

# The Effect of Human Capital on Batik SMEs Innovation: The Mediating Role of Adaptive Creativity

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## ABSTRACT

The research aimed to examine the role of human capital and adaptive creativity in firm innovation. Using quantitative descriptive methods, the research analyzed 166 batik Small and Medium-Sized Enterprises (SMEs) in Surakarta and Yogyakarta. The sampling technique used was probability sampling methods. The questionnaire as the instrument was sent to the owners of batik SMEs by mail. The data analysis used Structural Equation Modeling (SEM). The results of hypothesis testing show that tacit knowledge and explicit knowledge influence adaptive creativity which affects firm innovation. Individuals who can adapt to tacit and explicit knowledge have good creativity. So, in the end, they can support innovations in the firm. The research findings also strengthen the mediating role of adaptive creativity in the influence of human capital and firm innovation.

**Keywords:** human capital, firm innovation, adaptive creativity

## INTRODUCTION

Small and Medium-Sized Enterprises (SMEs) need to have a strategy to adapt and prepare to face future economic changes. The changes occur not only at the global level but also the regional and local levels (Boniface & Groenewald, 2016; Distanont & Khongmalai, 2020; Huda, Munandar, & Syamsinirwani, 2018). SMEs' important role in economic development and the strength of competitiveness is very dependent on the performance of SMEs. It can be achieved through growth and profitability. SMEs' high performance is expected to improve the contribution of SMEs to the economy (Munoz, Welsh, Chan, & Raven, 2015; Nasuredin, Halipah, & Shamsudin, 2016).

Maintaining the excellent performance of SMEs is difficult because of the low quality of human resources. It is one of the obstacles that must be faced. Djampagau, Salim, Rofiaty, and Wijayanti (2018) and Hung, Cant, and Wiid (2016) stated that human resources were essential in SMEs. Then, Ardiana, Brahmayanti, and Subaedi (2010) suggested that entrepreneurial competence significantly influenced

the business performance of SMEs. However, the performance of SMEs faced some constraints, such as the lack of professionalism in the management of SMEs and the low quality of human resources. Therefore, the low quality of human resources affected the performance of SMEs and was one cause of business failure. Similarly, Alnachef and Alhajjar (2017) found that SMEs also felt a fluctuating economy. It caused human resources to be one of the important things to be used to face it. Reliable human resources enabled SMEs to enter the international market. Thus, SMEs had to prepare themselves to develop their human resources.

Human resources development works well if SMEs can manage knowledge. Knowledge must be managed so that it eventually becomes the firm's assets. Knowledge of entrepreneurs will bring success for the organization as it enhances the entrepreneur's ability to see opportunities and transfer these opportunities into economic value (Gunasekera & Chong, 2018; Pasban & Nojedeh, 2016; Sembiring, 2016; Zaky & Soliman, 2017). Knowledge is also a tool that will lead individuals to think creatively (Chefmecka, 2018; Mannucci & Yong, 2018; Zhavoronkova, Zavalko, &

Zhavoronkov, 2018).

Individuals can have high creativity due to the process of internalization and externalization of knowledge. The training and education as a process of internalization and externalization of knowledge foster creativity and attitude to accept the changes. Therefore, entrepreneurs are required to have adaptive creativity to compete and improve their business performance. Nawaz, Hassan, and Shaukat (2014) found out that when employees were given appropriate training according to work performed, they felt involved with the work. Thus, it resulted to their creativity.

Inadequate human capital in the performance of SMEs is a major problem. If human capital is developed into an important element, it can increase innovation in the firm. Similarly, if knowledge in the organization is properly managed and maintained, it will help the organization to develop products and services with creativity and innovation (Rambeli & Yunus, 2018). Human resources with knowledge will be an instrument for adaptive creativity to increase innovation. Adaptive creativity as an accelerator of the firm's innovation is the ability of entrepreneurs to generate new ideas or opportunities from the interaction with other people. It can also be from the process of adjustment to the environmental conditions (Doran & Ryan, 2017; Klimczuk-Kochańska, 2017; Smith & Webster, 2018)

According to Pasban and Nojehdeh (2016), human capital is intangible capital that can be in the form of knowledge, skills, and creativity. An individual can acquire knowledge and skills through education, training, and experience. In the era of globalization and modernization, knowledge as one element in human capital is an important aspect of human life. It is also not an exception in an organization.

Meanwhile, it is argued that the quality of an organization depends on how the organization uses its knowledge for organizational development (Mohajan, 2017). Then, organizational knowledge can be a strategy to improve services to customers, penetrate local and global markets, and minimize production costs (Gunjal, 2019). Therefore, organizations have to effectively manage knowledge to improve employees' skills and experience (Farooq, 2019; Valmohammadi, Sofiyabadi, & Kolahi, 2019). Knowledge, talent, creativity, skills, and abilities can be said to be very valuable resources and built through education and experience (McGuirk, Lenihan, & Hart, 2015; Pasban & Nojehdeh, 2016).

Almahamid, McAdams, and Kalaldehy (2010) found out that knowledge of the individual increased the individual adaptability. The adaptation was the ability or the skills of individuals to adapt to social conditions and the surrounding environment. Similarly, Karaevli and Hall (2006) agreed that a factor in determining individuals' success was their ability to adapt. Khalique, Nassir Shaari, Isa, and Ageel (2011) and Crook, Todd, Combs, Woehr, and Ketchen Jr (2011) stated that there were two kinds of knowledge, namely tacit knowledge and explicit knowledge.

Explicit knowledge was the knowledge that was easily stored so it could be exchanged in the form of text, computer output, and written or spoken word. Meanwhile, tacit knowledge was from individuals' experience that was difficult to be documented and formulated.

Creativity is a mental process that allows individuals to think of new ideas and beneficial opportunities (Bratnicka & Bratnicki, 2013). Competitive advantage is when the firm appreciates their tacit knowledge. It will be a source of great opportunities and the potential to generate creativity (Seidler-de Alwis & Hartmann, 2008). Tacit knowledge can shape the ability of innovation and creativity of individuals and organizations. It is because tacit knowledge can create efficiencies in decision-making, customer service, and accuracy of task performance (Mohajan, 2017; Rambeli & Yunus, 2018).

Amabile and Pratt (2016) stated that creativity could occur due to internal and external encouragement. Auger and Woodman (2016), Fischer, Malycha, and Schafmann (2019), Malik, Choi, and Butt (2019), and Rehman, Shahrukh, Virk, and Butt (2019) mentioned that the creativity of internal impulses occurred because the intrinsic motivation brought new ideas in an individual. Moreover, Semrád and Škrabal (2017), Sözbilir (2018), and Szobiová (2015) agreed that the creativity of external impulse arose because of the encouragement from the social environment around the individuals to think new opportunities. It showed that in improving their ability, not only entrepreneurs required creativity, but they also needed encouragement from external environment to produce creativity. Based on the understanding mentioned, the first hypothesis is as follows:

H<sub>1a</sub> : Tacit knowledge has a positive and significant effect on adaptive creativity

H<sub>1b</sub> : Explicit knowledge has a positive and significant effect on adaptive creativity

Innovation drives change for an organization. The organization must realize the important role of innovation. Then, the organization will be more responsive in adopting innovation and turn it into a competitive advantage (Distanont & Khongmalai, 2020; Dogan, 2017; Nuryakin, 2018; Pulgarín-Molina & Guerrero, 2017; Smit, 2015; Zhang, Khan, Lee, & Salik, 2019). Each firm must have the capability that can affect its presence in the dynamic market. The firm's innovation will cause the firm to survive and achieve superior performance. It will also drive the firm to produce and sell the expected product market. The desire of organizations to be more innovative in producing and providing services causes organizations to seek and collect information about innovations and experiments (Rao & Weintraub, 2013).

The characteristics of modern firms are inseparable from the existence of innovations.

It illustrates the dynamics of the firm in creating innovative products. Firms with high levels of innovation will influence their ability to generate competitive advantages and strengthen market position (Distanont & Khongmalai, 2020; Ershova, Yutkina, Pashkov, Ivanova, & Chistyakova, 2018).

Human capital is a skill, ability, and knowledge in an individual. Several researchers have mentioned that human resources are a driving force for innovation and competitive advantage (McGuirk *et al.*, 2015). Human capital as a driver of innovation will increase the competitive advantage of the firm. However, in developing countries, the level of education is not even, so the relationship between human resources and innovation is still weak (UNCTAD, 2014). Thus, the research of these two things is still very necessary.

According to Smit (2015), organizational adaptability is closely related to innovation. Organizations that are good at creating change, learning, and creativity are better in producing new ideas. They have the flexibility to turn the ideas into outcomes that can be disseminated outside the organization.

Anderson, Potočnik, and Zhou (2014) stated that innovation required individuals to monitor and change the individual's cognition or behavior to implement new ideas. Then, Richard, Lebeau, Becker, Inglis, and Tenenbaum (2018) suggested that the ability to adapt could be interpreted as a tendency for someone to solve problems faced in creative and innovative ways.

In short, individuals who will innovate must be able to adapt (Smith & Webster, 2018). Adaptability and innovation are integral and interrelated. It is suggested that creativity influences innovation (Doran & Ryan, 2017). The formation of ideas and creativity is fundamental to innovation. Therefore, the firm's owners and managers encourage, stimulate, and fund these activities (Saroghi, Libaers, & Burkemper, 2015; Zia & Shafiq, 2017). Adaptive creativity needs to be developed by entrepreneurs to maintain and enhance the innovation capabilities of SMEs. Based on the explanation, the second hypothesis is as follows:

$H_{2a}$  : Tacit knowledge has a positive and significant effect on firm innovation

$H_{2b}$  : Explicit knowledge has a positive and significant effect on firm innovation

$H_{2c}$  : Adaptive creativity has a positive and significant effect on firm innovation.

Then, the other researchers that support and are relevant to the research are presented in Table 1. The research is designed to study the problem of the low quality of human resources in SMEs related to innovation capability. Inadequate human capital to support the innovation of SMEs is a significant problem to be discussed. Thus, human capital will be developed into an important element that can promote innovation in SMEs. Knowledge embedded in human resources will be a tool for adaptive creativity to improve

innovation in SMEs. The conceptual framework in the research illustrates the tacit knowledge and explicit knowledge as a predictor variable. It can play a direct role in supporting adaptive creativity and innovation in the firm, as shown in Figure 1.

Table 1 The Supporting Research

Research	Result
Ardiana <i>et al.</i> (2010), Özer and Çam (2017), and Pasban and Nojedehe (2016)	The human capital that contains elements of knowledge will bring business success.
Almahamid <i>et al.</i> (2010), Mohajan (2017), and Özer and Çam (2017)	Knowledge of the individual will improve the ability of creativity and adaptation.
Da Silva Marinho <i>et al.</i> (2016), Doran and Ryan (2017), and Klimczuk-Kochańska (2017)	Creativity will generate ideas for new product innovation.
Koller and Ramón (2016), Smit (2015), Smith and Webster (2018), Do, Yeh, and Madsen (2016), and Muñoz-Pascual and Galende (2017)	Adaptability will encourage individuals' innovation in the organization to impact the success and survival of the firm.
Van Uden, Knobens, and Vermeulen (2014), Al Haraisa (2016), and Dostie (2018)	Human capital through various training will increase organizational innovation.

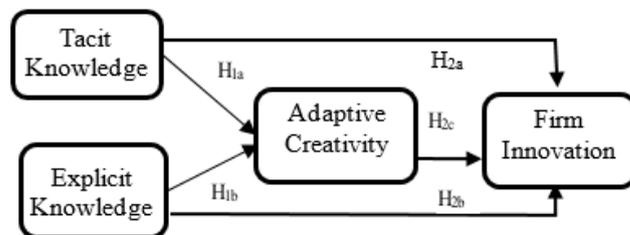


Figure 1 The Conceptual Framework and Development of Hypotheses in the Research

Tacit knowledge is individual knowledge in the form of actions and practices that are personal, so it is difficult to formulate, communicate, and share with others (Rahimi, Rostami, Shad, & Vafaei, 2017). Five indicators measure tacit knowledge by Dhanaraj, Lyles, Steensma, and Tihanyi (2004). Meanwhile, explicit knowledge can be articulated or codified in manuals, worksheets, drawings, graphs, or diagrams, so it is easy to transfer and share with others (Byukusenge & Munene, 2017). The explicit knowledge is measured by five indicators from Dhanaraj *et al.* (2004).

Then, adaptive creativity is the ability to generate new ideas or opportunities gained from interaction with other people and the process of adjustment to the

environmental conditions (Almahamid *et al.*, 2010). It is measured with five indicators by Almahamid *et al.* (2010). Next, firm innovation is a process of integrating or changing ideas in the development of new products, services, or systems. Thus, those can be accepted in the target market for the benefit of the firm and stakeholders (Kell & Lurie-Luke, 2015). It is measured by five indicators from Lin (2007).

Based on an understanding of the importance of human capital in a company, the research aims to examine the role of tacit knowledge and explicit knowledge of adaptive creativity, which can impact firm innovation later. The research proposes adaptive creativity and human capital to build innovation in the firm to maintain a sustainable competitive advantage. Another purpose of this research is to examine the role of adaptive creativity as a mediating variable in the relationship between human resources and innovation. Furthermore, the research is expected to benefit business owners, especially SMEs, to pay attention to tacit knowledge, explicit knowledge, and adaptive creativity, because these variables can be the foundation of firm innovation.

## METHODS

The research is conducted in batik SMEs in Yogyakarta and Surakarta in which those two regions signify the keraton classic characteristics. Besides, those are travel destination attended by foreign tourists. The local batik is often used as souvenirs. Therefore, batik SMEs are required to develop human capital and adaptive creativity to innovate in the market.

The research is a descriptive study with the quantitative method. The sampling technique applies probability sampling methods with 166 batik SMEs in Surakarta and Yogyakarta. The survey uses a questionnaire sent by mail to the batik SME owners. The SME owners give their perceptions on various indicators to measure latent variables.

Among 350 questionnaires which are distributed, there are 236 questionnaires are returned. However, only 166 questionnaires can be used for decision-making in hypotheses. It is because most of the questionnaires are not complete, and there are data on outliers. The response rate is 67,4% with 66% male and 34% female. High school graduates around 48% dominate the education level of respondents. Most of the revenue per year of batik SMEs in Surakarta and Yogyakarta is 600 million per year or 57%. The firm's age is between 10-15 years or 74%..

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## RESULTS AND DISCUSSIONS

Confirmatory factor analysis (CFA) is performed to test whether the indicator used has been accurate and consistent to draw the measured latent variables. The CFA estimates the validity and reliability of the latent constructs to be studied. Convergent validity is depicted by Average Variance Extracted (AVE) value of each construct obtained. Validity can be achieved if the AVE value is greater than 0,5. The results of data analysis in Table 2 show the AVE of all variables is greater than 0,5. So, it can be said that the indicators used as observed variables can explain the formed construct variables. Meanwhile, the reliability of the construct that shows the reliability value has a cut of the required value of greater than 0,7 (Hair Jr, Black, Babin, & Anderson, 2018). Table 2 shows the reliability value of the construct. The extracted variance value is greater than the required value in the validity and reliability testing.

Table 2 The Item and Construct Reliability

Indicator	Construct Reliability	AVE
Tacit knowledge	0,798	0,573
Explicit knowledge	0,740	0,501
Adaptive creativity	0,847	0,502
Firm innovation	0,798	0,505

The result of data analysis for the normality test shows that the skewness value of critical ratio and kurtosis below the significant value 1,96 (p-value = 0,05). Meanwhile, the amount of covariance matrix determinant is equal to 0,051. It indicates that there are no multicollinearity and singularity.

The fit model test shows all the index values have good model eligibility criteria. It means that research data can be used to support the proposed structural model. The result of model fit is the value of Chi-Square (115,76) with df (98), probability (0,106), GFI (0,911), CFI (0,985), AGFI (0,877), RMSEA (0,033), Cmin/df (1,680). In addition, the analysis presents that the value of Squared Multiple Correlations (SMC)

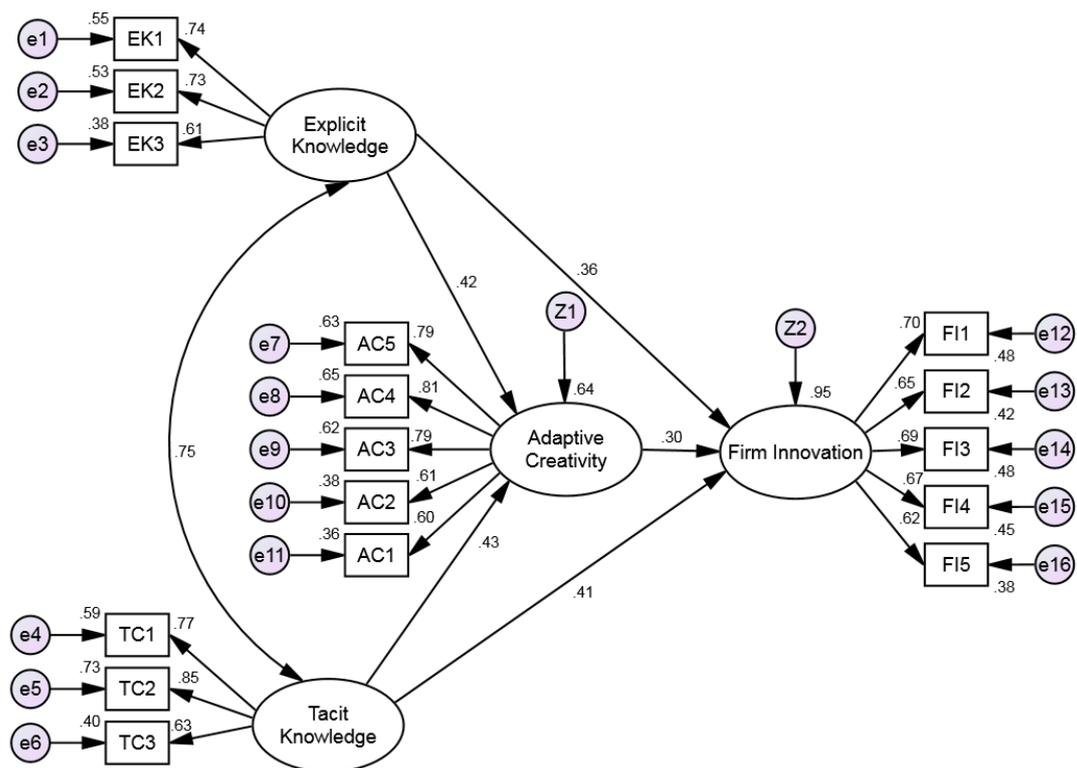


Figure 2 Final Research Model (P-Value < 0,05; TC: Tacit Knowledge; EK: Explicit Knowledge; AC: Adaptive Creativity; and FI: Firm Innovation)

Table 3 The Results of Hypothesis Test based on Standardized Path Coefficient

Path Analysis	Std. Estimate	Critical Ratio (p-value)	Results
Tacit knowledge → adaptive creative	0,432	3,201 (0,001)	Supported
Explicit knowledge → adaptive creative	0,421	2,996 (0,003)	Supported
Tacit knowledge → firm innovation	0,409	3,439 (0,000)	Supported
Explicit knowledge → firm innovation	0,356	2,824 (0,005)	Supported
Adaptive creative → firm innovation	0,303	2,695 (0,007)	Supported

of the firm innovation can be explained by explicit knowledge, tacit knowledge, and adaptive creativity by 0,95 or 95%. Meanwhile, the remaining 5% can be explained by other variables out of the three constructs (see Figure 2).

The Structural Equation Model (SEM) is used to analyze the data with the AMOS analysis tool. It produces Figure 2 by showing the coefficient of the research path. Meanwhile, in Table 2, it shows the critical value and p-value that can be used in the research hypotheses.

The result of SEM is in Table 3. The influence of tacit knowledge on adaptive creativity is  $\beta = 0,432$ ,  $CR = 3,201$ , and  $p < 0,05$ . Meanwhile, the effect of explicit knowledge to adaptive creativity is  $\beta = 0,421$ ,  $CR = 2,996$ , and  $p < 0,05$ .

Then, the influence of tacit knowledge and the firm innovation is  $\beta = 0,409$ ,  $CR = 3,439$ , and  $p < 0,05$ . For explicit knowledge and firm innovation, it is  $\beta (0,356)$ ,  $CR (2,824)$ , and  $p < 0,05$ . Last, for adaptive creativity and the firm innovation, it has  $\beta (0,303)$ ,  $CR (2,695)$ , and  $p < 0,05$ . Therefore, it can be concluded

that these relationships have positive and significant influence. It means the hypotheses ( $H_{1a}$ ,  $H_{1b}$ ,  $H_{2a}$ ,  $H_{2b}$ , and  $H_{2c}$ ) are accepted.

The result of the statistical test on  $H_{1a}$  shows the value of parameter estimation of tacit knowledge on adaptive creativity of 0,432. It is with the standard error of parameter estimation about 0,149 and a critical ratio value of 3,201 with p-value of 0,001. Those values are accepted since  $CR > 1,96$  is at a significance level of 0,05. It implies the significant influence of tacit knowledge on adaptive creativity. Thus,  $H_{1a}$  is accepted.

Furthermore, the statistical test of  $H_{1b}$  shows the value of explicit knowledge estimation parameter on adaptive creativity of 0,421. It is with a standard error parameter estimate of 0,188 and a critical ratio value of 2,954 with p-value of 0,003. These values have fulfilled the requirement that is  $CR > 1,96$  at a significance level of 0,05. Then, it shows that explicit knowledge has a significant effect on adaptive creativity. Therefore,  $H_{1b}$  is accepted.

The result of the statistical test on  $H_{2a}$  shows the value of parameter estimation of tacit knowledge to innovation firm about 0,409. It is with the standard error of parameter estimation of 0,083, and the critical ratio value of 3,439 with p-value of 0,000. It can be said that tacit knowledge has a significant effect on innovation firm, so  $H_{2a}$  is accepted.

In  $H_{2b}$ , it shows the value of explicit knowledge estimation parameter on the innovation capability of 0,356. It is with the standard error parameter estimate of 0,108 and the critical ratio value of 2,745 with the p-value of 0,006. Those values meet the requirement that the  $CR > 1,96$  at a significance level of 0,05.  $H_{2b}$  is accepted, so there is a significant influence explicit knowledge on the firm innovation.

Furthermore, the value of the adaptive creativity estimation parameter to the innovation capability is 0,303 with a standard error parameter estimate of 0,071 and a critical ratio of 2,690 with p-value of 0,007. These values have shown a significant influence between adaptive creativity and innovation capabilities. Thus,  $H_{2c}$  is accepted.

The results reveal that the human capital, which consists of tacit and explicit knowledge, has a positive influence on creativity adaptive. Human capital containing the elements of knowledge can bring business to success. The knowledge in individuals improves the ability of creativity and individual adaptation. It also enhances the capital or other resources used to maintain the firm's sustainable competitive advantage. The results are consistent with Almahamid *et al.* (2010), Ardiana *et al.* (2010), and Pasban and Nojedeh (2016).

Furthermore, it can be disclosed that the empirical findings show that tacit knowledge, explicit knowledge, and adaptive creativity have a positive impact on the performance of the firm's innovation. Adaptability will drive an entrepreneur to innovate.

Besides, creativity will also generate ideas to innovate new products. Knowledge is constructed through various training activities that can increase the innovation made by a firm. The result is in line with Van Uden *et al.* (2014). In the end, the research findings reinforce the mediating role of adaptive creativity on the influence of human capital and firm innovation.

## CONCLUSIONS

The idea of creativity is closely associated with entrepreneurs. Creativity is an initiative to produce a product that has economic value. For the entrepreneurs, creativity will smooth the innovation in the business and retain the position in the industry in the market. Innovation is the key to the success of a firm. In the batik industry, creativity is like a pulse or an important part of maintaining the sustainability of batik SMEs. Batik industry continues to experience good growth patterns.

The results of the research indicate that tacit knowledge, explicit knowledge, and adaptive creativity affect SME innovation. The research focuses on the role of human capital, including skills and knowledge as the basis of firm innovation. It can strengthen the relationship between the theory of human capital with the firm innovation. Moreover, individual knowledge increases the ability to understand, create, and process information faster so that it brings an innovative environment within the firm.

The results guide the owners of SMEs to pay significant attention to tacit knowledge, explicit knowledge, and adaptive creativity because these three things can be the foundation for SMEs to improve the capabilities of innovation. Tacit knowledge can be enhanced through various activities such as building ideas, perceptions, ways of thinking, insight, and expertise of a person. The owner of SMEs can train employees or even themselves always to do various activities that can improve the work experience. Then, the explicit knowledge can be developed by attending various training provided by professionals. Both of this knowledge will foster the spirit of adaptive creativity for SMEs that are very important for the foundation to build the firm innovation.

The practical implications of the research are aimed at batik SMEs. Its human capital must be better developed. So, it will have an impact on increasing adaptive creativity and firm innovation. It is because the batik industry is one of the creative industries that need adaptive creativity.

The limitations of the research include the difficulty of finding respondents who are willing to participate. The low response is because, in general, the respondents are less familiar with research activities and the density of their production activities. Finally, the researcher recommends that future researcher uses other human capital elements, such as training, to strengthen adaptive creativity.

## REFERENCES

- Al Haraisa, Y. E. (2016). The impact of human resource management practices on innovation performance: An empirical study on Jordanian private hospitals. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(4), 185-195.
- Almahamid, S., McAdams, A. C., & Kalaldehy, T. (2010). The relationships among organizational knowledge sharing practices, employees' learning commitments, employees' adaptability, and employees' job satisfaction: An empirical investigation of the listed manufacturing companies in Jordan. *Interdisciplinary Journal of Information, Knowledge & Management*, 5, 327-356.
- Alnacheif, T. H., & Alhajjar, A. A. (2017). Effect of human capital on organizational performance: A literature review. *International Journal of Science and Research (IJSR)*, 6(8), 2319-7064.
- Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations: Making progress, making meaning. *Research in Organizational Behavior*, 36, 157-183.
- Anderson, N., Potočník, K., & Zhou, J. (2014). Innovation and creativity in organizations: A state-of-the-science review, prospective commentary, and guiding framework. *Journal of Management*, 40(5), 1297-1333.
- Ardiana, I. D. K. R., Brahmayanti, I. A., & Subaedi, S. (2010). Kompetensi SDM UKM dan pengaruhnya terhadap kinerja UKM di Surabaya. *Jurnal Manajemen dan Kewirausahaan*, 12(1), 42-55.
- Auger, P., & Woodman, R. W. (2016). Creativity and intrinsic motivation: Exploring a complex relationship. *The Journal of Applied Behavioral Science*, 52(3), 342-366.
- Boniface, O., & Groenewald, D. (2016). SMEs' adaptability in the increasingly discontinuous business environment. *Journal of Emerging Trends in Economics and Management Sciences*, 7(4), 266-275.
- Bratnicka, K., & Bratnicki, M. (2013). Linking two dimensions of organizational creativity to firm performance: The mediating role of corporate entrepreneurship and the moderating role of environment. *Advances in Business-Related Scientific Research Journal*, 4(2), 153-163.
- Byukusenge, E., & Munene, J. C. (2017). Knowledge management and business performance: Does innovation matter? *Cogent Business & Management*, 4(1), 1-18.
- Chełmecka, A. (2018). Study the relationship between creativity and knowledge. *World Scientific News*, 92(2), 198-210.
- Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. (2011). Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. *Journal of Applied Psychology*, 96(3), 443.
- Da Silva Marinho, E., González, M. O. A., Galvão, M. S., De Araújo, A. C. C., Rosa, M. S. C., & Pereira, J. R. (2017). Relationship between creativity and product innovation: A literature review. *Product: Management & Development*, 14(1), 32-37.
- Dhanaraj, C., Lyles, M. A., Steensma, H. K., & Tihanyi, L. (2004). Managing tacit and explicit knowledge transfer in IJVs: The role of relational embeddedness and the impact on performance. *Journal of International Business Studies*, 35(5), 428-442.
- Distanont, A., & Khongmalai, O. (2020). The role of innovation in creating a competitive advantage. *Kasetsart Journal of Social Sciences*, 41(1), 15-21.
- Djampagau, H. R. D., Salim, U., Rofiaty, & Wijayanti, R. (2018). The relationship of human capital, innovation, and corporate performance (A study of small and medium rattan businesses in Palu City Central Sulawesi Province). In *The 2018 International Conference of Organizational Innovation, KnE Social Sciences* (pp. 453-463).
- Do, B. R., Yeh, P. W., & Madsen, J. (2016). Exploring the relationship among human resource flexibility, organizational innovation and adaptability culture. *Chinese Management Studies*, 10(4), 657-674.
- Dogan, E. (2017). A strategic approach to innovation. *Journal of Management Marketing and Logistics*, 4(3), 290-300.
- Doran, J., & Ryan, G. (2017). The role of stimulating employees' creativity and idea generation in encouraging innovation behaviour in Irish firms. *The Irish Journal of Management*, 36(1), 32-48.
- Dostie, B. (2018). The impact of training on innovation. *ILR Review*, 71(1), 64-87.
- Ershova, N., Yutkina, O., Pashkov, A., Ivanova, M., & Chistyakova, A. (2018). Influence of human capital on the level of innovation activity of an enterprise. In *MATEC Web of Conferences* (Vol. 239, p. 04011).
- Farooq, R. (2019). Developing a conceptual framework of knowledge management. *International Journal of Innovation Science*, 11(1), 139-160.
- Fischer, C., Malycha, C. P., & Schafmann, E. (2019). The influence of intrinsic motivation and synergistic extrinsic motivators on creativity and innovation. *Frontiers in Psychology*, 10, 1-15.
- Gunasekera, V. S., & Chong, S. C. (2018). Knowledge management critical success factors and project management performance outcomes in major construction organisations in Sri Lanka. *VINE Journal of Information and Knowledge Management Systems*, 48(4), 537-558.
- Gunjal, B. (2019). Knowledge management: Why do we need it for corporates. *Malaysian Journal of Library & Information Science*, 10(2), 37-50.
- Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate data analysis* (8<sup>th</sup> ed.). CENGAGE.
- Huda, N., Munandar, A., & Syamsinirwani, S. (2018). The effect of entrepreneurship competency and adaptability of business environment to financial performance of small and medium business units in Bima City. *Jurnal Terapan Manajemen dan Bisnis*,

- 4(2), 131-137.
- Hung, Y. T., Cant, M. C., & Wiid, J. A. (2016). The importance of human resources management for small businesses in South Africa. *Problems and Perspectives in Management*, 14(3-1), 232-238.
- Karaevli, A., & Hall, D. T. T. (2006). How career variety promotes the adaptability of managers: A theoretical model. *Journal of Vocational Behavior*, 69(3), 359-373.
- Kell, D. B., & Lurie-Luke, E. (2015). The virtue of innovation: Innovation through the lenses of biological evolution. *Journal of The Royal Society Interface*, 12(103), 1-15.
- Khalique, M., Nassir Shaari, J. A., Isa, A. H. B. M., & Ageel, A. (2011). Role of intellectual capital on the organizational performance of electrical and electronic SMEs in Pakistan. *International Journal of Business and Management*, 6(9), 253-257.
- Klimczuk-Kochańska, M. (2017). Importance of creativity of employees in adaptation of food companies to innovative trends in the world. *Human Resources Management & Ergonomics*, 11(1), 50-64.
- Koller, T., & Ramón, M. (2016). Exploring adaptability in organizations: Where adaptive advantage comes from and what it is based upon. *Journal of Organizational Change Management*, 29(6), 837-854.
- Lin, H. F. (2007). Knowledge sharing and firm innovation capability: An empirical study. *International Journal of Manpower*, 28(3/4), 315-332.
- Malik, M. A. R., Choi, J. N., & Butt, A. N. (2019). Distinct effects of intrinsic motivation and extrinsic rewards on radical and incremental creativity: The moderating role of goal orientations. *Journal of Organizational Behavior*, 40(9-10), 1013-1026.
- Mannucci, P. V., & Yong, K. (2018). The differential impact of knowledge depth and knowledge breadth on creativity over individual careers. *Academy of Management Journal*, 61(5), 1741-1763.
- McGuirk, H., Lenihan, H., & Hart, M. (2015). Measuring the impact of innovative human capital on small firms' propensity to innovate. *Research Policy*, 44(4), 965-976.
- Mohajan, H. (2017). Tacit knowledge for the development of organizations. *ABC Journal of Advanced Research*, 6(1), 17-24.
- Munoz, J. M., Welsh, D. H., Chan, S. H., & Raven, P. V. (2015). Microenterprises in Malaysia: A preliminary study of the factors for management success. *International Entrepreneurship and Management Journal*, 11(3), 673-694.
- Muñoz-Pascual, L., & Galende, J. (2017). The impact of knowledge and motivation management on creativity: Employees of innovative Spanish companies. *Employee Relations*, 39(5), 732-752.
- Nasuredin, J., Halipah, A., & Shamsudin, A. S. (2016). Entrepreneurial competency and SMEs performance in Malaysia: Dynamic capabilities as mediator. *International Journal of Research*, 3(14), 4759-4770.
- Nawaz, M. S., Hassan, M., & Shaukat, S. (2014). Impact of knowledge management practices on firm performance: Testing the mediation role of innovation in the manufacturing sector of Pakistan. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 8(1), 99-111.
- Nuryakin. (2018). Competitive advantage and product innovation: Key success of Batik SMEs marketing performance in Indonesia. *Academy of Strategic Management Journal*, 17(2), 1-17.
- Özer, G., & Çam, İ. (2017). The moderating effect of human capital on innovation capital and firm market value relationship: An application on BIST. *Uluslararası Yönetim İktisat ve İşletme Dergisi*, 13(5), 512-522.
- Pasban, M., & Nojede, S. H. (2016). A review of the role of human capital in the organization. *Procedia-Social and Behavioral Sciences*, 230, 249-253.
- Pulgarín-Molina, S. A., & Guerrero, N. A. (2017). Innovation and competitiveness: Organizational culture and business model. *Dimensión Empresarial*, 15(2), 15-25.
- Rahimi, E., Rostami, N., Shad, F., & Vafaei, V. (2017). The importance of knowledge management on innovation. *Applied Mathematics in Engineering, Management and Technology*, 5(1), 68-73.
- Rambeli, S. A., & Yunus, A. M. (2018). The knowledge management practices at PTAR in promoting creativity and innovation among staff. *International Journal of Academic Research in Business and Social Sciences*, 8(9), 364-374.
- Rao, J., & Weintraub, J. R. (2013). How innovative is your company's culture? *MIT Sloan Management Review*, 54(3), 29-37.
- Rehman, S., Shahrukh, H. M., Virk, A. M., & Butt, M. (2019). Pay for Performance (PFP) increasing creativity through intrinsic motivation. *International Journal of Research in Business and Social Science*, 8(2), 74-90.
- Richard, V., Lebeau, J. C., Becker, F., Inglis, E. R., & Tenenbaum, G. (2018). Do more creative people adapt better? An investigation into the association between creativity and adaptation. *Psychology of Sport and Exercise*, 38(September), 80-89.
- Saroghi, H., Libaers, D., & Burkemper, A. (2015). Examining the relationship between creativity and innovation: A meta-analysis of organizational, cultural, and environmental factors. *Journal of Business Venturing*, 30(5), 714-731.
- Seidler-de Alwis, R., & Hartmann, E. (2008). The use of tacit knowledge within innovative companies: Knowledge management in innovative enterprises. *Journal of Knowledge Management*, 12(1), 133-147.
- Sembiring, R. (2016). Impact of human resources' knowledge and skills on SMEs' in Medan City, Indonesia. *International Journal of Management, Economics and Social Sciences*, 5(3), 95-104.
- Semrád, J., & Škrabal, M. (2017). The influence of the social environment on the creative activities of secondary school students. *Littera Scripta*, 1, 117-130.
- Smit, J. (2015). The innovation value chain and adaptability of organizations. *Journal of International Technology and Information Management*, 24(3), 57-74.
- Smith, M. B., & Webster, B. D. (2018). Narcissus the

- innovator? The relationship between grandiose narcissism, innovation, and adaptability. *Personality and Individual Differences*, 121(January), 67-73.
- Sözbilir, F. (2018). The interaction between social capital, creativity and efficiency in organizations. *Thinking Skills and Creativity*, 27(March), 92-100.
- Szobiová, E. (2015). Creativity in organizational environment. *Acta Technologica Dubnicae*, 5(2), 69-79.
- UNCTAD. (2014). *World Investment Report 2014: Investing in the SDGs: An action plan*. Switzerland: United Nations Publication.
- Valmohammadi, C., Sofiyabadi, J., & Kolahi, B. (2019). How do knowledge management practices affect sustainable balanced performance? Mediating role of innovation practices. *Sustainability*, 11(18), 1-23.
- Van Uden, A., Knobens, J., & Vermeulen, P. (2014). *Human capital and innovation in developing countries: A firm level study*. Nijmegen Institute for Management Research.
- Zaky, A. H. M., & Soliman, M. (2017). The effect of knowledge management critical success factors on knowledge management effectiveness and performance: An empirical research in Egyptian banking sector. *The Business and Management Review*, 9(2), 201-211.
- Zhang, Y., Khan, U., Lee, S., & Salik, M. (2019). The influence of management innovation and technological innovation on organization performance. A mediating role of sustainability. *Sustainability*, 11(2), 1-21.
- Zhavoronkova, G., Zavaliko, K., & Zhavoronkov, V. (2018). Knowledge, creativity and innovation in knowledge society formation. *Machines. Technologies. Materials*, 12(9), 367-370.
- Zia, S., & Shafiq, M. (2017). Innovation and knowledge management: A literature review and research framework. *Journal of Quality and Technology Management*, 13(1), 99-116.