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The Urgency of Business Agility During COVID-19 Pandemic: Distribution of Small and Medium Business Products and Services

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Abstract

Purpose: Business agility is an important key to survival for SMEs in Indonesia, especially during the COVID-19 pandemic. Indonesian local product distribution and service distribution are mostly served by SMEs. Agile businesses will be able to assist them in the proper distribution of products and services. This research examines how the direct and indirect influence of IT capabilities on business agility through organizational learning and business intelligence for small and medium enterprises in the distribution of Indonesian products and services. **Research design, data and methodology:** This research uses SEM method with SmartPLS tool. The sample of this research was conducted on small and medium enterprises in the distribution of Indonesian products and services. The sample obtained in this study was 202 SME owners or managers (strategic level). **Results:** Business intelligence plays a key role in improving business agility. The results of IT capability can directly and indirectly affect business agility through organizational learning. **Conclusions:** Business intelligence has the biggest role in increasing business agility in SMEs in Indonesia. IT capability has an indirect effect on business agility through organizational learning. The findings of this study prove that IT capabilities do not indirectly affect business agility through business intelligence.

Keywords : Business Agility, Organizational Learning, Business Intelligence, IT Capability, Product Distribution, Service Distribution

JEL Classification Code: M10, M15, M20

1. Introduction

The COVID-19 pandemic, which has lasted almost 2 years, has had a significant impact on the survival of small and medium enterprises in Indonesia. Small and medium enterprises in the distribution of Indonesian products and services have a variety and traditional characteristics of local culture. Before the COVID-19 pandemic or in 2019, only 8% or 3.79 million SMEs out of the 59.2 million total SMEs in Indonesia used online or digital platforms as their business marketing media. Meanwhile, during the COVID-

19 pandemic, several surveys of the impact of COVID-19 on SMEs in Indonesia were carried out such as the Katadata Insight Center (KIC) almost 82.9% of SMEs felt a negative impact during the COVID-19 pandemic. Bank Indonesia also released a survey regarding 87.5% of SMEs affected by the COVID-19 pandemic, while 93.2% of small and medium enterprises' sales were adversely affected.

From this data, the root of the problem for SMEs in Indonesia is the importance of the will to change, especially during the COVID-19 pandemic. The data also shows that the distribution of local Indonesian products and services

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declined due to low sales. If the owners of SMEs do not want to make changes during the pandemic or after the pandemic, then the business they run will be difficult to survive and will eventually go bankrupt.

The distribution of products and services by SMEs in Indonesia uses various distribution media. The distribution media used can be face-to-face such as (offline store) and online distribution. There are many media platforms for online distribution of products and services offered by SMEs in Indonesia. Each platform has its own advantages and disadvantages. Unfortunately, the development of this online distribution platform is not utilized by small and medium enterprises in Indonesia.

SMEs cannot adapt or use online distribution platforms because they lack the agility of current business systems. Business agility has become a new paradigm for maintaining a competitive advantage in the business in times of uncertainty and turmoil in the business environment (Mathiassen & Pries-Heje, 2006). Previous researchers have proven several factors that can improve business agility such as, IT capability (Mao, Liu, & Zhang, 2014), organizational learning (Schlosser, Templer, & Ghanam, 2006), and business intelligence (Chen & Siau, 2020). The role of IT capability / infrastructure is very important in running a business because it can create a fast flow of information for businesses so that they can make wise decisions. Adequate IT capability will facilitate the distribution of their business's products and services to consumers. Businesses that have agility will need to change, so that they are able to meet business needs (Zhang & Sharifi, 2000). IT capability in a business can be seen from how the IT is managed, IT infrastructure used, use of IT-based business processes. With IT capability, businesses can easily create organizational learning.

Organizational learning is a process of forming knowledge based on organizational resources and capabilities (Perez, Manuel, & Jose, 2005). Organizational learning is very important not only for large companies but also for small and medium-sized companies. SMEs when carrying out operations, especially product distribution and service distribution, they will gain a lot of experience and knowledge. Organizational learning can help companies become more competitive and improve their performance. Organizational learning has a significant role in a business such as connecting the business with the external environment. The role of organizational learning in fostering knowledge based on experience or often known as "organizational memory" will make agility for a business (Irani, Sharif, & Love, 2009). A business that has been running for a long time will have a lot of experience, so that a lot of knowledge can be managed by SMEs and become a source of decision making. In the distribution of products and services, SMEs are helped by the consumptive nature of

the Indonesian people. When an SME succeeds of gaining a market, they do not build a learning system (experience and knowledge become explicit knowledge such as standard operating procedures, new employee introduction materials, etc). The problems with this learning system, will be an obstacle to the company's growth and will make them eroded against intense competition. This fact shows that in the absence of a learning system, many SMEs are not agile to change. Agile businesses will be able to assist them in the proper distribution of products and services. Efforts that are not agile to change, especially during the COVID-19 pandemic will not be able to survive and grow.

Business intelligence can also increase business agility (Rane, Narvel, & Bhandarkar, 2019). Business intelligence can make an effort "capable" in making the right decisions at the right time. In general, business intelligence can be said to be not only a system but also a way of solving problems / methods, using applications and technology that can help decision making, such as the AHP program. Business intelligence is not only used in big businesses such as global companies or multinational companies, but it is also beneficial for SMEs. SMEs can build business intelligence with several requirements such as data integration, analytical capability, quality data, procedure data in decision-making analysis (Rouhani, Ashrafi, Ravasan, & Afshari, 2016). SMEs that have data based on business intelligence, the distribution of products and services will be faster, and consistency can be maintained. The business will also be superior and faster in making decisions.

Business agility is becoming urgent for small and medium enterprises in Indonesia. Indonesia, which is an archipelagic country, and is rich in culture, local traditions of each region are different, making small and medium enterprises must be responsive to changes and the external environment. The distribution of products and services for MSMEs in Indonesia can be supported by business agility. SMEs in Indonesia are inflexible and very rigid in running their business. Businesses that are not agile will be greatly affected by environmental changes, especially during the COVID-19 pandemic and intense competition. This research will focus on how to improve business agility for SMEs in Indonesia. Before the COVID-19 pandemic, SMEs in Indonesia continued to grow rapidly. However, during the pandemic, many SMEs were unable to survive and even chose not to continue their business (bankrupt). Business agility has an important role so that SMEs should be able to adapt to changes, especially during the pandemic. In this study, efforts to improve business agility will focus on IT capability, organizational learning and business intelligence as exogenous variables. Product distribution and service distribution by SMEs will have an advantage if their business is agile. SMEs will have an advantage if their business is agile. Therefore, in this study examine two

important questions: (1) how variable (IT capability, organizational learning, and business intelligence) can directly improve business agility in small and medium enterprises in Indonesia?, (2) how IT capability, organizational learning and business intelligence can affect indirectly to business agility?.

2. Literature Review

2.1. Business agility

The concept of business agility was developed from a variable that is often known as "organizational agility". Business agility can be defined as how businesses can adjust and execute well in a rapidly changing environment (Panda & Rath, 2017). In 2001, relative business agility became a new paradigm used in problem solving to maintain competitive advantage against uncertainty and turbulence in the business environment (Mathiassen & Pries-Heje, 2006). During the COVID-19 pandemic, small and medium enterprises in Indonesia were faced with very fast changes in terms of the external environment (government regulations and policies, competition and technology in business). SMEs in Indonesia can be more competitive by having business agility, because it enables businesses to have a sense of opportunity and reach the target market with the latest conditions. In practice, business agility will help small and medium enterprises in creating service quality (Morgan, 2004). With this service quality, it will help businesses become more sensitive to consumer desires and build good relationships with consumers.

2.2. IT capability

IT capability can be defined as the company's ability to gain a competitive advantage over the ability to acquire, deploy, combine and reconfigure IT resources to help shape business strategies. (Mao, Liu & Zhang, 2014). The relationship between IT capability and business agility is very interesting to study, especially for Indonesian SMEs during the pandemic. IT capability in a business will make it more agile to change and face external challenges. Previous studies have shown that IT capability has an important role for business agility (Mathiassen & Pries-Heje, 2006; Lu, & Ramamurthy, 2011; Mao, Liu, & Zhang, 2014).

H1: IT capability has a positive impact on business agility.

IT capability can also affect organizational learning (Kane & Alavi, 2007). In an organization to make learning and acquire knowledge happen, the organization must be able to use information technology (IT) as a learning system

in internal business. IT has an important role in enhancing organizational learning process (Dari, Jabeen, Hussain, & Al Khawaja, 2020). The role of IT in helping systems create, transmit and apply knowledge makes it easier for businesses to discover opportunities and threats from external factors. IT capability in a business is always associated with organizational agility.

H2: IT capability has a positive impact on organizational learning.

There is still little research related to information technology and learning organization. According to previous research suggestions (Foster, Smith, Ariyachandra, & Frolick, 2015), the importance of information technology on organization learning is one of the novelties in this study. Research conducted by Real, Leal & Roldan (2006), shows that information technology capability (IT) is an antecedent to improving organizational learning. The capabilities of information technology contribute to a sustainable competitive advantage through interaction with other resources. In this study, IT capability will be expected to influence organizational learning. Several studies and theories support this hypothesis (Tippins & Sohi, 2003; Yelland, Marshall, & Katz, 2003).

H3: IT capability has a positive impact on business intelligence.

2.3. Organizational Learning

In business, organizational learning is needed in forming key strategic capabilities, especially to compete in the digital era or in the modern market (Santos-Vijande, Lopez-Sanchez, & Trespalacios, 2012). There have been many definitions written about organizational learning by researchers in the world, but basically the same is about how organizations change based on experience (Argote, & Miron-Spektor, 2011). These changes and experiences which will certainly make organizational learning occur will increase business agility. The process of downsizing due to bottlenecks in business processes will occur based on learning experiences. Previous research has shown that organizational learning can have a positive effect on business agility (Bahrami, Kiani, Montazeralfaraj, Zadeh, & Zadeh, 2016; Muduli, 2016; Menon & Suresh, 2020).

H4: Organizational learning has a positive impact on business agility.

Total interpretive structural modeling (TISM) reveals the factors that drive agility in higher education. TISM proves that IT capability has an important role in creating

organizational learning and later makes the organization more agile (Menon & Suresh, 2020). There are still few studies that examine the indirect effect of IT capability on business agility through organizational learning. However, if IT capability can directly affect the organization learning (Tippins & Sohi, 2003; Yelland, Marshall, & Katz, 2003), and organization learning can affect business agility (Bahrami et al., 2016; Muduli, 2016), then this hypothesis can be built.

H5: IT capability has a positive impact on business agility through organizational learning.

2.4. Business Intelligence

Almost every business today has started to implement data-driven and use business intelligence (BI) as a reference in decision making (Chan & Lau, 2018). Business intelligence is often known as business analytics (Chen & Siau, 2020). Business intelligence can create an internal business environment to generate, share and use newfound knowledge to assist in rapid decision making. The role of business intelligence in increasing business agility is very important. With the organization's ability to use business intelligence, it can make big and fast changes, especially predicting product demand, forecasting market share increases and responding to new products from competitors (Isik, Jones, & Sidorova, 2013).

H6: Business intelligence has a positive impact on business agility.

In the digital era, the rapid development of technology, and the impetus for changes in business digitization in Indonesia have played an important role in IT capability. High IT capability will enable businesses to use adequate technology, especially to build and use business intelligence in business processes. There are still few previous researchers, who specifically examined the indirect effect of IT capability on business agility through business intelligence. Business intelligence will work well if a business can adapt and develop information technology. IT Capability is important for entrepreneurs to be able to carry out business intelligence so that data can be accessed quickly and accurately (Shollo & Galliers, 2015). Meanwhile, Rane, Narvel, and Bhandarkar (2019) proved that business intelligence is a strategy to accelerate the improvement of business agility.

H7: IT capability has a positive impact on business agility through business intelligence.

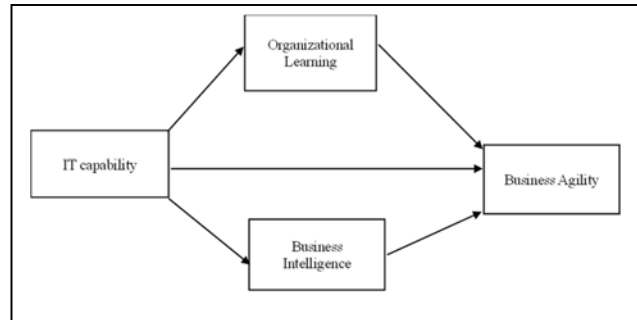


Figure 1: Research Framework

Based on Figure 1, the latent variables studied are IT ability, organizational learning, business intelligence, and business agility. IT capabilities can directly and indirectly affect business agility through organizational learning and business intelligence. Organizational learning and business intelligence are intervening variables and can have a direct effect on business agility.

3. Research Methods and Materials

This research is a quantitative method with an analytical method that is Structural Equation Modeling (SEM). The tool that will be used for this SEM Analysis method is Smart PLS software version 3.2.9. Questionnaires were distributed to SME owners/managers (strategic level) throughout Indonesia to obtain primary data from the survey. After the data is obtained, the data is tabulated with excel and then processed through the Smart PLS. Before testing the direct and indirect effects, evaluation of the model (outer loading) used, after the model is accepted, there will be structural model testing.

3.1. Data Source and Sample Frame

The sampling technique used is non-probability with judgment sampling, to the owner or manager (strategic level) of SMEs around Indonesia. This questionnaire is distributed to Small and Medium Enterprises that focus on the distribution of Indonesian products and services. The sample obtained was 202 small and medium enterprises in Indonesia. Characteristics of respondents, gender dominance of SMEs owners or managers in Indonesia are 155 men (76.73%) and 47 (23.26%) respondents are women. Data shows that 121 respondents (59.90%) have been doing business for approximately one to three years, 20 (9.90%) respondents have been doing business under 1 year and 61 (30.19) respondents have been doing business for more than 3 years.

3.2. Measures

There are 5 latent variables used in this variable, namely (IT capability / ITC, business intelligence / BI, learning organization (OL), and business agility / BA). The

developed questionnaire was measured using a likert scale of 1-5 scale (1 strongly disagree to 5 totally agree). In measuring the latent variable, the manifest variable was used which was developed based on previous studies:

Table 1: Measurement Scales

Variables	Dimension	Code Indicator	Indicator Items	Supporting Research
Business Agility (BA)	Operational Adjustment Agility	BA01	Ability to respond to customer needs	Cegarra-Navarro, Soto-Acosta, Wensley, (2016); Lu & Ramamurthy, (2011)
		BA02	Ability to adapt production to demand fluctuations	
		BA03	Ability to rapidly cope with problems from suppliers	
	Market Capitalizing Agility	BA04	We rapidly implement decisions to face market changes	
		BA05	Continuously search forms to reinvent or redesign organization	
		BA06	Market changes as opportunities for rapid capitalization	
Organizational Learning (OL)	Information acquisition	OL01	Employees interactions and participation are encouraged to gather information about possible changes	Santos-Vijande, Lopez-Sanchez, Trespalcios, (2012)
		OL02	Constantly evaluate the need to adapt to the business environment	
	Knowledge dissemination	OL03	Meeting schedule among departments to integrate the existing information	
		OL04	Always use database and organizational files to support our work	
		OL05	Vital information is transmitted quickly to all employees	
	Shared interpretation	OL06	Before a decision is taken the different alternatives are thoroughly analyzed	
		OL07	We review relevant information periodically in case it is absolute or may lead to error	
	Organizational memory	OL08	Key employees when the organization faces a new opportunity or problem can be conveniently contacted	
		OL09	There is an atmosphere of trust and collaboration among the personnel of the company to cooperate when opportunities or problems arise.	
Business Intelligence (BI)	Data Integration	BI01	Data are completely integrated, enabling real-time reporting and analysis.	Popovič, Hackney, Coelho, & Jaklič (2012); Spark & McCann (2015)
	Information content quality	BI02	The scope of information is adequate (neither too much nor too little)	
		BI03	The information is not precise enough and not close enough to reality.	
		BI04	The information is free of distortion, bias, or error	
	Information access quality	BI05	The provision of information corresponds to users' needs and habits	
		BI06	The information is processed and delivered rapidly without delay	
	Use of information in business processes	BI07	Having information reduces uncertainty in the decision-making process, increases credibility, and improves operational efficiency.	
		BI08	The information enables us to rapidly react to business events and perform proactive business planning.	
		BI09	We are using the information to add value the services delivered to customers.	
Information Technology Capability (ITC)	IT infrastructure capability	ITC01	Data management services & architectures (e.g., databases, data warehousing, data availability, storage, accessibility, sharing) are considered adequate	Lu & Ramamurthy, (2011); Tippins & Sohi, (2003).
		ITC02	IT facilities' operations/services (e.g., servers, large-scale processors, perform are considered adequate	
	IT business spanning capability	ITC03	We have developed a clear vision regarding how IT contributes to business value	
		ITC04	Establishing an effective and flexible IT planning process and developing a robust IT plan	
	IT proactive stance	ITC05	We constantly keep current with new information technology innovations	
		ITC06	We constantly seek new ways to enhance the effectiveness of IT use	

4. Results

The results of using SmartPLS in testing the model used will be discussed in 2 stages, namely measurement model evaluation (outer model) and structural model (inner model).

In the outer model, the validity and reliability of the data will be tested, and the factor loading of each indicator will be tested. While the structural model will be used in testing the hypothesis.

Table 2: Measurement Models

Code Indicator	First iteration				Final iteration			
	Outer Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Outer Loading	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
BA01	0.842	0.932	0.947	0.747	0.842	0.932	0.947	0.747
BA02	0.888				0.889			
BA03	0.892				0.893			
BA04	0.832				0.832			
BA05	0.896				0.897			
BA06	0.833				0.833			
BI01	0.780	0.888	0.910	0.532	0.822	0.879	0.909	0.624
BI02	0.727				0.704			
BI03	0.753				0.759			
BI04	0.685				Omitted			
BI05	0.539				Omitted			
BI06	0.798				0.834			
BI07	0.811				0.838			
BI08	0.769				0.774			
BI09	0.664				Omitted			
ITC01	0.738	0.942	0.955	0.780	0.738	0.942	0.955	0.780
ITC02	0.894				0.895			
ITC03	0.924				0.924			
ITC04	0.889				0.890			
ITC05	0.920				0.920			
ITC06	0.918				0.918			
OL01	0.755	0.934	0.945	0.658	0.741	0.933	0.945	0.686
OL02	0.695				Omitted			
OL03	0.870				0.881			
OL04	0.848				0.862			
OL05	0.777				0.767			
OL06	0.730				0.714			
OL07	0.899				0.913			
OL08	0.835				0.845			
OL09	0.865				0.878			

4.1. Measurement model evaluation

In table 2, the outer loading which has a value above 0.7 is called highly satisfactory, if the value of 0.5 and above is still acceptable/tolerated. However, in this study we determined that the outer loading must be above 0.7. So manifest variables that exist highly satisfactory measure latent variables. Cronbach's alpha identifies how the manifest variable measures the latent construct. Cronbach's alpha and composite reliability values must be above 0.7 then the model is said to be "moderate" (Hair, Ringle, & Sarteed, 2011). While the AVE value of the construct must

be above 0.5, it is said that the amount of variance in the latent variable has been successfully captured from the manifest variable.

In table 2, the missing manifest variables due to outer loading are below 0.7, namely BI04, BI05, BI09, LO02, so that the model is tested again by trimming the omitted instrument. Final iteration shows that the model is improved by eliminating the outer loading which has a value below 0.7, will have a better AVE value than the first iteration. Meanwhile, Cronbach alpha and composite reliability of each variable also have a value above 0.7, so that it can be concluded that all variables are reliable.

4.2. Discriminant validity

Furthermore, this study will test discriminant validity by looking at the value of cross loading. A high discriminant validity value will indicate that the construct that has been built has been appropriate in measuring or explaining the variable.

Table 3: Discriminant validity (Cross-loading)

	Business Agility	Business Intelligence	IT Capability	Learning Organization
BA01	0.842	0.565	0.565	0.547
BA02	0.888	0.611	0.565	0.499
BA03	0.892	0.636	0.545	0.501
BA04	0.832	0.582	0.586	0.503
BA05	0.896	0.611	0.569	0.525
BA06	0.833	0.574	0.506	0.458
BI01	0.594	0.78	0.451	0.367
BI02	0.556	0.727	0.341	0.356
BI03	0.458	0.753	0.412	0.299
BI04	0.436	0.685	0.356	0.286
BI05	0.361	0.539	0.185	0.181
BI06	0.58	0.798	0.451	0.411
BI07	0.522	0.811	0.382	0.372
BI08	0.506	0.769	0.354	0.31

BI09	0.469	0.664	0.298	0.306
ITC01	0.46	0.323	0.738	0.493
ITC02	0.549	0.404	0.894	0.591
ITC03	0.605	0.501	0.924	0.604
ITC04	0.553	0.405	0.889	0.59
ITC05	0.613	0.509	0.92	0.611
ITC06	0.613	0.493	0.918	0.611
OL01	0.476	0.346	0.5	0.755
OL02	0.442	0.398	0.415	0.695
OL03	0.469	0.337	0.579	0.87
OL04	0.492	0.358	0.604	0.848
OL05	0.447	0.417	0.521	0.777
OL06	0.439	0.359	0.5	0.73
OL07	0.497	0.385	0.554	0.899
OL08	0.473	0.349	0.519	0.835
OL09	0.528	0.343	0.612	0.865

Table 3 shows that each construct has a higher value for its construct than the cross-loading value for the indicators in other variables.

4.3. Structural models

The following are the results of structural model testing obtained (Figure 2).

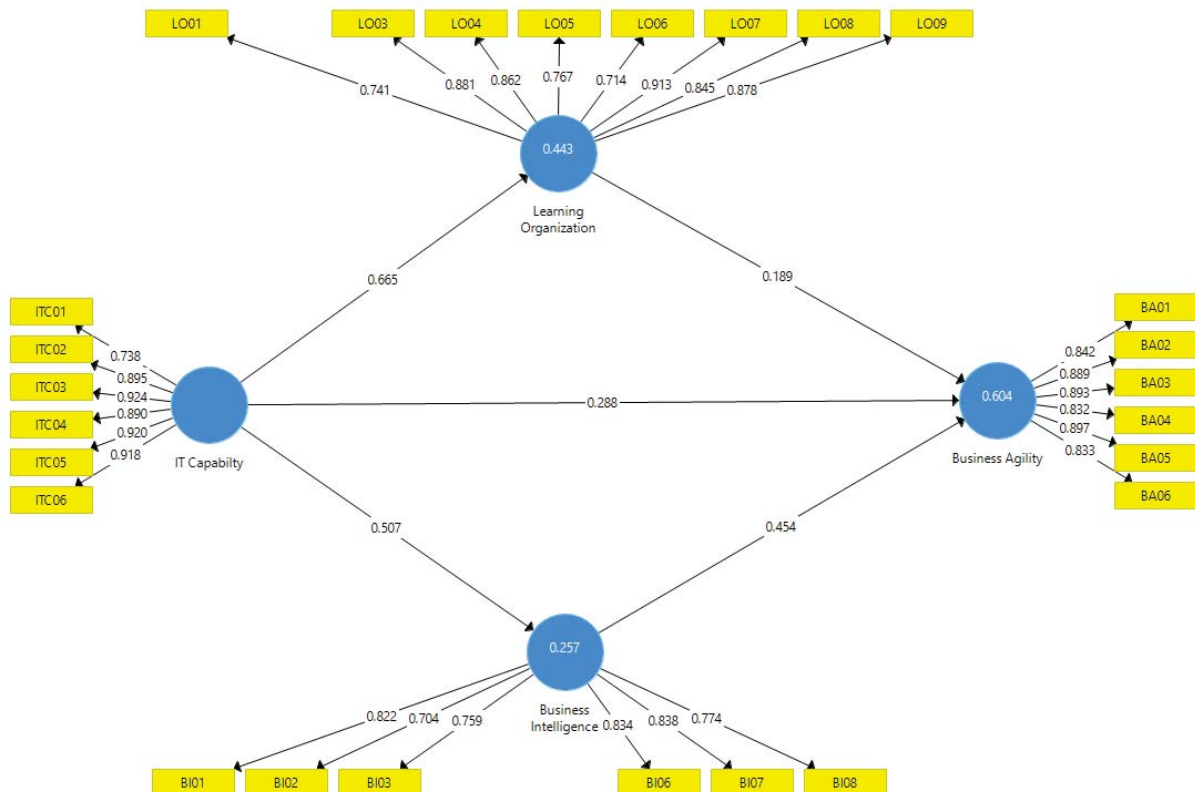


Figure 2: Research Results using SmartPLS (Final iteration)

Based on the structural model test (Figure 2), the following is a summary of the test results (Table 4). Result from Table 4, testing the direct effect of variables obtained directly from processing with SmartPLS software, while the indirect effect is carried out by the Sobel test formula (z-value). Testing the direct effect can be seen in the P values must be less than 0.05. So that Hypotheses 1, 2,3,4 and 6 are accepted because they have P values below 0.05. Furthermore, the influence of IT capability on business agility is 0.288. IT capability to learning organization is 0.665. IT capability to business intelligence is 0.507, and business intelligence to business agility is 0.454.

The indirect effect test uses the formula $z\text{-value} = a*b/\text{SQRT}(b^2*Sa^2 + a^2*Sb^2)$, where a & b are regression coefficients, Sa^2 and Sb^2 are standard errors. Then to get the regression coefficient on the indirect test, then a & b is only multiplied. For example, hypothesis 5, to obtain a regression coefficient of 0.126 ($0.665*0.189$) and Z Values of 2.209 ($0.665*0.189/\text{SQRT}(0.189^2*0.057^2 + 0.665^2*0.084^2)$). Furthermore, hypothesis 7, the regression coefficient is obtained 0.230 ($0.507*0.454$) and Z Values 0.447 ($0.507*0.454/\text{SQRT}(0.454^2*0.057^2 + 0.507^2*0.084^2)$). Z value must be less than 1.96 (two-tailed alpha of 0.05), so hypothesis 5 accepted while hypothesis 7 was rejected. IT capability only has a significant indirect effect through organizational learning on business agility of 0.126. Meanwhile, IT capability does not have an indirect effect on business agility through business intelligence. The total effect of IT capability is 0.414 ($0.288 + 0.126$).

Table 4: Path coefficient with t-values and z-values for the structural model

Hypothesis	Path analysis	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Z Values
H1	IT capability -> Business Agility	0.288	0.089	3.231	0.001	-
H2	IT capability -> Learning Organization	0.665	0.057	11,573	0	-
H3	IT capability -> Business Intelligence	0.507	0.057	8.856	0	-
H4	Organizational Learning -> Business Agility	0.189	0.084	2,250	0.025	-
H5	IT Capabilities -> Organizational Learning -> Business Agility	0.126	-	-	-	2.209
H6	Business Intelligence -> Business Agility	0.454	0.084	5,393	0	-
H7	IT capability -> Business Intelligence -> Business Agility	0.23	-	-	-	0.447

5. Discussion

Business agility is very important for the survival of SMEs during the COVID-19 pandemic. The contribution of this research shows the most influential factor in increasing business agility in small and medium enterprises in the distribution of Indonesian products and services. The results show that business intelligence has an important role in increasing agility in SMEs (because it has the biggest direct effect, which is 0.454). The first contribution of this research adds to the fact that business intelligence can affect business agility (Bahrami et al., 2016; Chen & Siau, 2020; Tooranloo, & Saghafi, 2019). IT capability is no less important in helping the occurrence of business agility in SMEs. The total influence of IT capability on business agility is 0.414, which means that the effect is not much different from the direct effect of business intelligence on agility. The results of this study are in line with previous research (Ravichandran, 2018; Mathiassen & Pries-Heje, 2006; Lu, & Ramamurthy, 2011; Mao, Liu & Zhang, 2014; Cai, Liu, Huang & Liang, 2017). The influence of IT capability on agility is supported by the large number of Small and Medium Enterprises in Indonesia using online distribution platforms during the COVID-19 pandemic, increasing by 10.2 million. Although organizational learning has a significant and lowest effect compared to other latent variables on business agility, the role of organizational learning can strengthen the effect of IT capability on business agility as proven in this study. Organizational learning can increase business agility, this result is in line with previous researchers (Bahrami et al., 2016; Muduli, 2016; Menon & Suresh, 2020). The second contribution in this study shows that organizational learning can significantly strengthen the effect of IT capability on business agility. Meanwhile, business intelligence cannot help IT capability in increasing business agility (because it has a Z value that is smaller than 1.96).

6. Conclusion, Limitations and Future Research

There are 2 conclusions in this study. The first conclusion, IT capabilities, organizational learning and business agility have a direct influence on business agility in SMEs engaged in product distribution and service distribution in Indonesia. Business intelligence has the biggest role in increasing business agility in SMEs in Indonesia. The second conclusion is that IT capability has an indirect effect on business agility through organizational learning. The findings of this study indicate that IT capabilities do not indirectly affect business agility through business intelligence. This study has a limitation on the number of samples that can be added based on the type of

business, and the length of business. For the development of more in-depth results, the researcher recommends the next researcher to conduct in-depth exploratory research with qualitative methods. Further researchers can also reuse this research model, in particular to strengthen the facts regarding direct and indirect effects between latent variables (because there are still few studies that prove the indirect effect of IT capability through organizational learning and business intelligence on business agility. There are still many other variables besides business agility that have not been explored to help SMEs adapt to the current platform for product distribution and service distribution.

References

- Argote, L., & Miron-Spektor, E. (2011). Organizational Learning: From Experience to Knowledge. *Organization Science*, 22(5), 1123–1137. <http://dx.doi.org/10.1287/orsc.1100.0621>
- Bahrami, M. A., Kiani, M. M., Montazeralfaraj, R., Zadeh, H. F., & Zadeh, M. M. (2016). The Mediating Role of Organizational Learning in the Relationship of Organizational Intelligence and Organizational Agility. *Osong Public Health and Research Perspectives*, 7(3), 190–196. <http://dx.doi.org/10.1016/j.phrp.2016.04.007>
- Cai, Z., Liu, H., Huang, Q., & Liang, L. (2017). Developing organizational agility in product innovation: the roles of IT capability, KM capability, and innovative climate. *R and D Management*, 49(4), 421-438. <https://doi.org/10.1111/radm.12305>
- Cegarra-Navarro, J.G. and Martelo-Landroguez, S. (2020). The effect of organizational memory on organizational agility: Testing the role of counter-knowledge and knowledge application. *Journal of Intellectual Capital*, 21(3), 459-479. <https://doi.org/10.1108/JIC-03-2019-0048>
- Cegarra-Navarro, J. G., Soto-Acosta, P., & Wensley, A. K. P. (2016). Structured knowledge processes and firm performance: The role of organizational agility. *Journal of Business Research*, 69(5), 1544–1549. <https://doi.org/10.1016/j.jbusres.2015.10.014>
- Chan, L. K., & Lau, P. Y. (2018). Investigating the Impact of System Quality on Service-Oriented Business Intelligence Architecture. *SAGE Open*, 8(4), 1-14. <https://doi.org/10.1177/2158244018805527>
- Chen, X., & Siau, K. (2020). Business Analytics/Business Intelligence and IT Infrastructure. *Journal of Organizational and End User Computing*, 32(4), 138–161. <https://doi.org/10.4018/JOEUC.2020100107>
- Dari, T. A., Jabeen, F., Hussain, M., & Al Khawaja, D. (2020). How types of organizational culture and technological capabilities contribute to organizational learning. *Management Research Review*, 44(3), 437-459. <https://doi.org/10.1108/MRR-02-2020-0090>
- Foster, K., Smith, G., Ariyachandra, T., & Frolick, M. N. (2015). Business Intelligence Competency Center: Improving Data and Decisions. *Information Systems Management*, 32(3), 229-233. <https://doi.org/10.1080/10580530.2015.1044343>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/MTP1069-6679190202>
- Irani, Z., Sharif, A. M., & Love, P. E. D. (2009). Mapping knowledge management and organizational learning in support of organization memory. *International Journal of Production Economics*, 122(1), 200-215. <https://doi.org/10.1016/j.ijpe.2009.05.020>
- Işık, O., Jones, M. C., & Sidorova, A. (2013). Business intelligence success: The roles of BI capabilities and decision environments. *Information and Management*, 50(1), 13–23. <https://doi.org/10.1016/j.im.2012.12.001>
- Kane, G. C., & Alavi, M. (2007). Information Technology and Organizational Learning: An Investigation of Exploration and Exploitation Processes. *Organization Science*, 18(5), 796–812. <http://dx.doi.org/10.1287/orsc.1070.0286>
- Lu, & Ramamurthy, K. R. (2011). Understanding the Link Between Information Technology Capability and Organizational Agility: An Empirical Examination. *MIS Quarterly*, 35(4), 931-954. <https://doi.org/10.2307/41409967>
- Mao, H., Liu, S., & Zhang, J. (2014). How the effects of IT and knowledge capability on organizational agility are contingent on environmental uncertainty and information intensity. *Information Development*, 31(4), 358–382. <https://doi.org/10.1177/0266666913518059>
- Mathiassen, L., & Pries-Heje, J. (2006). Business agility and diffusion of information technology. *European Journal of Information Systems*, 15(2), 116–119. <https://doi.org/10.1057/palgrave.ejis.3000610>
- Menon, S., & Suresh, M. (2020). Factors influencing organizational agility in higher education. *Benchmarking: An International Journal*, 28(1), 307-332. <https://doi.org/10.1108/BIJ-04-2020-0151>
- Morgan, R. E. (2004). Business agility and internal marketing. *European Business Review*, 16(5), 464–472. <https://doi.org/10.1108/09555340410699811>
- Muduli, A. (2016). Exploring the facilitators and mediators of workforce agility: an empirical study. *Management Research Review*, 39(12), 1567–1586. <https://doi.org/10.1108/MRR-10-2015-0236>
- Panda, S., & Rath, S. K. (2017). Modeling the Relationship Between Information Technology Infrastructure and Organizational Agility: A Study in the Context of India. *Global Business Review*, 19(2), 424–438. <https://doi.org/10.1177/0972150917713545>
- Pérez, L. S., Manuel, M. P., & José, V. O. (2005). Organizational learning as a determining factor in business performance. *The Learning Organization*, 12(3), 227–245. <https://doi.org/10.1108/09696470510592494>
- Popović, A., Hackney, R., Coelho, P. S., & Jaklič, J. (2012). Towards business intelligence systems success: Effects of maturity and culture on analytical decision making. *Decision Support Systems*, 54(1), 729–739. <https://doi.org/10.1016/j.dss.2012.08.017>
- Rane, S. B., Narvel, Y. A. M., & Bhandarkar, B. M. (2019). Developing strategies to improve agility in the project procurement management (PPM) process: Perspective of business intelligence (BI). *Business Process Management*

- Journal*, 26(1), 257-286. <https://doi.org/10.1108/BPMJ-07-2017-0196>
- Rouhani, S., Ashrafi, A., Ravasan, A. Z., & Afshari, S. (2016). The impact model of business intelligence on decision support and organizational benefits. *Journal of Enterprise Information Management*, 29(1), 19-50. <https://doi.org/10.1108/JEIM-12-2014-0126>
- Santos-Vijande, M. L., López-Sánchez, J. A., & Trespalcios, J. A. (2012). How organizational learning affects a firm's flexibility, competitive strategy, and performance. *Journal of Business Research*, 65(8), 1079-1089. <https://doi.org/10.1016/j.jbusres.2011.09.002>
- Schlosser, F., Templer, A., & Ghanam, D. (2006). How human resource outsourcing affects organizational learning in the knowledge economy. *Journal of Labor Research*, 27(3), 291-303. <http://dx.doi.org/10.1007/s12122-006-1024-x>
- Shollo, A., & Galliers, R. D. (2015). Towards an understanding of the role of business intelligence systems in organizational knowing. *Information Systems Journal*, 26(4), 339-367. <https://doi.org/10.1111/isj.12071>
- Sparks, B. H., & McCann, J. T. (2015). Factors influencing business intelligence system use in decision making and organisational performance. *International Journal of Sustainable Strategic Management*, 5(1), 31-54. <https://doi.org/10.1504/IJSSM.2015.074604>
- Tippins, M. J., & Sohi, R. S. (2003). IT competency and firm performance: is organizational learning a missing link?. *Strategic Management Journal*, 24(8), 745-761. <https://doi.org/10.1002/smj.337>
- Tooranloo, H. S., & Saghafi, S. (2019). Investigating the Impact of Using Knowledge Management on Organisational Agility through Competitive Intelligence and Strategic Thinking. *Journal of Information and Knowledge Management*, 18(2), 1-31. <https://doi.org/10.1142/S0219649219500163>
- Yelland, N., Marshall, G., & Katz, Y. (2003). Learning in School, Home and Community: ICT for early and Elementary Education. Manchester, United Kingdom: IFIP.
- Zhang, Z., & Sharifi, H. (2000). A methodology for achieving agility in manufacturing organizations. *International Journal of Operations and Production Management*, 20(4), 496-513. <https://doi.org/10.1108/01443570010314818>