I hereby confirm that I have examined this project paper entitled: Technological Readiness for Crowd funding as an Alternative Way to Finance SME in Malaysia

By Muhaymin bin Hatta

I hereby acknowledge that this project has been accepted as part fulfillment for the Bachelor of Technopreneurship (BTEC) with Honours

Signature	ː
Supervisor	: DR SENTOT IMAM WAHJONO
Date	:
Signature	:
Panel	: MDM ADILAH MOHD DIN
Date	ː

TECHNOLOGICAL READINESS FOR CROWD FUNDING AS AN ALTERNATIVE WAY TO FINANCE SME IN MALAYSIA

MUHAYMIN BIN HATTA

Report Submitted in Fulfillment of the Requirements for the Bachelor of Technopreneurship (BTEC) with Honours

Faculty of Technology Management and Technopreneurship UNIVERSITI TEKNIKAL MALAYSIA MELAKA

JUNE 2017



DECLARATION OF ORIGINAL WORK

I, MUHAYMIN BIN HATTA "

I hereby declare that the work of this exercise is mine except for the quotations and summaries that have been duly acknowledged."

Signature :

Name : MUHAYMIN BIN HATTA

Date

DEDICATION

This Research Paper is dedicated

To my beloved family who have been my constant source of inspiration. They have given me the drive and discipline to tackle any task with enthusiasm and determination.

Without their love and support this project would not have been made possible.

ACKNOWLEDGMENT

First of all, I would like to thank Allah for the gift in providence and chance to best prepare for this research paper titled "Technological Readiness for Crowd funding as an Alternative Way to Finance SME in Malaysia".

I would like to say a big thanks to Dr. Sentot Imam Wahjono on tutoring and guidance for completing the research for these two semesters. The encouragement and guidance from him, eventually I can successfully complete this Final Year Project. Next, special thanks to Mdm. Adilah binti Mohd Din, my assigned panel for her contributes and inspired me a lot to work on this project.

In addition, I want to thank my family who have always supported and helped me in completing this task for the mentality or physically. Next, special thanks to my colleagues who helped to complete this paper.

Moreover, I would like to thank the authority of University Teknikal Malaysia Melaka (UTeM) for providing us, the students with a good environment and facilities to complete this project. Also, I would like to take this opportunity to thank to the Centre of Faculty of Technology Management and Technopreneurship for offering this subject. It gave me an opportunity to participate and learn about the research project which is valuable for an academic purpose.

Thank you.

ABSTRACT

This research is a study to identify the technology readiness for crowd funding as an alternative way to finance Small and Medium Enterprise (SME) in Malaysia. The scope for this research survey is amongst entrepreneurs or businesses or ventures that ever used crowd funding or at least acknowledge crowd funding as an alternative way of financing. Fundamentally, researcher defines on the crowd funding as an alternative way to finance SMEs. In the other hand, the researcher also investigating other ways to finance SMEs and how ready Malaysia to implement crowd funding in term of technology readiness. The technology readiness is the key determinant to the successful crowd funding implementation. Hence, the findings of the research will upshot the most important technology factors for implementing crowd funding. Next, the method use by researcher is survey method by distributing questionnaire to the target samples respondents. Several analyses that involved are descriptive analysis, reliability analysis, Pearson's correlation analysis and multiple regression analysis. The research finding shows that implementation of crowd funding can be used as an alternative way to finance SME in Malaysia. In short, the implementation of crowd funding solved the financial problems faced by most SMEs in Melaka. Furthermore, the implementation of crowd funding method has successfully captured entrepreneur's intention. The results of the research may be inadequate due to lack of information as the crowd funding method is implemented in a small scale in Malaysia. Although a few parties and government alternative had implemented such similar program with this project, it still cannot capture a satisfying total amount of SME to join it.

Keywords : Crowd funding, Technology Readiness, Small and Medium Enterprise (SME)

ABSTRAK

Kajian ini merupakan satu kajian untuk mengenal pasti kesediaan teknologi bagi crowd funding sebagai jalan alternatif untuk membiayai industri kecil dan sederhana (IKS) di Malaysia. Skop kajian ini adalah dikalangan usahawan atau perniagaan atau usaha sama yang pernah digunakan crowd funding atau sekurang-kurangnya mengakui crowd funding sebagai jalan alternatif pembiayaan. Pada dasarnya, penyelidik mentakrifkan pada crowd funding tersebut sebagai jalan alternatif untuk kewangan PKS. Di sisi lain, penyelidik juga menyiasat cara lain untuk membiayai PKS dan Malaysia berapa bersedia melaksanakan crowd funding dari segi kesediaan teknologi. Kesediaan teknologi adalah penentu utama kepada pelaksanaan crowd funding berjaya. Oleh itu, dapatan kajian ini akan kesudahannya faktor teknologi yang paling penting untuk melaksanakan crowd funding. Seterusnya, penggunaan kaedah oleh penyelidik ialah kaedah tinjauan dengan mengedarkan soal selidik kepada responden sampel sasaran. Beberapa analisis yang terlibat adalah analisis deskriptif, analisis korelasi Pearson's, analisis kebolehpercayaan dan analisis regresi berganda. Kajian ini mencari menunjukkan bahawa pelaksanaan crowd funding boleh digunakan sebagai jalan alternatif untuk membiayai PKS di Malaysia. Ringkasnya, pelaksanaan crowd funding menyelesaikan masalah kewangan yang dihadapi oleh kebanyakan PKS di Melaka. Selain itu, pelaksanaan kaedah crowd funding telah berjaya ditangkap niat usahawan. Hasil kajian ini mungkin tidak mencukupi kerana kekurangan maklumat seperti kaedah crowd funding dilaksanakan secara kecilkecilan di Malaysia. Walaupun beberapa pihak dan alternatif kerajaan telah melaksanakan program tersebut serupa dengan projek ini, ia masih tidak dapat menangkap jumlah memuaskan PKS untuk menyertainya.

Kata Kunci: Crowd funding, Kesediaan Teknologi, Perusahaan Kecil dan Sederhana (PKS)

TABLE OF CONTENTS

CHAPTER	HEM	PAGE
	DECLARATION OF ORIGINAL WORK	xi
	DEDICATION	xii
	ACKNOWLEDGMENT	xiii
	ABSTRACT	xiv
	ABSTRAK	XV
	TABLE OF CONTENTS	xvi
	LIST OF TABLE	xix
	LIST OF FIGURE	xxi
CHAPTER 1	INTRODUCTION	1
	1.1 Background of the study	1
	1.2 Problem Statement	3
	1.3 Research Questions	4
	1.4 Research Objectives	4
	1.5 Scope and Limitation	5
	1.6 Key Assumption	5
	1.7 Significance/Importance of Study	6
CHAPTER 2	LITERATURE REVIEW	0
	2.1 Introduction	0
	2.2 Small and Medium Enterprise (SME)	7
	2.3 How to finance SME	9
	2.3.1 Bank financing method	10
	2.3.2. Financial Market	11
	2.3.3. Asset-based financing	12
	2.4 Crowd funding	13
	2.4.1 Donation-Based Crowd funding	15
	2.4.2 Reward-Based Crowd funding	15
	2.4.3 Crowd Lending/P2P Lending	16
	2.4.4 Equity Crowd funding (ECF)	16
	2.5 Technology	18

	2.6 Technology Readiness Measurement	21
	2.6.1 Technology Readiness Assessment (TRA)	21
	2.6.2 Technology Readiness Level (TRL)	22
	2.6.3 Technology Research Index (TRI)	25
	2.7 Networked Readiness Index (NRI)	26
	2.8 Previous Research	28
	2.9 Conceptual Framework	30
	2.10 Hypothesis	31
CHAPTER 3	RESEARCH METHODOLOGY	33
	3.1 Introduction	33
	3.2 Research Design	34
	3.2.1 Methodological Choices	35
	3.2.2 Time Horizon	35
	3.2.3 Location of Research	35
	3.3 Research strategy	35
	3.3.1 Pilot testing	36
	3.3.2 Validity	39
	3.3.3 Reliability Analysis	39
	3.4 Data Collection	41
	3.4.1 Population Method	42
	3.4.2. Sample Method	43
CHAPTER 4	DATA ANALYSIS	45
	4.1 Introduction	45
	4.2 Roles of IVs to DVs	46
	4.3 Identifying the Relationship between Variables	47
	4.3.1 Demographic Analysis	47
	4.3.2 Descriptive Statistic for Each Indicator	55
	4.3.3 Level of Crowd funding amongst Malaysia SMEs Malaysia in term of technology readiness	n 61
	4.4 Pearson Correlation Coefficient	63
	4.5 Multiple Regression Analysis (MRA)	64
	4.7 Hypothesis Testing	68
	4.8 Discussion	71
	4 8 1 Discussion on Research Objectives 1	71

		xviii
	4.8.2 Discussion on Research Objectives 2	73
	4.8.3 Discussion on Research Objective 3	74
	4.9 Summary	75
CHAPTER 5	CONCLUSION AND RECOMMENDATION	76
	5.1 Introduction	76
	5.2 Summary of Key Findings	77
	5.3 Recommendations	78
	5.3.1 Limitations	79
	5.4 Conclusion	80
REFERENCES		81
APPENDIX 1:		87
	1. Questionnaire in Paper Form	87
	2. Questionnaire in Google-Doc Form	93
APPENDIX 2:		100
	1. Correlation statistic (r-value square)	100
	2. Reliability Statistic	105
	3. Demographic Statistic	106
	4. Frequency Table	107
	5. Mean statistic for DV	115
	6. Multiple Regression Analysis (MRA)	116
APPENDIX 3		117
	Gantt chart for Questionnaire (PILOT TEST)	117
	Gantt chart to Demonstrate Research Activities	118
APPENDIX 4		119
	Turnitin Result	119

LIST OF TABLE

TABLE	TITLE	PAGE
Table 2.1	Definition based on Operation Size	8
Table 2.2	List of registered market operators for ECF, which also	
	reliable in Malaysia	17
Table 2.3	Malaysia Internet Users, July 2016	20
Table 2.4	The Technology Readiness Level (TRL)	23
Table 2.5	The Previous research used to compare with the current	28
	research	
Table 3.1	Types of research	34
Table 3.2	Validity of pilot test (30 respondents)	37
Table 3.3	Cronbach's Alpha of each variable for pilot test	38
Table 3.4	Cronbach's Alpha of overall for pilot test	39
Table 3.5	Sample size of a known Population	44
Table 4.1	Gender Statistic	48
Table 4.2	Age Statistic	49
Table 4.3	Business Sector Statistic	50
Table 4.4	Annual Sales Statistic	51
Table 4.5	Total Employee Statistic	52
Table 4.6	Experience in using Crowd funding	54
Table 4.7	Descriptive Statistic for Optimism (Independent	55
	variable)	
Table 4.8	Descriptive Statistic for Innovative (Independent	56
	variable)	
Table 4.9	Descriptive Statistic for Insecurity (Independent	57
	variable)	
Table 4.10	Descriptive Statistic for Discomfort (Independent	58
	variable)	
Table 4.11	Descriptive Statistic for Technology Development	59
	(Dependent variable)	

Table 4.12	Descriptive Statistic for Exploratory Development	59
	(Dependent variable)	
Table 4.13	Descriptive Statistic for Full - Scale Development	60
	(Dependent variable)	
Table 4.14	Descriptive Statistic for Production (Dependent variable)	60
Table 4.15	The Descriptive Statistic for Dependent Variable	61
Table 4.16	The mean analysis of crowd funding practices in SMEs	61
	in Malaysia in term of technology readiness	
Table 4.17	Measurement for level of crowd funding in term of	62
	technology readiness	
Table 4.18	Validity Test result for all respondents	63
Table 4.19	Cronbach's Alpha of overall	65
Table 4.20	Pearson correlation Coefficient	66
Table 4.21	Model Summary of Multiple Regressions	67
Table 4.22	ANOVA table	68
Table 4.23	Table of Coefficients	69
Table 4.24	t and sign value	71

LIST OF FIGURE

FIGURE	TITLE	PAGE
Figure 2.1	Principles in Web 2.0	19
Figure 2.2	The Networked Readiness Framework	27
Figure 2.3	Malaysia technology readiness	27
Figure 2.4	Conceptual Framework	30
Figure 4.1:	Gender	48
Figure 4.2	Age	49
Figure 4.3	Business Sector Statistic	50
Figure 4.4	Annual Sales Statistic	51
Figure 4.5	Total Employee Statistic	52
Figure 4.6	Experience in using Crowd funding	54
Figure 4.8	Beta value for Standardize Coefficients	70

CHAPTER 1

INTRODUCTION

1.1 Background of the study

The main purpose of this research is to review the technological readiness for crowd funding as an alternative way to finance Small and Medium Enterprise (SME) in Malaysia. In this study, researcher will examine and explain on the technology available and technological readiness that directly influence crowd funding implementation in Malaysia. In other words, to find out the breakpoint of technology required for successfully implementation of crowd funding. The researcher also will discuss on the on different kind of crowd funding available and the existence technological barriers that prevent entrepreneur from implementing crowd funding as well as to prove that the crowd funding method is a noble and a great alternate way to finance SME, and at the same time, indirectly, to empower country economic condition.

As review form, it is noted that every new venture requires resources to succeed. Financial is one of the most critical resources for any business owner or entrepreneur to start and run their ventures as planned. Financial managers and investors are not operating in a vacuum condition, which mean they are making decisions within a large and complex financial environment, (Finance 1521, Financial Market- Chapter 5, 1984). Financial environment involves both institutions and financial markets, regulatory policies and tax, and the condition of the economy itself. Therefore, it is essential for the investors and financial managers to understand deeply on the environment in which they wanted to operate.

Besides that, the study is about seeking few issues arises in understanding crowd funding platform as an alternative way to finance SME. Firstly, the crowd funding method will be outlined together with a suitable description as well as an explanation of the ways in which it works. Besides, there are few crowd funding websites that already existed on internet, that reliable in Malaysia use, such as Kickstarter and Indiegogo. Back in 1997, the very first documented successful crowd funding occurred when a British rock band sponsored their reunion tour through online contributions from their fans. Recently, after few decades of discovering crowdsourcing method, many entrepreneurs have taken crowd funding as the simplest and easiest way to get fund and start their venture. By doing this noble method, entrepreneurs do not need to seek for venture capital or any other traditional sources of venture capital anymore. For instance, after inspired by this financing method, ArtistShare became the first online crowd funding platform in 2000, which using available technology that time. Presently, there are more crowd funding platforms started to emerge, and the crowd funding industry has grown each year. In the future, crowd funding might become a 'game changer' in term of seeking finance for new venture in Malaysia. As the matter of fact, there are already few small -scaled projects has been established that using crowd funding in Malaysia.

1.2 Problem Statement

As we know, there are significant lack of understanding of crowd funding uses as an alternative way to finance Small and Medium Enterprise (SME) in Malaysia. The words itself are quite unfamiliar amongst entrepreneurs. In term of technological readiness, few factors arise to study whether Malaysia is fully ready for crowd funding or otherwise.

According to the report made by Securities Commission Malaysia (SCM) in 2015, Malaysia is the first country in ASEAN to present a regulatory framework to facilitate equity crowd funding in 2015, with six registered equity crowd funding (ECF) platform operators to fully operationalize by 2016.

In Malaysia, technology has become one of the most important requirement for the citizen, especially in the technology era that rapidly changing time to time. Technology available are not quite updated compared to developed country such as America, Japan and etc. but it is quite adequate for citizen to be approached to the crowd funding medium, either in web-based platform or any other approaches. The only problem arise is how good the technology available so that it can capture entrepreneur awareness about crowd funding. Besides that, the compatibility of the technology itself.

1.3 Research Questions

Based on the problem statement, researcher creates three research questions regarding on the technology readiness towards crowd funding to be used as an alternative financing for SME. These research questions are the keys activities for this research progress.

- 1. What are the indicators of technology readiness for success crowd funding implementation as an alternative way to finance SME in Malaysia?
- 2. What is the level of crowd funding in Malaysian SMEs?
- 3. What is the most factors affect crowd funding implementation as an alternative way to finance SME in Malaysia?

1.4 Research Objectives

The criteria of the research objectives are based on the research question constructed. So, the research objectives proposed to answer the research question in this study.

- 1. To identify the indicators of technology readiness for success crowd funding implementation as an alternative way to finance SME in Malaysia
- 2. To identify the level of crowd funding in Malaysian SMEs
- 3. To analyze the most factors affect readiness technology for crowd funding implementation as an alternative way to finance SME in Malaysia

1.5 Scope and Limitation

The scope for this research survey is conducted in Malaysia. The entrepreneurs or businesses or ventures that used or acknowledge crowd funding will be the main target for the survey. Besides that, projects that used crowd funding will be one of the research scope area as well as the funder or group of funder itself. Information and data required for descriptive result are also can be obtained from any department and responsible parties in Malaysia, such as Securities Commission Malaysia (SCM).

Meanwhile the limitations for this research are the time and cost are the faced by researcher. Since the scope of this research is needed different state of location, the cost and time is various. Instead, the biasness of respondent's feedback on the questionnaires in term of knowledge and experience possess is the limitation the researcher perceives from the view of crowd funding. Other than that, data collected may be varies on foreign country, since crowd funding are still an infant medium in Malaysia.

1.6 Key Assumption

The researcher assumes that the respondent has answered the questionnaire honestly. Furthermore, the researcher assumes a good cooperation from the respondents during the distribution of questionnaires. In addition, it is assuming that the information and data obtained regarding crowd funding in Malaysia are accurate and standardized.

1.7 Significance/Importance of Study

Crowd funding implementation is a very important to improve financing capabilities for small or new ventures in Malaysia. As the growth of financial capabilities is a significantly change in the country economy; technology readiness is the factor affecting the growth. Even Malaysian crowd funding is still in the growing stage and factors that influence is technology itself and how fast the implementation will take. Therefore, the researcher stress on the importance of identifying the technology available for implementing crowd funding as the main proposed of this research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

In literature review section, the flows determine on how the previous research is arranged to prove the use of theoretical framework. The model framework in this study is used for the research based on the fundamental theory of crowd funding as a noble way of financing, specifically for Small and Medium Enterprise (SME), and what are the suitable theory of managing technology readiness towards crowd funding method, and then manage to find a barrier that prevent crowd funding implementation theoretically related to the availability of technology; accordance to the current issues regarding the increase of number of SME towards economic condition in Malaysia.

2.2 Small and Medium Enterprise (SME)

Small and Medium Enterprise (SME) are the key importance for economy in most countries around the world. SMEs involve butchers, bakers, electricians, and many more, which have their own professions (L. Norden, 2015). Similarly, SMEs also defined as non-subsidiary, independent companies which hire only less than a given number of employees. Usually, frequent higher limit is 250 employees, as used in the European Union. However, some countries set the limit until 200 employees, except for United States, which considers SMEs to include companies with less than 500 employees. Small companies basically hire less than 50 employees, microenterprises have 10 employees mostly, or sometime 5 employees only. Besides that, financial assets also used to define SMEs in certain cases, (OECD Observer, 2000)

According to the report made by SME Corp. Malaysia, 2016, Majlis Pembanguna PKS Kebangsaan (MPPK), or the national SMEs council in Malaysia has approved a uniform and standardize definition since 2005 and has been adopted by all ministries and agencies, officers monitored and financial institutions involved in SME program.

A review of the definition has been done in year 2013, because of the changes in economy such as structural changes, price inflation, and changes in business trends in the year of 2015. During the 14th MPPK Meeting in July 2013, a new definition of SMEs has been approved which is covering all sectors, manufacturing, agriculture, construction and mining & quarry activities.

The number of full time employees, annual sales turnover and two criteria used to determine the definition by using the standard as follows:

- For the manufacturing sector, SMEs are defined as firms with annual sales not exceeding RM50 million or the number of full time employee not exceeding 200 people.
- For the services sector and other sectors, SMES are defined as firms with annual sales not exceeding RM20 million or the number of full time employees is not more than 75 people. (SME Corp. Malaysia, 2016)

A business can be categorized as SMEs if it meets one of two criteria, namely, or the number of full.time employees or annual sales, whichever is lower. Detailed info for the new definition of SMEs are as follows:

Definition based on the Operation Size:

- Micro enterprises across all sectors: annual sales less than RM300, 000 or the number of full.time employees for less than 5 people.
- Table 2.1 below summarize the definitions for categories of small and medium enterprises based on their respective sector.

Table 2.1 Definition based on Operation Size

Category	Small	Medium
Manufacturing	RM300, 000 (Annual Sales)	RM15 million (Annual Sales) to
sectors	to less than RM15 million	not more than RM50 million or;
	or;	from 75 to not more than 200
	5 to less than 75 employees	employees
Services and	RM300, 000 (Annual sales)	RM3 million (Annual sales) to
other sectors	to less than RM3 million or;	not exceeding RM20 million or;
	from 5 to less than 30	from 30 to not more than 75
	employees	employees

Source: SME Corp. Malaysia, 2016

2.3 How to finance SME

There are many ways and methods can be used to finance Small and Medium Enterprise (SME). In Malaysia, financing tools that quiet popular amongst SMEs and new ventures are bank lending and borrowing, micro-credit institution and financial market or financial institution as well as crowd funding method either in financial or non-financial crowd funding. Any startup entrepreneurs are able finance their company externally or internally. However, entrepreneurs are not always using internal financing and they are preferring external financing. With their limited and no personal equity either, they must turn to external financing.

Normally, external financing includes family or friends lending, banks loan, business angels or venture capitalists, and finally crowd funding. Each one of this methods has its own benefits to SMEs. For instances, family and friends not only lend funds to businesses start-up but through the life of SMEs as well. Besides, with loans from family and friends, entrepreneurs will not suffer with many asymmetries as bank loans does, because friends and family know and trust the entrepreneurs well. However, entrepreneurs that exclusively borrow from family and friends to start their business still remain as a minority, because require wealthy relatives and hence may generate a class bias. (Duffy B., 2013).

Then, bank loans also used mostly to help SMEs start and run their business. But due to the banks reluctance in providing extensive loans because of the lack of track record and risky business, entrepreneurs forced to get funds from other sources. The other sources could be business angels and venture capitalists. Business angels capable of providing funds to entrepreneurs and often parts of networks and browse projects on websites. Meanwhile, venture capitalists focusing on a higher startup sectors and need high returns as well as capable of taking a higher risk. Venture capitalists also require a way to cash in their financing, Colombo et al., (2013). Besides that, crowd funding, also known as a microfinance, and been around for many years. With the popularity of this method and the emergence of Internet, it has widely spread throughout the economic world.

2.3.1 Bank financing method

Bank is absolutely one of the most used way of financing SMEs and businesses in Malaysia, due to its durability of maintaining financial state and capability of giving fund to any potential ventures or growing up businesses. Oklahoma State Department of Education (2008), stated that banking is a federally chartered, for profit-based business that provides accounts checking, savings accounts, and other financial services to its customers. According to the research conducted for OECD (2016), bank loan is the most common used for finding source of additional finance to fund SMEs and any ventures. Mostly, it will be used for requirements such as to fund their startup, investment needs and cash flow. However, for small-scaled business facing challenges from bank finance since it is not an easy work to get funded and the risk are also higher if the business is going to fail.

Normally, banks exist due to the imperfection of the existing capital markets. Based on the research made by Boot (2000), the theory of financial intermediation proves that frictions in capital markets, such as transaction costs and asymmetric information, are the main purpose for the financial intermediaries. The existence of capital gaps in companies overcome their important conversions in their business activities, such as control changes in management and ownership, seeking to reduce leverage and improve the capital structures. A long-standing financial caused the entrepreneur to strengthen capital structures and decrease dependence on borrowing, which also cause many firms to increase their leverage in order to survive any financial crisis or unstable economic condition.

Even though the bank financing keeps continuously become so important for the SME sector especially in Malaysia, there is an idea that credit constraints will become the new method for SMEs. Hence, it is essential to widen the range of financing tools available to SMEs in order to allow them to endure their role in business and investment as well as keep on growing.