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## Article

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# Factors that influence value creation and value capture in companies – evidence in an emerging market

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## Abstract

**Purpose** – The objective of this study is to analyze the influence of the following variables – technological innovation, creativity and innovation management and business model innovation – on two variables: value creation in companies and value capture in companies.

**Design/methodology/approach** – The sample consisted of 222 informants employed by companies listed in the Top 1,000 in the city of Lima. A questionnaire was designed to examine the five variables under study (three independent variables and two dependent variables). Confirmatory and structural factor analyses were performed using structural equations with the SPSS AMOS software.

**Findings** – The study shows that value capture is influenced by technological innovation, creativity and innovation management, as well as business model innovation, while value creation is influenced only by technological innovation and business model innovation.

**Research limitations/implications** – One limitation of this study is that its results are generalized for companies from different business sectors, so its conclusions cannot be associated with specific business sectors. Another limitation of the study is that the data from this research are cross-sectional, so the relationships found between the study variables are not sufficient to establish a definitive causal relationship.

**Practical implications** – For executives, this study offers valuable insights into the significance of their management roles in driving innovation, particularly concerning the dual objectives of value creation and capture within their organizations.

**Originality/value** – A research model is proposed to identify the factors that influence value creation and value capture in companies in a developing country, where consumers have different purchasing power and purchasing preferences compared to consumers in developed countries. Executives focus their efforts on creating and implementing innovative ideas only if they perceive that doing so will achieve monetary results, and it is necessary to emphasize the innovation of internal processes to create value in a way customers will perceive.

**Keywords** Technological innovation, Innovation, Creativity, Business models, Value creation in companies, Value capture in companies

**Paper type** Research paper

## 1. Introduction

Innovation has become an important tool to generate competitive advantage. However, most companies that implement innovation projects do not manage this tool systematically (Peterková and Franek, 2018). Good creativity management is necessary to stimulate the development of individual skills for innovation management (Ubeda *et al.*, 2017), and good innovation management will facilitate innovation implementation (Melendez *et al.*, 2019).

## JEL Classification — M1, O32

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To unlock the full potential of organizational growth, it is imperative to intertwine the threads of technological innovation with the artistry of innovation management. While considerable scholarly attention has been showered upon dissecting the intricacies of technological innovation, the equally crucial realm of innovation management has lingered in the shadows of research (Damanpour *et al.*, 2018). Thus, the pursuit of knowledge beckons us to delve deeper into the realms of technological and innovation management within organizational landscapes, as echoed by the calls of scholars like Lee and Xuan (2019).

Companies with a high degree of innovation in their business model are more likely to survive longer (Velu, 2015). The generation of new business models allows organizations to gain new competitive advantages and/or retain existing ones, and it also allows companies to innovate and capture value (Abrahamsson *et al.*, 2019). However, few studies have been conducted on business model innovation (Cao *et al.*, 2018). Companies' ability to adapt new business models is a source of competitive advantage and is key to organizational performance. However, many business models are not successful and fail, while the aspect of business model innovation is relatively unexplored (Geissdoerfer *et al.*, 2018).

Typically, research on innovation management is primarily conducted within developed countries, with fewer instances in developing countries (George *et al.*, 2012). Yet, in emerging markets, consumer demographics are often characterized by diverse purchasing power and distinct preferences compared to those in developed countries (Hossain, 2021).

Additionally, many multinational companies have difficulty adapting their products and/or services to the context of emerging economies, as these economies have their own characteristics and limited resources: raw materials, human resources, adequate regulation and infrastructure (Mutlu *et al.*, 2015). Although innovations in developing countries are an opportunity to create new markets, the current literature on innovation capabilities for underserved customers is limited (Lim and Fujimoto, 2019).

Our study makes several contributions to research on the variables that influence value creation and value capture in organizations. On the one hand, numerous studies emphasize technological innovation as a primary driver in generating and seizing value within companies. However, this study broadens the scope by incorporating two additional variables: creativity and innovation management and business model innovation. On the other hand, this study contributes by showing that value capture in companies is influenced by technological innovation, creativity and innovation management and business model innovation, while value creation in companies is influenced only by technological innovation and business model innovation. Thus, the aim of this study is to scrutinize the impact of three factors – technological innovation, creativity and innovation management and business model innovation – on two outcomes: value creation and value capture within companies. The data were collected through a questionnaire from individuals who worked for companies listed in the Top 1,000 in Lima; a total of 222 valid questionnaires were obtained. The model's constructs underwent reliability and validity testing using confirmatory factor analysis (CFA). This article has been structured as follows: a summary, followed by sections on specific topics, (1) Introduction; (2) Literature review, including the formulation of the hypotheses; (3) Method; (4) Results; (5) Discussion and (6) Conclusions and References. Hypothesis testing was conducted within the context of a developing country.

## 2. Literature review

### 2.1 Technological innovation

Technological innovation has become a key factor for company development, which is very important in a highly competitive global economy (Rajapathirana and Hui, 2018), due to the need to constantly improve knowledge and technological capabilities, in order to facilitate the transformation of a scientific or technological project into a type of business innovation that creates value (Camisón-Haba *et al.*, 2019).

In order to innovate effectively, technological innovation must go hand in hand with management innovation so as to forge original organizational structures, develop new processes and implement new practices to produce competitive advantages (Rajiani and Ismail, 2019). Effective research and development can be explained by the management of the organization's social system and, in particular, by its innovation management (Heij *et al.*, 2019). Innovation management and technological innovation contribute significantly to the sustainability and performance of an organization (Zhang *et al.*, 2019), while investment in new technologies is vital for long-term competitiveness (Peterková and Franek, 2018), which makes it necessary to properly manage innovation to promote business development.

### 2.2 Creativity and innovation management

Innovation is a strategic tool for the creation, improvement and development of a company's competitive advantages (Distanont and Khongmalai, 2018), and creativity and innovation management are important in the development and creation of value in companies. Measuring the performance of innovation and development management has become the focus of managers (Salimi and Rezaei, 2018), as it leads to positive impacts on the creation of new production processes, new distribution processes and/or new products (Dereli, 2015).

Creativity and innovation are key factors in a company's success; however, most of the literature does not examine the role of creativity as a first step in the innovation process (Ferreira *et al.*, 2020). Creativity and innovation management in companies requires the support of upper management, but limited information is available on how the members of the organization relate as they manage more complex, long-term issues (Klarner *et al.*, 2020).

Sufficient technological innovation and effective management of creativity and innovation can diminish the marginal costs associated with research and development, thereby fostering an uptick in productivity growth rates (Lee and Xuan, 2019). Innovations are commonly viewed as the realization of novel ideas (Voig *et al.*, 2018); hence, assessing a company's capacity to nurture creativity and innovation internally is imperative.

Creativity and innovation management is a process that establishes a strong company–customer relationship and can be a key factor in facilitating successful competition in the market (Machová *et al.*, 2016).

### 2.3 Business model innovation

Business models must seek to make it easy to design and carry out activities, such as interaction with suppliers, partners and customers (Müller *et al.*, 2018). Von Delft *et al.* (2019) point out that business model innovation refers to significant changes made in the company to create and capture value. On the other hand, Casadesus-Masanell and Ricart (2010) define business model innovation as the search for new business logics and new ways to create and capture value for stakeholders.

The innovation of new business models leads to the generation of new products or services and requires an exchange of knowledge within the company (Weijs-Perrée *et al.*, 2020). New business models must be aimed at achieving business objectives, such as creating and capturing value in the company, which is why business model innovation has become an increasingly important research topic (Spieth *et al.*, 2020).

Business model innovation has garnered growing interest among both management scholars and practitioners (Foss and Saebi, 2017). Organizations that engage in business model innovation tend to reap favorable outcomes on performance (Cucculelli and Bettinelli, 2015). Thus, adopting new business models emerges as a viable strategy for managing creativity and innovation to foster value creation and value capture within companies.

### 2.4 Value creation in companies

Value is created at the beginning of the product or service development process, i.e. at the beginning of the creative process, when new ideas are being generated or discovered (Dyduch

*et al.*, 2021). New or modified ideas (in other words, the innovation) can be an important source of value creation (Bilton and Cummings, 2010), and this value creation then facilitates the identification of consumer needs and preferences that are difficult to analyze from a classical perspective (Amit and Han, 2017).

For companies, identifying customer needs is vital to creating value. Companies need to develop new innovation management processes that adapt to customer needs and ensure greater efficiency in business management (Ruggieri *et al.*, 2018). Value creation requires innovation or market domains and a formal cooperation strategy or cooperation experience (Bouncken *et al.*, 2020).

The analysis of customer needs and preferences must be ongoing in order to obtain information, manage that information and then make timely decisions (Kusterer and Schmitz, 2017). However, by detecting new customer needs, companies can reconfigure market opportunities and threats (Pedron *et al.*, 2018), so prioritizing the retention of employees with knowledge about products, resources and processes – who can contribute to new ideas, new products and new business – is essential (Smith *et al.*, 2017). Through collaborative innovation management, customers should become an active part of the innovation process (Krajcsák, 2019).

### 2.5 Value capture in companies

Hossain (2021) defines that value capture in companies is the generation of monetized value for the company and the shareholders. Bocken *et al.* (2014) argue that value capture is what creates value for a company's shareholders. Companies that find innovative ways to manage will not only reap financial rewards but also obtain a competitive advantage that will increase their overall value (Agustia *et al.*, 2019). One business objective is to capture value through profits, which can be achieved by creating a corporate innovation management system (Krajcsák, 2019). There is a connection between creativity and innovation management and value capture through obtaining profits; this relationship flows both ways, as profits allow more resources to be allocated to developing the company's innovation capacity (Illmeyer *et al.*, 2017).

Numerous researchers and professionals have recognized the importance of innovation for organizations to survive and grow (Fossas-Olalla *et al.*, 2015). In order to capture value in a company, solid and consistent innovation management must be established within an appropriate business environment (Stevanović *et al.*, 2016). Competitive intelligence must be developed in the company, as it improves the company's adaptability and supports the value capture in business (Placer-Maruri *et al.*, 2016).

### 2.6 Hypotheses

Although there are many approaches to developing proper creativity and innovation management, companies still have difficulty in properly distributing funds and managing them systematically (Peterková and Franek, 2018), which requires them to have a formalized and structured innovation management system to effectively promote innovation in order to increase productivity (Lee and Xuan, 2019).

Technological innovation allows companies to offer a product or service with unique characteristics that customers are looking for; from this perspective, an opportunity is presented for companies to face the challenges of market evolution (Macharia Chege and Wang, 2020) and thus be in constant search of the creation and capture of value. Companies must continuously adapt to changes in the globalized world and technological advancements, and they can do this more effectively if managed systematically. Proper management of research, development and technology, along with good cash flow management, helps sustain a company's operations (Tou *et al.*, 2020).

Companies carry out activities and strategies linked to technology, and to obtain technological advances, open innovation should be promoted so that organizations can opt for

value capture (Gandia and Parmentier, 2017). More research is needed to analyze how customers value products or services resulting from technological innovation and to understand the effects of that innovation on companies' value capture (Cheung *et al.*, 2016). Technological innovation helps companies improve organizational performance, which is observed in the improvement of profitability and sustainable economic growth, but appropriate innovative practices are needed with technological advances to respond to environmental pressures (Zhang *et al.*, 2019). For all these reasons, the following hypotheses are proposed:

*H1.* Technological innovation positively influences value creation in companies.

*H2.* Technological innovation positively influences value capture in companies.

Creativity and innovation management promotes good innovation practices and is carried out with the objective of creating and capturing value for the company. Companies need to make sure their creativity and innovation management is aimed at creating value for the company; that is, they must create programs to develop new products and processes that involve establishing a system of activities to define, plan and execute projects for market success (Stoycheva and Antonova, 2018). Dyduch *et al.* (2021) argue that organizations should prioritize processes that generate creativity and innovation in the development of new products, services or technologies in order to create value as a natural strategic option.

The use of innovation is needed to improve organizational performance by emphasizing supply chain management and precision in marketing and sales efforts and to establish profitable after-sales services (Omar *et al.*, 2019). The importance of creativity and innovation management should also be highlighted because it is a factor that can go a long way toward explaining the success of a company (Nasiri *et al.*, 2016). In this regard, Machová *et al.* (2016) argue that there is currently a strong demand for companies to bring new ideas, products or services to the market, as well as to be attractive for and achieve good long-term performance in the market. The best results in organizational performance originate through the creation and innovation of new products and/or services, so organizations should prioritize dynamic capabilities to innovate; studies should continue to explore the composition of resources and processes and propose more precise measures to improve value capture (Dyduch *et al.*, 2021). For all these reasons, the following hypotheses are proposed:

*H3.* Creativity and innovation management positively influence value creation in companies.

*H4.* Creativity and innovation management positively influence value capture in companies.

Organizations are compelled to continuously evolve to establish enduring value and sustainable profitability. Efforts in business model innovation ought to be geared toward fostering both the creation and the capture of value, thereby securing a position of market leadership (Omar *et al.*, 2019) and serving as a viable avenue for achieving profitability and sustainability (Iheanachor *et al.*, 2021). There is a pressing need for ongoing research into two key aspects: firstly, the innovation of business models and, secondly, the intricate ways in which these models influence value creation. While business model innovation has emerged as a pivotal concern in corporate management, it remains an area ripe for further exploration and understanding (Cucculelli and Bettinelli, 2015).

It is necessary to research the relationship between the innovation of new business models and the creation of value in the company, which allows companies to have policies that improve innovation (Binuyo *et al.*, 2019). The largest category of literature on business model analysis deals with the application of techniques to improve sales and includes studies that focus only on very specific cases; it is evident that literature on a comprehensive business approach is insufficient (Omar *et al.*, 2019). Business models have historically facilitated the

ability of companies to create and capture value (Iheanachor *et al.*, 2021), but they must be supported by the appropriate management of creative processes to foster all types of innovation (Plotnikova and Romanenko, 2019). A higher rate of adoption of business models will allow companies to obtain more efficient solutions, generating more benefits for stakeholders (Geissdoerfer *et al.*, 2018). Although value creation in companies is related to the business model, the knowledge obtained must still continue and focus on conceptualizing value creation well (Amit and Han, 2017).

It is important to understand how companies can design their business models so that they adequately capture the value of the company (Suominen *et al.*, 2019). There are concepts such as value creation, which, although important in the description of any business model, have not been widely taken into account in business model research (Maucuer *et al.*, 2022). Abrahamsson *et al.* (2019) argues that new international companies are innovating the capture of value through their business model innovation, specifically in new forms of sales channels and logistics methods; these findings improve the academic debate on business models, as companies seek sustainable growth, and further research into new business models is required. For all these reasons, the following hypotheses are proposed:

H5. Business model innovation positively influences value creation in companies.

H6. Business model innovation positively influences value capture in companies.

### 3. Method

#### 3.1 Research design

This study analyzes the influence of three independent variables, namely technological innovation, creativity and innovation management and business model innovation, on two dependent variables, namely value creation in companies and value capture in companies. The testing of the hypotheses was carried out in a developing country.

#### 3.2 Data and variables

A single questionnaire was designed that requested information on the five study variables: (1) technological innovation, (2) creativity and innovation management, (3) business model innovation (the independent variables), (4) value creation in companies and (5) value capture in companies (the dependent variables).

The items that make up each construct were taken and adapted from the following authors: for technological innovation, the survey proposed by Macharia Chege and Wang (2020) was adapted; for creativity and innovation management, the survey proposed by Stuhlfaut and Windels (2012) was adapted; for business model innovation, the survey proposed by Von Delft *et al.* (2019) was adapted; for value creation in companies, the survey proposed by Bouncken *et al.* (2020) was adapted, and for value capture in companies, the survey proposed by Tamulevičienė and Androniceanu (2020) was adapted.

All the constructs were measured using a five-point Likert scale. For each of the questionnaire items, respondents needed to assign scores between 1 and 5. These scores represented the following: (1) completely disagree, (2) disagree, (3) undecided, (4) agree and (5) completely agree.

The definition of each study variable was as follows:

- (1) *Technological innovation* is defined as the implementation of an idea for a new product or service or the introduction of new elements into an organization's production process or service operations (Damanpour and Evan, 1984).
- (2) *Creativity and innovation management* is the strategic management of the appropriate processes to create and implement innovation and to create the conditions for the

organizational culture in order to facilitate the emergence of ideas and their implementation (Bel, 2010).

- (3) *Business model innovation* refers to significant changes that are made in the company to create and capture value. These changes can be in terms of the customer's value proposition, profits, key resources or key processes (Von Delft et al., 2019).
- (4) *Value creation in companies* is a way for companies to establish their internal processes so that they are in a better position and get customers to perceive the increased value of their products and services in the market (Bouncken et al., 2020).
- (5) *Value capture in companies* is the generation of monetized value for a company and its shareholders (Hossain, 2021), which is expressed in obtaining an increase in profits, sales and assets.

A sample was taken from informants who worked for companies in different industry sectors, all of which were listed in the Top 1,000 Companies in Lima, Peru. The data were collected using a questionnaire sent by email to a total of 480 individuals who worked for one of the companies listed in the Top 1,000 ranking. The questionnaires were sent randomly; many authors have previously used this method to obtain information, including Montoya et al. (2020). A total of 274 questionnaires were answered, 52 of which were rejected as they had been incorrectly filled out and/or lacked certain data; therefore, in the end, a total of 222 valid questionnaires were obtained. Regarding the types of companies, 14% were agricultural companies, 16% were food and beverage companies, 11% were metal-mechanical services, 18% were textiles and clothing, 23% were in the commerce sector, 9% operated in hotel and tourism and 9% represented other categories. Regarding the hierarchical levels of the informants, 45% were managers, 34% were middle managers and 20% were employees. The informants were of both sexes: 142 of them were men (63.96%) and 80 were women (36.04%). As for the ages of the informants, 15% were 30 or younger, 46% were between 31 and 50 and 39% were 51 or older.

### 3.3 Analytical procedure

In order to be valid, the measurement instrument was developed taking into account the study model of the following authors: Montoya et al. (2020), Ostos et al. (2019) and Olmedo-Cifuentes and Martínez-León (2014). A convergent validity check was performed through an exploratory factor analysis to identify the items that make up each construct. Then, the discriminant validity analysis was performed through an analysis of correlations between constructs. The validity of the study model was verified through CFA to then obtain the results of the structural model. Both the CFA and structural factor analysis were carried out using structural equation modeling with IBM SPSS AMOS version 27 software.

## 4. Results

The model's constructs were tested for reliability and validity using CFA. The study model includes five constructs: technological innovation, creativity and innovation management, business model innovation, value creation in companies and value capture in companies; each construct is composed of three items.

A convergent validity analysis was carried out through the exploratory factorial analysis. Table 1 shows the five constructs obtained: (1) technological innovation (GIT), composed of three items with factor loadings of 0.818, 0.796 and 0.753; (2) creativity and innovation management (GI), made up of three items with factor loadings of 0.866, 0.835 and 0.835; (3) business model innovation (GIN), composed of three items with factor loadings of 0.814, 0.791 and 0.762; (4) value creation in companies (CVM), made up of three items with factor loadings of 0.813, 0.807 and 0.798, and (5) value capture in companies (GVE), made up of

**Table 1.** Exploratory factor analysis: rotated component matrix

Items	Items Code	Components				
		GIT	GI	GIN	CVM	GVE
Introduction of new products and/or services	GIT1	0.818	0.126	0.098	0.155	0.155
Test and trial of new products and/or services	GIT5	0.796	0.083	0.186	0.243	0.164
Discovery of new products and/or services	GIT4	0.753	0.114	0.114	0.154	0.233
Recognition of creativity	GI3	0.060	0.866	0.105	0.047	0.207
Importance of creative work teams	GI2	0.141	0.835	0.031	0.115	0.114
Existence of resources to generate ideas	GI1	0.115	0.835	0.131	0.146	0.013
Change in the offer of products and/or services	GIN3	0.096	0.131	0.814	0.138	0.195
Change of pricing and sales strategy	GIN4	0.049	0.132	0.791	0.190	-0.004
Change in marketing strategy	GIN5	0.251	0.001	0.762	0.038	0.085
Innovations offer benefits to customers	CVM4	0.109	0.159	0.172	0.813	0.178
Innovations generate novelties in the market	CVM5	0.263	0.099	0.130	0.807	0.216
Technological innovations benefit customers	CVM3	0.301	0.099	0.124	0.798	0.255
Increased profitability of the company	GVE2	0.063	0.098	0.096	0.203	0.908
Increase in company sales	GVE1	0.111	0.066	0.082	0.136	0.896
Increase in the value of assets	GVE3	0.117	0.194	0.103	0.243	0.736
Variance explained		9.25%	11.67%	6.78%	11.51%	35.86%
Reliability (Cronbach's alpha)		0.785	0.762	0.757	0.862	0.872

**Note(s):** Extraction method: Main component analysis. Rotation method: Varimax with Kaiser normalization

<sup>a</sup>The rotation has turned into 5 iterations

**Source(s):** Authors' own elaboration

three items with factor loadings of 0.908, 0.896 and 0.736. In all cases, the factor loadings obtained for each item presented reasonable results that confirmed the unidimensionality of each of the five constructs.

Following the exploratory factor analysis, a CFA was performed, and the model produced acceptable results. Table 2 shows the reliability data of the scale. Both the Cronbach's alpha values and the composite reliability scores are above 0.7, which is the minimum value recommended by Hair *et al.* (1999) for each construct. This table also shows the results of the average variance extracted: the data for each construct are above the minimum accepted value of 0.5. Other authors, such as Bajaba *et al.* (2022), also used these minimum values to validate their proposals.

The quality summary of model fit values is shown in Table 3. As can be seen, the indices obtained exceed the minimum values proposed by Hair *et al.* (1999). Del Brio and Lizaraburu (2018) also used these minimum values to validate their proposals. The values of the  $X^2$  ratio (1.485) were below the commonly accepted maximum value of 3. The comparative fit index, normed fit index, incremental fit index and Tucker–Lewis index indices possessed values of 0.975, 0.929, 0.976 and 0.968, respectively, which were all above the commonly accepted minimum value of 0.9. Values were also obtained for the root mean square error of approximation (RMSEA) index (0.047), all of which were below the commonly accepted maximum value of 0.08.

Regarding discriminant validity, the data were subjected to the Pearson correlation test; all the values obtained were below the 0.8 recommended by Hair *et al.* (1999), thus confirming that the constructs pass the discriminant test and are not related to each other.

A path analysis was carried out to test the research hypotheses. It was confirmed that the fitting model yielded significant values – model fit  $X^2$ : 1.485, CFI: 0.975, IIF: 0.976, TLI: 0.968 and RMSEA: 0.047.

Hypothesis H1 states that technological innovation positively influences value creation in companies; the results obtained indicate that this relationship is both positive and significant

**Table 2.** Confirmatory factor analysis results

Construct	Items code	Standardized factor loading	Standard error (S.E.)	Critical ratio (C.R.)	Cronbach's alfa	Composite reliability	Variance extracted
Technological innovation (GIT)	GIT1	0.682	1		0.785	0.789	0.555
	GIT5	0.793	0.120	9.206			
	GIT4	0.756	0.125	9.022			
Creativity and innovation management (GI)	GI3	0.764	1		0.762	0.843	0.642
	GI2	0.773	0.087	11.001			
	GI1	0.863	0.093	11.523			
Business model innovation (GIN)	GIN3	0.640	1		0.757	0.765	0.525
	GIN4	0.665	0.138	7.784			
	GIN5	0.850	0.173	8.146			
Value creation in companies (CVM)	CVM4	0.892	1		0.862	0.855	0.665
	CVM5	0.833	0.065	14.764			
	CVM3	0.710	0.073	12.875			
Value capture in companies (GVE)	GVE2	0.966	1		0.872	0.883	0.719
	GVE1	0.859	0.051	17.218			
	GVE3	0.698	0.056	12.467			

**Source(s):** Authors' own elaboration

**Table 3.** Quality summary of model fit

Fit index	Recommended value	Observed value
CMIN/DF ( $X^2$ ratio)	$\leq 3$	1.485
Comparative fit index (CFI)	$\geq 0.90$	0.975
Normed fit index (NFI)	$\geq 0.90$	0.929
Bollen's incremental fit index (IFI)	$\geq 0.90$	0.976
Tucker–Lewis index (TLI)	$\geq 0.90$	0.968
Root mean square error of approximation (RMSEA)	$\leq 0.08$	0.047

**Source(s):** Authors' own elaboration

( $B = 0.505, p < 0.01$ ), supporting hypothesis [H1](#). Hypothesis [H2](#) proposes that technological innovation positively influences value capture in companies; the results obtained indicate that this relationship is both positive and significant ( $B = 0.177, p < 0.05$ ), supporting hypothesis [H2](#). Hypothesis [H3](#) indicates that the management of creativity and innovation positively influences value creation in companies. However, the results show that this relationship is positive but not significant, which means that hypothesis [H3](#) is not supported. Hypothesis [H4](#) indicates that creativity and innovation management positively influence value capture in companies; the results obtained assert that this relationship is both positive and significant ( $B = 0.191, p < 0.05$ ), supporting hypothesis [H4](#). Hypothesis [H5](#) indicates that business model innovation positively influences value creation in companies; the results indicate that this relationship is both positive and significant ( $B = 0.198, p < 0.05$ ), supporting hypothesis [H5](#). Hypothesis [H6](#) expresses that business model innovation positively influences value capture in companies; the results indicate that this relationship is both positive and significant ( $B = 0.200, p < 0.05$ ), supporting hypothesis [H6](#). The results of the analysis are shown in [Table 4](#).

**Table 4.** Path analysis results

Independent variable	Dependent variable	Unstandardized regression weight	Standardized regression weight	p.value	Hypotheses
Technological innovation	Value creation in companies	0.564	0.505	<0.01	H1 (supported)
Technological innovation	Value capture in companies	0.210	0.177	<0.05	H2 (supported)
Creativity and innovation management	Value creation in companies	0.145	0.123	n.s	H3 (not supported)
Creativity and innovation management	Value capture in companies	0.240	0.191	<0.05	H4 (supported)
Business model innovation	Value creation in companies	0.275	0.198	<0.05	H5 (supported)
Business model innovation	Value capture in companies	0.294	0.200	<0.05	H6 (supported)

**Note(s):** Model Fit  $X^2 = 1.485$ ; CFI = 0.975; IFI = 0.976; TLI = 0.968 and RMSEA = 0.047

**Source(s):** Authors' own elaboration. Table courtesy of [Ostos et al. \(2019\)](#)

## 5. Discussion

The results of the study indicate that technological innovation influences companies' value creation and value capture. This means that executives value efforts to maintain sustainable technology that facilitates the creation of new products or services in order to improve organizational performance.

Creativity and innovation management influence companies' value capture but not their value creation. This indicates that executives support efforts to generate and implement ideas only if tangible results are expected in organizational performance as it relates to profitability, sales and an increase in assets. In other words, a drive for creativity and innovation will be viable only if customers perceive it and if this is reflected in transactions that improve organizational performance.

Business model innovation is essential to counteract the volatility of the markets and influences both value creation and value capture in companies. This agrees with studies of [Miroshnychenkoa et al. \(2021\)](#), who point out that the business model innovation is related to the value creation in companies through the development of the absorption capacity and the exploitation of knowledge, and [Yang et al. \(2020\)](#), who argue that business model innovation is related to value capture in companies by identifying the value proposition. The permanent reconfiguration of business models in terms of product offerings, strategies and orientation to customer needs is essential for improving organizational performance and enhancing perceived value from the perspective of customers and the market in general.

The business management landscape has changed: the growing pace of technology and high levels of competition have generated volatile markets that force companies to adapt using new innovation processes ([Zajkowska, 2017](#)) and new business models to deliver products and/or services that are tailored to meet customer needs ([Lynch et al., 2016](#)). Therefore, companies require managers who are skilled in effective management and decision-making. This study highlights exactly this: the importance of the management of innovation-related activities and technology and the adaptation of new business models.

## 6. Conclusions

The objective of this study was to analyze the relationships between three independent variables, namely technological innovation, creativity and innovation management and

business model innovation, and two dependent variables, namely value creation in companies and value capture in companies. The relationships between the variables were examined using six hypotheses, five of which yielded positive and significant results, while only one of them yielded insignificant results.

This study contributes by showing that value capture in companies is influenced by technological innovation, creativity and innovation management and business model innovation, while value creation in companies is influenced only by technological innovation and business model innovation. A first value of these findings is that this study model combines three independent variables that had not yet been explored together. In this regard, [Damanpour et al. \(2018\)](#) show that most studies on innovation have mainly focused on the technological innovation analysis rather than on innovation management. On the other hand, [Cao et al. \(2018\)](#) argue that few studies on business model innovation have been conducted. In this study, we have precisely analyzed these variables.

A second value is the fact that the study findings correspond to an emerging market, which is characterized by having consumers whose purchasing power and purchasing preferences are different compared to those in developed countries ([Hossain, 2021](#)). Studies with a similar approach conducted in emerging markets can be found in [Ferreira et al. \(2020\)](#), who argue that studies on the adoption of technological innovation and the development of potential competitive advantages have received little attention in emerging countries.

Academics are presented with a study model that lays the groundwork for ongoing exploration into the factors shaping value creation and value capture within companies across various industries. Meanwhile, for executives, this study offers valuable insights into the significance of their management roles in driving innovation, particularly concerning the dual objectives of value creation and value capture within their organizations. Some insights can be proposed, such as (1) investing in technologies that can optimize processes to create new products and/or market opportunities; (2) promoting a culture that values continuous learning, establishing multidisciplinary teams to foster new ideas and (3) conducting market analysis and/or benchmarking to identify areas for improvement in the current business model. A future study could consider the value capture variable in companies as a mediating variable between independent variables and the creation of value in companies.

One limitation of this study is that its results are generalized for companies from different business sectors, so its conclusions cannot be associated with specific business sectors. For this reason, it is suggested to explore the findings in a specific industry or make comparisons between industrial sectors, such as services, manufacturing, mining and others.

Another limitation of the study is that the data from this research are cross-sectional, so the relationships found between the study variables are not sufficient to establish a definitive causal relationship. Previous studies suggest similar statements, such as the one maintained by [Claver-Cortés et al. \(2012\)](#). In a future study, the use of longitudinal data could be considered to verify the findings obtained in this study or to find new findings.

Finally, it should be noted that the age and life cycle of the organizations were not taken into account in the sample of this study, which is why the findings could have a bias. In this regard, it is suggested to extend the study, taking into account the age and/or life cycle of organizations. We also suggest expanding the study by company size, such as small- and medium-sized companies.

## References

- Abrahamsson, J., Boter, H. and Vanyushyn, V. (2019), "Business model innovation of international new ventures: an empirical study in a Swedish context", *Journal of International Entrepreneurship*, Vol. 17 No. 1, pp. 75-102, doi: [10.1007/s10843-018-0238-3](https://doi.org/10.1007/s10843-018-0238-3).
- Agustia, D., Sawarjuwono, T. and Dianawati, W. (2019), "The mediating effect of environmental management accounting on green innovation - firm value relationship", *International Journal of Energy Economics and Policy*, Vol. 9 No. 2, pp. 299-326, doi: [10.32479/ijep.7438](https://doi.org/10.32479/ijep.7438).

- Amit, R. and Han, X. (2017), "Value creation through novel resource configurations in a digitally enabled world", *Strategic Entrepreneurship Journal*, Vol. 11 No. 3, pp. 228-242, doi: [10.1002/sej.1256](https://doi.org/10.1002/sej.1256).
- Bajaba, S., Tahlil Azim, M. and Aftab Uddin, M. (2022), "Social support and employee turnover intention: the mediating role of work-family conflict", *Revista Brasileira de Gestão de Negócios*, Vol. 24 No. 1, pp. 48-65, doi: [10.7819/rbgn.v24i1.4153](https://doi.org/10.7819/rbgn.v24i1.4153).
- Bel, R. (2010), "Leadership and innovation: learning from the best", *Global Business and Organizational Excellence*, Vol. 29 No. 2, pp. 47-60, doi: [10.1002/joe.20308](https://doi.org/10.1002/joe.20308).
- Bilton, C. and Cummings, S. (2010), "Creative strategy: reconnecting business and innovation", in *Creative Strategy*, Wiley, Hoboken, NJ.
- Binuyo, A., Ekpe, H. and Binuyo, B. (2019), "Innovative strategies and firm growth: evidence from selected fast moving consumer goods firms in Lagos state, Nigeria", *Problems and Perspectives in Management*, Vol. 17 No. 2, pp. 313-322, doi: [10.21511/ppm.17\(2\).2019.24](https://doi.org/10.21511/ppm.17(2).2019.24).
- Bocken, N.M.P., Short, N.M.P., Rana, P. and Evans, S. (2014), "A literature and practice review to develop sustainable business model archetypes", *Journal of Cleaner Production*, Vol. 65, pp. 42-56, doi: [10.1016/j.jclepro.2013.11.039](https://doi.org/10.1016/j.jclepro.2013.11.039).
- Bouncken, R., Fredrich, V. and Kraus, S. (2020), "Configurations of firm-level value capture incooperation", *Long Range Planning*, Vol. 53 No. 1, pp. 869-883, doi: [10.1016/j.lrp.2019.02.002](https://doi.org/10.1016/j.lrp.2019.02.002).
- Camisón-Haba, S., Clemente-Almendros, J. and Gonzales-Cruz, T. (2019), "How technology-based firms become also highly innovative firms? The role of knowledge, technological and managerial capabilities, and entrepreneurs' background", *Journal of Innovation and Knowledge*, Vol. 4 No. 3, pp. 162-170, doi: [10.1016/j.jik.2018.12.001](https://doi.org/10.1016/j.jik.2018.12.001).
- Cao, L., Navare, J. and Jin, Z. (2018), "Business model innovation: how the international retailers rebuild their core business logic in a new host country", *International Business Review*, Vol. 27 No. 3, pp. 543-562, doi: [10.1016/j.ibusrev.2017.10.005](https://doi.org/10.1016/j.ibusrev.2017.10.005).
- Casadesus-Masanell, R. and Ricart, J.E. (2010), "From strategy to business models and onto tactics", *Long Range Planning*, Vol. 43 Nos 2-3, pp. 195-215, doi: [10.1016/j.lrp.2010.01.004](https://doi.org/10.1016/j.lrp.2010.01.004).
- Cheung, F., Kurul, E. and Oti, A. (2016), "A case study of hybrid strategies to create value for a contracting business in the education sector in England and Wales", *Construction Management and Economics*, Vol. 34 Nos 4-5, pp. 335-352, doi: [10.1080/01446193.2016.1200107](https://doi.org/10.1080/01446193.2016.1200107).
- Claver-Cortés, E., Pertusa-Ortega, E. and Molina-Azorín, J. (2012), "Characteristics of organizational structure relating to hybrid competitive strategy: implications for performance", *Journal of Business Research*, Vol. 65 No. 7, pp. 993-1002, doi: [10.1016/j.jbusres.2011.04.012](https://doi.org/10.1016/j.jbusres.2011.04.012).
- Cucculelli, M. and Bettinelli, C. (2015), "Business models, intangibles and firm performance: evidence on corporate entrepreneurship from Italian manufacturing SMEs", *Small Business Economics*, Vol. 45 No. 2, pp. 329-350, doi: [10.1007/s11187-015-9631-7](https://doi.org/10.1007/s11187-015-9631-7).
- Damanpour, F. and Evan, W.M. (1984), "Organizational innovation and performance: the problem of organizational lag", *Administrative Science Quarterly*, Vol. 29 No. 3, pp. 392-402, doi: [10.2307/2393031](https://doi.org/10.2307/2393031).
- Damanpour, F., Sanchez-Henriquez, F. and Chiu, H. (2018), "Internal and external sources and the adoption of innovations in organizations", *British Journal of Management*, Vol. 19 No. 4, pp. 1-19, doi: [10.1111/14678551.12296](https://doi.org/10.1111/14678551.12296).
- Del Brio, J. and Lizarzaburu, E. (2018), "CSR actions in companies and perception of their reputation by managers: analysis in the rural area of an emerging country in the banking sector", *Sustainability*, Vol. 10 No. 4, p. 920, doi: [10.3390/su10040920](https://doi.org/10.3390/su10040920).
- Dereli, D. (2015), "Innovation management in global competition and competitive advantage", *Procedia - Social and Behavioral Sciences*, Vol. 195, pp. 1365-1370, doi: [10.1016/j.sbspro.2015.06.323](https://doi.org/10.1016/j.sbspro.2015.06.323).
- Distanont, A. and Khongmalai, O. (2018), "The role of innovation in creating a competitive advantage", *Kasetsart Journal of Social Sciences*, Vol. 41 No. 1, pp. 1-7, doi: [10.1016/j.kjss.2018.07.009](https://doi.org/10.1016/j.kjss.2018.07.009).

- Dyduch, W., Chudziński, P., Cyfert, S. and Zastempowski, M. (2021), "Dynamic capabilities, value creation and value capture: evidence from SMEs under Covid-19 lockdown in Poland", *PLoS One*, Vol. 16 No. 6, pp. 1-28, doi: [10.1371/journal.pone.0252423](https://doi.org/10.1371/journal.pone.0252423).
- Ferreira, J., Fernandes, C. and Ferreira, F. (2020), "Wearing failure as a path to innovation", *Journal of Business Research*, Vol. 120, pp. 195-202, doi: [10.1016/j.jbusres.2020.08.006](https://doi.org/10.1016/j.jbusres.2020.08.006).
- Foss, N. and Saebi, T. (2017), "Fifteen years of research on business model innovation: how far have we come, and where should we go?", *Journal of Management*, Vol. 43 No. 1, pp. 200-227, doi: [10.1177/0149206316675927](https://doi.org/10.1177/0149206316675927).
- Fossas-Olalla, M., Minguela-Rata, B., López-Sánchez, J. and Fernandez-Menendez, J. (2015), "Product innovation: when should suppliers begin to collaborate?", *Journal of Business Research*, Vol. 68 No. 7, pp. 1404-1406, doi: [10.1016/j.jbusres.2015.01.022](https://doi.org/10.1016/j.jbusres.2015.01.022).
- Gandia, R. and Parmentier, G. (2017), "Optimizing value creation and value capture with a digital multi sided business model", *Strategic Change*, Vol. 26 No. 4, pp. 323-331, doi: [10.1002/jsc.2134](https://doi.org/10.1002/jsc.2134).
- Geissdoerfer, M., Vladimirova, D. and Evans, S. (2018), "Sustainable business model innovation: a review", *Journal of Cleaner Production*, Vol. 198, pp. 401-416, doi: [10.1016/j.jclepro.2018.06.240](https://doi.org/10.1016/j.jclepro.2018.06.240).
- George, G., Mcgahan, A. and Prabhu, J. (2012), "Innovation for inclusive growth: towards a theoretical framework and a research agenda", *Journal of Management Studies*, Vol. 49 No. 4, pp. 661-683, doi: [10.1111/j.1467-6486.2012.01048.x](https://doi.org/10.1111/j.1467-6486.2012.01048.x).
- Hair, J., Anderson, R., Tathan, R. and Black, W. (1999), *Análisis Multivariante*, 5th edición, Pearson, Prentice Hall, Mexico, available at: <https://www.amazon.com/-/es/Joseph-Hair/dp/8483220350>
- Heij, C.V., Volberda, H., Van Den Bosch, F.A. and Hollen, R.M. (2019), "How to leverage the impact of R and D on product innovation? The moderating effect of management innovation", *R and D Management*, Vol. 50 No. 2, pp. 277-294, doi: [10.1111/rdm.12396](https://doi.org/10.1111/rdm.12396).
- Hossain, M. (2021), "Frugal innovation and sustainable business models", *Technology in Society*, Vol. 64, pp. 508-515, doi: [10.1016/j.techsoc.2020.101508](https://doi.org/10.1016/j.techsoc.2020.101508).
- Iheanachor, N., David-West, Y. and Ovemeso Umukoro, I. (2021), "Business model innovation at the bottom of the pyramid – a case of mobile money agents", *Journal of Business Research*, Vol. 127, pp. 96-107, doi: [10.1016/j.jbusres.2021.01.029](https://doi.org/10.1016/j.jbusres.2021.01.029).
- Illmeyer, M., Grosch, D., Kittler, M. and Priess, P. (2017), "The impact of financial management on innovation", *Entrepreneurship and Sustainability Issues*, Vol. 5 No. 1, pp. 58-71, doi: [10.9770/jesi.2017.5.1\(5\)](https://doi.org/10.9770/jesi.2017.5.1(5)).
- Klamer, P., Probst, G. and Useem, M. (2020), "Opening the black box: unpacking board involvement in innovation", *Strategic Organization*, Vol. 18 No. 4, pp. 487-519, doi: [10.1177/1476127019839321](https://doi.org/10.1177/1476127019839321).
- Krajcsák, Z. (2019), "Implementing open innovation using quality management systems: the role of organizational commitment and customer loyalty", *Journal of Open Innovation: Technology, Market, and Complexity*, Vol. 5 No. 4, pp. 90-100, doi: [10.3390/joitmc5040090](https://doi.org/10.3390/joitmc5040090).
- Kusterer, D. and Schmitz, P. (2017), "The management of innovation: experimental evidence", *Games and Economic Behavior*, Vol. 104, pp. 706-725, doi: [10.1016/j.geb.2017.06.011](https://doi.org/10.1016/j.geb.2017.06.011).
- Lee, J.W. and Xuan, Y. (2019), "Effects of technology and innovation management and total factor productivity on the economic growth", *The Journal of Asian Finance, Economics and Business*, Vol. 6 No. 2, pp. 63-73, doi: [10.13106/jafeb.2019.vol6.no2.63](https://doi.org/10.13106/jafeb.2019.vol6.no2.63).
- Lim, C. and Fujimoto, T. (2019), "Frugal innovation and design changes expanding the cost-performance Frontier: a Schumpeterian approach", *Research Policy*, Vol. 48 No. 4, pp. 1016-1029, doi: [10.1016/j.respol.2018.10.014](https://doi.org/10.1016/j.respol.2018.10.014).
- Lynch, P., Power, J., Hickey, R. and Messervey, T. (2016), "Business model strategies: flexibility trade in low voltage distribution networks", *Entrepreneurship and Sustainability Issues*, Vol. 4 No. 3, pp. 380-391, doi: [10.9770/jesi.2017.4.3s\(12\)](https://doi.org/10.9770/jesi.2017.4.3s(12)).

- Macharia Chege, S. and Wang, D. (2020), "The influence of technology innovation on SME performance through environmental sustainability practices in Kenya", *Technology in Society*, Vol. 60, pp. 210-222, doi: [10.1016/j.techsoc.2019.101210](https://doi.org/10.1016/j.techsoc.2019.101210).
- Machová, R., Huszárík, E. and Šimonová, M. (2016), "Selected aspects of innovation policy for small and medium sized enterprises", *Journal of International Studies*, Vol. 9 No. 2, pp. 219-232, doi: [10.14254/2071-8330.2016/9-2/17](https://doi.org/10.14254/2071-8330.2016/9-2/17).
- Maucuer, R., Renaud, A., Ronteau, S. and Muzellec, L. (2022), "What can we learn from marketers? A bibliometric analysis of the marketing literature on business model research", *Long Range Planning*, Vol. 55 No. 5, 102219, doi: [10.1016/j.lrp.2022.102219](https://doi.org/10.1016/j.lrp.2022.102219).
- Melendez, K., Dávila, A. and Melgar, A. (2019), "Literature review of the measurement in the innovation management", *Journal of Technology Management and Innovation*, Vol. 14 No. 2, pp. 81-87, doi: [10.4067/S0718-27242019000200081](https://doi.org/10.4067/S0718-27242019000200081).
- Miroshnychenkoa, I., Stroblb, A., Matzlerc, K. and De Massis, A. (2021), "Absorptive capacity, strategic flexibility, and business model innovation: empirical evidence from Italian SMEs", *Journal of Business Research*, Vol. 130, pp. 670-682, doi: [10.1016/j.jbusres.2020.02.015](https://doi.org/10.1016/j.jbusres.2020.02.015).
- Montoya, M.F., Ostos, J. and Saenz Arteaga, A. (2020), "Role of empowerment and Identification with work teams in innovation climate", *Revista de Administracao de Empresas*, Vol. 60 No. 3, pp. 183-194, doi: [10.1590/s0034-759020200302](https://doi.org/10.1590/s0034-759020200302).
- Müller, J., Buliga, O. and Voigt, K.-I. (2018), "Fortune favors the prepared: how SMEs approach business model innovations in Industry 4.0", *Technological Forecasting and Social Change*, Vol. 132, pp. 2-17, doi: [10.1016/j.techfore.2017.12.019](https://doi.org/10.1016/j.techfore.2017.12.019).
- Mutlu, C.C., Zhan, W., Peng, M.W. and Lin, Z.J. (2015), "Competing in (and out of) transition economies", *Asian Pacific Journal of Management*, Vol. 32 No. 3, pp. 571-596, doi: [10.1007/s10490-015-9419-y](https://doi.org/10.1007/s10490-015-9419-y).
- Nasiri, A., Alleyne, A. and Yihui, L. (2016), "Analysis of innovation management in German enterprises", *Cogent Business and Management*, Vol. 3 No. 1, pp. 727-741, doi: [10.1080/23311975.2016.1216727](https://doi.org/10.1080/23311975.2016.1216727).
- Olmedo-Cifuentes, I. and Martínez-León, I. (2014), "Influence of management style on employee views of corporate reputation. Application to audit firms", *Business Research Quarterly*, Vol. 17 No. 4, pp. 223-241, doi: [10.1016/j.brq.2013.08.001](https://doi.org/10.1016/j.brq.2013.08.001).
- Omar, Y., Minoufekar, M. and Plapper, P. (2019), "Business analytics in manufacturing: current trends, challenges and pathway to market leadership", *Operations Research Perspectives*, Vol. 6, pp. 127-142, doi: [10.1016/j.orp.2019.100127](https://doi.org/10.1016/j.orp.2019.100127).
- Ostos, J., Saenz, A. and Bremser, K. (2019), "Relationships of business strategies and organizational characteristics with innovation types: application in service companies", *Revista Perspectiva Empresarial*, Vol. 6 No. 2, pp. 5-19, doi: [10.16967/23898186.595](https://doi.org/10.16967/23898186.595).
- Pedron, C., Picoto, W., Colaco, M. and Araújo, C. (2018), "CRM system: the role of dynamic capabilities in creating innovation capability", *Brazilian Business Review*, Vol. 15 No. 5, pp. 494-511, doi: [10.15728/bbr.2018.15.5.6](https://doi.org/10.15728/bbr.2018.15.5.6).
- Peterková, J. and Franek, J. (2018), "Specifics of management of enterprise innovation activities in the Czech republic - the decision-making mechanism", *Management Systems in Production Engineering*, Vol. 16 No. 3, pp. 137-142, doi: [10.1515/mspe-2018-0022](https://doi.org/10.1515/mspe-2018-0022).
- Placer-Maruri, E., Pérez-González, D. and Soto-Acosta, P. (2016), "Effects of the use of competitive intelligence in industrial SMEs", *Intangible Capital*, Vol. 12 No. 4, pp. 923-941, doi: [10.3926/ic.750](https://doi.org/10.3926/ic.750).
- Plotnikova, L. and Romanenko, M. (2019), "Creative methods of innovation process management as the law of competitiveness", *Management Science Letters*, Vol. 9, pp. 737-748, doi: [10.5267/j.msl.2019.1.015](https://doi.org/10.5267/j.msl.2019.1.015).
- Rajapathirana, R.P.J. and Hui, Y. (2018), "Relationship between innovation capability, innovation type, and firm performance", *Journal of Innovation and Knowledge*, Vol. 3 No. 1, pp. 44-55, doi: [10.1016/j.jik.2017.06.002](https://doi.org/10.1016/j.jik.2017.06.002).

- Rajiani, I. and Ismail, N. (2019), "Management innovation in balancing technology innovation to harness universities performance in the era of community 4.0", *Polish Journal of Management Studies*, Vol. 19 No. 1, pp. 309-321, doi: [10.17512/pjms.2019.19.1.24](https://doi.org/10.17512/pjms.2019.19.1.24).
- Ruggieri, R., Savastano, M., Scalingi, A., Bala, D. and D'Ascenzo, F. (2018), "The impact of digital platforms on business models: an empirical investigation on innovative start-ups", *Management and Marketing. Challenges for the Knowledge Society*, Vol. 13 No. 4, pp. 1210-1225, doi: [10.2478/mmcks-2018-0032](https://doi.org/10.2478/mmcks-2018-0032).
- Salimi, N. and Rezaei, J. (2018), "Evaluating firms' R and D performance using best worst method", *Evaluation and Program Planning*, Vol. 66, pp. 147-155, doi: [10.1016/j.evalprogplan.2017.10.002](https://doi.org/10.1016/j.evalprogplan.2017.10.002).
- Smith, C., Fixson, S., Paniagua-Ferrari, C. and Parise, S. (2017), "The evolution of an innovation capability", *Research-Technology Management*, Vol. 60 No. 2, pp. 26-35, doi: [10.1080/08956308.2017.1276388](https://doi.org/10.1080/08956308.2017.1276388).
- Spieth, P., Laudien, S. and Meissner, S. (2020), "Business model innovation in strategic alliances: a multi layer perspective", *R and D Management*, Vol. 51 No. 1, pp. 24-39, doi: [10.1111/radm.12410](https://doi.org/10.1111/radm.12410).
- Stevanović, M., Marjanović, D. and Štorga, M. (2016), "Idea management in product innovation – the empirical research results", *Tehnički Vjesnik*, Vol. 23 No. 5, pp. 1285-1294, doi: [10.17559/TV-20150603223629](https://doi.org/10.17559/TV-20150603223629).
- Stoycheva, B. and Antonova, D. (2018), "Investigating factor interactions in formalising the process of developing new products", *Serbian Journal of Management*, Vol. 13 No. 1, pp. 173-184, doi: [10.5937/sjm13-16409](https://doi.org/10.5937/sjm13-16409).
- Stuhlfaut, M. and Windels, K. (2012), "Measuring the organisational impact on creativity", *International Journal of Advertising*, Vol. 31 No. 4, pp. 795-818, doi: [10.2501/IJA-31-4-795-818](https://doi.org/10.2501/IJA-31-4-795-818).
- Suominen, A., Seppänen, M. and Dedehayir, O. (2019), "A bibliometric review on innovation systems and ecosystems: a research agenda", *European Journal of Innovation Management*, Vol. 22 No. 2, pp. 335-360, doi: [10.1108/EJIM-12-2017-0188](https://doi.org/10.1108/EJIM-12-2017-0188).
- Tamulevičienė, D. and Androniceanu, A. (2020), "Selection of the indicators to measure an enterprise's value and its changes in the controlling system for medium-sized enterprises", *Entrepreneurship and Sustainability Issues*, Vol. 7 No. 3, pp. 1440-1458, doi: [10.9770/jesi.2020.7.3](https://doi.org/10.9770/jesi.2020.7.3).
- Tou, Y., Watanabe, C. and Neittaanmäki, P. (2020), "Fusion of technology management and financing management - amazon's transformative endeavor by orchestrating techno-financing systems", *Technology in Society*, Vol. 60, pp. 219-239, doi: [10.1016/j.techsoc.2019.101219](https://doi.org/10.1016/j.techsoc.2019.101219).
- Ubeda, C.L., Santos, F.C. and Nagano, M.S. (2017), "Analysis of the individual competences contributions to innovation management based on methodological triangulation", *Gestão e Produção*, Vol. 24 No. 3, pp. 595-609, doi: [10.1590/0104-530X1481-16](https://doi.org/10.1590/0104-530X1481-16).
- Velu, C. (2015), "Business model innovation and third-party alliance on the survival of new firms", *Technovation*, Vol. 35, pp. 1-11, doi: [10.1016/j.technovation.2014.09.007](https://doi.org/10.1016/j.technovation.2014.09.007).
- Voig, C., Hofer, M. and Schön, S. (2018), "Innovation management in schools: barriers and enablers to management as educative practice", available at: <https://www.semanticscholar.org/paper/Innovation-management-in-schools%3A-Barriers-and-to-Voigt-Hofer/a954c31061cc28d51ec194312c33ee2971daf24e>
- Von Delft, S., Kortmann, S., Gelhard, C. and Pisani, N. (2019), "Leveraging global sources of knowledge for business model innovation", *Long Range Planning*, Vol. 52 No. 5, pp. 848-868, doi: [10.1016/j.lrp.2018.08.003](https://doi.org/10.1016/j.lrp.2018.08.003).
- Weijts-Perrée, M., Appel-Meulenbroek, R. and Arentzea, T. (2020), "Analysing knowledge sharing behaviour in business centres: a mixed multinomial logit model", *Knowledge Management Research and Practice*, Vol. 18 No. 3, pp. 323-335, doi: [10.1080/14778238.2019.1664269](https://doi.org/10.1080/14778238.2019.1664269).
- Yang, D., Wei, Z., Shi, H. and Zhao, J. (2020), "Market orientation, strategic flexibility and business model innovation", *Journal of Business and Industrial Marketing*, Vol. 35 No. 4, pp. 771-784, doi: [10.1108/JBIM-12-2018-0372](https://doi.org/10.1108/JBIM-12-2018-0372).

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Zajkowska, M. (2017), "Open models of innovation processes as a future management challenge for small and medium-sized enterprises in Poland", *Journal of Management and Business Administration. Central Europe*, Vol. 25 No. 4, pp. 193-208, doi: [10.7206/jmba.ce.2450-7814.214](https://doi.org/10.7206/jmba.ce.2450-7814.214).

Zhang, Y., Khan, U., Lee, S. and Salik, M. (2019), "The influence of management innovation and technological innovation on organization performance. A mediating role of sustainability", *Sustainability*, Vol. 11 No. 2, p. 495, doi: [10.3390/su11020495](https://doi.org/10.3390/su11020495).

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