Aspects of Innovation and Leadership in Small and Medium Enterprises

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Abstract

Innovation is the characteristic function of the company's resources. A technologically efficient collaboration, with support from other partners, significantly develops and improves technological capabilities as well as product innovation performance. Both from a local and regional perspective, in knowledge-based economies, innovation is defined as a particularly important pillar. Logically, innovation is not feasible without a well-informed leader: If the latter is not anticipating new ideas and new implementation techniques to face the rapidly changing environment, subordinates will not certainly be. This raises the importance of leadership in the innovation process in SMEs. To ensure their competitiveness globally, SMEs must enjoy effective leadership which is unanimously regarded as a transformational one. Consequently, it is this type exactly that will be considered throughout this article. This paper uses secondary data sources to address the topic and its impact. It ends up by focusing on the importance of leadership in creating and communicating a clear vision toward adopting innovation as an important survival strategy in the long run.

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1. Introduction

When thinking about terms that describe the economic world today, "complicated" and "unpredictable" resonate the most. Consequently, it requires high level of flexibility to cope with a rapidly changing world to ensure success and survival in the long run. Leaders/managers must have the intention to constantly change old manners in favor of new, more efficient ones, manners that

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open the door to the innovation process. For SMEs to survive, entrepreneurs should recognize the need for innovation by creating essential changes (Hashim, 2012).

According to Fadol et al. (2013), collaboration today is an extremely visible phenomenon in SMEs, arising from the desire to develop, survive and strengthen the competitive position in a dynamic environment. From this point of view, for a company capitalizing on all relevant information and knowledge becomes extremely difficult due to the increasing complexity and rapid development of knowledge in an operational business environment (Perez et al., 2013). According to Pateli (2009) and Pett et al. (2001) enterprises, in a constantly changing environment, can no longer independently manage, develop and nurture knowledge-based knowledge. Consequently, in order to use as efficiently as possible the skills, knowledge and resources present to other partners in order to improve and develop the competitiveness of the market position, companies engage in many networks and collaborations (Salisu et al., 2018; Todeva et al., 2005; Ceptureanu EG et al., 2019a). According to Madu (2016), for any technology-oriented organization to survive the competition of this century, strategic creativity is essential in order to increase the capacity to maintain, improve and attract knowledge.

The production systems of manufacturing companies, instead of relying on the development of modern technologies outside and inside the business, they are still based rather on certain traditional approaches (Apulu, 2012). In conclusion, in order to address these challenges, the international technology transfer policy was adopted (Sobanke et al., 2012). Given these aspects, according to Egbogah (2012) technological developments, which take place within stable integrated industries with the role of developing human capital and resurrecting education, are made with rigorous determination and do not take place in a independently. According to Aworawo (2011), the necessary basis for the successful development and support of the technological innovation capacity is determined by the active implementation but also by the strategic planning of a determined collaborative strategy. The collaboration capacity of a company generates the aggressiveness of its technological capacity (Aloini et al., 2015). According to Ryzhkova (2015), the innovation performance of firms is obviously and significantly enhanced by collaboration with customers. There are relatively limited studies on the links between the company's product innovation performance, technological capacity and technological collaboration even when strategic collaboration to improve the company's access to knowledge and resources is absolutely essential to develop technological capacity. The technological collaboration present within the value chain of the production industries will undoubtedly improve the level of innovative performances but also the technological capacities (Ceptureanu EG et al, 2017).

As matter of fact, many factors play an important role in the innovation formula whether we are talking about a technical innovation, a process innovation, or simply an administrative innovation. A good quality of leadership had been granted the most active role in this procedure. A company’s leader must be aware of every aspect in the company to be able to take off with a new journey, i.e. the

company's resources capacities. Not only should the leader be alerted of the company's current capacities, he/she must also figure out an anticipated vision regarding where the company is heading up to. This requires high levels of scientific curiosity, passion, wisdom, a sense of adventure, and the ability to motivate and involve everyone in the new mission (Hashim, 2012). By remaining a risk avert, resistant to change manager, SMEs will be doomed to failure (Hashim, 2012). In brief, to survive in the rapidly changing environment, SME's leaders need to get involved in the innovation process. Consequently, they should be leaned toward becoming transformational manager.

The transformational leadership style is meticulously connected to entrepreneurship (Matzler et al. 2008). Effective leaders are those who are able to adjust their behavior in a more or less transformational way to encounter the vibrant demands of the environment (Hannah et al., 2008). Because SMEs are relatively small, it is the role of the entrepreneur to guide, to envision, and to direct, which corresponds to the transformational leadership's effect (Matzler et al. 2008). SMEs function under energetic and unpredictable opportunities and threats, employees need to be constantly motivated to give the best of their effort which is highly required to keep the company moving on. All of this imposes the transformational style of leadership as the most appropriate one to enhance SMEs' performance (Matzler et al. 2008; Visser et al., 2013).

By definition, transformational Leadership is a process where both leaders and followers engage together to raise motivation toward goal achievement (Bass, 2000). Leaders create a strategic vision, and consistently communicate it by "walking the talk" (Avolio et al., 2002). To sum up with, transformational managers grant employees the opportunity to develop themselves through proposing a dream and getting everyone actively involved and committed in the project and focused on delivering good quality products, on increasing profitability and high returns (Bass et al., 2003; Birasnav et al., 2013).

2. Technological capacity of SMEs

According to Al-Ansari et al. (2013), the totality of the organization's skills that are aimed at obtaining technical knowledge in order to improve business performance is defined as the technological capacity (TC) of the organization (Ceptureanu S.I. et al, 2015). According to Zahra (1996), it has been widely recognized in the academic literature but also in practice that the success of business firms present in a dynamically changing business environment is directly influenced by technological capacity. Consequently, in order to exploit or introduce new products, business firms use a series of technologies to improve a perpetual competitive position. Consequently, in almost all activities specific to economic fields, the effects of technology on the activities present in enterprises are intensely manipulated (Zahra, 1996). For this reason, in order to execute routine activities and processes in an efficient manner, many business firms are directly dependent on their own technological capacity, because it is a critical element that determines the improvement of the company's performance.

According to Adelowo et al. (2015), in order to increase international competitiveness, profit and turnover, increase production, limit production costs and improve the final product, companies develop specific programs to increase technological capabilities (Ceptureanu EG et al, 2018). According to Hitt et al.(1990), the audacity shown towards technological activities determines implicitly the position of the real competitive advantage of the company. In conclusion, many companies, in order to discover new technologies during the development processes of new products in order to meet customer expectations better than their competition (Hitt et al., 1990), are particularly receptive but and proactively aggressive about the necessary investments in research and development. In order to obtain better performance in terms of environmental challenges but also market requirements, the company's efficiency in the innovation modeling process is naturally increased by the capacity for technological innovation (Lestari et al., 2013). According to Ahmad et al. (2014), manufacturing companies are required to consider technological capacity as a priority because it is the most important component in terms of the ability of companies that categorically contribute to better performance. According to Chantanaphant et al. (2012), this will allow companies to improve their efficiency, reduce costs, encourage interorganizational collaboration, obtain but also develop new knowledge and update their processes and products.

According to Chesbrough (2003), in the theory of adequately open innovation, the role of external sources of knowledge regarding the influence of technological innovation has been highlighted. Organizations are able to obtain the key skills and knowledge needed to achieve innovation from different external sources (Alvarez et al., 2015). According to Chesbrough et al. (2006), organizations can engage in the process of open innovation in the following two ways: open entry innovation and open exit innovation. The internal transfer of technology, where organizations are forced to evaluate but also scan their operating environment with a vision needed to pragmatically identify technological supply knowledge and mix them in their knowledge base defines the process of open innovation (Alvarez et al., 2015). The transfer of external technology, in which organizations seek and identify external bodies that are superior in terms of the appropriate commercialization of the identified technology, characterizes the process of open innovation (Lichtenthaler et al., 2009).

In conclusion, the organization is required to exhibit a typical progressive behavior in the market to obtain knowledge from external partners in order to complete internal research and development activities because it must to consider first of all the consequences of the cumulative processes of knowledge, the multidimensional nature of the technologies as well as the short lifespan of the product (Chesbrough et al., 2006, Brunswicker et al., 2014).

3. Technological collaboration of SMEs

According to Tsasis (2009), the need to obtain mutual benefits achieved through a process of exchange of resources and information but also of effort

between companies, defines the technological collaboration. Achieving the company's objectives or solving technological problems is, if not impossible, difficult to achieve without maintaining that surface of technological collaboration (Snavely et al., 2002). According to Guo et al. (2005), achieving common goals, through the use of resources and joint efforts, is achieved through collaboration, which involves companies working together with various partners. Firms that are committed to collaborating with companies and suppliers are successful in implementing automated manufacturing technology (Burgess et al., 1997).

The competitive position and the company's performance depend primarily on the ability to share and acquire resources, knowledge and information to complement each other in sharing benefits and risks, creating business value and the extent and depth of collaboration initiated and established with other partners and not they depend directly and absolutely on the resources they have (Sambasivan et al., 2010). According to Ju et al. (2005), in technological industries, where rapid technological changes occur, high costs of product development but also increasing the complexity of the final product, collaboration becomes especially necessary. A certain positive impact both on the partnership and on the commercial performances of the companies is generated by the management style, the exploitation of opportunities but also by the technological collaboration for the benefit of establishing a mutual perspective in technology (Sompong et al., 2014). A common commitment is present in the production alliance, licensing agreement, technology transfer, development and research. According to Das et al. (2003), a technological network usually involves knowledge, experience, skills, information exchange and is created in most cases in enterprises in the higher value chain. In the high-tech industry in particular, business organizations, to improve the development life cycle and increase core competencies, have used all available sources of technological capacity thus gaining penetration and access in a new market and achieving a wider network of services (Rajasekar et al., 2009); competence in branding, retail and marketing are also important reasons to collaborate with partners (Wigley et al., 2011). Because the acquisition and access of partners' external capabilities largely depends largely on the composition of the firm's internal capabilities.

4. Technological capacity and technological collaboration of the company

According to Ju et al. (2005), a critical and tactical issue for the survival of organizations is the acquisition of external technologies through several inter-organizational relationships. According to Khamseh et al. (2008), access to learning and knowledge transfer is obtained through a process of collaboration between organizations. In conclusion, in an industry where firms differ in the structure of costs, minimizing the differentiation of these costs is due to a learning process (Das et al., 2003), and the secret of improving customer satisfaction and gaining a competitive advantage is in full agreement, with the ability of

organizations to develop a certain learning ability of the alliance (Taylor, 2005). According to Richey et al. (2009), there is an interdependent activity present in the existing learning process in the current business environment through which the client and supplier, employees and the employer relate and interact in order to acquire skills, excellent exploitation but also to identify the necessary opportunities in order to improve the performance.

A particularly important element in order to obtain the sustainable competitive advantage of a company is represented by the exploitation and acquisition of external knowledge (Bierly et al., 2009). Given these aspects, Taylor (2005) demonstrates that the openness and availability of partners present in the alliance for the exchange of knowledge and skills that ultimately lead to the absorption of better and newer knowledge from partners directly determines the success of the alliance collaboration (Ceptureanu S.I. et al, 2018). However, in an alliance, this is the function of institutionalizing commitment and trust (Wahyudi, 2015; Todeva et al., 2005). In this way, effective learning through problem solving is facilitated by the major factors influencing the success of the strategic alliance, represented by commitment and trust (Valdés-Llaneza et al., 2015). Social capital, interdependence agreement, coordination build the transfer of knowledge and trust between partners (Wahyudi, 2015).

According to Thorne et al. (2005), the collective goal but also the individual goal can be achieved through an efficient process of implementing an inter-organizational management of learning. In agreement with Ford et al. (2003), in order to obtain a greater flexibility, a higher quality of products but also a better customer satisfaction, the collective resources of the partners represent particularly adequate tools and access to crucial information from the market is allowed through the business alliance. In order to obtain an efficient marketing but also an efficient investment, the available resources are offered by the alliance (Ricciardi, 2014).

Therefore, in order to complete the knowledge, companies use inter-organizational relationships and specialize (Yang et al., 2015). Consequently, according to Thorne et al. (2005), a basis for gaining the competitive advantage is the efficient management of the interaction, by creating an interdependent environment. According to Taylor (2005), opportunities for innovation and the collective conception of value arise from prospective learning gained from successive and long-term interactions between organizations. Consequently, the performance of innovation is directly affected by the standardization capacity of the partners, the reputation and compatibility in the alliance but at the same time the capacity of autonomous innovation is particularly improved through an alliance with the appropriate partner.

The realization, sometimes, of technological innovation with applications on a wide range of products, which produce profit for all partners, takes place due to the skills of employees in the collaborative research and development project and the transfer of reserves of unique resources and patented knowledge by companies, with the help of strategic technological collaboration (Todeva et al., 2005). Consequently, in order to take advantage of the advantages of combining

the knowledge and skills of partners in order to obtain and develop new technological solutions, companies must develops in the relationship with the public research institutes a collaboration as efficient as possible in terms of development and research in order to sustain the competitive advantage but also of the innovation at a high level in the current environment characterized by rapid changes. According to Briggs (2015), companies can share with co-partners the risk of failure, reduce the burden of research and development costs to a minimum and thus increase the efficiency of the innovation process of participants through a partnership with other partners. In conclusion, the development of united innovative solutions can be achieved only through a collaboration regarding the development and collaboration process (Natalicchio et al., 2017; Ceptureanu EG et al., 2019b).

5. Product innovation performance and technological collaboration of SMEs

Commitment of efforts but also of technical resources (Abu Bakar et al., 2010), which are certainly not easily available in SMEs (Saunila et al., 2014) as well as in small and medium enterprises present in the economies of countries under development is necessary in order to innovate products, according to the existing literature. According to Shakeel et al. (2017), SMEs that are oriented towards innovation and technology are able to develop collaborations with all relevant bodies outside but also within their supply chain given that, in order to continuously develop new products, they cannot provide absolutely all the necessary capacities and resources. Companies, in order to achieve the successful innovation of a product, must transfer but also acquire skills, distinct resource reserves but also patented information, through a strategic technological collaboration (Todeva et al., 2005). In the complex process of innovation, an indisputable but essential factor is knowledge, therefore. Consequently, according to Huizingh (2011), external players represented by research institutions, competitors and suppliers, while exploiting beneficially the solutions developed by the company, provide technological solutions that can grow and develop company innovation.

In conclusion, according to Ryzhkova (2015), SMEs in different industries access all valuable sources of knowledge present and available outside their borders, due to the wide and particularly intense spread of knowledge present in their business environment. Obviously, the concept of open innovation conditions this development process (Chesbrough, 2003). In the process of using external and internal knowledge flows, different practices of the concept are present. If SMEs want to sustain their performance, promote and focus their competitiveness, collaboration, for stakeholders and companies, they must optimize and facilitate the development of distinct and new values because technological collaboration alone for the sake of the alliance is not enough. Bititci et al. (2004) and resources and skills obviously increase the performance of innovation but at the same time complement and optimize the capacity of the innovation company (Salisu et al., 2018).

6. Product innovation performance and technological capacity of SMEs

In the context of improving the company's performance in technologies affected by shorter product life cycles, intense global competition and rapidly changing, to generate the continuous flow of product innovation the role of technological capabilities is more important than ever (Löfsten, 2014). According to Gassmann et al. (2010), in terms of collaborative innovation, it is particularly important to develop a certain culture that values external know-how but also capabilities. In conclusion, managing the complexity of the product innovation process is a major concern of many company managers. In terms of resolving concerns regarding the management of the entire innovation process, technological capacity can be particularly important. This is able to allow companies to differentiate in terms of reaction in the context of a constantly changing marketing environment within an efficient innovation process (Lestari et al., 2013). In this context, according to Nerkar et al. (2004), for the development of the necessary complementary skills to facilitate the distribution and production of products, facilitating the process of combining and acquiring emerging knowledge in new and valuable products, an important strategic resource is represented of technological capacity. According to Chantanaphant et al. (2013), within the respective industries, companies can gain a sustainable competitive advantage with the help of an important and strategic resource represented by TC. In conclusion, product innovation achieved through superior differentiation as well as greater efficiency in terms of pioneering innovations take place within firms that are adequately able to meet the demand of rapidly and continuously changing markets and who developed superior CT (Tsai et al., 2012).

Figure 1 shows this proposed framework.

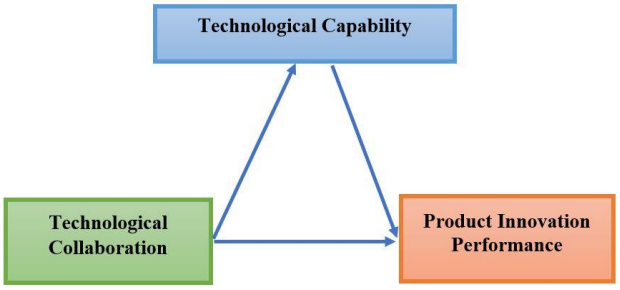

Figure 1: Research Framework Proposal

7. Conclusions

The present study has as objective directory the validation from a theoretical point of view, for the increase of the performance of the product innovation and the development of the technological capacity of the SMEs, of the significance of the technological collaboration. The potential significant relationship between the performance of product innovation, the technological capacity of the company but also the technological collaboration is confirmed by many critically analyzed studies. In conclusion, a much clearer understanding of the situation but also the revelation of the special importance of capacity and technological collaboration in the process of obtaining the competitive advantage and improving the performance of product innovation is ensured by the relationship between these variables in Figure 1.

7.1 Strategies for implementing innovation in small and medium enterprises

According to Xie et al. (2013), there is a lack of information regarding the innovation of SMEs in developing countries even given that many studies are available on the innovation process within these SMEs. The way in which innovation is used to increase organizational profitability or to improve organizational performance by SME managers has not been studied. Performance is enhanced by the efficient use of innovation potential. Even under these conditions, especially in SMEs, the expected results are not guaranteed and especially generated by an inefficient implementation of innovation (Norek, 2014). Globally, of the total number of active companies, SMEs represent approximately 90%, representing, globally and locally, a significant part of economies (Shrirame et al., 2015). In order to achieve the performance objectives within their companies, particularly useful guidelines that SME managers can use are generated by exploring and exploiting strategies for implementing successful innovation.

7.2 The role of SMEs in economic development

In both developing and developed countries, SMEs make a major contribution to the economy. SMEs are described as drivers of economic growth (Eniola et al. (2014)), the special role of SMEs (Mabhungu et al., 2017; Valaei et al., 2017). Worldwide, SMEs represent the majority of enterprises of the total number of enterprises in most countries (Shrirame et al., 2015) SMEs contribute between 50 and 60% of the national GDP of each country present in the Organization for Economic Cooperation and Development (Organization for Economic Cooperation and Development, 2017). Given the fact that SMEs are a strong contributor to the gross domestic product and represent, among enterprises, the largest population of companies, they are both job creators and majority employers. According to Çela et al. (2015), two out of three employees in the

European Union are present in SMEs. In conclusion, through the process of creating new jobs, SMEs present, in the context of reducing unemployment, poverty as well as improving living conditions, a particularly important role. Poverty reduction, unemployment reduction, the improvement of the general state of the economy as well as the creation of new jobs are primarily stimulated and determined by the development of innovation in a strong SME sector.

7.3 The role of SME managers in cultural change and innovation

Given its crucial contribution to improving competitive advantage, innovation management is a particularly critical area of study. In the opinion of Shafique and Kalyar (2018), employees can be stimulated to exceed what is required of them but also to innovate only by leaders with a very clear vision. More than anything else, innovation is about mentality and culture (Schiliro, 2015). The spirit of tolerance but also of risk innovation that must be present in SMEs must be promoted by their managers (Zhai et al., 2018). Innovation can be hindered or encouraged by the organizational culture that is in close contact with people (Naranjo-Valencia et al., 2016). In conclusion, in order to manage and encourage innovation, deliberate and special efforts should be made by SME managers. The corporate organizational culture, influenced by SME managers, has a particularly strong impact on the process of implementing innovation. As a matter of fact, SMEs that seek innovation are in an urgent need for leaders characterized by influential imagination and outstanding communication skills. The stronger the SMEs' leaders are, the greater the chances for the companies to involve themselves in the innovation process and become pioneers in their field.

7.4 The influence of top management in the development of an innovative culture

The failures of SMEs are attributed to a lack of focus on business but also to an absence of clarity of mission and vision manifested in SME managers (Nwosu et al., 2016). Approving flexibility, communicating the strategy to employees and defining an innovation strategy are encouraging elements regarding the implementation of innovation by managers (Wikhamn et al., 2018). Employees can be stimulated to achieve but also to exceed what is required of them and in this way to innovate by leaders with a very clear vision (Shafique et al., 2018). The pace of innovation is affected by a major factor such as organizational culture (Maher, 2014). Innovation can be hindered or encouraged by organizational culture related to behavior but also to people (Naranjo-Valencia et al., 2016). More than anything else, innovation is about mentality and culture (Schiliro, 2015; Ceptureanu EG et al., 2017). Poor implementation of innovation in SMEs is due to a certain cultural mismatch (Szymańska, 2016).

In order to be successful in implementing innovation, it is especially important for top management to cultivate an innovative corporate culture. With

open communication, employees can be encouraged by managers to implement and develop ideas (Sattayaraksa et al., 2018). By promoting collaboration, diversity and experimentation, according to Benbya et al. (2018), the culture of innovation could be encouraged by managers. Top management largely influences the corporate culture which is, for each organization, a unique feature (Szymańska, 2016). In conclusion, it is particularly difficult to copy corporate culture by another company. Moreover, that corporate culture that can promote innovation will have a special value for the company. Non-transferable resources support the competitive advantage and the competitive advantage is offered to the company by the most valuable resources.

References

1. Ahmad, N. Othman, S., & Mad Lazim, H., 2014. *A Review of Technological Capability and Performance Relationship in Manufacturing Companies*. In International Symposium on Technology Management and Emerging Technologies, pp. 193-198.
2. Al-Ansari, Y., Altalib, M., & Sardoh, M., 2019. *Technology Orientation, Innovation and Business Performance: A Study of Dubai SMEs*. International Technology Management Review, 3(1), pp. 1-11.
3. Aloini, D., Pellegrini, L., Lazzarotti, V., & Manzini, R. 2015. *Technological Strategy, Open Innovation and Innovation Performance: Evidences on the Basis of a Structural-equation-model Approach. Measuring Business Excellence*, 19(3), pp. 22-41.
4. Alvarez, H., & Iske, P., 2015. *Internal Capabilities and External Knowledge Sourcing for Product Innovation in LMT SMEs*. Journal of Innovation Management, 2, pp. 55-70.
5. Apulu, I., 2012. *Developing a framework for successful adoption and effective utilization of ICT by SMEs in developing countries: A case study of Nigeria*. University of Wolver Hamton.
6. Avolio, B., & Bass, B., 2002. *Developing Potential Across a Full Range of Leadership Styles: Cases on Transactional and Transformational Leadership*, Mahwah, NJ: Lawrence Erlbaum Associates.
7. Aworawo, D., 2011. *Costly Neglect: Technology, Industrialization and the Crisis of Development in Nigeria*. Journal of International Social Research, 4(17), pp. 99-107.
8. Bass, B. M., 2000. *The future of leadership in learning organizations*. Journal of Leadership Studies, 7, pp. 18-40.
9. Bass, B. M., Avolio, B. J., Jung, D. I., & Berson, Y., 2003. *Predicting unit performance by assessing transformational and transactional leadership.* Journal of Applied Psychology, pp. 88, 207.
10. Bierly, P., Damanpour, F., & Santoro, M., 2009. *The Application of External Knowledge: Organizational Conditions for Exploration and Exploitation*. Journal of Management Studies, 46(3), pp. 2022-2380.
11. Birasnav, M., Albufalasa, M., & Bader, Y., 2013. *The role of transformational leadership and knowledge management processes on predicting product and process innovation: An empirical study developed in Kingdom of Bahrain*. Tékhne, 11, pp. 64-75.

12. Bititci, U., Martinez, V., Albores, P., & Parung, J., 2004. *Creating and Managing Value in Collaborative Networks. International* Journal of Physical Distribution & Logistics Management, 34(3/4), pp. 251-268.
13. Briggs, K., 2015. *Co-owner Relationships Conducive to High Quality Joint Patents*. Research Policy, 44(8), pp. 1566-1573.
14. Brunswicker, S., Vanhaverbeke, W., 2014. *Open Innovation in Small and Medium-Sized Enterprises (SMEs): External Knowledge Sourcing Strategies and Internal Organizational Facilitators.* Journal of Small Business Management, 53(4), pp. 1241-1263.
15. Burgess, T., Gules, H. & Tekin, M., 1997. *Supply-chain Collaboration and Success in Technology Implementation*. Integrated Manufacturing Systems, 8(5), pp. 323-332.
16. Ceptureanu, E. & Ceptureanu S., 2019. *The impact of adoptive management innovations on medium sized enterprises from a dynamic capability perspective.* Technology Analysis & Strategic Management, DOI:10.1080/09537325.2019. 1587160.
17. Ceptureanu, E., Ceptureanu, S., Bologa, R., & Bologa, R., 2018. *Impact of competitive capabilities on sustainable manufacturing applications in Romanian SMEs from textile industry. Sustainability*, 10(4), pp. 942.
18. Ceptureanu, S., Ceptureanu, E., Bogdan, V., & Radulescu, V., 2018. *Sustainability perceptions in non-profit organizations: a dual empirical study using Success Factor Analysis.* Sustainability, 10(2), pp. 294.
19. Ceptureanu, S., Ceptureanu, E., & Visileanu, E., 2017. *Comparative analysis of small and medium enterprises organizational performance in clothing industry*. Industria Textila, 68(2), pp. 156-162.
20. Ceptureanu, E., Ceptureanu, S., & Herteliu, C., 2019. *Evidence regarding external financing in manufacturing MSEs using Partial Least Squares regression*. Annals of Operations Research, https://doi.org/10.1007/s10479-019-03291-2.
21. Ceptureanu, E., Radulescu, V., Marin, I., & Luchian, C.E., 2017. *Peculiarities of management and leadership styles in Small and Medium Enterprises from Romanian IT sector*. Economic Computation And Economic Cybernetics Studies and Research, 51(4), pp. 127-138.
22. Ceptureanu, S. &Ceptureanu, E., 2015. *Knowledge Management in Romanian Companies*, Quality-Access to Success, 16(145), pp. 61-66.
23. Chantanaphant, J., Nabi, M. & Dornberger, U., 2013. *The Effect of Technological Capability on the Performance of SMEs in Thailand.* The Macrotheme Review, 2(4), pp. 16-26.
24. Chantanaphant, J., Nabi, N., Dornberger, U., 2012. *Impact of Technological Capability on the Export Performance of SMEs in Thailand*, pp. 1-16.
25. Chesbrough, H., 2003. *The Logic of Open Innovation: Managing Intellectual Property.* Management Review, 45(3), pp. 33-58.
26. Chesbrough, H. & Crowther, A., 2006. *Beyond High-tech: Early Adopters of Open Innovation in other Industries.* R&D Management, 36(3), pp. 229-236.
27. Das, S., Sen, P., & Sengupta, S., 2003. *Strategic Alliances: A Valuable Way to Manage Intellectual Capital?* Journal of Intellectual Capital, 4(1), pp. 10-19.
28. Egbogah, E., 2012. *The Role of Science and Technology in National Development: The Miracle of Malaysia.* Petroleum Technology Development Journal, 1, pp. 1-12.
29. Fadol, Y. & Sandhu, M., 2013. *The Role of Trust on the Performance of Strategic Alliances in a Cross-cultural Context: A Study of the UAE.* Benchmarking: An International Journal, 20(1), pp. 106-128.

30. Gassmann, O., Enkel, E. & Chesbrough, H., 2010. *The Future of Open Innovation*. R&D Management, 40(3), pp. 213-221.
31. Glenn Richey, G. & Autry, C., 2009. *Assessing Interfirm Collaboration/Technology Investment Tradeoffs: The Effects of Technological Readiness and Organizational Learning.* The International Journal of Logistics Management, 20(1), pp. 30-56.
32. Guo, C. & Acar, M., 2005. *Understanding Collaboration among Nonprofit Organizations: Combining Resource Dependency, Institutional, and Network Perspectives*. Nonprofit and Voluntary Sector Quarterly, 34(3), pp. 340-361.
33. Hannah, S. T., Avolio, B. J., Luthans, F., & Harms, P. D., 2008. *Leadership efficacy: Review and future directions.* The Leadership Quarterly, 19, pp. 669-692.
34. Hashim, F., 2012. *Challenges for the internationalization of SMEs and the role of government: The case of Malaysia*. Journal of International Business and Economy, 13, pp. 97-122
35. Hitt, M. & Hoskisson, R., 1990. *Mergers and Acquisitions and Managerial Commitment to Innovation in M-Form Firms.* Strategic Management Journal, 11, pp. 29-47.
36. Huizingh, E., 2011. *Open Innovation: State of the Art and Future Perspectives*. Technovation, 31(1), pp. 2-9.
37. Ju, T., Chen, S., Li, C. & Lee, T., 2005. *Industrial Management & Data Systems A Strategic Contingency Model for Technology Alliance.* Industrial Management & Data Systems, 105(5), pp. 623-644.
38. Khamseh, H. & Jolly, D., 2008. *Knowledge Transfer in Alliances: Determinant Factors*. Journal of Knowledge Management, 12(1), pp. 37-50.
39. Lestari, E., Thoyib, A., Zain, D. & Santoso, I., 2013. *Innovation as a Mediating Variable of the Relationship between Technological Capability and Firm Performance: A Conceptual Approach*. International Journal of Business and Behavioral Sciences, 3(12), pp. 41-49.
40. Lichtenthaler, U. & Lichtenthaler, E., 2009. *A capability-based framework for open innovation: Complementing absorptive capacity*. Journal of Management Studies, 46(8), pp. 1315-1338.
41. Lofsten, H., 2014. *Product Innovation Processes and the Trade-off between Product Innovation Performance and Business Performance*. European Journal of Innovation Management, 17(1), pp. 61-84.
42. Madu, I., 1016. *Production Techniques and Technological Orientation on the Performance of Manufacturing Industries in Nigeria*. International Business and Management, 13(1), pp. 29-35.
43. Matzler, K., Schwarz, E., Deutinger, N., & Harms, R., 2008. *The relationship between transformational leadership, product innovation and performance in SMEs*. Journal of Small Business and Entrepreneurship, 21, pp. 139-151.
44. Natalicchio, A., Petruzzelli, A. & Garavelli, A., 2017. *The Impact of Partners' Technological Diversification in Joint Patenting: A Study on Firm-PRO Collaborations*. Management Decision, 55(6), pp. 1248-1264.
45. Pateli, A., 2009. *Decision Making on Governance of Strategic Technology Alliances.* Management Decision, 47(2), pp. 246-270.
46. Perez, L., Whitelock, J. & Florin, J., 2013. *Learning about Customers: Managing B2B Alliances between Small Technology Startups and Industry Leaders*. European Journal of Marketing, 47(3/4), pp. 431-462.
47. Pett, T. & Dibrell, C., 2001. *A Process Model of Global Strategic Alliance Formation*. Business Process Management Journal, 7(4), pp. 349-364.

48. Rajasekar, J. & Fouts, P., 2009. *Strategic Alliances as a Competitive Strategy: How Domestic Airlines use Alliances for Improving Performance*. International Journal of Commerce and Management, 19(2), pp. 93-114.
49. Ricciardi, F., 2014. *Innovation Processes in Business Networks: Managing Inter-Organizational Relationships for Innovational Excellence.* In Advance in Information Systems and Business Engineering, pp. 1-94.
50. Ryzhkova, N., 2015. *Does Online Collaboration with Customers Drive Innovation Performance?* Journal of Service Theory and Practice, 25(3), pp. 327-347.
51. Salisu, Y. & Abu Bakar, L., 2018. *Strategic Alliance and the Performance of SMEs in Developing Economies: The Mediating Role of Innovation Strategy*. Asian Journal of Multidisciplinary Studies, 6(2), pp. 47-56.
52. Sambasivan, M. & Yen, C., 2010. *Strategic Alliances in a Manufacturing Supply Chain: Influence of Organizational Culture from the Manufacturer's Perspective*. International Journal of Physical Distribution & Logistics Management, 40(6), pp. 456-474.
53. Saunila, M., Pekkola, S. & Ukk, J., 2014. *The Relationship between Innovation Capability and Performance: The Moderating Effect of Measurement*. International Journal of Productivity and Performance Management, 63(2), pp. 234-2490.
54. Shakeel, M., Kannan, V., Brah, S. & Hassan, S., 2017. *Linkages Between Firm Innovation Strategy, Suppliers, Product Innovation, and Business Performance: Insights from Resource Dependence Theory.* International Journal of Operations & Production Management, 37(8), pp. 1054-1075.
55. Snavely, K. & Tracy, M., 2002. *Development of Trust in Rural Nonprofit Collaborations*. Nonprofit and Voluntary Sector Quarterly, 31(1), pp. 62-83.
56. Sobanke, V., Ilori, M. & Adegbite, S., 2012. *Technological Capability in Metal Fabricating Firms in Southwestern Nigeria.* American Journal of Industrial and Business Management, 2, pp. 176-183.
57. Sompong, K., Igel, B. & Smith, H., 2014. *Strategic Alliance Motivation for Technology Commercialization and Product Development*. Management Research Review, 37(6), pp. 518-537.
58. Taylor, A., 2005. *An Operations Perspective on Strategic Alliance Success Factors: An Exploratory Study of Alliance Managers in the Software Industry*. International Journal of Operations & Production Management, 25(5), pp. 469-490.
59. Thorne, E. & Wright, G., 2005. *Developing Strategic Alliances in Management Learning*. Journal of European Industrial Training, 29(5), pp. 383-404.
60. Todeva, E. & Knoke, D., 2005. *Strategic Alliances and Models of Collaboration.* Management Decision, 43(1), pp. 123-148.
61. Tsai, K., Tsai, M. & Wang J., 2012. *Supplier Collaboration and New Product Performance: A Contingency Model*. Industrial Management & Data Systems, 112(2), pp. 268-289.
62. Tsasis, P., 2009. *The Social Processes of Interorganizational Collaboration and Conflict in Nonprofit Organizations*. Nonprofit Management & Leadership, 20(1), pp. 5-21.
63. Valdes-Llaneza, A. & Garcia-Canal, E., 2015. *The Devil you know? A Review of the Literature on the Impact of Prior ties on Strategic Alliances.* Management Research: The Journal of the Iberoamerican Academy of Management, 13(3), pp. 334-358.
64. Visser, V. A., Van Knippenberg, D., Van Kleef, G. A., & Wisse, B., 2013. *How leader displays of happiness and sadness influence follower performance: Emotional contagion and creative versus analytical performance.* The Leadership Quarterly, 24, pp. 172-188.

65. Wahyudi, I., 2015. *Realizing Knowledge Sharing in Strategic Alliance: Case in Islamic Microfinance*. Humanomics, 31(3), pp. 260-271.
66. Wigley, S. & Aikaterini, P., 2011. *Market-facing Strategic Alliances in the Fashion Sector.* Journal of Fashion Marketing and Management: An International Journal, 15(2), pp. 141-162.
67. Yang, Y, Ying, I. & Fagerlin, W., 2015. *Knowledge Creation and Application in Technology Collaboration Portfolio: Two Cases in China*. Consumer Culture Theory, pp. 367-399.
68. Zahra, S., 1996. *Technology Strategy and Financial performance: Examining the Moderating Role of the Firm's Competitive Environment.* Journal of Business Venturing, II, pp. 189-219.