Lemeshow test, does not differ significantly from a perfect model. The range of each sector's Nagelkerke's pseudo-R² for marketing innovation variables is 2,6 to 8,4 percent of the data variation. Lastly, the manufacturing firms have the highest overall model prediction accuracy (74.4%), while the service firms have the lowest (57.4%) (marketing innovation: product pricing). Only when it came to product placement-based marketing innovation was the firm's size a relevant indicator. It was discovered that a company's age had a negative impact on product price and a favorable impact on product design-based marketing innovation. Furthermore, we discovered variations (with respect to significance) between both the dependent and independent variables, as well as between the various kinds of marketing innovations. In H1, we postulated that manufacturing companies will be more affected by business model objectives when it comes to marketing innovations pertaining to product design than service organizations. For the goal of breaking into new markets, we only discovered a significant association in service firms, not in manufacturing firms. In other words, H1 was not supported.

We discovered a different outcome for H2, manufacturing businesses will be more affected by the effect of business model objectives in marketing innovations connected to product promotion than service firms. In this instance, it was discovered that the goal of breaking into new markets was important for both manufacturing companies and service companies. Additionally, we discovered evidence in favor of focusing on acquiring new clients as a precondition for creative marketing in manufacturing companies' product advertising. This indicates that H2 received complete support.

The most satisfying outcomes were found in the linkages between the goals of the company strategy and innovative product placement-based marketing. In contrast to manufacturing companies, where only the objectives of entering new markets and targeting new customers were significant, there was a notable correlation between the service businesses' business model objectives. This thus indicates that H3 was completely supported.

The effects of business model goals on price-related marketing innovations for products will, we finally hypothesized in H4, be more applicable to service companies than to industrial companies. In this instance, we discovered that manufacturing firms' goal of breaking into new markets was crucial, but service firms' goal of gaining market share was more significant. We are therefore able to partially validate H4 for our data. We will go over the findings and their implications for the

two categories of businesses that were taken into consideration manufacturing and service firms in the section that follows.

DISCUSSION

This study looked at the relationship between marketing innovations and business model objectives. These results may aid businesses in identifying new opportunities and improving their competitiveness in the market (OECD, 2005). The study's findings have produced some intriguing conclusions about how the goals of the company model impact marketing innovations that businesses employ. Furthermore, this study surpasses previous research by specifically defining the unique characteristics that set apart the areas of manufacturing and services. Depending on the business model goals being pursued, the data show different outcomes in the use of innovative marketing techniques.

Innovation in item design is frequently applied by manufacturers. The only business model aim that drives service providers is expanding into new markets; however, in manufacturing organizations, there is no goal for the business model that justifies using this marketing innovation. This suggests that business model goals unrelated to the ones examined here, such as changing consumer perceptions or the meaning of the product, may be the driving forces behind innovative product design (Luchs et al., 2016). The findings imply that the goal of expanding into new markets is the driving force behind product design-

related marketing developments in service companies. This is in contrast to past research that showed hospital design choices were motivated by improving value for both patients and managers rather than by expanding into new markets (Lehoux et al., 2014). Our results support the notion that, as opposed to manufacturers, service businesses seek distinct goals for product design innovation (Asikainen, 2015), possess distinct incentives and options (Koelling et al., 2010), and may need client cooperation (Ajayi and Morton, 2015). The age of the company has a big role in determining how products are designed for manufacturing and service businesses. Age has a favorable impact on the use of product design-based marketing innovation in both industries. On the other hand, size has little bearing on how a product is designed. Geldes and Felzensztein (2013) discovered a favorable correlation between product design innovation and staff count, but no significant influence of company size on novel packaging techniques in their study on marketing innovations in agribusinesses. Our findings imply that business size has no impact on product design innovation, in contrast to their study, which does not discriminate between new design and new packaging as two distinct marketing innovations. Our results support the notion that, as opposed to manufacturers, service firms seek distinct goals for innovation in product design, possess distinct incentives and options (Koelling et al., 2010), and may need client collaboration (Ajayi and Morton, 2015). The age of the company has a big role in determining how products are designed

for manufacturing and service businesses. Age has a favorable influence on both sectors' use of product design-based marketing innovation. On the other hand, size has little bearing on how a product is designed. Geldes and Felzensztein (2013) discovered a favorable correlation between product design innovation and employee count, but no in their study on marketing innovations in agribusinesses, they found a considerable impact of firm size on innovative packaging techniques.

The business model aims of manufacturing organizations to market innovation based on product promotion is demonstrated to account for targeting new customers and expanding into new markets. Many businesses in the manufacturing and service sectors are regularly adjusting boost the sharing economy via attracting new customers and developing inventive ways to market their products (Matzler et al., 2015). Although creative product marketing initiatives can boost a company's market share (Pauwels et al., 2004), neither service providers nor manufacturers are significantly affected by our findings. However, the only thing that can help the service sector is the goal of breaking into new markets. The hypothesis that the function of product promotion to draw clients in services may differ from that of manufacturers is supported by the findings (Edvardsson et al., 2010). Size has no bearing on marketing creativity in manufacturing and service companies when it comes to product design or promotion. Firm age has no discernible effect in services. These are surprising findings because

contingency theorists emphasize how crucial to management, a company's age, size, and sector are important.

In the meantime, expanding market share, pursuing new clientele, and breaking into untapped areas are the driving forces behind the application of product placement-based marketing innovation in the service industry. However, only the other two goals pursuing new clients and breaking into untapped markets maintained their explanatory power in the manufacturing sector, where growing market share was of little consequence. To accomplish certain goals for their business models, producers and suppliers of services launch novel ways to market their goods and services. Provided examples of how businesses across many industries might alter their distribution networks to find new clients and focus on unexplored customer groups. According to Stankevici (2015), incremental innovation strategies aim to introduce new distribution systems, which are significant concerns for manufacturers and service providers alike. Size significantly improves marketing innovations based on where products are placed in both samples. When the company expands and gets a little bigger, it may be possible to form a cooperation with distributors for that kind of marketing innovation (Berends et al., 2016).

Lastly, depending on the industry, there are several explanations for creative product-price-based marketing. Manufacturers use new pricing strategies primarily with the intention of breaking into new markets, but the

main goal of service providers' new pricing tactics is to increase their market share. Price model changes put the company at greater risk and uncertainty because the new approach could not be as appealing to customers as the original. Innovation strategies have been perceived as aiming to develop new pricing mechanisms intended to break into new markets in earlier study (Stankevica, 2015). As our manufacturing sample shows, breaking into new markets may therefore be a better way to spur pricing innovation. In order to lower associated risks, service companies hoping to gain market share should spend in educating present clients about the benefits of the new pricing strategy (Schneckenberg et al., 2017). Upon conducting a more thorough examination of the three business model objectives, managers can uncover intriguing insights.

To summarize, the most frequent and significant factor driving marketing innovations is entering new markets. In particular, achieving this goal results in improvements in product distribution, pricing, and design for manufacturing organizations as well as innovative approaches to product distribution, marketing, and design for service-oriented businesses. Regarding the goal of growing market share, an intriguing outcome has been discovered. It has no effect on any kind of marketing innovation in manufacturing firms, but it has a significant impact on new product placement and pricing in service providers. This means that the goal of growing market share may be linked to other types of innovation besides marketing innovations. According to

research, businesses that experience a large decline in market share typically adapt by moving developing innovative open approaches, reinventing their primary business model, or introducing new products and processes. However, some would rather concentrate on breaking into new areas rather than growing their market share (Teece, 2018). In that area, more investigation is required.

IMPLICATIONS FOR MANAGERIAL AND ACADEMIC

The study examines the connection between business models and innovation, which fills in an interesting research gap. The findings offered here may benefit scholars and professionals, motivate them, and encourage more study in this area. Our results support the notion that, in contrast to manufacturers, service firms have various incentives and options, as well as distinct innovation goals (Asikainen, 2015). (Koelling et al., 2010).

Additional details about the kinds of marketing innovations that businesses explore are provided by this study. According to research on business models, different kinds of companies could have distinct main goals. The results of our investigation shed light on the business model goals that companies pursue and how those goals affect marketing innovations. The primary goal of businesses who create marketing breakthroughs in terms of product pricing, location, promotion, and design is to break into a new market. Results imply that it is not the sole goal that businesses pursue. The

findings, however, point to the possibility that certain marketing innovations could be motivated by goals beyond the scope of this study, such as changing consumer perceptions or the meanings associated with a product (Luchs et al., 2016). Scholars are urged to take into account a variety of business model goals in order to investigate their impact on specific marketing innovations.

Previous studies on marketing innovations either ignore the four categories under investigation or concentrate on different industries (Geldes and Felzensztein, 2013). Above all, our research adds to the body of knowledge by examining the causal relationship between marketing innovations and business model objectives. As far as we are aware, this is the first time around to compare service providers and manufacturers while researching the effects of various business model goals on four different forms of marketing innovation. This has the consequence that our findings help researchers and practitioners by demonstrating, for example, that manufacturing companies use new product placement strategies to target new markets and increase market share, while service companies use new customer targeting strategies to drive the implementation of marketing innovations.

Our findings add to the discussion among academics and managers over how age and business size affect the introduction of different marketing innovations. It is often acknowledged that established businesses usually gain

advantages when venturing into new markets and/or securing funding for creative endeavors. Continuous improvement has resulted in a number of advances, especially in the area of processes (Pires et al., 2008). Our findings, however, indicate that age has a detrimental effect on whether a product's pricing or design is adopted. This is in line with earlier studies' findings that novel pricing strategies are crucial for startups in particular (Schneckenberg et al., 2017). Since they are more popular, we urge younger businesses to develop those marketing innovations.

Furthermore, age has little bearing on whether marketing ideas centered around product promotion are adopted or not. These results suggest that age and size of the company do not significantly limit the introduction of innovative techniques for product or service promotion for managers. With the exception of offering novel techniques for product placement, size was determined to have no effect. A distributor alliance may be necessary for this kind of marketing innovation (Berends et al., 2016), and this can be accomplished when the company expands and gets a little bigger. However, our findings imply that new product promotion strategies and the adoption of innovative product designs are unaffected by a firm's size. One management takeaway is that tiny and medium-sized businesses can still innovate and use novel marketing strategies. This suggests that managers may support and develop marketing ideas at any size business. Firms seek many goals or "I want tos," which can all

be accomplished by taking different paths (Bouwman et al., 2018), in line with recent research on business models and innovation (Heikkilä et al., 2018). In a similar vein, the findings reported here implore management in the manufacturing and service industries should establish specific objectives and explore alternative approaches to encourage innovation. It has been discovered that innovation in services differs greatly from innovation in manufacturing. The goals of company models vary, but manufacturers and service providers also use distinct alternative marketing innovations.

LIMITATIONS AND FUTURE RESEARCH

We also note that this study has several limitations. The primary benefit of using pre-collected data gathered from an official entity is the data's validity. It also limits the amount of factors that can be added to the study, though. Despite this drawback, the poll is appropriate for our goal of researching the goals of business models and how they affect marketing innovations. Subsequent studies might use a more thorough quantitative methodology with more factors.

Our study solely looks at the value proposition, one of Clauss (2017)'s sub-dimensions of business models that takes into account the goals that an organization pursues with its customers and markets while developing its business model. However, certain additions to the literature have indicated that marketing innovation initiatives may be related to value creation and value capture, two additional key business model

elements. For instance, business models have also shown to be crucial in examining how innovation is impacted by the supply chain. In certain cases, partnering putting the marketing innovations specified in the business model into practice requires working with other stakeholders into practice (Velu, 2015). This is the situation, for example, in the wine sector, where suppliers, consultants, and research institutes are the most frequently used collaborators by marketing innovators (Doloreux et al., 2015). Additionally, national regulatory frameworks intended to preserve public confidence in the financial system as a whole and safeguard individual investors have historically structured marketing advances made by financial services corporations (Wood and Wójcik, 2010). Businesses in different industries can find it easier to apply marketing innovations on their own without enlisting the help of other partners. Comparably, business models could be focused on determining the client, interacting with them to meet their wants, providing satisfaction, and generating revenue.

Given how frequently companies combine marketing breakthroughs with other types of advances (Asikainen, 2015), more research is required to comprehend the causes and consequences of merging various forms of innovations. As previously said, it would be intriguing to integrate the results of business model objectives with regards to both product and marketing innovations (Pires et al., 2008; Armbruster et al., 2008), which are classified as non-technological

innovations. While the focus of our research is on the distinctions between product and service organizations, it could be worthwhile to examine how our analysis differs across different nations or business categories, like family businesses versus non-family businesses (De Massis et al., 2015). As a result of all these goals and techniques, it will also be wise to look at competitive advantage or performance. (Naidoo, 2010) (Wang and Chien, 2006).

REFERENCES

- Achtenhagen, L., Melin, L. and Naldi, L. (2013), "Dynamics of business models—strategizing, critical capabilities and activities for sustained value creation", *Long Range Planning*, Vol. 46 No. 6, pp. 427-442.
- Ajayi, O.M. and Morton, S.C. (2015), "Exploring the enablers of organizational and marketing innovations in SMEs", *SAGE Open*, Vol. 5 No. 1, available at: <https://doi.org/10.1177/2158244015571487>.
- Amit, R. and Zott, C. (2001), "Value creation in e-business", *Strategic Management Journal*, Vol. 22 Nos 6-7, pp. 493-520.
- Armbruster, H., Bikfalvi, A., Kinkel, S. and Lay, G. (2008), "Organizational innovation: the challenge of measuring non-technical innovation in large-scale surveys", *Technovation*, Vol. 28 No. 10, pp. 644-657.
- Asikainen, A.-L. (2015), "Innovation modes and strategies in knowledge intensive business services", *Service Business*, Vol. 9 No. 1, pp. 77-95.
- Baden-Fuller, C. and Haefliger, S. (2013), "Business models and technological innovation", *Long Range Planning*, Vol. 46 No. 6, pp. 419-426.
- Bellman, R., Clark, C.E., Malcom, D.G., Craft, C.J. and Ricciardi, F.M. (1957), "On the construction of a multi-stage, multi-person business game", *Operations Research*, Vol. 5 No. 4, pp. 469-503.
- Berends, H., Smits, A., Reymen, I. and Podoyntsyna, K. (2016), "Learning while (re) configuring: business model innovation processes in established firms", *Strategic Organization*, Vol. 14 No. 3, pp. 181-219, available at: <https://doi.org/10.1177/1476127016632758>
- Biemans, W.G., Griffin, A. and Moenaert, R.K. (2016), "Perspective: new service development: how the field developed, its current status and recommendations for moving the field forward", *Journal of Product Innovation Management*, Vol. 33 No. 4, pp. 382-397.
- Bohnsack, R., Pinkse, J. and Kolk, A. (2014), "Business models for sustainable technologies: exploring business model evolution in the case of electric vehicles", *Research Policy*, Vol. 43 No. 2, pp. 284-300.
- Bouwman, H., Nikou, S., Molina-Castillo, Francisco-Jose and de Reuver, M. (2018), "The impact of digitalization of business models", *Digital Policy, Regulation and Governance*, Vol. 20 No. 2, pp. 105-124, available at: <https://doi.org/10.1108/DPRG-07-2017-0039>.
- Brucks, M., Zeithaml, V.A. and Naylor, G. (2000), "Price and brand name as indicators of quality dimensions for consumer durables", *Journal of the Academy of Marketing Science*, Vol. 28 No. 3, pp. 359-374.
- Burnham, T.A., Frels, J.K. and Mahajan, V. (2003), "Consumer switching costs: a typology, antecedents, and consequences", *Journal of the Academy of Marketing Science*, Vol. 31 No. 2, pp. 109-126.
- Calantone, R.J., Harmancioglu, N. and Droge, C. (2010), "Inconclusive innovation 'Returns': a meta analysis of research on innovation in new product

- development”, *Journal of Product Innovation Management*, Vol. 27 No. 7, pp. 1065-1081.
- Camisón, C. and Villar-López, A. (2011), “Non-technical innovation: organizational memory and learning capabilities as antecedent factors with effects on sustained competitive advantage”, *Industrial Marketing Management*, Vol. 40 No. 8, pp. 1294-1304.
- Campolongo, F., Cariboni, J., Ndacyayisenga, N. and Pagano, A. (2015), “Banks under X-rays: business model choices and trading”, *Journal of Financial Economic Policy*, Vol. 7 No. 4, pp. 377-400.
- Carroll, R.J. and Pederson, S. (1993), “On robustness in the logistic regression model”, *Journal of the Royal Statistical Society. Series B (Methodological)*, Vol. 55 No. 3, pp. 693-706.
- Chamberlin, T., Doutriaux, J. and Hector, J. (2010), “Business success factors and innovation in Canadian service sectors: an initial investigation of inter-sectoral differences”, *The Service Industries Journal*, Vol. 30 No. 2, pp. 225-246.
- Chesbrough, H. (2010), “Business model innovation: opportunities and barriers”, *Long Range Planning*, Vol. 43 Nos 2-3, pp. 354-363. Chesbrough, H.W. (2007), “Why companies should have open business models”, *MIT Sloan Management Review*, Vol. 48 No. 2, pp. 22-28.
- Clauss, T. (2017), “Measuring business model innovation: conceptualization, scale development, and proof of performance”, *R&D Management*, Vol. 47 No. 3, pp. 385-403, available at: <https://doi.org/10.1111/radm.12186>
- Coombs, R. and Miles, I. (2000), “Innovation, measurement and services: the new problematic”, in Metcalfe, J.S. and Miles, I. (Eds), *Innovation Systems in the Service Economy: Measurement and Case Study Analysis*, Springer, Boston, MA, pp. 85-103.
- Cortimiglia, M.N., Ghezzi, A. and German, A. (2016), “Business model innovation and strategy making nexus: evidence from a cross-industry mixed-methods study”, *R&D Management*, Vol. 46 No. 3, pp. 414-432.
- Creusen, M.E.H. and Schoormans, J.P.L. (2005), “The different roles of product appearance in consumer choice”, *Journal of Product Innovation Management*, Vol. 22 No. 1, pp. 63-81.
- Damanpour, F. (2010), “An integration of research findings of effects of firm size and market competition on product and process innovations”, *British Journal of Management*, Vol. 21 No. 4, pp. 996-1010.
- DaSilva, C.M. and Trkman, P. (2014), “Business model: what it is and what it is not”, *Long Range Planning*, Vol. 47 No. 6, pp. 379-389.
- De Massis, A., Frattini, F., Pizzurno, E. and Cassia, L. (2015), “Product innovation in family versus nonfamily firms: an exploratory analysis”, *Journal of Small Business Management*, Vol. 53 No. 1, pp. 1-36.
- Doloreux, D., Shearmur, R. and Guillaume, R. (2015), “Collaboration, transferable and non-transferable knowledge, and innovation: a study of a cool climate wine industry (Canada)”, *Growth and Change*, Vol. 46 No. 1, pp. 16-37.
- Edvardsson, B., Gustafsson, A., Kristensson, P. and Witell, L. (2010), “Customer integration in service innovation”, *The Handbook of Innovation and Services*, Edward Elgar Publishing, pp. 301-317.
- Evangelista, R. and Vezzani, A. (2010), “The economic impact of technological and organizational innovations. A firm-level analysis”, *Research Policy*, Vol. 39 No. 10, pp. 1253-1263.
- Foss, N.J. and Saebi, T. (2018), “Business models and business model innovation: between wicked and paradigmatic

- problems”, *Long Range Planning*, Vol. 51 No. 1, pp. 9-21.
- Gallouj, F. and Djellal, F. (Eds) (2010), *The Handbook of Innovation and Services: A Multi-disciplinary Perspective*, Edward Elgar Publishing.
- Gallouj, F. and Savona, M. (2009), “Innovation in services: a review of the debate and a research agenda”, *Journal of Evolutionary Economics*, Vol. 19 No. 2, pp. 149-172.
- Ganter, A. and Hecker, A. (2013), “Deciphering antecedents of organizational innovation”, *Journal of Business Research*, Vol. 66 No. 5, pp. 575-584.
- Geldes, C. and Felzensztein, C. (2013), “Marketing innovations in the agribusiness sector”, *Academia Revista Latinoamericana de Administración*, Vol. 26 No. 1, pp. 108-138, available at: <https://doi.org/10.1108/ARLA-05-2013-0042>.
- Ghezzi, A., Cortimiglia, M.N. and Frank, A.G. (2015), “Strategy and business model design in dynamic telecommunications industries: a study on Italian mobile network operators”, *Technological Forecasting and Social Change*, Vol. 90 No. 1, pp. 346-354.
- Green, W.H. (2007), *Econometric Analysis*, Prentice-Hall, Upper Saddle River, NJ.
- Guan, J.C., Yam, R.C.M., Tang, E.P.Y. and Lau, A.K.W. (2009), “Innovation strategy and performance during economic transition: evidences in Beijing, China”, *Research Policy*, Vol. 38 No. 5, pp. 802-812.
- Hacklin, F., Björkdahl, J. and Wallin, M.W. (2018), “Strategies for business model innovation: how firms reel in migrating value”, *Long Range Planning*, Vol. 51 No. 1, pp. 82-110, available at: <https://doi.org/10.1016/j.lrp.2017.06.009>.
- Halpern, N. (2010), “Marketing innovation: sources, capabilities and consequences at airports in Europe’s peripheral areas”, *Journal of Air Transport Management*, Vol. 16 No. 2, pp. 52-58.
- Heikkilä, M., Bouwman, H. and Heikkilä, J. (2018), “From strategic goals to business model innovation paths: an exploratory study”, *Journal of Small Business and Enterprise Development*, Vol. 25 No. 1, pp. 107-128.
- Hervas-Oliver, J.-L., Sempere-Ripoll, F. and Arribas, I. (2015), “Asymmetric modeling of organizational innovation”, *Journal of Business Research*, Vol. 68 No. 12, pp. 2654-2662.
- Hoarau, H. and Kline, C. (2014), “Science and industry: sharing knowledge for innovation”, *Annals of Tourism Research*, Vol. 46 No. 1, pp. 44-61.
- Hu, B. (2014), “Linking business models with technological innovation performance through organizational learning”, *European Management Journal*, Vol. 32 No. 4, pp. 587-595.
- Jansen, J.J.P., Van Den Bosch, F.A.J. and Volberda, H.W. (2006), “Exploratory innovation, exploitative innovation, and performance: effects of organizational antecedents and environmental moderators”, *Management Science*, Vol. 52 No. 11, pp. 1661-1674.
- Johnson, M.W., Christensen, C.M. and Kagermann, H. (2008), “Reinventing your business model”, *Harvard Business Review*, Vol. 52, pp. 57-69.
- Koelling, M., Neyer, A.-K. and Moeslein, K.M. (2010), “Strategies towards innovative services: findings from the German service landscape”, *The Service Industries Journal*, Vol. 30 No. 4, pp. 609-620.
- Lee, Y. and O’Connor, G.C. (2003), “The impact of communication strategy on launching new products: the moderating role of product innovativeness”, *Journal of Product Innovation Management*, Vol. 20 No. 1, pp. 4-21.
- Lehoux, P., Daudelin, G., Williams-Jones, B., Denis, J.L. and Longo, C. (2014), “How do business model and health technology

- design influence each other? Insights from a longitudinal case study of three academic spin-offs”, *Research Policy*, Vol. 43 No. 6, pp. 1025-1038.
- Leiponen, A. and Helfat, C.E. (2010), “Innovation objectives, knowledge sources, and the benefits of breadth”, *Strategic Management Journal*, Vol. 31 No. 2, pp. 224-236.
- Luchs, M.G., Swan, K.S. and Creusen, M.E.H. (2016), “Perspective: a review of marketing research on product design with directions for future research”, *Journal of Product Innovation Management*, Vol. 33 No. 3, pp. 320-341.
- Maglio, P.P. and Spohrer, J. (2013), “A service science perspective on business model innovation”, *Industrial Marketing Management*, Vol. 42 No. 5, pp. 665-670.
- Markides, C. and Sosa, L. (2013), “Pioneering and first mover advantages: the importance of business models”, *Long Range Planning*, Vol. 46 Nos 4-5, pp. 325-334.
- Massa, L., Tucci, C. and Afuah, A. (2017), “A critical assessment of business model research”, *Academy of Management Annals*, Vol. 11 No. 1, pp. 73-104.
- Matzler, K., Veider, V. and Kathan, W. (2015), “Adapting to the sharing economy”, *MIT Sloan Management Review*, Vol. 56 No. 2, pp. 71-77.
- Mezger, F. (2014), “Toward a capability-based conceptualization of business model innovation: insights from an explorative study”, *R&D Management*, Vol. 44 No. 5, pp. 429-449.
- Mohnen, P. and Hall, B.H. (2013), “Innovation and productivity: an update”, *Eurasian Business Review*, Vol. 3 No. 1, pp. 47-65.
- Morris, M., Schindehutte, M. and Allen, J. (2005), “The entrepreneur’s business model: toward a unified perspective”, *Journal of Business Research*, Vol. 58 No. 6, pp. 726-735.
- Mugge, R. and Dahl, D.W. (2013), “Seeking the ideal level of design newness: consumer response to radical and incremental product design”, *Journal of Product Innovation Management*, Vol. 30 No. 5, pp. 34-47.
- Nagelkerke, N.J.D. (1991), “A note on a general definition of the coefficient of determination”, *Biometrika*, Vol. 78 No. 3, pp. 691-692.
- Naidoo, V. (2010), “Firm survival through a crisis: the influence of market orientation, marketing innovation and business strategy”, *Industrial Marketing Management*, Vol. 39 No. 8, pp. 1311-1320.
- OECD (2005), *Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data*, 3rd Edition, The Measurement of Scientific and Technological Activities, OECD Publishing.
- Osterwalder, A. and Pigneur, Y. (2010), *Business Model Generation: A Handbook for Visionaries, Game Changers, Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*, Wiley, Hoboken, NJ.
- Patrick, Y.K.C. and Tam, K.Y. (1997), “Factors affecting the adoption of open systems: an exploratory study”, *MIS Quarterly*, Vol. 21 No. 1, pp. 1-24.
- Pauwels, K., Silva-Risso, J., Srinivasan, S. and Hanssens, D. (2004), “New products, sales promotions, and firm value; the case of the automobile industry”, *Journal of Marketing*, Vol. 68 No. 4, pp. 142-156.
- Pires, C.P., Sarkar, S. and Carvalho, L. (2008), “Innovation in services— how different from manufacturing?”, *The Service Industries Journal*, Vol. 28 No. 10, pp. 1339-1356.
- Podsakoff, P.M., Mackenzie, S.B., Lee, J. and Podsakoff, N.P. (2003), “Common method biases in behavioral research: a critical review of the literature and recommend-ed remedies”, *Journal of*

- Applied Psychology, Vol. 20 No. 5, pp. 879-903.
- Reinartz, W., Krafft, M. and Hoyer, W.D. (2004), "The customer relationship management process: its measurement and impact on performance", *Journal of Marketing Research*, Vol. 41 No. 3, pp. 293-305.
- Rousseeuw, P. and Christmann, A. (2003), "Robustness against separation and outliers in logistic regression", *Computational Statistics and Data Analysis*, Vol. 43 No. 1, pp. 315-332.
- Sainio, L.M. and Marjakoski, E. (2009), "The logic of revenue logic? Strategic and operational levels of pricing in the context of software business", *Technovation*, Vol. 29 No. 5, pp. 368-378.
- Schneckenberg, D., Velamuri, V.K., Comberg, C. and Spieth, P. (2017), "Business model innovation and decision making: uncovering mechanisms for coping with uncertainty", *R&D Management*, Vol. 47 No. 3, pp. 404-419.
- Shi, X., Li, F. and Bigdeli, A.Z. (2016), "An examination of NPD models in the context of business models", *Journal of Business Research*, Vol. 69 No. 7, pp. 2541-2550.
- Simmons, G., Palmer, M. and Truong, Y. (2013), "Inscribing value on business model innovations: Insights from industrial projects commercializing disruptive digital innovations", *Industrial Marketing Management*, Vol. 42 No. 5, pp. 744-754.
- Soman, D. and Gourville, J.T. (2001), "Transaction decoupling: how price bundling affects the decision to consume", *Journal of Marketing Research*, Vol. 38 No. 1, pp. 30-44.
- Spieth, P. and Schneider, S. (2016), "Business model innovativeness: designing a formative measure for business model innovation", *Journal of Business Economics*, Vol. 86 No. 6, pp. 671-696.
- Stampfl, G. (2016), *The Process of Business Model Innovation: An Empirical Exploration*, ISBN 978-3-658-11266-0, Springer.
- Stankevicius, I. (2015), "Innovation strategies as outcomes of KM practices and antecedents of firm performance: evidence from European economies", *Electronic Journal of Knowledge Management*, Vol. 13 No. 1, pp. 62-73.
- Stanko, M.A., Molina-Castillo, F.J. and Harmancioglu, N. (2015), "It won't fit! for innovative products, sometimes that's for the best", *Journal of Product Innovation Management*, Vol. 32 No. 1, pp. 122-137.
- Storey, C., Cankurtaran, P., Papastathopoulou, P. and Hultink, E.J. (2016), "Success factors for service innovation: a meta-analysis", *Journal of Product Innovation Management*, Vol. 33 No. 5, pp. 527-548.
- Taran, Y., Boer, H. and Lindgren, P. (2015), "A business model innovation typology", *Decisions Sciences*, Vol. 46 No. 2, pp. 301-331.
- Teece, D.J. (2010), "Business models, business strategy and innovation", *Long Range Planning*, Vol. 43 No. 1, pp. 172-194.
- Teece, D.J. (2018), "Business models and dynamic capabilities", *Long Range Planning*, Vol. 51 No. 1, pp. 40-49.
- Tether, B.S. (2005), "Do services innovate (differently)? Insights from the European innovometer survey", *Industry and Innovation*, Vol. 12 No. 2, pp. 153-184.
- Un, C.A. and Montoro-Sanchez, A. (2010), "Public funding for product, process and organisational innovation in service industries", *The Service Industries Journal*, Vol. 30 No. 1, pp. 133-147.
- Van Cruysen, A. and Hollanders, H. (2008), "Are specific policies needed to stimulate innovation in services? (INNO

- Metrics 2007 Report)", European Commission, DG Enterprise, Brussels.
- Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1-17.
- Velu, C. (2015), "Business model innovation and third-party alliance on the survival of new firms", *Technovation*, Vol. 35 No. 1, pp. 1-11.
- Wang, C., Yi, J., Kafouros, M. and Yan, Y. (2015), "Under what institutional conditions do business groups enhance innovation performance?", *Journal of Business Research*, Vol. 68 No. 1, pp. 694-702.
- Wang, T.-Y. and Chien, S.-C. (2006), "Forecasting innovation performance via neural networks— a case of Taiwanese manufacturing industry", *Technovation*, Vol. 26 Nos 5-6, pp. 635-643.
- Wood, P. and Wójcik, D. (2010), "A dominant node of service innovation: London's national, professional and consultancy services", *The Handbook of Innovation and Services: A Multi-disciplinary Perspective*, Edward Elgar Publishing, pp. 589-620.
- Yang, H.-L. and Hsiao, S.-L. (2009), "Mechanisms of developing innovative IT-enabled services: a case study of Taiwanese healthcare service", *Technovation*, Vol. 29 No. 5, pp. 327-337.
- Yin, X. and Zuscovitch, E. (1998), "Is firm size conducive to R&D choice? A strategic analysis of product and process innovations", *Journal of Economic Behavior and Organization*, Vol. 35 No. 2, pp. 243-262.
- Zimmermann, R., Ferreira, L.M.D.F. and Carrizo Moreira, A. (2016), "The influence of supply chain on the innovation process: a systematic literature review", *Supply Chain Management: An International Journal*, Vol. 21 No. 3, pp. 289-304.