Journal of Entrepreneurship, Management, and Industry (JEMI) Vol 05, No. 04, (2022), pp. 281-300
DOI : 0.36782/jemi.v5i4.2403

The Impact of LINKS (Local and Indigenous Knowledge Systems) on Human Resources Innovation Capability Strategy and Business Performance of Food and Beverage MSMEs

Dwi Novanda Sari[1*], Muhammad Ainul Fahmi[2]

***Corresponding Author**
Padjadjaran University, Bandung, Indonesia
[1]dwi.novanda@unpad.ac.id
[2]muhammad.ainul.fahmi@unpad.ac.id

Sumbitted : 2023-01-10 | Reviewed : 2022-02-01 | Accepted : 2023-02-06

Abstract — The low innovation capability of a country is in line with the low innovation capabilities of economic institutions and organizations including MSMEs in it. For companies such as MSMEs, innovation has the power to build competitive advantages in sources of prosperity and economic growth. One of the factors driving the creation of an innovation climate in organizations is culture. Therefore, it is necessary to have a LINKS (Local and Indigenous Knowledge Systems) based approach which refers to the understanding, skills, culture, and philosophy developed by the community with a long history of interaction with the natural environment of the community itself. This paper aims to analyses the impact of LINKS on Human Resources Innovation Capability Strategy and Business Performance of Food and Beverage MSMEs. This research was conducted quantitatively using a survey method. Statistical analysis was used to examine the relationship between the variables, and this involved the application of the structural equation model (SEM) as well as Partial Least Square (PLS). This research shows that LINKS (Local Indigenous Knowledge System) indicators had a positive and significant effect on all factors of Innovation Capabilities. Therefore, this study shows that LINKS (Local and Indigenous Knowledge Systems) can encourage Human Resources Innovation Capability Strategy and has implications for increasing Innovation Activities and Innovation Performance to improve the Business Performance of food and beverage MSMEs in Jogjakarta.

Keywords : *LINKS, Innovation Capability, Human Resource, Business Performance, MSMEs.*

INTRODUCTION

Indonesia's global competitiveness ranking regressed in 2019. The *Global Competitiveness Index (GCI) Report* 2019 states that Indonesia's position fell by five places from 45th to 50th (Anonym, 2019a). Of the 12 pillars of assessment indicators, one of the indicators that is important to evaluate is innovation capability. In addition to Indonesia having entered the *Innovation Driven* stage, innovation capabilities play an important role in determining who can develop and be sustainable in the era of globalization, deregulation and the advancement of science and technology as it is today (Gunadi, 2017). Currently international competition is increasing, so that the national innovation capabilities of a country are the key to core competition and the key to sustainable development capabilities. Improving innovation capabilities and developing national innovation systems has gained worldwide focus and attention. The national innovation system refers to the network of innovations within a country that interacts between institutions, consisting of economic, scientific, and technological organizations to enhance innovation (Zheng, 2006) . National innovation capability can be broadly defined as the potential ability of a country to maintain innovation activities through the implementation of a national innovation system. Experts believe that

ISSN: 2620-777X

national innovation capabilities can be measured through various aspects such as human resources, knowledge creation, knowledge dissemination and innovative financing applications (Anonym, 2003).

The low innovation capability of a country is in line with the low innovation capabilities of economic institutions and organizations including MSMEs in it. For companies such as MSMEs, innovation has the power to build competitive advantages in sources of prosperity and economic growth (Belitz et al, 2008). Based on the research of Natario et al. (2011), the evaluation of national innovation capabilities, including the analysis of the innovation capabilities of MSMEs, obtained an overview that the organization is efficient, the national cultural dimension, infrastructure training and financial resources, system interaction and entrepreneurship, each of which has a positive effect on innovation capabilities. The research presents some limitations in understanding the micro-mechanisms that make innovation, so it is necessary to conduct a more detailed analysis using micro-level variables to measure the real competitiveness of companies based on their innovation capabilities that affect national innovation capabilities.

Strengthening the competitiveness of Micro, Small and Medium Enterprises (MSMEs) is one of the goals of the Indonesian nation as mandated in the preamble to the constitution of the Republic of Indonesia, namely, to advance social welfare. The urgency of strengthening the competitiveness of MSMEs in Indonesia is very important in the era of global competition in line with the National Medium-Term Development Plan 2020-2024. In 2025, Indonesia is expected to experience an increase in science and technology capabilities, creation, and innovation capabilities. Another goal is that Indonesia can become *Research Powerhouse* which produces a variety of highly competitive and development-oriented R&D products and increases access to MSMEs that apply environmentally friendly technology and innovation to encourage productive business in the community (Anonym, 2019b).

MSMEs need more attention because MSMEs have an important and strategic role in national economic development. MSMEs as the main players in economic activities with a dominant population of business actors reaching 99% or 65 million units. The contribution of MSMEs in Indonesia reaches 59.8% of the total national income and the largest provider of employment up to 117 million people with a percentage of 97%. Not only that, MSMEs also have the potential to be a source of innovation and creators of new markets. Especially in Food and Beverage MSMEs, MSMEs in this sector experience growth every year. Of the 21% of the industry's contribution to GDP, the processing industry, including food and beverage MSMEs in it, was able to contribute 10.59%. Food and beverage MSMEs have high flexibility when compared to other sectors or businesses with a larger capacity to carry out innovation activities, so it needs special attention supported by accurate information, so that there is a directed business link between MSME actors and elements of business competitiveness (Anonym, 2015).

Currently, the typical obstacles faced by MSMEs are the low capability of innovation and the adoption of the resulting product technology (Tambunan, 2008). This can happen because of the wrong strategy for developing MSMEs in Indonesia so far which ultimately makes the performance of Indonesian MSMEs lag behind MSMEs in other countries. So far, MSMEs in Indonesia, especially food and beverage MSMEs, re considered important only because they absorb a lot of labor are considered important only because they absorb a lot of labor, not because they can potentially become a source of innovation as well as food and beverage MSMEs in developed countries (Tricahyadinata, 2013).

This needs special attention, because the development of science and technology and innovation capabilities is the source of the formation of an innovation climate which is the basis for the growth of human resource creativity (HR), which can increase innovation capabilities, then in turn can become a source of economic growth and competitiveness (Darwanto et al., 2018). According to Zhu *et al.* (2001) The development of innovation capabilities in product development is essential to create a competitive advantage, in addition to responding to changing consumer needs and the movements of its competitors. Similarly, according to (Sulistyo and Siyamtinah, 2016), an increase in the number of new products and new process technologies needs to be carried out, apart from the fact that the product life cycle and product model are getting shorter and shorter, the company must increase new product development projects that are larger than before, and more efficient use of resources on each project.

Innovation is a key factor in the competition. Product innovation is one of the keys to help MSMEs become more competitive and as a successful application of creative ideas in the company. MSMEs are required to be able to create new assessments and new ideas. The fear of MSMEs in implementing product innovation is the amount of costs that must be invested, but it does not actually have to start from the sophisticated and large cost, more importantly it is institutionalized, consistent and sustainable. Innovation itself is more studied in the context of large companies, often overlooked in small companies. Innovation is the key to increasing productivity through the process of developing and creating new, higher value, products, and services (Serrano García and Robledo Velásquez, 2013). Innovation not only produces quality products, but also produces new products that keep up with changes and market tastes that continue to grow.

ISSN: 2620-777X

Currently, one of the ways that the state is doing in achieving the goal of increasing innovation capabilities by advancing science and technology by upholding religious values and national unity. This is stated in the Law of the Republic of Indonesia No. 11 concerning the National System of Science and Technology Part Five on Invention and Innovation. In Article 34 Paragraph 1, it is stated that the central government and local governments are obliged to develop inventions and innovations. The invention and innovation in question, aimed at becoming a national problem, combines technical, functional, business, socio-cultural and aesthetic perspectives and produces added value from products and or production processes for the welfare of society. Furthermore, in paragraph 2 the inventions and innovations referred to in paragraph 1 are produced from basic, applied and development research; technologists; reverse engineering; technology intermediation; diffusion of Science and Technology; commercialization of technology.

Scientific and technological innovations have become a determining factor for economic growth. Both are key elements that promote the core competitiveness of the company, and the foundation of a country or region to maintain sustainable, rapid, and healthy economic development (Shan, 2017). One of the factors driving the creation of an innovation climate in organizations is culture. The role of culture in encouraging organizational innovation is manifested from the characteristics of adaptive culture and innovation culture. One of the characteristics of culture according to Robbins (2007) is the courage to innovate and take risks that can be measured by the extent to which the organization motivates employees to actively innovate and stimulates employees to dare to take risks. Without the courage to take risks, innovations in organizations are difficult to emerge. In the context of innovative culture according to Khedhaouria, A. and Thurik, R. (2017) is a multidimensional concept that includes the intention to be innovative, the infrastructure to support innovation, the organizational behavior necessary to influence the market and the profit (value) orientation and environment that supports the implementation of innovation.

A country that invests in creating an enabling environment for its human capital to operate at optimum usually receives yields by way of highly innovative products and services. At the foundation of innovation and invention is knowledge— local and indegineous knowledge of the environment within which the end product will be utilized (Maria, C.T, 2009), need to be improve start from MSMEs sector because MSMEs have an important and strategic role in national economic development. MSMEs as the main players in economic activities with a dominant population of business actors reaching 99% or 65 million units. Therefore, it is necessary to have a *LINKS (Local and Indigenous Knowledge Systems)* based approach which refers to the understanding, skills, culture, and philosophy developed by the community with a long history of interaction with the natural environment of the MSMEs.

This paper aims to analyses the impact of LINKS on Human Resources Innovation Capability Strategy and Business Performance of Food and Beverage MSMEs. It is hoped that it can be a solution in designing a strategy for developing HR innovation capabilities that will have direct implications for effective product and technology innovation and increase the competitiveness of food and beverage MSMEs. In addition, innovation and technology capabilities are multi-part of the organic capability system, so a *multi-faceted, multi-angle, multi-level* evaluation system must be built to obtain a strategy in increasing the expected innovation capabilities.

LITERATURE REVIEW

MSMEs (Micro, Small, and Medium Enterprises)

According to SMEs and Entrepreneurship OECD (2019), SME stands for Small and medium-sized enterprises (SMEs) or small and medium-sized businesses (SMBs) are business whose personnel numbers fall below certain limits. Actually the SME sector plays an extremely important part in modern economy, proving to be the most attractive and tremendous innovative system. The number of employees in SMEs vary from industry to industry.

MSMEs have characteristics based on the aspects of commodities produced (Indonesian Banking Development Institute 2015):

1. Quality is not standard, MSMEs do not have adequate technology which causes the products produced to have diverse quality standards.
2. Limited product design, MSMEs work on orders, not many have made creations on their product designs.
3. Limited product types, MSMEs produce certain products that do not have much variety.
4. Raw materials are less standardized, MSMEs obtain raw materials from different sources.
5. Product continuity is less guaranteed; production is not regular, and the products produced still do not have certain standards.

   As for the assets and turnover owned, MSMEs are divided into four categories. Table 2.1 shows the categories of MSMEs according to the Indonesian Banking Development Institute (2015).

ISSN: 2620-777X

Table 1: MSME Criteria Based on Assets and Turnover

Business Size	Assets	Turnover
Micro Enterprises	maximum IDR50 million	maximum IDR300 million
Small Enterprises	> IDR 50 million – IDR 500 million	> IDR 300 million – IDR 2.5 billion
Medium Enterprises	> IDR 500 million – IDR 10 billion	> IDR 2.5 billion – IDR 50 billion
Big Enterprises	> IDR 10 billion	> IDR 50 billion

In its implementation, MSMEs are divided into several types. This type serves to be able to divide MSMEs so that it is easy if they receive a business license from the government so that they can be categorized according to the field of process or product being worked on. One type of MSME is the Processing Industry which includes Food and Beverage MSMEs. This Food and beverage MSME are a business engaged in all kinds of food and beverage fields. This MSME is categorized as a non-agricultural MSME whose number of business actors is ranked 3rd highest in the national economy, namely 16.9% (Anonym, 2016).

The processing industry sector is one of the drivers of a country's economy. Of the industry's 21% contribution to GDP, the processing industry was able to contribute 10.59%. Then in terms of employment, the processing industry sector, including the food and beverage industry, can contribute 6.41%. Thus, the food and beverage industry remain able to grow significantly. The things that need to be considered from the processing industry business include business locations, permits, associations of industrial business actors, waste treatment facilities, product standardization, customized production properties or not, ownership status of business locations, technology and equipment used, potential human resources, business orientation and competitors (Anonym, 2015).

Innovation Capabilities

Neely et al. (2001) defines innovation capability as the potential of an organization to generate innovation by implementing all available facilities within the organization. Meanwhile, the definition of innovation capability according to Lawson and Samson (2001) focuses on seven constructions related to innovation capability that allow the potential generation of an organization to develop systematic activities related to innovation in the organization. This definition is relatively clear from the previous one, since it separately describes all the constructions that are important to develop in innovation capabilities. It provides answers about how innovation capabilities should be generated and to know about the possible outcomes of the entire innovation capability development process. Innovation capabilities have been conceptualized based on elements identified from the literature and broadly reconciled based on basic similarities in perceptions of innovation capabilities that can be seen in Table 2.

Table 2: Recapitulation of Innovation Capability Definition

Author and Year	Definition
Lawson and Samson (2001)	It is the ability to continuously transform knowledge and ideas into new products, processes, and systems for the benefit of the company and its stakeholders *(stakeholders).*
Neely et al. (2001)	It is a potential of the organization to produce innovation.
Yliherva (2004)	*Intangible property* of the organization and the ability to exploit such *intangible property* in such a way that can help in generating innovation

ISSN: 2620-777X

Assink (2006)	*Disruptive* innovation capabilities have been defined as the power to develop and explore radical new ideas and concepts and transform it into a profitable and effective innovation with the help of internal as well as external competencies of resources.
Akman and Yilmaz (2008)	Innovation capability is defined as a crucial element that facilitates the culture of an organization, the peculiarities of *in-house* promotional activities and the ability to understand and respond appropriately to the external environment.
Olsson et al. (2010)	Innovation capability is the ability of an organization to continuously produce innovation in response to a dynamic environment.
Saunila and Ukko (2012)	Innovation capability consists of three important things: innovation potential, innovation process and innovation activity results.

Innovation Capability is a company's ability to use or implement a new idea, process, or product successfully (Halit, 2006). To encourage innovation, several resources such as capital, human resources, technology, and research and development (R&D) are needed and external factors such as marketing orientation. From the internal side of the company (corporate resource), these factors are in fact a common problem in Indonesian MSMEs as stated by Tambunan (2012: 51) which identifies the main problems in Indonesian SMEs including working capital and investment, problems in marketing, distribution and procurement of raw materials and inputs.

A modified conceptualization of the Kanter (1989) model can be seen in Figure 1. This conceptualization is used to describe the capabilities of innovation. Companies do not see innovation simply as a user of scarce resources for uncertain results, but rather as a mechanism for creating new knowledge and competitive advantage. They recognize that business unit making a profit today may not represent the best opportunity for tomorrow's business. Therefore, mainstream factors and innovations (mainstream factors) managed in a unified manner so that the two work in harmony. Mainstream operational activities are converting raw materials into products that are sent to customers. When a customer pays, from the company's side, the money covers the cost of the sale; The rest make a profit or are invested in other parts of the business. As time goes by, the mainstream's ability to meet customer demand will decline as competition increases and product lines age. This will continuously reduce the product life cycle. Short cycle time, affecting the position of the product as product leader in the market can be lost in a short time. Hence the mainstream will invest for new stream innovation aimed at creating new products, markets, technologies, and future businesses (Lawson and Samson (2001).

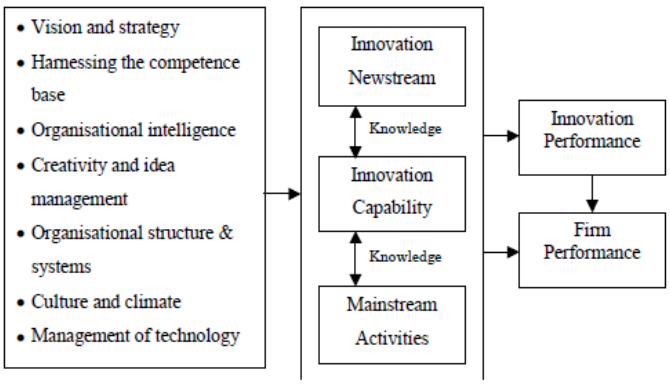

Figure 1: Integrated Innovation Concept
Source: Lawson and Samson (2001)

ISSN: 2620-777X

Innovation capability itself is not a separately identifiable construct. Innovation capabilities consist of strengthening practices and processes within the company. These processes are key mechanisms for stimulating, measuring, and strengthening innovation. The elements that make up the innovation capability are grouped into seven main elements. These elements have been built from literature in innovation management, as well as best practice models, such as the Baldrige Quality Award. It can be noted that there is no clear agreement on what the variables of innovation really are, and that there may be differences of opinion in this regard. Thus, a holistic model of innovation capabilities will be interesting to discuss mainly about the categorization of elements, which is an important step to facilitate the analysis and construction of the innovation framework. These elements are vision and strategy, utilizing the competency base, organizational intelligence, creativity and idea management, organizational structure and Systems, culture and climate, and technology management (Samson, D., et al., 2017). The innovation capability model can be seen in Figure 2 below.

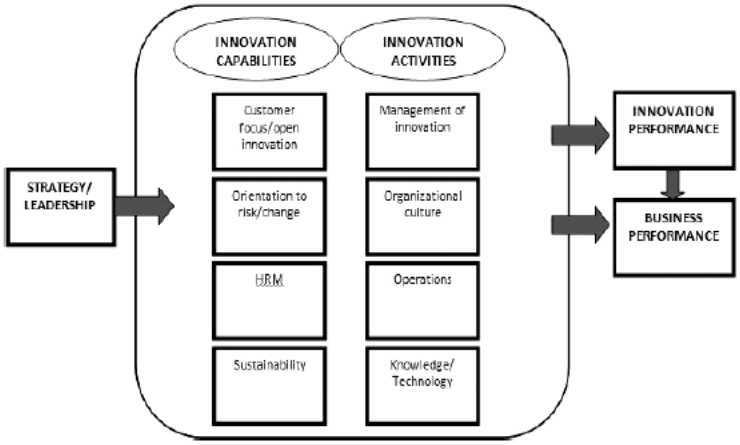

Figure 2: Innovation Capability Model
Source: Samson, D., et al. (2017)

Human Resources

Human resources are in the organization who contribute thoughts and perform various types of work in achieving the goals of the organization. The donations in question are the thoughts and work they do in various activities within the company. In the sense of human resources, what is covered is not limited to experts, education personnel or experienced personnel but all the manpower used by the company to realize its goals (Sukirno, 2006)

The word "Resource" according to Poerwadarminta, explains that from an etymological point of view the word "source" is given the meaning of "origin" while the word "power" means "power" or "ability". Thus, resource means "ability", or "origin of power". Another opinion says that Resources are defined as tools to achieve goals or the ability to profit from certain opportunities or escape from difficulties so that the word resource does not denote an object but can play a role in a process or operation, namely an operational function to achieve a certain goal such as fulfilling satisfaction. In other words, human resources are an abstraction that reflects human aspirations and relates to a function or operation (Susilo, 1992).

To understand the meaning of Human Resources (HR) it is necessary to distinguish between its definition in macro and micro terms. The definition of human resources macro is all human beings as residents or citizens of a country or within the boundaries of a certain area that has entered the age of the labor force, both those who have entered the age of the labor force, both those who have and have obtained jobs. In addition, macro human resources also mean residents who are in the productive age, although for various reasons and problems there are still those who are not productive because they have not entered the jobs found in their communities (Hanggraeni, 2012).

ISSN: 2620-777X

A more complex and relevant study model in explaining innovation and human resources. SMEs in Indonesia can practically be considered in company policies related to efforts to improve innovation and SME performance both from the company side and other stakeholders which means the importance of the role of market orientation, leadership, organizational culture, and organizational cooperation towards innovation (process, product and market) and performance, one of the strategies to win the competition is through innovation. From a *resource-based strategy* point of view, it emphasizes the importance of resources and capabilities in developing the competitive advantage of the company. Innovation is one key that leads to competitive advantage, therefore innovation and its relationship with organizational resources and capabilities is an important factor in efforts to win the competition in the global era, including in the context of SMEs in Indonesia to increase competitive advantage in the face of the free market (Tricahyadinata, 2013).

LINKS (Local and Indigenous Knowledge Systems)

Indigenous knowledge is defined as knowledge which is spatially and/or culturally context specific, collective, holistic, and adaptive. Although it was previously largely ignored in the fields of development and conservation, indigenous knowledge is currently living a revival and its incorporation into development projects is seen as essential (Mistry, J., 2009)

According to UNESCO (2020), "*Local indigenous knowledge"* refers to the understanding, skills, and philosophies developed by people with a long history of interaction with their natural environment. For local and rural communities, local knowledge is decisive in decision-making about fundamental aspects of everyday life. This knowledge is part of a cultural complex that also includes language, classification systems, the practice of resource use, social interaction, rituals, and spirituality. Knowledge in this distinctive way is an important aspect of the world's cultural diversity and provides the foundation for sustainable development appropriate to local conditions.

LINKS encourages local knowledge and its interrelationships in climate science and policy processes. LINKS has been influential in ensuring that the knowledge holders of local and indigenous knowledge are included in contemporary science-policy-society forums on issues such as assessment and management of biodiversity assessment and adaptation to climate change, natural disaster preparedness and sustainable development. Moving at the local, national, and global levels, LINKS seeks to strengthen indigenous peoples and local communities, encouraging transdisciplinary engagement with scientists and policymakers and new pilot methodologies for further understanding of the impacts of climate change, adaptation, and mitigation (UNESCO, 2020).

RESEARCH AND METHODOLOGY

Empirical Review and Hypothesis Development

In this study, the researcher wanted to know the impact of LINKS (Local and Indigenous Knowledge Systems) on innovation capabilities and business performance in food and beverage MSMEs in Jogjakarta. Researchers identify research models as Local and Indigenous Knowledge Systems (LINKS), Strategy/Leadership (ST), Customer Focus/Open Innovation (CF), Orientation to Risk/Change (RC), Human Resource Management (HRM), Sustainability (SU), Management of Innovation (MI), Organizational Culture (OC), Operations (OP), Knowledge/Technology (KT), Innovation Performance (IP), Business Performance (BP). In several studies by Nakashima and Nilsson (1945); Samson, D., et al. (2017), researchers present a new synthesis model of innovation capabilities and business performance in food and beverage MSMEs in Jogjakarta, which can be seen in Figure 3.

ISSN: 2620-777X

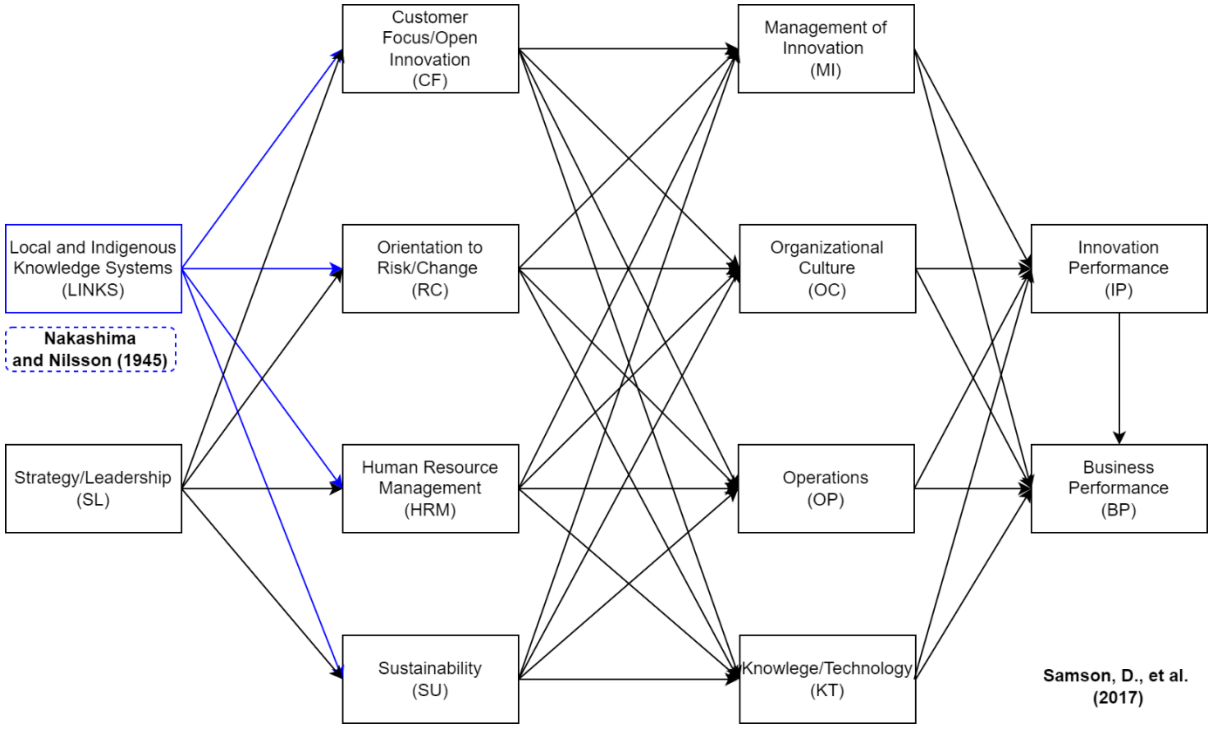

Figure 3: Conceptual Model of the Study; *Source:* Authors

Figure 3 shows a new synthesis model that will be tested by researchers. From Figure 3 the researchers identified the following hypotheses:

H1: LINKS positively and significantly affects CF

H2: LINKS positively and significantly affects RC

H3: LINKS positively and significantly affects HRM

H4: LINKS positively and significantly affects SU

H5: SL positively and significantly affects CF

H6: SL positively and significantly affects RC

H7: SL positively and significantly affects HRM

H8: SL positively and significantly affects SU

H9: CF positively and significantly affects MI

H10: CF positively and significantly affects OC

H11: CF positively and significantly affects OP

H12: CF positively and significantly affects KT

H13: RC positively and significantly affects MI

H14: RC positively and significantly affects OC

H15: RC positively and significantly affects OP

H16: RC positively and significantly affects KT

ISSN: 2620-777X

H17: HRM positively and significantly affects MI

H18: HRM positively and significantly affects OC

H19: HRM positively and significantly affects OP

H20: HRM positively and significantly affects KT

H21: SU positively and significantly affects MI

H22: SU positively and significantly affects OC

H23: SU positively and significantly affects OP

H24: SU positively and significantly affects KT

H25: MI positively and significantly affects IP

H26: MI positively and significantly affects BP

H27: OC positively and significantly affects IP

H28: OC positively and significantly affects BP

H29: OP positively and significantly affects IP

H30: OP positively and significantly affects BP

H31: KT positively and significantly affects IP

H32: KT positively and significantly affects BP

H33: IP positively and significantly affects BP

This research was conducted quantitatively using a survey method. Data were collected by distributing closed questionnaires containing alternative answers designed using a Likert scale by Nakashima and Nilsson (1945); Samson, D., et al. (2017). Moreover, a total of 212 respondents of Food and Beverage MSMEs in Jogjakarta were selected as samples using a purposive sampling method (Hair, Jr. et al., 2021). Statistical analysis was used to examine the relationship between the variables, and this involved the application of the structural equation model (SEM) as well as Partial Least Square (PLS).

FINDINGS AND DISCUSSIONS

LINKS was measured using four indicators, SL was measured using four indicators, and CF was measured using four indicators. RC was measured using six indicators. HRM was measured using eight indicators. SU was measured using four indicators. MI was measured using eight indicators. OC was measured using five indicators. OP was measured using five indicators. KT was measured using four indicators. BP was measured using three indicators.

ISSN: 2620-777X

First Order Construct Evaluation

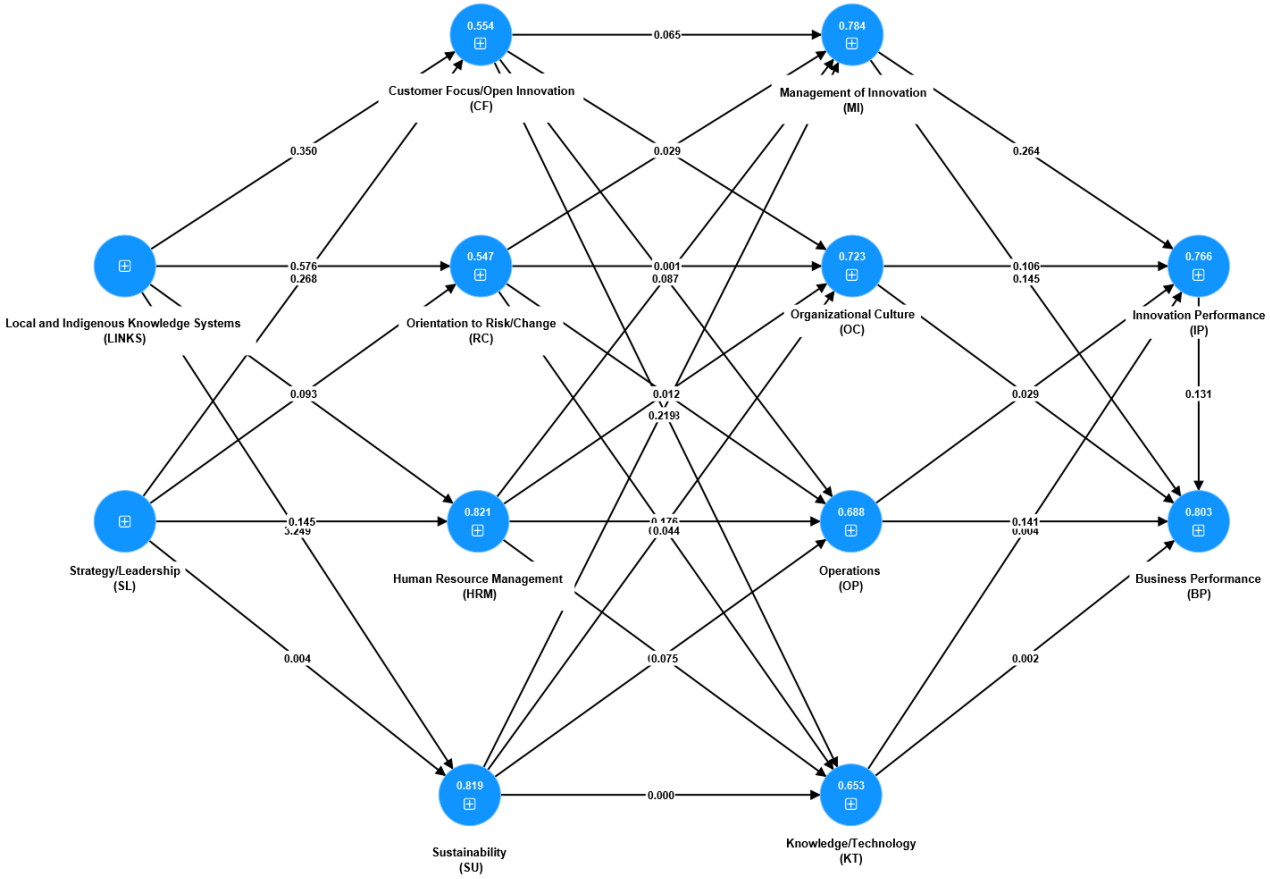

Figure 4: First Order Construct Evaluation; *Source:* Authors

Because the measurement model in this study is reflective, an outer loading greater than 0.6 is recommended (Hair et al., 2019). However, if the outer loading is less than 0.4, the reflective indicator must be removed. When the outer loading is between 0.4 and 0.7, it is advisable to keep or delete the item depending on the other item's outer loading (height) (Hair et al., 2019; Henseler et al., 2015). Based on this theory, the researchers took a value of 0.6. Furthermore, the average variance extracted (AVE) must be greater than 0.5; it is more recommended; this ratio implies that the latent variable has accounted for more than 50% of the variance of the reflective indicator. The results of this study (Table 3.) found that all measuring items had met the test requirements for the outer loading value above 0.6 and the average variance extracted (AVE) above 0.50 so that it can be said to be valid and can be used to measure each latent variable.

Table 3: Convergent Validity

Variable	Indicator	Outer Loading	AVE	Result
BP	BP1	0.745	0.759	Valid
	BP2	0.921		
	BP3	0.926		
	BP4	0.897		
	BP5	0.901		
	BP6	0.892		

ISSN: 2620-777X

	BP7	0.890		
	BP8	0.777		
OC	OC1	0.747	0.687	Valid
	OC2	0.760		
	OC3	0.895		
	OC4	0.885		
	OC5	0.846		
CF	CF1	0.793	0.666	Valid
	CF2	0.821		
	CF3	0.830		
	CF4	0.821		
HRM	HRM1	0.860	0.692	Valid
	HRM2	0.861		
	HRM3	0.863		
	HRM4	0.846		
	HRM5	0.779		
	HRM6	0.786		
	HRM7	0.839		
	HRM8	0.813		
IP	IP1	0.828	0.669	Valid
	IP2	0.851		
	IP3	0.821		
	IP4	0.841		
	IP5	0.830		
	IP6	0.832		
	IP7	0.797		
	IP8	0.795		
	IP9	0.761		
KT	KT1	0.893	0.810	Valid
	KT2	0.913		
	KT3	0.912		
	KT4	0.882		
LINKS	LINKS1	0.892	0.783	Valid
	LINKS2	0.887		
	LINKS3	0.878		
	LINKS4	0.882		
MI	MI1	0.764	0.656	Valid
	MI2	0.790		
	MI3	0.774		
	MI4	0.758		
	MI5	0.866		

ISSN: 2620-777X

	MI6	0.849		
	MI7	0.850		
	MI8	0.819		
OP	OP1	0.809	0.752	Valid
	OP2	0.920		
	OP3	0.911		
	OP4	0.844		
	OP5	0.846		
RC	RC1	0.860	0.701	Valid
	RC2	0.826		
	RC3	0.883		
	RC4	0.854		
	RC5	0.807		
	RC6	0.790		
SL	SL1	0.913	0.868	Valid
	SL2	0.947		
	SL3	0.934		
	SL4	0.932		
SU	SU1	0.888	0.751	Valid
	SU2	0.904		
	SU3	0.862		
	SU4	0.810		

Since there is no problem with convergent validity, the next step to be tested is the problem related to discriminant validity for each construct with the correlation value between constructs in the model (Garson, 2016). This method is often referred to as Cross Loading. Based on results shows that all cross-loading values in each of the intended constructs are more significant than the cross-loading values with other constructs. It can be concluded that all indicators are valid, and there are no problems with discriminant validity.

The reliability of each latent construct was assessed using Cronbach's alpha and composite reliability scores; however, in addition to using Cronbach's alpha and composite reliability, the rho_a value can be considered to ensure the reliability of the PLS construction score, as defined in Dijkstra & Henseler (2015). Cronbach's alpha and composite reliability are higher than 0.70 (Hair et al., 2019), while the rho_a value must be 0.70 or greater, which indicates the composite reliability.

Table 4: Construct Reliability

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)
Business Performance (BP)	0.954	0.954	0.962
Customer Focus/Open Innovation (CF)	0.833	0.834	0.889

ISSN: 2620-777X

Human Resource Management (HRM)	0.936	0.938	0.947
Innovation Performance (IP)	0.938	0.940	0.948
Knowledge/Technology (KT)	0.922	0.922	0.945
Local and Indigenous Knowledge Systems (LINKS)	0.908	0.908	0.935
Management of Innovation (MI)	0.925	0.927	0.938
Operations (OP)	0.917	0.919	0.938
Organizational Culture (OC)	0.885	0.895	0.916
Orientation to Risk/Change (RC)	0.914	0.915	0.934
Strategy/Leadership (SL)	0.949	0.951	0.963
Sustainability (SU)	0.889	0.892	0.923

The table shows that all the variables used in this study have ideal validity and reliability as indicated by the Cronbach Alpha and Composite Reliability coefficient values which are higher than 0.7 (> 0.7) and AVE coefficient values which are more significant than 0.5 (>0.5). It indicates they were all feasible to be used.

Structural Model Evaluation

The inner model is a model specification of the relationship between latent variables (structural model), also known as inner relations, describing the relationship between latent variables based on the substantive theory of research. Without losing its general nature, it is assumed that the latent variable and indicator or manifest variable on the zero means to scale and the unit variance is equal to one so that the location parameter (parameter constant) can be omitted from the model (Sarstedt et al., 2019). The inner model test develops a concept and theory-based model to analyze the relationship between exogenous and endogenous variables (Hair et al., 2019). Testing the structural model is done by looking at the value of the R-square, which is the goodness-fit test of the model. The R-square value is the goodness-fit test of the model. The second test can be seen from the R-square results for endogenous latent variables of 0.25, 0.50, and 0.75, indicating that the model has small, medium, and large significant effects on the structural model (Hair et al., 2019). Table 5 shows that it was found that 5 variables had a moderate effect (0.50), and five other variables had a large effect (0.75) on the structural model.

Table 5: Model Fit

Variable	R-square	R-square adjusted	SRMR
Business Performance (BP)	0.803	0.799	0.072
Customer Focus/Open Innovation (CF)	0.554	0.550	
Human Resource Management (HRM)	0.821	0.819	
Innovation Performance (IP)	0.766	0.761	
Knowledge/Technology (KT)	0.653	0.646	
Management of Innovation (MI)	0.784	0.780	
Operations (OP)	0.688	0.682	
Organizational Culture (OC)	0.723	0.718	

ISSN: 2620-777X

Orientation to Risk/Change (RC)	0.547	0.543
Sustainability (SU)	0.819	0.817

Furthermore, the evaluation of the fit model in this study was carried out using three test models, including Chi2, standardized root means square residual (SRMR), and standard fit index (NFI). According to Bentler and Bonett (1980), the model is acceptable if the Chi2 value is more than 0.9 (Chi2>0.9). While Hair et al. (2014) suggested that the model will be considered a good fit if the standardized root means square residual (SRMR) value is below or equal to 0.1. However, because this study uses a repeated indicators approach, some values cannot be calculated and show n/a values.

The effect size for each path model can be seen by calculating the effect size (f^2). According to Henseler and Sarstedt (2013), effect sizes can be determined that 0.02, 0.15, and 0.35 represent small, moderate, and significant effects, respectively.

Table 6: Effect Size

Variables	BP	CF	HRM	IP	KT	MI	OP	OC	RC	SU
Customer Focus/Open Innovation (CF)					0.218	0.065	0.302	0.391		
Human Resource Management (HRM)					0.075	0.087	0.176	0.209		
Innovation Performance (IP)	0.131									
Knowledge/Technology (KT)	0.002			0.004						
Local and Indigenous Knowledge Systems (LINKS)		0.350	2.651						0.576	3.249
Management of Innovation (MI)	0.145			0.264						
Operations (OP)	0.141			0.029						
Organizational Culture (OC)	0.003			0.106						
Orientation to Risk/Change (RC)					0.044	0.029	0.012	0.001		
Strategy/Leadership (SL)		0.268	0.145						0.093	0.004
Sustainability (SU)					0.000	0.219	0.007	0.002		

Table 6 shows the results of calculating the effect size (f^2) in the research model, where all paths have a value range of 0.000 to 3.249. From the results of this study, it was found that 5 pathways had a significant influence (0.35), 7 relationships had a moderate effect (0.15), and 21 other relationships had a small effect (0.02).

ISSN: 2620-777X

Hypothesis Testing

Data analysis has been carried out from the model conceptualization stage to testing the research hypothesis. Hypothesis testing is used to test hypotheses to find answers to research conducted and be able to answer existing problem formulations. In addition, hypothesis testing is carried out to prove whether each lower-order construct influences the intended higher-order.

Table 7: Hypothesis Testing

Path	Original sample (O)	T statistics (|O/STDEV|)	P values
Customer Focus/Open Innovation_(CF) -> Knowledge/Technology_(KT)	0.388	5.745	0.000
Customer Focus/Open Innovation_(CF) -> Management of Innovation_(MI)	0.167	3.437	0.001
Customer Focus/Open Innovation_(CF) -> Operations _(OP)	0.433	6.961	0.000
Customer Focus/Open Innovation_(CF) -> Organizational Culture_(OC)	0.464	8.399	0.000
Human Resource Management _(HRM) -> Knowledge/Technology_(KT)	0.322	3.758	0.000
Human Resource Management _(HRM) -> Management of Innovation_(MI)	0.273	3.672	0.000
Human Resource Management _(HRM) -> Operations _(OP)	0.467	5.223	0.000
Human Resource Management _(HRM) -> Organizational Culture_(OC)	0.480	6.486	0.000
Innovation Performance_(IP) -> Business Performance_(BP)	0.332	4.344	0.000
Knowledge/Technology_(KT) -> Business Performance_(BP)	0.038	0.457	0.647
Knowledge/Technology_(KT) -> Innovation Performance_(IP)	0.060	0.791	0.429
Local and Indigenous Knowledge Systems _(LINKS) -> Customer Focus/Open Innovation_(CF)	0.457	7.535	0.000
Local and Indigenous Knowledge Systems _(LINKS) -> Human Resource Management _(HRM)	0.798	24.101	0.000
Local and Indigenous Knowledge Systems _(LINKS) -> Orientation to Risk/Change_(RC)	0.591	9.663	0.000

ISSN: 2620-777X

Local and Indigenous Knowledge Systems _(LINKS) -> Sustainability _(SU)	0.888	38.375	0.000
Management of Innovation_(MI) -> Business Performance_(BP)	0.302	3.949	0.000
Management of Innovation_(MI) -> Innovation Performance_(IP)	0.396	5.317	0.000
Operations _(OP) -> Business Performance_(BP)	0.358	4.269	0.000
Operations _(OP) -> Innovation Performance_(IP)	0.175	2.099	0.036
Organizational Culture_(OC) -> Business Performance_(BP)	-0.050	0.688	0.492
Organizational Culture_(OC) -> Innovation Performance_(IP)	0.329	4.587	0.000
Orientation to Risk/Change_(RC) -> Knowledge/Technology_(KT)	0.198	2.639	0.008
Orientation to Risk/Change_(RC) -> Management of Innovation_(MI)	0.128	2.344	0.019
Orientation to Risk/Change_(RC) -> Operations _(OP)	0.099	1.811	0.070
Orientation to Risk/Change_(RC) -> Organizational Culture_(OC)	0.024	0.375	0.707
Strategy/Leadership_(SL) -> Customer Focus/Open Innovation_(CF)	0.400	6.430	0.000
Strategy/Leadership_(SL) -> Human Resource Management _(HRM)	0.186	5.266	0.000
Strategy/Leadership_(SL) -> Orientation to Risk/Change_(RC)	0.238	3.610	0.000
Strategy/Leadership_(SL) -> Sustainability _(SU)	0.032	0.910	0.363
Sustainability _(SU) -> Knowledge/Technology_(KT)	0.002	0.025	0.980
Sustainability _(SU) -> Management of Innovation_(MI)	0.416	6.194	0.000
Sustainability _(SU) -> Operations _(OP)	-0.092	1.311	0.190
Sustainability _(SU) -> Organizational Culture_(OC)	-0.045	0.699	0.484

This stage is carried out to determine whether the research hypothesis proposed in the research model is accepted or rejected. To test the proposed hypothesis can be seen from the path coefficients, T-Statistic values through bootstrapping procedures, and p-values. According to Hair et al. (2014), the path coefficient values are in the range of values -1 to +1, where the path coefficient values close to +1 represent a strong positive relationship, and the path coefficient values -1 indicate a strong negative relationship. At the same time, T-Statistics (bootstrapping) is used to see

ISSN: 2620-777X

the significant value between constructs. Hair et al. (2019) suggested carrying out the bootstrapping procedure with a re-sample value of 5,000. The limit for rejecting and accepting the proposed hypothesis is ±1.96. If the t-statistic value is in the range of -1.96 and 1.96, then the hypothesis is rejected or, in other words, accepts the null hypothesis (H0).

Based on the test results, it was found that the LINKS (Local Indigenous Knowledge System) had a positive and significant effect on all dimensions of innovation capabilities. LINKS had a positive (β = 0.457) and significant (t = 7.535, p = 0.000) effect on Customer Focus/Open Innovation, positive (β = 0.591) and significant (t = 9.663, p = 0.000) effect on Orientation to Risk/Change, positive (β = 0.798) and significant

(t = 24.101, p = 0.000) effect on Human Resource Management, positive (β = 0.888) and significant (t = 38.375, p = 0.000) effect on Sustainability. Thus hypothesis was accepted, means the higher LINKS the level of open innovation, orientation to risk, human resource management and sustainability will increase.

Furthermore, the findings in this study reveal that not all dimensions of innovation capabilities had a positive and significant effect of innovation activities. Customer Focus/Open Innovation and Human Resources Management had a significant and positive effect on all dimension of innovation activities such as Management Innovation (β = 0.457, t = 7.535, p = 0.000), Organizational Culture (β = 0.457, t = 7.535, p = 0.000), Operations (β = 0.457, t = 7.535, p = 0.000), Knowledge Technology (β = 0.457, t = 7.535, p = 0.000).

For Orientation to Risk/Change had a hypothesis rejecting. It had negative and no significant effect on Operation (β = 0.099, t = 1.811, p = 0.070) and organizational culture (β = 0.457, t = 7.535, p = 0.000). These means the higher value of Orientation Risk has no influence on the value of Operation and Organizational Culture. But RC had positive and significant effect on Knowledge/Technology (β = 0.198, t = 2.639, p = 0.008) and Management of Innovation (β = 0.128, t = 2.344, p = 0.019).

This research found that Strategy Leadership had a positive and significantly influence on all dimension of innovation capabilities except on Sustainability dimension. Human Resources Management had a significant and positive effect on all dimension of innovation activities such as Management Innovation (β = 0.273, t = 3.672, p = 0.000), Organizational Culture (β = 0.480, t = 6.486, p = 0.000), Operations (β = 0.467, t = 5.223, p = 0.000), Knowledge/Technology (β = 0.322, t = 3.758, p = 0.000). Then, Sustainability had no significant effect on all dimension of Innovation Activities except on Management of Innovation dimension. Thus, hypothesis rejected means sustainability had no significant influence or effect on the change of value of innovation activities such as organizational culture, operations, and knowledge technology.

Finally, Organizational Culture (t = 0.688, p = 0.492) and Knowledge/Technology (t = 0.457, p = 0.647) as Innovation Activities had no significant influence on Business Performance. Furthermore, all dimension of Innovation Activities had significant influence on Innovation Performance except Knowledge/Technology (t = 0.791, p = 0.429). Then, Innovation Performance had positive and significant (β = 0.332, t = 4.344, p = 0.000) impact on Business Performance.

CONCLUSIONS

There are 9 rejected hypotheses and 24 accepted hypotheses from 33 hypotheses in this study. This research shows that LINKS (Local Indigenous Knowledge System) had a positive and significant effect on all dimensions of innovation capabilities. However, Strategy Leadership had no significant effect on Human Resources Management and Sustainability. Furthermore, Innovation Capability which are Customer Focus/ Open Innovation and Human Resource Management had significant effect on all dimension of Innovation activities such as Management Innovation, Operational Culture, Operations and Knowledge Technology. But, Orientation to Risk and Sustainability dimension still

ISSN: 2620-777X

had no significant influence on Operation and Organizational Culture. Sustainability had no significant influence on Knowledge Technology and Operations.

Hereafter, Organizational Culture and Knowledge/Technology as Innovation Activities had no significant influence on Business Performance. Furthermore, all dimension of Innovation Activities had significant influence on Innovation Performance except Knowledge/Technology. Then, Innovation Performance had positive and significant impact on Business Performance. All in all, an interesting finding in this study is that LINKS (Local and Indigenous Knowledge Systems) can encourage Human Resource Innovation Capabilities and has implications for increasing Innovation Activities and Innovation Performance to improve the Business Performance of food and beverage MSMEs in Jogjakarta.

REFERENCES

Akman, G. and Yilmaz, C. (2008) 'Innovative capability, innovation strategy and market orientation: an empirical analysis in Turkish software industry', *International Journal of Innovation Management*, Vol. 12, No. 01, pp.69–111.

Assink, M. (2006) 'Inhibitors of disruptive innovation capability: a conceptual model', *European Journal of Innovation Management*, Vol. 9, No. 2, pp.215–233.

Azis, I. J. 2010.Pembangunan Berkelanjutan Peran dan Kontribusi Emil Salim.Gramedia. Jakarta.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, *88*(3), 588

Central Agency on Statistics. 2016. Sensus Ekonomi Tahun 2016. http://se2016.bps.go.id, Retrieved on 3 Maret 2020

Darwanto, D., Santosa, P.B., Woyanti, N., Bambang, B. 2018. *Designing Model and Strategy for Strengthening the Competitiveness of Small Medium Enterprises*. Etikonomi 17, 69–92.

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS quarterly*, *39*(2), 297-316.

Garson, G. D. (2016). Partial least squares. Regression and structural equation models.

Hair, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. European Business Review, 26(2), 106–121. http://doi.org/10.1108/EBR-10-2013-0128.

Hair, J. F. J., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2019). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM). Long Range Planning. http://doi.org/10.1016/j.lrp.2013.01.002.

Halit Keskin, (2006) "Market orientation, learning orientation, and innovation capabilities in SMEs: An extended model", European Journal of Innovation Management, Vol. 9 Iss: 4, pp.396

Hanggraeni,D. 2012. *Manajemen Sumber daya Manusia,* (Jakarta: LPFEUI, 2012), hal. 35

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43(1), 115–135*. http://doi.org/10.1007/s11747-014-0403-8.

Henseler, J., & Sarstedt, M. (2013). Goodness-of-fit indices for partial least squares path modeling. *Computational statistics*, *28*(2), 565-580.

Indonesia Banking Development Institute (LPPI). 2015. *Profil Bisnis Usaha Mikro, Kecil dan Menengah (UMKM)*. Lembaga Pengembangan Perbankan Indonesia.

Khedhaouria, A. and Thurik, R. 2017. *Configurational Conditions of National Innovation Capability: A Fuzzy Set Analysis Approach*. Journal Technological Forecasting and Social Change. pp. 48–58. doi: 10.1016/j.techfore.2017.04.005.

ISSN: 2620-777X

Lawson, B. and Samson, D. (2001) 'Developing innovation capability in organizations: a dynamic capabilities approach', *International Journal of Innovation Management*, Vol. 5, No. 03, pp.377–400.

Mistry, J. (2009). Indigenous knowledges. In R. Kitchin, & N. Thrift (Eds.), International Encyclopedia of Human Geography (Vol. 5, pp. 371-376). Elsevier.

Najib, M. 2011. *Innovation, Cooperation and Business Performance: Some Evidence from Indonesian Small Food Processing Cluster*. Journal of Agribusiness in Developing and Emerging Economies, Vol. 1 Iss: 1, pp.75 – 96

Neely, A., Adams, C. and Crowe, P. (2001) 'The performance prism in practice', *Measuring Business Excellence*, Vol. 5, No. 2, pp.6–13.

RPJMN. 2019. Rencana Teknokratik RPJMN Rencana Pembangunan Jangka Menengah Nasional 2020-2024. Bappenas

Robbins, S. 2007. *Perilaku Organisasi.* Salemba Empat. Jakarta.Darwanto, D., Santosa, P.B., Woyanti, N., Bambang, B., 2018. Designing Model and Strategy for Strengthening the Competitiveness of Small Medium Enterprises. Etikonomi 17, 69–92.

Samson, D., Gloet, M., & Singh, P. (2017). Systematic innovation capability: Evidence from case studies and a large survey. *International Journal of Innovation Management*, *21*(07), 1750058.

Sarstedt, M., Hair Jr, J. F., Cheah, J. H., Becker, J. M., & Ringle, C. M. (2019). How to specify, estimate, and validate higher-order constructs in PLS-SEM. *Australasian Marketing Journal (AMJ)*, *27*(3), 197-211.

Saunila, M. and Ukko, J. (2012) 'A conceptual framework for the measurement of innovation capability and its effects', *Baltic Journal of Management*, Vol. 7, No. 4, pp.355–375.

Serrano García, J., Robledo Velásquez, J., 2013. Methodology for evaluating Innovation Capabilities at university institutions using a fuzzy system. J. Technol. Manag. Innov. 8, 246–259.

Shan, D., 2017. Research of the Construction of Regional Innovation Capability Evaluation System: Based on Indicator Analysis of Hangzhou and Ningbo. Procedia Eng. 174, 1244–1251.

Sulistyo, H., Siyamtinah, 2016. Innovation capability of SMEs through entrepreneurship, marketing capability, relational capital, and empowerment. Asia Pacific Manag. Rev. 21, 196–203.

The Global Competitiveness Report, 2019. Choice Reviews Online. doi: 10.5860/choice.44-5759.

Tricahyadinata, I., 2013. Kapabilitas Inovasi Usaha Kecil Dan Menengah Di Indonesia. Akuntabel 10, 1–18.

UNESCO. 2020. *LINKS (Local and Indigenous Knowledge Systems).* From https://en.unesco.org/links. Retrieved on 16 Februari 2020.

Yliherva, J. (2004) *Management Model of an Organization's Innovation Capabilities; Development of Innovation Capabilities as Part of the Management System*, Doctoral dissertation, dissertation, Department of Industrial Engineering and Management, University of Oulu.

SMEs and Entrepreneurship - OECD. (n.d.). Retrieved April 19, 2019, from http://www.oecd.org/industry/smes/

Maria, C.T. 2009. Enhancing innovation between scientific and indigenous knowledge: pioneer NGOs in India. *Journal of Ethnobiology and Ethnomedicine* Vol 5, 9

ISSN: 2620-777X

.

ISSN: 2620-777X