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UDC: 005.21:001.895

Original scientific paper

DOI: 10.5937/ptp2403045K

Received on: January 30, 2024

Approved for publication on:

February 19, 2024

Pages: 45–56

THE USE OF PARTIAL LEAST SQUARES (PLS) IN THE STRATEGIC MANAGEMENT OF BUSINESS PERFORMANCE OF COMPANIES

ABSTRACT: The subject of this paper is the analysis of strategic management, with a focus on the impact of innovation and information and communication (IC) resources on a company's entrepreneurial strategy. The paper analyzes the management of strategic issues, with an emphasis on contingency planning and the establishment of an appropriate management system. The aim of the research is to define and measure the impact of innovation and information resources on the business performance of companies, with particular attention to small and medium-sized enterprises (SMEs) that face various challenges. The research identified a statistically significant positive relationship between the analyzed variables, concluding that innovation, IC equipment, and an entrepreneurial strategic approach are linked to the business performance of companies.

Keywords: entrepreneurship, strategic management, innovation, business performance.

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1. Introduction

In modern business, maintaining a leading position requires constant improvement through investment in technologies and equipment. Lack of resources can seriously hinder the ability to adapt to changes in the market. Therefore, it is crucial to invest in a stimulating work environment. Monitoring trends enables the company to recognize the need for technological innovation. Properly channeling financial resources enables effective change management and maintaining competitive advantage. Continuous improvement and adaptation to technological innovations are key to maintaining a leading position in a dynamic business environment.

A quick and coordinated reaction to changes in the business environment is crucial for the success of a company in the modern economy. The strategy must be adapted to new goals, and changes in the market, technology and capacities require planned action in order to overcome crisis moments. Strategic planning, which focuses on the growth and development of the company, enables the assessment of opportunities and the determination of strategic directions. Planning also encourages creativity and innovation in the economy.

The subject of research in the paper is the analysis of strategic management, emphasizing the impact of innovation and information and communication resources on the entrepreneurial strategy of the company. The management of strategic issues is analyzed with an emphasis on contingent planning and the establishment of an appropriate management system. The aim of the research is to define and measure the impact of innovations and information resources on the business performance of companies, with an emphasis on the SMEs.

Research has a significant role in understanding the competitive dynamics and success of companies, especially in turbulent times. Focusing on the current situation in companies and identifying ways to improve business performance further contributes to the relevance of the research.

2. Literature review

In changing business conditions, it is crucial to establish an organizational structure that enables flexibility and support for the growth and development of the company (Kovač, 2012). Making the right business decisions is essential, as mistakes lead to the loss of resources and funds. A quality accounting information system becomes the basis for effective business decision-making.

The survival and development of economic entities are directly related to the ability to adapt to changes. The development of a business strategy is crucial for achieving the company's goals and facing challenges. Managing a successful business requires continuous development of organizational capabilities and structure. Changes in the business environment often require adaptation of the organizational structure and management processes.

Strategic management is crucial for the growth and development of small and medium-sized enterprises. In a dynamic business environment, where innovation and change are constant, it becomes crucial to manage organizational culture. This need for effective management is especially evident when there is a difference between the desired culture within the company and the actual existing culture, or when employees show resistance to change (Kostić-Stanković, Makajić-Nikolić & Vujošević, 2011).

Within strategic management, the role of organizational culture is manifested through its influence on the mental models of managers at the strategic level and employees in general. Values and norms arising from the organizational culture form those mental models, significantly shaping the manager's perception of the environment and influencing the process of making strategic decisions. In addition, organizational culture plays a key role in shaping and implementing a company's strategy.

The defined strategy of the company determines the operational activities, and the long-term implementation of the strategy can affect the organizational culture. If the strategy is in line with cultural values, it will positively influence the culture through the process of institutionalization. However, if the strategy requires working in a way that is not in accordance with the culture, cognitive dissonance may occur (Janićijević, 2013). If the strategy requires changes in the values of the employees, there may be a change in the culture itself. Strategic decisions are made through the dialogue of managers, allowing the exploration of alternative opinions outside the normal operations of the organization.

An effectively designed strategy is necessary for the success of a company, and its success depends on successful implementation (Plavšić & Paunović, 2011). Management deals with different management methods, business activities, projects, human resources and organizational structure (Muković, 2015), while the organizational structure represents a dynamic system that requires adaptation to new situations (Knežević, 2008).

Innovation is key to adapting to changes in the environment. Organizations, as open systems, interact with the environment and are subject to change. Connecting human resources and business processes is becoming

an important area of the innovation. Alignment of strategy and organizational components, as well as their mutual alignment, contribute to improving performance and creating a competitive advantage.

The creativity of management and employees, together with the innovativeness of the organization, become key success factors in an intensive business environment. Different models of creativity and innovation are applied to gain competitive advantage. Networked creativity, as a structural managerial framework, encourages continuous innovation for the long-term survival of the enterprise.

In today's competitive conditions, a company's strategy represents a planning decision that determines key activities for achieving goals. An appropriate strategy enables the maximum exploitation of the company's strengths and minimization of its weaknesses in a dynamic environment.

The concept of competitiveness plays a key role in development, as it defines development goals and supports economic growth. Harmony between the economy and institutions is crucial for development, and effective coordination of innovation policy, including the participation of relevant stakeholders, from ministries to small and medium-sized enterprises, becomes imperative.

Innovations represent a key driver of economic expansion, improvement of competitiveness and encouragement of entrepreneurial spirit. The implementation of modern information and communication technologies and electronic business is becoming imperative for sustainable development.

Increased resource use and environmental impact, associated with a growing global population, indicate the necessity of transitioning from "business as usual" to more sustainable models (Bocken, Short, Rana & Evans, 2014). Strategic thinking for sustainable development, integrated with business strategy, organizational design and change, becomes key to aligning with market demands.

In order to build sustainability processes, it is necessary to develop and innovate forms of management (Broman et al., 2017). Companies, especially in countries in transition like the Republic of Serbia, should be trained for independent market performance, healthy competition and business at the international level, requiring fundamental changes and redesign of business postulates (Belić & Đorđević, 2008).

Management, as a key influencing factor, should act as a leader and use resources, especially human resources, as key to development. The knowledge of the management team becomes crucial for running the company, and managers are faced with the tasks of planning goals, organization, evaluating

results and controlling activities (Stefanović, 2004). The issue of sustainable development becomes essential in the management of the company, requiring a holistic approach and engagement of employees in the responsible use of resources and the implementation of strategic activities aimed at the sustainable growth and development of the company. According to the aim of this paper it is of high importance the understanding of business process management in contemporary strategic management, above all in the context of growing changes and extremely dynamic and changing market environment, and providing the modern managers with insight into modern business and how to improve their business in an increasingly sharp market match (Gardašević & Radić, 2020).

3. Research methodology

In accordance with the specific subject of the research, the goal and hypotheses are set in the paper. Empirical research relies on the conclusions of “authors (Bharadwaj, 2000; Santhanam & Hartono, 2003; Tanriverdi, 2006), with the aim of establishing the relationship of the proposed variables” (Abuhteara, 2022). Setting hypotheses and creating questionnaires are the next steps, and variables are defined for measuring IT potential, entrepreneurial strategic structure and business performance. The survey is based on the literature (Aral & Weill, 2007; Ireland & Webb, 2007; Chen et al., 2014; Alegre & Chiva, 2008; Alegre, Lapiedra & Chiva, 2006) in order to assess the attitudes of ICT employees. Descriptive statistics are used, and statistical packages SPSS and PLS smart4 software are used to analyze the results.

The research was supposed to investigate the connection “between innovative and IC potential of companies, entrepreneurial strategic organization of companies and their business performance” (Abuhteara, 2022). The focus of the analysis is on the influence of innovative and IC potential on the entrepreneurial strategic structure of the company, with the desire to precisely define and measure the strength and importance of this influence on business performance. The IT variable consists of 10 indicators, the SP variable consists of 10 indicators, while the PP variable is defined with 8 variables. Statistical data processing and analysis were carried out using structural equations using the method of partial least squares (PLS-SEM). The survey collected 556 responses, which makes the sample satisfactory (Hair et al., 2014). The analysis established mean values (Mean), standard deviation (Std. Deviation), considered normality of distribution and reliability of variables (Cronbach alpha). The final PLS model consists of latent variables IT (five constructs), SP (four constructs) and PP consists of 4 reflective variables .

4. Research results

The results of the PLS analysis indicate the following:

Table 1. Descriptive values for IT, SP and PP variables

	Mean	Std. Dev.
IT1 – Our information systems are tailored to share information	3,59	1,579
IT2 – Our information system plans reflect the objectives of the business plan	3,54	1,283
IT3 – Business plans have reasonable expectations of information systems	3,45	1,223
IT4 – Our company's IT project management practices are better than our competitors	3,44	1,143
IT5 – IT security control planning in our company is better than our competitors	3,35	1,185
SP1 – Entrepreneurial way of thinking – The ability of our company is to notice changes in society as a whole, we often have ideas for new products and services.	3,71	1,228
SP2 – Entrepreneurial way – Our company never experiences a lack of ideas that can be turned into profitable products and services.	3,71	1,228
SP3 – Innovation – We constantly strive to generate new products and services.	3,64	1,543
SP4 – Competitive Advantage – All our products/services must add value or they will be rejected	3,35	1,155
PP1 – We are able to expand our existing range of products/services using new technologies	3,74	1,17
PP2 – We are able to expand our existing range of products/services using improved technologies	3,65	1,555
PP3 – Our company has a lower average cost of innovation projects than our competitors	3,36	1,188
PP4 – Our company has a higher global level of satisfaction with innovation projects than our competitors	3,57	1,345

Source: Abuhteara, M. A. Abd (2022), pp. 125–128.

After starting the continuation of the analysis, 13 variables were retained in the model, with factor loading values greater than 0.7.

The reliability score of the variable loadings is shown below:

Table 2. Results of Path coefficients, values of Cronbach α , CR and AVE

IT	Var	<i>Path coefficients</i>	the results of the analysis of the reflective measurement model		
			Cronbach α	CR	AVE
IT	IT1	0,811	Cronbach α 0,847	CR 0,894	AVE - 0,617
	IT2	0,764			
	IT3	0,859			
	IT4	0,784			
	IT5	0,702			
SP	Var	<i>Path coefficients</i>	Cronbach α 0,814	CR 0,814	AVE - 0,642
	SP1	0,929			
	SP2	0,956			
	SP3	0,908			
	SP4	0,900			
PP	Var	<i>Path coefficients</i>	Cronbach α 0,942	CR 0,944	AVE - 0,852
	PP1	0,798			
	PP2	0,841			
	PP3	0,807			
	PP4	0,758			

Source: Abuhteara, M. A. Abd (2022)., p. 129.

The assessment of the reflective measurement model shows that in the model there are variables with a load greater than 0.7; Cronbach's alpha is 0.814–0.942, which indicates high reliability of the variables. CR has values of 0.814–0.944 and indicate the existence of internal connection, while AVE is 0.617–0.852. It is satisfied with the Fornell Larcker criteria and HTMT values. The VIF is 1.02-1.05, the obtained values are less than 3, which means that there is no collinearity problem in the model.

The strongest correlation exists between SP and PP (0.691), while the correlation between IT and SP is weaker (0.440). R²=0.690 shows a moderate impact, that is, 69% of the dependent variable is explained by the independent variables. Effect size coefficients – f² IT on SP is 2.232, and SP on PP is 0.786. Finally, the significance testing of the structural model and the confirmation of the hypotheses was carried out.

Table 3. Results of structural model analysis and path coefficients in the model

	β	T-value	p-value
H 1: IT -> SP	0,831	99,876	0,000**
H 2: SP -> PP	0,663	34,887	0,000**
H 3: IT -> SP -> PP	0,551	29,130	0,000**

Source: Author's calculation.

After testing the hypotheses, it is possible to conclude (Abuhteara, 2022):

H1: There is a statistically significant and positive connection between the company's IT – innovative and IC potential and the company's entrepreneurial strategic structure – the HYPOTHESIS is confirmed.

H2: There is a statistically significant and positive relationship between the Entrepreneurial Strategic Structure of the company and the Business Performance of the company, – the HYPOTHESIS is confirmed.

H3: There is a statistically significant and positive connection between the IT – innovative and IC potential of the company and the business performance of the company, the HYPOTHESIS is confirmed.

5. Conclusion

In the concluding remarks, we point out the importance of innovation, information and communication potential and entrepreneurial organization for achieving high business performance of the company. The results of the empirical research confirm the positive connections between these factors, emphasizing the necessity of integrating innovation and information technologies into the strategic planning of the company.

With regard to the development of the entrepreneurial sector in Serbia, it is concluded that the implemented development policies have brought some progress, but that further alignment with EU standards and further improvement is crucial. Strategic planning, education and training, especially of young entrepreneurs, represent the basic guidelines for further development. It also emphasizes the need for effective representation of the interests of companies, with a special focus on small and medium-sized companies, in order to ensure competitiveness on the domestic and European markets.

Based on the empirical research, we can draw the conclusion that all hypotheses have been proven and that there is a positive statistical correlation between the examined variables.

As for the development of the entrepreneurial sector in Serbia, progress has been noted in the implementation of support policies, but the need for further alignment with EU standards is highlighted. Key guidelines for further

development include strategic planning, focus on education and training, especially of young entrepreneurs, and harmonization of regulations with EU standards. This would contribute to encouraging the entrepreneurial spirit, improving the competitiveness of the sector and would ensure the effective representation of the interests of companies, especially small and medium-sized companies, both at the national and European level.

As a proposal for future research, the need for further study of the concept of business development of the entrepreneurial sector, with special reference to harmonization with EU standards, is emphasized. These researches can contribute to a better understanding of the dynamics of the entrepreneurial sector and provide guidelines for further strategic guidance and support for this key segment of the economy.

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UPOTREBA PARCIJALNIH NAJMANJIH KVADRATA (PLS) U STRATEGIJSKOM MENADŽMENTU

APSTRAKT: Predmet istraživanja u radu jeste analiza strategijskog menadžmenta, sanaglaskomnauticaj inovacija i informaciono-komunikacionih (IK) resursa na preduzetničku strategiju preduzeća. Analizira se upravljanje strategijskim pitanjima sa akcentom na kontigentno planiranje i uspostavljanje odgovarajućeg upravljačkog sistema. Cilj istraživanja je definisanje i merenje uticaja inovacija i informacionih resursa na poslovne performanse preduzeća, s posebnim fokusom na mala i srednja preduzeća koja su izložena različitim izazovima. Istraživanjem je ustanovljena pozitivna veza između analiziranih varijabli, koja je statistički značajna, odnosno, zaključeno je da su inovativnost, IK opremljenost preduzeća i preduzetničko strategijski pristup povezani sa poslovnim performansama preduzeća.

Ključne reči: preduzetništvo, strategijsko upravljanje, inovacije, poslovne performanse.

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