

KNOWLEDGE SPILLOVER OF EMPLOYMENT GROWTH IN SERVICES
SECTOR IN MALAYSIA

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DECLARATION

‘I admitted that this thesis is done by myself except which I have to mention the source such as citation.’

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Date :

DEDICATION

This research is dedicated to my parents and my family who have been my source and inspiration during my study. They have given me tremendously support in my studies during I am completing my thesis. Word can really describe but every effort priceless. This all success is so much special for me and my life. I am so proud to have a family as my backbone that supporting me from behind since the first day I am producing this thesis. Thank you for giving me a chance to prove myself through my life especially in studies. I also thanks to my friends who willing and continuously helping me when I need their support throughout this study and research.

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ABSTRACT

This research examines the knowledge spillovers of employment growth in the services sector. The aim of this research is to identify the factor knowledge spillover of employment growth in services sector that help improve economy in surrounding area. Thus, the measurement shows the spillover of knowledge in states. The methodology is using employment data from 14 states in Malaysia from Department of Statistic Malaysia. The data of services sector collected from Malaysian Industrial Classification Industry 2008 (MSIC). The theory of knowledge spillover suggests significant differences in spillover effects of services sector in Malaysia. The employment growth is the dependent variable while the independent variables are specialization, competition and diversity. All these variables are analyze using IBM SPSS 23. The result of this research is creating job opportunities and the implications for regional policy development.

Keywords: Knowledge spillover, Employment growth, Theory of Knowledge Spillover, Malaysia

ABSTRAK

Penyelidikan ini mengkaji limpahan pengetahuan oleh pertumbuhan pekerjaan dalam sektor perkhidmatan. Tujuan penyelidikan ini adalah untuk mengenal pasti pengetahuan faktor limpahan pertumbuhan pekerjaan dalam sektor perkhidmatan yang membantu meningkatkan ekonomi di kawasan sekitarnya. Oleh itu, pengukuran menunjukkan limpahan pengetahuan di negeri-negeri. Metodologi ini menggunakan data pekerjaan dari 14 negeri di Malaysia dari Jabatan Statistik Malaysia. Data sektor perkhidmatan dikumpulkan dari Industri Klasifikasi Perindustrian Malaysia 2008 (MSIC). Teori limpahan pengetahuan mencadangkan perbezaan yang signifikan dalam kesan limpahan sektor perkhidmatan di Malaysia. Pertumbuhan pekerjaan adalah pemboleh ubah bergantung manakala pembolehubah bebas adalah pengkhususan, persaingan dan kepelbagaian. Semua pembolehubah ini dianalisis menggunakan IBM SPSS 23. Hasil kajian ini adalah mewujudkan peluang pekerjaan dan implikasi untuk pembangunan dasar serantau.

Kata kunci: Limpahan pengetahuan, Pertumbuhan pekerjaan, Teori Limpahan Pengetahuan, Malaysia

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LIST OF ABBREVIATIONS

MSIC	=	Malaysia Standard Industrial Classification
MAR	=	Marshall, Arrow, Romer
SPE	=	Specialization
COMP	=	Competition
DIV	=	Diversity
EMP	=	Employment
BUS	=	Business services
DOSM	=	Department of Statistic Malaysia
DIS	=	Distribution
PER	=	Personal services
SPSS	=	Statistical Package for Social Sciences

LIST OF SYMBOLS

$\%$	=	Percent
$<$	=	Greater-than
$>$	=	Less-than
$=$	=	Equals
β	=	Beta
R^2	=	R Square

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the past decades there has been increasing identification that spillovers contribute substantially to economic growth. According to the new growth theory (Romer, 1986; Lucas, 1988), spillovers are the engine of growth. There are mixed type of spatial spillovers which are knowledge spillovers, market spillovers and network spillovers. However, the new growth theory centres on knowledge spillovers (Romer, 1986; Aghion and Howitt, 1992; Aghion et al, 1997). Knowledge such as R&D activities gathers that will generate innovation in firm. The economy grown up as the firm gets an overall benefit from their ideas and innovation. In other words, spillovers explain that economies grow faster in terms of employment growth.

According to (Audretsch and Thurik, 2000, 2001), knowledge and small firms have increase the role in the modern company motivates the outcome of knowledge spillovers. The small firms are more contingent on with knowledge spillovers than the sizeable firms. Knowledge spillovers have been a phenomenon to the economy within a sector. This involves the communication between people and firms situated in each other's closeness that will assemble the highest chance of spillover effects. This communication give an impact as the information can be diffused at free of charge throughout the world.

Audritsch and Thurik, 1999 had distinguished between knowledge and information. The information consists of valid fact and diffused simply by free of charge. It contrasting with knowledge as it cannot simply be coded. The knowledge is highly specific and it being burdensome to transfer through formal communication. Face to face contact is the most used for the diffusion of knowledge spillover. Another example of knowledge diffusion is during meetings or sales transactions. Differences in employment growth across state related to differences of knowledge diffusion as it extent each type of information.

1.2 Background of Study

This study examines the knowledge spillover of employment growth in services sector in Malaysia. In order to accomplish this, data on 14 states in Malaysia is using from the employment data taken by Department of Statistic Malaysia. These data show the number of employees in each Malaysia state across MSIC 2-digit sectors. It is used to calculate another variable of knowledge spillover of employment growth in services sector in Malaysia. This present study also focuses on three question based on a model of employment growth by Glaser, 1992.

The model identifies three factor of employment growth which are specialization, competition and diversity. Specialization is hypothesized to encourage spillovers between firms from the same sector, while diversity is hypothesized to encourage spillovers between firms from different sectors. The last factor, competition assumes a positive and negative effect on the total of innovative activity and economic growth in the sector. The remark of this study is interfirm spillovers which is knowledge spilling over between different firms. In the next chapter, services sector in Malaysia and three theories on knowledge spillovers are discussed by Glaeser et al (1992) that summarized from the three theories of knowledge spillover.

According to Doring & Schnellenbach (2006), a focus main of this research is to find out the importance of knowledge spillovers over the firms within sector to employment growth. The recent development of endogenous growth theory and innovation theory has stressed the importance of knowledge spillovers. Romer (1986), Griliches (1986), Krugman (1991), and Grossman and Helpman (1991), focused on the role that spillovers of economic knowledge across agents and firms play in generating increasing returns and ultimately economic growth.

1.3 Problem Statement

Malaysia currently has a good achievement of employment growth in services sector which is most rapidly growing economic sector in industrialized societies. Employment growth is one important aspect of the services sector that contributes more to effectiveness of the industry and economy. The spillover also effects the different across sector of the data gathered for the 2010 until 2016 census. Griliches (1992), Soete & Ter Weel (1999) demonstrate the present of knowledge spillovers to economy growth. However, Van Stela A. J. And Nieuwenhuijsen H. R. (2004) states that there are many conflict against the theory of knowledge spillover. There are two questions focused, first, do spillovers appear between different sectors or do spillovers appear within one sector. Second, how the competition impact the innovation activity and employment growth. These questions answered by the theory of knowledge spillover in Chapter 2 and 4 that relates to the importance of spillover effects.

1.4 Research Question

The research question is a fundamental core of this research study that focus to determine the methodology and all steps in this report. The question on this study listed below:

1. What are the factors that influence the knowledge spillover of employment growth in services sector in Malaysia?
2. How to measure the factor of knowledge spillover of employment growth in services sector in Malaysia?
3. What is the most important factor of knowledge spillover of employment growth in services sector in Malaysia?

1.5 Research Objectives

The research objectives are a continuous step after define the research question which it is the specific accomplishment for the researcher to achieve by this study. Here are the objectives that obtain the answer throughout the handling of this research.

1. To identify the factor influencing the knowledge spillover of employment growth in services sector in Malaysia.
2. To estimate the measurement of knowledge spillover of employment growth in services sector in Malaysia.
3. To identify the most important factor of knowledge spillover of employment growth in services sector in Malaysia.

1.6 Scope and Limitation of Study

The scope of this research is limit to the time series data from 2010 to 2016 only. This research provides a large scale because it comprehends all states in Malaysia and limit to services sector. Another industry level such as agriculture and manufacturing are not going too discussed in this research. The data of employment growth accurately helps to generate the contribution of the services sector. The limitation of this data may not be very accurate and differing definitions used to clarify the data.

1.7 Importance of Study

This research is relevant to the regional policy development. Recently, a Malaysian policy has involved the prominence on developing cluster of linked economic activities where they assume that most of the clusters may effect significant growth through specialization. The present of knowledge spillovers to employment growth agrees by several authors. A wide variety of spatial spillovers have a different nature and the most diffused concept of spillovers refers to knowledge spillover. Knowledge does not solely remain within that organisation, but spreads around, thereby creating value for other firms or organisations without any compensation mechanism (Fischer, 2006). Knowledge spills over the firm and becomes available to other firms and organisation.

1.8 Structure of Study

Chapter 1	<p>From this chapter, it explains about the introduction of the research and what the researcher want to study. In this chapter it explains the background of the study, problem statement, research question, research objectives and scope and limitation of study.</p>
Chapter 2	<p>In this chapter, the researcher will explain about literature review from the previous research and explain three of the theory used in knowledge spillover that had been suggested by them. Then explain the formulae or calculation that related to the researcher's research objectives.</p>
Chapter 3	<p>From this chapter, researcher will explain about the method use in this research and what the reason the method had been chosen by researcher</p>
Chapter 4	<p>In this chapter, the researcher will explain about numerous statistical tests and analysis of the result by using SPSS. The result of data collected will be discussing in this chapter.</p>

Chapter 5	From this chapter, the researcher will provide a summary and recommendation for this study based on the results that already been obtained.
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1.9 Summary

For overall, this chapter of study was covered the research topic which begin with the introduction of knowledge spillover and the theory involve in knowledge spillovers. The research objective of this study are to identify the factor influencing the knowledge spillover of employment growth in services sector, estimate the measurement of spatial spillover of employment growth in services sector in Malaysia and identify the most important factor of knowledge spillover of employment growth in services sector. Then, the problem statement is the source of research that stated and support with the objectives. The most important is it significant to support the outcome of the research which related to the scope and limitation of the research together with the important of the research. Therefore, the study of this topic was cover to identify the factors influencing knowledge spillover of employment growth in services sector in Malaysia.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter of this study discussed about the background of study and this chapter provides an evaluation and search of the available literature in the chosen topic area. The significant of the literature review to show the readers that this study has an in-depth grasp of the topic and the researcher understand what this study fits into. Moreover, it adds to an existing body of the basic knowledge. The first section discussed about the theory of knowledge spillovers. This is followed by how the knowledge spillover affects the services sector. Another section shows the equation involved in three factor of knowledge spillover in employment in services sector in Malaysia.

2.2 Knowledge Spillovers and Local Economic Growth

Ongoing ways to deal with monetary development have underlined the significance of learning overflows (Romer, 1986). This overflow may animate development if advancements and enhancements in a single association create outer advantages to different firms without paying full compensation (Glaeser et al., 1992). An essential differentiation is regularly made between powerful learning externalities, which mirror the part of earlier data aggregations on development, and static externalities, (for example, economies emerging from the co-area of firms in an industry near real providers), which impact general spatial examples of area (Henderson et al., 1995).

As unique externalities are overlooked by a past filled with cooperation and long haul connections, spatial closeness may assume a basic part in encouraging the transmission of these impacts (Van Stel and Nieuwenhuijsen, 2004). In any case, there are extensive understandings that such externalities are vital, there are clashing perspectives about the sorts of overflow impacts which are generally gainful. Specifically, there is an open deliberation about whether overflows happen basically inside ventures (restriction economies), crosswise over businesses (Jacobs externalities), or are related with the general size and populace thickness of a neighborhood economy (urbanization economies) (Frenken et al., 2007).