

THE EFFECTS OF INNOVATION ADOPTION ON THE BUSINESS CREATIVITY OF ELECTRICAL AND ELECTRONICS INDUSTRIES IN MALAYSIA

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Abstract: The innovation has become a vital element to improve the business creativity and performance and obtain the focus of recent studies and regulators. Therefore, paper aim is to analyze the impact of culture innovation, product innovation and market innovation on the business creativity of the electrical and electronics industries in Malaysia. This paper also investigates the mediating role of organizational learning between the relations of culture innovation, product innovation, market innovation, and business creativity of the electrical and electronics industries in Malaysia. This paper has followed the quantitative methods and used survey questionnaires for data collection, while SPSS and AMOS were used to test the hypotheses. The results indicated that culture innovation, product innovation and market innovation have a positive association with business creativity of the electrical and electronics industries in Malaysia. The findings also exposed that organizational learning significantly mediates among the nexus of culture innovation, product innovation, market innovation, and business creativity of the electrical and electronics industries in Malaysia. This paper is suitable for the regulation developing authorities that they should formulate effective policies related to the innovation adoption that enhance the business creativity and performance.

Keywords: Innovation, Business creativity, Organizational learning

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Introduction

Every business organization struggles to grow and expand while also surpassing the competition. It's crucial to make something different, new, and helpful for consumers if it wants to target a higher goal. A business organization cannot simply imitate what other businesses do and expect to be exceptional in the industry. To be exceptional, a business needs to innovate, find out solutions, and cross the boundaries (Cudny, Comunian, & Wolaniuk, 2020; Grebski & Mazur, 2022).

It has many advantages for business organizations. It helps the business organization to gain competitive advantages over the business rivals. Businesses need to find smarter ways to inspire the customers' interest. Through creativity, businesses can

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solve problems easier and faster than ever before. It assists in discovering unique ideas that will keep the consumers interested, which is vital to the business success. Through creativity, organizations can stay one-step ahead with the coverage of what people would need before they need it. Business creativity helps organizations push the boundaries while retaining their style. This nurtures culture in the organization. It assists the organizational personnel to make observations, trace out problems, and challenges find out solutions. One of the major benefits of business creativity is that it helps enhance productivity. Thus, there is marketing and overall high profits of the organizations (Palos-Sanchez, Saura, Grilo, & Ramirez, 2020).

The paper aims at analyzing the influences of innovation adoption such as culture innovation, product innovation, and market innovation on the development of business creativity with reference to the electrical and electronics industries in Malaysia. Malaysia is a developing upper-middle-income economy. The economy of Malaysia is the 4th largest in Southeast Asia, according to the International Monetary 2020. It is the world's 36th largest economy. Its nominal gross domestic product is estimated to be \$387.094 in 2021. Its total exports are valued at \$263 billion according to the statistics of 2017. The electrical & electronics industry is the leading sector in the manufacturing sector of the Malaysian economy. It contributes to the exports of the economy; this portion is 32.8 per cent of the total exports of Malaysia. It has provided employment to 27.2 per cent of the total employed population. In Malaysia's electrical and electronics industries, many business organizations are analyzed to have developed creativity in their business processes. Most of these organizations have adopted innovation like culture innovation, product innovation and market innovation. Still, there are many organizations that are ignorant of business creativity. For such organizations, this study is an example to be followed to develop business creativity (Raj-Reichert, 2020).

The main focus of the current piece of literature is on the influences of innovation adoption such as culture innovation, product innovation, and market innovation on the development of business creativity. In the past literature, many researchers and academics have debated on the contribution of three factors of the innovation adoption such as culture innovation, product innovation, and market innovation on the development of business creativity into the development of business creativity. But all these researchers and scholars have thrown light on the influences of these factors on business creativity separately (Antunes & Pinheiro, 2020). Our study fills this literary gap by exploring the role of all culture innovation, product innovation, and market innovation in developing business creativity in a single whole. This study has been conducted on the basis of the analysis of culture innovation, product innovation, and market innovation and their influences on the development of business creativity in the economy of Malaysia. This economy has been chosen for analysis as it is an emerging economy, and here the organizations and people have the strong financial position to meet the costs occurred on the business creativity and proper knowledge to understand and adopt innovation in the business processes. This study has selected the electrical and electronics industries of Malaysia because it is

the most successful industry of the Malaysian economy and, thus, fine example of innovation adoption and business creation.

In the 2nd part, the paper highlights the past literary views about the innovation adoption such as culture innovation, product and market innovation and their association with the business creativity. The next 3rd part describes the way to collect the supportive data to meet the study aims and 4th part of the research is related to find out the results. While in the last portion the study presents comparison between the study findings and the findings of other studies to approve the concepts.

Literature Review

In the modern world, people are greatly aware of the importance of innovation in the quality of products sold and services rendered by the organizations. They want something new and appealing. Thus, with the passage of time, the competition among the business is emerging. In order to compete successfully, the organizations need to create value to the present products and services, manufacture entirely new products, adopt innovative business procedures and marketing (Fedorko et al. 2018). This all is possible when the organizational personnel have creative skills like the creative thinking, deep observation, ability to face challenges, and find solutions to the problems. There are several factors, which affect the creativity in the business processes and creative skills in the business personnel. Our study examines the impacts of innovation adoption such as culture innovation, product innovation, and market innovation on the organizational learning and the development of business creativity. In the past literature, many studies have focus on the influences of the culture innovation, product innovation, and market innovation on the organizational learning and the development of business creativity (Haddad, Haddad & Nagpal, 2021). Many of these studies have been cited in this literary workout.

Culture innovation and business creativity

Culture is the combination of the behaviors, beliefs, values, rules, symbols and activities of a specific group of persons (Ozgenel, 2020). These behaviors, beliefs, values, and symbols are accepted by the people without thinking about them, and they are passed along by communication and imitation from one generation to the next. Every society or community has a specific culture, which its members accept. Similarly, every organization has specific behaviors, beliefs, values, rules, and activities, which its members accept. When the culture within a society is based on innovation (Caliskan & Zhu, 2020), it affects the quality of products and services produced by the organization operating in the society (Olsson et al., 2019; Oláh et al., 2021; Grebski, 2021). One of the fundamental objectives of the organization is to catch new customers or retain the potential customer. For this purpose, it is compulsory for the organization to meet the requirements of the customers, which constantly change with the change in the environment. When the society has an innovative culture that accepts changes in the thinking, behaviors, trends, and technology and tends to be innovative further, the business organizations there have to keep pace with the speed of change or innovativeness in the culture of the society.

They design their policies and strategies in such a way as to maintain innovativeness in the products and services. They try to develop intentions and abilities in the personnel to think new and imaginative ideas to create value to the processes, integrate the resources, products and services, manufacture utterly new products, and find solutions to the problems (Abdussalam & Menezes, 2021; Khan et al., 2020). The culture of the organization determines the quality of products and services which organization provides to the customer. When the organization follow conservative beliefs and values and does not change its policies and behaviors, the organizational personnel stick to the old processes and techniques. But if the organization have an innovative culture like innovative beliefs, values, rules, and behaviors (Danielle & Masilela, 2020), it gives an opportunity to the personnel to think by themselves, to apply their own ideas while performing business functions. Thus, an innovative organizational culture stirs creativity in the students. Hence, we can say;

H1: Culture innovation has a positive effect on business creativity.

Product innovation and business creativity

Product innovation is the creation of value to the product, its design, and its quality; it is the development of new products, or the use of new material in the production of the same products, or change in the components in the manufacture of products. The organizations where there is a trend to keep the quality of the products innovative in order to meet the customers or consumers novel requirements of the quality, organizations design their policies and strategies in such a manner as there is developed creativity in all the organizational departments which influence the quality of products (Schubert & Tavassoli, 2020). The intention of the organization to add to the quality of the products to meet the changing requirements of potential customers or consumers motivates the personnel of the procurement department to think about how to access the suppliers who possess new high-quality material, which adds to the value of the products and make them competitive (Halaskova et al. 2020a,b). The need to manufacture innovative products motivates the experts to apply new manufacturing technology (Balbay, 2020), new manufacturing procedures and bring newness in the design of the integration of resources which can result in the production of novel quality products (Kryshtanovych, Bilyk, Hanushchyn, Sheremet, & Vasylenko, 2021). If the organizational goals include the manufacturing of high-quality innovation-based products, its top management forms an organizational structure in such a way as there is a fluent and smooth communication network in the organization. Under such a communication network, all the organizational personnel can participate in the decision-making; thus, not only the managers but the employees of lower rank can present their ideas to handle any issue, to find out alternatives, and opportunities to solve the problems. The production of novel products raises the sales level and profitability of the organization. Thus, the increased profits can be used to bring creativity in the business like the hiring of expert workers, consultant, and the arrangement of training to provide knowledge to the personnel and develop creative skills in them. Hence, it can be hypothesized:

H2: Product innovation has a positive effect on business creativity.

Market innovation and business creativity

Market innovation affects the policies, strategies, processes, and, most important, the capacities of human resources in the business organization. Market innovation is the innovation in the market trends, in the quality of products and services presented in the market for sales, the technology used in marketing, innovativeness in the logistics used for marketing, innovation in the marketing channels, changes in product design, packaging, product placement, product promotion, or pricing. A marketplace where there are consistent shifts in the trends, the organizations in competition within a same industry, are forced to make amendments in their policies, strategies, processes, and the use of resources to respond to the changing market trends. This requires creative skills in the personnel to analyze the situation, present policies, strategies, processes, and resources and thus, bring improvement in them in response to the market trends. When the competitive business organizations maintain innovation in their products and services presented to be sold in the market, the particular organization must create knowledge and skills in the organizational personnel to add value to the products and services by enhancing the quality of material, bringing improvement in the production procedures, and minimizing the contaminating impacts of products (Awan, Sroufe, & Kraslawski, 2019). The innovation in the technologies used for the marketing of products and services and the marketing channels applied by the rival businesses for the sale of their products and services divert the attention of the managers of sales and marketing department to look at their own marketing channels and technology used for the marketing of the products and services. It enables them to find out the issues in the marketing channels and create ideas to find out solutions and alternatives. Similarly, the need to bring innovation in the product's design and packaging motivates the sales and marketing officers to force the workers in the production department to keep on thinking new ideas of product designs and packaging (Hong, Hou, Zhu, & Marinova, 2018). Hence it can be hypothesized:

H3: Market innovation has a positive effect on business creativity.

Mediating role of organizational learning

Organizational learning is the creation of knowledge, acquisition of knowledge, and the utilization of that knowledge within an organization for specific purposes. Organizational learning is characterized by readiness, continuous planning, improvised implementation, and action learning. Organizational learning has three levels, individual learning, group learning, and organizational level (Hughes, Lee, Tian, Newman, & Legood, 2018). Culture innovation, product innovation, and market innovation accelerate organizational learning at all three levels. Organizational learning proves to be helpful in accelerating business creativity. When the individuals in the organization have the ability to acquire knowledge for doing a specific task, immediately at the time of needs, he feels support in thinking new ideas and implementing them for the successful performance of that particular task. Similarly, when the team formed for the accomplishment of particular

objectives and they are easily provided knowledge about required for the function to get the objectives fulfilled, they can take initiatives and invent new things to facilitate the accomplishment of their objectives. When the organizations have an effective communication network with the stakeholders, and can easily acquire knowledge about any resources, data, trends, technology, processes, and market and customers' requirements and give an opportunity to the organizational personnel to use that knowledge in creating value to the products and services, developing new ideas, find new opportunities to compete in the market and solutions to the problem (Kaundert & Masys, 2018; Stojcic, Hashi, & Orlic, 2018).

Innovation in a culture which is the combination of the beliefs, values, rules, symbols, and behaviors of the organizational personal or the specific group of persons within the society that are generally accepted by the individuals without any objection, contributes to organizational learning. In some societies, there is an innovative culture, a culture that conforms to the changes in thinking, behaviors, technology, and trends, and it continues to be innovative. The organizations which operate in the same society can acquire and use knowledge from innovative beliefs, values, trends, and the behaviors of society people through interaction with employees and the customers. They can use that knowledge in developing creativity in the business processes (Kaundert & Masys, 2018). When the manufacturing of innovative products is one of the basic objectives of an organization, the organizational personnel try to acquire information about the change in the technology, source of quality of material, best ways of manufacturing, and packaging style and use that information to respond to the market trends and customers' requirements. This organizational learning facilitates the organization in developing business creativity. Similarly, the information about the innovation in the market trends, products and services, technology and logistics used in marketing, marketing channels, product design and packaging, enhances organizational learning, which in turn facilitate the development of creativity in the business (Zhang & Zhu, 2019). Hence, we can hypothesize:

H4: Organizational learning has a positive effect on business creativity.

H5: Organizational learning is a mediator between culture innovation; product innovation; market innovation and business creativity.

Research Methodology

This paper examines the impact of culture innovation, product innovation and market innovation on business creativity and investigates the mediating role of organizational learning between the relations of culture innovation, product innovation, market innovation, and business creativity of the electrical and electronics industries in Malaysia. This paper has followed the quantitative methods and used survey questionnaires for data collection. The employee of the research and development department (291 completed surveys) of the electrical and electronics industries in Malaysia are the respondents. The study model of the relations is as follows (Figure 1).

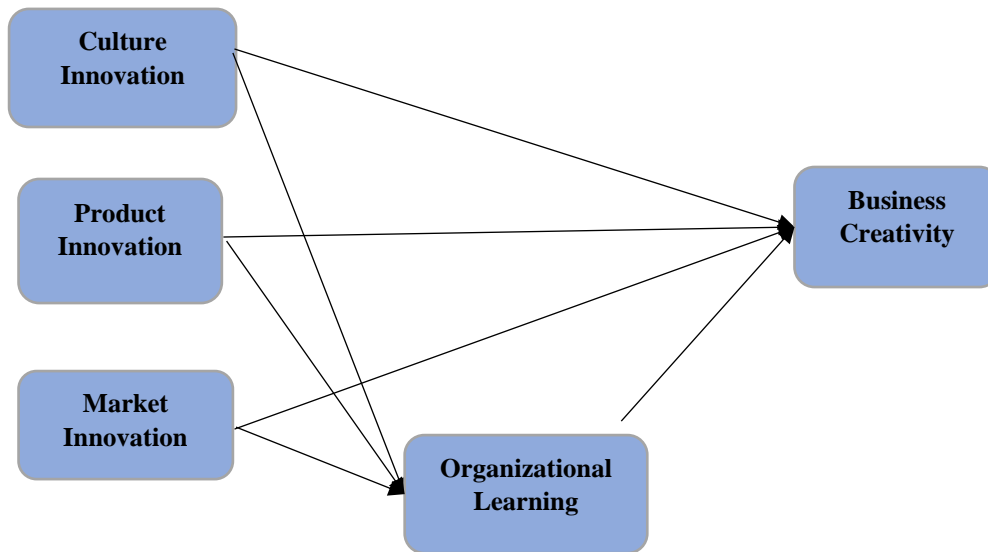


Figure 1: Theoretical Model

Research Results

Before the analysis of study hypothesis, the model was evaluated for its fitness levels. The fitness indices were evaluated by running the confirmatory factor analysis. The indices tested were goodness of fit (GFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA) and Incremental Fit Index (IFI). As presented in the table below, all the required threshold were satisfied confirming the fitness of the proposed model (Byrne, 1994; Tucker & Lewis, 1973; Schumacker & Lomax, 2004).

Table

Fit Indices	CMIN/DF	GFI	NFI	CFI	IFI	RMSEA
Value	0.267	0.952	0.963	0.927	0.928	0.0682
Threshold	<5.0	0.90	0.90	0.90	0.90	<0.08
Satisfactory?	Yes	Yes	Yes	Yes	Yes	Yes

This study has shown the factor loadings of the items that exposed the validity of the items. The values of factor loadings are more than 0.50 that show items are highly correlated and valid. These values have been mentioned in Table 1.

The model and constructs were also evaluated for reliability and validity levels. These were evaluated using convergent reliability (CV), average variance extracted

(AVE), and Cronbach's alpha. The values of CR and Alpha are more than 0.70, and the AVE values are more than 0.50 that show items are highly correlated and valid. These values have been mentioned in Table 2.

Table 2. Validity and Reliability Analysis

	Alpha	CR	AVE
BC	0.807	0.867	0.567
CI	0.917	0.932	0.633
MI	0.833	0.899	0.749
OL	0.785	0.875	0.701
PI	0.838	0.884	0.606

CI = Culture innovation, PI = product innovation, MI = market innovation, OL = organizational learning, BC = business creativity

After evaluating the model fitness, reliability, and validity measurements of the model, it was time to conduct the analysis for evaluating the hypothesis of the study. The structural equation modelling was conducted and the results are presented in the table and figure below.

Table 3. Structural Equation Model Results

Hypothesis	Paths	Estimate	S.E.	C.R.	p-value
H1	CI → BC	.049	.063	.778	.003
H2	PI → BC	.325	.049	6.638	***
H3	MI → BC	.206	.044	4.698	***
H4	OL → BC	.816	.152	5.375	***
H5	MI → OL → BC	.004	.032	.123	.002
	CI → OL → BC	.394	.067	5.893	***
	PI → OL → BC	.073	.033	2.195	.028

*** = significant at 0.01 level, CI = Culture innovation, PI = product innovation, MI = market innovation, OL = organizational learning, BC = business creativity

The path coefficient between culture innovation and business creativity was positive and significant ($\beta = 0.049$, $p = 0.03$) confirming H1. The path coefficient between product innovation and business creativity was positive and significant ($\beta = 0.325$, $p = 0.000$) confirming H2. The path coefficient between market innovation and business creativity was positive and significant ($\beta = 0.206$, $p = 0.000$) confirming H3. The path coefficient between organizational learning and business creativity was positive and significant ($\beta = 0.816$, $p = 0.000$) confirming H4. The research also indicated that organizational learning significantly mediates the effect of culture

innovation, product innovation and market innovation on business creativity, hence confirming hypothesis 5.

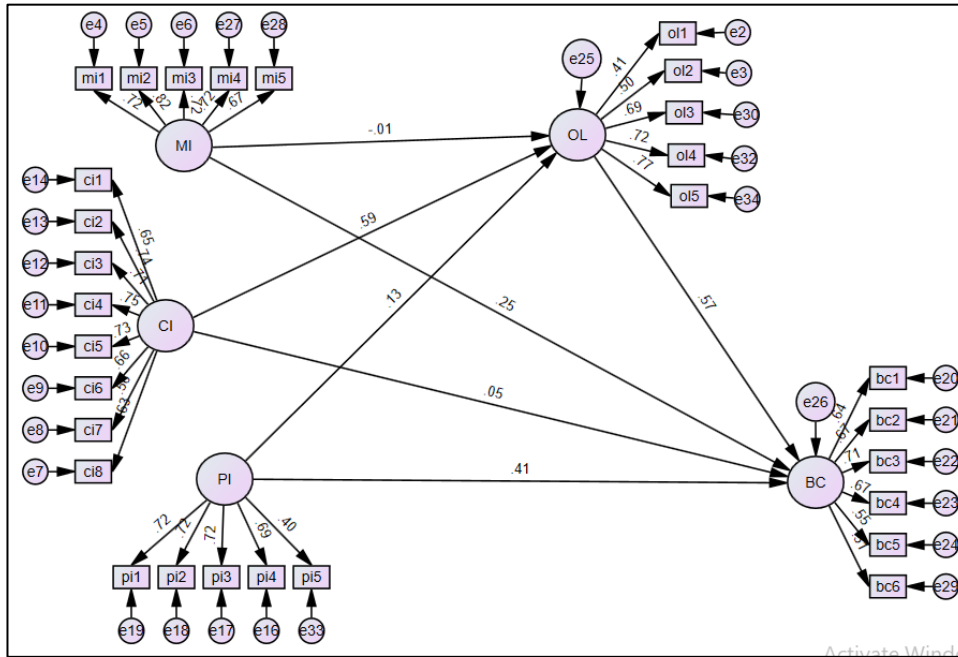


Figure 4. Structural Model Assessment

Discussion

The study results have indicated that cultural innovation has a positive association with business creativity. The study implies that the innovation-oriented culture within or outside the business organizations leads to creativity in the employees' skills and performance, newness and innovativeness in the products and services of the organization. These results are in line with the past study of Lee, Hallak, and Sardeshmukh (2019). This study deals with the factors determining business creativity. It concludes that the innovativeness in the values and beliefs of organizations which organizational personnel are bound to follow while performing their business duties, behaviors and actions of organizational personnel from managers to employees of lower rank result in the development of creativity and innovativeness in the business operations. These results are also in line with the past study of (Richter, Jackson, & Schildhauer, 2018), which states that the organization has modern values, innovation-based future plans, innovation-oriented behaviors, the employees have creative thinking and performing skills, and the organization is successful in developing creativity in the production and marketing procedures.

The study implies that the development of innovation in marketing channels, processes, and behaviors and sustainability in this marketing innovation forces the organization to develop thinking and activeness to find out the problems challenging

innovative marketing and to find out solutions to those problems. These results are approved by the previous study of -Patterson and Zibarras (2017), which demonstrates that the adoption of innovation in the advertisement and marketing techniques in order to keep pace with the constant change in the customers' preferences affects the nature of business policies and behaviors and thus, inspires creative thinking in the managers, team leaders and other employees. These results are also approved by the previous study of Zuo, Fisher, and Yang (2019), which shows that the tendency of creating and developing innovation in the marketing of goods and services inspires remote ideas, context, application of multiple perspectives, curiosity, flexibility in thinking and actions. This all brings newness and innovation in the business operations. In addition, the study results have indicated that organizational learning is an appropriate mediator between culture innovation and business creativity. These results are in line with the past study of Brix (2017), which shows that the innovation in the organization's values, beliefs, behaviors, and actions improves the creation, retention, and transformation of knowledge of different topics within the organization. The improvement in organizational learning enables the organization to enhance creativity in its organizational personnel. These results are also in line with the past study of Freixanet, Rialp, and Churakova (2020), which suggests that organizational learning, which is improved by the innovation-oriented business environment, enables managers of different departments, team leaders and workers to develop analytical skills, ponder upon business issues, and find out solutions & alternatives, and exchange their ideas across the organization.

The current study has made both theoretical and empirical implications. It has remarkable theoretical significance due to its dramatic contribution to the literature on business innovation. The study throws light on the role of innovation adoption in the creation and sustainability of business creativity in organizational personnel. It highlights the influences of three factors such as innovation in culture, product innovation, and market innovation on the development of business creativity. The study makes a great contribution to the existing economic-based literature with the introduction of organizational learning as a mediator between innovation adoption in culture development, product management, and marketing administration and the development of business creativity. In the previously conducted studies, authors have talked about the direct influences of organizational learning on business creativity, but only a few authors have focused on the mediating role of organizational learning between innovation adoption in culture development, product management, and marketing administration and development of business creativity. Thus, the current study is an exception in the literary world. The current paper also has great practical significance in the emerging economy like Malaysia for providing guidance to the economists on how to encourage business creativity. This study tells that business creativity in the organizational personnel can be created and developed with the innovation adoption in culture development, product management, and marketing administration to a high degree.

Conclusion

This study was conducted to ensure the innovation adoption role on the creativity of the business and also conducted to check that how much organizational learning is effective in the adoption of innovation in the electrical and electronics industries in Malaysia. Thus, this study was to check the degree of development of business creativity in the organizational personnel at a different level in a middle-lower-income economy of Malaysia. In this regard, it examined the impacts of innovation adoption in culture development, product management, and marketing administration on the development of business creativity. The study emphasized that innovation adoption in cultural development contributes greatly to the encouragement of business creativity in the organizational personnel. The study results also indicated that the innovation adopts in product management enhance business creativity. The struggle of a business entity to develop and maintain innovativeness in the product design and other features forces the organization to encourage creativity in all business areas concerning product development. The study findings also revealed that the innovativeness in the marketing strategies and techniques leads to high business creativity in the organization. Moreover, results also exposed that electrical and electronics industries have effective learning that help the organization in the innovation adoption and to improve the business creativity. Finally, this study concluded that electrical and electronics industries adopted the effective innovation in the industry and their own learning also had greater influence on the impact of innovation adoption and creativity of the business.

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References

- Abdussalam, M., Menezes, K., (2021). On the question of collective liability in innovation and creativity networks deploying blockchains–A discussion concerning joint liability for the unauthorised application of proprietary information. *Law, Innovation and Technology*, 1-27.
- Antunes, H. D. J. G., Pinheiro, P. G., (2020). Linking knowledge management, organizational learning and memory. *Journal of Innovation & Knowledge*, 5(2), 140-149.
- Awan, U., Sroufe, R. and Kraslawski, A., (2019). Creativity enables sustainable development: supplier engagement as a boundary condition for the positive effect on green innovation. *Journal of cleaner production*, 226, 172-185.
- Balbay, S., (2020). Review of Innovations and Challenges in Language Learning Motivation. *Eurasian Journal of Applied Linguistics*, 6(3), 543-547.
- Byrne, B. M., (1994). *Structural equation modeling with EQS and EQS/Windows*. Thousand Oaks, CA: Sage Publications.

- Brix, J., (2017). Exploring knowledge creation processes as a source of organizational learning: A longitudinal case study of a public innovation project. *Scandinavian Journal of Management*, 33(2), 113-127.
- Caliskan, A., Zhu, C., (2020). Organizational Culture and Educational Innovations in Turkish Higher Education: Perceptions and Reactions of Students. *Educational Sciences: Theory and Practice*, 20(1), 20-39.
- Cudny, W., Comunian, R. and Wolaniuk, A., (2020). Arts and creativity: A business and branding strategy for Lodz as a neoliberal city. *Cities*, 100, 102-123. doi:
- Danielle, N., Masilela, L., (2020). Open Governance For Improved Service Delivery Innovation In South Africa. *International Journal of eBusiness and eGovernment Studies*, 12(1), 33-47.
- Fedorko, I., Bacik, R. and Gavurova, B. (2018). Technology Acceptance Model in E-Commerce Segment. *Management & Marketing. Challenges for the Knowledge Society*, 13(4), 1242-1256.
- Freixanet, J., Rialp, A. and Churakova, I., (2020). How do innovation, internationalization, and organizational learning interact and co-evolve in small firms? a complex systems approach. *Journal of Small Business Management*, 58(5), 1030-1063.
- Grebski, M. and Mazur, M., (2022) Social climate of support for innovativeness. *Production Engineering Archives*, 28(1), 110-116.
- Grebski, M., (2021) Mobility of the Workforce and Its Influence on Innovativeness (Comparative Analysis of the United States and Poland). *Production Engineering Archives*, 27 (4), 272-276.
- Haddad, G., Haddad, G. and Nagpal, G., (2021). Can students' perception of the diverse learning environment affect their intentions toward entrepreneurship?. *Journal of Innovation & Knowledge*, 6(3), 167-176.
- Hair, Jr, J. F., Babin, B. J., and Krey, N., (2017). Covariance-based structural equation modeling in the Journal of Advertising: Review and recommendations. *Journal of Advertising*, 46(1), 163-177.
- Halaskova, M., Gavurova, B. and Kocisova, K., (2020). Research and Development Efficiency in Public and Private Sectors: An Empirical Analysis of EU Countries by Using DEA Methodology. *Sustainability*, 12(17), 7050.
- Halaskova, M., Gavurova, B., and Korony, S., (2020). Change of EU28 countries research and development indicators between 2010 and 2015. *Economics and Sociology*, 13(1), 230-248.
- Hong, J., Hou, B., Zhu, K. and Marinova, D., (2018). Exploratory innovation, exploitative innovation and employee creativity. *Chinese Management Studies*, 12(2), 268-286.
- Hughes, D. J., Lee, A., Tian, A. W., Newman, A. and Legood, A., (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*, 29(5), 549-569.

- Kaundert, M., Masys, A. J., (2018). Mass migration, humanitarian assistance and crisis management: embracing social innovation and organizational learning *Security by Design* 12, 73-91
- Khan, M. A., Domicián, M., Abdulahi, M. E., Sadaf, R., Khan, M. A., Popp, J. and Oláh, J., (2020). Do institutional quality, innovation and technologies promote financial market development. *European Journal of International Management*, 14(2), 1-24.
- Kryshchanovych, M., Bilyk, V., Hanushchyn, S., Sheremet, I. and Vasylenko, K., (2021). Modelling the ways to increase the creativity of psychology students as a basic factor in professional development. *Creativity Studies*, 14(1), 34-50.
- Lee, C., Hallak, R. and Sardeshmukh, S. R., (2019). Creativity and innovation in the restaurant sector: Supply-side processes and barriers to implementation. *Tourism Management Perspectives*, 31, 54-62.
- Naqshbandi, M. M., Tabche, I., (2018). The interplay of leadership, absorptive capacity, and organizational learning culture in open innovation: Testing a moderated mediation model. *Technological Forecasting and Social Change*, 133, 156-167.
- Oláh, J., Hidayat, Y. A., Dacko-Pikiewicz, Z., Hasan, M. and Popp, J., (2021). Inter-organizational trust on financial performance: proposing innovation as a mediating variable to sustain in a disruptive era. *Sustainability*, 13(17), 9947
- Olsson, A., B. Paredes, K. M., Johansson, U., Olander Røese, M. and Ritzén, S., (2019). Organizational climate for innovation and creativity—a study in Swedish retail organizations. *The International Review of Retail, Distribution and Consumer Research*, 29(3), 243-261.
- Ozgenel, M., (2020). The role of charismatic leader in school culture. *Eurasian Journal of Educational Research*, 20(86), 85-114.
- Palos-Sanchez, P., Saura, J. R., Grilo, A. and Ramirez, R. R., (2020). How attitudes, vision and ability to capture opportunities affect startups' business creativity. *Creativity Studies*, 13(2), 387-405.
- Patterson, F., Zibarras, L. D., (2017). Selecting for creativity and innovation potential: implications for practice in healthcare education. *Advances in Health Sciences Education*, 22(2), 417-428.
- Raj-Reichert, G., (2020). Global value chains, contract manufacturers, and the middle-income trap: The electronics industry in Malaysia. *The Journal of Development Studies*, 56(4), 698-716.
- Richter, N., Jackson, P. and Schildhauer, T., (2018). Outsourcing creativity: An abductive study of open innovation using corporate accelerators. *Creativity and Innovation Management*, 27(1), 69-78.
- Schubert, T., Tavassoli, S., (2020). Product innovation and educational diversity in top and middle management teams. *Academy of Management Journal*, 63(1), 272-294.
- Schumacker, R. E., Lomax, R. G., (2004). *A beginner's guide to structural equation modeling*, Second edition. Mahwah, NJ: Lawrence Erlbaum Associates.

- Stojcic, N., Hashi, I. and Orlic, E., (2018). Creativity, innovation effectiveness and productive efficiency in the UK. *European Journal of Innovation Management*, 21(4), 564-580.
- Tucker, L. R., Lewis, C., (1973). The reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38, 1-10.
- Sutanto, E. M., (2017). The influence of organizational learning capability and organizational creativity on organizational innovation of Universities in East Java, Indonesia. *Asia Pacific Management Review*, 22(3), 128-135.
- Waruwu, H., Asbari, M., Purwanto, A., Nugroho, Y. A., Fikri, M. A. A., Fauji, A. and Agistiawati, E., (2020). The Role of Transformational Leadership, Organizational Learning and Structure on Innovation Capacity: Evidence from Indonesia Private Schools. *EduPsyCouns: Journal of Education, Psychology and Counseling*, 2(1), 378-397.
- Zhang, F., Zhu, L., (2019). Enhancing corporate sustainable development: Stakeholder pressures, organizational learning, and green innovation. *Business Strategy and the Environment*, 28(6), 1012-1026.
- Zuo, L., Fisher, G. J. and Yang, Z., (2019). Organizational learning and technological innovation: the distinct dimensions of novelty and meaningfulness that impact firm performance. *Journal of the Academy of Marketing Science*, 47(6), 1166-1183.

WPLYW PRZYJĘCIA INNOWACJI NA KREATYWNOŚĆ BIZNESOWĄ PRZEMYSŁU ELEKTRYCZNEGO I ELEKTRONICZNEGO W MALEZJI

Streszczenie: Innowacja stała się istotnym elementem poprawy kreatywności i wydajności biznesowej oraz uzyskania zainteresowania ostatnich badań i organów regulacyjnych. Dlatego celem artykułu jest analiza wpływu innowacji kulturowych, innowacji produktowych i rynkowych na kreatywność biznesową przemysłu elektrycznego i elektronicznego w Malezji. Niniejszy artykuł analizuje również pośredniczącą rolę organizacyjnego uczenia się między relacjami innowacji kulturowej, innowacji produktowej, innowacji rynkowej i kreatywności biznesowej przemysłu elektrycznego i elektronicznego w Malezji. W niniejszym artykule zastosowano metody ilościowe i wykorzystano kwestionariusze ankiety do zbierania danych, natomiast do testowania hipotez wykorzystano SPSS i AMOS. Wyniki wskazują, że innowacje kulturowe, innowacje produktowe i innowacje rynkowe mają pozytywny związek z kreatywnością biznesową przemysłu elektrycznego i elektronicznego w Malezji. Odkrycia ujawniły również, że uczenie się organizacji znacząco pośredniczy w splocie innowacji kulturowych, innowacji produktowych, innowacji rynkowych i kreatywności biznesowej przemysłu elektrycznego i elektronicznego w Malezji. Niniejszy dokument jest odpowiedni dla organów opracowujących regulacje, które powinny sformułować skuteczną politykę związaną z przyjęciem innowacji, która zwiększy kreatywność i wydajność przedsiębiorstw.

Słowa kluczowe: Innowacje, Kreatywność biznesu, Uczenie się organizacji

创新采用的影响 马来西亚电气和电子行业的商业创造力

摘要： 创新已成为提高企业创造力和绩效的重要因素，并获得了近期研究和监管机构的关注。因此，本文旨在分析文化创新、产品创新和市场创新对马来西亚电气和电子行业的商业创造力的影响。本文还研究了组织学习在马来西亚电气和电子行业的文化创新、产品创新、市场创新和商业创造力之间的中介作用。本文遵循定量方法，采用调查问卷进行数据收集，采用SPSS和AMOS对假设进行检验。结果表明，文化创新、产品创新和市场创新与马来西亚电气和电子行业的商业创造力正相关。调查结果还表明，组织学习在马来西亚电气和电子行业的文化创新、产品创新、市场创新和商业创造力之间起着重要的中介作用。本文适用于监管制定机构，他们应制定有效的创新采用相关政策，以提高企业的创造力和绩效。

关键词： 创新、商业创造力、组织学习