**THE ESSENTIAL ROLE OF INNOVATION AND ITS DETERMINANT ON ENHANCES THE PERFORMANCE OF SMALL BUSINESSESS**

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**Abstract**

Small businesses have become the focus of economic development in developing countries all around the world. However, the support for these businesses has been relatively low. Consequently, the developments of these businesses were not optimal, and some even failed as their ability to absorb knowledge is lacking. This condition is largely due to the fact that many small businesses are still operated conventionally and with an informal information sharing. This study aims to investigates the essential role of innovation and its determinant on enhances performance. Using a sample of 195 workers from the woven textile small businesses, this study takes a quantitative design using the SEM-PLS as the data analysis. The findings showed that absorptive capacity and knowledge sharing are capable of stimulating innovation which in turn improves performance. Knowledge sharing is able to assist management in absorbing information from the external environment, which will be collaborated with internal resources and shared with the whole business line to create innovation. This research can be used as one for the considerations in the process of developing and empowering small businesses for supporting economic development.

**Keywords**: Knowledge Sharing, Absorptive Capacity, Innovation, Performance

**INTRODUCTION**

Today, 99% of the industry comprises small businesses which have made major contributions to the economic development of Indonesia, especially in terms of Gross Domestic Product (GDP). The woven textile industry is one of the small businesses that become the foundation of development in the global market era because of its uniqueness. The dominant creative industry which is a small and family business has proven to be relatively strong in facing the crisis so that it manages to survive (Hassen & Svensson, 2014). Entering the 4.0 industrial revolution, small businesses face various challenges, especially in innovating so they have not been able to perform well due to various resource constraints. Several research results explained that innovation can have a significant impact on employee and organizational performance (Bustinza et al., 2019; López-Nicolás & Meroño-Cerdán, 2011). Innovation is one of the requirements for an organization to survive and be better because it is adaptive to changes in environment so that the resulting output can be accepted by customers (Denning, 2005). Innovation can also reduce joint costs of intangible assets, such as sharing knowledge while increasing differentiation when entering the market (Porter, 2011).

Innovation is a company's mechanism to produce new products, processes, and systems in order to adapt to face competition in an ever-changing market (Wang and Noe, 2010). Innovation has become the main topic in organizations, it's just relatively difficult to realize so that organizations experience obstacles and difficulties in competing with others (Hort et al., 2012; Pratoom & Savatsomboon, 2012). At present, innovation has become an organization's need to improve its competitive position so that it can improve performance. Innovation has also been proven to be able to help organizations survive (Wang & Noe, 2010; Ikeda & Marshall, 2016) because they tend to be more creative and dynamic in the creation of knowledge and new skills to produce new products and processes (Esteve et al., 2012; Parthasarathy et al., 2011).

Innovation in the organizational only be realized when organizational stakeholders collaborate all internal capacity through share experiences, ideas, and information, (Standing & Kiniti, 2011; Nevalainen & Maijala 2012). Sharing information and experiences can make an important contribution in implementing collaboration of existing knowledge into creating new knowledge (Al-Kurdi et al., 2018; Aromaa et al., 2019) to improve innovation (Ismail & Yusof, 2009). Organizations that support and provide opportunities for employees to exchange knowledge can accelerate higher of innovation (Allameh, 2018; Shahin & Zahra, 2010). Schoolar, emphasized that knowledge sharing culture plays an important role in enhancing employees' knowledge, skills, and abilities in learning new things (Yang et al., 2019). Moreover, knowledge sharing can enhance the ability of employees to solve problems to find core competencies in entering business competition (Riana et al., 2019).

The creation of innovation needs adequate effort on learning capacity and higher ability to access and obtain knowledge from external sources (Mei & Nie, 2007; Rafique et al., 2018; Lau & Lo, 2019). Several studies claimed that knowledge sharing can improve ability of the organization's on absorb knowledge from external environment (Rafique et al., 2018; Gray, 2006). Innovation in small businesses can only be created when organizations have the capability to absorb knowledge from external sources (Riana et al., 2019). Moreover, Gray (2006) revealed that small businesses efforts are still considered relatively limited and less intensive to obtain and use external knowledge. Knowledge from external (Ruckstuhl et al., 2019) is essential sources to be collaborated with the organization's internal knowledge on generate new knowledge and ideas for supporting innovation creation. Collaborating between external and internal knowledge is a tough obstacle for small businesses due to limited resources (Mumford, 2000). However, the absorb of external information allows organizations to change more strenghthen face market dynamics (Zahra & George, 2002) because it allows to learn to do different things (Presutti et al., 2019; Lane et al., 2006). Furthermore, the absorption of knowledge from external environment help organizations share appropriate knowledge to internal stakeholders of the organization to support innovation activities (Rafique et al., 2018; Xie et al., 2018; Dávila et al., 2018).

Successful organizations always pay attention to investments in the field of knowledge management and technology. Knowledge sharing and absorptive capacity as part of knowledge management have an important role in increasing the ability of innovation so that it can run the innovation process more effectively to increase productivity (Crema et al., 2014; Kafetzopoulos & Psomas, 2015). Innovation has been proven to have an impact on producing quality products and superior performance (Lawson & Samson, 2001; Rosenbusch et al., 2011). This study aims to analyze the important role of innovation in improving performance. This study also analyzes the determinants of innovation in small businesses, namely knowledge sharing and absorptive capacity.

**LITERATURE REVIEW**

Srivastava & Gupta, (2007) revealed that the organization has focus on expanding its knowledge by collaborating internal knowledge with learning from other organizations to enhance knowledge. Knowledge is an organization's strategic resource that has characteristics that can be transferred so that it can be shared with all organizational stakeholders. Employees knowledge sharing is a basic means for to exchange knowledge contributed by application of knowledge and innovation to create competitive advantage (Wang & Noe, 2010). Knowledge sharing is to be a central process in knowledge management for improves innovation performance (Matzler & Mueller, 2011) so that small organizations are ideally able to manage knowledge even through informal processes. Small organizations are required to adopted external and synthesize owned knowledge, then apply on creating knowledge (Hutchinson, 2008). Desouza and Awazu (2006) affirmed that knowledge can be processed into information so that it can be used in accordance with the skills, experience, and organizations abilities. At the individual level, sharing of knowledge is done by providing information to help employees work better and faster, even more efficiently. Whereas at the organizational level, knowledge sharing is the ability to obtain, organize, reuse, and as well as transfer experience based on provide knowledge for organization members (Lin, 2007). A number of researcher (Ritala et al., 2018; Wang & Wang, 2012), stated that knowledge sharing has been proven to enhancing innovation and performance

Organizations must have adequate internal knowledge before assimilating new knowledge adopted and collaborated from external knowledge. Zahra and George (2002), clarified absorptive capacity covering the overall learning capacity to apply new knowledge, disseminate internally, and create new resources, including new technologies. Absorptive capacity is a set of routines and organizational processes so that they are able to acquire, assimilate, transform and exploit knowledge to enhance capacity of the organizational (Zahra and George, 2002), is seen as a function of organizational resources, such as tacit and explicit knowledge, routines, management competencies, and culture. Enhanching innovation requires learning capacity and the ability to access external knowledge (Mei & Nie, 2007; Tsai, 2001) because the resources of internal business knowledge are generally relatively limited. Therefore, absorptive capacity essensially so that organizations do different things to identify and exploit opportunities (Gray, 2006; Lane et al., 2006). Absorptive capacity can make organizations more easily create innovation so that it performs better (Presutti et al., 2019; Mehmood & Afzal, 2019).

Crossan and Apaydin (2010) stated that innovation is the novelty of adoption, assimilation, and exploitation ideas to provide value added, renewal, and expansion of products or services through developing new production methods and establishing new management systems. In addition, Lawson and Samson (2001) stated that innovation is a mechanism in organizations to produce new products, processes, and systems to adapt changing markets and competition. Rosenbusch et al. (2011) stated that innovation has enhanching performance when contribute more resources to process inputs through research and development (Zhang et al., 2019). Moreover, Kafetzopoulos and Psomas (2015) stated that innovation directly contributes to product quality and operational performance and increase organizational creativity. Furthermore, organizational creativity contributes to the creation of ideas to create innovative products (Carvalho & Roberto, 2012). The importance of knowledge sharing among employees can support the success of innovation (Urbancova, 2013). Knowledge sharing practices positively asscociated to speed quality of innovation and organizational performance impact (Wang & Wang, 2012). Scholar found that a significant influence between knowledge sharing and innovation ability when employees share and combine knowledge in organizations (Mathuramaytha, 2012). Seidler-de and Hartmann (2008) clarify that tacit knowledge plays an important role in all stages of the innovation process. Organizations that are considered creative tend to encourage the enrichment exchange of ideas throughout business functions and transform these ideas into innovation (Reychav et al., 2012).

The potential of absorptive capacity can increase the ability of absorptive capacity and innovative performance (Yaseen, 2019). Innovative performance requires the transformation and exploitation of knowledge possessed by the organization (Lawson & Samson, 2001). Tsai (2001) stated that organizations with a high level of absorptive capacity tend to utilize new knowledge from external sources to help innovative activities. Organizational units must to absorb input and produce output through access to external knowledge and internal learning capacity to improve innovation and performance. Investment in absorptive capacity enables organizations to effectively transform and exploit external knowledge. Lau and Lo (2019) stated that knowledge sharing affects absorptive capacity and innovative performance. Furthermore, absorptive capacity has intensify innovation activities (Gao et al., 2008) and performance (George et al., 2001; Tzokas et al., 2015: Kale et al., 2019). Organizations with high levels of absorptive capacity tend to utilize new knowledge to help innovative activities so that it affects the capacity of innovation (Liao et al., 2007). Gao et al. (2008) clarify that absorptive capacity has a intensify the creation of corporate innovation so that associated with opportunities to exploit new knowledge needed by organizations to create innovation.

As a result on the previous research argument, the following hypothesis (H) is proposed.

Hypothesis 1. Knowledge sharing is positive relationship with performance

Hypothesis 2. Absorptive capacity is positive relationship with performance

Hypothesis 3. Knowledge sharing is positive relationship with innovation

Hypothesis 4. Absorptive capacity is positive relationship with innovation

Hypothesis 5. Innovation is positive relationship with performance

**RESEARCH METHODOLOGY**

The population of this study was all small ikat weaving businesses registered at the Trade and Industry Office in Bali, namely 159 craftsmen spread across 8 (eight) regencies and city with 2,255 employees. The majority of small-scale weaving businesses are located in the Klungkung Regency, which consist of 55 craft industries (8 micro-businesses; 45 small businesses; 2 medium businesses) with a total number of 1,082 employees. The population of this study was determined to crafters in Klungkung by distributing 300 questionnaires distributed proportionally to 45 small woven industries. The questionnaire was prepared using a five-point Likert scale containing statements about the research variables. Knowledge sharing variable (X1) refers to the research indicators by (Giustiniano et al., 2016; Lin, 2007; Hussain et al., 2016) and two indicators were used, namely, knowledge collecting (X1.1) and knowledge donating (X1.2). Absorptive capacity variable (X2) refers to research conducted by (Zahra & George, 2002, Liao et al., 2007; Presutti et al., 2019) and we used four indicators, namely acquisition (X2.1), assimilation (X2.2), transformation (X2.3), and exploitation (X2.4). The innovation variable (Y1) refers to research by (Wang & Ahmed, 2004; Srivastava & Gupta, 2007) and three indicators were used, namely product innovation (Y1.1), process innovation (Y1.2), and management innovation (Y1.3). Furthermore, the performance variable (Y2) used two indicators, namely task performance (Y2.1) and contextual performance (Y2.2) adopted from the study of Koopmans et al (2014). The questionnaire was distributed directly to each address of the small business in the form of a questionnaire. The first step was checking after two weeks, in which 126 questionnaires were filled in completely. The second phase was to check again after three weeks and collected 69 completed questionnaires. After tabulating the data, 195 questionnaires were declared valid and ready to be analyzed using SEM-PLS.

**RESULTS AND ANALYSIS**

**Validity and reliability testing**

Before analyzed using SEM PLS, the validity and reliability test of the measuring instrument were conducted, which was a questionnaire. A validity test is intended to determine whether the measuring instrument used is absolutely right to measure the object being measured. While the reliability test aims to determine the reliability of the measuring instrument or, in other words, the measuring tool is consistent if used to measure the same object. Before data was collected as a whole, the instrument was tested using the instrument validity and reliability test. The test results showed the instrument was valid (r > 0.30) and reliable (Cronbach’s alpha value > 0.60) so that the instrument was declared to have met the validity and reliability requirements. Next, the validity and reliability of the model were tested to check the measurement model (outer model) and the structural model (inner model) as follows.

**Table 1. Average Variance Extracted (AVE)**

|  |  |  |  |
| --- | --- | --- | --- |
| Variable | AVE | $√$AVE | Correlation value between variables |
| KSh | ABCap | INOV | PERF |
| KSh | 0.769 | 0.877 | 1.000 |   |   |   |
| ABCap | 0.695 | 0,834 | 0.737 | 1.000 |   |   |
| INOV | 0.720 | 0,849 | 0.764 | 0.769 | 1.000 |   |
| PERF | 0.868 | 0,932 | 0.815 | 0.811 | 0.881 | 1.000 |

The measurement model test was carried out to measure the reflective model which was assessed using reliability and validity. The results of the analysis with SEM - PLS (Table 1) informs that the value of average variance extracted (AVE) of knowledge sharing, absorptive capacity, innovation, and performance variables is greater than 0.50. Hair et al. (2016) stated that the AVE value of at least 0.50 (> 0.50) illustrates adequate convergent validity. The results of the analysis (Table 1) show that the entire AVE values are greater than 0.50 which gives the meaning that the model meets the validity criteria of convergent. While discriminant validity is an additional concept to know a set of indicators that are combined are not unidimensional (Fornell - Larcker). Table 1 also informs that the square root values of the AVE ($√$AVE) of the study variables are greater than the correlation value (R-square / r2) between latent variables in the model so that the model has met the discriminant validity criteria. Furthermore, the analysis shows that the value of the outer loading indicator variable is above the cross-loading value between indicators. Thus, it can be concluded that the model has met the requirements of discriminant validity (Fornell - Larcker) and cross-loading values.

**Table 2. Outer loading indicator values**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables / indicators | original sample estimate | mean of subsamples | Standard deviation | T-Statistic |
| KSh |   |   |   |   |
| X11  | 0.898 | 0.895 | 0.035 | 25.347 |
| X12  | 0.914 | 0.915 | 0.021 | 44.401 |
| X13  | 0.816 | 0.828 | 0.036 | 22.968 |
| ABCap |   |   |   |   |
| X21  | 0.839 | 0.833 | 0.044 | 18.981 |
| X22  | 0.805 | 0.829 | 0.027 | 29.975 |
| X23  | 0.909 | 0.906 | 0.040 | 22.755 |
| X24  | 0.776 | 0.766 | 0.078 | 9.988 |
| INOV |   |   |   |   |
| Y11  | 0.912 | 0.897 | 0.035 | 26.153 |
| Y12  | 0.840 | 0.840 | 0.046 | 18.247 |
| Y13  | 0.789 | 0.809 | 0.025 | 31.621 |
| PERF |   |   |   |   |
| Y21  | 0.941 | 0.939 | 0.018 | 53.299 |
| Y22  | 0.921 | 0.913 | 0.039 | 23.790 |

Besides using AVE criteria (> 0.50), the validity of the convergent was also analyzed using the outer loading value (original sample estimate). The results of the analysis in Table 2 show the outer loading values ​​of all the research variable indicators are above the 0.50 value. This indicated that the model meets the convergence criteria. Next, Table 3 shows the composite reliability value of each variable. The value of composite reliability is often interpreted by the Cronbach’s Alpha value. If the composite reliability value is above than 0.70, then the model can be stated to have fulfilled the composite reliability criteria. The results of the analysis in Table 3 show that the composite reliability values are between the interval of 0.885 - 0.929 so that the model has met the composite reliability criteria. The testing of validity and reliability show all the criteria had been declared eligible so that the model was declared to be valid and reliable to be interpreted.

**Table 3. Composite reliability dan R-square**

|  |  |  |
| --- | --- | --- |
|  | Composite Reliability | R-square |
| KSh | 0.909 | - |
| ABCap | 0.901 | - |
| INOV | 0.885 | 0.677 |
| PERF | 0.929 | 0.843 |

Testing the structural model (inner model) showed evidence that the observed value has been reconstructed properly so that the model had predictive relevance. Testing the Goodness of Fit of the structural model in the inner model used the predictive-relevance (Q2) value based on the R2 value of each endogenous variable in the study (Table 3). Q-square (Q2) predictive relevance calculation results were obtained as follows

Q2 = 1 – (1 – R12) (1 – R22)

Q2 = 1 – (1 – 0.677) (1 – 0.843) = 1 – (0.323) (0.157)

Q2 = 0.9493 => (94.93 %)

The results show a predictive-relevance of 94.93% so that the model was feasible to be said to have relevant predictive value. These results inform that the model had a relative influence of 94.93 percent in observing endogenous variables (performance). Then, the SEM-PLS analysis results were displayed to test the proposed research hypotheses. Hypothesis testing results are shown in Figure 1 and Table 4 below.



**Figure 1. Results of SEM – PLS Analysis**

**Table 4. The results of the research hypothesis testing**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Path coefficient** | **mean of subsamples** | **Standard deviation** | **T-Statistic** | **Note** |
| KSh -> INOV | 0.432 | 0.422 | 0.103 | 4.190 | sig |
| ABCap -> INOV | 0.451 | 0.459 | 0.117 | 3.867 | sig |
| KSh -> PERF | 0.258 | 0.189 | 0.127 | 2.038 | sig |
| ABCap -> PERF | 0.232 | 0.226 | 0.105 | 2.198 | sig |
| INOV -> PERF | 0.505 | 0.570 | 0.185 | 2.734 | sig |

**The hypothesis testing**

The results of the analysis using SEM - PLS showed that all proposed hypotheses can be accepted. The influence of Knowledge sharing (KSh) on Innovation (INOV) shows a path coefficient of 0.432 with a t-statistic of 4.190 (> t-critical of 1.96), then the hypothesis of knowledge sharing (KSh) has a significant influence on innovation (INOV) can be accepted. The influence of absorptive capacity (ABCap) on innovation (INOV) obtained the value of the line coefficient of 0.451 with a t-statistic value of 3.867, greater than the t-critical value of 1.96 so that the ABCap has a significant effect on innovation (INOV) hypothesis can be accepted. The influence of Knowledge sharing on performance (PERF) obtained path coefficient value of 0.258 with a t-statistic of 2.038 (> t-critical of 1.96), then the knowledge sharing (KS) has a significant effect on performance hypothesis can be accepted. Meanwhile, the influence of absorptive capacity (ABCap) on performance (PERF) obtained a path coefficient of 0.232 with a t-statistic of 2.198 (> 1.96) which means that the hypothesis of absorptive capacity (ABCap) has a significant effect on performance can be accepted. Furthermore, the hypothesis stating innovation (INOV) has a significant influence on performance (PERF) is acceptable because the t-statistic value is 2.734 (> 1.96) with a path coefficient of 0.505. Based on these explanations, all the hypotheses of the direct influence proposed in the study are acceptable.

Besides analyzing the direct effect, this study also examines the indirect effect of knowledge sharing and absorptive capacity on performance through innovation. The indirect effect of knowledge sharing on performance through innovation using the variance accounted for – VAF test (Hair et al., 2016) obtained an indirect effect of 0.218 and a total effect of 0.4762, therefore obtained a VAF value of 45.80 percent, which means partial mediation. While the effect of absorptive capacity on performance through innovation obtained an indirect effect value of 0.2277 and a total affect of 0.4597 so that provided the VAF value of 49.54 percent. This means it mediates the variables partially. Thus, the direct effect of knowledge sharing and absorptive capacity on performance through innovation is partial mediation.

**DISCUSSION**

Knowledge sharing is a process of exchanging information, knowledge, and skills, including gathering as well as giving and receiving (Lin, 2007). Knowledge exchange within organizations using existing networks plays an important role in creating innovation. Small businesses generally store a variety of tacit knowledge, but it does not spread well due to knowledge sharing barriers. The findings of this study indicate knowledge sharing has an impact on the creation of innovation (Lau and Lo, 2019). The lack of cultural activities of sharing knowledge in small businesses can interfere with the creation of organizational innovation. In addition, the network for sharing knowledge in small businesses is more informal so employees feel they have not received sufficient information to support the creation of innovation. Seidler-de and Hartmann (2008) affirmed that organizational tacit knowledge plays an important role in the innovation process. Therefore, knowledge sharing can be used as a basis for innovation (Hadi et al., 2016; Al-Husseini & Elbeltagi, 2013). Creative organizations tend to encourage the free exchange of ideas in all business functions and transform these ideas into innovation (Reychav et al., 2012).

The findings of this study inform that knowledge sharing has a significant impact on performance. The knowledge and experience of the organization are very important to share because they can support the success of innovation to improve the quality of innovation and performance (Wang & Wang, 2012). Innovation can be created when employees combine all knowledge in the organization, and then shared between all the organizational lines (Mathuramaytha, 2012). Nearly all 21st-century organizations focus on making innovation one of the bases for improving performance. Innovation has been proven to help organizations grow and develop so that it becomes sustainable because it can maintain and even improve performance (Bustinza et al., 2019).

The results of this study also provide a strategic role for absorptive capacity to enhance innovation. Costa and Monteiro (2016) argued that the ability of organizations to recognize new values ​​from the external environment is very important to be assimilated to enhance innovative capabilities. Absorptive capacity greatly determines the ability of organizations to absorb new knowledge in the industrial environment. Organizations need to develop a thorough understanding of the knowledge they have and the process of converting knowledge to increase capacity according to environmental demands. Tsai (2001) stated organizations with a high level of absorptive capacity not only can help innovative activities but can also improve performance (Kale et al., 2019). The ability to access external knowledge and collaborate with internal capacity plays an important role in improving innovation and performance. Therefore, adequate investment is needed in absorptive capacity so that the organization can effectively exploit and transform external knowledge to improve organizational capability. Absorptive capacity influences the capacity of innovation (Liao et al., 2007) so that it significantly influences innovation (Gao et al., 2008).

These study also inform that innovation plays an important role in improving performance. Innovation can be understood as an effort to develop, produce, adopt, and implement new ideas to achieve organizational goals more effectively (Verbano et al., 2015). Innovation is a mechanism in organizations to produce new products, processes, and systems in order to adapt to changes in markets, technology, and competition (Lawson & Samson, 2001). Therefore, innovation is the novelty or adoption of production, assimilation, and exploitation to provide added value (Crossan & Apaydin, 2010). Organizations that are always innovating tend to operate more efficiently so that they perform better because they carry out renewal and expansion of products, services, and markets (Bustinza et al., 2019). The findings of this study inform that innovation is an important requirement for small businesses entering industrial revolution 4.0 to maintain performance and sustain. However, creating innovation requires the support of absorptive capacity and knowledge sharing (Riana et al., 2019) to improve the performance of small businesses.

**CONCLUSION**

Knowledge is perceived as increasingly important in modern society because it can change the paradigm of solving organizational problems (Nonaka, 1994). How organizations manage and process knowledge to create new knowledge is an issue that is still open for debate. Grant (1996) expected organizations to pay more attention to the ability to manage knowledge which can be equivalent to the management of other organizational resources. This study informs that knowledge sharing and absorptive capacity have important impacts on improving innovation and performance (Fazli et al., 2016). Furthermore, the innovations carried out by the organization have a strong impact on increasing performance. This research provides an important role in managing knowledge from external sources to help organizations innovate to produce superior performance. Also, organizations need to develop a more thorough understanding of the knowledge they have to be shared and the process of converting knowledge to increase capacity and competitiveness.

This research has limitations because it was only executed in small businesses. Meanwhile, the existing handicraft businesses are categorized into three, namely micro-businesses, small-scale businesses, and medium-scale businesses. The reason for using small businesses as the research target was because it has the largest number in industries and has the most employees and more knowledge base. Future researchers need to take research samples in three categories of existing businesses to be able to generalize the findings. In addition, future research is deemed necessary to explore knowledge sharing and absorptive capacity mechanism on supporting innovation in small businesses because it operates conventionally and interacts informally (Damanpour, 1991).

**REFERENCES**

Allameh, S. M. (2018). Antecedents and consequences of intellectual capital: The role of social capital, knowledge sharing and innovation. *Journal of Intellectual Capital*, 19(5), 858-874.

Al-Kurdi, O., El-Haddadeh, R., & Eldabi, T. (2018). Knowledge sharing in higher education institutions: a systematic review. *Journal of Enterprise Information Management*, 31(2), 226-246.

Al- Husseini, S. and Elbeltagi, I. (2013). Knowledge Sharing Practices as a Basis of Product Innovation: A Case of Higher Education in Iraq. *International Journal of Social Science and Humanity*. 5 (2), 182*-*85.

Aromaa, S., Tsourma, M., Zikos, S., Kaasinen, E., Kreposna, M., Drosou, A., & Tzovaras, D. (2019). User Experience of a Social Media Based Knowledge Sharing System in Usaha Work. In *International Conference on Human Interaction and Emerging Technologies* (pp. 117-123).

Bustinza, O. F., Gomes, E., Vendrell‐Herrero, F., & Baines, T. (2019). Product–service innovation and performance: the role of collaborative partnerships and R&D intensity. *R&D Management*, 49(1), 33-45.

Carvalho, A. D. P., & dos Reis, D. R. (2012). Creativity to Innovation in the APL of Information Technology in the Southwest Region of Paraná-PR. *International Journal of Organizational Innovation (Online)*, 4(3), 7- 23.

Crema, M., Verbano, C., & Venturini, K. (2014). Linking strategy with open innovation and performance in SMEs. *Measuring Business Excellence*, 18(2), 14-27.

Crossan, M. M., & Apaydin, M. (2010). A multi‐dimensional framework of organizational innovation: A systematic review of the literature. *Journal of management studies*, 47(6), 1154-1191.

Costa, V., & Monteiro, S. (2016). Knowledge processes, absorptive capacity and innovation: A mediation analysis. *Knowledge and Process Management*, 23(3), 207-218.

Damanpour, F. (1991). Organizational innovation: A meta-analysis of effects of determinants and moderators. *Academy of management journal*, 34(3), 555-590.

Dávila, G. A., Durst, S., & Varvakis, G. (2018). Knowledge absorptive capacity, innovation, and firm’s performance: insights from the South of Brazil. *International Journal of Innovation Management*, 22(02), 1850013.

Denning, Steve. (2005). Why the best and brightest approaches don’t solve the innovation dilemma. *Strategy and Leadership*. 33 (1), 4-11

Desouza, K. C., & Awazu, Y. (2006). Knowledge management at SMEs: five peculiarities. *Journal of knowledge management*. 16 (6), 879-903

Escribá‐Esteve, A., & Montoro‐Sánchez, Á. (2012). Guest editorial: creativity and innovation in the firm. *International Journal of Manpower*. 33 (4), 344-348

Esteve A.E., Sanchez A.M., (2012), Guest editorial: creativity and innovation in the firm Managerial antecedents and effects on employees, “International Journal of Manpower”, 33(4)

Fazli, H. S., Vazifehdoust, H., & Nikoumaram, H. (2016). The Effect of Knowledge Sharing On Organizational Innovation, Considering a Mediating Role of Organizational Learning.

Gao, S., Xu, K., & Yang, J. (2008). Managerial ties, absorptive capacity, and innovation. *Asia Pacific Journal of Management*, *25*(3), 395-412.

George, G., Zahra, S. A., Wheatley, K. K., & Khan, R. (2001). The effects of alliance portfolio characteristics and absorptive capacity on performance: A study of biotechnology firms. *The Journal of High Technology Management Research*, 12(2), 205-226.

Giustiniano, L., Lombardi, S., & Cavaliere, V. (2016). How knowledge collecting fosters organizational creativity*. Management Decision,* 54(6), 1464–1496

Gray, C. (2006). Absorptive capacity, knowledge management and innovation in entrepreneurial small firms. *International Journal of Entrepreneurial Behavior & Research*, 12(6), 345-360.

Grant, R. M. (1996). Toward a knowledge‐based theory of the firm. *Strategic management journal*, 17(Winter Special Issue), 109-122.

Hadi, S. F., Hosein H., Hashem, N. (2016) The Effect of Knowledge Sharing On Organizational Innovation, Considering a Mediating Role of Organizational Learning, International Journal of Business and Marketing, 1 – 11

Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications

Hassen, Y. A., & Svensson, A. (2014). The Role of E‐commerce for the Growth of Small Enterprises in Ethiopia. *The Electronic Journal of Information Systems in Developing Countries*, 65(1), 1-20.

Hort M.D., Vehar J., (2012), Becoming a Leader Who Fosters Innovation, Center for Creative Leadership, A White Paper.

Hussain, K., Konar, R., & Ali, F. (2016). Measuring service innovation performance through team culture and knowledge sharing behaviour in hotel services: a PLS approach. *Procedia-Social and Behavioral Sciences*, 224(15), 35-43.

Hutchinson, V., & Quintas, P. (2008). Do SMEs do knowledge management? Or simply manage what they know?. *International Small Business Journal*, 26(2), 131-154.

Ikeda, K., & Marshall, A. (2016). How successful organizations drive innovation. *Strategy & Leadership*, 44(3), 9-19.

Ismail, M. B., & Yusof, Z. M. (2009). Demographic factors and knowledge sharing quality among Malaysian government officers. *Communications of the IBIMA*, 9(1), 1-8.

Kafetzopoulos, D., & Psomas, E. (2015). The impact of innovation capability on the performance of manufacturing companies: The Greek case. *Journal of Manufacturing Technology Management*, 26(1), 104-130.

Kale, E., Aknar, A., & Başar, Ö. (2019). Absorptive capacity and firm performance: The mediating role of strategic agility. *International Journal of Hospitality Management*, 78, 276-283.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., De Vet, H. C., & Van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of occupational and environmental medicine*, 56(3), 331-337.

Lau, A. K., & Lo, W. (2019). Absorptive capacity, technological innovation capability and innovation performance: an empirical study in Hong Kong. *International Journal of Technology Management*, 80(1-2), 107-148.

Lane, P. J., Koka, B. R., & Pathak, S. (2006). The reification of absorptive capacity: A critical review and rejuvenation of the construct. *Academy of management review*, 31(4), 833-863.

Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International journal of innovation management*, *5*(03), 377-400.

Liao, S. H., Fei, W. C., & Chen, C. C. (2007). Knowledge sharing, absorptive capacity, and innovation capability: an empirical study of Taiwan's knowledge-intensive industries. *Journal of information science*, 33(3), 340-359.

Lin, H. F. (2007). Knowledge sharing and firm innovation capability: an empirical study. *International Journal of manpower*, 28(3/4), 315-332.

López-Nicolás, C., & Meroño-Cerdán, Á. L. (2011). Strategic knowledge management, innovation and performance. *International journal of information management*, 31(6), 502-509.

Mathuramaytha, C. (2012). Developing Knowledge-Sharing Capabilities Influence Innovation Capabilities in Organizations–a Theoretical Model. In *International Conference on Education and Management Innovation IPEDR,*  30. 285-291.

Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing–Examining the influence of learning and performance orientation. *Journal of Economic Psychology*, 32(3), 317-329.

Mehmood, K. K., & Afzal, M. A. (2019). Six Sigma and Absorptive Capacity Affecting Firm Innovation and Performance. *Pakistan Journal of Social Sciences (PJSS)*, 39(4), 1583-1597.

Mei, S. E., & Nie, M. (2007). Relationship between knowledge sharing, knowledge characteristics, absorptive capacity and innovation: An empirical study of Wuhan optoelectronic cluster. *The Business Review*, 7(2), 154-161.

Mumford, M. D. (2000). Managing creative people: Strategies and tactics for innovation. *Human resource management review*, 10(3), 313-351.

Mumford, M. D., Hunter, S. T., & Bedell-Avers, K. E. (Eds.). (2008). *Multi-level issues in creativity and innovation*. Emerald Group Publishing Limited.

Nevalainen, T., & Maijala, M. (2012). Creative management in TAMK Proacademy. *Development and Learning in Organizations: An International Journal*, 26(6), 17-19.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization science*, 5(1), 14-37.

Parthasarathy, Rangarajan; Huang, Chenglei and Ariss, Sonny*.* (2011)*.* Impact of Dynamic Capability on Innovation, Value Creation and Usaha Leadership *The IUP Journal of Knowledge Management*, 9(3).59- 73.

Porter, M. E. (2011). *Competitive advantage of nations: creating and sustaining superior performance*. Simon and Schuster..

Pratoom, Karun & Savatsomboon,Gomon. (2012). Explaining factors affecting individual innovation:The case of producer group members in Thailand. *Asia Pac J Manag*, 29, 1063–1087

Presutti, M., Boari, C., Majocchi, A., & Molina‐Morales, X. (2019). Distance to Customers, Absorptive Capacity, and Innovation in High‐Tech Firms: The Dark Face of Geographical Proximity. *Journal of Small Business Management*, 57(2), 343-361.

Rafique, M., Hameed, S., & Agha, M. H. (2018). Impact of knowledge sharing, learning adaptability and organizational commitment on absorptive capacity in pharmaceutical firms based in Pakistan. *Journal of Knowledge Management*, 22(1), 44-56.

Reychav, I., Stein, E. W., Weisberg, J., & Glezer, C. (2012). The role of knowledge sharing in raising the task innovativeness of systems analysts. *International Journal of Knowledge Management (IJKM)*, 8(2), 1-22.

Riana, I. G., Rihayana, I. G., Kumala Ratih, I. A. D. (2019). Creating Innovation Through Knowledge Sharing and Absorptive Capacity, Polish Journal of Management Studies. 19 (1), 338 – 352

Ritala, P., Husted, K., Olander, H., & Michailova, S. (2018). External knowledge sharing and radical innovation: the downsides of uncontrolled openness. *Journal of Knowledge Management*. 22(5), 1104-1123

Rosenbusch, N., Brinckmann, J., & Bausch, A. (2011). Is innovation always beneficial? A meta-analysis of the relationship between innovation and performance in SMEs. *Journal of business Venturing*, *26*(4), 441-457.

Ruckstuhl, K., Amoamo, M., Hart, N. H., Martin, W. J., Keegan, T. T., & Pollock, R. (2019). Research and development absorptive capacity: a Māori perspective. *Kōtuitui: New Zealand Journal of Social Sciences Online*, 14(1), 177-197.

Seidler-de, A.R. and Hartmann, E. (2008). The use of tacit knowledge within innovative companies: knowledgemanagement in innovative enterprises. *Journal of Knowledge Management*. 12 (1), 133-147.

Shahin, A & Zahra, Z. (2010). Developing a relationship Matrix for Organizational Learning and Innovativeness: With A Case Study in a Manufacturing Company. *International Journal of Business and Management*. 5 (.7)

Srivastava, A., & Gupta, R. K. (2007). Leveraging knowledge management for organizational innovation and creativity.

Standing, C., & Kiniti, S. (2011). How can organizations use wikis for innovation?. *Technovation*, 31(7), 287-295.

Tsai, W. (2001). Knowledge transfer in intra-organizational networks: Effects of network position and absorptive capacity on business innovation and performance. *The Academy of Management Journal*. 44 (5), 996-1004.

Tzokas, N., Kim, Y. A., Akbar, H., & Al-Dajani, H. (2015). Absorptive capacity and performance: The role of customer relationship and technological capabilities in high-tech SMEs. *Industrial Marketing Management*, 47, 134-142.

Urbancova, H. (2013). Competitive advantage achievement through innovation and knowledge. *Journal of competitiveness*, 5(1). 82-96.

Verbano, C., Crema, M., & Venturini, K. (2015). The Identification and Characterization of Open Innovation Profiles in Italian Small and Medium‐sized Enterprises. *Journal of Small Business Management*, 53(4), 1052-1075.

Wang, S., & Noe, R. A. (2010). Knowledge sharing: A review and directions for future research. *Human resource management review*, 20(2), 115-131.

Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European journal of innovation management*, 7(4), 303-313.

Wang, Z, & Wang, N. (2012). Knowledge sharing, innovation and firm performance. Expert Systems with Applications 39, 8899–8908.

Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS quarterly*, 29(1), 35-57.

Xie, X., Zou, H., & Qi, G. (2018). Knowledge absorptive capacity and innovation performance in high-tech companies: A multi-mediating analysis. *Journal of Business Research*, 88, 289-297.

Yang, J. T. (2007). The impact of knowledge sharing on organizational learning and effectiveness. *Journal of Knowledge Management*, 11(2), 83-90.

Yang, G., Wang, H., & Huang, J. (2019). A Model of Trust Knowledge Based on Trust Relationship and Knowledge Sharing. In *The International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery*, 147-153)

Yaseen, S. G. (2019). Potential Absorptive Capacity, Realized Absorptive Capacity and Innovation Performance. In *International Conference on Human Interaction and Emerging Technologies* (pp. 863-870).

Zahra, S. A., & George, G. (2002). Absorptive capacity: A review, reconceptualization, and extension. *Academy of management review*, 27(2), 185-203.

Zhang, J., Jiang, H., Wu, R., & Li, J. (2019). Reconciling the dilemma of knowledge sharing: a network pluralism framework of firms’ R&D alliance network and innovation performance. *Journal of Management*, 45(7), 2635-2665.