The Effect of Fiscal and Monetary Policies, Trade Openness and Balance of Payment on the Total Output in Malaysia

by

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A thesis submitted in fulfillment of the requirements for the degree of Doctor of Philosophy

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UNIVERSITI MALAYSIA PERLIS
2018

ACKNOWLEDGMENT

Bismillahirrahmanirrahim…This thesis, in one way or another, is a reflection and translation of prayers, doa, love, cares, sacrifices, inspiration, moral support, by most valued assets blessed by Allah Almighty. First of all, the acknowledgment of God's assistance in my work is necessary. It is first of all an important testimony of His grace in my life. I am extremely thankful to the almighty God, because His infinite mercy. Alhamdulillah, praises to Allah swt, who has been hearing and answering my prayers, and granting me with strengths and His blessings throughout my PhD journey.

I would like to extend my appreciation to University Baghdad (UB) for granted me the chance in complete my study PHD. I would also like to express my appreciation to school of Business Innovation and Technopreneurship that, University Malaysia Perlis (UNIMAP), in particularly, to Dean Dr.Tunku Salha Tunku Ahmad that made my study possible in Malaysia, (Alhamdulillah).

My special and humble dedication from the bottom of my heart to these special persons: Firstly, to my beloved parent, may Allah Almighty prolong his life with health and wellness and my mother, Allah grants her the forgiveness and mercy, Amen. (She was the one who encouraged me to complete my doctorate). May Allah give me the time and the power to recoup and repay to both of you. Secondly, Not I forgetting my dearest wife (Ruwaida Abdulkareem) who took over all my responsibilities to manage the family for the past five years when I was pursuing my study. I am give her all the respect and appreciation, and I pray to Allah to help me to be a faithful and loyal husband for the length of my life. I not forgetting my sons (Yousif &Younus) and my daughter (Melak).Thirdly, Also, To my brother, my sisters, nieces and nephews who had made so much sacrifices, support and encouragement to me throughout my life and they all along help me to look after my sons to support my study., no words could precisely express and describe how grateful I am to be associated with all of you. Fourthly, since the writing of the thesis in (February 2014 up to November 2018), I have received valuable Advices, comments, criticisms, and suggestions from a variety of persons. In particular, I wish to convey my gratitude to my supervisor Prof. Madya. Dr. Aminul Islam for his supervision and encouragement to support me throughout my

study. His support accompanied my whole research for PhD. So, the completion of this thesis is not possible without his guidance. I owe you a very big thank you sir. And Co-Supervisor Prof. Madya.Dr. Idris Bin Mohd Noor, thank you so much for your helpful supervision, guidance, time, and efforts. May Allah reward you with his blessings, ameen.

I will also like to express my profound gratitude to an erudite professor of economics, Professor Dr. Wan Ahmad Wan Omar. He oftentimes offered me expert advice in the Course of my research work. I say thank you sir. I am also indebted to Dr. Mohd Zukime Mat Junoh who contributed his quota to the success of this work, thank you sir. In addition, my appreciation also goes to Professor Madya Dr.Yoshifumi Harada and Dr .Tunku Salha Tunku Ahmad for all their kind encouragement and assistance.

Also, other valuable comments and suggestions given by professors and my colleagues have greatly improved this research. I would like to thank the following personalities: Professor Dr.Dileep Kumar M, Professor of research strategy and Professor.Dr.Rosli Mahmood.

Lastly, I want to express my deep gratitude to all staff of UniMAP, to my friends particularly Dr. Miftahu Idris from Nigeria and Dr. Mohammad Zahir Raihan from Bangladesh and any other person who assisted me in various ways.

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LIST OF ABBREVIATIONS

APEC	Asia Pacific Economic Cooperation
BNM	Bank Negara Malaysia
ECB	European Central Bank
EFC	Expansionary Fiscal Contraction
EMS	European Monetary System
EP	Exchange Policy
FC	Financial Crisis
FE	Fiscal Expansion
FP	Fiscal Policy
GDP	Gross Domestic Product
GNP	Gross National Product
IMF	International Monetary Fund
INF	Inflation
MC	Monetary Contraction:
MP	Monetary Policy
TOP	Trade Openness
NPLs	Non-Performing Loans
TO	Total Output
PDS	Private Debt Securities
RA	Reserve Accumulation
ROA	Return on Assets
ROE	Return on Equity

Kesan Dasar-Dasar Fiskal Dan Monetari, Keterbukaan Perdagangan dan Imbangan Pembayaran ke atas Jumlah Keluaran Di Malaysia.

ABSTRAK

Berikutan krisis kewangan 1997-98 dalam ekonomi Malaysia, penganalisis dasar dan penyelidik akademik mempersoalkan keberkesanan dasar fiskal dan dasar monetari dalam pengurusan krisis. Kajian literatur terdahulu belum lagi mencapai persetujuan mengenai dasar monetari dan dasar fiskal yang sesuai, terutamanya berkenaan dengan persoalan sama ada dasar monetari atau dasar fiskal lebih berkesan dalam menguruskan jumlah output dalam tempoh krisis kewangan. Kebanyakan kerangka teoretis komprehensif telah dipecahkan dan diuji di negara-negara maju. Kajian yang terhad telah dijalankan di negara-negara membangun. Memandangkan terdapat jurang dalam kajian literatur dan untuk membangunkan rangka kerja empirik yang mantap, kajian ini membentangkan keberkesanan dasar-dasar fiskal dan monetari, keterbukaan perdagangan dan imbangan pembayaran ke atas jumlah pengeluaran di Malaysia menggunakan data tahunan dari tahun 1985 hingga 2016. Dengan menggunakan model regresi berganda, kajian ini membahagikan model regresi kepada model fiskal, model monetari dan model perdagangan antarabangsa. Model fiskal telah menunjukkan semua pembolehubah fiskal adalah positif dan signifikan, dan lebih berkesan berbanding dasar monetari dan dasar perdagangan antarabangsa dalam menguruskan jumlah pengeluaran. Bagi model monetari dan model perdagangan antarabangsa, semua pembolehubah adalah positif dan signifikan kecuali imbangan pembayaran. Kesan krisis kewangan 1997-98 juga menunjukkan kesan positif dalam model fiskal tetapi kesan negatif ke atas jumlah output menggunakan model monetari, walaupun nilai-p adalah tidak signifikan dalam kedua-dua model. Dapatan keseluruhan menandakan bahawa dasar fiskal adalah lebih berkesan berbanding dengan dasar monetari dalam menggalakkan jumlah pengeluaran dalam tempoh kajian. Oleh itu, kerajaan harus memastikan pelaksanaan dasar fiskal yang sesuai untuk merealisasikan pertumbuhan output yang diingini dalam jangka masa yang panjang.

Kata kunci: dasar fiskal, dasar monetari, keterbukaan perdagangan, imbangan pembayaran, krisis kewangan, jumlah output, Malaysia.

The Effect of Fiscal and Monetary Policies, Trade Openness and Balance of Payment on the Total Output in Malaysia.

ABSTRACT

Following the 1997-98 financial crisis in Malaysian economy, policy analyst and academic researchers were questioning the effectiveness of fiscal and monetary policy in managing the crisis. The literature is yet to agree on the issue concerning the appropriate monetary and fiscal measures, particularly with respect to the question of whether or not monetary or fiscal policy tools are more effective in managing total output during a period of financial crisis. Majority of the comprehensive theoretical frameworks are fragmented and tested mostly in developed countries. Only limited number of studies were conducted in developing nations. In view of the existing gaps from the literature and to develop a solid empirical framework, this study examined the effectiveness of fiscal and monetary policies, trade openness and the balance of payment on the total output in Malaysia using annual data from 1985 to 2016. By employing the multiple regression model, the study divides the regression model into fiscal model, monetary model and international trade model. The fiscal model shows that all fiscal variables are positive and significant, and it is more effective than monetary policy and international trade policy in managing the total output. For the monetary model and the international trade model, all variables are positive and significant except balance of payment. The impact of 1997-98 financial crisis also revealed a positive impact in fiscal model but negative effect on total output using the monetary model, though the p-values remain insignificant in both models. The overall findings established that fiscal policy is more effective compared to monetary policy in encouraging the total output during the study period. Therefore, government should ensure proper implementation of fiscal programs in order to realize the desired output growth in the long-run.

Keywords: fiscal policy, monetary policy, trade openness, balance of payment, financial crisis, total output, Malaysia.

CHAPTER 1: INTRODUCTION

1.1 Introduction

The financial crisis is one of the most controversial issues in the literature regarding the optimal macroeconomic policy mix, that is, the optimal coordination between the efficiency of monetary and fiscal policies in managing the financial crisis (Gupta et al., 2007; Baldacci, 2009; Hutchison, 2010). This financial crisis is usually associated with total output. Accordingly, the manifestation of Asian financial crisis has further posed a question among the practitioners as for the effectiveness of monetary and fiscal policies in controlling the tempo of aggregate economic activities during the cyclical fluctuation (Fetai, 2013). Given the scholarly debates on the relevance or appropriateness of both monetary and fiscal measures, there is no agreement yet among the scholars on whether or not the monetary policy is more effective than the fiscal policy in controlling the cyclical fluctuations during the financial crisis (Li & Tang, 2010). Evidently, Fetai (2013) argued that the effectiveness of monetary and fiscal policies can be assess by including certain macroeconomic variables with the view to determining the total output during the financial crisis.

The remainder of this chapter is therefore categorized into various sections as follows: section 1.2 deals with general background of the study which further highlights the global scenarios on financial crisis; section 1.3 presents the problem statement and identifies numerous issues from the literature that need to be addressed; section 1.4 provides the research questions which are deduced from the problem statement; section 1.5 contains the research objectives; section 1.6 highlights the significance of this study to the current literature; section 1.7 provides the scope and boundary of this study;

section 1.8 deals with the definition of basic terms as used in the study; section 1.9 organizes the whole study into 5 chapters with the view to easing understanding.

1.2 Background of the Study

For more than twenty years prior to the global financial crisis, volatility in aggregate economic activities and inflation fell dramatically in most of the industrial world. The widespread and persistent nature of this phenomenon was termed "the great moderation". The most common explanations put forward for this include better monetary policy and structural changes in economic management (Bernanke, 2004; Blanchard & Simon, 2000; Summers, 2005). Various submissions postulated that, monetary policy elements play an effective role towards economic stabilization particularly the inflation level (Rafiq, 2013; Akanmi & Osinowo; 2013).

This consensus was cast aside in the wake of the recent global financial crisis, with countries around the world adopting unprecedented fiscal stimulus packages to mitigate the impacts of the crisis. This response hinged on the premise that the monetary policy transmission mechanism would be less effective in the current climate, with considerable deleveraging taking place. Although there was a sudden increase in short-term rate of money market, for example, overnight rate. The European Central Bank's (ECB) was the first Central bank to quickly react with the problems of unrestricted liquidity with overnight maturity with the rate of policy already decided previously. These are crucial problems for this study because it looked into the role played by central bank during the crisis and the enforcement requirement of their credit management role on other banks for the current time and in future.

However, the Malaysia's financial stability has gone through series of reform as an effort to strengthen its financial system's flexibility for overcoming the emerging shocks and risks. Malaysia is also reliant on broad strategies, identifying the numerous policies for tool that may be required for multitude objectives and situations. In relation to this, Manaf, Markom, Ali, Merican and Mohamad (2014) mentioned the use of the methods of macro prudential over the last few decades for the identification of the risks in certain economic sectors and financial segments, allowing monetary policy to concentrate on stabilizing prices.

Since its independence, Malaysia has achieved rapid economic growth and significant poverty reduction, while keeping a relatively successful record of curbing inflation in comparison to other developing countries. The fiscal and monetary policy play the major roles in guiding investment and spending behavior to meet development and stabilization goals in both the public and private sectors (She, 2015). Since its establishment, the Bank Negara Malaysia (BNM) has served as the most important monetary policy-making body in Malaysia. Governed by a board of directors, BNM is tasked with multiple mandates, including maintaining price stability, sustainable economic growth and financial stability. In recent years, BNM has increasingly emphasized balancing risks to growth and inflation whenever a policy decision is made (Zeti, 2009).

It has been a challenge to explain the substantial (real) costs associated with crises. As documented, there are various theories regarding the channels by which different types of crises affect the real economy. There also exists many descriptions of the empirical patterns around crises episodes. Inflation has always been an important

issue for the policy-makers as it creates uncertain situation in the economy that may badly affect economic growth. Therefore, high and stable economic growth in addition with low inflation is the main objective of macroeconomic policies. Accordingly, strict monetary policy with fiscal consolidation appears to have contributed to low price levels. The concern with inflation has not only to balance whole macroeconomic situation, but also from the fact that increase in inflation rates hurts the poor severely as their consumption level significantly decreases (Munir & Kiani, 2011).

The decrease in consumption level due to higher inflation rate maybe associated with the import and export (trade) policies of the economy. The trade openness is defined as a "phenomenon of sharp economic integration between countries capture through trade liberalization, investment and capital flows, as well as technological changes. Trade Openness association with falling prices is the most popular propositions found in international trade and there has been unique turn in favor of higher economic integration of world. In addition, openness suggests the economic benefit from international trade, international capital transactions, and the international exchange of knowledge and information. The lower the hurdles to international trade transactions the higher level of integration and benefits (Agarwal & Narayanan, 2003).

However, financial crisis and output are usually attributed to one another. Following the 1997-1998 crisis, various practitioners and scholars were questioning the effectiveness of monetary and fiscal policy during the crisis itself. Scholars have yet to agree on the issue regarding the appropriate monetary, fiscal as well as the international trade policy measures, particularly with respect to the question of whether or not monetary or fiscal policies are more effective tool in dealing with the financial crisis.

Understanding the factors that determine the impacts of monetary and fiscal policies, trade openness and the balance of payment in financial crisis within the period of 1985 to 2016 is crucial since instrumental theoretical perspective can be derived from it. Such knowledge leads to the creation of effective and more meaningful services in the context of monetary and fiscal policies in financial crisis. This is attainable via an expansion according to a number of ways for assessing the effect of the monetary policy and fiscal policy on the country's economy. This study contribute to the literature on this subject via the introduction of a new autonomous/independent theoretical framework that could generate justification towards realizing the effect of fiscal and monetary policies, trade openness and balance of payment in Malaysia. It can thus be said that this study brings to the table a comprehensive theoretical framework focusing on the antecedents factors of the effects of monetary and fiscal policies, trade openness and the balance of payment in Malaysia spanning the period of 1985 to 2016.

1.3 Problem Statement

Malaysia has experienced international crisis financially on both its national and corporate balance sheet. There have been numerous signals for financial crisis and yet the country has failed to prepare itself for the inevitable rectification. The re-pricing risk had dramatically occurred and it was a lot more than anticipated. The nature of the crisis is complex and this generates huge risks towards financial stability (Taylor, 2013; Singh & Singh, 2016).

During the middle of 1997, the turmoil that has rocked Asian foreign-exchange and equity markets since June 1997 and that has spread far afield is the third major currency crisis of the 1990s. Its two predecessors were the crisis in the European

Monetary System (EMS) of 1992-93 and the Mexican peso crisis of 1994-95. As shown in Table 1.1 and Table 1.2, currency and equity markets in emerging Asia recorded huge falls-on the order of 30 to 50 percent-in the second half of 1997. Developments during the first four months of 1998 have been mixed: on the positive side, there have been some rebounds in exchange rates in Thailand and South Korea and in equity prices in the Philippines; in the negative column, the downward slide in the Indonesian rupiah has accelerated, and even where currency and equity prices have rebounded, the cumulative decline over the crisis period as a whole remains very large. Moreover, forecasts of 1998 economic growth in the region-which stood in the 6 to 8 percent neighborhood prior to the crisis-have been sharply marked down since then.' Thailand, Indonesia, and South Korea are now expected to suffer recessions this year, and growth in Malaysia and the Philippines is likely to be only about a third of what was anticipated prior to the crisis. Excluding China, growth in emerging Asia is now expected to be only marginally positive (1 to 2 percent) this year (Ngah-Kiing Lim, Das & Das, 2009).

In the literature, a number of studies had examined the effects of monetary and fiscal policy on total output during the financial crisis. Nearly, majority of such studies mentioned fiscal policy being more effective as opposed to monetary policy during the financial crisis, hence, fiscal expansion can decrease total output (International Monetary Fund report, 2008a; 2008b). With respect to monetary policy, the report demonstrates the ability of countercyclical monetary policy in supporting the shortening of economic recession. Somehow, the crisis limits its efficiency. The effect of fiscal policy on real output during the financial crisis was investigated by Baldacci et al. (2009) and the authors reported the ability of government consumption in shortening the duration of the financial crisis. The authors further mentioned the greater effectiveness of such measure as opposed to policy that supports public investment or tax cuts.

Meanwhile, Hutchison et al. (2010) who studied the impact of monetary and fiscal policy during the sudden-stop balance of payments crisis in developing nations reported the linkage of fiscal expansion with smaller total output following a sudden stop while monetary expansion did not appear to demonstrate noticeable effect. This has led the authors to suggest the coordination of macroeconomic policy mix by discretionary fiscal expansion using a neutral monetary policy during the financial crisis.

More so, empirical evidence on the coexistence of the banking and currency crises is rather small. Further, crises of banking and currency have not been analyzed simultaneously. Kaminsky and Reihnart (1999) for instance, was the first to present evidence on banking and currency crises. As stated by the authors, many global financial crises were caused by currency devaluation which consequently cause the banking system to collapse (during 1980's and 1990's). The notion of crises in this study was referred to the episodes of banking crises followed by a currency crisis within two years. On the other hand, banking and currency crises are defined at the same time in this study; if the banking crisis occur in year (T), it is combined with currency crises over the period (t-3, t+3).

Further evidence from Table 1.1 presents the frequency of banking crisis, currency crisis and the coexistence of both crises. As indicated by the literature, there were no crises in 1970. Then, in 1980, the frequency of both crises was reported at 2.3 on average per year. The frequency increased to 5.5 per year from 1990 to 2000. It is probable that the increase of both crises, (banking crisis and currencies crisis) was caused by financial liberalization (Kaminsky & Reinhart, 1999). Also, both crises are bigger than single crisis demonstrating that banking crisis can cause currency crisis or

will happen following the currency crisis. As such, it is important that policy makers consider both crises in as one rather than separately.

Table 1.1: Frequency of Banking and Currency Crises

	1970-2010		1970-1979		1980-1989		1990-2000		2000-2008	
	Total	**Average**	**Total**	**Average**	**Total**	**Average**	**Total**	**Average**	**Total**	**Average**
Banking Crises	144	3.7	4	0.4	38	3.8	74	7.4	28	3.1
Join Crises Episodes	83	2.1	0	0	23	2.3	55	5.5	5	0.5
Currency Crises	207	5.3	25	2.5	72	7.2	92	9.2	18	2

Source: Fetai (2013)

Total output linked with financial crisis are measurable using several methods. In this study, data for total output are constructed according to the technique by Laeven and Valencia (2008; 2010). The sudden changes in level, degree and direction of foreign capital through the period of Asian crisis can simply be measured by the statistical evidence presented in Table 1.2.

Table 1. 2: Net Private Capital Flows in Five Asian Economies (US $ billion)

Years	1996	1997	1998
Private Flows (net)	93.1	-12.1	-9.4
Non debt flows	19.1	-4.5	7.9
• Foreign direct investment	7.0	7.2	9.8
• Portfolio equity investment	12.1	-11.6	-1.9
Debt flows	74.0	-7.6	-17.3
• Banks	55.5	-21.3	-14.1
• Non-Bank	18.4	13.7	-3.2

Source: IMF (1995). Capital flows to emerging market economies, January 1999.
*Include Indonesia, Singapore, Malaysia, Thailand, and Philippines.

Table 1.2 leads to the hypothesis that in a small open economy like Malaysia, the flight of short-term capital during the 1997-1998 crisis could have led to a sequence of events involving the selling of shares by foreigners in the stock market and taking the sale proceeds to the currency market for buying the US dollars to be taken out; the process leading to a down turn in both the markets. Though we could not get capital flows data for the relevant weeks to strengthen the argument, there is evidence supportive of the contention. The short-term capital account of the country recorded an extra-ordinary net outflow of funds – RM 11.3 billion in 1997 and 21.7 billion in 1998 (Bank Negara Report 1998, p.43). Probably bulk of this amount left the country during the sixty-three weeks of the crisis period.

The Malaysian economy has largely been on a sound footing since independence. It had enjoyed high growth, full employment, and low inflation rates for about a decade before it was taken over by the 1997-98 financial crisis. Initially, many economists and financial institutions including the IMF blamed the turmoil on the weak macroeconomic fundamentals of the countries in the region. Informed opinion did change about Malaysia later, but many at home and abroad continued to maintain the earlier position (Bank Negara Malaysia, 1999).

Prior to the crisis, Malaysian economy was a flourishing one in real terms. It grew at an average rate of 8.7% during 1990-97 (Borensztien, Gelos & Gaston, 2000). The rates of inflation and unemployment remained low. Domestic savings were around 40% of the GNP for the years 1995-97; investment rates were even higher (Das & Dilip, 1999). Though the balance of payments was in deficit during the period, it was a small fraction of the GNP, and was amply covered by the foreign currency reserves with the central bank. Presumably, the only weakness of the economy during the years was the

financing of long-term capital-intensive projects by the short-duration capital inflows. The change in the nature of projects undertaken led to a continual rise in the capital output ratios (Dornbusch, 2001). But the rise could not necessarily be taken as evidence of inefficient allocation of resources or wasteful expenditure. Perhaps, current prosperity was being extended to future generations (Fetai, 2013).

Available information and other supporting evidence in Table 1.3 highlights the loss of output during the episodes of financial crises between 1990 and 2000. As can be referred from the Table 1.3, there appears to be more join banking and currency crises as opposed to banking crises. In 1990, the amount of join crises was twice that of banking crises.

Table 1. 3: Output loss during the banking and currency crises

	1970	1980	1990	2000
Banking Crises	-15%	-32%	18%	-36%
Crises Episodes	0	-38%	-39%	-47%

Source: Fetai (2013)

Also, that majority of comprehensive theoretical frameworks are fragmented. Somehow, these frameworks have been tested in developed countries. Only very few studies were conducted in developing nations (Tng & Kwek, 2015; Çekrezi, Shanini, Saadaoui, & Mekkaoui, 2015; Dizioli, Guajardo, Klyuev, Mano, & Raissi, 2016). The framework also contributes in looking into the effects of fiscal, monetary and international trade polies variables on the total output during financial crisis. Majority of past works employed usage models that are yet to be comprehensively tested in

developing countries, while the reported results were inconsistent (Hwa Raghavan & Huey, 2017; Dahalan, Abdullah & Umar, 2016).

It should also be acknowledged that developing countries can still differ from one another in terms of their cultural, economic, political and demographic attributes. Scholarly works on the role of fiscal and monetary policies in the Great Recession are still ongoing. In relation to this, Alesina (2012), Oh and Reis (2012); Shoag (2013) mentioned the need for more theoretical and applied works focusing on the impacts of economic policy during financial crisis. Different approaches that can broaden the knowledge reservoir will also be valuable. More so, a dummy variable is introduced into the model to account or explained the impact of 1997-98 financial crisis on the total output in Malaysia. This is highly essential to this current study given the lack of attention from previous literature to explore this research domain. Not only that the 1997-98 financial crisis has affected the emerging and developing nations, but grossly undermine the activities of both private and public sector thereby leading to economic fluctuations.

Therefore, it can be deduced that the financial crisis is among the most controversial issue documented in the optimal macroeconomic policy mix literature; specifically, in the topic of optimal coordination between monetary, fiscal, and international trade policies over the financial crisis. This has created a gap which will be bridged by this study through examining the effect of fiscal and monetary policies, trade openness and the balance of payment during the financial crisis period in Malaysia. This study will also determine the type of macroeconomic measure to be used in developing nations during the economic crisis as an effort of alleviating the economic recession.