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The Influence of Product Innovation on Investment Interest Through Business Networks As an Intervening Variable in Startup Companies in Indonesia

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Abstract.
In carrying out innovation, all human resources in startup companies need the same market orientation to unite the perception of startup company management to jointly understand customer desires and create original values in the new products produced. This research is the first to discuss the impact of innovation on investment interest in startup companies through business networks, especially startup companies in Indonesia. Therefore, this research is very suitable to be carried out as an effort to develop knowledge, especially regarding the impact of product innovation on investor interest in startup companies in Indonesia. Of course, this point is novel, so this research is worth doing. The population in this study was 2419 with a sample size of 300 respondents. The technique used is SEM PLS. The results of the study show that product innovation has a significant and influential effect on investment interest in startup companies in Indonesia. Product innovation has a significant impact on business networks in startup companies in Indonesia. Business networks have a significant influence on investment interest in startup companies in Indonesia. Product innovation has a significant influence on investment interest in startup companies in Indonesia through business networks as an intervening variable.

Keywords: product innovation, investment interest, business network

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1. INTRODUCTION

Currently the government is encouraging people to become entrepreneurs, the real manifestation of which is that the government wants people to become entrepreneurs by including an entrepreneurial curriculum at certain levels of education. Entrepreneurship education starts from middle school to university. It is hoped that when people complete their education, they will develop a desire for entrepreneurship and will already have knowledge about entrepreneurship. Because by becoming an entrepreneur, school and college graduates will not be unemployed and can even create employment

opportunities. By not being unemployed and opening up job opportunities, the problem of poverty can be reduced by the government. Startup companies are companies that have a high failure rate. Based on records carried out by the forbes.com site, it is known that 90% of startup companies operating in the world fail and eventually close (Aras et al., 2021). This is considered normal because startup companies are designed and built to create products and services in conditions full of business uncertainty. The conditions prone to failure experienced by startup companies are in the first 120 days. Thus, the opportunity for startup companies to develop globally and in Indonesia is not directly proportional to the company's success in continuing to survive and become a large company (Hardiansyah & Tricahyono, 2019).

Startup problems in general consist of financial problems, namely, limited funds so that investors need to invest their capital in startup companies, the government's systematic and intense approach that is less than optimal for startup companies, high initial capital costs for establishing startup companies, lack of ability of startup company management to opening access to banks, as well as high bank credit interest are also problems for startup companies. Meanwhile, non-financial problems include low knowledge of marketing techniques, lack of skilled and creative human resources and limited knowledge about the business being managed (Surya et al., 2021). Many startup companies lack the ability to run their business and even tend not to control the business they run. Startup company management is unable to read the products that the market wants, and is even unable to determine which market they want to target. The limitations as mentioned above are an iceberg phenomenon that must be resolved properly.

Then, this research realizes that when innovation has been carried out by a startup company, it does not mean that it is easy to achieve high business performance, because the startup company must consider the business network it has to be able to market the product innovation it has made so that it is accepted by the market. Research on the impact of product innovation on the formation of business networks has not been carried out before. States that a company's business network encourages innovation in the company. However, by using reverse thinking logic, this research suspects that good product innovation will shape the company's business network for the better, so that the expected business performance can actually be achieved optimally.

2. METHODS

The research design used in this research is explanatory or often referred to as an explanatory survey. Population is a generalized area consisting of objects or subjects that have certain quantities and characteristics determined by the researcher (Amiruddin, 2022). The population of this research is startup companies operating in Indonesia. The number of startup companies operating in Indonesia is 2,419 companies. In this study the number of parameters was 55 so the minimum sample size was: 51 x 5 = 255. In this study the number of samples used was 275 respondents to provide better results.

3. RESULTS AND DISCUSSION

3.1. Sub Section (If Available)

The first model or initial model in this study was carried out using all indicators in each construct. The first model is analyzed using the basic reference model framework in the following figure, as follows:

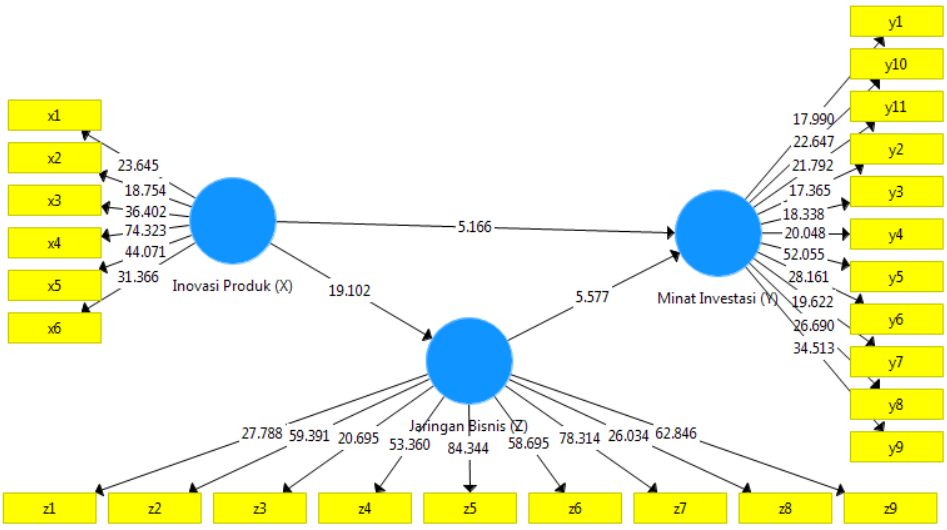

Figure 1: The Basic Reference Model Framework.

The loading factor value of each indicator against each construct is measured using the algorithm in the SmartPLS program, as follows:

Table 1: Table of Loading Factor Test Results.

	Product Innovation	Business Network	Investment Interest
x1	0.747		
X2	0.716		
X3	0.846		
X4	0.903		
X5	0.861		
X6	0.818		
Y1		0.734	
Y2		0.725	
Y3		0.774	
Y4		0.738	
Y5		0.885	
Y6		0.795	
Y7		0.766	
Y8		0.794	
Y9		0.841	
Y10		0.756	
Y11		0.740	
Z1			0.798
Z2			0.890
Z3			0.749
Z4			0.874
Z5			0.917
Z6			0.897
Z7			0.910
Z8			0.798
Z9			0.901

Based on the following table, it is known that many of the variable indicators in this study have outer loading values > 0.5. According the outer loading value between 0.5 and 0.6 is considered sufficient to meet the requirements of convergent validity. The data shows that the indicators are declared feasible or valid for research use and can be used for further analysis.

Assessment of internal consistency reliability is carried out on each construct. The composite reliability value of each construct is expected to be at least 0.7. However, in

exploratory research, a composite reliability value of > 0.6 is acceptable. The results of the SmartPLS algorithm on the composite reliability of each construct are known in Table, as follows:

Table 2: Table of Composite Reliability.

	Composite Reliability	Average Variance Extracted AVE
Product Innovation (x)	0.923	0.669
Business Network (z)	0.963	0.742
Investment Interest (y)	0.944	0.606

Source: Research Results (Data Processed by Author, 2024)

Based on the following table, it shows that the category is quite good for each construct that meets the criteria for assessing the reliability of the outer model with a composite reliability value of > 0.7. Thus the outer model analysis is continued to the outer model validity stage.

The outer model validity was carried out using convergent validity and discriminant validity. The convergent validity assessment was carried out by looking at the average variance extracted (AVE) value in each construct stating that the AVE value in each good construct was at least > 0.5. The results of the SmartPLS algorithm on the AVE value are summarized in the table as follows:

Based on the following table, it shows that the AVE value of each construct in the final model has reached a value of > 0.5. Thus, the proposed structural equation model meets the convergent validity criteria.

The results of the R-Square (R2) value on variables based on the measurement results are shown in. Table, as follows:

Table 3: Table of *R Square*.

	R Square
Investment Interest (Y)	0.599
Business Network (Z)	0.594

Source: Research Results (Data Processed by Author, 2024)

Based on the following table, it is known that the R Square value for the investment interest variable is 0.599, this means that the percentage influence of product innovation on investment interest is 59.9%, while the remaining 41.1% is influenced by other variables not examined in this research. The R Square value for the business network

variable is 0.594, this means that the percentage influence of product innovation on business networks is 59.4%, while the remaining 41.6% is influenced by other variables not examined in this research.

Hypothesis testing was carried out using the T-statistics test (t-test) with a significance level of 5%. It is said to be significant if the T-statistics value is > 1.66. If in this test a p-value <0.05 is obtained, it means that the test is significant, and vice versa if the p-value is > 0.05, it means that it is not significant. The results of the direct effect test for each variable can be seen in the table as follows:

TABLE 4: Table of Path Coefficients.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Sig./Tidak Sig.
X -> Z	0.771	0.772	0.040	19.102	0.000	Sig.
X -> Y	0.392	0.397	0.076	5.166	0.000	Sig.
Z -> Y	0.431	0.423	0.077	5.577	0.000	Sig.
X -> Z-> Y	10.332	0.326	0.062	5.355	0.000	Sig.

Source: Research Results (Data Processed by Author, 2024)

Based on this table, product innovation influences investment interest. Product innovation affects business networks. Business networks influence investment interest. Product innovation influences investment interest through business networks.

4. CONCLUSIONS

Based on the results of the research and discussion that has been carried out in the previous chapter, it can be concluded as follows:

Product innovation has a positive and significant effect on investment interest in startup companies in Indonesia.

Product innovation has a positive and significant effect on business networks in startup companies in Indonesia.

Business networks have a positive and significant effect on investment interest in startup companies in Indonesia.

Product innovation has a positive and significant effect on investment interest through business networks as an interverning variable in startup companies in Indonesia.

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