

The Impact of Technology Business Incubator on Startup Success among Business Incubator Members

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ABSTRACT

This research aimed at investigating the impact of Technology Business Incubator on Startup Success among Business Incubator Members at LPiK ITB Bandung. A verificative approach was carried out by employing the explanatory survey method. This research involved 88 business owners as the analysis unit. The research data were collected through questionnaires and analyzed using a simple regression analysis technique. The research findings revealed that Technology Business Incubator affected Startup Success in the medium category. This showed that the better the Technology Business Incubator, the higher the Startup Success members at Business Incubator LPiK ITB. The differences in this research area in the research object, research time, research instruments, literature sources, theories, and research results because business incubators have a very strong relationship with in the process of creating successful new entrepreneurs

Keywords: *Technology Business Incubator, Startup Success.*

1. INTRODUCTION

It is shown in figure 1 about startup success data in Indonesia, the success rate of establishing startups in Indonesia is still very low at 5%, while 95% are failed [1]. The development of startups in Indonesia is getting hampered by the pandemic that has attacked all countries in the world [2].



Figure 1 Startup Success Data in Indonesia [1]

Nowadays, a novel coronavirus which is mostly known as Covid-19 or coronavirus has spread all over the world [3]. The implementation of the social restriction

policy in Indonesia has weakened the business world because all movements must be limited so that business actors can no longer carry out their usual activities [4].

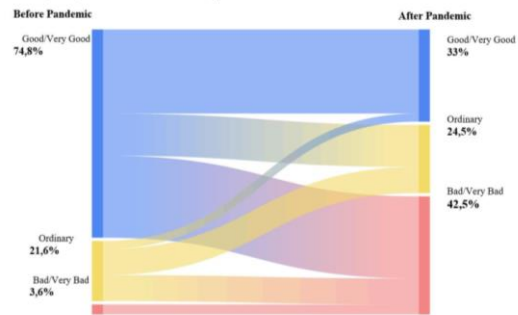


Figure 1. Graph of changes in digital startup conditions in Indonesia before and after the pandemic

Figure 2 Startup Condition Data Before and After Pandemic

The data in figure 2 shown above was taken from Katadata Insight Center (2020), As seen in figure 2, one of the leading online media and studies companies in economics and business. The survey revealed that at the end of 2019, 74.8% of startups were in good and very good condition, while 3.6% of them were in bad and very bad condition. However, after the Covid-19 outbreak spread in Indonesia, startups that were initially fine fell to 33%. This fact is worsened by the increase in the

number of startups that are in bad condition to 42.5%. This certainly needs special attention to overcome the problems faced by startup business people [5]. A startup business which is a newly initiated business has also been affected by this pandemic. Many startups have gone out of business. The worldwide startup failure rate can be as high as 90%. CB Insight released 20 things that cause startup failures in building their business, five of which are most commonly found as causes of startup failure from internal companies [6].

Table 1. Factors of Startup Failure

Factors of Startup Failure	%
No market need	42
Spending too much money	29
Not the right team	23
Get outcompeted	19
Pricing/cost issues	18

It is shown in table 1 above that the most influencing factor on startup failure is no market need factor. This is in line with the startup success dimension namely environment, in which the company’s external environment factor influences the company’s success, one of which is market condition [7]. This indicator measures what products are needed in the current market condition.

Moreover, spending too much money is also a factor that affects startup failure. This fact is in line with the startup success dimension namely strategy and characteristic, in which there are indicators of financial management strategy. In addition, a CEO or founder also plays an important role in building a solid team because this is also a factor that affects startup failure. This data is also in line with one of the startup successes dimensions namely the entrepreneur profile, which discusses an entrepreneur’s managerial abilities [7].

Startups that take actions leading to specific goals will accelerate their business in achieving startup success [8]. It was described in one research that motivation had a positive relationship with startup success [9]. Entrepreneur motivation showed that the greater the perceived relationship between strategy and managerial, the greater the motivation to continue acting as an entrepreneur, in this case, to achieve startup success [8].

Ways to increase startup success was discussed in research conducted by Saputra which investigated business incubator roles in developing a local digital startup in Indonesia [10]. Research on the same topic was also carried out by Mungila Hillemane et, al. conducted at an American startup [11]. Other researchers examined the influence of innovation and entrepreneurial self-efficacy on the success of digital startups [12]. In this study, the Technology Business Incubator is used as the variable because these two variables are being studied

according to previous studies and by the field conditions of the chosen object, namely the Business Incubator LPiK Institut Teknologi Bandung (ITB).

Business incubators play roles in helping new businesses to succeed. This concept is relevant to be implemented in Indonesia, thus the direction and development of business incubators are aimed at assisting new business actors and old business actors who have proposed new products and services. The development of business incubators practically encourages the creation and helps the growth of new businesses, specifically related to the themes of product innovation. One of the LPiK ITB programs is business incubators.

The development of business incubators in universities aimed at helping the commercialization process of research products in universities, namely building new businesses coming from research results and encouraging students and alumni to become business actors. The concept of business incubator development must be distinguished from the concepts of startup development in general [13].

Several aspects need to be taken care of by the management of business incubators LPiK ITB, one of which is helping their startup tenants to develop their strategies, such as digital marketing. As seen in figure 3, there are no more than half of the incubator tenants have websites to market their products.

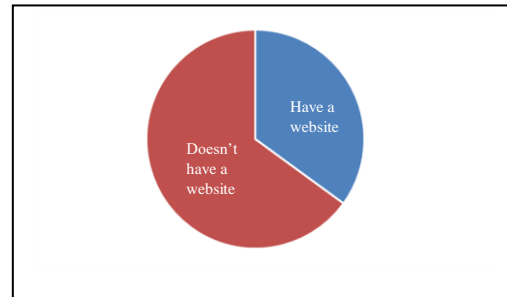


Figure 3 Number of LPiK ITB Tenants Who Already Have a Website

In shown in the figure 3 that LPiK ITB business incubator is still lacking about planning and consideration in the information system development process. Therefore, the incubator is still lacking in the utilization of technology, making incubator operations less effective and efficient. Technology Business Incubator is an institution that can help identify the most relevant strategic assets to support technology innovation, which directs startups that are launching new products [14].

Technology Business Incubator has seven dimensions, namely selection, infrastructures, business support, financial sustainability, government, relationship, and graduation. These seven dimensions are designed as a basis for the incubation process. First, the

incubator needs to identify several criteria for selecting startups to be incubated, one of the important things is the business model owned by the startup and the resources to be allocated. The second step is related to the infrastructure provided; one example is the physical area where the startup is incubated. The area is divided into two, namely the proper room condition to complete startup activities personally, one of which is room to receive clients. The second area is the one shared with other startups to reduce fixed costs [14].

In addition to infrastructure, there is also business support, which is a service offered by the incubator. One of them is technology-based consulting, training, coaching, and mentoring services. Furthermore, there is financial sustainability, which can be interpreted as a startup process receiving financial resources and strategies to manage the budget. Governance is a dimension that has an important role such as making policies relevant to incubator activities. While the relationship is a dimension related to the stakeholders. From this relationship, strategies can grow to increase startup success. The last dimension is graduation. There are several criteria for startups to pass, one of which is related to the competitiveness of their products in the market. Based on the formulation of the above problem, the purpose of this study is to know the influence of Technology Business Incubators on the Success of Startups.

2. METHODS

This research aimed at investigating the impact of Technology Business Incubator on Startup Success among Business Incubator Members at LPiK ITB Bandung. A verificative approach was employed by conducting an explanatory survey method. The total population of this research was 134 incubator members and as many as 88 samples were taken.

The research data were collected through questionnaires and analyzed using a simple regression analysis technique.

Some academic experts analyze that the concept of "success" in startups is very broad and diverse. It needs a deeper understanding to identify the factors that measure startup success. There are two perspectives that can be used, the first is the technical factors that lead to startup success and the scientific method proposed from various literature to measure startup success [7].

The first dimension focuses on the entrepreneur and analyzes his profile. Many previous studies have shown the definition of entrepreneur profile. Although some experts do not agree on a single definition of an entrepreneur profile, there are different characteristics such as age, gender, socio-demography, or economic condition. However, different characteristics are

presented to be the characteristics of entrepreneurs. These characteristics are personality and social traits [7].

The second dimension focuses on the strategy and characteristics of the company by specifically analyzing the strategy chosen by the entrepreneur for his business. This dimension focuses on how entrepreneurs do things, attitudes, capacities, abilities, and experiences of entrepreneurs to formulate strategies that will affect the company's progress [7].

The third dimension relates to the environment that can help the company development which is formed from several main aspects such as capital availability, quality human resources, and infrastructure [7].

3. RESULTS AND DISCUSSION

The independent variable in this research is *Technology Business Incubator* (X) while the dependent variable is *Startup Success* (Y). A simple regression testing was carried out to test whether there is an effect of the independent variable on the dependent variable.

The simple regression equation model formed in this research is as follows.

$$Y = a + bX \tag{1}$$

where:

Y = Dependent variable (Startup Success)

X = Independent (Technology Business Incubator)

a = Y value if X=0 (constant value)

b = values affecting the increase or decrease in Y based on X (Technology Business Incubator)

Based on the processing results using the SPSS 23.0 for windows program, the regression coefficients results are as follows:

Table 2. Simple Linear Regression Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	14.620	4.634		31.557	.002
	X	.526	.054	.726	9.796	.000
a. Dependent Variable: Y						

Table 2 in the B column shows the constant value and simple linear regression coefficient value for the independent variable. Based on those values, a simple linear regression model is formed in the following equation:

$$Y = 14.620 + 0,525 X \tag{2}$$

Based on the simple linear regression equation above, a constant value of 14,620 means that if there is no Technology Business Incubator, then the amount of Startup Success is 14,620. The regression coefficient on the Technology Business Incubator variable is 0,525, which means that if Technology Business Incubator (X) increases by one unit, there will be an increase in Startup Success (Y) by 0,525.

The coefficient of determination analysis is used to determine the percentage of influence of the independent variable to the dependent variable. Thus, in this research the coefficient of determination was used to determine the percentage of the influence of X on Y, the formula used is as follows .

$$CD=r^2 \times 100\% \tag{3}$$

where

r^2 = correlation coefficient

Table 3. Coefficient of determination

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.726	.527	.522	10.06236

Based on the calculation results in table 3, the coefficient of determination of Technology Business Incubator (X) on Startup Success is 52,7%, which is in the medium category, while the remaining 47,3% is influenced by other factors which are not examined in this study such as facilities, environment, motivation, etc.

To test the significance of Technology Business Indicator on Startup Success, t-test was carried out by comparing the t_{count} and t_{table} with the following conditions:

If $t_{count} > t_{table}$, H_0 is rejected and H_a is accepted

If $t_{count} < t_{table}$, H_0 is accepted and H_a is rejected

After it was revealed whether H_0 was accepted or rejected, a significance test was carried out with the following conditions:

$H_0: \rho \leq 0$, there is no positive influence of Technology Business Incubator on Startup Success.

$H_a: \rho > 0$, there is a positive influence of Technology Business Incubator on Startup Success.

The formula of the t-test of the coefficient test is described in Table 4 as follows.

Table 4. Significance test of t value

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Constant	14.620	4.634		31.557	.002

	X	.526	.054	.726	9.796	.000
a. Dependent Variable: Y						

Table 4 shows the testing for t-test taken from the coefficients using t-test, in which $t_{count} > t_{table}$. Thus, t_{table} with 88 respondents in which $\alpha = 0,05$ is 0.678. It was obtained that $9,796 > 0.678$, so H_0 is rejected. After that, a significance test was conducted, and based on the data taken from Table 3.2, the obtained R square is $0,527 > 0$, which means that there is a positive influence of Technology Business Incubator on Startup Success. Therefore, it can be concluded that the hypothesis in this research is that H_0 is rejected and H_a is accepted, so there is an influence of *Technology Business Incubator* on *Startup Success* among the members of Business Incubators LPiK ITB. Business incubators have a very strong relationship with in the process of creating successful new entrepreneurs.

4. CONCLUSIONS

Based on the research results, it was revealed that Technology Business Incubator had an influence on Startup Success in the medium category. This shows that the better the Technology Business Incubator, the higher the Startup Success of Members at Business Incubator LPiK ITB. Technology Business Incubator and Startup Success by using different indicators from various theoretical resources and on the different objects as there are still many weaknesses in this research especially related to the research method and data collection technique.

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