

The Exploratory Factor Analysis on Firms Performance of Micro and Small Enterprises in Indonesia

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Abstract

Research on Firms Performance of Micro and small-sized enterprises (MSEs) continues to grow, especially in developing countries such as Indonesia. This study is designed to build and validate the SME Performance (SP) instrument through the Exploratory Factor Analysis (EFA) which is limited to MSEs in Pekanbaru, Indonesia. This study analysed variable of Entrepreneur Expertise (EC), Government Support (GS) and Entrepreneur Environment (EE). This study followed a cross-sectional study style, with quantitative data obtained from 100 small and medium-sized enterprises based in Indonesia. This study Focused on the reliability measure, this analysis completed the instrument in eighteen (31) pieces. In this case the researcher measures the internal reliability value (i.e. the Cronbach Alpha Value) for the current SP Variable. This research outlines in depth the process for carrying out an EFA examination of SP constructs. This research outlines in depth the process for carrying out an EFA examination of SP constructs. The findings of this analysis may be useful for applied researchers involved in Entrepreneur Performance research.

Keywords

Exploratory Factor Analysis, EFA, SMEs, Performance, Competence, Environment, government support

1. Introduction

Entrepreneurship will boost society's economy. This is due to their potential commitment to reducing unemployment, providing new opportunities, expanding income distribution, reducing hunger, increasing exports of produced goods, fisheries and farm commodities.(Hasanah, Utomo, and Hamid 2019; Iskamto, Ghazali, and Aftanorhan 2019).

Entrepreneur are often described as visionaries who are hard - working and feel a deep inner connection with the goods and services they make, all of whom aspire to make their mark on the world. As such, the core of entrepreneurial activity is the very idea of reaching one's human capacity by purposeful, sincere and self-organized activities that can lead to a fulfilling and completely functional life (Iskamto, Ghazali, and Aftanorhan 2020; Iskamto and Jenita 2020; Wiklund et al. 2019).

Today's enterprise is a world of competition and a future that is more dependent on skill and intellectual resources, such that the development of entrepreneurs has to be guided towards a community of educated young people to become a country of competitiveness. Most MSEs insisted that the government should make more effort to eliminate obstacles and help MSEs in such activities (Iskamto et al. 2019). Strengthening protection laws, educational courses, excellent funding strategies, rational energy policies, continuing success evaluation, ending corruption commitments, and many of the required support services (Irfayanti and Azis 2012). Being an entrepreneur is a strategic decision that needs to be taken with a deep commitment. Entrepreneurialism is the secret to people's success. Entrepreneurship is a practice that promises an increase in quality of life (Abreu et al. 2019; Iskamto and Yulihardi 2017).

2. Literature review

Schumpeter (1965) suggested that entrepreneurs play a crucial role in economic growth by generating creativity, work and well-being. The corporate climate will promote the development of the profitable sector. The more entrepreneurs a country has the greater the nation's financial growth. According to Schumpeter there are five components of the contractors, namely (1) the launch of new goods or new standard products (2) the development of new manufacturing methods (3) the opening up of new markets (4) the procurement of new sources of supply from new resources or parts (5) the formation of a new business organization.

2.1 Entrepreneur Competence

Competencies are characterized as individual attributes, such as the qualifications, experience and abilities needed to perform a specified job (Baum, Locke, and Smith 2001). (Man, Lau, and Snape 2008) have shown that entrepreneurial skills are a set of higher-level characteristics, including recognition, skills and data. They can be seen as the whole business person's ability to play his role effectively. Accomplishing (Laguna, Wiechetek, and Talik 2012) Separated competencies as Basic skills are those relevant to the sector in which the company exists and the technical expertise it needs, and General skills apply to communication skills that are outside of the business background, such as oral speaking skills, energy management and decision-making skills. It is observed that the basic competencies of entrepreneurs are direct predictors of the development of businesses, whereas general abilities have major indirect impacts.

2.2 Government Support

The government can create a favorable Entrepreneurship Environment through policies issued. The government must be aware, however that policies issued in one field cannot be implemented automatically in other fields and even have the opposite effect (Samiadji, Manan, and Sanusi 2014). There are quite a number of government initiatives on entrepreneurship in Indonesia, but no in-depth studies have been conducted. Until now it is difficult to see how public policies on entrepreneurship are implemented in Indonesia, how this policy can be applied in Indonesia, and what policy products are related to entrepreneurship (Iskamto, Kurniati Karim, Sukono, and Bon 2020; Park, Lee, and Kim 2020).

2.3 Entrepreneur Environment

There is no question that the environment has an impact on entrepreneurship. It can be supportive, but it can also create barriers. (Delmar 1996) indicated that three aspects, such as new technology, new markets, and government regulatory deregulation or shifts, could potentially stimulate the creation of new businesses in the sector. He argues that factors such as economic situations, market forces, public policies, life cycles and innovation can play a critical part in the development of small firms (Alhinity 2016; Sanchez 2012). (Sajilan and Tehseen 2015) believed that the culture of society was important to entrepreneurship. Furthermore the existence of specific areas is very conducive to the creation of new enterprises (Iskamto 2020). Another community is better known for supporting a number of company facilities (Alhinity, 2016).

2.4 Firm Performance

As per prior studies Chavez (2016), Iskamto (2020b), and Kozubíková et al. (2015) give an explanation that an entrepreneur needs innovation and creativity by exploring customer desires in order to be able to make good employees or good products. It implies that there is a high NFA. The conclusion is that entrepreneurs with a high NFA have a good chance of success (Ghazali, Syed Jaaffar, et al. 2019). The organizational performance of Daft (1998) can be explained by different kinds of perspectives, and there are several factors that are mutually considered to define the overall organizational performance rather than the highly criticized measurement of financial profit, and profitability reflects the overall performance of profit organizations (Iskamto, Aripin Yapentra, Budi Ansori, and Jupri 2020).

2.5 Exploratory factor analysis (EFA)

Exploratory Factor Analysis is a statistical method used to construct a structural model that consists of a set of many variables. EFA is one of the methods of factor analysis used to identify the relationship between manifest variables or indicator variables in constructing a construct (Hair et al. 2019). The EFA is used in cases where researchers do not have any preliminary knowledge or conclusions that must be clustered into any variable set of measures that have been identified. Then the researcher departs from the predictor (manifest) and then forms a vector (Iskamto, Ghazali, and Aftanorhan 2020). Often the EFA was used in circumstances where latent variables had undefined markers. One latent variable indicator can overlap with another latent variable indicator. Researchers can use AMOS software to analyze the EFA. The feedback used is data from vector metrics. As there is no assumption as to where the metrics will be grouped, typically in the EFA study, it is not known how many latent factors or variables will be created. While it is allowed researchers can decide how many conditions are anticipated. The calculation demonstrating that the indicator can be accepted as a certain indicator in the EFA is the value of the loading factor (Awang 2015; Ghazali, Foziah, et al. 2019).

Exploratory Factor Analysis is one of the methods sometimes used to remove results. In the Exploratory Factor Analysis Process, questioner objects that obtain a common attribute would be categorized together under one item, rather than having too many items (Awang, 2014). In this analysis, the EFA is used to describe the basic parameters of the objects and also to remove items that did not exceed 0.6 of the loading factor of the cut-off stage. That implies that the part with a load factor below 0.6 does not work (Awang, 2014). The EFA was working with SPSS version 26.0. The EFA was conducted to define the simple dimensions of products and to exclude loading factor items not exceeding 0.6 (Awang, 2014), which means that items with a loading factor below 0.6 will not be accepted. In addition, the KMO and Bartlett analyses were conducted to check if the data set was suitable for factor analysis, as well as the bo research communities to determine the heterogeneity of each latent variable that could be clarified by the derived factor.

The level of KMO and Barlett's correlation test between things should be at minimum 0.5 kaiser and Rice (1974) emphasized the KMO level of 0.5 is called "Mediocre," the following table 1. shows the significance of the KMO level.

Table 1. Level of acceptance of the Kaiser-Meyer-olkin (KMO) value

KMO Value	Level of Acceptance
Above 0.90	Superb
0.80 to 0.90	Great
0.70 to 0.80	Good
0.50 to 0.70	Mediocre
Below 0.50	Unacceptable

Regulations respecting the volume of the derived factor shall be based on the own importance, the percentage of uncertainty and the importance of the loading factor. Factor loading at levels greater than one was deemed critical, with 60 percent of the total variances considered to be appropriate (Hair et al. 2010; P. Ghazali et al., 2012).

3. Research Methodology

This thesis is a pilot study of micro and small enterprises (MSEs) in Pekanbaru, Indonesia. The study data collection method was a self-directed survey in which participants were asked to answer questions. A total of 130 questionnaires were circulated in which 104 questionnaires were returned, but four were missing and could not be further examined. As a result, only 100 questionnaires were available for exploratory factor analysis (EFA). According to Sekaran & Bougie (2013) if just 5% of the data is incomplete and the study can be proceeded.

4. Finding and Result

There were 4 variable and 31 newly developed items for the SMEs Performance (SP) construct in this study. Among 18 items of SP construct, 6 items belong to SMEs Performance (SP) dimension, 3 items belong to Workload (WL) dimension, 3 items belong to Time Pressure (TP) dimension, 6 items belong to **Government Support (GS)** dimension, 13 items belong to Entrepreneur Competence (EC) dimension, and 6 items belong to Entrepreneur Environment (EN) dimension. The result of this study is therefore presented as follows:

The general approval index for KMO is above 0.6. In this case, the KMO value of 0.800 is outstanding since it reaches the suggested value of 0.6. In addition, the significance value of the Bartlett Sphericity Test should be less than 0.05 for a factor analysis to be appropriate. The test significance value of Bartlett in Table 1 is 0.000 and satisfy the necessary significance value of less than 0.05. Thus the KMO value close to 1.0 and the Bartlett test significance value close to 0.0 indicate that the evidence is satisfactory and sufficient to further continue with the reduction process. Complete variance explained is often the method of separating objects in order to minimize them to a reasonable amount before further analysis. In this method, components with values greater than 1.0 are extracted into separate components.

Output indicates that the EFA extracted 4-dimensional construct with eigenvalue 3.933 for variable 1 (SP) contributed 65.542 per cent, variable 2(GS) contributed 68.859 per cent, variable 3(EC) contributed 70.697 per cent, and variable 4(EN) contributed 62.038 per cent respectively. This means that the objects are divided into four dimensions or elements and will be considered for further study. The overall variance explained is 78,425 per cent.

4.1 Reliability and Validity for All Constructs

Reliability was evaluated both internally and the reliability of the construct is used to assess the survey items with a free random error without bias using cronboch's alpha that tested the construct's scale (Hair et al. 2019). The reliability assessment was carried out using Cronbach's Alpha to measure the internal consistency of the five constructs: MSEs Performance (6 items), Government Support (6 Items), Entrepreneur Satisfaction (14 Items), Entrepreneur Competence (13 Items), Environment (6 Items). Hair et al.(2012), suggested that the Cronbach's Alpha value exceeding 0.7 be satisfactory.

Table 2. Rotated Component Matrix of OS construct

Item	Comp1	Comp2	Comp3	Comp4
PF1	0.655			
PF2	0.776			
PF3	0.821			
PF4	0.852			
PF5	0.88			
PF6	0.853			
GV1		0.877		
GV2		0.677		
GV3		0.855		
GV4		0.879		
GV5		0.862		
GV6		0.811		
CP1			0.666	
CP2			0.645	
CP3			0.703	
CP4			0.717	
CP5			0.781	
CP6			0.811	
CP7			0.767	
CP8			(delete)	
CP9			(delete)	
CP10			0.63	
CP11			0.667	
CP12			0.625	
CP13			0.803	
EN1				0.689
EN2				0.800
EN3				(delete)
EN4				0.846
EN5				0.811
EN6				0.801

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The Structural Equation Model (SEM) often deploys the reliability of the construct (Awang, 2012). The foregoing are table 1. described for each construct on Cronbach's Alpha. The Table.1 showed that the scales were internally reliable: MSEs Performance (Cronbach's Alpha 0.885), Government Support (Cronbach's Alpha 0.908), Entrepreneur Competence (Cronbach's Alpha 0.909), and Environment (Cronbach's Alpha 0.871). All Cronbach's Alpha values thus surpassed well the minimum threshold of 0.70, as indicated

5. Conclusion

The current study contributes to the assessment of the SME Performance (SP) construction especially in Micro and Small Enterprises in Indonesia. The EFA findings of the present study provided a structure that extracts four dimensions of SP. The dimensions of the SP are Entrepreneur Competence, Government Assistance, and Entrepreneur Climate, as well as those dimensions can be calculated by 31 items established in this analysis as all the reliability tests for the three dimensions of the SP build showed a high value for Cronbach Alpha, met Bartlett Test (significant), KMO (>0.6) and exceeded 0.60 of the factor loadings. This represents the evaluation of things not set aside in this report. The stringent scale production and validation protocols of this analysis have ensured that the current OS instrument is internally reliable and robust across samples.

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