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The Effect of Strategic Flexibility on Survivability with Innovation as Mediator in Cooperatives

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Strategic Flexibility;

Innovation;

Survivability;

Cooperatives;

Uncertainty Environment;

Abstract

This study focuses on the ability of cooperatives, especially savings and loan cooperatives in Malang city, Indonesia; to always maintain their economic activities in the midst of environmental uncertainty, especially in pandemic conditions. With the declining economic capacity of the cooperative members, resulting in a decrease in the active role of members towards cooperatives, which results in the demand for cooperatives to have optimal survival capabilities (survivability). This study aims to determine the effect of strategic flexibility on the cooperative's survivability either directly or indirectly through the role innovation as a mediator. In this study, the sample used was 82 savings and loan cooperatives in Malang city, with a non-probability purposive sampling method, specifically the judgment sampling type; that is, with the fulfillment of certain criteria. Data were collected and measured using 5 Likert Scales and then analyzed using descriptive analysis methods and Partial Least Square (PLS). The results showed that strategic flexibility had a significant effect on innovation and survivability, and the mediation test proved that innovation partially mediate the effect of strategic flexibility on cooperative survivability.

1. Introduction

Cooperative as the pillar of economics is a business entity based on the principle of kinship in order to achieve common goals. Baswir (1997) asserted that cooperatives are a form of business in

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accordance with Article 33 of the 1945 Constitution, in economic and political development to actualize a social justice economy. Based on the 2019 Performance Report (Kementerian Koperasi dan Usaha Kecil dan Menengah Republik Indonesia, 2019), there were 123,048 active cooperatives in Indonesia, a less number compared to 2017. This was due to the Cooperative Reform policy and data collection through the Online Data System (ODS). The cooperative itself is still seen by members as a promised and prosperous business organization platform. However, there are always operational weaknesses and challenges for cooperatives.

In the second quarter of 2020, Indonesia and the whole world were faced with the COVID-19 pandemic. This condition was very sudden, unpredictable, and full of uncertainty; and almost completely attacked the stability and dynamism of the economy (Fitri et al., 2021). This environmental uncertainty encouraged the existence of a strong survival ability of a business. Beside disruption of operational stability in economic activities, cooperatives also experienced disturbances due to members experiencing economic difficulties, which resulted in contributions (active participations) difficulties to cooperatives, as well as loan payments by members of savings and loan cooperatives. This is where cooperatives need to have a flexible strategy in optimizing their survivability.

Supriadi et al. (2020) revealed that the results of his research showed that strategic flexibility had an important role in maintaining business, especially in conditions affected by the pandemic. Previous studies have identified the significance of business survivability. Prommarat dkk. (2015) proposed that the results of the flexibility strategic ability of an organization were: organizational adaptation, organizational excellence, organizational value creation, business performance, business survival; which this preposition still needed to be confirmed in future studies. Contrary to these researchers, in the scope of SMEs, Armstrong (2013) found that flexibility-based strategies could have a negative impact on survivability, but have a positive impact on organizational growth. Pagell & Krause, (2004) in several of their studies also had not found any propositions that support the finding that companies must responded to uncertainty by increasing flexibility.

Previous studies have revealed that strategic flexibility is the antecedent of innovation (Arief et al., 2021). In the context of human resources, Xiu et al. (2017) stated that companies focused on strategic flexibility were more likely use innovative HR practices to develop and maintain dynamic core competencies that were critical in achieving competitive advantage in a rapidly changing environment. Ghorban-bakhsh & Gholipour-kanani (2018) in their study revealed the positive influence of strategic flexibility (resource orientation, robustness, agility, integrity) on innovation (product, process, administrative). On the other hand, the research of Beraha et al. (2018) showed that the configuration of strategic flexibility in production and marketing flexibility had a significant relationship to product innovation, but HR flexibility did not have a significant contribution to product innovation. Another study proposed by Cefis & Marsili (2005) stated that innovation increases the probability of a company's survival by 11%, with process innovation being the main key.

Based on the previous studies, it can be seen that the dimensions used for innovation are different, and show different significances. There were also contradictory results from several academics, in this case there was a difference of opinion regarding the effect of strategic flexibility on survivability. Thus, this study aims to address this research gap by developing a conceptual framework that describes the relationship between strategic flexibility, innovation, and survivablity; and also explains the influence of innovation as a mediator of the relationship between strategic flexibility and survivability. Finally this study provides theoritcal contributions with its model describing the relationship among strategic flexibility, innovation, and survivability; and also provides practical contributions for practitioners such as cooperatives and their management, to prioritize certain factors in order to increase their optimal survivability.

2. Materials and Methods

The theory of strategic flexibility with its application to organizations began to develop decades ago. Lau (1996) defined strategic flexibility as the company's ability to respond uncertainty by adjusting existing objectives supported by superior capabilities and knowledge. As mention before, Prommarat dkk. (2015) proposed that the results of the strategic ability of an organization's flexibility were: organizational adaptation, organizational excellence, organizational value creation, business performance, and business survival. Prommarat dkk. (2017) also showed a direct positive significant relationship between strategic flexibility and survivability. In the research, they used four dimensions on organizational strategic flexibility which were (a) organizational outsourcing orientation (b) business alliance capability (c) inter-organizational teamwork concern, and (d) strategic linkage concentration; then the relationship between strategic organizational flexibility capabilities to business survival is mediated by organizational adaptation, organizational value creation, organizational excellence, and business performance. Meanwhile in the object of a SMEs, Armstrong (2013) found that a flexibility-based strategy could have a negative impact on the ability to survive, but has a positive impact on organizational growth. This researcher stated that small companies applying flexibility-based strategies had risky betting strategies for larger developments. Small companies needed to identify their unique competence in creating opportunities, which other companies could not afford. From the previous literatures, in this study the first hypothesis is proposed as follows:

H1: If Strategic Flexibility is implemented, then higher survivability can be achieved

The Organization for Economic Co-operation and Development / OECD (2005) defined innovation as the implementation of new or significally better product (goods or service), or process, or marketing method, or organizational method in business practice, workplace organization or external relations. Innovation was divided into four types, namely product innovation, process innovation, marketing innovation, and organizational innovation (OECD, 2005). Previous studies stated that the driver of innovation in organizations was if the organization has strong strategic flexibility. Ghorban-bakhsh & Gholipour-kanani (2018) suggested a positive influence of strategic flexibility (resource orientation, robustness, agility, integrity) on innovation (product, process, administrative). This researcher recommended that in increasing strategic flexibility, organizations should evaluated members' proposals in sharing knowledge for product innovation, improving social skills and team communication, also creating a work environment that could promote administrative innovation.

Oke (2007) found that service innovation was more emphasized in the retail and transportation sectors, compared to product innovation which was more emphasized in the telecommunications and financial sectors. Then Prifti & Alimehmeti (2017) suggested that service provider companies were generally more innovative than production companies. Other studies such as Broekaert et al. (2016), Ghorban-bakhsh & Gholipour-kanani (2018), Ko et al. (2018), Liao et al. (2018), also Miroshnychenko et al. (2020) also confirmed a significant positive relationship between flexibility and business innovation. Based on the description above, the researcher proposes the second hypothesis as follows:

H2: If strategic flexibility is implemented, then innovation will increase

Prommarat et al. (2015) defined the survivability of a business as the results of the organization's performance in managing the competitive environment after uncertain conditions, within a certain

period of time. Survivability of an organization depended not only on the function of economic performance, but also on the initiation of performance. Researchers such as Cefis & Marsili (2005) and Rahman et al. (2016) stated that innovation is an important key for organizations to survive. Cefis & Marsili (2005) stated that innovation increases the probability of a company's survival by 11%, with process innovation being the main key. In the scope of SMEs, Rahman et al. (2016) argued that by increasing technological innovation, survivability of SMEs could be extended so that their business were able to grow and develop. In another study in Nigeria, Gabriel & Arbolo (2015) proved that innovation as part of an entrepreneurial orientation had a significant positive effect on the organization's survivability. So in this study the third hypothesis is proposed as follows:

H3: If innovation is implemented, it can achieve higher survivability

As mention before, the research conducted by Gabriel & Arbolo (2015) showed how innovation as part of an entrepreneurial orientation had a direct and significant positive effect on organizational survival; while at the same time showing the positive influence of entrepreneurial orientation on organizational survival through the mediation of HR management. In another study, innovation was found to have a significant positive effect on its position as a mediator variable. For example, Camison & Lopez (2010) and Xiu et al. (2017) found a significant positive effect of innovation as a mediator between strategic flexibility on performance. Performance in several studies was mentioned as an antecedent of survivability (Bonn, 2000; Suraya et al., 2020; Walter et al., 2014). Those researcher stated that organizations with good performance have a higher probability of survival ability. Overall based on various studies, survivability could be influenced by innovation (Cefis & Marsili, 2005; Rahman et al., 2016) and strategic flexibility (Prommarat et al., 2015). Meanwhile, strategic flexibility itself was the antecedent of innovation (Broekaert et al., 2016; Ghorban-bakhsh & Gholipour-kanani, 2018; Ko et al., 2018; Liao et al., 2018; Miroshnychenko et al., 2020).

A variable is required to meet two conditions to be a mediating variable. First, there is a direct relationship between the two observed variables, and in this study there is a direct relationship between the strategic flexibility variable and the survivability. Second, there is a relationship between the two observed variables and the variable that will mediate. In this study, there is a relationship between strategic flexibility and innovation, and also between innovation and survivability. Therefore, innovation has fulfilled the requirements to be tested as a mediating variable on the relationship between strategic flexibility and survivability. In this study, innovation is expected to act as a mediator of the relationship between strategic flexibility and survivability. Therefore, the researcher proposes the fourth hypothesis as follows:

H4: Innovation mediates the relationship between strategic flexibility on survivability

Study related to the relationship between strategic flexibility, innovation, and survivability was still needed to be explored and developed; so that it could provide theoretical and practical contributions, a framework with the relationship between variables is proposed as follows:

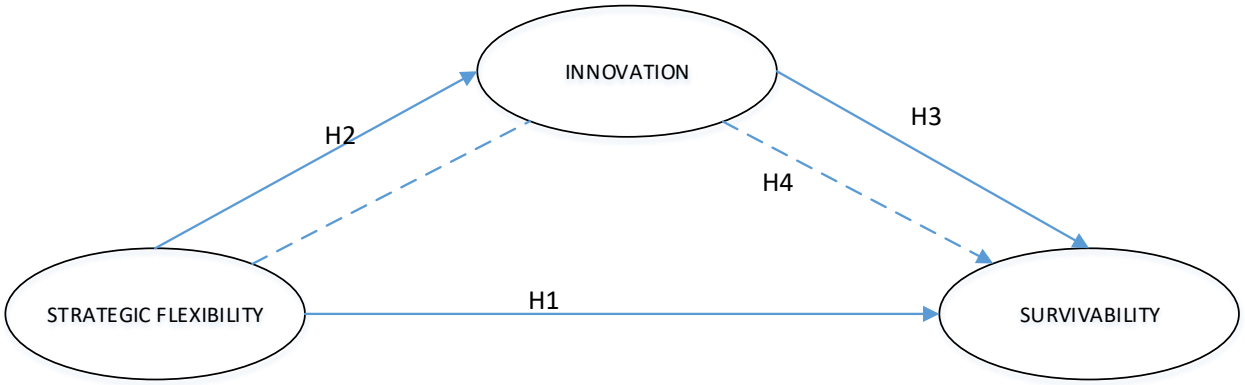


Figure 1. Conceptual Model

The research method used in this study is a quantitative research method and based on its objectives, this research is an explanatory research. The research was conducted in 2021 with the object of research being cooperatives in the Malang area which were considered to represent the condition of cooperatives in general in Indonesia. Based on Hair et al. (2010) and Sekaran & Bougie (2016), this study needed to determine as many as 70 samples of Savings and Loan Cooperatives in the Malang City area.

This study uses Likert scale to shows how strong the support or disagreement is in the five points. Data in the form of attitudes, opinions, perceptions needed to be quantified with numerical codes so that statistical analysis and hypothesis testing could be carried out (Sekaran & Bougie, 2016; Sugiyono, 2015). Data collection method was done by distributing questionnaires to cooperatives; which was done directly in physical form or in the form of an online questionnaire.

To test the validity of the instrument, some questionnaires were tested on several respondents; then compared with the Pearson Product Moment correlation index; the test results were valid if the value of r count > r table or the significance value of the correlation results < alpha (0.05). Therefore the instruments of this research questionnaire were valid. Reliability test could be done in two ways, namely repeated measurement; and also one shot measurement (Ghozali, 2018) using the Cronbach's Alpha test. The value obtained would be compared with the minimum acceptable reliability coefficient value (Cronbach's Alpha > 0.6).

In testing the Structural Equation Modeling (SEM), this study analyzed Partial Least Square (PLS) using SmartPLS software. It was also used for model measurement (outer model), model structure (inner model) and hypotheses testing. In analyzing this outer model, the relationship between variables and indicators were described. Several tests were carried out on the outer model analysis: validity test (convergent validity & discriminant validity) and reliability test (composite reliability & Cronbach's Alpha). This inner model analysis was used to ensure that the structural model developed to be robust and accurate. Consists of two main steps, namely by comparing the R^2 value of the construct and by measuring the Q^2 value; which were then followed by an analysis of its Goodness of Fit Index.

Then PLS analysis was carried out to test hypotheses related to the direct influence between variables (supported or not), by determining the significant level or critical value (α) of 5% and comparing the t-statistic value on the bootstraping output display of the smartPLS program with the value on the t-table. Furthermore, in measuring the influence of the mediating variable factors, this study used mediation analysis with the Variance Accounted For (VAF) method developed by Hair et al. (2014).

3. Results and Discussions

Pilot test

A pilot test of the research instrument using Pearson product-moment correlation was conducted on 30 samples, to measure the validity and reliability of the questionnaire as a tool to collect data. As it was found that item MI5 and MI6 have a value of r (correlation coefficient) < r table (correlation table = 0.361), these items could not be used as data collection tool in this study; then the model needs to be re-estimated. The validity test was carried out again, and all items had the r correlation coefficient value > r table (correlation table). Therefore the questionnaire items in each indicator that measure the variables of strategic flexibility, innovation, and survivability were declared valid, so they can be used as a data collection tool in this study. Reliability test was conducted right after. Each indicator measuring the variables of strategic flexibility, innovation, and survivability yields Cronbach's Alpha values of more than 0.6. All items, indicators, and variables in this study that had been proven reliable and consistent would also provide consistent data; which also means that if the statements were resubmitted, it will get answers that were relatively the same as the previous answers.

Description of respondents

Data were obtained from 87 respondents, and from those, this study determined 82 respondents who met the criteria. The demographic data of the respondents are presented in Table 1.

Table 1
Demography of Respondents

Variable		Frequency	Percentage
Cooperatives Age	≤ 10	18	22%
	11 - 20	23	28%
	21 - 30	24	29%
	31 - 40	8	10%
	> 40	9	11%
Number of cooperative members	0 - 100	42	51%
	101 - 200	19	23%
	201 - 300	9	11%
	301 - 400	3	4%
	401 - 500	1	1%
	501 - 600	2	2%
	601 - 700	1	1%
	> 700	5	6%
Respondent Gender	Male	28	34%
	Female	54	66%

Respondent Age	31 - 40	18	22%
	41 - 50	37	45%
	51 - 60	16	20%
	> 60	3	4%
	Not willing to say	**8**	10%
Management Position	Chairman	15	18%
	Secretary	18	22%
	Treasurer	36	44%
	Other	13	16%
Latest received Cooperatives Remaining Income	0 - 500.000	17	21%
	500.000 - 1.000.000	32	39%
	1.000.000 - 1.500.000	12	15%
	2.000.000 - 3.000.000	1	1%
	> 3.000.000	8	10%
	Not willing to say	12	15%

Descriptive Analysis

The results of the Likert scale questionnaire were given weight and the average value of the respondents' answers would show how much the respondent's level of agreement were. The answer to the respondent's statement on the strategic flexibility variable showed a fairly positive response with an average value of 3.63. More than 60% of respondents answered the questions with “agree” and “strongly agree”, and 29.7% of neutral answers. Based on Terano (2015), the average value of 3.63 was included in the acceptable category.

The average value obtained by the innovation variable was 3.79, with almost 70% of respondents answering “strongly agree” and “agree”. The indicator with the largest average value was organizational innovation with an average value of 4.24. This score indicated that the cooperatives represented by the respondents implement innovations in their organizations, which included internal commitment and cooperation, customer satisfaction, product/service quality, as well as a culture of creativity and innovation.

Lastly, the average value obtained by the survivability variable was 3.99 or almost close to 4 which means “agree”, with as many as 80% of respondents answered “agree” and “strongly agree”. Respondents felt that their cooperative already had a fairly good survivability.

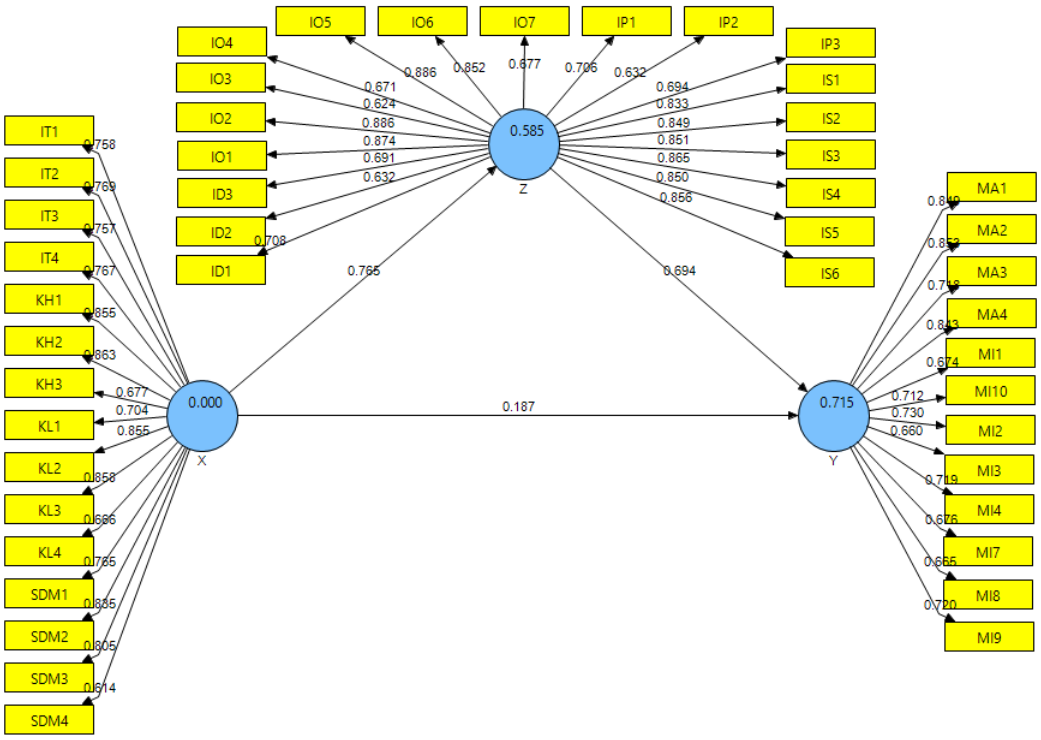


Figure 2. Path Diagram

Outer model evaluation

Validity and reliability tests on indicator items needed to be carried out before hypothesis testing could be carried out. The first step to test the validity of this research was to use convergent validity. This validity test would determine the validity of an item in measuring dimensions and variables. For each item, convergent validity in the measurement of variables would be shown how big or small the loading factor were. The loading factor which had a positive value and more than 0.6, indicated the validity of a statement item (Hair et al., 2014). Table 2 illustrates that all items have a value above 0.6 and shows the validity of the statement items. The strategic flexibility variable was measured by 15 items, the innovation variable was measured by 19 items, and the survivability variable was measured by 12 items; all of these items had a loading factor value greater than 0.6 and were declared valid. Based on table 2, it showed that all the variables in this study, namely the variables of strategic flexibility, innovation, and survivability, resulted in an Average Variance Extracted (AVE) value greater than 0.5. Thus, the items in each variable are declared valid to measure the variables.

Table 2
Loading Factor, AVE, Composite Reliability, Cronbach's Alpha

	Loading Factor	AVE	Composite Reliability	Cronbach's Alpha
SDM1	0.765	0.598	0.957	0.951
SDM2	0.835			
SDM3	0.805			
SDM4	0.614			
KH1	0.855			

KH2	0.863			
KH3	0.677			
KL1	0.704			
KL2	0.855			
KL3	0.858			
KL4	0.666			
IT1	0.758			
IT2	0.769			
IT3	0.757			
IT4	0.767			
ID1	0.708	0.603	0.966	0.962
ID2	0.632			
ID3	0.691			
IP1	0.706			
IP2	0.632			
IP3	0.694			
IS1	0.833			
IS2	0.849			
IS3	0.851			
IS4	0.865			
IS5	0.850			
IS6	0.856			
IO1	0.874			
IO2	0.886			
IO3	0.624			
IO4	0.671			
IO5	0.886			
IO6	0.852			
IO7	0.677			
MI1	0.674	0.545	0.934	0.923
MI2	0.730			
MI3	0.660			
MI4	0.719			
MI7	0.676			
MI8	0.665			
MI9	0.720			
MI10	0.712			
MA1	0.849			
MA2	0.853			
MA3	0.718			
MA4	0.843			

Discriminant validity was tested by comparing the value of the cross loading factor. When the value of the cross loading items against the intended construct were greater than the crossloading value of other constructs, the indicators were declared valid (Ghozali & Latan, 2015). Then the next step was to take into account the discriminant validity which was calculated using cross loading with the criteria that if the loading factor values were greater than the correlation between items and other variables, then the items were declared valid in measuring the appropriate variable, as presented in table3.

Table 3
Cross Loading Factor

		Strategic Flexibility	Innovation	Survivability
Strategic Flexibility	Resource Orientation	(0,755)	0,575	0,530
	Robustness	(0,798)	0,635	0,573
	Agility	(0,771)	0,582	0,534
	Integrity	(0,763)	0,548	0,564
Innovation	Product	0,560	(0,677)	0,506
	Process	0,554	(0,677)	0,506
	Market	0,668	(0,851)	0,684
	Organization	0,553	(0,781)	0,720
Survivability	Microeconomy	0,530	0,589	(0,694)
	Macroeconomy	0,519	0,664	(0,816)

In measuring reliability, it was found that the values of composite reliability on the variables of strategic flexibility, innovation, and survivability were greater than 0.7. Based on the calculation of composite reliability, all items that measure the variables of strategic flexibility, innovation, and survivability were reliable. Also, the value of Cronbach's Alpha on the variables of strategic flexibility, innovation, and survivabilty was greater than 0.6; which mean all items measuring the variables of strategic flexibility, innovation, and survivability were declared reliable, as shown in table 2.

Inner model evaluation

The next analysis was to evaluate the inner model / structural model. In this study, analysis of the coefficient of determination (R^2), predictive relevance (Q^2) and Goodness of Fit (GoF) needed to be done. First, evaluation of R^2 on the innovation variable was carried out and it resulted in a value of 0.585 or 58.5%. This value showed the strength of the contribution of the strategic flexibility variable to the innovation variable is moderate (Vinzi et al., 2010). The diversity of innovation variables, explained by the strategic flexibility variable of 58.5%. Meanwhile, R^2 of the survivability variable with a value of 71.5% indicated that the diversity of the survivability variable could be explained by the strategic flexibility and innovation variable with the value of 71.5%. This value of 0.715 also showed that the contribution strength of the strategic flexibility and innovation variable to the survivability variable were quite strong.

Calculation of Q-Square predictive relevance (Q^2) of 0.882 or 88.2% showed a strong correlation in this model. The contribution of the strategic flexibility and innovation variable to the overall survivability variable was 88.2%, while the remaining 11.8% considered as the contribution of other variables not discussed in this study. The value of Goodness of Fit in the study, which was 0.611, based on the effect calculation scale by Cohen (1988) was classified as large. After analyzing the inner model, namely the calculation of R^2, Q^2, and GoF; it can be concluded that the model in this study is reliable. A summary of the evaluation of the inner model is presented in table 4.

Table 4
Inner Model Analysis

Endogen Variables	**R^2**
Innovation	0,585
Survivability	0,715
$Q^2 = 1 - [(1 - R_1^2)(1 - R_2^2)$	
$Q^2 = 1 - [(1 - 0.585)(1 - 0.715)] = 0.882$	
$\sqrt{Com\ x\ R^2} = \sqrt{0.574\ x\ 0.65} = 0.611$	
GoF =	

Hypotheses test

The path diagram model of this study is shown in figure 2, with survivability (Y) as independent variable, strategic flexibility as dependent variable (X), and innovation as mediating wariabel (Z). Hypothesis 1 proposed that by applying strategic flexibility, higher survivability will be achieved. The calculation results showed the effect of strategic flexibility on the survivability resulting in a path coefficient of 0.187 (positive value) with a t-statistics value of 2.069 (t-statistics value > t table (1.96)). The second hypothesis stated that with the application of strategic flexibility, it will increase innovation. Strategic flexibility had an influence on innovation with a path coefficient of 0.765 (positive) with a t statistics value of 18.809. The third hypothesis proposed that by implementing innovation, a higher survivability will be achieved. Innovation had a positive significant effect on survivability with a path coefficient of 0.694 (positive) and t statistics value of 8.120. The calculation above showed that strategic flexibility variable and innovation variable had a positive significant effect on the survivability variable, and the strategic flexibility variable had a positive significant effect on the innovation variable. Of the three hypotheses related to the direct relationship between variables, it can be stated that hypotheses 1, 2, and 3 are accepted.

Table 5
Hypotheses test

Hypothesis	Path	Path Coefficient	Standard Error	t- statistic	Result
H1	FS -> SV	0.187*	0.090	2.069	Supported
H2	FS -> IN	0.765*	0.041	18.809	Supported
H3	IN -> SV	0.694*	0.085	8.120	Supported

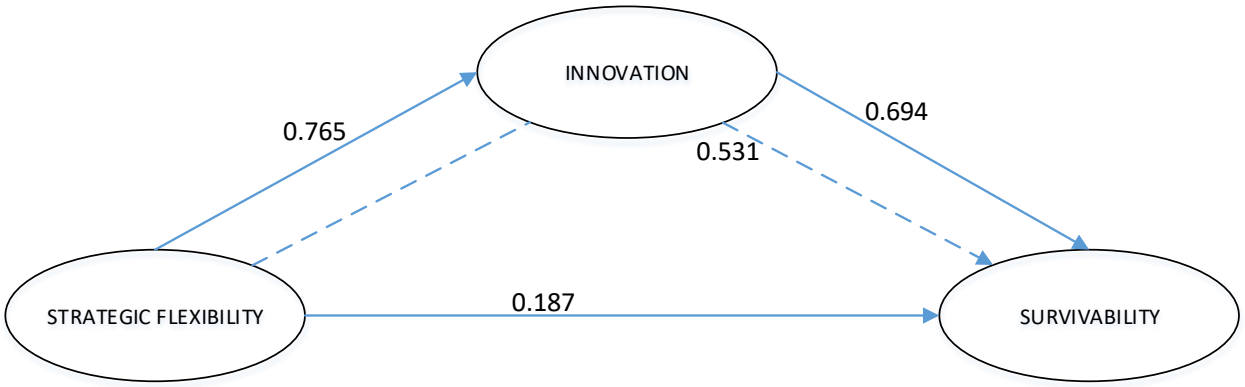


Figure 3. Tested model

Hypothesis 4 proposed the mediating effect of innovation mediators on the relationship between strategic flexibility and survivability. To evaluate the mediating effect, this study implemented Sobel test analysis and Variance Accounted For (VAF) test. In the Sobel test, the effect of strategic flexibility on innovation-mediated survivability was obtained by the T statistics value of 7.480; which meant more than the T-table value (1.96). Furthermore, the VAF value for the mediating effect of innovation on strategic flexibility – survivability relationship was 74%. The mediating variable with a VAF value between 20 and 80 percent considered to be a partially mediating variable. So it can be concluded that innovation partially mediates the relationship between strategic flexibility and its effect on survivability.

Table 6
Mediating variable test

Hypothesis	Path	Direct Coefficient	Indirect Coefficient	Total Path Coefficient	Sobel Test			VAF
					Test statistic:	Std. Error:	*p*-value:	
H4	FS -> IN -> KB	0.187*	0.531*	0.718*	7,4799202	0,07097803	0	74,00%

4. Conclusion

Studies about the relationship of strategic flexibility and survivability got varied results, tend to be inconsistent. Although the value was not too large, the results of this study found a positive relationship between strategic flexibility and survivability. This was in line with the research of Prommarat et al. (2017) who found a direct positive relationship of flexibility to survivability. On the other hand, this research did not support the study of Armstrong (2013) and Pagell & Krause (2004). In his research, Armstrong (2013) showed that survivability could be achieved with a competency-based strategy and assessed that a flexibility-based strategy could actually jeopardize the cooperative's survivability. More or less the results of Armstrong's (2013) research were also reflected in the respondents' answers in this study. The agility indicator got the lowest average score with the lowest item related to the ability of cooperatives to change the strategy and technical composition of HR (eg rotation / allocation of personnel) to benefit from environmental changes. This

showed that cooperatives were still unable to apply their agility flexibly in changing the allocation of human resources, and were still considering the competence of human resources and their implications for the cooperative's survivability; so that even though the acceptance value was obtained, the average value of this factor was the smallest.

Regarding the innovation variable, the indicator that needed attention was the product innovation factor, especially in terms of developing product/service lines on a regular basis. The research questionnaire exemplified the development of this product / service line on a regular basis, for example in terms of developing product / service values, as well as developing types of product / service variants. In this product innovation indicator, the product/service launch factor and the ability to accommodate customized products/services got higher scores. And also overall on this innovation variable, the marketing innovation indicator got a much higher value. In examining the relationship between strategic flexibility and innovation, this study supported previous studies such as Ghorban-bakhsh & Gholipour-kanani (2018). Their research showed the positive influence of strategic flexibility (resource orientation, robustness, agility, integrity) on innovation (product, process, administrative). Do et al. (2016) and Xiu et al. (2017) also showed how the relationship of strategic flexibility had a positive influence on innovation in the context of HR. In this study, the relationship between strategic flexibility and innovation enriched the results of previous research by showing a wider positive significant effect, namely strategic flexibility in the scope of resource orientation, robustness, agility, and integrity; towards innovation in the scope of product, process, marketing, and organizational innovation.

The application and improvement of innovation in the context of product (service), process, marketing, and organizational innovation; would encourage the improvement of cooperative survivability. For example, in the uncertainty condition (related to competition or in a pandemic situation), cooperatives were required to be able to innovate in order to maintain their operational activities. Most of the respondent (cooperatives) in this study considered that innovation as a fundamental strategy of the cooperative's vision and mission, must be implemented and improved, which prioritized by innovation in improving the quality of products / services / services; in order to increase their survivability. If to look at the answers of the respondents, they uphold transparency and inventory of goods and money, as well as the implementation of strategies to increase enthusiasm and dedication, and always have a medium-term periodic work plan. Cooperatives prioritized the principle of kinship and uphold the interests of their members.

Regarding the relationship between innovation and survivability, the results of this study were in line with the findings of Cefis & Marsili (2005) and Rahman et al. (2016). The two researchers argued that innovation increases survivability with different innovation foci. In increasing survivability, Cefis & Marsili (2005) focused more on process innovation, while Rahman et al. (2016) more on increasing technological innovation.

As discussed, the acceptance of hypothesis 1 (direct relationship of strategic flexibility to survivability) with a path coefficient value of 0.187, was still smaller than the the indirect effect coefficient value of strategic flexibility on survivability through innovation which is 0.531. So that it could be interpreted that with good strategic flexibility in cooperatives, it encouraged cooperatives to be able to innovate, so that it affected the survivability of cooperatives as well. Specifically, the strategic flexibility developed including strategic flexibility in resources, strategic flexibility with a focus on the robustness, agility, and integrity of cooperatives; so that cooperatives are encouraged to develop innovations in products (services), processes, marketing, and organizational innovations; which in turn increased the cooperative's survivability, both in terms of microeconomics and macroeconomics.

Innovation played an important role in increasing the effect of strategic flexibility relationship on cooperative survivability. The ideology and mentality to constantly innovate needed to be developed

in all managerial lines of the cooperative. This study also recommended to prioritize the focus of innovation on improving the quality of products/services, which also meant that cooperatives were expected to improve the quality of products/services in a way that had never been done before, either by other cooperatives or by other competing businesses.

The results of this study indicated the role of strategic flexibility in influencing innovation and also the effect on survivability (although the value is not as large as if there is an innovation mediation). This research proved that increasing strategic flexibility would encourage increased innovation and then increased survivability. It also suggested increasing strategic flexibility with a priority on the orientation of the robustness of strategic flexibility itself. This could be done by implementing new opportunities and methods, re-evaluating, and having the courage to take a quick and appropriate attitude whether to use a new method or use an old method if it were considered more effective.

Survivability itself is an important aspect in the sustainability of the economic activities of a business, including being a milestone to be able to further develop these economic activities. In this uncertainty conditions, such as the world of competition and the pandemic conditions being faced, the survivability of economic activity and the business itself were a priority for many business actors. This study confirmed that survivability spanning both microeconomic and macroeconomic factors could be improved by increasing strategic flexibility and innovation. Based on the results of this study, macroeconomic factors had a greater weight in measuring the cooperative's survivability. Parameters of cooperative survivability could be seen from the geographical location of the cooperative, the experience of cooperative in certain activities, the extent to which cooperatives were able to operate during the pandemic, and the extent to which cooperatives were able to face competition. In order to increase the experience of cooperatives to strengthen their survivability, cooperatives needed to apply the ideology of flexibility to strengthen their strategy, improved innovation lines and prioritized innovation on product/service quality.

Limitations and future research

Besides providing some theoretical and practical contributions, this research had some limitations that needed to be acknowledged. The main limitation was that there are obstacles in collecting data in the field due to pandemic conditions which affecting in the activity resrtrictions in Indonesia, resulting in an extension of time for data collection to meet the required sample. Another limitation, of course, related to the limitations of the scope of the research itself, both in terms of objects and dimensions, demographics, and also socio-cultural factors; which encouraged the development of further research. This research could still be developed in other business and management sectors. Objects could be developed into cooperatives in general (not just saving and loan cooperatives), SMEs, and large companies. The range of respondents can also be expanded to obtain data that better describes a broader situation and enriches research results.

Variables that affect the survivability could still be explored. This study examined the relationship between strategic flexibility and the survivability through innovation, while Prommarat et al. (2017) examined the relationship of strategic flexibility through organizational adaptation, organizational value creation, organizational excellence; through business performance; on survivability. Future research could examine the relationship between innovation and performance in terms of mediating the relationship between strategic flexibility and survivability. Lastly, the next step when economic business activities were deemed viable was to increase business /organizational growth. This study could be developed by making strategic flexibility and innovation as variables that affect the survivability to increase business/organizational growth.

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References

Arief, N. R., Purwana, D., & Saptono, A. (2021). Effect of Quality Work of Life (QWL) and Work-Life Balance on Job Satisfaction through Employee Engagement as Intervening Variables. *The International Journal of Social Sciences World (TIJOSSW)*, *3*(01), 259-269.

Armstrong, C. E. (2013). Competence or flexibility ? Survival and growth implications of competitive strategy preferences among small US businesses. *Journal of Strategy and Management*, *6*(4), 377–398. https://doi.org/10.1108/JSMA-06-2012-0034

Baswir, R. (1997). *Peran Koperasi dalam Mewujudkan Perekonomian yang Berkeadilan Sosial*. *2*.

Beraha, A., Bingol, D., Ozkan-Canbolat, E., & Szczygiel, N. (2018). The effect of strategic flexibility configurations on product innovation. *European Journal of Management and Business Economics*, *27*(2), 129–140. https://doi.org/10.1108/EJMBE-02-2018-0028

Bonn, I. (2000). Staying on top: Characteristics of long-term survival. *Journal of Organizational Change Management*, *13*(1), 32–48. https://doi.org/10.1108/09534810010371341

Broekaert, W., Andries, P., & Debackere, K. (2016). Innovation processes in family firms: the relevance of organizational flexibility. *Small Business Economics*, *47*(3), 771–785. https://doi.org/10.1007/s11187-016-9760-7

Camison, C., & Lopez, A. V. (2010). *An examination of the relationship Manufacturing between manufacturing flexibility and firm performance The mediating role of innovation*. *30*(8), 853–878. https://doi.org/10.1108/01443571011068199

Cefis, E., & Marsili, O. (2005). *A matter of life and death : innovation and firm survival*. *14*(6), 1167–1192. https://doi.org/10.1093/icc/dth081

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (Second). Lawrence Erlbaum Associates.

Do, B., Yeh, P., & Madsen, J. (2016). *Exploring the relationship among human resource flexibility, organizational innovation and adaptability culture*. *10*(4), 657–674. https://doi.org/10.1108/CMS-01-2016-0022

Fitri, R. L., Handaru, A. W., & Yohana, C. (2021). The Effect of Recruitment, Selection, and Placement on Employee Performance. *The International Journal of Social Sciences World (TIJOSSW)*, *3*(2), 90-97.

Gabriel, J. M. O., & Arbolo, K. G. (2015). Entrepreneurial Orientation and Survivability of Banks in Nigeria: The Mediating Role of Human Capital Management. *The European Business and Management Conference*. www.iafor.org

Georgsdottir, A. S., & Getz, I. (2004). How Flexibility Facilitates Innovation and Ways to Manage it in Organizations. *Creativity and Innovation Management*, *13*(3), 166–175. https://doi.org/10.1111/j.0963-1690.2004.00306.x

Ghorban-bakhsh, R., & Gholipour-kanani, Y. (2018). *Investigating the Impact of Strategic Flexibility on Organizational Innovation*. *8*(3), 1–5.

Ghozali, I. (2018). *Aplikasi Analisis Multivariate Dengan Program IBM SPSS 25* (IX). Fakultas Ekonomika dan Bisnis Universitas Diponegoro Semarang.

Ghozali, I., & Latan, H. (2015). *Partial Least Squares Konsep, Teknik dan Aplikasi Menggunakan*

Program SmartPLS 3.0 Untuk Penelitian Empiris (2nd ed.). Badan Penerbit Universitas Diponegoro.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Pearson.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A PRIMER ON PARTIAL LEAST SQUARES STRUCTURAL EQUATION MODELING (PLS-SEM)*.

Kementerian Koperasi dan Usaha Kecil dan Menengah Republik Indonesia. (2019). *Laporan Kinerja Tahun 2019*.

Ko, W. wai joyce, Liu, G., Ngugi, I. K., & Chapleo, C. (2018). *External supply chain flexibility and product innovation performance*. *52*(9), 1981–2004. https://doi.org/10.1108/EJM-07-2017-0466

Lau, R. S. M. (1996). Strategic Flexibility: A New Reality for World-Class Manufacturing. *SAM Advanced Management Journal*, *61*(2), 11.

Liao, S., Liu, Z., Fu, L., & Ye, P. (2018). *Investigate the role of distributed leadership and strategic flexibility in fostering business model innovation*. *13*(1), 93–112. https://doi.org/10.1108/CMS-02-2018-0420

Miroshnychenko, I., Strobl, A., Matzler, K., & Massis, A. De. (2020). Absorptive capacity , strategic flexibility , and business model innovation : Empirical evidence from Italian SMEs. *Journal of Business Research*, *February 2019*, 1–13. https://doi.org/10.1016/j.jbusres.2020.02.015

OECD. (2005). *Oslo Manual Guidelines For Collecting And Interpreting Innovation Data* (3rd ed.). OECD.

Oke, A. (2007). Innovation types and innovation management practices in service companies. *International Journal of Operations & Production Management*, *27*(6), 564–587. https://doi.org/10.1108/01443570710750268

Pagell, M., & Krause, D. R. (2004). *Re-exploring the relationship between flexibility and the external environment &*. *21*, 629–649. https://doi.org/10.1016/j.jom.2003.11.002

Prifti, R., & Alimehmeti, G. (2017). Market orientation, innovation, and firm performance—an analysis of Albanian firms. *Journal of Innovation and Entrepreneurship*, *6*(1). https://doi.org/10.1186/s13731-017-0069-9

Prommarat, P., Pratoom, K., & Muenthaisong, K. (2015). *A Conceptual Model of Strategic Organizational Flexibility Capability and Business Survival*. *14*(2), 77–93.

Prommarat, P., Pratoom, K., & Muenthaisong, K. (2017). Strategic Organizational Flexibility Capability and Business Survival: An Empirical Investigation of Tour Business in Thailand. *AU-GSB e-JOURNAL*, *9*(1), 61–82.

Rahman, N. A., Yaacob, Z., & Radzi, R. M. (2016). An Overview of Technological Innovation on SME Survival : A Conceptual Paper. *Procedia - Social and Behavioral Sciences*, *224*(August 2015), 508–515. https://doi.org/10.1016/j.sbspro.2016.05.427

Sekaran, U., & Bougie, R. (2016). *Reserach Methods for Bussiness A Skill-Bulding Approach*.

Sugiyono. (2015). *METODE PENELITIAN PENDIDIKAN Pendekatan Kuantitatif, Kualitatif, dan R&D* (22nd ed.). ALFABETA.

Supriadi, Y. N., Eeng, A., Adi, W. L., Chairul, F., & Dodi, S. (2020). Strategic Flexibility In Mediating The Effect Of Entrepreneurial Orientation And Dynamic Environment On Firm Performance. *International Journal of Scientific & Technology Research*, *1*(1), 324. http://www.ijstr.org/final-print/aug2020/Strategic-Flexibility-In-Mediating-The-Effect-Of-Entrepreneurial-Orientation-And-Dynamic-Environment-On-Firm-Performance.pdf

Suraya, E., Azis, N., & Majid, M. S. A. (2020). Does Performance Matter for Business Survival Based on the Enhancement of Locus of Control and Business Competence? The Case of Micro Small and Medium Enterprises. *Sumerianz Journal of Business Management and Marketing*, *3*(July), 98–106.

Terano, H. J. R. (2015). Development and Acceptability of the Simplified Text with Workbook in Differential Equations as an Instructional Material for Engineering. *Asia Pacific Journal of*

Multidisciplinary Research, *3*(4), 89–94.

Upton, D. M. (1994). The Management of Manufacturing Flexibility. *California Management Review*, *36*(2), 72–89. https://doi.org/10.2307/41165745

Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). Handbook of Partial Least Squares Concepts, Methods and Applications. In *Springer*. Springer-Verlag Berlin Heidelberg. https://doi.org/10.1007/978-3-540-32827-8_16

Walter, L. A., Edelman, L. F., & Hatten, K. J. (2014). The US brewing industry, strategic windows and survival. *Journal of Management History*, *20*(4), 434–458. https://doi.org/10.1108/JMH-02-2014-0017

Xiu, L., Liang, X., Chen, Z., & Xu, W. (2017). *Strategic flexibility , innovative HR practices , and firm performance A moderated mediation model*. *46*(7), 1335–1357. https://doi.org/10.1108/PR-09-2016-0252