

LETTER OF SUPERVISOR CONFIRMATION

I, hereby declare that have read this thesis and in my perspective this thesis is sufficient in terms of scope and quality. This project paper is submitted to Universiti Teknikal Malaysia Melaka as requirement for completion and reward of Bachelor of Technopreneurship.

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EXPLORING THE CHARACTERISTICS OF INCUBATEES TOWARDS
ACHIEVING FOURTH GENERATION INCUBATORS

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DECLARATION

“I declare this thesis entitle „Exploring The Characteristics of Incubatees towards Achieving Fourth Generation Incubators“ is my own work except the summary and each of which I have mentioned the source”

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DEDICATION

Dedicated to my lovely family, especially to my father and my mother for being supportive, encouraging and caring all the time. Not forgotten my supporting supervisor and also my beloved friend known as GC4. Thank you for helping, loving, supporting, and always being there whenever I need you and for the strength that I feel because all of you have loved me so wonderfully well.

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ABSTRACT

Business incubation is an economic development tool which is widely used to stimulate the growth of small to medium sized enterprises (SMEs). It is proven as an effective tool in creating jobs, and accelerating the growth of new businesses. This paper examines the underlying characteristics of incubatees that are needed at the selection phase of the business incubation process towards achieving fourth generation incubators. This study is based on a survey questionnaire from the 121 incubatees from ICT incubators in Malaysia. The characteristics of incubatees, personality, knowledge, skill and behaviour, are found to have inter-correlation among each other and shows to be significant factors for achieving fourth generation incubators. Results show that the most significant characteristic is behaviour while characteristics such as personality, skill and knowledge. The findings provide valuable information for the policy makers, business incubator managers, and potential incubatees toward achieving fourth generation incubators.

Keywords: Business incubator, Characteristic of Incubatees, Fourth generation incubators.

ABSTRAK

Perniagaan inkubator adalah alat pembangunan ekonomi secara meluas digunakan untuk merangsang pertumbuhan kecil kepada perusahaan bersaiz sederhana (PKS). Perniagaan ini terbukti sebagai alat yang berkesan dalam mewujudkan peluang pekerjaan, dan mempercepatkan pertumbuhan perniagaan baru. Karya ini mengkaji ciri-ciri yang mendasari inkubati yang diperlukan pada fasa pemilihan proses inkubasi perniagaan ke arah mencapai inkubator generasi keempat. Kajian ini adalah berdasarkan kepada soal kaji selidik dari 121 peserta inkubati dari inkubator ICT di Malaysia. Ciri-ciri inkubati, personaliti, pengetahuan, kemahiran dan tingkah laku, didapati telah berhubung antara satu sama lain saling dan menjadi faktor penting bagi mencapai inkubator generasi keempat. Keputusan menunjukkan bahawa ciri yang paling penting adalah tingkah laku berbanding ciri-ciri seperti personality, kemahiran dan pengetahuan. Penemuan ini memberi maklumat yang berharga untuk pembuat dasar, pengurus inkubator perniagaan, dan inkubati yang berpotensi ke arah mencapai inkubator generasi keempat.

Kata Kunci: *Perniagaan inkubator, Ciri-ciri inkubati, Inkubator generasi Keempat.*

TABLE OF CONTENT

CHAPTER	CONTENTS	PAGE
	APPROVAL	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	<i>ABSTRAK</i>	vi
	TABLE OF CONTENT	vii
	LIST OF TABLE	x
	LIST OF FIGURE	xi
	LIST OF ABBREVIATIONS	xii
CHAPTER 1	INTRODUCTION	
	1.1 Background of Study	1
	1.2 Problem Statement	2
	1.3 Research Question	3
	1.4 Objective of Study	3
	1.5 The Scope and Limitation of Study	4
	1.6 The Significant of Study / Importance of Study	4
	1.7 Flow of Study	5
	1.8 Summary	5

CHAPTER 2 LITERATURE REVIEW

2.1	Introduction	6
2.2	Business Incubation	7
	2.2.1 Business incubation impact	8
2.3	Definition	
	2.3.1 Incubator	9
	2.3.2 Incubatee	11
	2.3.3 Incubation	11
2.4	Evolution of Generation Business Incubator	12
	2.4.1 First generation incubators	13
	2.4.2 Second generation incubators	13
	2.4.3 Third generation incubators	14
	2.4.4 Fourth generation incubators	14
2.5	Business Incubation Process	16
	2.5.1 Selection phase	17
	2.5.2 Graduation phase	18
2.6	Characteristics of Incubatees	18
	2.6.1 Personality	19
	2.6.2 Behaviour	20
	2.6.3 Knowledge	21
	2.6.4 Skill	22

CHAPTER 3 RESEARCH METHOD

3.1	Introduction	24
3.2	Theoretical Framework	25
3.3	Research Design	25
3.4	Data Resources	26
3.5	Primary and Secondary Data Source	27
3.6	Research Strategy	28
3.7	Research Location	28
3.8	Time Horizon	29
3.9	Data Analysis	29
	3.9.1 Data scoring procedure	30
3.10	Reliability of Study	31

3.11	Validity	33
	3.11.1 Internal validity	33
	3.11.2 External validity	33
	3.11.3 Construct validity	34
3.12	Development of Questionnaire	34
3.13	Summary	34
CHAPTER 4	DATA ANALYSIS AND FINDINGS	
4.1	Introduction	35
4.2	Descriptive Analysis	
	4.2.1 Gender	36
	4.2.2 Age	37
	4.2.3 Race	37
	4.2.4 Education level	38
	4.2.5 Entrepreneurial experience	39
	4.2.6 Company status	39
	4.2.7 Type of business involved	40
4.3	Reliability Testing for Item in Variable	41
4.4	Correlation Analysis	42
4.5	Regression Analysis	44
CHAPTER 5	DISCUSSION, CONCLUSION AND RECOMMENDATION	
5.1	Introduction	45
5.2	Discussion	45
	5.2.1 Objective 1	46
	5.2.2 Objective 2	48
5.3	Conclusion	50
5.4	Recommendation	51
	REFERENCES	52
	APPENDIX	62

LIST OF TABLES

TABLE	TITLE	PAGE
Table 3.10.1	Cronbach alpha for pilot test	31
Table 3.10.2	Cronbach alpha for pilot test after question removed	32
Table 4.2.1	Distribution of research respondents according to gender	36
Table 4.2.2	Distribution of research respondents according to age	37
Table 4.2.3	Distribution of research respondent according to race	37
Table 4.2.4	Distribution of research respondents according to education level	38
Table 4.2.5	Distribution of research respondent according to the entrepreneurial experience	39
Table 4.2.6	Distribution of research respondent according to company status	39
Table 4.2.7	Distribution of research respondent according to type of business	40
Table 4.3	Reliability Statistic	41
Table 4.4	The Correlation of the All Variables	43
Table 4.5.1	Model Summary	44
Table 4.5.2	Coefficients	44

LIST OF FIGURES

FIGURES	TITLE	PAGE
Figure 1.7	Flow of study	5
Figure 2.4	Evolution of business incubator (TPM, 2013)	12
Figure 3.2	Theoretical framework	25

LIST OF ABBREVIATIONS

SMEs	Small and Medium Enterprise
ICT	Information and Communication Technology
NBIA	National Business Incubations Association
BIIA	Business Innovation and Incubation Australia
TPM	Technology Park Malaysia
STP	Science and Technology Park
SPSS	Statistical Package for Social Science
MRA	Multiple Regression Analysis

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Research into business incubation has grown during the last decade. The important role of business incubation as an effective method to accelerate growth and development of technology-based small-to-medium sized enterprise (SMEs) has been acknowledged in the economic and entrepreneurship literature (Aernoudt, 2004; Phan, Siegel, and Wright, 2005). The concept of “incubator” is often used as an overall denomination for organizations that constitute or create a supportive environment that is conducive to the “hatching” and the development of new firms (Chan and Lau, 2005, p. 12; Lindholm-Dahlstrand and Klofsten, 2002; Lyons and Li, 2003; Vinnova, 2004).

The secret of firm success has long fascinated people, but most of these studies have focused on larger companies. However, as we know, some of the firm succeeds and the others fail. Consequently, and in line with a general demand for more rigorous evaluation (OECD, 2006), the evaluation of incubator performance has attracted some attention (Aernoudt, 2004; Bhabra Remedios and Cornelius, 2003; Chan and Lau, 2005; Grimaldi and Grandi, 2005; Hackett and Dilt, 2004a; Nolan, 2003; Phan et al, 2005).

Despite the fact that some incubators have been growing and successful, others have been declined or stagnated. What factors that affects business incubator success among incubates? This study aims to find out the characteristics of incubatees that model needed the fourth generation incubators. The empirically-based findings in this paper indicate that the current state of play in Malaysia ICT incubators is characterized by the way incubatees are selected. The paper proceeds as follows; firstly, a review of the incubation literature are provided, followed by an outline of the methodology adopted regarding data collection and analyses, leading on to the presentation of the results and discussion. The project ends with a summary and conclusions of the research.

1.2 Problem Statement

The research conducted based on the selection phase on the business incubation processes. Selection phase refers to the decision concerning which venture to accept for the entry or which to reject. Researchers seem to be agreeing that selection is an important incubator management task. There have been done concerning incubator model related to the issues of incubatees selection. There are some problem statements as specified below:

1. Many applications from entrepreneurs to be incubatees have been rejected while selection phase because of entrepreneurs does not know the specific procedure to be incubatee.
2. The entrepreneurs did not know the specific characteristics and the procedure that needed while selection phase as incubatees.

1.3 Research Question

Recently, the fourth generation incubators have become as one of the industry that is well-known around new entrepreneurs. The characteristics of incubatees become an important aspect to achieve successful fourth generation incubators.

This study has two research questions that need to answer:

- i. What are the significant characteristics to be fourth generation incubatees?
- ii. What are the characteristics of incubatees that will create fourth generation incubators?

1.4 Objective of the Study

The aim of this research is to study the characteristics of incubates while enhancing the success of the fourth generation in incubator industries.

This study has set out to achieve two primary objectives:-

- i. To identify the significant characteristics of fourth generation incubatees.
- ii. To determine the characteristics of incubatees that will create fourth generation incubators.

1.5 The Scope and Limitation of Study

The scope of the study involves the feedback from respondents, incubatees from 3 ICT incubator industries, Technology Park Malaysia, K-Economy Incubator and Mad Incubator that involves in incubator industries and incubatees as their example of successful incubator.

Several limitations regarding this research require identification and there are as follows:

- This study is limited to a specific type of incubators (ICT incubator)
- This study is only in Malaysia context; the implication maybe not accepted to incubators in other countries.

1.6 The Significance of the Study / Importance of the Study

The significance of this research is to identify the characteristics to be a fourth generation incubator that can give benefit to the incubator industries itself. This research is to aim at achieving the goal by giving details about the characteristics of incubatees by using the academic data research and empirical part of the modifying assumption of the characteristics.

1.7 Flow of Study

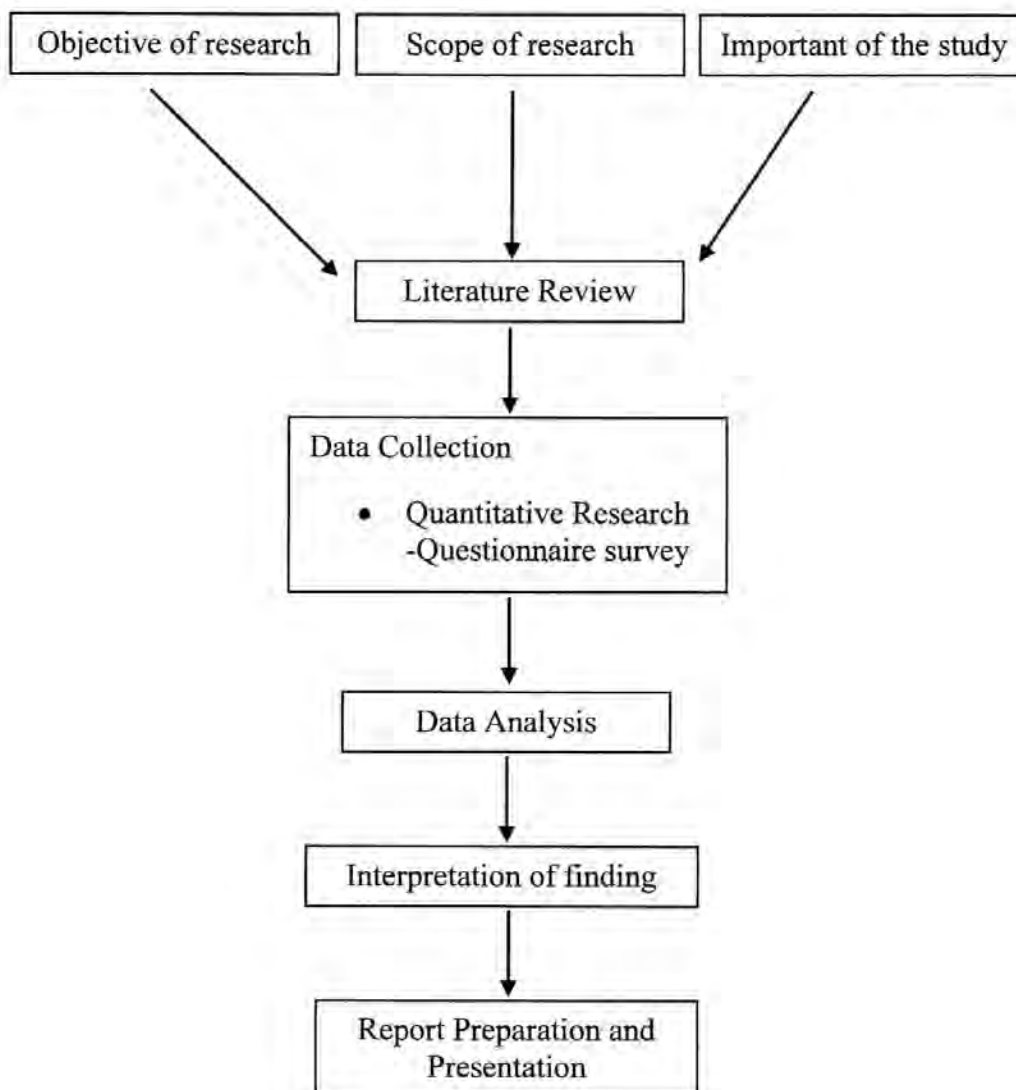


Figure 1.7 Flow of study

1.8 Summary

This chapter is discussing all about the initial background of the study. It was provided on the problem statement and also the objective of the research study. It also discussing on the flow and the method from the first and last research will go through. This introduction indicates that it becomes as guidance to the next chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of existing literature relevant to the research questions. The sections are concerned with answering the sub research questions. First part of this chapter is about introduction of business incubator to the examining the role of incubation business. Then followed by the definition of terms that will use in this research of business incubation study. Subsequently, the development of business incubation trough the generation of the incubator will present. The chapter will narrow in the scope of the characteristics of incubatees needed in the fourth generation incubators, beginning with a discussion of the business incubation process of the selection phase.

2.2 Business Incubation

To understand what business incubation entails, this section starts in search of a definition of business incubation. Relevant literature reveals that various definitions of business incubators and incubations exist. The National Business Incubations Association (NBIA) provides a definition of business incubation that is more suitable for the purpose of this research. NBIA is a non-profit organization devoted to help its members develop and manage successful business incubation programs. It is primarily composed of incubator developers and managers, and proposes the following definitions of business incubation:

“Business incubation is a business support process that accelerates the successful development of start-up and fledgling companies by providing entrepreneurs with an array of targeted resources and services. A business incubator’s main goal is to produce successful firm that will leave the program financially viable and freestanding.”

(National Business Incubation Association, 2009)

In 2005 alone, these incubators assisted more than 35,000 new ventures providing employment for 82,000 individuals and generated revenue of more than US\$ 7 billion (Tamasy, 2007). Despite certain similarities, various different types of incubators emerged over time. A distinction between different types of incubators can generally be made based on (a) their primary financial sponsor, (b) incubation spin-off or start-ups, (c) their incubatees business nature, or (d) their business nature (Hackett and Dilts, 2004)

Alternatively, Business Innovation and Incubation Australia (BIIA), defines business incubators as a new hybrid type of economic development facility that combines features of entrepreneurship, business facilitations and real estate development (businessincubation.com.au). The Small Business Council of Australia defines business incubation as a systematic approach to the new enterprise development which can be described as consisting of five dimensions including enterprise development, a business consultancy network, entrepreneurial synergy, flexible, affordable working space and shared office service

(<http://www.smallbusinessaustralia.org.au>). These dimensions can be generally understood as the purpose, benefit design and management of business incubators.

The concept of business incubators has been known for decades, but still lacks of theoretical foundation. Researchers keep asking themselves why the business incubator can be seen as an effective tool to 1) reduce fixed and search costs, 2) fasten learning and enable the development of organizational capabilities, and 3) provided credibility to the young firm (Hackett and Dilts, 2004b).

The incubations and small-business literature has an acknowledged that business incubation not only work as a business-creation tool, but as a business accelerator that leads to other economic and social impacts (Barrow, 2001; Carayannis & Von Zedtwitz, 2005). SMEs growth can be accelerated with the possible alleviation of the typical teething problems that fledgling companies face, such as lack of resources, lack of management and entrepreneurial skills and lack of capital (Papulova & Makros, 2007). Likewise, incubators are known for their role in assisting new business start-ups, hence the name 'business-creation tool'. Subsequently, business incubators are also known as to create employment opportunities (Peters, Rice, & Sundararajan, 2004)

2.2.1 Business incubation impact

The added value of business incubation and the impact business incubator services have on incubatees has been researched by various academics. Existing literature on business incubation shows studies that examine the influence of business incubation on the number of jobs created, incubatee development, or incubatee graduation rates (Peters et al., 2004). There is different types of incubators have been studied – such as university linked incubators, non-profit incubators, and also for profit incubators (Peter et al., 2004).

Allen and McCluskey (1990) concluded that the number of jobs created among incubatees and the number of firms graduated from the incubator was virtually not influenced by the incubator's structure, services, or policies. It was found that, instead age of the incubator and the number of incubatees explained over half the variance in jobs created and graduation of firms. This suggested that an incubator's impact on its incubatees is greater when it has learned from experience (Allen and McCluskey, 1990; Peters et al., 2004).

2.3 Definition

2.3.1 Incubator

Generally an incubator can be viewed as "...a support environment for start-up and fledgling companies." (Peter et al., 2004, p. 83). In the incubator literature, a large number of detailed and in many ways similar definitions have been put forward (Hackett and Dilts, 2004b). There are four components that have been received particular attention in previous research (Rice, 2002; Colombo and Delmastro, 2002; von Zedwitz, 2003; Hsu et al., 2003; Lyons and Li, 2003; Hackett and Dilts, 2004a; Hackett and Dilts, 2004b; Peters et al., 2004; Aetnoudt, 2004; Bollingtoft and Ulhoi, 2005; Chan and Lau, 2005; Clarysse et al., 2005).

1. Shared office space, which is rented under more or less favorable conditions to incubatees,
2. A pool of shared support services to reduce overhead costs,
3. Professional business support or advice "coaching" and
4. Network provision, internal and/or external.

According to Peters et al. (2004) the relative emphasis on each component has varied over time, from an initial focus on facilities and administrative services to a more recent emphasis on the importance of business support. In my opinion, without the business support activities, the denomination “hotel” is a better description than incubator. Nolan and von Zedwitz (2003) said, we cannot agree with those who argue that co-location is not a necessary feature of incubators. In contrast, Lewis (2001) said, we are convinced that the use of shared localities is an important advantage, besides shared overhead resources also provides opportunity for knowledge transfer and experience sharing between incubatees.

Some researchers seem to treat incubators and technology and science parks as synonyms (Lindelof and Lofsten, 2004) and distinguish between different types of incubators based on the development stages of their incubatees: start-ups, business development or maturity (Bhabra – Remedios and Cornelius, 2003). However, most researchers seem to be agreed that incubation is related to the early phase of the ventures life (Bhabra – Remedios and Cornelius, 2003; Grimaldi and Grandi, 2005; Hackett and Dilts, 2004a; Lindelof and Lofsten, 2004). We agree that most incubators take on ventures in early phases, to whose ideas are immature and help develop them into viable companies.

For the purpose of understanding the value and context of this study, the definition of incubator provided by the NBIA is adopted, as it has been widely used in past incubation research. The NBIA (2007) defines the incubator in their website (www.nbia.org) as:

“An economic development tool designed to accelerate the growth and success of entrepreneurial companies through an array of business support resources and services”

2.3.2 Incubatee

The term 'incubatee' is widely used in the incubation literature to refer to the start-ups companies housed in the incubators. According to Chinsomboon (2000, p.30) he defined incubatees as "partners, clients, venture, investments, start-ups, and members". Similar with Hamdani (2006) used the term "tenants" to refer to "residents of business incubators", which is signified to the landlord role played by the incubator management in earlier start-ups of incubatees. Alternatively, incubatees have been referred as "portfolios, clients, or tenant companies" (Hackett and Dilts, 2004a, p.1). For the purpose of standardization, this thesis will use the term 'incubatee' to refer to tenant companies in the incubators.

2.3.3 Incubation

The term 'incubation' is commonly used in the literature as the correspondent of the term incubator. According to Aernoudt (2004) states that incubation should be considered as an interactive and dynamic new firm creation process with the purpose of stimulating people to start-up their own business and supporting start-up enterprises in the development of innovative product. A real incubator is not an office space with a desk. It should be offered management services, financial assistance, juridical support, operational know-how and access to new markets, which can be done by both in a physical or virtual space. Some of these definitions include the provision of management assistance, networking, knowledge exchange, or access to business networks (Wiggins and Gibson, 2003; Bollingtoft and Ulhoi, 2005; Becker and Gassmann, 2006).

According to Hamdani (2006), business incubation can be described as an innovative, evolving organizational form to create value by combining the entrepreneurial drive of a start-up with resources generally available to the large or medium-sized firms. Business incubators nurture young firms during their formative years when they are most vulnerable, helping them to survive and grow into viable commercial enterprises.