Journal of Applied Engineering and Technological Science
Vol 4(1) 2022: 611-617

INSTRUMENT READINESS ANALYSIS OF TECHNOLOGY-BASED BUSINESSES

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Received : 15 November 2022, Revised: 30 December 2022, Accepted : 30 December 2022
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ABSTRACT
Digital technology is currently highly developed in all fields. The development of this technology certainly has a big impact on the world of business and industry. This study tries to prove the effect of instrument readiness in developing technopreneurship abilities in students. The readiness instrument variables used are Capital Thourgh, Information and Social Network. The study was conducted on 150 students who have technology-based businesses (technopreneurs) as samples. The data analysis technique used is the structural equation model with the help of Smart PLS. The results showed that Capital Through did not have a significant effect on technopreneurship, but Information and Social Networks had a positive influence on technopreneurship. In addition, the Social Network is able to encourage a technopreneur to make it easier to obtain information related to business development.

Keywords : *Technopreneurship, Capital Through, Digital Technology, Students, Business*

1. Introduction

In Indonesia, currently the paradigm of being an employee or office worker is still considered more honorable than being an entrepreneur. Until now, most university graduates in Indonesia still have a weak entrepreneurial spirit. Whereas a country can be said to be developed if it has at least 2 percent of the people who work as entrepreneurs. For this reason, students or graduates must not only have entrepreneurship skills, they must also be prepared with technology to face challenges in the industrial 4.0 era even in preparation for the next era, namely the 5.0 industry era (Rahmadoni et al., 2022).

Technopreneur is the answer to the existing phenomenon, because technopreneur is the development of the concept of entrepreneurship by using technology as a means for entrepreneurship. As is known today that technological developments are increasingly rapid and human resources are required to be able to master today's technology. The use of technology in technopreneurship that is currently often used is by using social media or the internet to develop the business that is being undertaken. The introduction of the concept of technopreneur is currently starting to be intensified starting from high school to college. This technopreneurship is very appropriate to be carried out by universities because this technopreneur is very different from entrepreneurs who we can learn instantly.

The factors that play an important role in encouraging technopreneurship students are environmental factors, namely instrument readiness and technology readiness. Instrument readiness in terms of several things, namely: access to capital, information and social networks. Access to capital is a classic barrier, especially for someone who is about to start a new business. At least this is the case in developing countries, because the support of financial providers is not so strong (Felsenstein & Fleischer, 2002; Daulay 2020). According to empirical studies, the main barriers to business success for aspiring entrepreneurs in developing countries are difficulties in obtaining capital, credit schemes, and financial system constraints (Bauernschuster et al., 2010; Herkenhoff et al., 2021). A research result states that access to capital is one of the determinants of the success of a business (Nigam et al., 2020). In other words, the better access to capital for a business, the more successful the business will be. However, this contradicts previous research,

which found no significant effect of access to capital on entrepreneurial intentions (Zarrouk et al., 2020).

Information is part of the environmental factors related to entrepreneurship. Information is data that has been shaped into a format that is useful for humans . Information has a very important role in entrepreneurship, because entrepreneurial interest (intentions) can emerge and develop if there is adequate information (Kuechle et al., 2011). The availability of business information is a critical factor for business growth and sustainability, as well as an important factor that can encourage a person's desire to open a new business (Alsoud et al., 2021; de la Hoz-Rosales et al., 2019). According to Indian research, one of the most important characteristics of an entrepreneur is a strong desire to obtain information (Eckhardt et al., 2018). Information seeking refers to the frequency with which a person makes contact with various sources of information. The outcomes of these activities frequently rely on the availability of information, which they obtain either through their own efforts or as part of social resources and networks. Several other research results also show that information is important for someone in entrepreneurship (de la Hoz-Rosales et al., 2019).

The readiness of instruments from the third environmental factor is social networks (Networking). Social networks serve to perpetuate something that happens in social society. By establishing a social network, all existing business opportunities, such as problems with working capital, production technology, business information, investment, changes in policies and regulations, and others can be overcome so that a business will be more effective and efficient, and can reduce risk. business that can occur (Tas et al., 2012). The evidence of a relationship between entrepreneurial interest and the profession of parents who work independently or as entrepreneurs. Independence and flexibility can be transmitted by parents to their children from an early age and become traits that are inherent in their children (Mursid et al., 2018).

From the finding of research gaps on the influence of instruments and technology readiness on student entrepreneurship, this study tries to analyze the mediating role of University support in helping to fill the gap. And this research also develops the concept of student entrepreneurship into student technopreneurship and focuses research on students who are entrepreneurship by utilizing technology. For this reason, the purpose of this study is to analyze the role of university support as a mediation in the relationship between instruments and technology readiness for student technopreneurship.

2. Literature Review

Technopreneurship

The term "Technopreneurship" derives from the words "Technology" and "Entrepreneurship," and it can be defined as a process of formation and collaboration between business fields, as well as the use of technology as a supporting instrument and as the foundation of the business itself, in processes, systems, parties involved, and the products produced. Technology, in general, refers to the practical application of science to industry or as a knowledge framework used to develop tools, skills, and materials to solve existing problems. While the term entrepreneurship is derived from the word entrepreneur, which refers to a person or agent who establishes a business with the courage to face risks and uncertainties in order to achieve profit and growth through the identification of existing opportunities. A technopreneur is someone who uses marketing and technology as a selling point to run a technopreneurship or a business with an entrepreneurial spirit. Traditional entrepreneurship and technopreneurship should be distinguished. Technology entrepreneurship must succeed in two areas: ensuring that the technology meets the needs of the target customer and that it can be sold profitably. Ordinary business only deals with the second part, namely profitably selling.

Access to capital (Capital through)

One of the most important factors in starting a business is capital. Access to capital is one of the factors that influence a company's success. Access to capital is a common barrier, particularly when starting a new business, especially in developing countries with weak financial institutions (Zampetakis et al., 2011). Access to capital in supporting students' entrepreneurial intentions is an important provision provided by the University as a form of support for students'

financial literacy. Business success also lies in the aspect of having fulfilled capital, productive distribution and achieving organizational goals. One aspect that needs to be improved to be able to fortify the capital aspect is by increasing the entrepreneur's knowledge of the aspect of capital turnover which will always be related to the financial aspect of the business (Herkenhoff et al., 2021). The existence of industry in the business world has several indicators or factors that influence it, namely production factors including raw materials, labor and capital, distribution factors including location and accessibility, demand and supply factors, marketing factors and government policy factors (Nigam et al., 2020; Zarrouk et al., 2020). Through this rationale, the following hypothesis is formulated:

H1. Access to capital has a significant positive effect on student technopreneurship

Information

Information has a very important role in entrepreneurship as important information in other fields. Entrepreneurial interest can emerge and develop if there is adequate information, namely the success of a business, business opportunities, available markets, support from the government and agencies related to entrepreneurship, support from universities in the form of training and education on entrepreneurship (de la Hoz-Rosales et al., 2019). Changes in the situation that occur also change the entrepreneur's perception of risk so that they also increase their search for information (Alsoud et al., 2021). Although research is still limited, the literature has indicated that information seeking is influenced by one's risk tendencies. The tendency to take risks is associated with the speed of making decisions based on limited information, so that people who have a tendency to dare to take risks seem to limit themselves in their search for information (Tas et al., 2012).

H2. Availability of information has a significant positive effect on student technopreneurship

Social Network

The social network of students is one of the environmental factors that can influence their entrepreneurial intentions. A social network is a social bond that connects a group of people, organizations, agencies, governments, or countries (Wu et al., 2016). A social network is a proclivity to form relationships and interact with others. A social network is a collection of elements that are directly or indirectly related to one another, forming a network structure that coordinates various activities. In the context of entrepreneurship, social networks refer to various people or entities who have close relationships with aspiring entrepreneurs and can provide support and assistance in promoting entrepreneurship (Chen et al., 2018).

H3. Social Networks have a significant positive effect on Information Availability

H4. Social Networks have a significant positive effect on student technopreneurship

3. Research Methods

The population in this study are private university students in Pekanbaru, Riau who are already running a technology-based business (technopreneurship) where the number is unknown. For this reason, 150 samples were taken in this study in accordance with the opinion of Hair et al., (2011) where the optimal number of samples for SEM testing is 100-200.

From November 2021 to March 2022, an online survey with a structured questionnaire was conducted. The entire questionnaire employs a 5-point Likert scale with the respondent's level of agreement listed in ascending order. The instrument in this research by the following: 1). Access to Capital : Acquisition of banking products, Government funding, Personal Fund Adequacy, Use of Capital according to Business Needs. 2). Availability of Information: Access Information Offlin, Access Information Online, Easy of Navigation, Speed of Obtaining Information, Modern Equipment, Self Reliance. 3). Social Networks: Organizations followed, Ease of Entering the Market, Private sector cooperation, Relationship with consumers. 4). Technopreneurship : Entrepreneurship readiness, The desire to become an entrepreneur, Attempts to become entrepreneurs Dream of becoming an entrepreneur Putting technology to use.

Before being disseminated to 150 respondents, the research instrument produced in this study was validated for each statement item's validity and appropriateness. As a result, 30 responders were given pilot test questionnaires at this stage.

In this study using the SPSS version 21 program for validity and reliability testing, then also using the help of SMART PLS 3 which will test Convergent Validity, Discriminant Validity, Construct Reliability, Multicollinearity Test, Coefficient of Determination Test (R Square), and evaluation of the inner models. to test the dependent construct and the path coefficient value and t-count (t-statistic) for each path to test the significance between constructs in the structural model.

4. Results and Discussions

General Characteristic

According to the data presented in table 2, female students account for 56.4 percent of the respondents in this study. Meanwhile, the majority of respondents (50.6 percent) are between the ages of 17 and 20, which is the appropriate age for college students because 17 is the age at which people graduate from high school and continue their education at the university level. For the lecture program, the majority of respondents (57.6 percent) are enrolled in full-time courses, with only a small percentage studying while working for their own business (15.6 percent). The majority of students in this study majored in social studies, with 63.2 percent majoring in social studies.

Validity and Reliability Test

Convergent Validity is a measurement model with reflexive indicators that is based on the PLS correlation between item scores and component scores. Only the relationship between indicators and exogenous constructs is considered in the loading factor value. The factor loading value of 0.7 must be removed from the model and the loading factor value re-estimated. As a result, each research variable indicator already has an outer loading value greater than 0.7, whereas several indicators with outer loading values less than 0.7 have been excluded from the study and will not be included in the subsequent analysis process.

The value of Composite Reliability (CR) and Average Variance Extracted can be used to determine reliability (AVE). If the composite reliability is 0.7, it is said to be reliable. If the AVE value is 0.5, it is considered good. According to the results, all variables meet composite reliability because they have a composite reliability value greater than 0.70, which already meets the reliable criteria, and an average variance extracted value greater than 0.50, which is considered good. As a result, it can be concluded that all observed variables are valid in measuring the latent variable, and the measurement model's reliability is also high.

Coefficient of Determination Test (R Square)

The value of R-Square indicates the level of determination of the exogenous to the endogenous. If the value of R-Square Adjusted is greater, the level of determination will be better.

Table 1. R Square

Variable	R Square	R Square Adjusted
Information	0,386	0,381
Technopreneurship	0,553	0,543

Source: Data Processed Smart PLS (2022)

From the table 1, the R Square Adjusted value for the Information variable is 0.386. this means that the percentage of the influence of Social Network is 38,6%. Furthermore, the R Square Adjusted value for the Technopreneurship Variable is 0.553 which means that the percentage of the influence of Access to Capital, Information and Social Network on Technopreneurship is 2.3%.

Hypothesis Test

After the data fulfills the measurement requirements, Smart PLS 3.3.5 is used to conduct the Bootstrapping technique. This test compares the t value provided by the T statistic computation to the t table. The null hypothesis will be accepted if the T statistic value is less

than t table and rejected if the T statistic value is greater than t table. The t table value is 1.69. The following table shows the outcomes of hypothesis testing using Smart PLS in this investigation.

Table 2. Hypothesis Test Result

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Conclusion
CT -> TP	0,101	1,189	0,235	NS
Inf -> TP	0,221	2,393	0,017	Sig
SN -> Inf	0,621	11,234	0,000	Sig
SN -> TP	0,524	7,729	0,000	Sig

NS : Not Significant
Sig : Significant

Based on the test statistic results, it was found that capital through had no significant effect on technopreneurship (Hypothesis 1), due to the P Value 0.235 > 0.05. This means that for students who do technopreneurship, capital is not a fundamental factor for them in developing their business. Education about entrepreneurship and awareness of opportunities for entrepreneurship, become the basis of one's thinking to carry out entrepreneurial activities. Armed with the education they have, students are now able to read what opportunities are needed in entrepreneurship, including capital. In addition, most students who are engaged in running a technopreneurship business have good access to capital, whether it's from their parents, relatives, and others (Zarrouk et al., 2020; Novendra 2020).

On the other hand, information is an important factor in influencing technopreneurship (Hypothesis 2) due to P Value 0.017 < 0.05. Previous research has shown that a strong desire for information is one of the most important characteristics of an entrepreneur. (Alsoud et al., 2021). Several studies have been conducted over the last few decades to investigate the relationship between risk perception and information seeking behavior, particularly information seeking (Fuller & Warren, 2006; Erkal & Kali, 2012). The basic reason for this relationship is the high perceived risk of putting a person in a bad situation which will motivate them to engage in problem solving activities; so they use information seeking as a problem-solving strategy to reduce perceived risk (Eckhardt et al., 2018; Darmayunata et al., 2020; Basil et al., 2021).

In hypotheses 3 and 4, social networks have an influence on information and also technopreneurship with a P value of 0.000 <0.05. Social networks are a component of social capital theory, which includes relationships, norms, and a shared set of values that allow network members to achieve common goals within their social network (Purwati et al., 2021; Irman et al., 2020). So it can be said that a social network is a group of people who establish social relations with one another either directly or indirectly to achieve the expected goals. Basically, this social relationship that is owned helps individuals in obtaining information in business or entrepreneurship (Hanim & Rahmadoni 2020). Moreover, if the younger generation of entrepreneurs have good networking, then they will get new ideas related to technological developments and the desires of today's consumers. Social networks help one to reduce costs and business risks that will be faced. So that someone will try to build a good social network to benefit from the social network they have.

5. Conclusion

Based on the results of the study, it was found that, for technopreneurship students, the things that had a significant influence in this study were information and social networks. but not on access to capital. This indicates a change in civilization for today's young generation, where the availability of information and social networks is important in growing business ideas in terms of technopreneurship. For further researchers, it is hoped that they will be able to examine more deeply related to other factors that are more closely related to influencing the current generation in entrepreneurship, especially from the technological aspect.

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