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Strategic Alliances: Building the Competitive Advantage of Rural Banks in Indonesia

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Abstract.
This paper highlights the determinants of rural banks' competitive advantage, which has decreased due to Fintech and limited office networks. In industry 4.0, limited office networks can be replaced with digital services to reach public services by proposing digital innovation and business digitalization variables to encourage strategic alliances and increase the competitive advantage of rural banks. Three variables was tested using SEM-PLS: competitive advantage, stratefic alliance, and digital innovation and business digitalisation. Data from 151 rural banks were collected using questionnaires to test the relationship amongst the variables. The results show that business digitalization's impact on competitive advantage is significantly positive. Strategic alliance mediates the relationship between digital innovation and business digitalization with competitive advantage. However, digital innovation does not directly support competitive advantage.

Keywords: digital innovation, business digitalization, strategic alliance, competitive advantage

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1. Introduction

Rural banks are financial institutions that assist rural communities in alleviating poverty by providing loans based on the community needs [1] and finance small and medium enterprises (SMEs); they are even the primary source of funding for SMEs [2]. Besides that, rural ranks also aim to meet the financial pressures of SMEs, farmers, and savings mobilization [3]. Based on data from the Central Statistics Agency, the market of rural banks in collecting funds and extending credit to rural communities is 42.1% of the 275.77 million Indonesian citizens. Besides that, according to the Ministry of Cooperatives and Small and Medium Enterprises, the market of rural banks in collecting funds and extending credit for Indonesian SMEs is 64 million, which is a pretty large market.

Looking at the importance of the role of rural banks in alleviating poverty and helping SMEs in improving the country's economy, there is a paradox where with a large market and the number of rural banks that reached 1,441 as of December 2022 [4], Indonesian banking statistics show that the market share of rural banks in collecting third party funds is only 1.54% in 2016 and 1.72% in 2022, while in lending is only 1.82% in 2016 and 1.95% in 2022 against all banks in Indonesia. The low market share of rural banks shows that the competitive advantage of rural banks is meager compared to the other financial service industries.

The second paradox occurs when rural banks' performance from 2016 to 2022, both in collecting third-party funds and lending, shows an increase annually, but as many as 192 rural banks have gone bankrupt. The intense competition in the financial services industry and the emergence of digital financial technology or Fintech [5] is one of the causes of bankruptcy, which simultaneously proves the very low competitiveness of rural banks. The presence of Fintech has disrupted and revolutionized traditional financial institutions such as rural banks with digital technology [6]. With technology, Fintech can save labor and office costs, so it can provide cheaper loans by providing technology-based products [7]. Fintech offers similar services and products as rural banks, the difference is that Fintech utilizes technology that makes Fintech more efficient [5] and more attractive to the public, which has an impact on disrupting the performance and profitability of rural banks.

The digital era that prioritizes the speed of information [8] is momentum for rural banks to innovate by digitizing all aspects of customer service. However, rural banks have various problems, including implementing digital technology [9] caused by financial constraints that can force rural banks to forego investments in implementing digital technology [10]. To respond to the problems faced by rural banks and survive in turbulent conditions, rural banks must be adaptive and keep abreast of changes occurring by implementing strategic alliances [11] to establish business and digitalization in improving community services.

The motivation for forming strategic alliances is to gain competitive advantages in the market [12]. Thus, strategic alliances are the answer for companies trying to gain competitive advantages [13]. The parties in the strategic alliance have different motivations with the same goal of expanding community services access [14]. Strategic alliances have many benefits for companies, including guaranteeing speed and flexibility to develop the company's competitive advantages, effectively deploying new technologies, and helping to enter new markets or learn something from superior

companies. The interesting thing about strategic alliances is that all the members benefit from this collaboration, and their positions in the market are even getting stronger, such as the bank-fintech alliance [15]. Fintech offers customer experience as an advantage, while banks offer advantages in back-office processing and meeting regulatory standards [16]. Thus, Fintech forms an image that represents innovation and exploration, while banks represent continuity and seniority [17]. These aspects are believed to be mutually exclusive, which can lead to fierce competition [18], but they also complement each other so that they can form good strategic alliances. Besides that, these conditions can be beneficial as the growth of the financial services industry has expanded the market and created new business opportunities, which require ongoing digitalization to have extensive innovation [19] that combines processes, services/products, and feasible digital technology business models [20].

Therefore, this study aims to test strategic alliances empirically by mediating the relationship between digital innovation and business digitalization with competitive advantage. This study will explain how strategic alliance can help rural banks face their problems and promote their competitive advantages through business digitalization that is supported by innovation that fits the business developments and market conditions [21,22]. This study also explains that the development of competitive advantage in strategic alliances is mainly driven by how strategic alliances are structured to increase competitive advantage [23], as the failure factor of strategic alliances is not poor strategy and development but because alliance partners cannot work together effectively, which makes them fail to achieve common goals [24]. Thus, this study contributes to the literature by providing insight into the role of digital innovation and business digitalization in building the competitive advantages of rural banks through strategic alliances. Besides that, this study also makes a practical contribution to the Indonesian government through the Financial Services Authority, which is currently active in promoting the growth of rural banks from the increasing competitiveness aspect.

2. Literature Review

2.1. Digital Innovation

Yoo et al. define digital innovation as a combination of digital and physical components in producing new products [25]. Digital innovation augments traditional physical products with digital components [26] by enhancing the usage of these products and

the customer experience [27]. To be able to compete in a business environment that is highly disrupted by technological developments, it is crucial for companies to participate in digital innovation [28]. However, rural banks have various problems, one of them is implementing digital technology [9], which is caused by financial constraints, which may force rural banks to forego investments in implementing digital technology [10]. Responding to various problems faced by rural banks, to survive in turbulent conditions, rural banks must be adaptive and keep abreast of changes that occur by implementing strategic alliances [11] to realize their digital innovation in improving services to the public. Based on the description above, hypothesis 1 (H1) is written as below:

H1: digital innovation has a positive and significant impact on strategic alliance.

The parties in the strategic alliance have different motivations with the same goal of increasing competitive advantage through expanding community services access [14]. Digital innovation through strategic alliances can reach services to the customer base of the parties in the strategic alliance so that it can increase the competitive advantage of the members of the strategic alliance [29]. The digital innovation Framework [30] is used to organize and measure digital innovation activities that cover five key areas: user experience, value proposition, digital evolution scanning, skills, and improvisation. Thus, digital innovation is used to design processes, products, services, and even new business models [20] in order to increase the competitive advantage of companies through the utilization of company resources, both tangible and intangible [31]. Based on the description above, hypothesis 2 (H2) is written as below:

H2: digital innovation has a positive and significant impact on competitive advantage.

2.2. Business Digitalization

Technological developments direct companies to better understand customer needs, product use, and company performance [32,33]. In this context, technological developments, especially monitoring technology, storage capacity, data analysis, and connectivity, play an important role in developing digitalization in companies [34]. Digitalization is seen as one of the most significant technology trends facing globally [35]. In business settings, the use of technology in digitalization can increase customer satisfaction and provide opportunities to create new business models [36] through collaboration with other companies in creating products and services [37]. However, several obstacles cause the business digitization process to be complex and challenging [38,39]. The

most common obstacles reflected in the literature are implementation costs, lack of information technology structures, lack of necessary technical skills, high risks, and difficulty finding the best business processes [38,40,41]. In response to various obstacles faced in implementing business digitalization, companies must be adaptive and keep abreast of changes that occur by implementing strategic alliances [11] to implement business digitalization. This needs to be done considering that digitalization significantly influences business competition, thus enabling the development of new strategic alliances [42]. Based on the description above, hypothesis 3 (H3) is written as below:

H3: business digitalization has a positive and significant impact on strategic alliances.

Digitalization for competitive advantage in international markets is defined by Autio as the application of digital technology and infrastructure in business, economy, and society [43]. Business digitalization is associated with optimizing production and operational costs, providing superior service, and high levels of customer satisfaction [44]. Business digitalization makes it easy to control company performance, which makes it more effective and efficient [45]. Business digitalization can introduce new products and services, competitive prices, and an efficient service system, thereby increasing the company's competitive advantage [46]. In a very competitive market context, gaining a competitive advantage in managing customer service is very important for companies as digitalization requires practical activities with the aim of improving services and building competitive advantage [47], which has a significant impact on improving company performance [48]. Based on the description above, hypothesis 4 (H4) is written as below:

H4: business digitalization has a positive and significant impact on competitive advantage.

2.3. Strategic Alliances

Strategic alliances are formally defined as agreements between two or more organizations sharing resources to carry out mutually beneficial businesses [49]. This type of inter-firm collaboration is becoming the most popular method of sharing knowledge between firms [50]. Strategic alliance relations and performance observe the two constructs from different perspectives [51,52]. Recent literature on strategic alliance relations and competitive advantage suggests an increase in the competitiveness of firms as they engage in alliances with predetermined goals by entering and growing in new

markets [53]. Interfirm learning, resource sharing, risk reduction, and other advantages of strategic alliances can pave the way for partners to respond to changing environments and outperform the competition [54]. A situation of advantage achieved through strategic alliances enables partners to drive innovation to introduce new products, services, or processes [53]. Pansiri studied the impact of alliance partner characteristics on performance, concluding that commitment and trust between parties positively affect alliance performance, which is measured in terms of growth in their market share, profitability, and increased satisfaction levels [55]. Strategic alliances that are well structured, by prioritizing common interests and carried out with high commitment, can boost competitive advantage [23]. Based on the description above, hypothesis 5 (H5) is written as below:

H5: strategic alliances have a positive and significant impact on competitive advantage.

2.4. Competitive Advantage

Competitive advantage is an advantage over competitors obtained by delivering greater value to customers at lower prices [56]. Porter says that competitive advantage is the heart of a company's performance in competing and developing based on the values the company can offer its customers to defend itself from competitor pressures [57]. To be able to compete, the accuracy of the company's strategy is one of the key factors for the company's success. According to Li et al., a company's competitive advantage can be measured using several indicators: price, quality, delivery dependability, product innovation, and time to market [58]. Referring to the theoretical understanding above, this study defines competitive advantage as the ability retained by a company to produce superior performance compared to competitors in the same market through competent resources.

From the hypotheses above, a research model can be drawn as follows.

3. Methodology Research

3.1. Sampling Method

The population used in this study are all rural banks in Indonesia, while the unit of analysis is the conventional rural bank organization represented by the director or

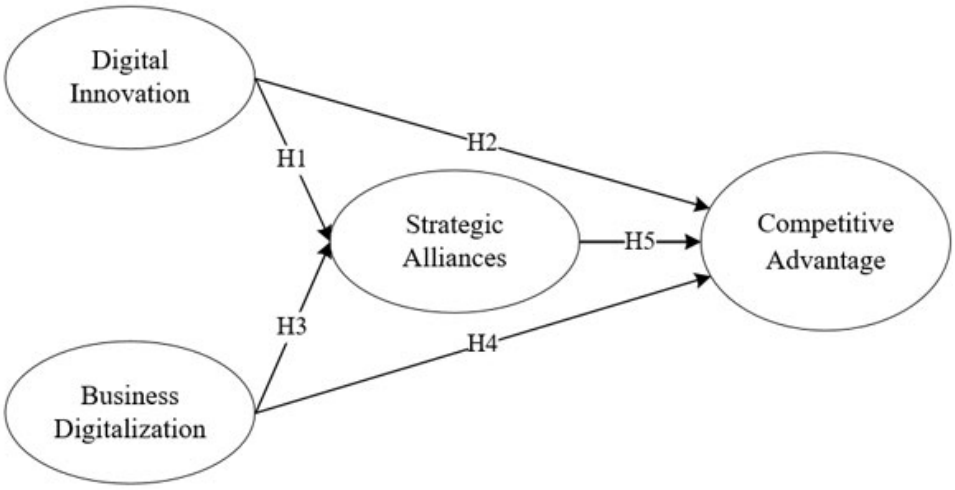

Figure 1: Research Model.

other top management who understand the business conditions of the rural banks. Conventional rural banks were chosen as the unit of analysis as many conventional rural banks went bankrupt, while sharia rural banks experienced an increase. Sampling was done using the probability stratified random sampling method as this study took samples from a homogeneous population in which the number of sampling units is not too large as the unit of analysis was limited to the type of conventional rural banks. Thus, the sample size follows the reference given by Roscoe [59], cited by Sekaran [60], which states that in multivariate research, it is better to use a sample 10 times larger than the number of variables used. This study uses 4 variables, which makes the minimum sample size used 40, which this study satisfies with the use of 151 samples.

3.2. Data Collection Methods and Techniques

An online survey approach using the Google Form service is used to analyze the relationship between conceptual model constructs in this study. The online survey data was then developed to get feedback from respondents, in this case, directors or other top management of conventional rural banks. To assess the feedback in this study, a closed questionnaire with a 5-point Likert scale is used [61]. The online survey was conducted for a month, and the questionnaire was filled out by 151 respondents who fulfilled the requirements, which were then used as a measurement model representing the population. This study uses 14 questions that can describe the characteristics of variables with a minimum requirement of 40 respondents.

3.3. Measurement

To ensure the validity of the data, a construct that can represent the research model concept that will be created and explain the causal relationship between constructs adapted from previous studies is used to ensure the validity of each construct's content. The digital innovation variable is adapted from Hidayat et al. [62] and Teguh et al. [63], strategic alliances variables is adapted from Efi [64], Galera-Zarco et al. [42] and Klus et al. [14], business digitalization variables is adapted from Galera-Zarco et al. [42], Haseeb et al. [65] and Imran et al. [66], and the competitive advantage variable is adapted from Shehadeh et al. [67]. A Likert scale (1 - 5), with the options "strongly disagree" to "strongly agree" was used as an assessment for all questions, which was adapted from Peppard & Ward [68].

3.4. Data Analysis

This study uses Structural Equation Model Partial Least Square (SEM-PLS) because this study is more predictive and explains latent variables than testing theory with a small number of samples in the study. While the tools used in analyzing quantitative data use SmartPLS software.

4. Result and Discussion

To explain the causal relationship between constructions in the research model, two stages of testing, validity and data reliability testing and structural equation model testing, were conducted.

4.1. Measurement Model

To measure the research model, a validity test is used to measure the extent to which the measuring instrument, in this case, the questionnaire, can measure the understanding of the model being measured. In conducting validity tests, two types of validity must be tested: content validity and criteria validity. Content validity is used to test the extent to which the questionnaire can measure the contents of a variable because the variables used are adopted from recognized international journals, so they are quite valid to use. In comparison, the validity of the criteria is used to test the correlation between

one variable and another. The method used in this study is a convergent validity test which refers to Hair et al., which states that the loading factor value of each question indicator must be greater than 0.50 [69]. Under these conditions, the perception of all variables, as outlined through the questions in the questionnaire, can be observed properly, and the latent variables can be measured precisely. Based on the study's results, the loading factor values for all variables indicated values > 0.50, as shown in Table 1, with the measurement model shown in Figure 2. Thus, all variables used in this study were valid.

Table 1: Outer Loading.

	BD	CA	DI	SA
BD1	0,921			
BD2	0,921			
BD3	0,809			
CA1		0,822		
CA2		0,861		
CA3		0,910		
CA4		0,782		
DI1			0,826	
DI2			0,898	
DI3			0,909	
SA1				0,881
SA2				0,829
SA3				0,881
SA4				0,776

BD: Business Digitalization; CA: Competitive Advantage; DI: Digital Innovation; SA: Strategic Alliances

4.2. Construct Reliability

After conducting the validity test by examining Factor Loading/Outer Loading, it is necessary to test the reliability of the composite as suggested by Hair et al. [69] and the extracted average variance proposed by Fornell & Larcker [70], which states that all construct values used in the research model must have a CR value of more than 0.7 and an AVE value of more than 0.5 as presented in Table 2. Thus, all the variables used in this study are reliable.

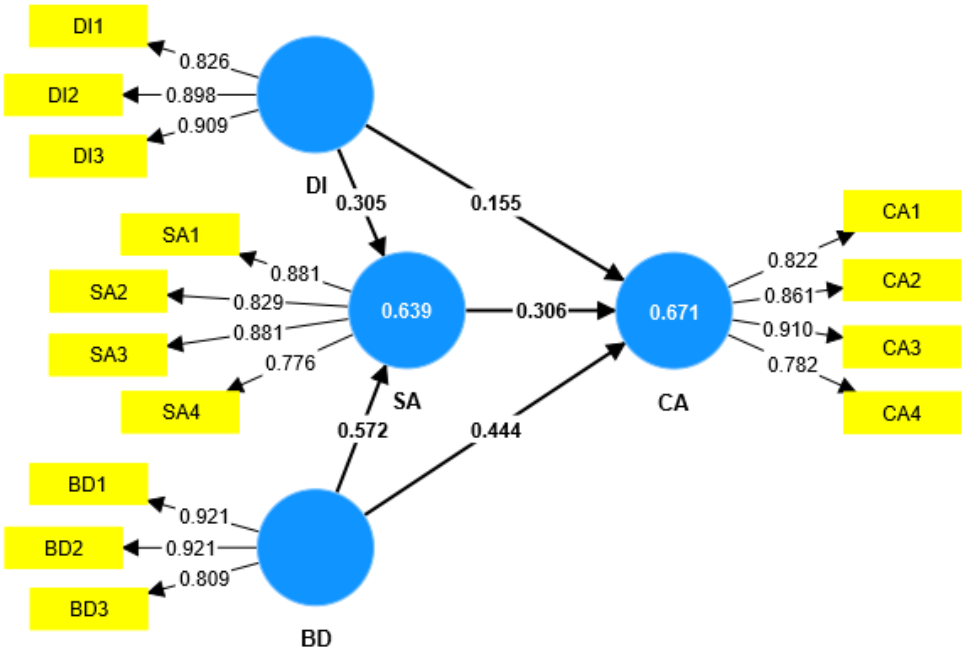

Figure 2: Measurement Model.

TABLE 2: Construct Reliability.

	CA	RA	CR	AVE
Business Digitalization	0,861	0,882	0,915	0,783
Competitive Advantage	0,865	0,869	0,909	0,714
Digital Innovation	0,853	0,876	0,910	0,772
Strategic Alliances	0,863	0,864	0,907	0,710

CA : Cronbach's Alpha; RA : rho_A; CR : Composite Reliability; AVE : Average Variance Extracted

4.3. Discriminant Validity

After conducting a reliability test by examining CR and AVE, Henseler et al. suggested that it is necessary to do a Discriminant Validity (DV) test by looking at the results of the Heterotrait-Monotrait Ratio (HTMT) matrix, which recommends that the measurement value should be less than 0.9 [71]. The research results shown in Table 3 show that all the variables used in this study have good discriminant validity values.

The second criterion used to test the discriminant validity is the criterion of Fornell & Larcker [70], which compares the AVE root value of each construct with the correlation value between constructs. The bold values in Table 4 are the AVE (Average Variance Extracted) root value of each construct, and the numbers that are not in bold are the correlation values between constructs and other constructs in the model. Thus, it can

Table 3: Rasio Heterotrait-Monotrait.

	BD	CA	DI	SA
BD				
CA	0,892			
DI	0,721	0,723		
SA	0,871	0,856	0,756	

BD: Business Digitalization; CA: Competitive Advantage; DI: Digital Innovation; SA: Strategic Alliances

be concluded that all the constructs used in the study have met the discriminant validity requirements.

Table 4: Kriteria Fornell-Lacker.

	BD	CA	DI	SA
BD	**0,885**			
CA	0,774	**0,845**		
DI	0,626	0,636	**0,879**	
SA	0,763	0,747	0,663	**0,843**

BD: Business Digitalization; CA: Competitive Advantage; DI: Digital Innovation; SA: Strategic Alliances

4.4. Structural Model

In the second stage, the data normality test was carried out by applying the bootstrapping process using a large number of samples, 5000, originating from the original sample of 151. This was done for error checking, which produced a P-value to prove the significance of the measurement model under a significance level of 5%. The process of bootstrapping the structural model is shown in Figure 3, with significant effects shown by DI on SA, BD on SA, BD on CA, and SA on CA.

4.5. The Goodness of Fit Model

he five measures applied in this study, SRMR, dULS, dG, Chi-square, and NFI, were used to determine the goodness of model fit obtained by including the exclusion process. Wong (2013) states that the standard SRMR value is less than 0.08 [72]. The research results shown in Table 4 obtained a value of 0.075, and thus, the model is considered suitable. In comparison, the value for NFI ranges between 0 – 1, with a value closer to

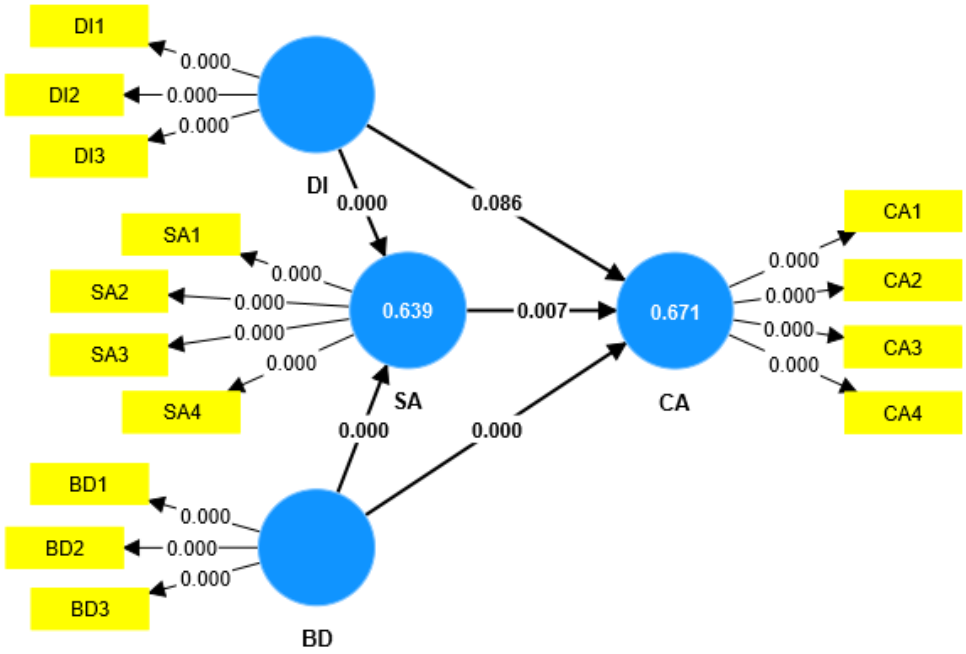

Figure 3: Structural Model.

1 the better. The research results obtained a value of 0.827, indicating a pretty good fit for the model.

TABLE 5: Model Fit.

	SM	EM
SRMR	0,075	0,075
d_ULS	0,593	0,593
d_G	0,319	0,319
Chi-square	272,710	272,710
NFI	0,827	0,827

SM = Saturated Model, EM = Estimated Model

The main downside of this index is that it is sensitive to sample size, it will produce an underestimated value if the sample is less than 200 [73,74], so it is not recommended to be used independently. Therefore, it is necessary to analyze the path coefficient, which results are shown in Table 5.

4.6. Evaluation of the Structural Model

According to the guidelines, the P-Values and T-Values that show a significant effect are $P < 0.05$ and $T > 1.96$. Based on the results of the hypothesis testing, it showed that DI had a significant influence on SA with a value of $T = 5.211$ and $P = 0.000$, both of

TABLE 6: Hypothesis Test Results.

		OS	SM	SD	T Values	P Values	Decision
H1	DI SA	0,305	0,314	0,058	5,211	0,000	Accepted
H2	DI CA	0,155	0,154	0,090	1,718	0,155	Rejected
H3	BD SA	0,572	0,559	0,067	8,596	0,000	Accepted
H4	BD CA	0,444	0,434	0,089	4,966	0,000	Accepted
H5	SA CA	0,306	0,309	0,114	2,691	0,007	Accepted

OS: Original Sample Beta; SM: Sample Mean; SD: Standard Deviation
BD: Business Digitalization; CA: Competitive Advantage; DI: Digital Innovation; SA: Strategic Alliances

which met the guidelines, so hypothesis 1 was accepted. The results also show that DI has no significant effect on CA with a value of T = 1.718 and P = 0.155, both of which do not meet the guidelines, so hypothesis 2 is rejected. The hypothesis test results also show that BD significantly affects SA with a value of T = 8.596 and P = 0.000, where both meet the guidelines, so hypothesis 3 is accepted. BD also has a significant effect on CA as the T-value = 4.966 and P-value = 0.000 met the guidelines, so hypothesis 4 is accepted. Lastly, SA significantly influences CA with a value of T = 2.691 and P = 0.007, both of which meet the guidelines, making hypothesis 5 accepted. These are all shown in Table 5, where not all hypotheses have a significant effect.

5. Discussion

The research results show that digital innovation has a significant effect on the strategic alliance, which means that the digital innovation done by rural banks will determine which party to include in the strategic alliance and what concept should the strategic alliance have so that the aim of the digital innovation, which is to build the competitive advantage of rural banks can be achieved. This is consistent with the study of Klus et al., which shows that the parties in a strategic alliance have different motivations with the same goal of expanding community services access [14]. This study is also supported by Bömer & Maxin [29], which state that digital innovation through strategic alliances allows services to reach the customer base of parties in strategic, thus increasing the competitive advantages of the members of the strategic alliances. However, this study shows that digital innovation does not directly affect competitive advantage, contradicting Shehadeh et al. [67], which was conducted on service companies in Jordan and stated that digital innovation had a significant influence on competitive advantage.

Besides that, this study also contradicts Hidayat et al. [62], which states that company resources affect competitive advantage but will have a more significant impact if used to develop digital innovation first. The analysis results show that realizing digital innovation requires high costs, and rural banks have financial limitations. Besides that, rural banks' markets are rural communities and SMEs who are not highly motivated toward high-level digital services. Thus, innovation targeting markets that are not ready to accept innovation will cause inefficiencies, which might decrease the competitive advantage of rural banks.

This study discovers that business digitalization significantly influences strategic alliances, which simultaneously shows that the business digitalization process affects the decision to enter into strategic alliances. This is consistent with Galera-Zarco et al. [42], which state that digitalization influences business competition, enabling the development of new strategic alliances. The results of this study are also supported by Adner & Kapoor [75] and Pateli & Giaglis [76], which state that current technological capabilities can affect the creation of new value and business operations, thereby encouraging companies to change their business models. Willems et al. also support this study by stating that traditional industries must digitize their business and develop strategic alliances to meet broader market demands and avoid competitor pressures [77]. This is in accordance with research by Haseeb et al. [65] and Imran et al. [66], which state that business digitization can analyze customer behavior and improve services based on customer behavior so that it can increase competitive advantage. However, this research contradicts the research of Lee & Falahat, which states that digitalization has no direct effect on competitive advantage [78]. Besides that, this study contradicts the research of Neubert and Ojala et al., which state that companies should not automatically expect positive results on their international competitive advantage through digitization without concurrently considering the role of other interrelated factors [79,80]. Further studies show that the digitalization of rural banks' business operating in Indonesia, an archipelagic country, has a strategic influence in providing public services with a broader reach without being limited by distance and time so that it can increase the competitive advantage of rural banks.

The findings from this study also show that strategic alliances significantly influence competitive advantage and mediate the relationship between digital innovation and business digitalization on competitive advantage. This indicates that through strategic alliances, rural banks can utilize the resources owned by alliance partners to provide services to customers in a wider range, increasing the competitive advantage of rural

banks. This study is supported by Musa [23], which states that developing competitive advantage in strategic alliances is mainly driven by how strategic alliances are structured to increase competitive advantage. This study also confirms Porter [81], which states that in a rapidly changing business environment, operational efficiency is not a sufficient condition to build competitive advantages. Additionally, this study confirms Barney [11], which states that in order to survive, companies must compete, and in order to survive in various conditions, companies must be adaptive and keep abreast of changes that occur by implementing strategic alliances.

6. Conclusion

This study provides an overview of how innovation factors and digitalization together can encourage the creation of strategic alliances in developing business model innovations and expanding customer service access. So, it can build competitive advantage as an effort to face various challenges of business competition and at the same time respond to challenges of technological developments that disrupt the financial services in Indonesia. This must be used as a momentum for rural banks to comprehensively transform all aspects of customer service through digital technology collaboration with conventional services.

By following current trends, this study has measured how strategic alliances, which are considered important factors and have an impact on the service sector, especially financial services, can build the competitive advantages of rural banks. Besides that, this study also measures how strategic alliances can mediate the relationship between digital innovation and business digitalization with competitive advantages using surveys with a cross-sectional research design.

Based on the results of the research and discussion above, it is concluded that digital innovation has a positive and significant effect on strategic alliances but does not have a direct effect on competitive advantage. Business digitalization has a positive and significant influence on strategic alliances and a positive significant effect on competitive advantage. Strategic alliance shows a positive significant influence on competitive advantage and also mediates the relationship between digital innovation and business digitalization with competitive advantages.

7. Research Limitation

This study helps provide insights for practitioners, especially banking practitioners, in developing a company's competitive advantage. However, there are limitations in which this study is only applied to rural banks in Indonesia, specifically conventional rural banks. Thus, the research results cannot be generalized as the conditions of business competition in each country differ, depending on competition and resources. Therefore, this study is not guaranteed to apply to other business environments. Another limitation is that the data was collected using a questionnaire survey, which results would be different if done by face-to-face interviews. Besides that, uneven knowledge and ability of rural banks regarding digitalization cause the rural banks' perceptions of the implementation of digitalization to vary widely, which also limits this study.

8. Future Research

This study used a questionnaire survey in collecting data, so it is possible for respondents to interpret the questionnaire differently. So, for future research, it is suggested to be carried out using a mixed methods approach, which uses interviews in addition to surveys to get better results. Furthermore, future research might also cover islamic rural banks in addition to conventional rural banks so that the research model can be applied to all types of rural banks in Indonesia or even in other countries.

9. Implication of Research

Overcoming technical challenges in the development of a company is very important, that it urges companies to find the right and feasible solution. This study is significant for companies, especially rural banks in Indonesia, to face the challenges of technological development in encouraging the building of companies' competitive advantage. This study is useful for practitioners, especially banking practitioners, in overcoming problems in improving customer services by utilizing information technology capabilities through strategic alliances. Theoretically, as far as this study is conducted, this study is a pioneer in the relationship between strategic alliance and competitive advantage for conventional rural banks in Indonesia. Therefore, this research contributes to management science by examining the role of strategic alliances in building competitive advantages in the banking industry, especially conventional rural bnks, which can open

new discussions for researchers. This research adds to the empirical literature on management theory by examining the role of digital innovation and business digitalization in strategic alliances to build competitive advantage for companies, which can be used as a reference for future research in the industrial revolution field.

10. Policy Recommendations

Challenges related to the dynamics of the latest technological developments are always hard to solve, especially for companies with limited resources like rural banks. In this regard, it is recommended for rural banks Indonesia to have strategic alliances to improve customer service by taking advantage of the momentum of Industry 4.0. It is recommended for rural banks to adopt information technology to support business digitalization in providing the best service to customers, as business digitalization will be able to manage various business competition challenges.

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