

ADOPTION OF OPEN INNOVATION (OI) INCREASES THE INNOVATIVENESS
AMONG SMALL AND MEDIUM-SIZED ENTERPRISES (SMEs) IN FOOD AND
BEVERAGE (FNB) INDUSTRY IN MELAKA

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DECLARATION

“ I admit that this report is a product of my own work except the citation for each
which I have mentioned the sources”

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DEDICATION

This research paper is dedicated to my lovely parent Ab Ghani Bin Deraman and Mdm. Rahimah Binti Zakaria and also my supervisor Dr. Nusaibah Binti Mansor who have been my important persons give the support and guidance to complete my degree successfully. Thank you for giving for always support from behind me to give the motivation and advice to become the success person. Last and but not less special thanks to my supervisor, panels and my friends for assisting me throughout the project is done.

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ABSTRACT

The aim of this study is to determine the factors of adopting Open Innovation (OI) among Small and Medium sized Enterprises (SMEs) that involve in the Beverage and Food (BnF) sector in Melaka. A research framework are constructed based on the factors that come up from the previous researches and combine together to construct the theoretical framework of factor adoption of Open Innovation in SMEs'. The objectives of this research are to identify the acceptance levels of OI among SMEs in Melaka, to determine the relationship between factors adoption of OI among SMEs and their performances and last one is to analyze the factors adoption of OI that have significant relationship with SMEs' performances. From the findings indicate that the strength of relationship is moderate between factors adoption of OI toward performances and the research discovers that collaboration and human capital factors have the significant relationship with SMEs performances.

Keywords: Open Innovation (OI), Small and Medium-Sized Enterprises (SMEs)

ABSTRAK

Tujuan kajian ini adalah untuk menentukan faktor-faktor Inovasi Terbuka (OI) dalam kalangan Perusahaan Kecil dan Sederhana (PKS) yang terlibat dalam sektor Minuman dan Makanan (BnF) di Melaka. Rangka kerja penyelidikan dibina berdasarkan faktor-faktor yang diambil daripada penyelidikan terdahulu dan menggabungkan kesemua faktor-faktor untuk membina rangka kerja teori untuk faktor-faktor penerapan inovasi terbuka (OI) dalam PKS '. Objektif penyelidikan ini adalah untuk mengenal pasti tahap penerimaan OI di kalangan PKS di Melaka, untuk menentukan hubungan antara faktor-faktor penggunaan inovasi terbuka dalam kalangan PKS terhadap prestasi PKS dan yang terakhir adalah untuk menganalisis faktor-faktor penggunaan OI yang mempunyai hubungan yang signifikan dengan prestasi PKS. Dari hasil penemuan menunjukkan bahawa kekuatan hubungan adalah sederhana di antara faktor-faktor penggunaan inovasi terbuka (OI) terhadap prestasi PKS dan penyelidikan mendapati bahawa faktor kolaborasi dan modal insan mempunyai hubungan yang signifikan dengan persembahan PKS.

Kata kunci: Terbuka Inovasi (Open Innovation), Perusahaan Kecil dan Sederhana (PKS)

TABLE OF CONTENT

CHAPTER	TITLE	PAGES
	DECLARATION	
	DEDICATION	
	ACKNOWLEDGEMENT	
	ABSTRACT	
	<i>ABSTRAK</i>	
	TABLE OF CONTENT	
	LIST OF TABLES	
	LIST OF FIGURES	
	LIST OF APPENDIXES	
	LIST OF ABBREVIATIONS	
CHAPTER 1	INTRODUCTION	
1.1	Introduction of the study	1-2
1.2	FnB industry in Malaysia	2-3
1.3	Important of SMEs	3

1.4	Innovation Policy in Malaysia	4
1.5	Problem Statement	5
1.6	Research Questions	6
1.7	Research Objectives	6
1.8	Scope of the Research	7
1.9	Importance of the Research	7
1.10	Limitation of the Research	8
	Key Assumption of the	
1.11	Research	8
1.12	Summary	9
CHAPTER 2	LITERATURE REVIEW	
2.1	Introduction	10
2.2	Open Innovation (OI) Concept	11
2.3	Open Innovation in SMEs	11-12
	The Acceptance Level of OI	
2.4	among SMEs in Melaka	13
	Relationship between Factors	
	Adoption OI and SMEs'	
2.5	performances	15
	Factors Adoption of OI among	
2.6	SMEs'	15
2.6.1	External Factor	15-16
	External Resources	16
	Collaboration	16
	Government and Public	
	Policies	17
2.6.2	Internal Factor	18
	Knowledge	18

	Technology	18-19
	Organizational Culture	19-20
	Human Capital	20-21
2.7	Theoretical Framework	22
2.8	Hypothesis Development	23-24
CHAPTER 3	RESEARCH METHOD	
3.1	Introduction	25
3.2	Research Design	26-27
3.3	Methodological Choices	27-28
	Primary and Secondary Data	
3.4	Sources	28-29
3.5	Data Analysis	29
	Statistical Package for Social	
3.5.1	Science (SPSS)	29
3.5.2	Pearson' Correlation	30
3.5.3	Multiple Regression Analysis	30
3.5.4	Descriptive Analysis	31
3.5.5	Location of the Research	31
3.6	Research Strategy	32
3.6.1	Questionnaire	32
3.7	Sampling Size	33-34
3.8	Time Horizon	34
3.9	Pilot Test	35-36
3.10	Scientific Canons	36
3.10.1	Internal Validity	36
3.10.2	Construct Validity	37
3.10.3	Reliability Test	37
3.10 4	Internal Consistency	38-40
3.11	Generalisability	40

3.12	Summary	41
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RESULT AND

CHAPTER 4 DISCUSSION

4.1	Introduction	42
4.2	Descriptive Analysis	43
4.2.1	Category of Company	43-44-
4.2.2	Annual Sale	44-45
4.2.3	Year of Establishment	45-46
4.2.4	Ownership	46-47
4.2.5	Problem	47-48
	Acceptance Level of OI among	
4.3	SMEs	49
4.3.1	Knowledge of OI among SMEs	49
4.3.2	Innovation	50
	Acceptance Level of OI among	
4.3.3	employees	51
	Significant Changes After	
4.3.4	Adopting Innovation	52
	Type of Incentives received by	
4.3.5	SMEs	53-54
4.3.6	Collaboration	54-55
4.4	Inferential Analysis	55
4.4.1	Pearson' Correlation Analysis	55-57
4.4.2	Multiple Regression Analysis	57-59
4.4.3	Hypothesis Verification	60-62
4.5	Summary	62

CONCLUSION AND

CHAPTER 5 RECOMMENDATION

5.1	Introduction	63
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5.2	Summary and Finding	64
5.3	Discussion of Finding	64
5.3.1	Descriptive	64
	Acceptance Level of OI among	
5.3.2	SMEs	65
	Relationship between Factors	
	Adoption of OI and SMEs'	
5.3.3	Performances	67
	The Factors Adoption of OI	
	that have Significant	
	Relationship with SMEs'	
5.3.4	Performances	67-73
5.4	Conclusion	73
5.5	Limitation of the study	74
	Recommendation of the Future	
5.6	Research	75
	REFERENCES	76-79
	APPENDIXES	80-92

LIST OF TABLE

NO	TABLE	PAGE
3.1	Pearson' correlation coefficient of range	30
3.2	Krejcei and Morgan's sample size	33
3.3	Value of reliability	39
3.4	Value of Cronbach's Alpha for pilot test	39
4.1	Category of SMEs' company	43
4.2	Annual sale	44
4.3	Year of SME company establishment	45
4.4	The type of ownership	46
4.5	The problem that faced by SME company	47
4.6	Knowledge of Open Innovation (OI) among SMEs	49
4.7	Innovation	50
4.8	Acceptance level of innovation among employees	51
4.9	The changes after adopting innovation	52
4.10	Types of initiatives that received by SME	53
4.11	Types of collaboration	54
4.12	Descriptive statistic	55
4.13	The summary of Pearson' Correlation Analysis	56

4.14	Model summary of Multiple Regression Analysis	57
4.15	ANOVA	58
4.16	Model Coefficient Analysis	58

LIST OF FIGURE

NO	FIGURE	PAGE
2.1	The relationship between factors adoption and SME's performances	22
3.1	Research flowchart	26
4.1	Percentage category of SME Company	43
4.2	Percentage of Annual Sale of SME	44
4.3	Percentage year of SME company establishment	45
4.4	Percentage the type of ownership	46
4.5	Frequency of the problem that faced by SME company	47
4.6	Percentage of Open Innovation (OI) of SMEs know about OI	48
4.7	Percentage of SME Company implements innovation	50
4.8	Percentage of acceptance level of innovation among employees	51
4.9	Percentage of the changes after adopting OI	52
4.10	The frequency types of initiatives that received by SME	53
4.11	The frequency types of collaboration	54
5.1	The Coefficient Analysis for each factors	67

LIST OF APPENDIXES

APPENDIXES	TITLE	PAGE
A	Gantt chart Final Year Project 1	80
B	Gantt chart Final Year Project 2	81
C	Questionnaire	82-88

LIST OF ABBREVIATION

DV	Dependent Variables
DOSM	Department of Statistic Malaysia
FnB	Food and Beverage industry
GDP	Gross Domestic Product
GII	Global Innovation Index
IPT	Institute of Higher Education Institutions
IV	Independent variable
MASTIC	Ministry of Science, Technology and Innovation
MOHE	Ministry of Higher Education
MARDI	Malaysian Agricultural Research and Development Institute
MATRADE	Malaysia External Trade Development Corporation
MITI	Ministry of International Trade and Industry
MRA	Multiple Regression Analysis (MRA)
NACE	Northern and Western Conference
NPSTI	National Policy Science, Technology and Innovation
PPRN	Public Private Research Network
R&D	Research and Development
SMEs	Small and Medium-sized Enterprises
STI	Science, Technology and Innovation
SPSS	Statistical Package for Social Science

OI

Open Innovation

UMP

Universiti Malaysia Pahang

CHAPTER 1

INTRODUCTION

1.1 Introduction/Background of the Study

Small and Medium-sized Enterprise (SMEs) are growth rapidly in Malaysia and become the biggest main contributors to Malaysian economic. According to SME Corp chief executives director Habsah says that “SMEs are the backbone of the Malaysia economic development based on its Gross Domestic Product (GDP) contribution of 35.9 percent last year that above the standard benchmarking for developing nation status” (Bernama, 2015).

In the Eleventh Malaysia Plan (2016-2020), Prime Minister plans to guide Malaysian SMEs by using the blue ocean strategy that focusing on high impact transmission on capital and economy of the Malaysian at low cost. Besides that, Government was introduced the four strategies which are unlocking the potential of productivity to ensure sustainable and exclusive growth, promoting investment to spearhead economic growth, increasing export to improve trade balance and enhancing fiscal flexibility to sustainable fiscal position. The strategies were implemented to ensure strengthen the economic fundamental and maintain economic stability.

The researcher want to conduct an investigation of Open Innovation (OI) is a new concept of innovation to be adopted among Small and Medium Enterprises (SMEs) to enhance their innovation to sustain in the competitive market. This

research carries out in the Food and Beverage industry (FnB) in Malaysia. From the Economic Census 2016, Department of Statistic Malaysia (DOSM), most of Malaysian SMEs that involve in service sector which is 89.2 percent that including Food and Beverage industry (FnB). This industry is one of industry that was contributed to the Malaysia economic.

1.2 Food and Beverage (FnB) Industry in Malaysia

According to Global EDGE of sources global business knowledge is defined the Food and Beverage (FnB) industry as the companies that involve in processing of raw food materials, packaging and distributing them as well as alcoholic and nonalcoholic beverages. Based on Northern rea Western Conference (NACE) classifies the Food and Beverage (FnB) industry into nine sub-sectors which are:

- Meat (further referred to as ME)
- Fish (further referred to as FI),
- Fruit and Vegetables (further referred to as FV),
- Oils and fats (further referred to as OF)
- Dairy products (further referred to as DP),
- Grain (further referred to as GR),
- Animal feeds (further referred to as AF),
- Other food products (further referred to as OFP)
- Beverages (further referred to as BE).

In Malaysia, FnB industry is a fast growing industry that one of industries that driver contribution to the increase SMEs Gross Domestic Product (GDP) share of services sector expanded further 40.2 percent. From the Economic Consensus

2016 of Food and Beverage sector shows the number of establishment increases which 5.1 percent of annual growth rate since 2010 until 2015.

Adoption of Open Innovation (OI) may lead the SMEs in this industry more concern about the important of innovation in developing the products or services. This also mentions by Garcia et al, (2014) these factors include intense collaboration along the industry value chain (agriculture, food processing and distribution), the pace of technological change, a mature market, intensive competitiveness and the small company size of the a large part of its production fabric. There many researchers conduct the researches about the effect of Open Innovation (OI) like Vanhaverbeke et al., (2017); Sarkar and Costa (2008); Fortuin and Omta (2009) and many more. This research will show that Open Innovation (OI) is the suitable way to overcome the new challenges that faced by FnB industry.

1.3 Important of Small and Medium-sized Enterprise (SMEs)

SMEs have the important roles in the economic development of Malaysia that need to give the priority by the Government in improving their capabilities to go further and growth rapidly. At the same time, SMEs faces many challenges because they have limited resources like financial, management skill, technology, information, and difficult to entry the market. As stated by (Council and Level, 2017). So this changes force firm adopts innovation by changing the way they develop the products or services. For SMEs, they need transforms their approaches from closed innovation to open innovation that better than previous approach in managing their business. Adopting Open Innovation (OI) is one method to solve the SMEs' constraints by collaborating with larger firms, other industry, education institution and other parties to gain the external sources like knowledge, technology, expertise to invent the innovation products and services. Other than to overcome their limitation, Open Innovation (OI) can increase innovativeness among SMEs and also enhance their performances.

1.4 Innovation Policy in Malaysia

In SME development, they focus on a few areas and one of areas is innovation and technology to enhance the productivity growth. Nowadays the innovation and technology is essential to improving the SMEs lifestyle. Based on the National Policy of Science, Technology and Innovation (STI) states that SMEs act as the driver of Malaysia economic growth however SMEs have limitation in term of the technology and innovation. To overcome their limitation, National Policy Science, Technology and Innovation (NPSTI) develops various incentives and measures to help strengthen capacity of SMEs for industries through connection and collaboration among public sector, research institution and industry specific research institution must be forged.

1.5 Problem Statement

The concept of Open Innovation (OI) is a common thing in the high technology industries because they already implemented on long time ago but for small and medium industries it is new concept of innovation and they have difficulties in understanding the opportunities and the benefits in it compared to the high technology industries. However, according statistic from Department of Statistic Malaysia (DOSM) shows SME contribution to Malaysian Gross Domestic Product (GDP) increased to 36.6 percent in 2016 compare to 36.3 percent in 2015 that across multiple sizes and sectors. Therefore from this statistics, this research to discover the factors that contributed to successful of SMEs is there because of adoption of OI. From the statistic of GDP of the world (2017) shows that Malaysia in ranked 31st that still at below compared to countries like Indonesia and Thailand. Therefore, Malaysia needs to become more aggressive to increase the economic growth through enhance productivity and innovation among SMEs that are the biggest contributors to Malaysia economic.

The main problem that faced by SMEs is lacking Resources such as knowledge, expertise, technology, financial and many more in developing the innovation products and processes. As reported by Global Innovation Index (GII) on 2017 shows Malaysian ranks 37th and Malaysia in ranked 8th in Asia compared to Singapore. The statistic shows that the innovation culture among the Malaysian is still at average level. Nowadays, the innovation is one of important element that must mustered in running the business and there should be the main priority to firms especially SMEs to sustain in the competitive market. The one of the innovation that need to adopt among SMEs is Open Innovation that a method to overcome the SMEs constraints and support their capabilities by outsource from external. Adoption of Open Innovation (OI) gives many benefits to the firms especially for SMEs to increase their innovativeness in developing the processes and products. Those depend on the ability of SMEs in adopting the OI from the external either it can give positive or negative relationship to the SMEs performances.

1.6 Research Questions

1. What are the acceptance levels of Open Innovation (OI) among SMEs in Melaka?
2. What are the relationship between factors of Open Innovation (OI) adoption and SMEs' performances?
3. What are the factors adoption of Open Innovation (OI) that have significant relationship with Small and Medium-sized Enterprise (SMEs) performances?

1.7 Research Objectives

1. To identify the acceptance levels of Open Innovation (OI) among SMEs in Melaka.
2. To determine the relationship between factors of Open Innovation (OI) adoption and SMEs' performances.
3. To analyze the significant relationship factors adoption of Open Innovation (OI) with Small and Medium-sized Enterprise (SMEs) performances.