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DETERMINANTS OF BRAIN DRAIN
IN JOHOR BAHRU

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The thesis is submitted in partial fulfilment of the requirement for the award of
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DECLARATION

“I admit that this report is the result of my own, except certain explanations and passages where every of it is cited with sources clearly.”

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DEDICATION

I would like to dedicate the appreciation to my family members and especially to my parents who bringing up me and always encourage me, support me spiritually and financially, my beloved supervisor who always concern about me and guide me throughout the research, and my lovely friends that assisted me through the journey of research. Most importantly, may all the glory be to God.

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ABSTRACT

Brain drain is the movement of high-skilled individuals from developing country to developed country. The issue of brain drain is nothing new in Malaysia. The negative of net migration rate in Malaysia has deprives country's human capital and negatively affect to the country's economic performance and growth prospect. This research aims to investigate the determinants that urge high-educated Malaysians emigrate from Malaysia and causes brain drain in Johor Bahru. From the descriptive research design in this research, quantitative method was used to collect data through questionnaire survey. In this research, 160 high-educated respondents' data were used as they fulfilled the basic requirement of "brain drain" for the analysis of the questionnaires survey. The respondents in Johor Bahru area were mainly focused and chosen randomly through simple random sampling technique. From the data analysis, the findings of the result showed that income factor, employment and education opportunities were positively impact to people's intention to emigrate whereas better employment opportunities overseas was the most influencing factors towards brain drain. As a conclusion, this research was important and useful to the government of Malaysia to retain talented Malaysia professionals by doing necessary improvements and transformation, and raise the awareness of Malaysia citizens to the issue of brain drain.

Keywords: Brain drain, intention to emigrate, Johor Bahru, Malaysia

ABSTRAK

Pengaliran keluar pakar adalah pergerakan individu yang berkemahiran tinggi dari negara yang sedang membangun ke negara maju. Isu pengaliran keluar pakar ini bukan lagi perkara baru di Malaysia. Kadar migrasi bersih yang negatif di Malaysia telah manafikan modal insan negara dan memberi kesan negatif kepada prestasi dan pertumbuhan prospek ekonomi negara. Kajian ini bertujuan untuk mengkaji penentu yang menggesa rakyat Malaysia yang berpendidikan tinggi berhijrah keluar dari Malaysia dan menyebabkan pengaliran keluar pakar di Johor Bahru. Dengan reka bentuk deskriptif dalam kajian ini, kaedah kuantitatif telah digunakan untuk mengumpul data melalui kajian soal selidik. Dalam kajian ini, data daripada 160 responden yang berpendidikan tinggi digunakan untuk analisis hasil kajian ini kerana mereka memenuhi keperluan asas “pengaliran keluar pakar”. Responden kajian soal selidik ini terutamanya fokus kepada responden yang tinggal di kawasan Johor Bahru dan dipilih secara rawak melalui teknik persampelan rawak mudah. Berdasarkan analisis data, dapatan hasilnya menunjukkan faktor pendapatan, peluang pekerjaan dan pendidikan memberi kesan positif kepada niat rakyat untuk berhijrah manakala peluang pekerjaan yang lebih baik di luar negara merupakan faktor yang paling mempengaruhi pengaliran keluar pakar. Kesimpulannya, kajian ini penting dan bermanfaat kepada kerajaan Malaysia untuk melaksanakan penambahbaikan dan transformasi supaya pakar Malaysia dapat dikekalkan dan meningkatkan kesedaran rakyat Malaysia kepada isu pengaliran keluar pakar.

Kata kunci: Pengaliran keluar pakar, niat untuk berhijrah, Johor Bahru, Malaysia

TABLE OF CONTENTS

CHAPTER	SUBJECT	PAGE
	DECLARATION	ii
	DEDICATION	iii
	ACKNOWLEDGEMENT	iv
	ABSTRACT	v
	ABSTRAK	vi
	TABLE OF CONTENTS	vii
	LIST OF TABLES	x
	LIST OF FIGURES	xi
	LIST OF ABBREVIATION AND SYMBOL	xii
	LIST OF APPENDIXES	xiii
CHAPTER 1	INTRODUCTION	
	1.1 Background of Study	1
	1.2 Problem Statement	2
	1.3 Research Questions	3
	1.4 Research Objectives	3
	1.5 Scope and Limitation of Study	4
	1.6 Importance of Research	4
	1.7 Summary	5
CHAPTER 2	LITERATURE REVIEW	
	2.1 Introduction	6
	2.2 Brain Drain	7

CHAPTER	SUBJECT	PAGE
	2.2.1 Push Factors	9
	2.2.2 Pull Factors	9
2.3	Theory of Reasoned Action	10
2.4	Determinants of Brain Drain	11
	2.4.1 Income Factor	11
	2.4.2 Employment Opportunities	12
	2.4.3 Education Opportunities	13
2.5	Summary	15
CHAPTER 3	RESEARCH METHOD	
3.1	Introduction	16
3.2	Research Framework	17
3.3	Research Hypotheses	17
3.4	Research Design	18
3.5	Methodological Choice	19
3.6	Primary and Secondary Data Sources	20
3.7	Location of Research	21
3.8	Questionnaire Design	21
3.9	Sampling Design	22
3.10	Research Strategy	23
	3.10.1 Pilot Test	24
3.11	Data Analysis Method	24
3.12	Validity, Reliability and Generalizability	26
	3.12.1 Construct Validity	26
	3.12.2 Internal Validity	27
	3.12.3 External Validity	27
	3.12.4 Reliability	28
3.13	Summary	28

CHAPTER	SUBJECT	PAGE
CHAPTER 4	DATA ANALYSIS	
4.1	Introduction	30
4.2	Descriptive Statistic Analysis	31
4.2.1	Profile of Respondents	31
4.2.1.1	Gender	31
4.2.1.2	Age	32
4.2.1.3	Race	33
4.2.1.4	Education Level	34
4.2.1.5	Employment Status	35
4.2.1.6	Current Income	36
4.2.2	Central Tendency	37
4.2.2.1	Income Factor	38
4.2.2.2	Employment Opportunities	39
4.2.2.3	Education Opportunities	40
4.2.2.4	Intention to Emigrate	42
4.3	Scale Measurement	43
4.3.1	Reliability Test	43
4.4	Inferential Statistic	44
4.4.1	Pearson Correlation	45
4.4.1.1	Pearson Correlation of Brain Drain	46
4.4.2	Multiple Regression Analysis	47
4.4.2.1	Multiple Regression Analysis for Determinants of Brain Drain	47
4.4.3	Hypotheses Testing	51
4.5	Summary	53

CHAPTER	SUBJECT	PAGE
CHAPTER 5	CONCLUSION AND RECOMMENDATION	
5.1	Introduction	54
5.2	Discussion of Objectives and Hypotheses Test	55
5.2.1	Objective 1: To Investigate the Relationship between Income Factor and Intention to Emigrate in Johor Bahru	55
5.2.2	Objective 2: To Identify the Relationship between Employment Opportunities and Intention to Emigrate in Johor Bahru	56
5.2.3	Objective 3: To Study the Relationship between Education Opportunities and Intention to Emigrate in Johor Bahru	57
5.2.4	Objective 4: To Determine The Most Influencing Determinant of Brain Drain towards Intention to Emigrate in Johor Bahru	58
5.3	Implication	59
5.4	Limitation	60
5.5	Recommendation	61
5.6	Conclusion	62
	REFERENCES	64
	APPENDIXES	70

LIST OF TABLES

TABLE	TITLE	PAGE
4.1	Statistics Analysis of Respondents by Gender	31
4.2	Statistics Analysis of Respondents by Age	32
4.3	Statistics Analysis of Respondents by Race	33
4.4	Statistics Analysis of Respondents by Education Level	34
4.5	Statistics Analysis of Respondents by Employment Status	35
4.6	Statistics Analysis of Respondents by Current Income (Monthly)	36
4.7	Statistic of Income Factor	38
4.8	Statistic of Employment Opportunities	39
4.9	Statistic of Education Opportunities	40
4.10	Statistic of Intention to Emigrate	42
4.11	Rule of Internal Consistency for Cronbach's Alpha	43
4.12	Reliability of Research	43
4.13	Strength of the Correlation	45
4.14	Pearson Correlation between Variables of Determinants of Brain Drain	46
4.15	Multiple Regression Analysis between Variables of Determinants of Brain Drain	48
4.16	Coefficients of Determinants of Brain Drain	51

LIST OF FIGURES

FIGURE	TITLE	PAGE
2.1	Diaspora and Brain Drain Scenario in 2010	9
2.2	Theory of Reasoned Action	10
3.1	Research Framework	17

LIST OF ABBREVIATION AND SYMBOL

ABBREVIATION	MEANING
CIA	= Central Intelligence Agency
IOM	= International Organization for Migration
U.S.	= United States
SPSS	= Statistical Package for the Social Sciences
A-Level	= Advanced Level
STPM	= Sijil Tinggi Persekolahan Malaysia
IF	= Income Factor
EPO	= Employment Opportunities
EDO	= Education Opportunities
ITE	= Intention to Emigrate
ANOVA	= Analysis of Variance
UiTM	= Universiti Teknologi MARA
UTP	= Universiti Teknologi PETRONAS

LIST OF APPENDIXES

APPENDIX	TITLE	PAGE
A	Gantt Chart	70
B	Questionnaire	71

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Malaysia is a developing country with highly open and upper-middle income economy which has triumphantly curtailed high poverty rates and reduced income inequalities in the past 30 years. To accomplish high income status by 2020 is the goal of Malaysia while engaging that growth is sustainable. In the year of 2014, Malaysia has 29.90 million populations, and 326.9 billion Gross Domestic Product (GDP) with 6% growth compared with the year of 2013. It is a great picture of the continuous growth in Malaysia, but there is a hidden problem happening in Malaysia and indirectly affect to the economic growth in Malaysia. A country's net migration rate contains the value for the diversity the number of persons entering and leaving the country during the year per 1,000 persons, which figure the contribution of migration to the overall level of population change. When year 2000 until year 2007, the data of net migration rate in Malaysia is zero, but it was started to become negative from year 2009 until year 2014 (CIA World Factbook, June 30, 2015). The negative of net migration rate indicated the number of persons leaving Malaysia is more than the number of persons entering Malaysia.

Brain drain in Oxford Dictionaries (2014) is defined as the emigration of highly trained or intelligent people from a particular country. According to Docquier and Rapoport (2012), brain drain can be explained as the emigration of high-skill individuals from developing to developed countries. It indicates the migration of

talent across borders (The World Bank, 2011). In Malaysia, there are currently about one million Malaysians residing overseas and 308,833 of them are highly-skilled workers (Ng, 2014). From The World Bank data of migrated Malaysians from year 2000 to year 2010, Singapore is the country where 54% of all migrated Malaysians were migrated to. The elevated of Malaysia's brain drain rate has brought a lot of inevitable impacts to Malaysia's economy. Its negative impacts have reduced developing countries' competitive advantage as the skilled and best human capital flowed out of the countries to the developed countries (Wahab, 2014).

1.2 Problem Statement

From the 2011 "Malaysia Economic Monitor: Brain Drain" report, The World Bank stated that the number of skilled Malaysians living abroad has tripled in the last two decades. For every ten skilled Malaysians born in Malaysia, one of them elects to leave their home country, Malaysia to others country. According to Nadaraj (2014), there were about one million citizens in Malaysia decided to migrate between year 2000 and 2010, and about one-third of them were professionals.

Human capacity is one of the drivers of economic growth for developing countries (Hanushek, 2013). For instance, according to Karim et al. (2012), one of the greatest challenging faced by the construction industry in Malaysia currently is to attract and to attain skilled labour. The lacked of skilled labour impact on low productivity among the labour will give influence to the industry on the aspects of cost overruns, schedule delays and so on. Moreover, many labours nowadays do not concern about their productivity as long as they can received their payment on time. Some of the labour becomes unproductive due to the problems of delay in salary payment, cut down of overtime payment or gain low salary by overloaded of work (Razak et al., 2014).

The high rate of human capacity leaving from Malaysia as known as brain drain was negatively affects to country's productivity and economic performance and growth prospect. It is due to the labour productivity will effect on a company's

competitiveness. Company is required to maintain its competitiveness or even become more competitive while producing good productivity labour in order for them to sustain in the industry (Razak et al., 2014). This causes the industries in Malaysia forced to import foreign human capacity to maintain their productivity and amplify their revenue generation. Nevertheless, although the foreign labour substitutes is estimated has constitute 70% of the workforce, but they were reported to be involved in such social problem, lack of skill and communication problem overtimes (Karim et al., 2012).

1.3 Research Questions

The aim of the study for this research was to investigate the determinants of brain drain in Johor Bahru. The research questions in this study were:

- 1) What is the relationship between income factor and intention to emigrate in Johor Bahru?
- 2) What is the relationship between employment opportunities and intention to emigrate in Johor Bahru?
- 3) What is the relationship between education opportunities and intention to emigrate in Johor Bahru?
- 4) Which is the most influencing determinant of brain drain towards the intention to emigrate in Johor Bahru?

1.4 Research Objectives

The research objectives of this research were established in order to accomplish the purpose of this research and to better define the focus of this research. The specific objectives of this research were:

- 1) To investigate the relationship between income factor and intention to emigrate in Johor Bahru.
- 2) To identify the relationship between employment opportunities and intention to emigrate in Johor Bahru.
- 3) To study relationship between education opportunities and intention to emigrate in Johor Bahru.
- 4) To determine the most influencing determinant of brain drain towards the intention to emigrate in Johor Bahru.

1.5 Scope and Limitation of Study

The scope of this study was primarily focused on the income, employment opportunities, and education opportunities determinants of brain drain. The survey respondents of this research were only focused on the public who lives in Johor Bahru and possess of high education level.

The limitations of this research also discussed in this part. Due to the nature of this research, the respondents of this research only focused on public who lives in Johor Bahru area which means others who lives other than Johor Bahru area's data were not be covered in this research. Second, it was hard to justify the accuracy and validity of the answer due to the difficulty to ensure respondents answered the questionnaires with honest, based on their knowledge and understanding or not. To strengthen the accuracy and validity of the research, qualitative method can be implementing in order to enhance the accuracy and validity of the research.

1.6 Importance of Research

The issue of brain drain in Malaysia was nothing new again in Malaysians' daily topic, already long accustomed to it. When the issue aggravate slowly and affect to a country's economic, the awareness to this crisis must be elevate and solve

it as fast as possible to forestall it before it getting worse again. The first step that must be done before any other actions is to identify the main factor and problem that cause brain drain accelerate continuously in Malaysia. Government of Malaysia plays a very important role in this issue to slow down and resolve it. Once the brain drain issue was solved, it then brings a lot of advantages to the country and especially in the economic contributions.

Moreover, each of the company and industry also play an important role to retain talented Malaysian professionals to work in Malaysia. The ability of talented local professionals brings benefits to its company or industry in the way of increase productivity and reduces company's labour cost so that the foreign worker demand would decrease. On the other hand, this research will provide basic and foundation information for further investigation. It can raise the awareness to the brain drain issue in Malaysia also in order to retain talented Malaysian professionals and motivate Malaysia's economy growth.

1.7 Summary

In this chapter, a foundation of this research was given. It consisted of six parts, background of study, problem statement, research questions, research objectives, scope and limitation of study, and importance of study. For the next chapter, researcher will proceed and discuss about the literature review.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

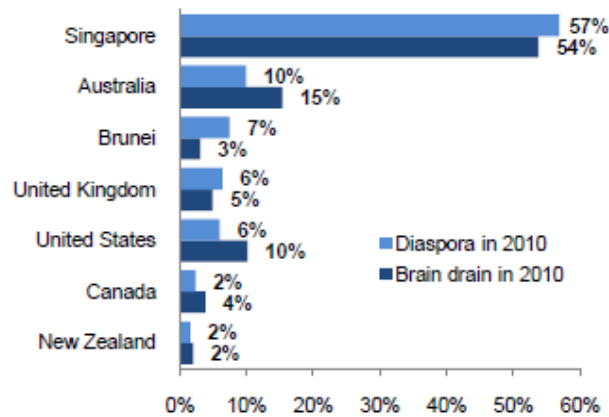
Literature review is an analysis of those existing researches and information that related to researcher's research topic. It gives a theoretical base and nature of researcher's research. Hence, the literature review of this research would be demonstrated in this chapter and organized in subtopics for more insight to understand with the topic of research. In section 2.2, an overview of brain drain was briefly explained with statistic provided. The following section 2.3 would showed the theory used in this research. Then, the determinants of brain drain would be indicated in section 2.4. Lastly, a summary for the entire chapter two was presented in section 2.5. This chapter was concluded with a restatement of the problem and the rationale for the need for this research project.

2.2 Brain Drain

The term of brain drain could be defined as the international transfer of human capital resources, and it was generally referred to the migration of highly educated individuals from developing countries to developed countries (Docquier, 2014). The use of the word “brain” in the semantics of the term “brain drain” was usually referred to any talent, know-how, competency or attribute that is a potential asset; while the use of “drain” was defined as a strong implication of serious loss which suggest that this rate of migration is at a greater level than what might be preferred. Hence, the combination of the two words implies the departure of the most skillful experts at noticeable and alarming rates (Ngoma and Ismail, 2013). The term is usually applied in a narrower sense which related more specifically to the migration of engineer, physicians, scientists, and other very high-skilled professionals with university training, often between developed countries (Docquier, 2014).

From the research of Docquier and Rapoport in year 2011, they realize that the first wave of brain drain was happened since the late 1960s and it was mainly consisted of welfare analyses in standard trade-theoretic frameworks. The acceleration of high-skilled emigration people from poor countries to rich countries was known as contributing to increase inequality at the international level so that the rich countries would became richer at the expenses of poor countries.

According to The World Bank (2011), there were about one million Malaysia diaspora dispersed in the entire world or even larger the number. The number of Malaysia diaspora has grown rapidly and it was almost quadrupled over the last three decades. From the overall migration of Malaysian, there were about a third of all migration was brain drain who have received a high level of education. From the report analysis, those countries which absorb Malaysia diaspora were Singapore, Australia, Brunei, United Kingdom, and United States and so on. However, Singapore is the countries which absorbed most of the diaspora. There were around 57% of the entire diaspora were dispersed in Singapore and 54% overall of Malaysia migration's destination was to immigrate to Singapore in 2010.



Source: Malaysia economic monitor: Brain drain (The World Bank, 2011)

Figure 2.1: Diaspora and brain drain scenario in 2010

2.2.1 Push Factors

Push factors refers to the factors that drive migrants to leave their countries of origin (Ngoma and Ismail, 2013). Ngoma and Ismail (2013) discover that push factors encourage professionals to migrate but the main factor that motivated migrants to migrate from one developing country to another country was different from each other depend on their own requirements. Generally, push factors are the weakness in the home country which closely related to the characteristics of underdevelopment such as low wages or salary, underemployment, limited access to quality education, inefficient institutions, human rights abuse, political instability, misplacement of talent, disregard for local talent, and so on.

2.2.2 Pull Factors

Pull factors refers to the factors that attract skilled migrants into their preferred destinations (Ngoma and Ismail, 2013). From the research of Ngoma and Ismail (2013), they realize that pull factors are usually represented as characteristics that virtually absent in developing countries but readily available and obtainable in destination countries. For instant, the pull factors that frequently mentioned by

migrants are the characteristic of better economic prospects, higher salary or income, better career expectation, better opportunity from higher qualification, modern education system, and so on.

2.3 Theory of Reasoned Action

Theory of Reasoned Action (TRA) is a general theory of relationship between attitudes and behavior (Oxford Reference, 2015). It defined a person's behavioural intention depends on the person's attitude toward the behavior and subjective norms (Fishbein and Ajzen, 1975). A person's attitude can be influenced by the person's beliefs about the outcome of the behavior and the person's evaluation of the potential outcome (Lezin, 2005). The aspect of attitude could be positive, negative, or neutral (Montano et al., 2008).

Therefore, when related Theory of Reason Action to the factors of people intended to emigrate, it was then indicated those people believed their action of emigrate would bring a desirable outcome to them. Then, it showed a positive attitude toward their behavior. Whereas, subjective norms are a people's beliefs about what others will think to the behavior (Montano et al., 2008). Afterwards, according to Montano et al. (2008), the Theory of Reason Action also defined that every people has a sense or belief about whether those key individuals and groups would approve the behavior or not. However, it also has to factor in how motivated we are to comply with their view (Lezin, 2005). Therefore, when people planned to emigrate, they believed that their action would bring better life to their parents and make them proud. Thus, a person's attitude and norms are the main influences or motivator on the person's intention and behavior.

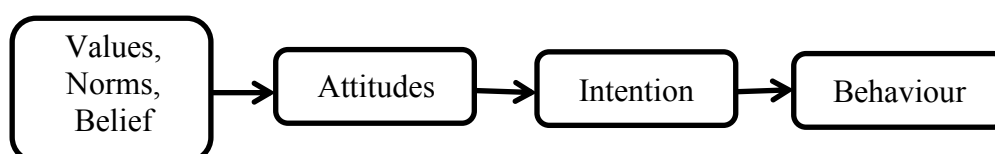


Figure 2.2: Theory of Reasoned Action (Fishbein and Ajzen, 1975)