



ORIGINAL ARTICLE

Technopreneurs Millennial in Indonesia: The Acquisition and Application Knowledge

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ABSTRACT

The development of technical knowledge has encouraged many business activities utilizing communication tools and technologies in business processes. This study aims to test the effect of knowledge acquisition and knowledge application of millennial technopreneurs in Indonesia in utilizing technology for their business activities. A total of 153 respondents were surveyed through online questionnaires. SEM analysis is used to test the research model. This study found that millennial technopreneurs ignore acquiring knowledge about business activities. But significant results showed that millennial technopreneurs immediately applied knowledge without looking at previous knowledge acquisition processes.

Keywords: Knowledge Acquisition, Knowledge Application, Technopreneur, Millennial

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INTRODUCTION

The development of technology-based business is growing and developing, with the emergence of various start-up businesses increasingly popular in Indonesia (Jakartapost.com, 2017). Technology-based entrepreneurs have emerged in developing countries such as Indonesia because many products from the global market have entered the country. Research from The Economist Intelligence Unit (2017) predicts that some traditional business models will experience tension due to changes that are driven by technology. Besides, Ngah and Ibrahim (2009) found that there were significant differences in individual abilities causing the use of technology to be widespread in Asian countries such as Indonesia compared to western countries. It is important to realize by millennial entrepreneurs from developing countries such as Indonesia to compete in advanced information and communication technology today by mastering business knowledge. By relying on technology in business processes, the term known as technopreneur is a modern entrepreneur who uses technology in running his business. Technopreneur has emerged in Indonesia in recent years and has great potential to continue to grow in the future (Dailysocial.id, 2016). Besides the increasing number of millennial young entrepreneurs or new businesses in the technology and creative industries.

According to W&S Market Research (2014), the Indonesian e-commerce market has the opportunity to continue to grow, considering that internet and smartphone users are increasing in Indonesia. Millennials or Generation Y (born in the 1980s-2000s) are groups of people born after Generation X. Millennial generation is special because it is very different from previous generations related to technology (Livescience.com, 2017). Research from ManpowerGroup (2016) in 25 countries found that the millennial generation's careers have changed and left the old ways of working. Most millennials are digital entrepreneurs and innovators in their respective fields. Among the 255 million registered population in Indonesia, 81 million are a millennial generation or aged 17 - 37 years. It means that Indonesia has many opportunities through the millennials' generation to develop their country, which is entrepreneurship, by utilizing information technology that is currently developing (Idntimes.com, 2017). Thus, millennial generation entrepreneurs need to adapt to advances in information technology by acquiring existing knowledge that finds, select, organize, and present information on their respective businesses are engaged in a certain way. It will increase the mastery of knowledge related to customers, products, and competitors and suppliers. The knowledge embedded within the millennial entrepreneur needs to be applied so that the knowledge can be used and applied optimally in business activities. Applying knowledge needs to be improved by acquiring knowledge from external parties and then internalizing that knowledge in the occupied areas (Darr and Epple, 1995). The process of knowledge acquisition and knowledge application must be applied intensively to develop over time to achieve a sustainable competitive advantage (Nonaka and Takeuchi, 1995).

Research Hwa (2009), in automotive companies in Singapore, found that technopreneur is influenced by the knowledge that individuals personally own. The knowledge gained from other people through the process and stages is then formulated into a strategy of using the tools/devices that assist in implementing such knowledge. Then, Mohannak and Matthews's (2011) research on SME companies in Australia found that knowledge management processes that consist of knowledge acquisition impact the use of technology to produce innovation so that knowledge integration can occur in business routinely and support company management. Bon's research (2010), that young technopreneur in Malaysia

obtained information and knowledge about technology-based entrepreneurship, started from universities' training. Smith (2003) examined the technopreneur in Asia, especially in Singapore, found that entrepreneurs' success is driven by technology and the role of leaders in applying their knowledge to apply knowledge skills by building new systems and processes, exploiting special knowledge, and building the strong brand image. Pratomo (2010) explains technopreneur needs to manage knowledge. Knowledge management needs to be abandoned traditionally and needs to accommodate changes in complex situations quickly. In fast-paced and complex conditions, technopreneurs need to have a decision support system to help carry out strategic tasks. Knowledge management systems play an important role in acquiring knowledge while helping to develop technopreneurs. Business processes in the current era encourage millennials to tend to use technology in carrying out business activities. The knowledge that has been obtained from various sources can be applied to business activities to support success. Research Madhousi et al. (2011) conducted on technopreneur in Iran gives the results that knowledge management is very dependent on effective management and utilization of knowledge in practice used. According to Mohannak and Matthews (2011), the utilization and application of knowledge management by technopreneur is very dependent on the tools used by company management. It is related to research and development in the process of technology-based business orientation. The findings provide the results that knowledge management, which consists of the knowledge application, needs to be applied formally and needs to be embedded in routine organizational activities. In the research of Mehdi and Shaemi (2010), automotive companies in Iran gave the results that in applying knowledge, companies need to pay attention to creating, establishing, and disseminating knowledge into company management through data and then processing it into useful information for the organization. Then Pratomo (2010) also explained that knowledge management systems play an important role in applying knowledge agents (millennials). A knowledge management system will greatly assist the development of millennial technopreneur in a better direction.

This study examines the effect of knowledge acquisition and knowledge application on the use of technology for millennial entrepreneurs in Indonesia. Developments in information technology drive many business activities or business utilizing communication tools and technologies in business processes. Millennial entrepreneurs can seek knowledge about the business model that is done by gaining knowledge from many available sources through technology that can be utilized.

METHOD

A quantitative approach used in this study through a survey method to test young entrepreneurs' perceptions (millennial), which uses technology in business processes. The data analysis technique is SEM (Amos 21), and the estimation technique is Maximum Likelihood Estimation (MLE). The sample's determination is nonprobability sampling with purposive and snowball sampling techniques (Cooper and Schindler, 2011). Primary data is self-report through a self-administered survey with an online survey using Google form. This study tested the validity and reliability of the constructs first. The research instrument on knowledge acquisition and knowledge application was adopted from Gold et al. (2001), while the technopreneur instrument was adopted from Howe and Straus (2007). The validity test was carried out using face validity, convergent validity, and discriminant validity, while the reliability test was using construct reliability - cr (Hair et al., 2010). The sample adequacy has met the assumptions recommended by Hair et al. (2010), which is 153 number of samples.

Evaluation of outliers based on the degree of freedom a variable number of indicators at the level of significance (Mahalonabis Distance). No Mahalanobis Distance cases were found so that the whole observation can be used in the next step of testing (Hair et al., 2010).

Table 1. Test of validity and reliability (Standardized Factor Loading, Average Variance Extracted and construct reliability)

Construct	Item	Standardized Factor Loading	AVE	CR Value	Description
Knowledge Aquisition	X3	0.737	0.500	0.850	Valid & Reliable
	X4	0.695			
	X5	0.641			
	X6	0.786			
	X7	0.701			
Knowledge Application	X8	0.653	0.550	0.918	Valid & Reliable
	X10	0.751			
	X11	0.751			
	X12	0.766			
	X13	0.787			
	X14	0.787			
	X15	0.759			
	X16	0.670			
	X17	0.770			
	X18	0.680			
Technopreneur Millennial	X19	0.680	0.535	0.935	Valid & Reliable
	Y2	0.739			
	Y3	0.719			
	Y4	0.804			
	Y5	0.827			
	Y6	0.701			
	Y7	0.726			
	Y8	0.752			
	Y9	0.698			
	Y10	0.684			
	Y11	0.747			
	Y12	0.662			
	Y13	0.679			
	Y14	0.751			

This study analyzes the measurement model using confirmatory factor analysis (CFA). All estimated values for the relationship between indicators and their constructs are significant at the 0.1 level (X1, X2, X9, Y1 are invalid). The standardized factor loading value indicates this, average variance extracted, and a critical ratio above 0.5. Thus all indicators listed in the table are valid and reliable. Based on table 2, the Chi-Square value (χ^2) is 694,244. The smaller the Chi-Square value (χ^2), the more it fits the model with empirical data measurements. Normed Chi-Square (χ^2 / df) is 1.8876 and good because it is smaller than 3.00 (Hair et al., 2010). The measurement model fit with empirical data. In table 2, the GFI model index is 0.773. According to Hair et al. (2010), GFI is better if it is close to a value of 1 (one) or above 0.9. The results obtained can be said to be a moderate value (above 0.5), and based on this value, it can be concluded that the overall model has a moderate level of conformity. In testing, the model's suitability is evaluated through various criteria for the goodness of fit (GOF).

Table 2. Assumptions of Goodness of Fit

Indeks Goodness of Fit	Cut of Value	Model	Description
<i>Absolute fit measure</i>			
Chi Square (X^2)	Small	694.244	Moderate
Normed Chi Square (CMIN/DF)	<3.00	1.876	Good
Probability (P-Value)	>0.05	0.000	Less
Root Mean Square Error of Approximation (RMSEA)	<0.08	0.076	Good
Goodness of Fit Index (GFI)	>0.90	0.773	Moderate
<i>Incremental fit measure</i>			
Adjusted Goodness of Fit Index (AGFI)	>0.90	0.733	Moderate
<i>Parsimonious fit measure</i>			
Parsimonious Goodness of Fit Index (PGFI)	>0.90	0.658	Moderate

Similar the GFI value, the closer to 1, the AGFI value is considered to be better, and the recommended AGFI value is greater or equal to 0.90 (Hair et al., 2010). This study produces an AGFI value of 0.733 and indicates a moderate level of model suitability. RMSEA value is one index of the size of badness-of-fit. RMSEA value indicates how well the fitness model is estimated in a population, not only in the samples used for estimation (Hair et al., 2010). The smaller the RMSEA value, the better the suitability level, and the RMSEA acceptance value ranges from 0.03 to 0.08 (Hair et al., 2010). The resulting RMSEA value of 0.076, and this value reflects a good level of model suitability.

RESULTS

This study was dominated by 120 female millennial entrepreneurs (78.4%) and 33 men (21.6%). Millennial women are more interested in entrepreneurship in fashion and cosmetics, so that they are consistent with the type of business they are engaged in. Millennial entrepreneurs studied were aged 17-36 years; most are aged 17-21 (103 people). Research from the British Council of Indonesia (2018) shows that most leaders or founders of Indonesia are millennials. However, many businesses are still new and have been running for less than one (1) year. Most respondents in this study were 17-21 years old at the time of running a business. Many millennials have not used e-commerce facilities (applications) in this study, and only 44 (28.8%) of 169 respondents used e-commerce facilities. The information technology media widely used by millennial entrepreneurs is smartphones, which amounted to 104 (68.0%). It is because almost all individuals currently have smartphones to make it easier for millennial entrepreneurs to run a business. Besides, there were 32 respondents (20.9%) who used information technology media other than smartphones and combined it with other information technology media such as smartphones, and laptops, ten respondents (6.5%), and smartphones, laptops, computers, and tablets as many as seven respondents (4.6%). It is in line with the national socio-economic survey (Susenas) that cellular phones show that the millennial generation is superior compared to previous generations in urban and rural areas (www.kemenpppa.go.id, 2018).

Table 3. E-Commerce Facilities, Media Technology, Promotion Facilities, and Type of Business

	Description	Amount	Percentage (%)
E-Commerce Facilities	Not	109	71.2
	Yes	44	28.8
	Total	153	100.0
Media Information Technology	Smartphone	104	68.0
	Smartphone & Laptop	32	20.9
	Smartphone, Laptop & Komputer	10	6.5
	Smartphone, Laptop, Computer & Tablet	7	4.6
	Total	153	100.0
Electronic Promotion Facilities	Social Media	101	66.0
	Online Chat	48	31.4
	Marketplace	3	2.0
	Website	1	7
	Total	153	100.0
Type of Business Field	Cosmetic	18	11.8
	Retail	25	16.3
	Furniture	2	1.3
	Decoration	5	3.3
	Health	9	5.9
	Culinary	15	9.8
	Reseller	4	2.6
	Education	2	1.3
	Fashion	56	36.6
	Services	12	7.8
	Spareparts	5	3.3
	Total	153	100.0

Based on table 3, promotions using electronic information technology media mostly use social media (Instagram, Facebook, and Line) by 101 (66.0%). These results are consistent with research conducted by Indonesia Mom Digital Service (2017). Many millennial mothers often shop via Instagram & Facebook, and, consistently, many millennial entrepreneurs are dominated by women in this study. While the rest use online chat (BBM and WhatsApp), only a few use the marketplace and website to promote this study. In this study, the types of business fields are divided into several types. Millennial business fields consist of fashion (34%) then retail (17%), cosmetics (11.8%), culinary (10.7%), services (7.7%), health (5.3%), decoration and spare parts (6%), resellers. (4%), education (3%), and furniture (2%).

Table 4. Regression Weight and Estimate Significance Value of the Relationship between Constructs

Relationship between Constructs	Estimate Value	Critical Ratio	Standardized Weight Value	Regression	P-Value
Knowledge Aquisition Technopreneur Millennial	→ 0.340	2.035	0.334		0.420
Knowledge Application Technopreneur Millennial	→ 0.609	3.322	0.572		***

Significant : 0.001 (***)

Source: primary data

The reference value for the critical ratio in this study is > 2.56 at a significance level of 0.1. If the critical ratio value is greater than > 2.56 , the causal relationship between the two constructs is significant at level 0.1. Table 4 shows the significance of the structural relationships between the constructs of the structural model. Table 4 shows that based on the CR value greater than > 2.56 (at a significance level of 0.1), there is a significant relationship. Based on these assumptions, the significant value of the variable that has a CR greater than 2.56 is the causal relationship between the knowledge application construct and millennial technopreneurs with a significant level of 0.1. Meanwhile, the causal relationship between knowledge acquisition constructs and millennial technopreneur is not significant.

DISCUSSION

Based on the analysis, the results show that knowledge acquisition does not significantly affect millennial technopreneurs. This research indicates that millennial entrepreneurs who run a business by relying on technology (technopreneur) in their operations are still not maximal in several ways: 1) lack of knowledge about business partners; 2) lack of knowledge exchange between individuals; 3) less use of feedback from existing projects to improve the next project; 4) lack of knowledge about customers; 5) produce less new knowledge from existing knowledge; 6) lack of collaboration with a dedicated team to identify best practices for the business undertaken. This insignificant result is supported by convergent validity, where the average variance extracted (AVE) value is at 0.50 in table 1 and is the lowest value compared to other constructs. Thus this study does not support the hypotheses and theories and research of Smith (2003), Hwa (2009), Bon (2010), and Pratomo (2010). Besides, this study provides results that the application of knowledge has a significant effect on millennial technopreneurs. Meanwhile, this study supports the hypothesis, theory, and research of Mehdi and Shaemi (2010), Madhousi et al. (2011), Mohannak, and Matthews (2011). Millennial entrepreneurs who are included in this research have a process to apply knowledge learned from experience, have a process to use knowledge in developing new products or services, and use knowledge to solve new problems. The millennial entrepreneurs also adjust their sources of knowledge to problems and challenges faced, using knowledge to improve business efficiency, using knowledge to adjust strategic business direction. Discover and apply knowledge to changing competitive conditions, making knowledge accessible to those in need, and quickly applying knowledge to pressing competitive needs.

Implications

Millennials are the successors of future generations. Millennial entrepreneurs play an important role in using, utilizing, and relying on technology in business processes. Knowledge is an important asset in realizing competitiveness in achieving a competitive advantage for millennial entrepreneur businesses. Besides, knowledge acquisition is the first and very important process in the knowledge management process. It is because acquiring knowledge from external parties/sources will provide insights for an individual's stock knowledge to increase before carrying out the knowledge process to apply knowledge. In digital technology, business processes are highly dependent on the sophistication of technology and information systems used so that millennial knowledge goes through cognitive and affective processes before applying knowledge. Millennial entrepreneurs need to adopt knowledge (acquisition) regarding the suitability of technology and the business being carried out so that the knowledge acquisition process of technology utilization in millennial entrepreneurship will survive and develop from time to time.

CONCLUSION

Process in knowledge management requires individuals to acquire knowledge first before applying it. So that knowledge can be used properly and by its benefits and filtered properly, knowledge acquisition is the first process that needs to be carried out by individuals who are millennial entrepreneurs who use technology in carrying out their business activities. This study found that millennial entrepreneurs have neglected the process of acquiring knowledge of the business needed. The millennial entrepreneurs studied did not pay attention to knowledge acquisition but instead directly applied the knowledge and applied the knowledge as it was. The millennial entrepreneurs have used smartphones, laptops, computers, and tablets to support their businesses but are still weak in using e-commerce facilities extensively in their business processes. It can be seen in respondents' descriptive data, which shows that of the 153 respondents studied, only 44 people used e-commerce to support business activities. Technology, such as e-commerce, plays an important role in the current era and supports business processes. Because this research was conducted online, so there was no direct contact with the respondents. The next research is suggested to map similar businesses in the same group or business so that the treatment of the theory used can be maximized in its measurement. This effort can increase the generalizability of research results so that the ability to predict is strong between theory and facts in the field.

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