



THE REVIEW OF INNOVATION AND BUSINESS PERFORMANCE

Mohammad Alshorman¹, Mohd Hisham bin Omar²

¹Master student in Faculty of Innovative Design and Technology, Universiti Sultan Zainal Abidin, (UniSZA), 21300, Kuala Terengganu, Malaysia

corresponding Email: mohammedabusanad@yahoo.com Ph: 0060199544483

²Doctor in Faculty of Innovative Design and Technology, (UniSZA), Kuala Terengganu 21300

Email: hisham@unisza.edu.my Ph: 0060139391130

Abstract

The purpose of this study to review a number of studies on innovation and business performance the several empirical studies reviewed show mixed results and conclusions. In some studies, strong positive relationships are found to exist between innovation and business performance and in some, the relationship is little weak other scholars report different results. This mixture of findings and conclusions comes from the differences in methodologies, variables used and the period of study. There is also a difference in the study area that effects on business performance and innovation.

Keywords: Innovation, Business performance

Introduction

Innovativeness is measured as a vital instrument of growth strategies that business need to venture into new marketplaces, raise the existing market share and ensure that the company continues to enjoy increased profitability. Innovation not only contributes to profitability but also to more industrious manufacturing practices, improved performance in the market and seeks to maintain positive status in customers' opinion. Innovations offer firms with a planned course to rise beyond the troubles they come across while pushing to realize sustainable competitive edge (Gunday, Ulusoy, Kilic, & Alpan, 2011).

Moreover, innovation is a process of making something new that has critical value to an individual, group, organization, manufacturing, or the general public. Innovation is the means by which a firm or individual profits from inventiveness (Altman, Nagle, & Tushman, 2014). Presently, like never before, the key to competitive advantage is innovation. However, innovation can help organizations in a meet of their difficulties, not just competition. Accelerating rates of change, globalization, rapidly advancing technology, more innovative solutions, and a change from an industrial to a knowledge-based economy all will require innovative solutions. Utilizing course reading answers for these or other market-situated difficulties, a firm turns out to be dangerously unsurprising and best ends up in the same relative position from its opposition. The more probable outcome is a competitive advantage (Halkos & Bousinakis, 2012).

In addition, innovation is the way to competitive advantage in a strongly turbulent environment. It is a main driving force for the economic growth of nation-states. The capacity to innovate has guide results for the capacity to contend at the individual, firm, local and national level. The values made by innovations are frequently showed in better approaches for getting things done or new items and procedures that add to riches (Ballot, Fakhfakh, Galia, & Salter, 2015). When we think about a firm as a heap of assets, abilities, and skills, at that point the impact of innovation is to change an association's inward capacities, asking it more versatile, better ready to learn, to abuse new ideas (Gemmill, 2011).

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Review of Empirical Studies

Innovation and business performance

Tuan, Nhan, Giang, & Ngoc (2016) explored two parts: the impacts of innovation on the different aspect of innovation performance, then their effects to firm performance (production, market, and financial performance). The study collected data from 118 mechanics, electronics, motorbike and automobile industries. The result demonstrated that there are positive effects of process, marketing, and organizational innovations on firm performance in supporting firms. More specifically, the higher the level of innovation activities is, the greater the innovative performance is, which means the larger level of Process, organization, and marketing innovation activities are, the higher level of innovative performance are likely to be. Secondly, the higher level of Process, organization, and marketing innovative performance, the better level of firm performances is likely to be. To sum up, in order to improve the innovative and firm performance, those firms in supporting industry should highly concentrate on process, marketing, and organizational innovation activities, rather than product innovation activities.

Cheng, Yang, and Sheu, (2014) are drawn from the resource-based view theory to investigates inter-relationships among three types of eco-innovation and their relative influence on business performance. They collected 121 data from Taiwan Environmental Management Association and analyzed using structural equation modeling. The findings showed that eco-organizational innovation has the strongest impact on business performance. Moreover, eco-process and eco-product innovations partially mediated the influence of eco-organizational innovation, and eco-product innovation mediated eco-process innovations' influence on business performance. However, the business performance is positively and negatively influenced by eco-process, eco-product innovations and eco-organizational. Löfsten, (2014) examined the effect of innovation performance on business performance in Sweden. They collected data set of 99 medium-sized technology firms and analyzed using regression model. They found that Product innovation performance was influenced by seven variables of the 14 variables that signify product innovation procedures. Moreover, product innovation performance was not influenced by firm age, firm size, and branch and product life cycles. The result also showed that copyrights, licenses, and patents have a positive impact on the firm's sales; however, there were no relations to the firm's profitability.

Ndesaulwa and Kikula (2017) investigated the impact of Innovation on Performance of Small and Medium Enterprises (SMEs) in Tanzania. The study uses a desktop and library research methodology. The result showed that the innovation has a positive impact on the efficiency and performance of firms requires clarification on two points. The first point is that investments in innovation and technology should be treated as positive inputs into the efficiency of the firm rather than as cost figures that exhaust the firm (as they are often treated in the classical approach of finance and accountancy). The second point is that such investment needs to be related to the production costs to reflect the true utilization of the firm's resources. Moreover, a higher ratio is an indication of the firm management's high level of commitment to invest in innovation and absorption of new technologies, while a lower figure indicated the reverse and actually points to an old style, non-innovational approach to firm development strategies. Zainal Abidin (2014) examined the impact of intellectual capital and strategic orientations (market orientation, learning orientation and technology orientation) on innovation capability and firm performance of small-to-medium enterprises (SMEs) in the Information and Communications Technology (ICT) industry in Malaysia. A quantitative approach is employed to achieve the objectives of the study. A survey technique is used to collect data from owners, Chief Executive Officers (CEOs) or managers of ICT SMEs. 213 responses were received and

further analyzed. The research models and proposed hypotheses were assessed using the Partial Least Squares (PLS) technique. The empirical results provided strong evidence of the explanatory power of the model developed indicating that Malaysian ICT SMEs would perform better with greater emphasis on developing innovation capability through enhancement of intellectual capital and the strategic orientations measured in this study. It also showed that greater benefits for firms in terms of performance will be achieved with higher innovation capability as there is a more substantial impact from intellectual capital and strategic orientations when higher innovation capability is achieved.

Camisón and Villar-López, (2014) assessed the association among organizational innovation and technological innovation competencies and analyzed their influence on firm performance in Spanish industrial firms. They collected data from 144 Spanish industrial firms and analyzed using partial least squares approach. The results confirmed that organizational innovation favors the development of technological innovation competencies and that both organizational innovation and technological competencies for products and procedures can lead to greater firm performance. Singh, Chakraborty, and Roy, (2016) provided the empirical evidence of green innovation to motivate manufacturing MSMEs toward environmentally responsible activities. The findings strongly validated the impact of green innovation and innovation drivers with 61% variance explained for firm's business performance. Moreover, they have found that green organizational innovation and green procedure have a significant influence on business performance as associated with green product innovation.

Zainol, Abas, and Ariffin, (2016) conceptualized the supply chain amalgamation and technological innovation for the business performance of aquaculture contract farming countryside in Malaysia. Established from the SCM philosophy, it highlighted on the three correlated variables of supply chain amalgamation, such as external amalgamation with supply chain risks and customers, external amalgamation with suppliers, and technological innovation, and the relative between the variables in focus that conceivably could produce a potential favorable business performance. Therefore, ability to conceptualized, observed and give due recognition to the possible comparisons between these variables in question by the potential aquaculture contract farming contributors, possibly could bring about a perceptive commitment for the improvement of the aquaculture business performance.

Njagi (2014) determined the effect of product innovation on the profitability of private manufacturing companies in Nairobi County. The study collected the data from 45 private manufacturing companies using convenience random sampling which was approximately 11.9% of all the private manufacturing firms in Nairobi County. The study uses Descriptive statistics such as mean, medium, and standard deviation to describe the data collected. Data presentation was done by the use of percentages and frequency tables. The study found a positive and significant correlation between product innovation and ROA. The findings also revealed that the correlation between inflation rate and ROA is negative and significant. Cost of production was also found to be negatively and significantly associated with ROA. The study concluded that product innovation has positive effects on profitability.

Mahmoud, Blankson, Owusu-Frimpong, Nwankwo, and Trang, (2016) examined the relationship between learning orientation, innovation, and market orientation; and second, measures the role of market orientation, learning orientation and innovation, on firms' business performance in Ghanaian banking domain. The collected the data from senior managers of 28 banks in Ghana and analyzed using multiple linear regression techniques. The analysis revealed that market orientation has a significant relationship with innovation whereas learning orientation has a significant influence on innovation. Furthermore, innovation mediated the association between market orientation and business performance.

Visnjic, Wiengarten, and Neely, (2016) studied the performance influence of service business model innovation and its interaction with product innovation. Applying the lenses of the demand-based view on value design and complementarity, the performance influence of two main service business models is observed: the customer-oriented model and product-oriented model, the executed equally with product innovation. The analysis showed that the interaction between service business model innovation and product innovation benefits the long-term performance joined with a degree of short-term performance sacrifice. Moreover, the service business model innovation in separation from product innovation outcomes in short-run return increases, however, long-run knowledge loss and, therefore, market performance decrease.

Soto-Acosta, Popa, and Palacios-Marqués, (2016) extended the previous studies on the organizational influence of Internet technologies by examining factors influencing e-business use and its effect on organizational innovation in manufacturing Small and Medium-Size Enterprises (SMEs). The also examined the mediating impact of organizational

innovation on the association between e-business and firm performance. The collected the data from the dataset of 175 Spanish manufacturing SMEs. They employed partial least squares (PLS) structural equation modeling techniques for the analysis. The results confirmed that e-business use arises from internal organizational and resources rather than from external pressure. Moreover, the results revealed that e-business use was positively related to firm performance via organizational innovation.

Mir, Casadesús, and Petnji, (2016) investigated the influence of eco-innovation on business performance SMEs in New Zealand. The collected the data from 83 green-oriented SMEs. The results suggested that eco-innovation has a positive influence on business performance. Moreover, the findings revealed that although environmental orientation does not directly influence business performance, it improves the positive influence of eco-innovation on business performance. The results also indicated that green-oriented firms would gain more performance benefit of eco-innovation when they obligate more organizational resources. Karimi and Walter, (2016) provided a theoretical perspective and supported by empirical studies from the newspaper industry, on how projecting corporate entrepreneurship qualities influence disruptive business model innovation adoption, and how such adoption influences business model performance. They found that, whereas risk-taking, pro-activeness and autonomy do have positive relationships with the degree of adoption of disruptive business model innovation, innovativeness does not. Moreover, disruptive business model innovation adoption has a nonlinear relationship with business model performance.

Saji and Ellingstad, (2016) established a social innovation model and understood the levels of communication of diverse social performers at Hewlett Packard. They also look into the influence of communication networks and power of words in the social interface in social innovation projects. They focused on the data available via the papers, articles, and internet associated with social innovation experience of technology companies. They used a content analysis of the terminology that is used for social innovation projects through innovation development and the articles published. They illuminated the power of certain words that are frequently used in articles and e-mails associated with the social innovation which can give researchers an idea of the power of words in social innovation. Naranjo-Valencia, Jiménez-Jiménez, and Sanz-Valle, (2016) used a sample of industrial companies to identify factors of innovation in Spain. The results revealed that culture could raise innovation, in addition to company performance, or it could similarly be a problem for both of them, reliant on the values stimulated by the culture. It is also found precisely, that an adhocracy culture is the greatest innovation and performance predictor and innovation mediated the association among certain forms of organizational cultures and performance.

Wanyoike (2016) established the relationship between innovation strategies and competitive advantage in Logistics firms in Mombasa County, Kenya. The cross-sectional descriptive survey was used as the research design. The study used purposive sampling found in non-probability sampling techniques to select respondents for interviews and administration of questionnaires. Primary data was collected using closed-ended questionnaires target respondents were the Branch managers, human resource managers and operations managers. The study found that the causal relationship between innovation and competition was significant at the 5% level. Overall a positive relationship existed between innovation strategies employed and the firms' competitive advantage.

Therefore, this implied that the innovation strategies significantly influence competitive advantage of the logistics firms in Mombasa County. Jyoti, Chahal, and Rani, (2017) explored the role of the organizational learning and innovation as mediators between high-performance human resource practices (HPHRPs) and business performance in the telecommunication sector. They used Census method data collection from employees working in telecommunication organizations in North India. Structural equation modeling has been used for hypotheses testing. The results indicated that organizational learning mediated the association between HPHRPs and innovation. However, innovation does not mediate but moderated the association between organizational learning and BP. Moreover, the model evaluated the mediated-moderation effect of organizational learning and innovation in between HPHRPs and BP.

Campbell and Park (2017) explored factors relating to self-interest, corporate social responsibility, and resource-based strategy to help predict small business performance across a total of provinces containing retailing and service-based industries. Relating instrumental stakeholder approach and the resource-based view suggested that resources such as intellectual capital, entrepreneurial orientation, and social capital along with strategic management of community as a stakeholder contributed to small business performance. They employed structural equation modeling and found that small businesses sustained the significance of both instrumental stakeholder approach and the resource-based view of general performance. Gërguri-Rashiti, Ramadani, Abazi-Alili, Dana, Ratten, (2017) used the Business Environment Enterprise Performance Survey to examine the influence of information communication technologies (ICT) and innovation activities

on firm performance. The sourced the data from firm-level data in the three rounds: 2002, 2005, and 2008. They also applied the dynamic approach to assessing the changes that arise from the influence of ICT and innovation activities. The analysis found that the probability of the firm to accept innovation activities has revealed to improve firm performance.

Ramanathan, He, Black, Ghobadian, and Gallea, (2017) investigated the associations between firms' innovation, environmental regulations, and private sustainability benefits. They used nine case studies of Chinese and UK firms. The analysis revealed that depending on firms' capabilities and resources, those that implement a more dynamic approach to respond to environmental rules innovatively and take an active approach to achieve their environmental performance are commonly well able to obtain the private benefits of sustainability. Bayraktar, Hancerliogullari, Cetinguc, and Calisir, (2017) studied the interactions among competitive strategies, innovation, and firm performance in Turkish manufacturing companies. The collected the data from top management of the firms through Computer Assistant Telephone Interviewing technique. They employed structural equation modeling using partial least squares approach. The findings indicated that competitive strategies lead to innovation, which, in turn, raise the firm performance.

Cheng and Chen, (2017) explored how firm service innovation mediated the relationship between market orientation and business performance in China. They used Structural equation modeling based on a cross-section (n = 260) of 5 years of supply chain business data (2009–2013). They found that firm market orientation and service innovation have a significant positive impact on business performance. Furthermore, the results revealed that market orientation was mediated by the influence of service innovation on business performance.

Conclusion

The several empirical studies reviewed here show mixed results and conclusions. In some studies, strong positive relationships are found to exist between innovation and business performance and in some, the relationship is a little weak. Other scholars report different results. This mixture of findings and conclusions emanates from differences in methodologies, variables used and the period of the study. There is also a difference in the study area that affects the of the business performance variables. However, the majority of the studies show evidence to support and prove that there is a relationship between innovation and business performance vari

References

- Altman, E. J., Nagle, F., & Tushman, M. (2014). Innovating without information constraints: Organizations, communities, and innovation when information costs approach zero.
- Ballot, G., Fakhfakh, F., Galia, F., & Salter, A. (2015). The fateful triangle: Complementarities in performance between product, process and organizational innovation in France and the UK. *Research Policy*, 44(1), 217-232.
- Birkinshaw, J., Hamel, G., & Mol, M. J. (2008). Management innovation. *Academy of management Review*, 33(4), 825-845.
- Camisón, C., & Villar-López, A. (2014). Organizational innovation as an enabler of technological innovation capabilities and firm performance. *Journal of business research*, 67(1), 2891-2902.
- Cheng, C. C., Yang, C. L., & Sheu, C. (2014). The link between eco-innovation and business performance: a Taiwanese industry context. *Journal of Cleaner Production*, 64, 81-90.
- Gemmill, P. R. (2011). Conceptual framework and perspectives for creativity and design in technology and engineering education. *Creativity and design in technology & engineering education*, 321-353.
- Gunday, G., Ulusoy, G., Kilic, K., & Alpkan, L. (2011). Effects of innovation types on firm performance. *International Journal of production economics*, 133(2), 662-676.
- Halkos, G. E., & Bousinakis, D. (2012). Importance and influence of organizational changes on companies and their employees. *Journal of Advanced Research in Management*, 3(2), 90.
- Hamel, G. (2006). The why, what, and how of management innovation. *Harvard business review*, 84(2), 72.
- Löfsten, H. (2014). Product innovation processes and the trade-off between product innovation performance and business performance. *European Journal of Innovation Management*, 17(1), 61-84.
- Lowman, M., Trott, P., Hoecht, A., & Sellam, Z. (2012). Innovation risks of outsourcing in pharmaceutical new product development. *Technovation*, 32(2), 99-109.
- Mahmoud, M. A., Blankson, C., Owusu-Frimpong, N., Nwankwo, S., & Trang, T. P. (2016). Market orientation, learning orientation and business performance: The mediating role of innovation. *International Journal of Bank Marketing*, 34(5), 623-648.

- Ndesaulwa, A. P., & Kikula, J. DETERMINANTS OF INNOVATION ACTIVITIES BEING CARRIED OUT BY SMALL AND MEDIUM ENTERPRISES (SMES) IN ARUSHA AND MOSHI-NORTHERN TANZANIA.
- NJAGI, E. M. (2016). THE EFFECT OF PRODUCT INNOVATION ON THE PROFITABILITY OF PRIVATE MANUFACTURING FIRMS IN NAIROBI COUNTY.
- Osman Zainal Abidin, J. (2014). An empirical investigation into the significance of intellectual capital and strategic orientations on innovation capability and firm performance in Malaysian information and communications technology (ICT) small-to-medium enterprises (SMEs).
- Singh, M. P., Chakraborty, A., & Roy, M. (2016). The link among innovation drivers, green innovation and business performance: empirical evidence from a developing economy. *World Review of Science, Technology and Sustainable Development*, 12(4), 316-334.
- Soto-Acosta, P., Popa, S., & Palacios-Marqués, D. (2016). E-business, organizational innovation and firm performance in manufacturing SMEs: an empirical study in Spain. *Technological and Economic Development of Economy*, 22(6), 885-904.
- Tuan, N., Nhan, N., Giang, P., & Ngoc, N. (2016). The effects of innovation on firm performance of supporting industries in Hanoi, Vietnam. *Journal of Industrial Engineering and Management*, 9(2), 413.
- Visnjic, I., Wiengarten, F., & Neely, A. (2016). Only the brave: Product innovation, service business model innovation, and their impact on performance. *Journal of Product Innovation Management*, 33(1), 36-52.
- Zainol, M. A., Abas, Z., & Ariffin, A. S. (2016). Supply Chain Integration and Technological Innovation for Business Performance of Aquaculture Contract Farming in Malaysia: A Conceptual Overview. *International Journal of Supply Chain Management*, 5(3), 86-90.