

CRITICAL SUCCESS AND MODERATING FACTORS EFFECT IN INDONESIAN PUBLIC UNIVERSITIES' BUSINESS INCUBATORS

by Lina Gozali

Submission date: 13-Apr-2021 05:15PM (UTC+0700)

Submission ID: 1558025676

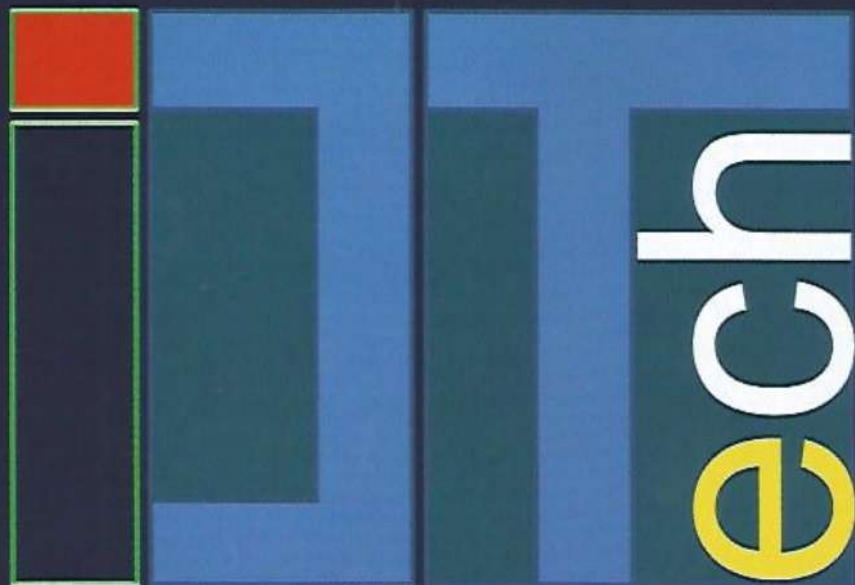
File name: total_ijtech_2018.pdf (1.27M)

Word count: 5407

Character count: 32905

International Journal of Technology

Volume 9 | Issue 5 | October 2018



www.ijtech.eng.ui.ac.id

Published by Faculty of Engineering, Universitas Indonesia

List of Contents

Editorial Notes

- The Role of Technology in Building a Resilient City: Managing Natural Disasters 862
Mohammed Ali Berawi

Articles

- A Compact Microstrip Slotted Antenna for Dual-band RFID Applications 866
Ahmed Elhamraoui, Elhassane Abdelmounim, Jamal Zbitou, Hamid Bennis, Mohamed Latrach, Abdelaali Tajmouati
- The Patterns of Innovation Agendas on 5G Mobile Technology 876
Muhammad Suryonegara, Muhamad Asvial
- Evaluation of Spatial Layout in Health Care Waiting Areas based on Simulation of Droplet Movement Trace 888
Yandi Andri Yatma, Nandy Putra, M. M. Y. Harahap, Diandra Pandu Saginotari
- Lessons Learned from a Cancelled Urban Transport Project in a Developing Country: The Importance of the Front-end Planning Phase 898
Seng Hansen, Eric Too, Tiendung Le
- Reliability Study of Spectral Acceleration Designs Against Earthquakes in Bengkulu City, Indonesia 910
Lindung Zalbain Mase
- Assessing the Bond Strength of Hot Mix Asphalt Pavement for Wearing and Binder Courses 925
Haryati Yaacob, Fung Lung Chang, Ramadhansyah Putra Jaya, Mohd Rusli Hainin, Ahmad Safuan A. Rashid, Norhidayah Abdul Hassan
- Treatment of Batik Industry Waste with a Combination of Electrocoagulation and Photocatalysis 936
Nur Sharfan, Ahmad Shabri, Fadhila Ahmad Anindria, Rickson Mauricio, Muhammad Akbar Buana Tafsili, Slamet Slamet
- Response Surface Optimisation of Biogas Potential in Co-Digestion of *Miscanthus Fuscus* and Cow Dung 944
Emmanuel Tetteh, Kofi Owusu Ansah Ampo, Denis Asante-Sackey, Edward Armah
- The Application of Geostatistical Seismic Inversion for Delineating Thin Reservoirs: A Case Study of the Jambi Sub-Basin 955
Abdul Haris, Aditya Dwi Prasetyo, Agus Riyanto, Sri Mardiyati
- The Simultaneous Removal of Cyanide and Cadmium Ions from Electroplating Wastewater using UV/TiO₂ Photocatalysis 964
Tedi Hudaya, Hans Kristianto, Christine Meliana
- Nanostructure Properties And Dye-sensitized solar cell open circuit Voltage of A TiO₂, Aerogel and Pre-Hydrothermally Treated Xerogels 972
Bambang Priyono, Akhmad Herman Yuwono, Badrul Munir, Muhammad Hasan Mustafa, Faizah
- An Anticorrosion Coating from Ball-milled Wood Charcoal and Titanium Dioxide using a Flame Spray Method 983
Teguh Endah Saraswati, Kartika Nugroho, Miftahul Anwar
- The Hydrogen Adsorption Behavior of Mechano-Chemically Activated Carbon from Indonesian Low-rank Coal: Coupled Langmuir and Dubinin-Astakhov Isotherm Model Analysis 993
Sri Harjanto, Jaka Fajar Fatmiansyah, Latifa Nuraini Noviana, Stefanna Widy Yunior
- Drying Kinetics of Indonesian Peat 1006
Pither Palamba, Mohamad Lutfi Ramadhan, Agus Sunjarianto Pamitran, Gatot Prayogo, Engkos Achmad Kasasih, Yulianto Sulistyia Nugroho
- Measurement and Prediction of the Density and Viscosity of Biodiesel Blends 1015
Minh Tuan Pham, Anh Tuan Huang, Anh Tuan Le, Abdel Rahman M Said Al-Tawaha, Van Huong Dong, Van Vang Le
- Study on the Alteration of Geometrical Dimensions of Tee Stiffeners Concerning the Ultimate Strength Characteristics under a Vertical Bending Load 1027
Firman Ady Nugroho, Bongot Siregar, Gerry Liston Putra, Radan Dhelika
- The Effect of Fiber Orientation and Stress Ratio on the Crack Growth Behaviour of Fiber Metal Laminates (FMLs) 1039
Anindito Purnawidodo, Khairul Anam, Djarot B. Darmadi, Ari Wahjudi
- Critical Success and Moderating Factors Effect in Indonesian Public Universities' Business Incubators 1049
Lina Gazali, Maslin Masrom, Teuku Yuri M Zagloel, Habibah Norehan Haron, Dahmir Dahlan, Frans Jusuf Daywin, Mohammad Agung Saryatmo, Docki Saraswati, Asril Fitri Syamas, Eko Harry Susanto
- Resilient Structure Assessment using Cobb-Douglas Production Function: The Case of the Indonesian Metal Industry 1061
Ida Bagus Made Putra Jandhana, Teuku Yuri M Zagloel, Rahmat Nurcahyo
- Halal Logistics Performance and Customer Loyalty: From the Literature Review to a Conceptual Framework 1072
Ilyas Masudin, Faradilla Witha Fernanda, Widayat Widayat



INTERNATIONAL JOURNAL OF TECHNOLOGY

Volume 9, Issue 1, October 2021

ISSN 2286-9024

Editorial Board

Editor-in-Chief

Dr. Mohammed Ali Berawi

Universitas Indonesia, Indonesia

Managing Editor

Dr. Nyoman Suwartha

Universitas Indonesia, Indonesia

Members

| | |
|-----------------------------------|---|
| Prof. Dr. Akhmad Herman Yuwono | Universitas Indonesia, Indonesia |
| Dr. Agus Sunjarianto Pamitran | Universitas Indonesia, Indonesia |
| Dr. Anwar Usman | Universiti Brunei Darussalam, Brunei |
| Prof. Dr. Bambang Sugiarto | Universitas Indonesia, Indonesia |
| Dr. Cecilia Vale | University of Porto, Portugal |
| Prof. Dr. Dedi Priadi | Universitas Indonesia, Indonesia |
| Dr. Eko Adhi Setiawan | Universitas Indonesia, Indonesia |
| Dr. Eny Kusriani | Universitas Indonesia, Indonesia |
| Prof. Dr. Esah Hamzah | Universiti Teknologi Malaysia, Malaysia |
| Dr. Giuseppe Lo Papa | Teagasc Rural Economy Research Centre, Ireland |
| Prof. Dr. Hamzah Abdul Rahman | Universiti Malaya, Malaysia |
| Dr. Ir. Hendri Dwi Saptioratri B. | Universitas Indonesia, Indonesia |
| Prof. Dr. Hideaki Ohgaki | Kyoto University, Japan |
| Dr. Hng Huey Hoon | Nanyang Technological University, Singapore |
| Prof. Dr. Isti Surjandari | Universitas Indonesia, Indonesia |
| Dr. Johannes Widodo | National University of Singapore, Singapore |
| Prof. Dr. Jong-Taek Oh | Chonnam National University, South Korea |
| Dr. Ir. Muhamad Asvial | Universitas Indonesia, Indonesia |
| Prof. Dr. Muhammad Idiris Saleh | Universiti Sains Malaysia, Malaysia |
| Dr. Muhammad Suryanegara | Universitas Indonesia, Indonesia |
| Prof. Dr. Nandy Putra | Universitas Indonesia, Indonesia |
| Dr. Nofrijon Sofyan | Universitas Indonesia, Indonesia |
| Prof. Paramita Atmodiwirjo | Universitas Indonesia, Indonesia |
| Prof. Dr. Raimundo Delgado | University of Porto, Portugal |
| Dr. Reza Kia | Islamic Azad University, Tehran, Iran |
| Dr. Roy Woodhead | Hewlett Packard, United Kingdom |
| Prof. Rui Calçada | University of Porto, Portugal |
| Dr. Ruki Harwahu | Universitas Indonesia, Indonesia |
| Dr. Sam P. Sinha | Scientific Research & Development, United States of America |
| Prof. Dr. Simon P. Ringer | University of Sydney, Australia |
| Dr. Sri Harjanto | Universitas Indonesia, Indonesia |
| Prof. Dr. Sutrasno Kartohardjono | Universitas Indonesia, Indonesia |
| Prof. Dr. T. Yuri M. Zagloel | Universitas Indonesia, Indonesia |
| Prof. Dr. Toshio Shudo | Tokyo Metropolitan University, Japan |
| Prof. Dr. Yandi Andri Yatmo | Universitas Indonesia, Indonesia |
| Prof. Dr. Yung- Hui Lee | National Taiwan University, Taiwan |
| Dr. Yung-Jung Hsu | National Chiao Tung University, Taiwan |

INTERNATIONAL JOURNAL OF TECHNOLOGY

Volume 9, Issue 5, October 2018

ISSN 2086-9614

List of Contents

Editorial Notes

- The Role of Technology in Building a Resilient City: Managing Natural Disasters 862
Mohammed Ali Berawi

Articles

- A Compact Microstrip Slotted Antenna for Dual-band RFID Applications 866
Ahmed Elhamraoui, Elhassane Abdelmounim, Jamal Zbitou, Hamid Bennis, Mohamed Latrach, Abdelaali Tajmouati
- The Patterns of Innovation Agendas on 5G Mobile Technology 876
Muhammad Suryanegara, Muhamad Asvial
- Evaluation of Spatial Layout in Health Care Waiting Areas based on Simulation of Droplet Movement Trace 888
Yandi Andri Yatmo, Nandy Putra, M. M. Y. Harahap, Diandra Pandu Saginatari
- Lessons Learned from a Cancelled Urban Transport Project in a Developing Country: The Importance of the Front-end Planning Phase 898
Seng Hansen, Eric Too, Tiendung Le
- Reliability Study of Spectral Acceleration Designs Against Earthquakes in Bengkulu City, Indonesia 910
Lindung Zalbuin Mase
- Assessing the Bond Strength of Hot Mix Asphalt Pavement for Wearing and Binder Courses 925
Haryati Yaacob, Fung-Lung Chang, Ramadhansyah Putra Jaya, Mohd Rosli Hainin, Ahmad Safuan A. Rashid, Norhidayah Abdul Hassan
- Treatment of Batik Industry Waste with a Combination of Electrocoagulation and Photocatalysis 936
Nur Sharfan, Ahmad Shobri, Fadhila Ahmad Anindria, Rickson Mauricio, Muhammad Akbar Buana Tafsili, Slamet Slamet
- Response Surface Optimisation of Biogas Potential in Co-digestion of Miscanthus Fuscus and Cow Dung 944
Emmanuel Tetteh, Kofi Owusu Ansah Amano, Denis Asante-Sackey, Edward Armah
- The Application of Geostatistical Seismic Inversion for Delineating Thin Reservoirs: A Case Study of the Jambi Sub-Basin 955
Abdul Haris, Aditya Dwi Prasetyo, Agus Riyanto, Sri Mardiyati
- The Simultaneous Removal of Cyanide and Cadmium Ions from Electroplating Wastewater using UV/TiO₂ Photocatalysis 964
Tedi Hudaya, Hans Kristianto, Christine Meliana

| | |
|--|------|
| Nanostructure Properties and Dye-sensitized-solar-cell open-circuit Voltage of a TiO ₂ Aerogel and Pre-Hydrothermally Treated Xerogels | 972 |
| <i>Bambang Priyono, Akhmad Herman Yuwono, Badrul Munir, Muhammad Hasan Mustofa, Faizah</i> | |
| An Anticorrosion Coating from Ball-milled Wood Charcoal and Titanium Dioxide using a Flame Spray Method | 983 |
| <i>Teguh Endah Saraswati, Kartiko Nugroho, Miftahul Anwar</i> | |
| The Hydrogen Adsorption Behavior of Mechano-Chemically Activated Carbon from Indonesian Low-rank Coal: Coupled Langmuir and Dubinin-Astakhov Isotherm Model Analysis | 993 |
| <i>Sri Harjanto, Jaka Fajar Fatriansyah, Latifa Nuraini Noviana, Stefano Widy Yunior</i> | |
| Drying Kinetics of Indonesian Peat | 1006 |
| <i>Pither Palamba, Mohamad Lutfi Ramadhan, Agus Sunjarianto Pamitran, Gatot Prayogo, Engkos Achmad Kosasih, Yulianto Sulisty Nugroho</i> | |
| Measurement and Prediction of the Density and Viscosity of Biodiesel Blends | 1015 |
| <i>Minh Tuan Pham, Anh Tuan Hoang, Anh Tuan Le, Abdel Rahman M.Said Al-Tawaha, Van Huong Dong, Van Vang Le</i> | |
| Study on the Alteration of Geometrical Dimensions of Tee Stiffeners Concerning the Ultimate Strength Characteristics under a Vertical Bending Load | 1027 |
| <i>Firman Ady Nugroho, Bongot Siregar, Gerry Liston Putra, Radon Dhelika</i> | |
| The Effect of Fiber Orientation and Stress Ratio on the Crack Growth Behaviour of Fiber Metal Laminates (FMLs) | 1039 |
| <i>Anindito Purnowidodo, Khairul Anam, Djarot B. Darmadi, Ari Wahjudi</i> | |
| Critical Success and Moderating Factors Effect in Indonesian Public Universities' Business Incubators | 1049 |
| <i>Lina Gozali, Maslin Masrom, Teuku Yuri M Zagloel, Habibah Norehan Haron, Dahmir Dahlan, Frans Jusuf Daywin, Mohammad Agung Saryatma, Docki Saraswati, Asril Fitri Syamas, Eko Harry Susanto</i> | |
| Resilient Structure Assessment using Cobb-Douglas Production Function: The Case of the Indonesian Metal Industry | 1061 |
| <i>Ida Bagus Made Putra Jandhana, Teuku Yuri M Zagloel, Rahmat Nurcahyo</i> | |
| Halal Logistics Performance and Customer Loyalty: From the Literature Review to a Conceptual Framework | 1072 |
| <i>Ilyas Masudin, Faradilla Witha Fernanda, Widayat Widayat</i> | |

1 **CRITICAL SUCCESS AND MODERATING FACTORS EFFECT IN INDOONESIAN PUBLIC UNIVERSITIES' BUSINESS INCUBATORS**

Lina Gozali^{1*}, Maslin Masrom², Teuku Yuri M. Zagloel³, Habibah Norehan Haron², Dahmir Dahlan⁴, Frans Jusuf Daywin¹, Mohammad Agung Saryatmo⁵, Docki Saraswati⁶, Asril Fitri Syamas⁷, Eko Harry Susanto⁸

¹*Department of Industrial Engineering, Faculty of Engineering, Universitas Tarumanagara, Jl. S. Parman No 1, Jakarta 11440, Indonesia*

²*Razak School of Engineering and Advanced Technology, Universiti Teknologi Malaysia, Jalan Sultan Yahya Petra, Kuala Lumpur 54100, Malaysia*

³*Department of Industrial Engineering, Faculty of Engineering, Universitas Indonesia, Kampus UI Depok, Depok 16424, Indonesia*

⁴*Department of Mechanical Engineering, Faculty of Engineering, Universitas Pancasila, Jl. Srengseng Sawah, Jagakarsa, Jakarta Selatan 126400, Indonesia*

⁵*Department of Industrial System Engineering, School of Engineering and Technology, Asian Institute of Technology, km 42 Paholyothin Road, Pathum Thani 12120, Thailand*

⁶*Department of Industrial Engineering, Faculty of Industrial Technology, Universitas Trisakti, Jl. Kyai Tapa No 1, Jakarta 11440, Indonesia*

⁷*Association of Indonesian Business Incubator, Jl. Jenggala 2 no.9, Kebayoran Baru, Jakarta 12110, Indonesia*

⁸*Faculty of Communication Science, Universitas Tarumanagara, Jl. S. Parman No 1, Jakarta 11440, Indonesia*

(Received: January 2018 / Revised: March 2018 / Accepted: September 2018)

28 **ABSTRACT**

1
This study aims to examine the effect of critical success and moderating factors in Indonesian public universities' business incubators. The study of business incubators benefits university professors in their roles as managers and advisors, university faculty entrepreneurs and start-ups/tenants in the knowledge transfer and entrepreneurship learning processes, and government officials in effective policy making. For the universities, the incubators serve as a platform for the commercialization of their research efforts. The incubators assist the universities' stakeholders in fulfilling their newly identified responsibilities towards building the nation's economy and giving the faculty members and graduate students the chance to conduct research. Regarding the economic environment, the incubators help create job opportunities, increase the country's economic value, and reduce poverty. This research employed the quantitative method approach, and the data were analyzed using the IBM SPSS version 23 and Smart PLS version 3 statistical software packages. The samples of this research were comprised of 31 business incubator managers from Indonesian public universities. Although there have been previous models about critical success and moderating factors for business incubators in other countries, this study is the first that was conducted in Indonesia and found direct and indirect relationships between critical success factors and moderating success factors for Indonesian Public University Business Incubators. The results of the research demonstrated that good system and infrastructure showed a strong direct relationship with success factors and that information technology showed a strong relationship with the moderating factors, namely age and quality of

14
*Corresponding author's email: ligoz@ymail.com, Tel. +62-85 781219980, Fax. +62-21-5638358
Permalink/DOI: <https://doi.org/10.14716/ijtech.v9i5.1363>

facilities. Furthermore, mentoring and networking showed a strong relationship with the moderating factors good system and infrastructure and that university regulation had a strong relationship with moderating factor credit and rewards. Entry criteria, exit criteria, and funding support showed strong direct relationships to success factors. These findings could improve the management of business incubators in Indonesian Public Universities and allow them to more successful.

Keywords: Critical success factors; Indonesian public universities; Moderating factors; University business incubators

1. INTRODUCTION

While the term “entrepreneurship” has various meanings, it can be defined as “the process of uncovering or developing an opportunity to create value through innovation” (Macke & Kayne, 2001). According to Feldmann (2014), research on university faculty, staff and entrepreneurial capacities may be extended and investigated in various areas of study. In the long run, business enterprises are crucial elements in determining economic success (Romer, 1994). In addition, during economic recessions, new firms play a crucial role in providing employment, proliferating inventions and driving a country's economy (Dana, 2004; Engle et al., 2010; Ahmed et al., 2010).

Researchers, policymakers, operators of business incubators and stakeholders do not have an adequate and proper method to monitor and appraise business incubators' performances in various business sectors and diverse geographical areas. Previous studies lack the theories, methodologies and empirical data to appraise business incubators' performance and their impact on the economy, even though they are of particular interest to academics and industry practitioners alike (Lewis, 2001; Cornelius & Bhabra-Remedios, 2003). Therefore, business incubators are expected to define their own performance measurements (Voisey, 2006).

According to the National Business Incubation Association (NBIA) (2003), an important factor in the appraisal of an incubator's performance is the service provision method, but it has not been given enough attention. There is a lack of research about how the services have been extended to the incubators. The incubators goal is to discover whether the services are provided by their managers, boards or mentors, or through internal courses or other methods.

The failure rate in the early stage of start-ups is 90% (Griffith, 2007; Patel, 2015). Data on the rates of business failures are frequently quoted (NBIA, 2003). According to the U.S. Small Business Administration, only 44% of firms stay in business four years after the commencement of operation. This is contradictory to the data gathered by the NBIA, which reports that 87% of graduate firms remained in business ten years after the commencement of operation. On account of the data of failed start-ups, it becomes necessary to identify the critical success factors of building business incubators for public universities in Indonesia. This study's objective is to identify the critical success factors in those incubators. The focus of this study is on the activities of Indonesian public universities' business incubators, especially the capabilities and the activities of 31 business incubator managers.

Indonesia's fast growing middle-class market is a fertile ground for start-up enterprises, both local and foreign. This trend presents promising prospects across various industries, including technology, communication, creative and social enterprises. Nurturing a resilient business sector will result in the creation of new jobs and more business prospects across industries, which makes it critical for the economic growth of developing countries (Singtel, 2017).

There is no previous research that addresses the effect of critical success and moderating factors towards a business incubator's success, especially among Indonesian public university business incubators. The main purpose of this research is to identify the direct and indirect relationships between critical success factors and moderating success factors for Indonesian public university business incubators.

A well-known cultural issue is that Indonesians are less initiates their own business ventures. According to a study by the Global Entrepreneurship Monitor, 14.5% of Americans and 7.2% of Singaporeans are keen to start up their own businesses. These statistics stand in contrast to the less than one percent of Indonesians who are willing to do the same (Frazier, 2012).

2. LITERATURE REVIEW

2.1. University Business Incubators

The clients of the University of Central Florida's Business Incubation Program receive extensive benefits regarding business, technology and entrepreneurial support (O'Neal, 2005). The incubator is emphasized the several critical success factors that will ensure a client's success by: (1) incorporating clients into a larger technology development system; (2) encouraging interaction among clients, incubator management and its employees, external parties and the incubator's advisory panel; and (3) giving access to external financing, university resources, economic development agencies in the local community/government and other business support organizations.

Currently, there is a higher degree of support from the university incubators for small firms in the latter's quest for long-term viability and development that involves networking among the entrepreneurs. Several previous studies have investigated the importance of networking for entrepreneurs in detail, and they emphasize the steps towards developing and maintaining relationships within the business setting (Aldrich & Zimmer, 1986; Shaw & Conway, 2000; Hoang & Antoncic, 2003; Neergaard, 2005). Among the advantages offered by the incubator are networks and cooperation, and many businesses would be keen to collaborate with the best of them if they were given the opportunity (Agnete Alsos et al., 2011). Therefore, according to Miller et al. (2011), more attention ought to be given to keeping and preserving knowledge because it would assist in the universities' technology transfer processes, especially on account of the fleeting nature of spin out companies evolving through the process.

2.2. Regulation of Business Incubators in Indonesian Universities

To improve the well-being of Indonesia's citizens, it is necessary for the government to resolve a major challenge, namely unemployment. The Central Bureau of Statistics (CBS) of Indonesia revealed that 5.33% of Indonesia's workforce were unemployed and 11.5% of the population were below the poverty line in 2017. In support of the government's program to alleviate poverty, entrepreneurship projects at public universities are expected to help provide employment, which will also reduce the number of poor people.

In September 2017, the Federal Open Market Committee (FOMC) reported that the normal unemployment rate should be between 4.4% and 5% with a median value of 4.6%. Regrettably, 5.33%, or 7.02 million of Indonesia's population, were unemployed (CBS, 2017). To make matters worse, uneducated people are often used in demonstrations in Indonesia. These people are in dire need of jobs that can help improve their economic and financial conditions. Business incubators, therefore, play an important role because they will help Indonesia resolve some of its economic problems by creating jobs and graduated firms.

With assistance from the Cooperative Department and universities, the government of Indonesia has established the incubators in the country since 1992. This initiative was given a

boost in 1997 by a program known as the Development of Entrepreneurship Culture in Universities, where activities included the New Entrepreneurs' Incubators (Bank Indonesia, 2006).

In addition to Indonesian regulations about business incubators, the terms of business incubators, incubation activity, and incubation participation are governed by the Presidential Regulation Number 27/2013, the Development of Entrepreneurial Incubators. Further, in the Ministry of Cooperatives and Micro, Small and Medium Enterprises had introduced Regulation No. 24/Per/M.KUKM/IX/2015 on Norms, Standards, Procedures, and Criteria (NSPK) of the Management of Entrepreneurial Incubators. This regulates the administrative matters of an incubator, including registration, required standards, required services, expected output of an incubator and its tenant and a targeted number of incubators in the country. Some of the parameters regarding the regulation, however, are unspecific, such as the employees' standards of professionalism, the provisions of sufficient facilities and infrastructure and measurements of the incubators' success indicators.

4.3. Business Incubator Successful Factor Development

Most problems that entrepreneurs encounter at the early stages of business development are a lack of legitimacy, experience, tangible resources and accumulated knowledge, which are success factors that allow them to recognize and seize business opportunities. Business incubators do not guarantee graduate tenant company. Evaluating all of the emerging critical success factors, however, can minimize failures once the company enters the business incubator (Lumpkin & Ireland, 1988).

The initial framework by Campbell et al. (1985) emerged with the simple business incubator services and facilities. The business incubator framework started with entry criteria, selection processes, funding and mentoring-networking for tenant business growth.

Smilor (1987) introduced a non-profit business incubator framework whose model implicates the tenant business mission, such as economic development, successful products, a tenant's profit, technology diversification and job creation. Smilor's framework involved support systems, namely administration, facilities and business expertise, from universities and the government. His extensive work strives to ascertain and elaborate upon the different elements of an incubation system. Berge et al. (1989) introduced a new incubation process model that consisted of a pre-incubation process, entry criteria and selection processes and monitoring and controlling processes. The previous models by Campbell et al. (1985) and Smilor (1987) did not introduce the processes and activities from the pre-incubation and incubation processes until successful outcomes were achieved. Mian (1997) provided more detailed processes, criteria, policies and programs and sought the involvement of universities, communities and other stakeholders for the development of a theoretical model to evaluate and manage the university-based technology business incubators' (UTBI) performance. For the first time, Mian introduced the university involvement and developed performance criteria for technology business incubators in the public and private sectors.

The business incubator model is categorized as pre-incubation activities or input (entry criteria), incubation or process and graduation or output (exit criteria) (Costa-David et al., 2002). Costa-David et al. were the first to outline the detailed skill requirements, such as management, finance, business advice, networking and training for start-ups until their graduation. Verman (2004) framework introduced more detailed success factors, namely shared services, facilities and location, financing and support, control of incubators, mentoring-networking, entry criteria and exit criteria, as well as moderating factors, such as age and the quality of facilities for a successful business incubator framework. Voisey et al. (2006) introduced the concepts of hard (profitability, sales turnover, etc.) and soft (business skill improvement, cost saving, etc.)

performance measurements of business incubator practice achievement.

3. RESULTS AND DISCUSSION

Each of the 9 success factors, 3 moderating factors and 115 indicators in this research was investigated in Gozali et al. (2015). The development of a proposed initial framework of successful business incubators in Indonesian public universities from previous business incubator's model and framework was also explored by Gozali et al. (2016). The research was addressed using mixed methods, specifically qualitative and quantitative methods. In the qualitative method, the literature study and expert interviews were conducted in Indonesian public university business incubators to develop the questionnaire (Gozali, 2018). In the quantitative method, data collection, data calculation (reliability and validity) and a calculation of the business incubators' success factors' value were performed. The data were collected from March to October 2016.

3.1. Research Location

This research was conducted in Indonesia with the participation of 18 Indonesian public university business incubators, comprising Universitas Sumatera Utara, Universitas Andalas, Universitas Indonesia, Institut Pertanian Bogor, Universitas Diponegoro, Universitas Sam Ratulangi, Universitas Brawijaya, Universitas Airlangga, Institut Teknologi Sepuluh November, Universitas Riau, Universitas Udayana, Universitas Gorontalo, Universitas Sebelas Maret, Universitas Jambi, Universitas Padjajaran, Bandung Techno Park, Universitas Negeri Yogyakarta and Institut Teknologi Bandung.

3.2. Research Sample

The sample of this research is comprised of incubator managers in public universities in Indonesia who oversaw the daily activities of the incubators and graduated tenant companies. The samples consisted of managers had the required understanding and experience in incubator management as well as in handling the relationships among tenant companies within the incubators.

This research saw the participation of 77.4% male and 22.6% female respondents in the age ranges of below 30 years old (3.2%), 30–39 years old (29%), 40–49 years old (19.4%), 50–59 years old (35.5%) and over 60 years old (12.9%). All the respondents were business incubator managers. The respondents' levels of education consisted of Bachelor's degrees (6.5%), Master's degrees (51.6%) and Doctorate degrees (41.9%).

4. DATA ANALYSIS AND RESULTS

4.1. Indicator Reliability Test

This study employed a mixed-method research design, namely quantitative and qualitative methods, which uses a sequential explanatory design that begins with data collection from a literature review and develops a quantitative study that is supplemented by data from in-depth, one-on-one interviews. The status of the quantitative aspects of the research was considered higher than the qualitative because the interviews with the expert were based on empirical data, which was collected first. The quantitative study continued with reliability and validity tests, research hypotheses tests and a structural model test. This research used the case study as a part of the qualitative method to examine the differences among public university business incubators in Indonesia.

The data was analyzed using statistical software IBM SPSS version 23 and Smart PLS version 3. The Cronbach alpha values that were calculated are larger than 0.6 (Hair et al., 2012). All of the reflective latent variables, therefore, have high levels of internal consistency reliability. Composite reliability that was calculated is larger than 0.7, which confirms the composite

reliability (Bagozzi & Yi, 1988). Furthermore, convergent validity, such as the average variance extracted (AVE) of the latent variables should exceed the acceptable threshold value of 0.5 (Bagozzi & Yi, 1988). Some indicators showed an unacceptable reliability test and they were removed from the research. The indicators that did not meet the threshold were FAC 1 (business taxes), FAC 2 (risk and management unit), FAC 7 (export development assistance), FAC 8 (writing financial report, ratio and balances), SBSE 1 (audio visual equipment), SBSE 10 (office hour answering service), SBSE 11 (air conditioner), SBSE 12 (cleaning), SBSE 13 (maintenance), SBSE 14 (custodial service), SBSE 7 (filing), SSF 10 (logistic), SSF 5 (conference room), SSF 6 (meeting room), SSF 7 (furniture and equipment rental), SSF 8 (canteen) and SSF 9 (shipping and receiving).

4.2. Indicator Validity Test

According to Fornell and Larcker (1981), the square root of each latent construct's AVE could determine discriminant validity, if this value is greater than other correlations among the latent constructs. The square root of AVE for each construct was compared with the correlations between all pairs of latent constructs. If the square root of the AVE for each construct is larger than the correlations between all pairs of the constructs in the model, then the model has enough discriminant validity. When the square root of the AVE is greater than the correlations between the constructs, the level of validity of the constructs is considered satisfactory. As a result, each construct was considered as having high validity. All the square roots of the AVE exceeded the correlation values between other constructs and all the square roots of latent variables in each column. The results, therefore, showed satisfactory discriminant validity.

4.3. Effect Size Value

The effect size was calculated to evaluate the impact of a predictor construct on an endogenous construct. Credits and rewards, entry criteria, exit criteria and funding support had a strong effect size on the success factors. The effect sizes of funding and support to success factors, good system and infrastructure to success factors, information technology to the quality of facility and mentoring-networking to good system and infrastructure were strong. The correlation between university regulations and credits-and-rewards was strong. Table 1 and Figure 1 show the effect size of business incubator success factors.

The success factors of Indonesian public university business incubators are: the ability of the business incubator, entry criteria, exit criteria, funding and support, government support and protection, incubator governance, mentoring and networking, system infrastructure and university regulation.

It is necessary for knowledge-intensive firms to possess the capability, competency and the right attitudes at both individual and firm levels to convert new thinking, technologies and creations into economic and social value by using pioneering business models (Byers et al., 2010; Mitchelmore & Rowley, 2010; Romano et al., 2014).

The importance performance map analysis, as presented in Figure 2, shows the strong correlations between mentoring-networking and good system and infrastructure as well as university regulations and credits-and-rewards and between information technology and other services and age-and-quality facilities.

Table 1 The effect size business incubator success factors

| | Age and Quality of Facilities | Credits and rewards | Entry Criteria | Exit Criteria | Funding Support | Good System and Infrastructure | Success Factors |
|---|-------------------------------|---------------------|----------------|---------------|-----------------|--------------------------------|-----------------|
| Age and Quality of Facilities | | | | | | | 0.044 |
| Credits and Rewards | 0.150 | | | | | | |
| Entry Criteria | | | | | | | |
| Exit Criteria | | | | | | | |
| Financial Accounting Consultation | 0.006 | | | | | | |
| Funding Support | | | | | | | |
| Good System and Infrastructure | | | | | | | 1.114 |
| Government Support and Protection | | 0.003 | | | | | |
| Incubator Governance | | 0.018 | | | | | |
| Information Technology | 0.727 | | | | | | |
| Management Human Resource and Assistance | 0.280 | | | | | | |
| Marketing Assistance | 0.004 | | | | | | |
| Mentoring-Networking | | | | | | 0.321 | |
| Physical Logistic Facilities | 0.047 | | | | | | |
| Professional Business Service and Etiquette | 0.009 | | | | | | |
| Shared Business Service and Equipment | 0.232 | | | | | | |
| Success Factors | | | 1.409 | 1.076 | 1.377 | | |
| System Infrastructure | | | | | | 0.035 | |
| University Regulations | | 0.302 | | | | | |

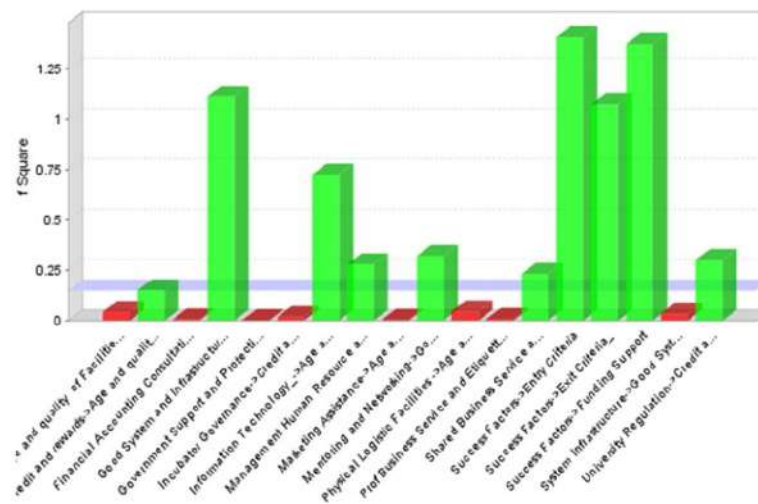


Figure 1 Effect size of business incubator success factors

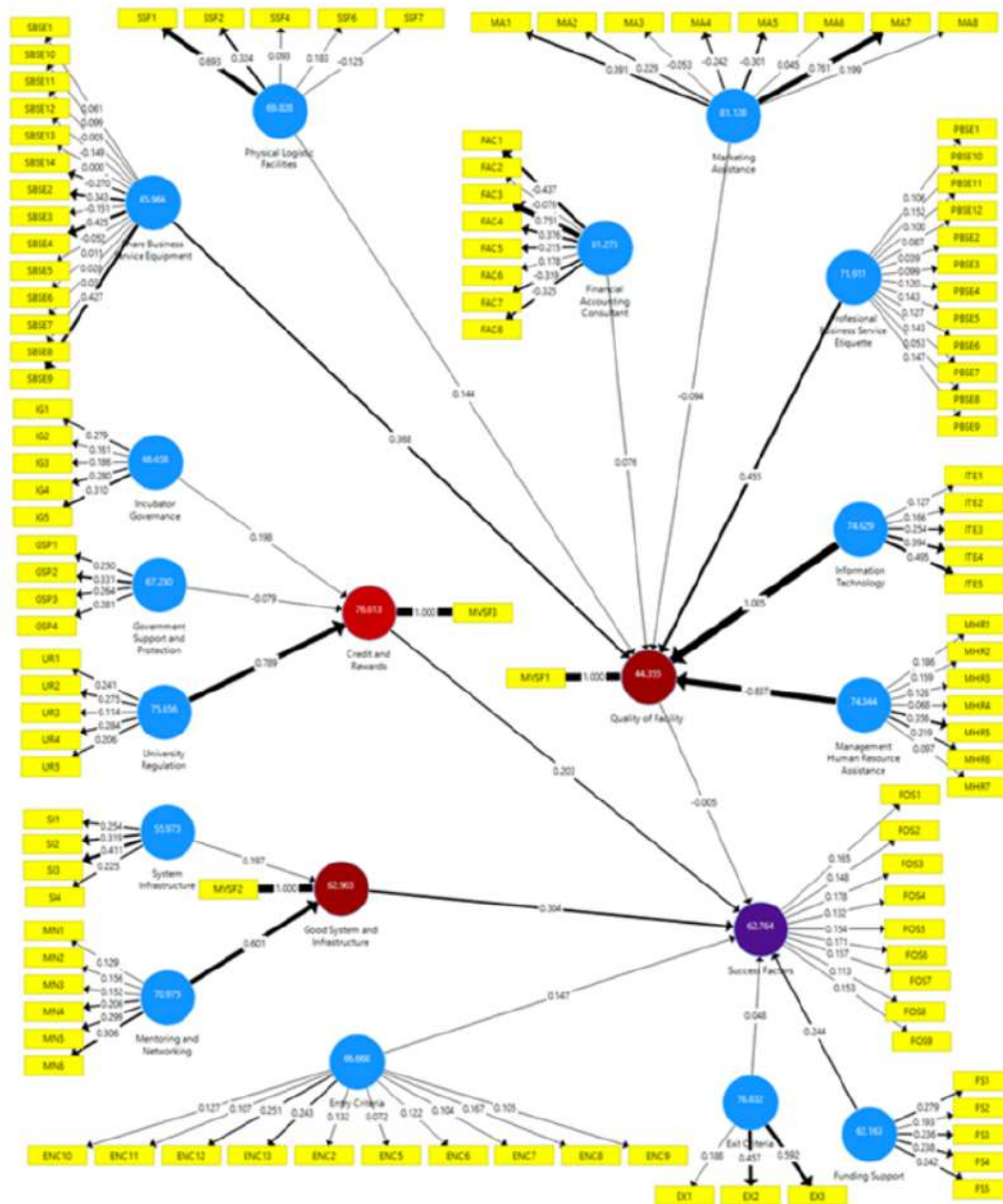


Figure 2 Importance performance map analysis of the factors of successful business incubators among Indonesian public universities

4.4. Structural Path Coefficient

After the model was entered into the SEM software package and the analysis was conducted, the result of the fitness measures indicated whether the research hypotheses were accurate or not. The ratio of each parameter to its standard error corresponded to a z test for the significance of the relationship with $p = 0.05$ and a standard deviation of 1.96 (Jackson et al., 2005).

The strong effect of critical success factors and moderating factors in business incubators for Indonesian public universities are: (a) credit and rewards to age and the quality of the facilities; (b) information technology to age and the quality of the facilities; (c) mentoring-networking to good system and infrastructure; (d) success factors to entry criteria, exit criteria, and the funding support; and (e) the universities' regulations to credits and rewards factors (refer to Table 2).

Table 2 Structural path coefficient model for this research

| No. | Critical Success Factors | T statistics | P values |
|-----|---|--------------|----------|
| 1 | Age and quality of facilities → Success factors | 0.836 | 0.404 |
| 2 | Credit and rewards → Age and quality of facilities | 1.513 | 0.131 |
| 3 | Financial accounting consultation → Age and quality of facilities | 0.282 | 0.778 |
| 4 | Good system and infrastructure → Success factors | 4.996 | 0.000 |
| 5 | Government support and protection → Credit and rewards | 0.226 | 0.821 |
| 6 | Incubator governance → Credit and rewards | 0.435 | 0.664 |
| 7 | Information technology → Age and quality of facilities | 2.786 | 0.006 |
| 8 | Management human resource & assistance → Age and quality facilities | 1.241 | 0.215 |
| 9 | Marketing assistance → Age and quality of facilities | 0.136 | 0.892 |
| 10 | Mentoring and networking → Good system and infrastructure | 2.738 | 0.006 |
| 11 | Physical logistic facilities → Age and quality of facilities | 0.656 | 0.512 |
| 12 | Prof Business Service and Etiquette → Age and quality of facilities | 0.267 | 0.789 |
| 13 | Shared business service and equipment → Age and quality of facilities | 1.289 | 0.198 |
| 14 | Success factors → Entry criteria | 11.433 | 0.000 |
| 15 | Success factors → Exit criteria | 6.152 | 0.000 |
| 16 | Success factors → Funding support | 10.521 | 0.000 |
| 17 | System infrastructure → Good system and infrastructure | 0.819 | 0.413 |
| 18 | University regulation → Credits and rewards | 2.354 | 0.019 |

5. CONCLUSION

The results of this study demonstrated that the effect of critical success factors, namely entry criteria (Berge et al., 1989), exit criteria (Berge et al., 1989), funding support (O'Neal, 2005), mentoring-networking (Agnete Alsos et al., 2011; Miller et al., 2011) and university regulations (Mian, 1997), directly affect the business incubators for Indonesian public universities. Furthermore, the results showed that the moderating factors, namely credit and rewards (O'Neal, 2005), good system and infrastructure (O'Neal, 2005) and the age and quality of the facilities (Verma, 2004), significantly affect university regulations, mentoring-networking and information technology, respectively.

A good system and infrastructure showed a strong relationship with the success factors, and information technology showed a strong relationship with the moderating factors, especially age and the quality of the facilities. Mentoring and networking had a strong connection to the moderating factors, namely good system and infrastructure, and university regulations had a strong relationship with the moderating factor of credit and rewards. It cannot be denied that entry criteria, exit criteria and funding support are associated with the success factors. This finding could improve the management of business incubators in Indonesian public universities and make them more successful. These research findings may persuade Indonesian public university business incubators to give more attention to the development and management of the business incubators on their own.

This study has ascertained the effect of critical success factors and moderating factors for the business incubators in Indonesian public universities. Voisey et al. (2006) utilized business incubator measurement to manage business incubators performance, economic policymakers and stakeholders of the importance of learning strategies. Universities' business incubator

regulations and environments enable and encourage the start-ups to exchange ideas and achieve success in business creation. The entry criteria are important not only to select start-ups to implement their business ideas, but also to support business learning communities in entrepreneurship learning programs.

5. ACKNOWLEDGEMENT

We are indebted to my mentor : Lesa Mitchell (Techstars and Kauffman Foundation), Abdul Yuli Andi Gani (Universitas Brawijaya), Jann Hidajat Tjakraatmadja (Institut Teknologi Bandung), Meika Syahbana Rusli (Institut Pertanian Bogor), Kristanto Santosa (Business Innovation Center), Sayu Ketut Sutrisna Dewi (Universitas Udayana), Munzir Busniah (Universitas Andalas), Aris Yunanto (Universitas Indonesia), Deva Primadia Almada (Institut Pertanian Bogor), Harjum Muharam (Universitas Diponegoro), James D.D. Massie (Universitas Sam Ratulangi), Lilik Setiabudi MS (Universitas Brawijaya), Elly Munadzirroh (Universitas Airlangga), Elly Agustiani (Institut Teknologi Sepuluh November), Arif Firmansyah (Universitas Airlangga), Yudha Prasetyawan (Institut Teknologi Sepuluh November), Ahmad Rifai (Universitas Riau), Ayu Desi Indrawati (Universitas Udayana), Bambang Purwanggono (Universitas Diponegoro), Hais Dama (Universitas Gorontalo), Wahyudi Sutopo (Universitas Sebelas Maret), Agus Syarif (Universitas Jambi), Fung Fuk Lestario (Global Entrepreneurship Program Indonesia), Suhono (Institut Teknologi Bandung), Lies Endarwati (Universitas Negri Yogyakarta), Arwina Sufika (Universitas Sumatera Utara), Heni Rachmawati (Institut Teknologi Bandung), Rinovia Simanjuntak (Institut Teknologi Bandung), Fatma Sri Wahyuni (Universitas Andalas), Irsan Pawennei (Center of Innovation Policy and Government), Harini Yaniar (LIPI), Agus Heri Purnomo (Ministry of Marine Affairs and Fisheries), Fahmi Rizal (Universitas Padjajaran), Bambang Sunarko (LIPI) Raldi Artono Koestoer (Universitas Indonesia), Nur Alam La Nafie (Politeknik Negri Ujung Pandang), Lucy Chairael (Universitas Dharma Andalas Padang), Reiny Iriana (International Macquarie University Australia), Agustinus Purna Irawan (Universitas Tarumanagara Jakarta), Lamto Widodo (Universitas Tarumanagara Jakarta), Adianto (Universitas Tarumanagara Jakarta), Harto Tanujaya (Universitas Tarumanagara Jakarta)

6. REFERENCES

- Agnete Alsos, G., Hytti, U., Ljunggren, E., 2011. Stakeholder Theory Approach to Technology Incubators. *International Journal of Entrepreneurial Behavior & Research*, Volume 17(6), pp. 607–625
- Ahmed, I., Nawaz, M.M., Ahmad, Z., Zeeshan, M., Usman, A., Ahmed, N., 2010. Determinants of Students' Entrepreneurial Career Intentions: Evidence from Business Graduates. *European Journal of Social Sciences*, Volume 15(2), pp. 14–22
- Aldrich, H., Zimmer, C., 1986. *Entrepreneurship through Social Networks*. In: The Art and Science of Entrepreneurship. Sexton, D.L. and Smilor, R.W., (eds.). Cambridge: Ballinger
- Bank Indonesia, 2006. *Kajian Inkubator Bisnis dalam Rangka Pengembangan UMKM* (Study of Business Incubator in the Framework of UMKM Development). Tim Penelitian dan Pengembangan Biro Kredit. Available online at <http://www.bi.go.id/id/umkm/penelitian/nasional/kajian/Pages/ril16.aspx>, Accessed on 17th November 2016
- Bagozzi, R.P., Yi, Y., 1988. On the Evaluation of Structural Equation Models. *Journal of the Academy of Marketing Science*, Volume 16(1), pp. 74–94
- Berge, D., Janus, J., Olsen, K., Campbell, C., 1989. Change Agents in the New Economy: Business Incubators and Economic Development. *Economic Development Review*, Volume 7(3), pp. 56–57

- Byers, T.H., Dorf, R.C., Nelson, A.J., 2010. *Technology Ventures: From Idea to Enterprise*. New York, NY: McGraw-Hill
- Campbell, C., Kendrick, R., Samuelson, D., 1985. Stalking the Latent Entrepreneur. *Economic Development Review*, Volume 3(2), pp. 43–48
- Central Bureau of Statistics, 2017. Available online at <https://www.bps.go.id/Brs/view/id/1376>, Accessed on 27 October 2017
- Cornelius, B., Bhabra-Remedios, R., 2003. Cracks in the Egg: Improving Performance Measures in Business Incubator Research. In: 16th Annual Conference of Small Enterprise Association of Australia and New Zealand, 28 September - 1 October 2003
- Costa-David, J., Malan, J., Lalkaka, R., April, 2002. Improving Business Incubator Performance through Benchmarking and Evaluation: Lessons Learned from Europe. In: 16th International Conference on Business Incubation. National Business Incubation Association, Toronto, Canada, Volume 28
- Dana, L., 2004. *Handbook of Research on International Entrepreneurship*. Cheltenham: Edward Elgar Publishing
- Engle, R.L., Dimitriadis, N., Schlaegel, C., Delanoe, S., Alvarado, I., He, X., Buame, S., Wolff, B., 2010. Entrepreneurial Intent: A Twelve-country Evaluation of Ajzen's Model of Planned Behavior. *International Journal of Entrepreneurial Behavior & Research*, Volume 16(1), pp. 35–57
- Feldmann, B.D., 2014. Dissonance in the Academy: The Formation of the Faculty Entrepreneur. *International Journal of Entrepreneurial Behavior & Research*, Volume 20(5), pp. 453–477
- Fornell, C., Larcker, D.F., 1981. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, Volume 18(3) pp. 382–388
- Frazier, D., 2012. Indonesia Minister: 'We Need Four Million Entrepreneurs'. Forbes. Available online at <https://www.forbes.com/sites/donaldfrazier/2012/05/14/indonesian-minister-we-need-four-million-entrepreneurs/#61347b841f1b>, Accessed on 27 October 2017
- Gozali, L., Masrom, M., Haron, H.N., Zagloel, T.Y.M., 2015. A Framework of Successful E-business Incubator for Indonesian Public Universities. *The Asian Journal of Technology Management*, Volume 8(2), pp. 118–132
- Gozali, L., Masrom, M., Haron, H.N., Zagloel, T.Y.M., 2016. A Framework of Successful Business Incubator for Indonesian Public Universities. *International Journal of Technology*, Volume 7(6), pp. 1086–1096
- Gozali, L., 2018. *Framework Towards a Successful Business Incubator for Indonesian Public Universities*, Ph.D thesis, Universiti Teknologi, Malaysia
- Griffith, E., 2014. Why Startups Fail, According to Their Founders. Available online at <http://fortune.com/2014/09/25/why-startups-fail-according-to-their-founders/>, Accessed on June 26, 2017
- Hair, J.F., Ringle, C.M., Sarstedt, M., 2011. PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing Theory and Practice*, Volume 19(2), pp. 139–151
- Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J.A., 2012. An Assessment of the Use of Partial Least Squares Structural Equation Modeling in Marketing Research. *Journal of the Academy of Marketing Science*, Volume 40(3), pp. 414–433
- Hoang, H., Antoncic, B., 2003. Network Based Research in Entrepreneurship: A Critical Review. *Journal of Business Venturing*, Volume 18(2), pp. 165–187
- Jackson, J.L., Degee, K., Douglas, K., Shimeall, W., 2005. *Introduction to Structural Equation Modeling (Path Analysis)*. Precourse PA08. Washington, DC: Society of General Internal Medicine (SGIM)

- Lewis, D.A., 2001. *Does Technology Incubation Work?: A Critical Review*. Economic Development Administration. US Department of Commerce, Washington, DC
- Lumpkin, J.R., Ireland, R.D., 1988. Screening Practices of New Business Incubators: The Evaluation of Critical Success Factors. *American Journal of Small Business*, Volume 12(4), pp. 59–81
- Macke, D., Kayne, J., 2001. *Rural Entrepreneurship: Environmental Scan*. Kauffman Center for Entrepreneurial Leadership, Kansas City, USA
- Mian, S.A., 1997. Assessing and Managing the University Technology Business Incubator: An Integrative Framework. *Journal of Business Venturing*, Volume 12(4), pp. 251–285
- Miller, K., McAdam, R., Moffett, S., Brennan, M., 2011. An Exploratory Study of Retaining and Maintaining Knowledge in University Technology Transfer Processes. *International Journal of Entrepreneurial Behavior & Research*, Volume 17(6), pp. 663–684
- Mitchelmore, S., Rowley, J., 2010. Entrepreneurial Competencies: A Literature Review and Development Agenda. *International Journal of Entrepreneurial Behavior & Research*, Volume 16(2), pp. 92–111
- Neergaard, H., Shaw, E., Carter, S., 2005. The Impact of Gender, Social Capital and Networks on Business Ownership – A Research Agenda. *International Journal of Entrepreneurial Behavior & Research*, Volume 11(5), pp. 338–357
- O'Neal, T., 2005. Evolving a Successful University-based Incubator: Lessons Learned from the UCF Technology Incubator. *Engineering Management Journal*, Volume 17(3), pp. 11–25
- Patel, N., 2015. 90% of Startups Fail: Here's What You Need to Know About the 10%. Available online at <http://www.forbes.com/sites/neilpatel/2015/01/16/90-of-startups-will-fail-heres-what-you-need-to-know-about-the-10/>, Accessed 26 June 2017
- Romer, P., 1994. The Origins of Endogenous Growth. *Journal of Economic Perspectives*, Volume 8(1), pp. 3–22
- Romano, A. Passiante, G., Del Vecchio, P., Secundo, G., 2014. The Innovation Ecosystem as Booster for the Innovative Entrepreneurship in the Smart Specialization Strategy. *International Journal of Knowledge Based Development*, Volume 5(3), pp. 271–288
- Shaw, E., Conway, S., 2000. *Networking and the Small Firm*. In: Enterprise and Small Business, Carter, S. and Jones-Evans, D. (eds.), Prentice-Hall, Harlow
- Singtel, 2017. Business in Indonesia: Start-ups Can Leverage Incubator Program for Growth Available online at <https://mybusiness.singtel.com/techblog/business-indonesia-start-ups-can-leverage-incubator-program-growth>, Accessed on 27 October 2017
- Smilor, R.W., 1987. Managing the Incubator System: Critical Success Factors to Accelerate New Company Development. *IEEE Transactions on Engineering Management*, Volume 3, pp. 146–155
- Verman, S., 2004. *Success Factors for Business Incubators: An Empirical Study of Canadian Business Incubators*. Eric Sprott School of Business, Carleton University, Ottawa, Ontario
- Voisey, P., Gornall, L., Jones, P., Thomas, B., 2006. The Measurement of Success in a Business Incubation Project. *Journal of Small Business and Enterprise Development*, Volume 13(3), pp. 454–468

CRITICAL SUCCESS AND MODERATING FACTORS EFFECT IN INDONESIAN PUBLIC UNIVERSITIES' BUSINESS INCUBATORS

ORIGINALITY REPORT

15%

SIMILARITY INDEX

12%

INTERNET SOURCES

5%

PUBLICATIONS

6%

STUDENT PAPERS

PRIMARY SOURCES

| | | |
|---|--|----|
| 1 | Submitted to College of Banking and Financial Studies Student Paper | 2% |
| 2 | derby.openrepository.com Internet Source | 1% |
| 3 | www.emeraldinsight.com Internet Source | 1% |
| 4 | toyama.repo.nii.ac.jp Internet Source | 1% |
| 5 | mybusiness.singtel.com Internet Source | 1% |
| 6 | wiredspace.wits.ac.za Internet Source | 1% |
| 7 | media.neliti.com Internet Source | 1% |
| 8 | stipmjournal.org Internet Source | 1% |

www.tandfonline.com

| | | |
|----|---|------|
| 9 | Internet Source | 1 % |
| 10 | ieomsociety.org Internet Source | 1 % |
| 11 | ilmuberbagi.or.id Internet Source | 1 % |
| 12 | ro.uow.edu.au Internet Source | 1 % |
| 13 | www.scribd.com Internet Source | <1 % |
| 14 | Submitted to An-Najah National University Student Paper | <1 % |
| 15 | Managing Service Quality, Volume 23, Issue 3 (2013-05-27) Publication | <1 % |
| 16 | Submitted to University Tun Hussein Onn Malaysia Student Paper | <1 % |
| 17 | eprints.leedsbeckett.ac.uk Internet Source | <1 % |
| 18 | iletisim.ieu.edu.tr Internet Source | <1 % |
| 19 | www.emerald.com Internet Source | <1 % |

| | | |
|----|---|------|
| 20 | iaabd.org Internet Source | <1 % |
| 21 | larryvershel.blogspot.com Internet Source | <1 % |
| 22 | Taras Gagalyuk, Jon Hanf, Christina Herzlieb. "Managing supply chains successfully: An empirical testing of success of supply chain networks in the German fish sector", Food Economics - Acta Agriculturae Scandinavica, Section C, 2010 Publication | <1 % |
| 23 | citation.allacademic.com Internet Source | <1 % |
| 24 | classic.austlii.edu.au Internet Source | <1 % |
| 25 | repository.hkbu.edu.hk Internet Source | <1 % |
| 26 | Rachel Doern. "Understanding how perceived barriers influence growth intentions and behaviours", International Journal of Entrepreneurial Behavior & Research, 2011 Publication | <1 % |
| 27 | icsb.org Internet Source | <1 % |
| 28 | www.emrbi.org Internet Source | <1 % |

| | | |
|----|--|------|
| 29 | Kristel Miller, Rodney McAdam, Sandra Moffett, Michael Brennan. "An exploratory study of retaining and maintaining knowledge in university technology transfer processes", International Journal of Entrepreneurial Behavior & Research, 2011 Publication | <1 % |
| 30 | eprints.uad.ac.id Internet Source | <1 % |
| 31 | etheses.bham.ac.uk Internet Source | <1 % |
| 32 | repository.tudelft.nl Internet Source | <1 % |
| 33 | www.emich.edu Internet Source | <1 % |
| 34 | Antik Suprihanti, Maftuh Kafiya, Liana Fatma Leslie Pratiwi. "Lecturer's Response to Establishment Plan of Business Incubators at Faculty of Agriculture UPN "Veteran" Yogyakarta", Proceeding of LPPM UPN "Veteran" Yogyakarta Conference Series 2020 – Economic and Business Series, 2020 Publication | <1 % |
| 35 | mafiadoc.com Internet Source | <1 % |

Exclude quotes On

Exclude matches Off

Exclude bibliography On