SAVINGS AND INVESTMENT: AN EVIDENCE FROM SELECTED ASEAN COUNTRIES

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UNIVERSITI MALAYSIA SABAH

2016

UNIVERSITI MALAYSIA SABAH

BORANG PENGESAHAN TESIS

JUDUL KAJIAN: SAVINGS AND INVESTMENT : AN EVIDENCE FROM SELECTED ASEAN COUNTRIES

IJAZAH: SARJANA EKONOMI

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ACKNOWLEDGEMENTS

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Here by I would like to thank ALLAH S.W.T because He guides me to finish this dissertation paper. I also wish to express my deepest gratitude and appreciation and thankfulness to my supervisor Associate Professor Dr. Qaiser Munir, the lecturer of the Faculty of Business, Economics and Accounting, Universiti Malaysia Sabah who guided and taught me how to use software and do this study with patiently. I also want to thanks to my family, friends, course mates, staffs of Postgraduates from Faculty of Business, Economics and Accounting for all their help for this dissertation. It would be impossible to make it through all semesters without their help, support and advices.

Nur Azuanah Binti Masri

01 November 2016

ABSTRACT

This study proposed to determine the relationship between savings and investment in selected ASEAN countries. In perfect capital mobility, saving and investments should not be correlated by each other because if both of these indicators highly correlated, it will show low capital mobility in a country. In addition, this study will investigate the causality between saving and investment in selected ASEAN countries. This study would use six of ASEAN countries, namely, Malaysia, Indonesia, Philippines, Thailand, Vietnam and Singapore. This study would use the annual data that covered from 1980 until 2014 that were collected from International Monetary Fund (IMF) and, using the panel cointegration, panel FMOLS, panel DOLS and panel causality to examine the relationship between saving and investment in six of Southeast Asian countries. The result found that existed long-run, short-run and causality relationship between savings and investment in six ASEAN countries over the period 1980 until 2014.

ABSTRAK

Simpanan dan Pelaburan: Bukti daripada Negara-Negara ASEAN yang dipilih.

Kajian ini dicadangkan untuk menentukan hubungan antara simpanan dan pelaburan di negara-negara ASEAN yang dipilih. Dalam pergerakan modal sempurna, simpanan dan pelaburan tidak boleh dikaitkan dengan satu sama lain kerana jika kedua-dua indikator ini berkait rapat, ia akan menunjukkan mobiliti modal yang rendah dalam sesebuah negara. Di samping itu, kajian ini akan menyiasat sebab akibat antara tabungan dengan pelaburan di negara-negara ASEAN dipilih. Kajian ini akan menggunakan enam negara-negara ASEAN, iaitu Indonesia, Filipina, Malaysia, Singapura, Thailand, dan Vietnam. Kajian ini akan menggunakan data tahunan yang meliputi dari tahun 1980 hingga 2014 yang telah dikumpulkan dari Dana Kewangan Antarabangsa (IMF) dan, dengan menggunakan kointegrasi panel, FMOLS panel, panel Dols dan panel sebab akibat untuk melihat hubungan di antara tabungan dengan pelaburan di enam daripada Tenggara negara-negara Asia. Keputusan mendapati bahawa wujud hubungan jangka panjang, jangka pendek dan sebab akibat antara simpanan dan pelaburan di enam negara ASEAN sepanjang tempoh 1980 sehingga 2014.

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

It is well established that there exists a link between the savings and investment of a country. Some economists find that savings and investment ratio are highly correlated. For instance, such evidence is found by Feldstein and Horioka (1980) in the case of the Organization for Economic Co-operation and Development (OECD) countries. On the other hand, conceptually, perfect capital mobility means there is no correlation between savings and investment, and imperfect capital mobility signifies savings and investment are correlated. Thus, the finding of Feldstein and Horioka (1980) seems to be contradicting with the theory of capital mobility.

The findings of Feldstein and Horioka (1980) about the savings and investment become one of the important puzzles in economy when this puzzle also known as 'mother of all puzzles'. This puzzle became one of six major puzzles, (Obstfeld and Rogoff, 2000). It gives a major policy implication, included the opportunity of encouraging saving and investment, taxes and the effectiveness of monetary and fiscal policy. If there is perfect capital mobility, the savings will increase in one country and it would increase the investment in all countries. Some of the economists debated about the capital is perfectly mobile, people should be able to invest in countries where the rates of returns are higher.

The national savings is one of the tools in the formation of the capital, even in a closed economy, the national savings is very important in investment. So, we can see that the savings equals with the investment. But, in the open economy the investment is not only obtained from the national savings, it is also can be obtained from the abroad because of the assumption in an open economy is the international capital flows, and then there is a lending and borrowing activities between domestic residents with foreign residents.

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There are two comparisons between closed and open economy about investment and saving. To show the relationship among these variables, savings can cover the investment in a closed economy. It will be different in the open economy because the savings and investment may move independently of each other. The interpretation from the puzzle has been a debated in around the world and the puzzle is still the puzzle.

This study proposed to find the relation between savings and investment in six of ASEAN countries, namely Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam by referring Feldstein and Horioka puzzle. Based on Obstfeld and Rogoff (2000), the coefficient of significantly falls further once they included countries outside the OECD or poor countries and we can investigate the effectiveness of this puzzle in Southeast Asia countries.

The rapid economic development and economic system that are competitive declare the name of the ASEAN countries. Investment and savings is one method to increase the economic growth in an economies of each countries. Investment and savings in one country may raise interesting issues which can be discussed and it contributes to future studies. With this study, we can find out the short run and long run relationship between investment and savings in ASEAN countries.

1.2   Background of Association of Southeast Asian Nations (ASEAN)

This study focuses on the situation of investment and savings on economics in ASEAN countries. ASEAN countries have ten countries, which are Malaysia, Indonesia, Philippines, Thailand, Brunei Darussalam, Singapore, Vietnam, Lao PDR, Myanmar and Cambodia. Due to the unavailability of the data, four countries (Brunei Darussalam, Cambodia, Lao PDR, and Myanmar) had been county excepted in this study.

As we know, ASEAN countries also the member of the Association of ASEAN Nations (ASEAN). ASEAN had been documented on 8 August 1967 in Bangkok, Thailand, with signing of the ASEAN Declaration. The founding fathers of ASEAN are Indonesia, Malaysia, Philippines, Singapore and Thailand. Then, Brunei joined on 7 January 1984, afterward Vietnam joined on 28 July 1995, Lao PDR and

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Myanmar joined on 23 July 1997, and the last is Cambodia that joined on 30 April 1999. Thus, there are making up what is today the ten Member States of ASEAN. Acknowledge as the Sub-Regional Ministerial Steering Committee (MSC).

There are objectives and purposes of ASEAN stated that to quicken the economic growth, social advancement and cultural growth in the area through joint effort in the tone of equality and partnership in order to fortify the creation of a flourishing and peaceful community of Southeast Asian countries. Second, ASEAN wanted to advance stability and regional peace through remaining respect for justice and the colony of law in the relationship among nations of the region and obedience to the rules of the United Nations Charter. Third, they promote active collaboration and mutual help on issues on mutual interest in the economics, scientific, cultural, technological, and social administrative areas.

Next, offer help to each other in the course of training and research installations in the educational, professional, expert and administrative regions is one of the objectives for the ASEAN. They also would like to join forces more effectively for improving the employment of their agriculture and industries, the expansion of their trade, including the study of the trouble of international commodity operate communications facilities and the improvement of their transportation and the raising of the living standards of their peoples and uphold of Southeast Asian studies. ASEAN holds greater collaborate with existing regional and international arrangements with similar motives and intentions, and investigate all avenues for even closer collaboration among themselves.

The ASEAN Vision 2020 to outward looking, living in peace, stability and prosperity, bonded together in a corporation in lively evolution and in a residential area of caring companies. At the 12th ASEAN Summit in January 2007, the Leaders affirmed their strong commitment to accelerate the formation of an ASEAN Community by 2015 and signed the Cebu Declaration on the Acceleration of the Establishment of an ASEAN Community by 2015.

Figure 1.1   Logo of ASEAN

1.3   Problem Statement

Due to globalization, countries around the world especially the developing countries potentially benefit from greater capital mobility following the integration among financial markets at the international level. As clearly mentioned by Wahid *et al.* (2010), an increased incorporation among the financial markets could improve the chances in the financial markets which in turn contributes towards business expansion and economic growth in particular countries. However, the developed countries have undertaken relatively more immense deregulation in their financial markets as compared to the developing countries. As a result, the developed countries may experience greater capital mobility than the developing countries. It is deemed important to deepen the understanding on the relationship in the long-run and short-run, as well as the causality between savings and investment, in particular for the emerging market economies in the Association of Southeast Asian Nations (ASEAN) region since these countries are in the phase of rapid economic

growth. For instance, Indonesia has recorded gross domestic product (GDP) growth of approximately 5.02 percent in 2014, Malaysia 6.0 percent, Philippines 6.13 percent, Singapore 2.92 percent, Thailand 0.87 percent, and Vietnam 5.98 percent. Thus, it is important to assess the relationship between savings and investment in the aforementioned ASEAN countries. This is important to support the validity of the Feldstein and Horioka (1980) puzzle, and thus to find out whether perfect capital mobility or imperfect capital mobility holds in these ASEAN countries.

1.4   Research Questions

There are two research questions that related with this paper as stated below:

i.   Is there any long-run relationship between the savings and investment in the ASEAN countries?

ii.   Is there any short-run relationship between the savings an investment in the ASEAN countries?

iii.   Is there a causal relationship between the domestic savings and investment in the ASEAN countries?

1.5   Objectives of the Study

The specific objectives of this study are stated as below:

i.   To investigate the long run relationship between the domestic savings and investment in the selected ASEAN countries, including Indonesia, Malaysia, Philippines, Singapore, Thailand, and Vietnam.

ii.   To investigate short run relationship between the domestic savings and investment in the selected ASEAN countries.

iii.   To investigate the causality between the domestic savings and investment in the selected ASEAN countries.

1.6   Significance of the Study

From the previous study, the literature review had prepared the significant contributions in understanding about the relationship between savings and investment. In this study, the important has stated as below:

i.   This study is the effort to add the literature by researching the total investment and gross domestic savings relationship.

ii.   This study will identify the relationship in the ASEAN countries, whether it is have short-run or long-run relationship.

iii.   This study will analyze pattern of the causality in the ASEAN countries whether there are bi-directional or unidirectional between the variables.

1.7   Scope of the Study

This study focuses on the relationship between savings and investment in ASEAN countries. ASEAN countries included ten countries which are Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Vietnam. Due to the unavailability of data, Brunei, Cambodia, Lao PDR and Myanmar county excepted in this study.

In this study, panel data were used. The data series covered the period between year 1980 to 2014, which reflecting the availability of data for all variables. Panel data of the savings and investment has been carried out in the following countries, which are Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam. There is some previous research on the relationship between savings and investment in other countries also included in this study.

1.8   Limitations of the Study

The data of some ASEAN countries are only available for short time spend. For example, in order to obtained a balanced data set from 1980 – 2014, this study only included six ASEAN countries, namely, Indonesia, Malaysia, Philippines, Thailand, Singapore and Vietnam.

1.9   Organization of the Study

In this study, the arrangement to make this study is very important. Firstly, we need to understand the title of this research to ensure the progress of this research going smoothly. Chapter 1, which are introduction, background of study, scope of study, problem statements, research objectives, limitation of study and last is the organization of study.

In chapter 2, which is the literature review. In the literature review, I will put the information from the previous research to differ the gaps with this study. In the review of literature, it is divided into two parts, the evidence that support the original findings, and the evidences that offended original findings of Feldstein-Horioka (1980) I have chosen the journals that should put in this study because it will make the progression of this research going smoothly.

In chapter 3 will discuss about the econometric techniques which are panel unit root test, panel cointegration test, cointegration regression (FMOLS and DOLS) test and panel Granger causality to test the relationship between savings and investment in ASEAN countries.

In chapter 4 will discuss the findings of the panel unit root test whether the data stationary or non-stationary, panel cointegration will be using to test whether the variables are cointegrated or not. Cointegration regression (FMOLS and DOLS) will find the correlation between the savings and investment. Lastly, in Chapter 5 will discuss about the recapitulation of study, discussion of findings, policy implications recommendation of study and conclusion.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter will discuss about the literature from the previous study that related with this study. This chapter also explained the theory and resulted that had been done by other researchers. This study will examine a degree of international capital mobility for five developing countries of Southeast Asia.

2.2   Trends of Savings and Investment in ASEAN Countries

In this section, it is a discussion about the variables in ASEAN countries which is important to understand the savings and investment. The sources of savings and investment are taken from International Monetary Funds (IMF). From the figures below, we can see the trend for investment and savings were negative because when investment increased, the savings would decrease and vice versa.

2.2.1 Indonesia

Indonesia total land area is 1,904,569 square km. The total population of Indonesia is 251,490,000 populations and the GDP was 5.02 percent. Indonesia is the largest region in ASEAN.

Savings and Investment in Indonesia

Figure 2.1   Savings and Investment in Indonesia

Figure 2.2 showed the savings and investment in Indonesia from year 1980 – 2014. The investment in Indonesia is higher than savings in 1980 and it increased until it achieved the high range of investment in 1989 with 12.87 percent. It started to decline in 1992 and the lower range of investment in 1999 due to the economy crisis with -32.24 percent. The investment showed the stability in 2012 until 2014 and the investment still higher than the savings in 2014.

Savings showed a big gaps with the investment from year 1980 until 1992 and the gaps between savings and investment became smaller in 1993 until 2014. Savings also has a crucial range due to the economy crisis during 1999 but still higher than the investment. The high range of the savings is 12.87 percent in 1989.

2.2.2 Malaysia

Malaysia has a total land area of 328, 550 square km. Malaysia has become the second highest of the GDP per capita, even Malaysia only have 30,034,000 and the GDP was 6.0 percent.
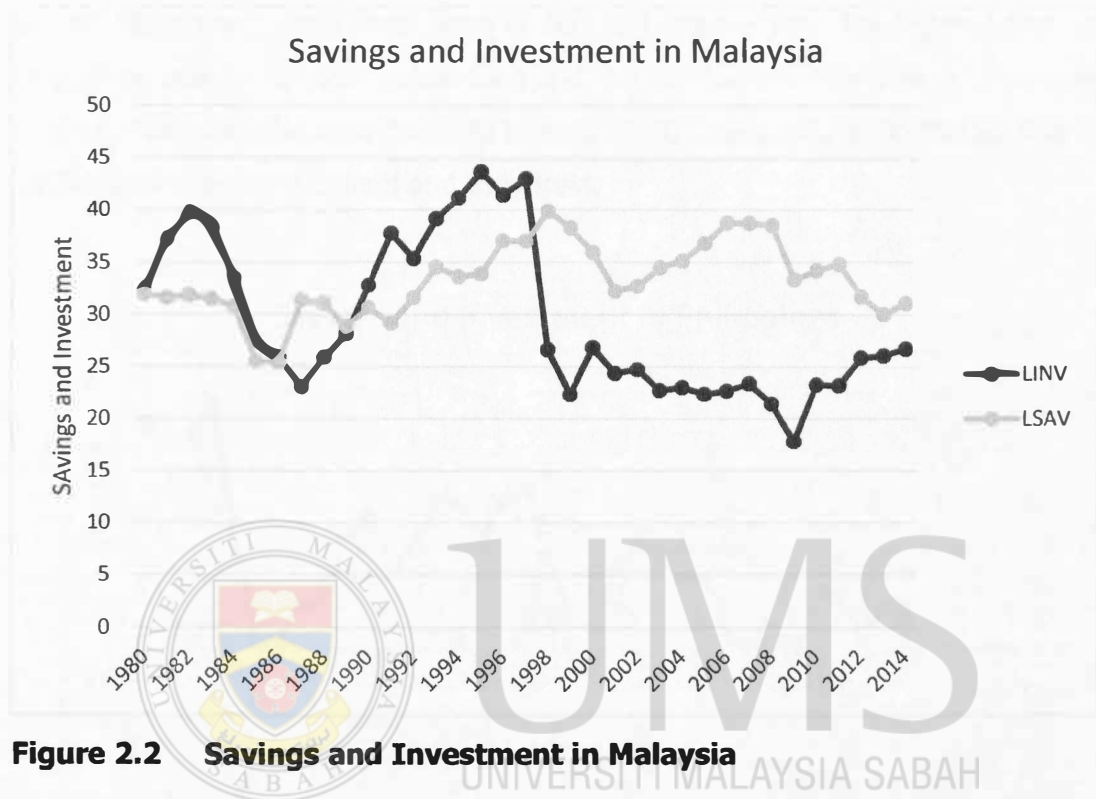

Figure 2.2   Savings and Investment in Malaysia

Figure 2.2 shows that savings and investment in Malaysia from year 1980 to 2014. For the year 1980 until 1982, the investment had increased by 22.68 percent and started the decreasing from year 1983 until 1987. The high range of the investment is $43.64 billion (5.9 percent) in 1995. Malaysia have two lower ranges for investment in year 1999 and 2009. It was happened due to the economy crisis in 1997 – 1998 and in 2009. In 2014, the investment of Malaysia increased by 2.47 percent than 2013.

Savings in Malaysia also has inconsistent trend because it will decrease when the investment increase and savings will increase when the investment decrease. It showed in 1980 until 1984 that savings did not increased when investment increased and declined. Savings has high range of the value in 1998

(7.64 percent) due to the economy crisis when the investment had declined, and also have two lower ranges in 1985 and 1986.

2.2.3 Philippines

In the Philippines, total land area is 653,520 square km. Total population of Philippines was 96,706,764 populations and in 1970 and the GDP was 6.13 percent in 2014. Philippines became the third highest of GDP per capita in Southeast Asia in 1970 but now below Thailand and Indonesia.
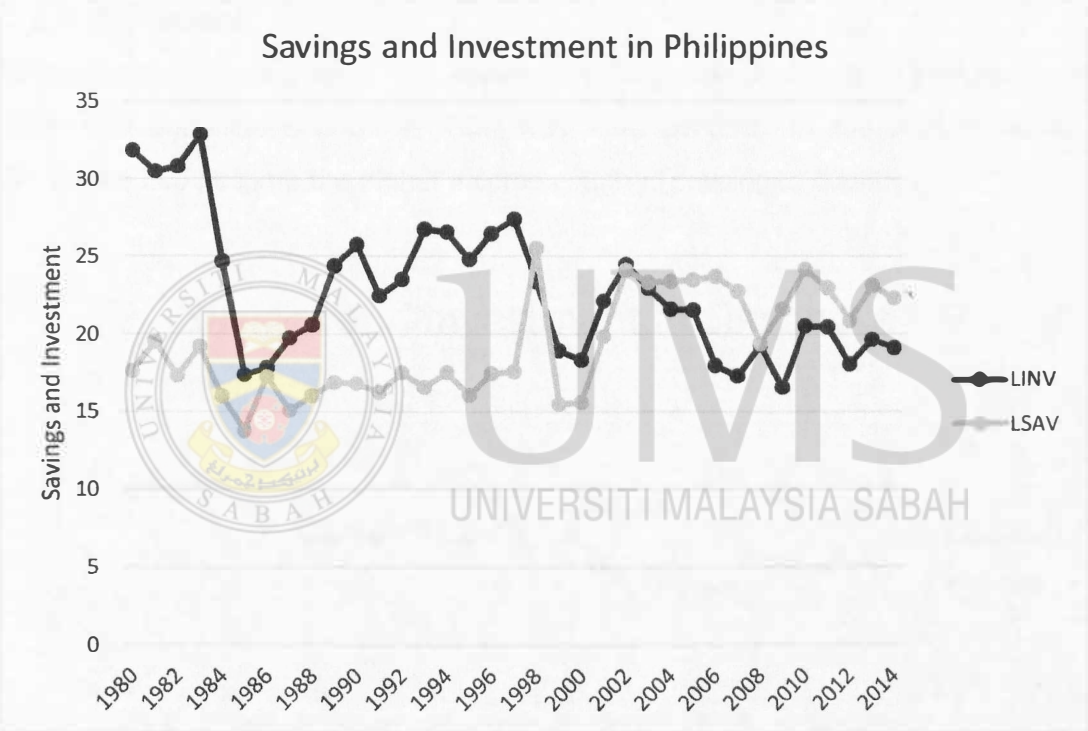

Figure 2.3   Savings and Investment in Philippines

Figure 2.3 shows that savings and investment in Philippines from year 1980 to 2014. The investment showed a big gap with the savings in 1980 when the investment presented $ 31.84 billion rather than savings, $ 17.651 billion. The investment in Philippines showed the declining from 1983 until 1985 with -46.69 percent. The high range of investment was 1983 with 6.58 percent. There were two lower ranges showed in the figure, in 1985 and 2009 with -29.47 percent and -

13.98 percent. The amount of investment in 2014 was lower than the 2013 with 19.136 (-2.68 percent).

For savings, it showed a big gap from year 1980 until 1997 and it moved along with the investment started in 1998. The higher ranger in savings is 44.91 percent in 1998 and the lower range is -13.97 percent in 1985. The savings started to surpass the investment in year 2002 until 2014. But, the amount of savings in 2014 is lower than 2013 with 22.302 (-3.56 percent).

2.2.4 Singapore

Singapore total land area is 724 square km. Singapore had a total population of 5,554,000 populations and the GDP was 2.92 percent. In the ASEAN region, Singapore had become the higher income country (developed country).
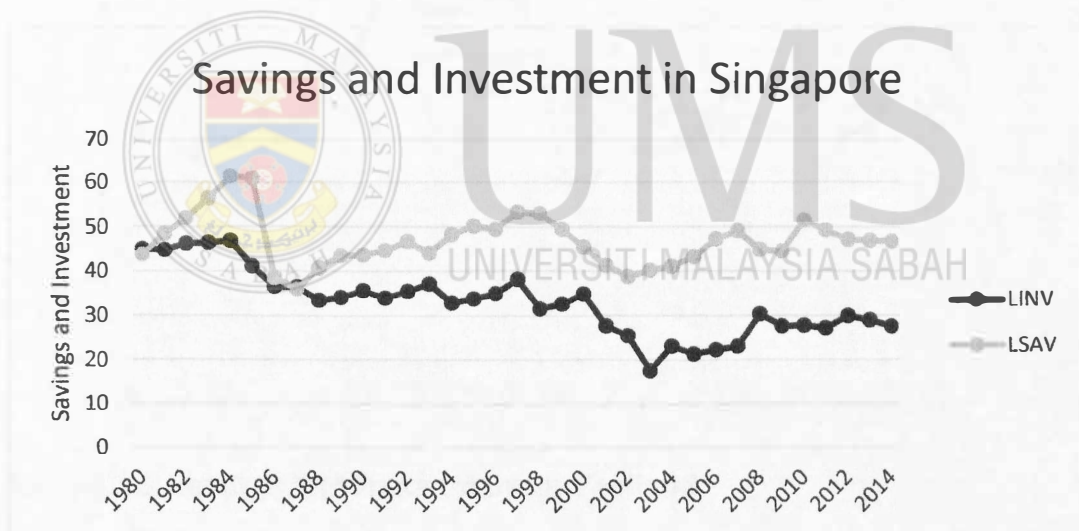

Figure 2.4   Savings and Investment in Singapore

Figure 2.4 showed a different movement of savings and investment in Singapore from year 1980 – 2014. As we can see from the figure, the investment was smaller than the savings except in 1980 and 1987. The higher range of the investment was 1.04 percent in 1984 and it started to decline in 1985. The lower range of the investment was -30.76 percent in 2003. The investment in 2014 becomes lower than 2012 and 2013.

Savings in figure 2.4 was different from the developing countries in other ASEAN region when the savings in Singapore was higher than the investment. Savings higher range was $ 61.365 billion (8.8 percent) in 1984. However, in 1986 the savings declined with -36.70 percent. The amount of savings was still higher in 2014 compared to the amount of investment ($ 46.728 billion for savings and $ 27.638 billion for investment)

2.2.5 Thailand

Thailand has a total land area of 510,890 square km. The total population of Thailand was 66,785,001 populations and the GDP was 0.87 percent in 2014.
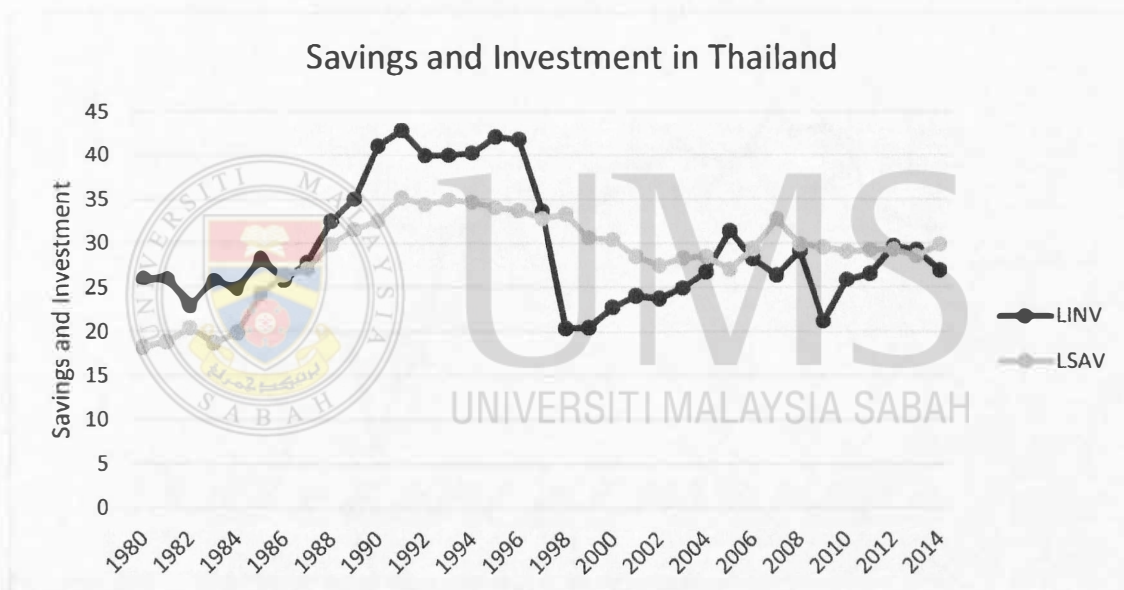

Figure 2.5 Savings and Investment in Thailand

Figure 2.5 shows that savings and investment in Thailand from year 1980 to 2014. In 1980 showed that the investment was higher than the savings. The investment started to increase from year 1986. The higher range in the investment was $ 42.841 billion (4.31 percent) in 1991. However, the amount of investment fell in 1998 due to the economy crisis with -39.26 percent from 1997 to 1998. The investment have two lower ranges in 1998 and 2009 with $ 20.447 billion and $ 21.241 billion.