

ROLE OF DIGITAL INNOVATION IN ADAPTING BUSINESS ENVIRONMENT AND OPTIMIZING COMPANY RESOURCE: STRATEGIES TO IMPROVE BUSINESS PERFORMANCE

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Abstract:

Purpose: This study aims to examine the effect of business environment and company resources on digital innovation, and business performance, as well as the effect of business environment and company resources on business performance through digital innovation. **Research Design:** This study uses a quantitative research approach. Observations were made in a cross section/one shot, in 2022. The population of this study was the ISP industry in Indonesia, which amounted to 474 companies, and the unit of observation was the management. Samples were taken as many as 240 respondents. Testing the causality hypothesis in this study used **Structural Equation Modeling (SEM)** **Results:** the hypothesis testing show that: Business Environment and Company resources have a direct significant effect on business performance. Business Environment and Company resources play a significant role in developing digital innovation, but digital innovation does not have significant effect on business performance, and it's make insignificant effect of business environment and company resources on business performance through digital innovation **Findings:** Improving business performance can be do it through optimizing company resources and anticipating changes in the business environment, while implementing digital innovation as a mediation of the relationship between the business environment and company resources on business performance does not have a significant impact.

Key Words: Business Environment, Company Resources, Digital Innovation, Business Performance, Internet Service Provider

1. INTRODUCTION

The increase in internet penetration in Indonesia is now over nine times larger than population growth, according to data from the 2018 Indonesian Internet Service Providers Association (APJII) study. The function of the Internet Service Provider (ISP), which is currently dealing with hyper-competitive conditions, cannot be divorced from this. Because 474 local ISP players are currently registered as members of APJII and have a license from the Ministry of Communication and Information Technology, this criteria exists. Along with rival local ISPs, global ISPs operating both in Indonesia and outside will compete with local ISPs as well. Local ISPs experienced a fall in revenue during the Covid-19 outbreak, particularly those that relied

on a B2B business model that catered to non-retail consumers. Additionally, the profitability of the business has stagnated or declined. This has to do with the fact that, starting in 2009 and continuing to the present, annual rates of internet connection have been falling. Internet access is becoming more and more essential for connecting different apps to different IoT sensors as the need for IoT implementation grows. Due to the placement of IOT sensors, which typically tend to be dispersed and movable, only ISPs who are also Telecommunication Operators receive greater benefits (Mobile). Additionally, Indonesian ISPs now tend to lack the resources and the ability to innovate and work together to develop into IoT service providers that include platforms, connectivity service providers, and IoT solutions/applications. In order to improve their performance, businesses must be able to use resources to foresee dangers and opportunities in the business environment. To sustain a long-term competitive edge, businesses must comprehend the connection between resources, capabilities, competitive advantage, and profitability (Barney, 1991). The phenomena in the ISP sector, however, demonstrates that there are barriers relating to capital ownership and a shortage of professionals. The company's resources are confined to providing internet access services, along with a weak understanding of digital technology and ICT infrastructure that frequently performs worse than ISPs in other nations. Additionally, ISPs conducting B2B business must have a positive cash flow during the Covid-19 epidemic. The profitability of Indonesian ISP businesses is significantly impacted by these diverse factors.

The present performance of ISPs, according to APJII, is also correlated with the need of collaboration with pertinent stakeholders and industry participants, both of which have not yet been completely established adequately, for example ; collaboration with the government as a policy maker to benefit the ISP industry such as tax amnesty and delays in payment of USO (universal service obligation) fees, collaboration with banks to negotiate loan interest returns, especially during the COVID-19 pandemic, collaboration with universities for joint research on the use of new technologies to improve services.

The inventiveness of industry participants in growing the ISP business often does not adequately reflect the needs of the current market. Many ISP businesses are seeing a drop in income during this epidemic, therefore they must act quickly to innovate and discover new business models and new services, such as IOT (Internet of Things)-based smart home services, video, games, and others. The phenomena of digital innovation in ISP firms demonstrates that businesses still struggle to identify customer groups that have untapped potential for capturing market share. In addition, businesses have a propensity to innovate slowly in response to digital disruption, particularly when it comes to developing new goods, services, and business models. In managing innovation in digital goods and services, five main areas have been identified that may be monitored and evaluated. These categories include user experience, value proposition, digital evolution scanning, skills, and improvisation (Soelton et al., 2021; Uno et al., 2020; Nylen & Holmstrom, 2015).

In order to maintain a long-term competitive advantage, companies must be able to develop capabilities through innovation as a competitive advantage in utilizing the resources they have.

For example, using the RBV concept, companies can comprehend the relationship between resources, capabilities, competitive advantage, and profitability (Barney, 1991)

2. LITERATURE REVIEW

The following explanation of the factors utilized in this study is based on the findings of earlier research:

Business performance is the end product or outcome of all business-related operations; organizational performance indicators include asset growth, ROA, ROIC, ebitda margin, and sales growth. Wheelen & Hunger (2018), David (2013), Uno et al., (2020); Best (2014). Return on equity (ROE), return on assets (ROA), earnings per share (EPS), and Tobin's Q ratio are used by Tifow & Sayilir (2015) as indicators of firm success. Indicators of ROA are also used by Hahn and Powers (2013) to evaluate business success. Similar to Al-Tamimi (2010), who gauges business success using ROA and ROE. In their study on digital technology, digital capabilities, and organizational performance, Khin and Ho (2018) use two dimensions to quantify organizational performance variables: subjective performance and objective performance. Sales, net income, and cash flow measurements are examples of subjective performance. Measures of market share, staff attrition, and customer happiness are used to assess objective performance.

Nylen & Holmstrom (2015) established a digital innovation management framework. They believe that businesses want dynamic tools to assist the management of the digital innovation activities that they are making. To this end, the digital innovation management framework identifies five key areas that can be measured and evaluated in the process of managing digital product and service innovation. These key areas are as follows: user experience, value proposition, digital evolution scanning (observation of digital evolution), skills, and improvisation. In order to achieve this goal, the framework identifies the following five key areas: user experience, value proposition, and digital evolution scanning (observation of digital improvisation) According to Yoo et al. (2010), the use of information and communication technology as a driving factor for innovations that have an influence on organizational structures, processes, and landscapes is referred to as digital innovation.

The fundamental building elements of the company's competitive strategy are its resources and competencies. Resources are competitive assets or productive inputs that the firm owns and controls. According to Thompson et al. (2020), there are two basic sorts of resources: tangible resources and intangible resources. Each business stands out due to its own collection of resources, which includes both physical and intangible assets as well as the organizational capacity to make use of these resources. Companies need three fundamental resources: organizational skills, intangible assets, and physical assets. The balance sheet of a business will include tangible assets, such as manufacturing facilities, raw materials, and financial resources.

The business environment indicates internal factors (internal environment) and external forces (narrowal external environment) and institutions outside the company's control (broader external environment) that can affect the company's business either directly or indirectly

(Krapez et al., 2012). External environmental forces include: economic strength; social, cultural, demographic, and environmental forces; political, governmental, and legal power; technological power; competitive forces (David, 2017). In the research of Ahmad Ch. et al. (2011), the external environment includes the micro-environment and macro-environment. The micro-environment includes corporate stakeholders who have control over suppliers, customers, retailers, and competitors. While the macro-environment includes politics, economics, social, and technology.

2.1 Variable dimensions

According to Thompson et al. (2020), Hafeez et al. (2012), and Amit & Schoemaker (2016), the company resource variables in this research were assessed along two dimensions: tangible and intangible assets.

The business environment variable in this study was measured by the dimensions of the macro-environment and micro-environment which refers to the opinion of Ahmad Ch et al. (2011).

The digital innovation variable is measured by five dimensions referring to Nylen & Holmstrom (2015), which consist of: user experience, value proposition, observation of digital evolution, skills, and improvisation.

And the business performance variable is measured by 5 indicators: ROA, ebitda margin, ROIC, asset growth and market share growth (Best (2014), Wheelen & Hunger (2018), and David (2013))

2.2 Variable dimensions

The influence of business environment on digital innovation

Customer demands and expectations are crucial for product innovation as well as process innovation that strives to boost effectiveness, according to Zakić et al. (2008). The most crucial element in process and product innovation is opportunity. Fahrudi et al. (2013) discovered that the introduction of IT-supported innovations increased industry competition, but staff creativity was restricted by employees, risk aversion, and laws. Organizational leaders can foster innovation through their vision, organizational culture, agile methodology, activity-based workplace, and innovative technologies. In order to be more innovative in the face of a fast changing environment, banks need to modify their management control systems, according to Madani & Andersson's (2016) research. Radical innovation necessitates a shift in the bank's fundamental culture, which has an impact on its control management system. In reality, banks seek to strike a balance between radical innovation and traditional approaches, which results in an innovation process compromise.

Khin and Ho (2018), who studied 105 SME IT (Small Medium Enterprises-Information Technology) companies in Malaysia, found that digital capabilities and orientation have a positive impact on digital innovation. They also found that digital innovation mediates the impact of digital capabilities and orientation on innovation. Performance both financially and otherwise. The first hypothesis is stated in the following manner, which is derived from the results of these studies:

H1: business environment has a significant effect on digital innovation.

The influence of company resource on digital innovation

Human resource management is examined in Kohansal et al. (2013) study of organizational performance, efficiency, and environmental innovation efficiency, it was discovered that HR is a crucial component in achieving innovation for the company. According to Tchuta and Xie (2017), a synergistic innovation management model is created when three capabilities—market, technology, and capability management—are combined to form a special configuration known as the source of the company's core competencies... Additionally, Sulistyo and Siyamtinah (2016) discovered that entrepreneurship, marketing skills, relational capital, and empowerment had a favorable and significant impact on innovation performance.

H2: company resources have a substantial impact on digital innovation.

The influence of business environment on business performance

Vo Van Dut (2015) found that local authority promotion policies of private firms and local employees had a favorable impact on the performance of small and medium-sized enterprises (SMEs). The influence of local government assistance programs for private enterprises and the workers on company success is beneficial. While, Gado (2015) discovered that environmental factors have a favorable and substantial influence on corporate success. In a similar vein, Gavrila-Paven and Muntean (2011) discovered that small and medium-sized businesses must recognize and adapt swiftly to market developments in search of flexible and inventive strategies to enhance their operations. According to Eruemegbe (2015), the business environment impacts business organization factors, psychological factors, government attitudes, international variables, marketing strategies, and the growth of corporate performance. The environment exerts pressure on business operations; hence, the firm relies on its surroundings to get inputs and absorb outputs. The third hypothesis is stated in the following manner, which is derived from the results of these studies:

H3: business environment has a significant effect on business performance.

The influence of company resources on business performance

Hafeez et al. (2012) found that entrepreneurial orientation, corporate resources, and SME branding are related to business performance through innovation. Karami et al. (2015) found that HR practices have a positive effect on business performance. The main elements of human capital include knowledge, skills and abilities, as well as open-mindedness, execution, imitation, and functional diversity. Innovation capability is very important to improve performance (Yen, 2013). Bagheri et al. (2013) found that manager competence has an effect on business performance, and indicators of manager competence have a significant relationship with business performance. Izadi et al. (2020) discovered that there are three emotional and intellectual assets that determine corporate success. These assets include knowledge and competence, digital technology, and reputation. The research by Yasa et al. (2019) demonstrates that digital skills have a major impact on the success of businesses. The fourth hypothesis is stated in the following manner, which is derived from the results of these studies:

H4: Company resources have a significant effect on business performance

The influence of digital innovation on business performance

Atalay, Anafarta, and Sarvan (2013) discovered that technical innovation (product and process innovation) had a substantial beneficial impact on performance. According to Kafetzopoulos and Psomas (2015), innovation capacity adds directly to product quality and operational performance. Izadi et al. (2020) have discovered that there are three emotional and intellectual assets (knowledge and competence, digital technology, and reputation) that influence corporate performance. Sami, Rahnarad, and Tabar (2019) discovered that business linkages impact firm success through product innovation.

The fifth hypothesis is stated in the following manner, which is derived from the results of these studies:

H5: digital innovation has a significant effect on business performance

The influence of business environment on business performance through digital innovation

According to Huhtala et al. (2013), innovation aptitude mediates performance effects during economic expansion but only to a limited extent during recessions. In times of economic expansion, innovation capability mediates the relationship between customer orientation and firm performance; while, in times of economic contraction, the mediating effect is primarily driven by competitor orientation. Business relationships influence a company's performance through product innovation, according to Sami et al. (2019). Khin and Ho (2018), who studied 105 SME IT (Small Medium Enterprises-Information Technology) companies in Malaysia, found that digital capabilities and orientation have a positive impact on digital innovation. They also found that digital innovation mediates the impact of digital capabilities and orientation on innovation. Performance both financially and otherwise.

The sixth hypothesis is stated in the following manner, which is derived from the results of these studies.

H6: digital innovation mediates the influence of business environment on business performance

The influence of company resource on business performance through digital innovation

Knowledge management ability and innovation performance influence the impact of knowledge-oriented leadership on organizational performance, according to Gurlek and Cemberci (2019). Hafeez et al. (2012) discovered that entrepreneurial approach, firm resources, and SME branding are associated with company success through innovation. Innovation has been shown to have a favorable impact on firm performance. Because innovation may serve as a catalyst for SMBs to grow their services and products, as well as gain market attention, so increasing their value. In addition, Yasa et al. (2019) investigates the role of digital innovation in mediating the relationship between digital capabilities and corporate success. Khin and Ho (2018) revealed that digital orientation and digital capabilities have a positive effect on digital

innovation, and that digital innovation mediates the effect of technology orientation and digital capabilities on digital innovation. Financial and non-financial performance. Based on the findings of these studies, the seventh hypothesis is formulated as follows:

H7: digital innovation mediates the influence of company resources on business performance.

3. METHODS

This study uses a quantitative research approach. Observations were carried out in a cross section/one shot, in 2022. The population of this study was the ISP company industry, and the unit of observation was the management. Sampling used stratified random sampling, in which population elements were grouped at certain levels with the aim of taking samples evenly throughout the group so that the sample represented the character of all heterogeneous population elements.

The survey was conducted by selecting a sample of the population, namely licensed ISP companies operating in Indonesia and being members of APJII (Indonesian Internet Service Providers Association) totaling around 474. ISPs are grouped based on the size of each company based on the number of customers and branch cities which are divided into 3 groups, namely: small, medium and large. Samples were taken as many as 240 respondents. Sampling from each classification is done randomly based on a list of population members. The measurement scale in this study uses an ordinal scale using the Likert method which produces ordinal data. The ordinal measurement scale is a scale where the data shows a certain order or order (Ferdinand, 2014). Testing the causality hypothesis in this study used Structural Equation Modeling (SEM)

4. ANALYSIS AND DISCUSSION

4.1 Goodness of Fit

Structural equation modeling is an ideal data analytical tool for testing complex relationships among many analytical variables. To test the extent to which a hypothesized model provides an appropriate characterization of the collective relationships among its variables, researchers must assess the “fit” between the model and the sample’s data. A guideline for assessing if a theory-based model fits empirical data or the resulting model describes actual conditions. Structural Equation Model (SEM) as a statistical test can explain the strength of a model with several index criteria to assess the suitability of the model.

The following Table.1 are the results of the Goodness of fit of this study, Chi-Square = 571, 39, and the Chi-Square p-value = 0.58125 > 0.05. Therefore, according to the Chi-Square index, the suitability of this research model is fit (Hair et al., 2010). The RMSEA is less than 0.05. Besides that, Goodness of Fit Index (GFI) = 0.89 > 0.80, likewise AGFI. So it can be concluded that the research model is in an empirical condition.

Table 1: Goodness of Fit

No.	Degree of Fit	Value	Acceptable match-rate	Explanation
1	Absolute Fit Test			
	Chi Square	571.39	P -value>0,05	Close Fit
	Normed Chi Square (x2/df)	P -value = 0.58125		
	Goodness of Fit Index (GFI)	0,89	>0,80	Close fit
	Root Mean Square Error of Approximation (RMSEA)	0,000	RMSEA ≤ 0,08 (good fit) RMSEA < 0,05 (close-fit)	Close fit
2	Incremental Fit Measures			
	Adjusted Goodness of Fit Index (AGFI)	0,86	AGFI > 0,8	Close fit
	Normed Fit Index (NFI)	0.90	NFI > 0.90	Close fit
	Comparative Fit Index (CFI)	0.96	CFI > 0.90	Close fit
3	Parsimonious Fit Measures			
	Parsimonious Normed Fit Index (PNFI)	0.93	PNFI > 0.90	Close fit
	Parsimonious GFI (PGFI)	0.91	PGFI > 0.90	Fit

4.2 Measurement Model

After the model is declared fit, the next process is to see indicators in a construct. This process is called the construct validity test (latent variable) which is carried out through the convergent validity test, which is an indicator that composes a data the construct has a high loading factor with that construct Internal reliability and composite reliability commonly employed to evaluate construct reliability. And convergent validity achieved through Average Variance Extracted and factor loadings with expected value >0.50.

Figure 1: Estimate Model Results

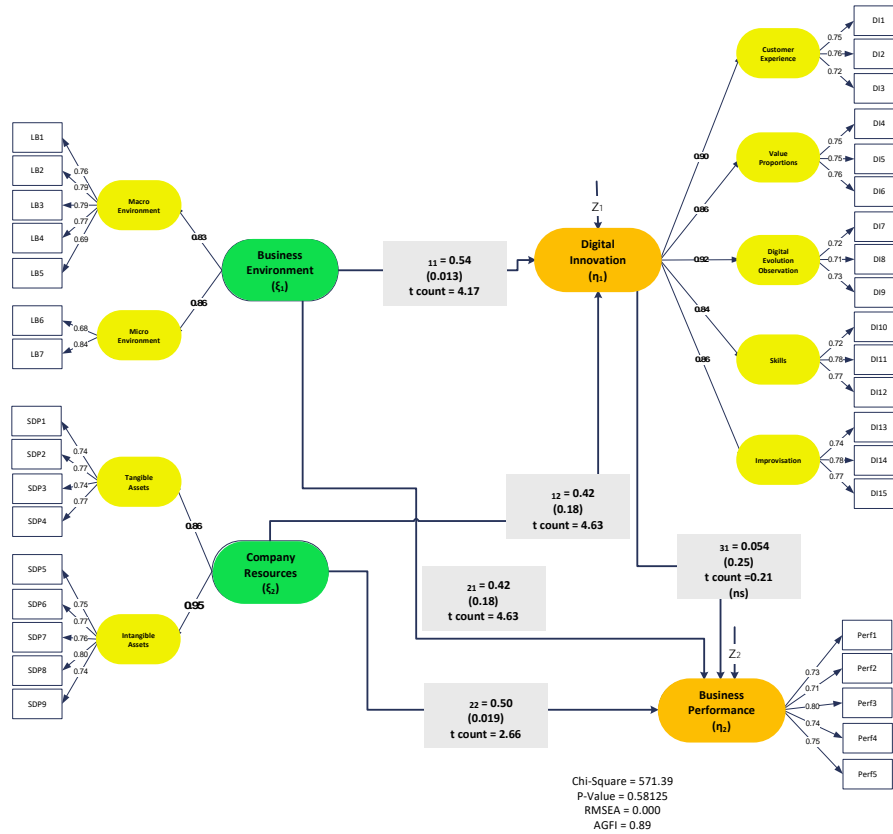


Table 2: Research Measurement

Variable	Dimension-Indicator	Loading Factor	t value	Prob.	Average Variance Extracted (AVE)	Composite Reliability
Business Environment	Macro Environment	0,83	7,13	0,000	0,635	0,897
	BE1	0,8	-			
	BE2	0,83	8,61	0,000		
	BE3	0,83	8,57	0,000		
	BE4	0,8	8,31	0,000		
	BE5	0,72	7,36	0,000		
	Micro Environment	0,86	6	0,000	0,646	
Company Resources	BE6	0,72	-			0,871
	BE7	0,88	6,35	0,000		
	Tangible Assets	0,86	7,46	0,000	0,628	

	CR1	0,77	-			
	CR2	0,81	7,96	0,000		
	CR3	0,78	7,69	0,000		
	CR4	0,81	7,98	0,000		
	Intangible Assets	0,95	8,34	0,000	0,647	0,901
	CR5	0,79	-			
	CR6	0,81	8,43	0,000		
	CR7	0,8	8,26	0,000		
	CR8	0,84	8,7	0,000		
	CR9	0,78	8,02	0,000		
Digital Innovation	User Experience	0,90	5,55		0,614	0,827
	DI1	0,79	-			
	DI2	0,8	7,84	0,000		
	DI3	0,76	7,45	0,000		
	value proposition	0,86	5,45	0,000	0,624	0,833
	DI4	0,79	-			
	DI5	0,78	7,67	0,000		
	DI6	0,8	7,82	0,000		
	observation of digital evolution	0,92	5,46	0,000	0,578	0,885
	DI7	0,76	-			
	DI8	0,75	7,09	0,000		
	DI9	0,77	7,28	0,000		
	Skill	0,84	5,25	0,000	0,625	0,833
	DI10	0,75	-			
	DI11	0,81	7,52	0,000		
	DI12	0,81	7,48	0,000		
	Improvisation	0,86	5,4	0,000	0,640	0,842
	DI13	0,77	-			
	DI14	0,82	7,96	0,000		
	DI15	0,81	7,87	0,000		
Business performance	Perf1	0,76	-		0,673	0,861
	Perf2	0,84	7,36	0,000		
	Perf3	0,84	8,21	0,000		
	Perf4	0,78	7,65	0,000		
	Perf5	0,79	7,73	0,000		

In Figure 1 and table 2 it is known loading factor > 0.50 , and the t value of the loading factor is higher than the t-table at a significance of 5%, according to Chin (2000) dimensions and indicators are valid in measuring latent variables. Composite Reliability and Alpha Cronbach are used to see the level of reliability of indicators and dimensions in measuring research variables. Cronbachs Alpha value is greater than 0.70 (Nunnally, 1994), composite reliability $> 0,7$ dan AVE $> 0,5$, then the dimensions and indicators are declared reliable in measuring the research variables.

4.3 Hypothesis Testing

The following are the results of hypothesis testing:

Table 3: Hypothesis Testing

No	Structural Model	Coefficient Estimated	t-value	R2	P value	Conclusion
1	Business Environment -> Digital Innovation	0,540	4,170	0,292	0,000	Significant
2	Company Resources -> Digital Innovation	0,600	4,630	0,360	0,000	Significant
3	Business Environment -> Business Performance	0,420	2,330	0,176	0,021	Significant
4	Company Resources -> Business Performance	0,500	2,660	0,250	0,008	Significant
5	Digital Innovation -> Business Performance	0,054	0,210	0,003	0,834	Not Significant
6	Business Environment -> Digital Innovation-> Business Performance	0,029	0,216	0,029	0,829	Not Significant
7	Company Resources -> Digital Innovation -> Business Performance	0,032	0,216	0,032	0,829	Not Significant

Based on the results of hypothesis testing revealed in Table 3, it is found that:

- Business Environment and Company Resources have positively and significant direct effect on Digital Innovation with t-value $> 1,98$ (Prob < 0.05). Company resources has the dominant influence on Digital Innovation with $R^2 = 0.36$, compare to business environment with $R^2 = 0.292$.
- Business Environment and Company Resources have positively and significant direct effect on Business Performance with t-value $> 1,98$ (Prob < 0.05). Company resources has the dominant influence on Business Performance with $R^2 = 0.25$, compare to business environment with $R^2 = 0.176$
- Because of digital innovation have insignificant direct effect on business performance t-value < 1.98 (prob > 0.05), thus causing the indirect effect of the business environment and company resources on business performance through digital innovation to be insignificant t-value < 1.98 (prob > 0.05)

In term of relation between business environment and company resources with digital innovation, this finding supports the research results of Zakić et al. (2008), Fahrudi et al. (2013), Madani & Andersson's (2016), and Khin and Ho (2018) which describe the significant role of business environment on digital innovation, and in line with the results of research by Kohansal et al. (2013), Sulistyo and Siyamtinah (2016), and Tchuta and Xie (2017) which describe the significant role of company resources on digital innovation.

This findings also support of previous research that stated there is a significant role of the business environment on business performance (Vo Van Dut (2015), Gado (2015), Gavrilapaven and Muntean, (2012), Eruemegbe (2015)), and supported the findings of previous research that stated there is a significant role of the company resources on business performance (Hafeez et al. (2012), Karami et al. (2015), (Yen, 2013), Bagheri et al. (2013), Izadi et al. (2020))

Empirically, during the Covid-19 pandemic, many ISPs doing B2B business experienced a decline in income, so the ability to keep the company's cash flow resources positive is one of the most important things to pay attention to in order to survive. Various problems related to company's resources greatly affect the profitability of ISP companies in Indonesia. Such conditions require companies to have superior resources in order to be able to position themselves in the competition. Companies are required to be able to utilize their resources as a comparative advantage to improve performance, as with the RBV concept, companies are able to understand the relationship between resources, capabilities, competitive advantage, and profitability in order to maintain a long-term competitive advantage (Barney, 1991).

Company's resources been proven to have an effect on the business performance of ISP companies, where 25% of changes in business performance are influenced by the company's resources, in table 2 it is revealed that intangible resources have a larger coefficient (0.95) than the coefficient of tangible resources (0.86). This illustrates that the role of intangible resources is more dominant in improving the business performance of ISP companies than tangible resources. Intangible resources include reputation, superior customer service, mastery of IT technology, supportive organizational culture, and development of internal business processes and Tangible resources include representative office buildings, complete office facilities, capital adequacy.

Meanwhile, business environment also been proven to have an effect on the business performance of ISP companies, where 17, 6 % of changes in business performance are influenced by the business environment. In table 2 it is revealed that the micro-environment has a slightly greater influence coefficient (0.86) than the macro-environment coefficient (0.83). The micro-environment includes industry competition and consumer profiles. The macro-environment covers the following aspects: economy, politics, socio-culture, government policies, and technological developments. These aspects need to be understood and evaluated by the company's as input in formulating the company's strategy to be able to survive in the competition.

Companies must understand the conditions of their business environment as opportunities or threats and then anticipate them in order to have a competitive advantage. Industrial Organization theory (Tirole, 1988) states that the competitive advantage of a company's is determined by the ability to analyze the opportunities and threats of the company's external factors, and emphasizes that the source of the company's competitive advantage comes from attractive industries or external factors.

But, this research found that digital innovation does not have a significant direct effect on business performance, $t\text{-value} < 1.98$ ($\text{prob} > 0.05$), make the findings does not support the research result of Atalay et al. (2013) Kafetzopoulos and Psomas (2015), Izadi et al. (2020), Sami et al. (2019) which describe the significant role of digital innovation on business performance.

Because in this study it was found that digital innovation does not have a significant effect on business performance, causing the indirect relationship of the business environment and company resources to business performance through digital innovation to be insignificant. This is different from the results of previous research from Huhtala et al. (2013), Sami et al. (2019), Khin and Ho (2018), Gurlek and Cemberci (2019), Hafeez et al. (2012), and Yasa et al. (2019) which states that innovation has a significant mediating capability an indirect relationship between the business environment and company resources on business performance.

5. CONCLUSION

Based on the results of hypothesis testing, it was found that in the ISP industry in Indonesia, business environment and company resources play a direct significant role in digital innovation and business performance. But digital innovation do not have a direct significant effect to business performance, causing the indirect relationship of the business environment and company resources to business performance through digital innovation to be insignificant. This are happens because the business environment and company resources already have a significant direct effect with business performance, so there is no need for mediation anymore and the mediation function of digital innovation maybe needs synergy with other mediating variables such as collaboration as a completed and closed model of this research to improve business performance, the need to implement collaborative as a mediation to improve business performance can be deduced from the phenomena that faced by the ISP Industry in Indonesia as was explained in the introduction section.

The results of this study are novel and very interesting to applied, because for ISP companies in Indonesia that efforts to improve business performance especially in this pandemic era, can be carried out by optimizing company's resources and to anticipating the changes of business environment. Because it was revealed that the company's resources have a greater contribution than the business environment as a driver to improve the business performance of ISP companies.

Aspects of company's resources that provide the highest contribution in improving the performance of ISP companies are intangible assets which are consisting of ; superior customer service, mastery of IT technology, organizational culture, company's reputation, and internal business processes, then followed by tangible assets which are consisting of ; adequate human resources, completeness of facilities, capital adequacy, and office building. The aspect of the business environment that is a priority to be recognize, understand, anticipated and adapted in improving company's performance is the micro-environment which are consisting of : a customer profiles and industry competition then followed by a macro environment which are consists of ; political, social, government policy, economy and technological development.

But, the findings of this study state that digital innovation does not provide a significant mediating effect on the indirect relationship between the business environment and company resources with business performance, so the ISP industry in Indonesia when implementing digital innovation to improve business performance requires also to implement other strategic activities, and as explained earlier in the introduction that there is a phenomenon of the ISP Industry in Indonesia that requires good collaboration with stakeholders to improve business performance, especially during this Covid-19 pandemic. The implementation of digital innovation together with collaboration is expected to both have a significant influence on business performance, so that it will have a significant effect mediating the relationship between the business environment and company resources on business performance.

The limitation of this study is that it only uses 1 mediating variable, namely digital innovation which is proven to have no significant mediating effect for the relationship between the business environment and company resources with business performance, so that the addition of the collaboration variable as a second mediating variable is expected to make this research model more complete and this can be a suggestion for further research.

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