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## The Determinants of Entrepreneurial Success: A Multidimensional Framework

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**FOREWORD by EDITOR-in-CHIEF**

We are pleased to present the STIPM Journal Vol. 2, No. 2, December, 2017. This issue brings together research findings on the adoption of science, technology, and innovation policy and management from Thailand, Malaysia, and Indonesia. This issue also presents a theoretical review on the determinants of entrepreneurial success.

In the original articles of this issue, **Poolsak Koseeyaporn et al.** presented the Talent Mobility Programme in Thailand. It is a new programme for making relationship between the researchers, who are mostly working at Public R&D institutions and universities/higher education institutions, and companies. This programme is supporting the researchers to connect, meet, and explore the possibility of having research topics that fulfill both interests of researchers and the companies. The researchers would have a chance to be exposed to the industry's research problems as well as to obtain a level of trust from the companies.

**Wati Hermawati and Ishelina Rosaira** present the result of an exploratory study on the factors contributing to the sustainability of renewable energy projects in the rural areas. It was indicated that the success of energy technology implementation lays not only in good technology performance and long-term maintenance, but was also highly dependent on six key factors, namely (1) project planning and development; (2) community participation; (3) active communication and beneficiaries; (4) technology maintenance, including workshop and technician availability; (5) project management and institutionalisation; and (6) local government support and networks. The findings from this study provide useful insights to all stakeholders involved in the implementation of renewable energy technology for the rural areas in Indonesia.

**Thiruchelvam** presents a brief overview on Malaysia's STI achievements, salient features of the nation's national innovation system (NIS), and the key challenges of its NIS. The central theme of the paper is that success in STI is not automatic. It must be made through effective policies in promoting innovation as well as innovations in policy-making itself. Without such commitment for these two sides of innovation policy-making, pouring more resources to the development of STI will be futile.

**Ria Hadiyati, et al.**, discussed the innovation capacity-building in the health sector in Indonesia. Current initiatives to enhance innovation capacity exists by intensifying R&D consortia in life science, especially vaccine and stem cell. The research capacity in the area of vaccines has been long started from individual research conducted by researchers. It has been continued into research organisations, and then developed into building innovation capacity through R&D consortia. In areas of stem cell, there is still lack of evidence however, efforts have been made to build innovation capacity through R&D consortia.

**Emyana Ruth and Faiq Wildana** compare the management of Indonesian ICT Business Incubators from the perspective of administrators and tenants. The incubation administrators emphasise the

importance of aspects of skill development, synergy, and seed capital. Meanwhile, from the tenants' perspective, skill development services are considered quite satisfying, either in government, private, or university-owned business incubators. However, emphasising on skill development aspect might lead incubators to provide oversized portion on training activities and susceptible to be trapped as a training institute.

**Dyan Vidyatmoko and Pudji Hastuti** propose a theoretical framework as a result of the development of theoretical framework, proposed by Kiggundu as well as Lussier and Halabi. The proposed framework is to examine factors affecting the success of entrepreneurship development in Indonesia. Three factors are discussed simultaneously, namely the entrepreneurs, the entrepreneurial firms, and the external environment. Success is represented by three indicators consisting of employment growth, profitability, and survival. Compared to both models, the proposed approach is expected to provide a comprehensive analysis of the factors affecting the success of entrepreneurship development in Indonesia. The results of the study is relevant and useful, both from the academic and practical points of view. It also has practical contribution for policy makers in terms of conceptualising and operationalising appropriate factors for the success of entrepreneurship in Indonesia.

After indexing by Google Scholar, ISJD, and IPI, STIPM Journal is now indexed with DOAJ, BASE, and OCLC World Cat. This has made the journal dissemination wider. We would like to thank all the reviewers for their excellent work and the authors who have kindly contributed their papers for this issue. We are also indebted to the STIPM Journal editorial office at Pappiptek LIPI and the publishing and production teams at LIPI Press for their assistance in the preparation and publication of this issue.

We expect that STIPM will always provide the highest scientific platform for the authors and the readers, with a comprehensive overview on the most recent STI Policy and Management issues at the national, regional, dan international levels.

Jakarta, December 2017

Editor-In-Chief



# JOURNAL OF STI POLICY AND MANAGEMENT

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## LIST OF CONTENTS

An Empirical Study of Policy Implementation of Thailand Talent Mobility Programme <b>Poolsak Koseeyaporn, Kittisak Kaweevijmanee, Arum Kitipongwatana, and Oraphan Wiarachai</b> .....	95–110
Key Success Factors of Renewable Energy Projects Implementation in Rural Areas of Indonesia <b>Wati Hermawati and Ishelina Rosaira</b> .....	111–125
Mobilizing Science, Technology and Innovation (STI) for Socio-Economic Development: The Experience of Malaysia <b>K. Thiruchelvam</b> .....	127–138
Building Capacity for Innovation through R&D Consortia in Health Projects: From Network Interaction to Systemic Transformation <b>Ria Hardiyati, Trina Fizzanty, and Erman Aminullah</b> .....	139–148
Management of Indonesian ICT Business Incubators: Administrators' Compared to Tenants' Perspective <b>Emyana Ruth E. Sirait and Faiq Wildana</b> .....	149–161
SCIENTIFIC REVIEW	
The Determinants of Entrepreneurial Success: A Multidimensional Framework <b>Dyan Vidyatmoko and Pudji Hastuti</b> .....	163–178



SCIENTIFIC REVIEW

## The Determinants of Entrepreneurial Success: A Multidimensional Framework

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**ABSTRACT**

This paper tries to propose a theoretical framework to examine factors that affect the success of entrepreneurs. The proposed framework applies a multidimensional analysis of success factors. There are three factors, namely the entrepreneur, the entrepreneurial firm and the external environment. All of them are discussed simultaneously. Success is identified by three indicators: employment growth, profitability, and survival. The proposed framework is a development of theoretical framework proposed by Kiggundu (2002) as well as Lussier and Halabi (2010). Compared to both model, the proposed framework is expected to provide a comprehensive analysis of the factors contributing to the success of entrepreneurship development in Indonesia. This multidimensional approach can illustrate the scope of various entrepreneurial phenomena in Indonesia. In addition, applying this analytical technique to test the relationship and the influence of independent variables will produce determinant variables and eliminate the variables that are not relevant. This study also applies Structural Equation Model. The results of the study is relevant and useful, both from the academic and practical points of view. It also has practical contributions for policymakers in terms of conceptualising and operationalising factors for the success of entrepreneurship in Indonesia.

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## I. INTRODUCTION

### A. Background

Although the academics have been discussing various topics related to entrepreneurial process and the factors influencing the entrepreneurial success, there are still many differences about which of the factors are very important. The most important characteristics of successful entrepreneurs often become a big question (Szerb, 2003). It is reasonable due to the increasing diversity of approaches used in a variety of disciplines on the study of entrepreneur and entrepreneurship issues.

Research on entrepreneurship has been widely conducted in various disciplines of economics (Praag, 1999); ecology (Aldrich, 1990); anthropology (Barth, 2000); psychology (Frese, 2009), and history (Gerschenkron, 2000). Economic theory dominates research on entrepreneurship (Perez and Canimo, 2009). However, as entrepreneurial behaviour can be understood not only from the point of view of rational decision structure, other disciplines are also necessary to fully understand the process of entrepreneurship. Therefore, the various characteristics or personality traits of an entrepreneur, such as creativity, risk-taking, and innovation should also be analysed in others contexts, such as social, political, and economic environmental (Timmons, 1994). Moreover, Wiklund, Patzelt, and Shepherd (2007) stated that business success requires analysis from various dimensions as success involves a complex process.

Some psychologists (such as Frese, Brantjes, & Hoor, 2002) and economists (such as Bianchi and Henrekson, 2005) said that personality of an entrepreneur has an important influence on the success of a business, especially when it is run by the owner himself and has only a few employees (Caliendo & Kritikos, 2007). Moreover, Caliendo and Kritikos (2007) identified several variables influencing the entrepreneurial success, such as human capital or entrepreneurial knowledge and the important personality characteristics of one, in developing entrepreneurial skills, such as personal need and ambition for achievement, locus of control, problem-solving orientation, interpersonal reactivity and assertiveness. These

personality characteristics, together with entrepreneurial knowledge, define character-based approach.

Many topics in entrepreneurship are still being further explored. The distinction has raised at least four practical problems (Szerb, 2003). First, what is meant by innovative behaviour or what should be considered as innovation? Second, where is the border line between an entrepreneur and a manager? Third, what are the distinctive characteristics of an entrepreneur? Fourth, are entrepreneurs born or made?

Most empirical studies on entrepreneurship have been undertaken in developed countries, especially in the United States and UK. It is due to the increasing role of entrepreneurship in the economy, the growing popularity of the entrepreneurship issues, and the easy access to the related data. For a developing country like Indonesia, there is only little knowledge about factors affecting the success of entrepreneurship. In an effort to fill the gap, this study assesses variables determining the success of entrepreneurs in Indonesia.

The economic system adopted by developing countries like Indonesia is different from what it is adopted in developed countries. It is therefore understandable that factors determining entrepreneurial success will be influenced by various specific and local factors. With the different characteristics, studying factors affecting the success of entrepreneurs in developing countries will be different from the ones conducted in developed countries like US, UK and Japan. The differences are, among others, related to the role of entrepreneurs (SMEs) in sustaining the Indonesian economy during severe recessions. It will later become an important pillar in contributing to the Indonesian economic growth.

The rationale underlying the need to compose the framework concept of the relationship between entrepreneurial success and its determinant factors is due to the limited number of multi-dimensional study on this topic. Entrepreneurship in Indonesia has an enormous potential, and has been proven to have contributed significantly to the Indonesian economy. Therefore, the issue of entrepreneurship has become a major concern of

academics and mass media, also due to the fact that the creation of entrepreneurship is one of the priorities of the present government policy.

## B. Theoretical Problem

Industry is one of the most important actors in the techno-industrial innovation system. The owners of small and medium enterprises (SMEs) play a very significant role since they determine the direction and path of their business activities. According to Small Business Administration (2007), two-thirds of the firms in US could survive up to two years, but only half of it can survive to the age of four years. In Chile, less than 42% of SMEs can survive up to four years and less than 50% are able to survive at the age of 10 years (Cabrera et al., in Lusssier & Halabi, 2010). There are various reasons and conditions supporting the success of entrepreneurs in running their business. Some of them are the necessity to gain profit (Dennis & Fernald, 2001), economic stability and health (Pompe & Bilderbeek, 2005), and management skills and environmental conditions (Chocce & Ubeda, 2006). Rajput (2011) concluded that entrepreneurial success factors can be divided into the category of innovation and resources, consisting of psychological and managerial factor. Acs & Szerb (2007) argued that just like politics, entrepreneurship has local nature. Therefore, in determining the entrepreneurial success factors, local factors should surely also be considered.

The entrepreneurship development program in recent years aims basically to increase the number of entrepreneurs to boost the economic development of Indonesia. The data from the Ministry of Cooperatives and SMEs shows that there are an estimated of 4,125,000 entrepreneurs in Indonesia at present, while the ideal number is around 10 million (Ministry of Cooperatives, Small and Medium Enterprises, 2017). Therefore, efforts to create 5,875 million new entrepreneurs in Indonesia are still required. However, research on factors influencing the success of entrepreneurs in Indonesia has not been widely carried out. The study on entrepreneurship development by Sukardi (1991) revealed that the development of entrepreneurship through education and

training gave unsatisfactory results, due to the difficulty to design an appropriate educational/training program for the potential entrepreneurs. Moreover, education and training in present days have not yet integrated the three most required elements i.e the need to engage in entrepreneurship, knowledge and theory required to manage the firm, as well as opportunity to practice in solving real business problems in an enterprise. The study also revealed that potential entrepreneurs can learn about the success of an entrepreneur through his/her participation in daily activities within an established company.

It can be concluded then that factors used in determining the success of entrepreneurship is empirically still partial and do not consider the various factors indicated to have significant influence on the success of entrepreneurs. One of the main causes of this condition is that until now, the government has yet to found the appropriate principles to formulate policies in developing entrepreneurship in Indonesia. To determine the number and type of factors influencing entrepreneurial success, a variety of considerations, such as factors affecting the success of entrepreneurs, and the weight of these factors, are required. These considerations should be viewed from various perspectives and are integrative in the effort to develop entrepreneurship in Indonesia.

Based on the previous explanation, the theoretical problem to be answered in this study is to identify factors influencing the success of entrepreneurship. Several questions related to the formulation of the research model are as follows.

- 1) What are factors influencing the success of entrepreneurs?
- 2) What is the correlation and influence of factors affecting entrepreneurial success?

This framework concept is expected to provide useful information to know more about the relevance of entrepreneurial success and its affecting factors. It is also expected to provide a basic concept (benchmark concept) for further research. As for the government, it can be used as a reference to improve the policy process in its efforts to create qualified new entrepreneurs.



### **C. Method of Study**

In order to develop an analytical framework from the literature review on factors influencing the success of entrepreneurs, two initial steps of meta-analysis were carried out (DeCoster, 2004). The first step was to determine and study the research topics related to the understanding of entrepreneur, the understanding of success for entrepreneur and its indicator, and the determinant of entrepreneurial success and its indicator. The result was then summarised. It is followed by keyword identification through the search for relevant literature in online database. The search for factors influencing the success of entrepreneurs was carried out in accordance with the determinants as stated in the Kiggundu (2002) model. The materials—both in English and Indonesian—were retrieved from Google, Google Scholar, Proquest, and Science Direct regardless of their year of issue.

The next step was selecting particular topics using the previous keywords as guidance, which lasted up until May 2017. Most of the publications obtained from Proquest are academic articles in the form of journals and dissertations. From Google, a variety of articles ranging from scientific journals, working papers, conference papers, institutional reports, dissertations, and books could be collected. As from Google Scholar and Science Direct, the research found some widely cited scientific journals. In general, scientific journals used as references are international journals recognised by DIKTI (indexed journal from Thomson Reuter, Scopus, and Microsoft Academic Search).

## **II. ANALYTICAL FRAMEWORK**

### **A. Concept of Entrepreneur**

Most people would agree that an entrepreneur is a person who has started his or her own business. However, there is no single terminology agreed to be used since many concepts of entrepreneur have been developed.

Frederick, Kuratko, & Hodgestts (2006) viewed the entrepreneur as an agent of change who carries out deliberate search, careful planning, and prudent consideration in entrepreneurial

process. Zimmerer & Scarborough (2008) described entrepreneur as someone who creates a new business to face uncertainty and risk in order to gain profit and growth through the identification of significant opportunities and the use of required resources.

Meredith, Nelson, and Neck (2000) argued that entrepreneurs are the ones who have the ability to see and assess business opportunities, gather the resources needed to take advantage of them, and take appropriate action to ensure success.

From the previous definitions, it can be concluded that an entrepreneur is someone who has the ability to see opportunities, then to seek funding as well as other resources required to take advantage of those opportunities, and to take risks with the aim to achieve individual well-being and added value to the community. Riyanti (2004) concluded that from the various definitions of entrepreneurship, a definition can be drawn that entrepreneur is someone who creates employment for others by establishing, developing, and instituting his own company, and willing to take personal risks in trying to find opportunities and creatively use his potential to identify the product, manage and determine mode of production, set the operation for product procurement, as well as sell these products to the market and finance all the operations.

Pearce & Robinson (2009) revealed that entrepreneurship is a process of combining ideas as well as creative innovative process with management and organisation skills required to direct the appropriate human and financial resources, as well as operation to achieve the identified needs and wealth creation in the process. The essence of entrepreneurship according to Drucker (1996) is ‘the ability to create something new and different through creative thinking and innovative actions to open up opportunities’. Zimmerer & Scarborough (2008) defined entrepreneurship as a process of applying creativity and innovation to solve problems in order to find opportunities to maintain and improve the business. According to Robinson and McDougall (1998), entrepreneurship is a process of doing something new (creative), different (innovative),

and ready to take risks in order to create wealth either for individuals or organizations, as well as to increase value added for society.

From the definitions mentioned previously, it can be concluded that entrepreneurship is a process of working on something new (creative) and something different (innovative) supported by the willingness to take risks. A creative entrepreneur is no stranger to the ability and tenacity to develop new ideas by combining the resources they own. In addition, they tend to have many alternatives to face certain situation and utilise subconscious mental forces to create something new, such as new product or new process. Innovation is the application of creative ideas with the courage to bear the risk to get the opportunity for increasing the business and profit by taking advantage of opportunities/potential of the existing resources.

## B. Concept of Success

Some researchers who studied about the success of entrepreneurship have different definition and criteria on successful business. Some of them defined success in narrow, accountancy term using criteria based upon financial analysis and ratios (Jennings & Beaver, 1997; Zahra & Bogner, 2000; Murphy, Trailer, & Hill, 1996; Robinson & McDougall, 1998; Santos-Requejo & González-Benito, 2000; Harada, 2003; Garoma, 2012). Assessing success is somewhat debatable due to a deficiency of agreement on what comprises entrepreneurial success.

Defining a company's success based on its financial performance will be extremely difficult when the subject of the study is new business ventures, particularly in the context of small and medium enterprises (SMEs). Young firms lack of historical information and many of them have neither standardised accounting measures nor indicators of performance yet. Moreover, they may not show profit in their first years of operation although their sales are increasing (Brush & Vanderwerf, 1992). For all those reasons, a number of scholar have doubted about basing extensively on financial performance indicators (Hillman & Keim, 2001; Ghobadian & O'Reagen, 2006). Some authors such as Man, Lau, and

Chan. (2002) prefer speaking of success in terms of competitiveness to analysing these early years of the life of the business.

Indicators applied to measure business success should be different from one sector to another. For instance, the success of a high-technology company, in which the initial investment of capital is very high and high profitability cannot be expected in the first years of the company's life, cannot be measured simply using the financial indicators (McGee, Dowling, & Megginson, 1995; Bosma, van Praag, Thurik, & de Wit, 2004). Thus, Stuart and Abetti (1987) propose a broader concept of performance that includes non-financial indicators. Several researchers use this type of indicator, such as market share (Zahra and Bogner, 2000) and the introduction of new products or product quality (McGee, et al., 1995).

Nowadays, management acknowledges the need to emphasise innovative measures of success, and not necessarily those of the financial natures (Ittner & Larcker, 1998; Usoff, Thibodeau, & Burnaby, 2002; Kaplan and Norton, 1992). Several studies have demonstrated the importance of these measures in fields where intangible assets are linked to the key factors of success (Amir & Lev, 1996; Edvinsson & Malone, 1997).

Other than the previous classification, a significant number of studies in this field put the concept of entrepreneurial success on the same level as the concept of survival (Bosma, van Praag, Thurik, & de Wit, 2004). Authors who opt for survival as a measure of success find support in the dynamic models of industrial organisation. It is said that young ventures—which obtain profit—decide to stay in the market, while those that obtain losses end up abandoning the activity (Harada, 2003). Moreover, it is easy to identify and measure survival.

Therefore, it can be concluded that success has multidimensional natures and hence it is essential to include all the different dimensions of performance in the empirical research undertaken in the field (Wiklund & Shepherd, 2003). Based on a review on some of the most important entrepreneurship journals, it is found that the most used indicators are those related to

company growth. This category includes 31% of the measures used in the articles and is by far the most preferred dimension to reflect the performance and success of new firms. Following that dimension, the paper prefers using indicators that refer to profitability, which is applied in 18.11% of cases. That is followed by profit, with almost 14%, while liquidity trails with 7.16%. Indicators related to organization revenues and employees both represented 4.25% of the total, followed by those related to the production/service process (3.39%), the product or service itself (2.26%), the customer (1.88%), and market share (3.01%) (Perez & Canimo, 2009)

### **C. Kiggundu and Lussier & Halabi Models**

Kiggundu (2002) proposed three approaches to study factors influencing the success of entrepreneur. These factors are the entrepreneur, the entrepreneurial firm, and the external environment. The entrepreneur's attributes relevant for success or failure include demographic variables, psychological factors, work behaviour, and core competencies. The entrepreneurial firm relevant factors include organization form, capital resources, corporate governance, and technical assistance. The external environment includes macro-economic variables, quality of public administration, social/cultural values/attitudes, and infrastructure.

Each variable of the three aspects is approached in a variety of manifest variables/indicators. For demographics, indicators of age, gender, marital status, social status, education/experience, race/ethnicity, and core competence are used. Psychological factors use the indicators of achievement, risk taking, self-confidence, action orientation, autonomy, and internal locus of control. To measure work behaviour, the indicators of hard work, perseverance, community leadership, and strategising are used. In core competencies, indicators of technical/ craft skills, managerial skills, social/political skills, human relations skills, business acumen, innovation, and expertise in implementing management stages are used.

For the variable of organisation form, it is used the indicators of size, age, location, ownership/structure, industry/sector, and business network. Capital resources are measured using the indicators of initial capital, sources of capital, expansion capital, human capital, and appropriate technology. Corporate governance is measured using the indicators of board of directors, annual general meeting, and shareholder's rights, while technical assistance is measured using the indicators of financing, training, consultancy, technology transfer, incubation, twinning, overseas tours, and subsidies.

Macro-economic variables use the indicators of GDP growth, income distribution, competitiveness, and deregulation. The quality of public administration is measured by using the indicators of legal framework, property rights, services to public, and openness. To measure the variable of social/cultural values or attitudes, some indicators are used. These indicators are profit motive, risk taking, individualism, social capital, and business/capitalism. Infrastructure is measured using the indicators of physical, digital, and institutional.

On the other hand, Lussier & Halabi (2010) design a prediction model for success and failure of a business. This model is a development of the previous Lussier (1995) model. There are 15 independent variables used in this model. They include capital, record keeping and financial control, industry experience, management experience, planning, professional advisors, education, staffing, product/service timing, economic timing, age, partners, parents, minority, and marketing. Dependent variables consist of success and failure.

## **III. RESULTS AND DISCUSSION**

The summary of variables resulted from the previous studies in various countries is presented in Table 1.

From literature review, it can be concluded that the success of entrepreneurs in running their business is determined by various variables (and aspects). Using the determinants of entrepreneurial success as described in Table 1, a conceptual framework can be constructed (Figure 1).

**Table 1.**  
Variables Affecting the Success of Entrepreneurs

No.	Variables	Author and Year
<b>I. Demographics :</b>		
1.1.	Age	Alam, Abdullah, Moten, & Azam (2015); Lim & Envick (2013); Welter (2001); Cortes, Albert, & Ashfaq (1987); Kiggundu (2002); Hiemstra, Kooy, & Frese (2006); Panda (2001); Bosma, Praag, & Wit. (2000); Lussier & Halabi (2010); Riyanti (2004)
1.2.	Gender	Kiggundu (2002); Bosma et. al. (2000); Mead & Liedholm (1998); Welter (2001)
1.3.	Social status	Kara, Chu, & Benzig (2010); Alam, Jani, & Omar (2011); Venter & Farrington (2009); Ramana, Ramana, & Aryasri (2009); Panda (2001); Lussier & Halabi, (2010); Morrison (2006); Kiggundu (2002)
1.4.	Education	Alam et al. (2015); Bates (1990); Kiggundu (2002); Hiemstra et al. (2006); Coy, Shipley, & Jmerik (2007); Bosma et al. (2000); Lussier & Halabi (2010); Narayanasamy, Rasiah, & Jacobs (2011); Kim (1997)
1.5.	Experience	Kalyani & Kumar (2011); Dahl & Reichstein (2007); Kiggundu (2002); Ramana et al. (2009); Panda (2001); Lussier & Halabi (2010); Hasweel et al. in Zimmerer & Scarborough (2008)
1.6.	Race/ ethnicity	Lussier & Halabi (2010); Kiggundu (2002)
<b>II. Psychological Factors :</b>		
2.1.	Achievement	Abdullah Hamli, & Deen (2009); Sebor, Lee, & Sukasame (2009); Chattopadhyay & Ghosh (2008); Johnson (1990); Kiggundu (2002); Sollimossy (1998); Morrison (2006)
2.2.	Risk taking	Fairlie & Hollem (2012); Johnson (1990); Narayanasamy et al. (2011); Kiggundu (2002); Frese et al. (2002); Abdullah et al. (2009); Sun (2004); Panda (2001); Munoz, Liao, & Welsch (2005).
2.3.	Self confidence	Abdullah et. al. (2009); Johnson (1990); Baum (1994); Kiggundu (2002); Dalimunthe (2002); Sun (2004)
2.4.	Action orientation	Munoz et al. (2005); Kiggundu (2002)
2.5.	Autonomy	Chattopadhyay (2008); Kiggundu (2002); Sun (2004); Morrison (2006)
2.6.	Internal locus of control	Lussier & Halabi (2010); Sebor et al. (2009); Johnson (1990); Kiggundu (2002); Venter & Farrington (2009); Chattopadhyay (2008);
2.7.	Motivation *	Chedli (2016); Samisoni (2010); Johnson (1990); Wiklund et al. (2007); Glancey (1998); Dalimunthe (2002); Welsch, Liao, Pistrni, Oksoy, & Hung (2003)
2.8.	Entrepreneurship *	Hult, Snow, & Kandemid (2003)
2.9.	Creative/innovative *	Samisoni (2010)
<b>III. Work Behaviour :</b>		
3.1.	Hard work/ high energy	Lee & Lee (2015); Kiggundu (2002); Venter & Farrington (2009); Coy et al. (2007); Munoz et al. (2005)
3.2.	Leadership	Abdullah et al. (2009); Kiggundu (2002)
3.3.	Strategising/ Strategic orientation	Kiggundu (2002); Sollimossy (1998); Bosma et al. (2000)
3.4.	Decisions Making Style/ Based Decisions *	Team Grieco (2007); Dalimunthe (2002); Sun (2004)
3.5.	Industrial Environment *	Dalimunthe (2002)
3.6.	Market Orientation *	Hult et al. (2003); Dalimunthe (2002)
3.7.	Chance/ Opportunity *	Kearins Luke, & Corner (2004); Sollimossy (1998)
3.8.	Social Network (Partner)	Alam et al. (2011); Monahan, Shah, & Mathew (2011); Sollimossy (1998); Lussier & Halabi (2010); Morrison (2006)

No.	Variables	Author and Year
<b>IV. Core Competencies</b>		
4.1.	Technical/ Craft skills	Chattopadhyay & Ghosh (2008); Rose, Kumar, & Yen (2006); Baum et al. (2001); Kiggundu (2002); Sun (2004)
4.2.	Managerial skills	Samisoni (2010); Kiggundu (2002); Lussier & Halabi (2010); Abdullah et al. (2009); Rose et al. (2006); Herriott (2000)
4.3.	Human relations skills	Samisoni (2010); Kiggundu (2002); Rose et al. (2006); Sun (2004)
4.4.	Business acumen	Kiggundu (2002); Samisoni (2010)
4.5.	Innovation	Kiggundu (2002); Frese et al. (2002); Kearins et al. (2004); Rose et al. (2006); Baker (2007); Samisoni (2010); Lussier & Halabi (2010)
4.6.	POSDCORB *)	Kiggundu (2002); Rose et al. (2006); Lussier & Halabi (2010)
<b>V. Organisation Form :</b>		
5.1.	Size	Liedholm (2002); Kiggundu (2002); Dalimunthe (2002); Sollimossy (1998); Samisoni (2010); Lussier & Halabi (2010)
5.2.	Age	Bigsten & Gebreyesus (2007); Kiggundu (2002); Samisoni (2010)
5.3.	Location	Liedholm (2002); Kiggundu (2002)
5.4.	Networks/ clusters	Kiggundu (2002); Sollimossy (1998); Bosma et al. (2000)
5.5.	Business experience **)	Dalimunthe (2002); Baker (2007)
5.6.	Marketing Skill	Monahan (2011); Dalimunthe (2002); Sollimossy (1998); Lussier & Halabi (2010); Indarti & Langenberg (2005)
<b>VI. Capital Resources :</b>		
6.1.	Initial capital	Kalyani & Kumar (2011); Kiggundu (2002); Dalimunthe (2002); Panda (2001); Bosma et al. (2000); Lussier & Halabi (2010)
6.2.	Sources of capital/ Risk Capital Availability	Kiggundu (2002); Attahir (1995); Indarti & Langenberg (2005); Samisoni (2010); Rose et al. (2006)
6.3.	Expansion capital	Kiggundu (2002)
6.4.	Human capital	Baptista et al. (2014); Kiggundu (2002); Monahan (2011); Dalimunthe (2002); Samisoni (2010); Sollimossy (1998); Lussier & Halabi (2010)
<b>VII. Technical Assistance :</b>		
7.1.	Credit/ financing	Kiggundu (2002)
7.2.	Training	Kiggundu (2002); Dalimunthe (2002); Sun (2004).
7.3.	Consultancy	Kiggundu (2002), Lussier & Halabi (2010)
7.4.	Incubation	Kiggundu (2002)
7.5.	Twinning	Kiggundu (2002)
7.6.	Overseas tours	Kiggundu (2002)
<b>VIII External Environment</b>		
8.1	Enabling business environment	De Soto (2001); Sethuraman (1997); Van Dijk (1996)
8.2.	Social networks	Annen (2007); Annen (2001), Wiklund et al. (2007); Kristiansen (2004); Johannisson (1998)

\*) POSDCORB (*Planning, Organising, Staffing, Directing, Coordinating, Reporting, Budgeting*)

\*\*) additional variable excluded in Kiggundu (2002), Lussier & Halabi (2010) model

The proposed model in Figure 1 describes the direct and indirect relationship between the dependent variable and the independent variables. Variables of entrepreneurial attributes have a direct relationship to the success of the entrepreneur as described in the previous study (Alam, Abdullah, Moten, & Azam, 2015; Kiggundu, 2002; Kara, Chu, & Benzig, 2010; Kalyani & Kumar, 2011; Abdullah, Hamli, & Deen, 2009; Fairlie & Hollem, 2012; Lee & Lee, 2015).

Variables of entrepreneurial firm and external environment have indirect influence to the success of entrepreneur. Variables of entrepreneurial firm such as human capital, financial capital, and social network influence business success indirectly through entrepreneur attributes (Wiklund et al., 2007). The success of entrepreneur is measured by financial ratios and non-financial ratios to show a comprehensive approach.

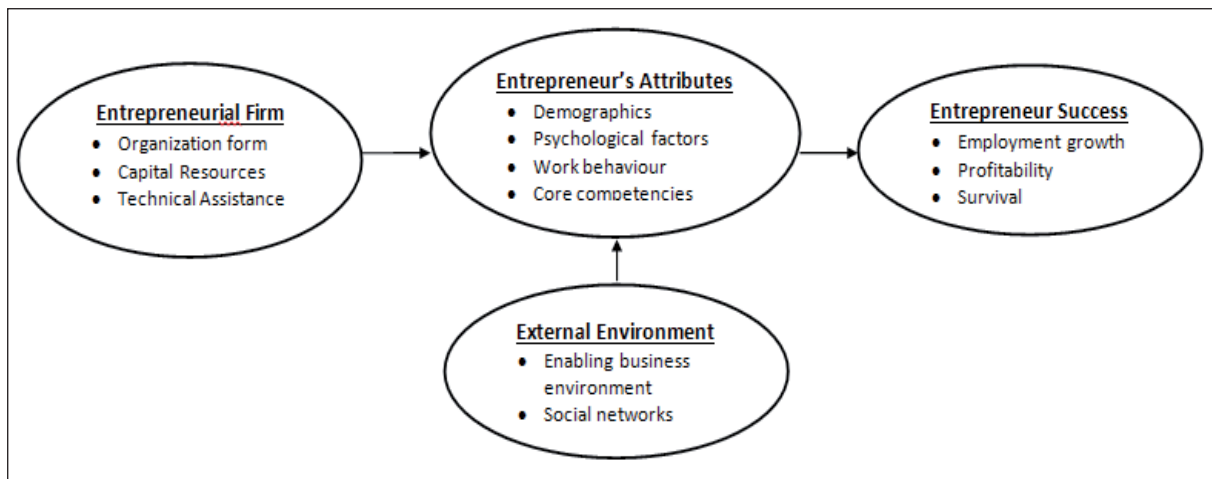
This study is the development of a theoretical study proposed by Kiggundu (2002), and Lussier & Halabi (2010). Compared to both model, the proposed approach provides more comprehensive analysis of the factors affecting the success of entrepreneur in Indonesia. This multidimensional approach can illustrate the scope of various entrepreneurial phenomena in Indonesia. Further on, the use of analytical technique to test the relationship and influence of independent variables will produce determinant variables and eliminates the irrelevant variables.

Additional variables are also included in this study. Variables of education and experience, considered as one variable in Kiggundu's concept, are separated into two variables in this study. This separation is supported by the results of previous studies, empirical observations, and discussion with experts.

When it is compared to theoretical concept of Kiggundu, there are also three additional variables in the category of psychological factors. These variables are motivation, entrepreneurship, and creativity. For the category of work behaviour, four additional variables include decision-making style, industrial environment, market orientation, and opportunity. One additional variable, business experience, is also added to the category of organisation form.

Variables of entrepreneurial spirit and creativity/innovation need to be added with the reasoning that in an increasingly difficult economic situation, people with the entrepreneurial spirit and creative skills are required to provide opportunities to create new businesses. These new businesses will not only be able to provide better life for the owners and their families, but also to provide opportunities for employment as well as to provide opportunities in innovation activities, such as development of new products, services, technology, administration, and strategy. Characteristic dimension of business includes new business venturing, product/service innovation, process innovation, self-renewal, risk taking, proactive, and competitive aggressiveness (Antoncic & Hisrich, 2003). The addition of strong motivation is needed for the business to be able to reach the goals that have been set. The addition of motivation variable is supported by the research of Dalimunthe (2002), Samisoni (2010), and Welsch, Liao, Pistmi, Oksoy, & Hung, (2003). Variable of entrepreneurial spirit is in line with the results of Hult, Snow, & Kandemid, (2003) research as well as variable of creative/innovative which is supported by Samisoni (2010).

Decision-making style of an entrepreneur needs to be added to the variables influencing the success of entrepreneur. Empirical observation indicates that the decision-making style affects the decision process in a variety of business activities. For example, to decide the brand to be used, entrepreneurs usually consider inputs from various parties. The same thing happens when they have to make decision in determining the location/place to sell products. Using different decision-making styles, entrepreneurs influence their subordinates to achieve corporate goals. The style of a leader has a strong influence on the implementation of the tasks performed by employees. This empirical observation is supported by the research conducted by Dalimuthe (2002), Sun (2004), and Grieco (2007).



**Figure 1.** Proposed Frame Factors in Understanding Entrepreneur Success

Variable of industrial environment is the factor indicated to determine the success of entrepreneurs, as each industrial environment has different level of risks and characteristics. Industrial environment can be divided into the environment with low turbulence level and the environment with high turbulence level. Environmental turbulence is related to the environment with industrial characteristic and market environment, such as market risks, operational and technical risks as well as financial and social risks. A study by Dalimunthe (2002) and Wisardja (2000) reveal that variable of industrial environment has significant influence on success of entrepreneurs.

Variable of market orientation is added to the category of entrepreneurial behaviour as every effort made by the entrepreneur requires anticipation on consumer needs. Various empirical observations (Susilo, Krisnadewa, & Didit, 2007; Sumiati, 2015) in the food industry in Indonesia show that market orientation also plays important role in the success of an entrepreneur. As an example, there is a business that sets the product price and creates size of product package adjusted to the level of consumer income. The implementation of market orientation will lead to business improvement and the successful entrepreneur. This empirical observation is supported by the study of Dalimunthe (2002) and Hult et al. (2003).

Variable of opportunity is included in the study since not all entrepreneurs can take advantage of opportunities or the opportunity is not available at all times. Business opportunities in the food industry are also often associated with luck. A study conducted by Kearins, Luke, & Corner (2004) and Sollimossy (1998) showed that the variable of opportunity has a significant influence on entrepreneurial success.

Variable of business experience is added to the variables that determine the success of an entrepreneur. The reason to include this variable is that based on empirical observation, business experience will influence the success of entrepreneurs. The previous experience in connected to the similar industry will increase the company's ability to perform the relatively similar activities. This empirical observation is supported by the result of the study conducted by Dalimunthe (2002), Sollimossy (1998), and Baker (2007).

It can be concluded therefore that factors determining the success of entrepreneurs are grouped into the categories of demographics, psychological factors, work behaviour, core competencies, form of organisation, capital resources, and technical assistance. Demographic category consists of age, gender, social status, education, experience, and ethnicity. Category of psychological factors includes achievement, risk-taking, self-confidence, action orientation, and autonomy, internal locus of control, motivation,

entrepreneurship, and creativity/innovation. Category of behaviour consists of hard work, leadership, strategic orientation, decision-making style, industry environment, market orientation, opportunities, and social network. Category of core competencies includes technical expertise, managerial skills, personal relationship, business acumen, innovation, and expertise in conducting management cycle. Category of organisation form can be divided into business size, age, location, business network, business experience, and marketing skill. Category of capital resources consists of initial capital, human resources, expansion of capital, and human resources. Category of technical assistance includes loan/financing, training, consultancy, incubation, twinning, and overseas tours.

Based on the previous explanation, the details of the eight aspects with their variables are as follows.

- a. The organizational form includes: business scale ( $X_1$ ), age of the firm ( $X_2$ ), company location ( $X_3$ ), business network ( $X_4$ ), business experience ( $X_5$ ), and marketing expertise ( $X_6$ ).
- b. Capital resources consist of: initial capital ( $X_7$ ), capital source ( $X_8$ ), capital increase ( $X_9$ ), and human resources ( $X_{10}$ ).
- c. Technical assistance includes: loan/financing ( $X_{11}$ ), training ( $X_{12}$ ), business consultancy access ( $X_{13}$ ), incubation ( $X_{14}$ ), internship ( $X_{15}$ ), and overseas visits/business cooperation ( $X_{16}$ ).
- d. Demographics consist of: age ( $X_{17}$ ), gender ( $X_{18}$ ), social status ( $X_{19}$ ), education ( $X_{20}$ ), experience ( $X_{21}$ ), and ethnicity ( $X_{22}$ ).
- e. Psychology includes: best achievement ( $X_{23}$ ), risk-taking ( $X_{24}$ ), self confidence ( $X_{25}$ ), action orientation ( $X_{26}$ ), autonomy ( $X_{27}$ ), internal locus of control ( $X_{28}$ ), strong motivation ( $X_{29}$ ), entrepreneurship ( $X_{30}$ ), and creativity/ innovation ( $X_{31}$ ).
- f. Work behaviour consists of: hard work ( $X_{32}$ ), leadership ( $X_{33}$ ), strategic orientation ( $X_{34}$ ), decision-making style ( $X_{35}$ ), industrial environment ( $X_{36}$ ), market orientation ( $X_{37}$ ), ability to exploit market opportunities and

network ( $X_{38}$ ), and social and market networks ( $X_{39}$ ).

- g. The core competencies include: technical expertise ( $X_{40}$ ), managerial skills ( $X_{41}$ ), personal relationship skills ( $X_{42}$ ), business acumen ( $X_{43}$ ), innovation ( $X_{44}$ ), and expertise in management cycle ( $X_{45}$ ).
- h. External environment consist of: enabling business environment ( $X_{46}$ ) and social network ( $X_{47}$ ).

By identifying the indicated variables influencing the success of entrepreneurs, this general theoretical framework is developed. This framework illustrates the relationship between independent variables and dependent variable. Factors influencing the success of entrepreneurs serve as an independent variables and success serves as dependent variable. In order to operationalise these variables, it is necessary to explain their definition and indicators of each variable, as well as their data sources.

The proposed framework can be analysed using Structural Equation Model (SEM) (Ferdinand, 2000; Kusnendi, 2008). The use of SEM as an analytical technique is based on the consideration that the hypothesised factors influencing the entrepreneurial success are the latent variables or constructs (unobserved variables)—the variables that cannot be measured directly, but can be estimated by indicator. SEM is also able to build a very diverse relationship pattern and to estimate the interaction relationship among variables. In addition, regression estimation using SEM is performed simultaneously for all independent variables so that SEM is not affected by intercorrelation relationships among independent variables. Using SEM analysis will result in the magnitude of the influence of each independent variable so that it will be known the main factors affecting the success of entrepreneurship. The use of SEM will also eliminate independent variables that do not affect the success of the entrepreneur.

#### IV. CONCLUSION

A variety of factors that influence the success of entrepreneur are presented in the literature review. From the results of literature review and



empirical observations, a theoretical framework of the study to determine the determinants of entrepreneurial success is developed.

This theoretical framework is the development of a model proposed by Kiggundu (2002) and Lussier & Halabi (2010). This new framework is developed by adding new variables for the categories of psychological factor, behaviour, and organisation form. Compared to Kiggundu and Lussier & Halabi model, the proposed approach is expected to provide a comprehensive analysis of the factors affecting the success of entrepreneur in Indonesia. To operate the research framework, it is necessary to explain the definition of latent variables, measurement of latent variables and their indicators, unit of indicator, and data sources.

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