UNIVERSITI PUTRA MALAYSIA

FINANCE- GROWTH NEXUS AND THE ROLE OF INSTITUTIONS IN MITIGATING PUSH AND PULL FACTORS

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By

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FINANCE- GROWTH NEXUS AND THE ROLE OF INSTITUTIONS IN MITIGATING PUSH AND PULL FACTORS

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July 2019

Chair: Prof. Dato' Ahmad Zubaidi Baharumshah, PhD
Faculty: Economics and Management

The rises of financial fragility and fluctuation of capital flows and increases of global uncertainty in last couple of decades motivate this study to examine the interrelationships between global and domestic uncertainty, financial and capital flow stability and economic growth. There are three specific objectives in this thesis. First, to examine the spillover effect of global uncertainty shocks on domestic financial performance and the finance-growth nexus. Second, to investigate the role of regimes of *push* and *pull* factors in explaining the gains and losses of capital flows on growth. Lastly, to examine the role of institutions in mitigating the risks of *push* and *pull* factors on economic growth.

Firstly, a reduction in significant positive effect of financial development on economic growth that is documented in recent studies of finance-growth literature motivate this present study to examine driven factors of global uncertainty in distorting financial development and hence explaining the reduction of financial performance on economic growth. By employing panel vector autoregressive (Panel VAR) of a sample of 86 countries over the period 1990 to 2015, our empirical results show that global uncertainty shock significantly causes a drop in financial development. Further, this study examines the indirect effect of global uncertainty on the finance-growth nexus by examining the relationship between financial development and economic growth based on regimes of global uncertainty. Our results demonstrate that financial development has a statistically significant positive effect on economic growth during low regime of global uncertainty, but has insignificant effect on economic growth especially during a period of high global uncertainty.

Secondly, the puzzle of gains and losses of financial openness is still an ongoing debate until today. While most existing literature examine the direct effect of financial openness on growth, there are less attempts to investigate potential factors that drive and explained the puzzle and mixed results of financial openness on growth. To fill the gap, for our second objective, this study examines the significant role of *push* and *pull* factors which consist of components such as global uncertainty and domestic risk inflation uncertainty in influencing the effects of financial openness on economic growth. Based on the panel threshold method, our results indicate that the impact of capital flows on economic growth varies, and relies on the regimes of *push* and *pull* factors. In other words, the puzzle of cost and benefits of financial openness can be explained by the uncertainty levels of global and domestic factors. Financial openness can bring benefits to economic growth when the global environment is at low uncertainty, with high liquidity and high interest rate as well as stable macroeconomic factors of low inflation uncertainty, and low public debt.

Lastly, the important role of institutions in mitigating the risk of *push* and *pull* factors on economic growth is examined in this study. The experience of the 2008 Global Financial Crisis has motivated many countries to scrutinize and find effective strategies to increase resilience towards the risks from both global and domestic macroeconomic factors to prevent them from the adverse effects of financial instability and growth collapse. Our empirical analyses suggest that good quality institutions especially political institutions are fundamental elements in helping countries (particularly the emerging/developing countries) to alleviate the severe spillover risks of global factors and increase sustainability of domestic factors for maintaining growth and reducing the cost of financial integration.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

HUBUNGAN ANTARA KEWANGAN DAN PERTUMBUHAN EKONOMI NEGARA, SERTA PERANAN INSTITUSI DALAM MENGURANGKAN FAKTOR PENOLAKAN DAN PENARIKAN

Oleh

RAFIQA BINTI MURDIPI

Julai 2019

Pengerusi: Prof. Dato' Ahmad Zubaidi Baharumshah, PhD
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Sejak kebelakangan ini, peningkatan kerapuhan institusi kewangan, ketidakstabilan aliran modal dan ketidaktentuan ekonomi dunia, telah mendorong kajian ini untuk meneliti tentang hubung kait antara ketidaktentuan ekonomi dunia dan dalam negara, kestabilan kewangan dan aliran modal serta pertumbuhan ekonomi. Secara terperinci, kajian ini mengandungi tiga objektif. Pertama, mengkaji kesan peralihan ketidaktentuan ekonomi dunia terhadap prestasi kewangan dalam negara dan hubungan antara kewangan dan pertumbuhan ekonomi. Kedua, menganalisis peranan faktor aturan penolakan (dunia) dan penarikan (domestik) dalam menerangkan keuntungan dan kerugian aliran modal terhadap pertumbuhan ekonomi. Akhir sekali, mengkaji peranan institusi dalam mengurangkan risiko faktor penolakan dan penarikan terhadap pertumbuhan ekonomi.

Pertama, kejatuhan ketara kesan positif kemajuan kewangan terhadap pertumbuhan ekonomi yang telah ditunjukkan dalam kajian empirik terkini, mendorong kajian ini untuk menganalisis faktor pendorong ketidaktentuan ekonomi dunia yang membantutkan perkembangan kewangan dan seterusnya menjadi penyebab kepada pengurangan kesan positif kemajuan kewangan terhadap pertumbuhan ekonomi. Dengan menggunakan kaedah Panel VAR daripada sampel 86 buah negara bermula tahun 1990 hingga 2015, keputusan kajian ini menunjukkan faktor ketidaktentuan ekonomi dunia adalah signifikan dalam menyebabkan penurunan kemajuan kewangan. Seterusnya, kajian ini menganalisis hubungan tidak langsung ketidaktentuan ekonomi dunia terhadap hubungan antara prestasi kewangan dalam negara dan pertumbuhan ekonomi. Hasil kajian ini menunjukkan bahawa kemajuan kewangan memberi kesan positif yang signifikan terhadap pertumbuhan ekonomi semasa ketidaktentuan

ekonomi dunia adalah rendah, tetapi kemajuan kewangan tidak memberi impak positif terhadap pertumbuhan ekonomi semasa ketidaktentuan ekonomi dunia adalah tinggi.

Kedua, teka-teki berkenaan keuntungan dan kerugian aliran modal masih menjadi isu yang hangat yang diperdebatkan sehingga hari ini. Walaupun telah banyak kajian yang dijalankan bagi mengkaji hubungan langsung implikasi keterbukaan kewangan terhadap pertumbuhan ekonomi, namun hanya segelintir pengkaji yang berusaha untuk menganalisis faktor-faktor yang berkemungkinan mendorong dan menerangkan teka-teki dan keputusan kajian empirik yang bercampur-campur tentang kesan keterbukaan kewangan terhadap pertumbuhan ekonomi. Demi mengisi kelompangan kajian lepas bagi objektif kedua, kajian ini meneliti peranan faktor penolakan dan penarikan yang mengandungi komponen ketidaktentuan ekonomi dunia dan ketidaktentuan risiko inflasi dalam negara yang mempengaruhi impak keterbukaan kewangan terhadap pertumbuhan ekonomi. Berdasarkan kaedah panel nilai ambang (nilai minimum), hasil kajian ini menunjukkan bahawa kesan aliran modal terhadap pertumbuhan ekonomi adalah berbeza bergantung kepada aturan faktor penolakan dan penarikan. Dengan kata lain, teka-teki mengenai kos dan manfaat keterbukaan kewangan bergantung kepada tahap ketidaktentuan faktor ekonomi dunia dan domestik. Keterbukaan kewangan akan memberi manfaat kepada pertumbuhan ekonomi apabila situasi ketidaktentuan ekonomi dunia adalah rendah, kecairan modal yang tinggi, kadar faedah yang tinggi, serta keadaan faktor makroekonomi dalam negara yang stabil seperti ketidaktentuan inflasi dan hutang yang rendah.

Akhir sekali, kajian ini meneliti kepentingan peranan institusi dalam mengurangkan risiko faktor penolakan dan penarikan terhadap pertumbuhan ekonomi. Pengalaman krisis kewangan dunia pada tahun 2008 telah mendorong banyak negara memikirkan secara mendalam berkaitan langkah-langkah yang efektif bagi meningkatkan daya tahan terhadap risiko faktor makroekonomi dunia dan domestik bagi mengelakkan kesan buruk akibat ketidakstabilan kewangan dan keruntuhan pertumbuhan ekonomi. Dapatan kajian ini menunjukkan bahawa institusi yang berkualiti terutamanya institusi politik menjadi perkara utama yang membantu negara mengurangkan kesan buruk risiko peralihan faktor dunia dan meningkatkan kestabilan faktor makroekonomi dalam negara bagi mengekalkan pertumbuhan ekonomi dan mengurangkan kos keterbukaan kewangan.

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This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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Declaration by Members of Supervisory Committee

This is to confirm that:

- the research conducted and the writing of this thesis was under our supervision;
- supervision responsibilities as stated in the Universiti Putra Malaysia (Graduate Studies) Rules 2003 (Revision 2012-2013) are adhered to.

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BANK ASSET	Deposit Money Bank to GDP (%)
CIPS	cross-section augmented IPS
CONFLICT	Internal Conflict
CREDIT	Private credit by deposit money banks and other financial institutions to GDP (%)
DEBT	debt-to-GDP
ELECOMP	Executive indices of electoral competitiveness
EME	Emerging market economies
EPU	Economic policy uncertainty
ETHNIC	Ethnic tension
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GMM	Generalized Method Moment
GOV	Government expenditure
HUMAN	Human Capital Index
ICRG	International Country Risk Guide
IMF	International Monetary Fund
INFLATION	Inflation rate
INVEST	Investment
IPS	Unit Root Im, Pessaran and Shin
IRF	Impulse response function
IRS	Interest rate spread
IV	Instrumental variable
LIABILITIES	Liquid liabilities to GDP (%)
LIQUIDITY	Global liquidity
POLITY	Institutional Improvement index
POP	Population growth
PR	Freedom House's political rights
PRS	Political Risk Services
PVAR	Panel Vector Autoregressive
R&D	Research and Development
REER	Real exchange rate
S-GMM	System Generalized Method Moment
SMCAP	Stock market capitalization to GDP (%)
SMTURNOVER	Stock market turnover ratio (%)
SMVALUE	Stock market total value traded to GDP (%)
SOSIO	Socioeconomic condition
TFP	Total Factor Productivity
TRADE	Trade openness
U.S.	the United States
UK	United Kingdom

VAR	Vector Autoregressive
VCPI	Inflation uncertainty
WDI	World Development Indicators
WGDP	Global GDP growth
WIR	World/global interest rate
2SLS	Two-Stage Least Squared

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CHAPTER 1

INTRODUCTION

1.1 Overview of the Study

The goal of this thesis is to explore the direct and indirect roles of uncertainty through domestic and international finance on economic growth. It brings novelty, innovations, and extension pertaining to the issue of uncertainty, directly or indirectly, which provide an exciting opportunity to advance knowledge and understanding regarding the issue of uncertainty. This study begins by examining the potentially significant effect of macroeconomic and/or global uncertainty indirectly through domestic and international finance on economic growth. The study ends with the role of institutional quality in curbing this potential deleterious effect of uncertainty shocks. In this thesis, it focuses on both global and macroeconomic uncertainties rather than microeconomic uncertainty. Both global and macroeconomic uncertainties have since become a central discussion nowadays in understanding its significant detrimental effects on an economy especially with regard to economic growth.

Jurado et al. (2015) stated that:

"*At a general level, uncertainty is typically defined as the conditional volatility of a disturbance that is unforecastable from the perspective of economic agents.*"

(Jurado et al., 2015, p. 1177).

Christiano et al. (2014) and Bloom (2014) assigned a single meaning when referring to risk and uncertainty, following which, this study adopted both the terms 'uncertainty' and 'risk' as being identical in meaning and concept. The terms 'uncertainty', 'volatility' and 'risk' are used interchangeably, and all of them are referred to as identical and having a single meaning. Traditionally, the concept of uncertainty has merely been related to uncertainty in the stock market. However, its concept is much broader in terms of macroeconomic and global uncertainty. .

There are several issues intend to address in this thesis. First, the global economic environment in recent years seemed more volatile and future outcome is unpredictable. At the same time, financial repression has widened as indicated by the rising number of bank bankruptcy and fragility. The financial market have become more unstable and slowing down. It has also sparked fear among policy makers since it is widely accepted that domestic financial system performance is an important factor for economic growth progress. Moreover, limited evidence of significant positive effect of financial sector

development on economic growth in recent years have motivated several studies to investigate the possible determinants that explain instability of the financial system, and subsequently on economic growth. It may be of relevance that the deteriorating financial performance and weaknesses in contribution of financial development on the growth process is attributed by increased global uncertainty shock in the last decades. Thus, for first objective, this thesis investigate the importance of driven global uncertainty shocks in distorting domestic financial development and hence explaining decreases in positive effect of financial sector development on growth.

Second, until now, there is still an ongoing debate regarding the gains and losses of financial openness on economic growth. The puzzle of the effects of financial openness on economic growth, which leads to an issue of relationship between financial openness and economic growth, still gains attention among researchers and policy makers until today. It is well documented in the literature that global (*push*) and country-specific (*pull*) factors are the factors of capital flows and/or volatility of capital flows[1]. However, none of the previous studies has highlighted the roles of *push* and *pull* factors in explaining gains and losses of financial openness on economic growth. The *push* and *pull* factors can be reconciled to the puzzle of gains and losses of capital flows on growth and mixed results of previous research on impact of financial integration on growth. Moreover, many countries especially the developing ones have been concerned with the potential negative effects on growth stemming from capital mobility. Such concerns consequently lead to the implementation of capital controls by several developing countries. However, restriction of capital flows can be inefficient if the impact of capital flows on growth are explained by the *pull* factors. Nevertheless, if the gains and losses of capital flows and economic growth are more associated with the *push* factors, it becomes more challenging to achieve the stability of capital flows across countries. Thus, by examining the association between these *push* and *pull* factors, and capital flows and growth linkages, the gains and losses of financial openness on economic growth can be scrutinize.

Lastly, it may be incomplete if only investigate the importance of *push* and *pull* factors directly and indirectly on growth, without recommending possible strategies in mitigating the risks of uncertainty. This study hypothesizes that improvement in institutional quality should be one of the key strategies in increasing the ability to absorb uncertainty or risk shocks in preventing the undesired collapse of the economy. To test conjecture, the thesis then proceed by examining the relationship between institutional quality, uncertainties and economic growth. Findings from the study may be helpful for the improvement or reform of institutional quality in minimizing potential negative effects of uncertainty on economic growth and financial systems.

[1]Global factors are typically called as *push* factors while the local factors are known as *pull* factors in the literature. *Push* factors consist of global uncertainty while the *pull* factors consist of inflation uncertainty and interest rate spread.

This thesis addresses three important issues: (i) the spillover effect of global uncertainty shocks on domestic financial system performance and economic growth. (ii) gains and loss of financial openness embedded in the changes of *push* and *pull* factors. (iii) an important element of improvement of institutional quality in strategy alleviating the potential destruction effect of risk from the vulnerability of *push* and *pull* factors. This thesis addresses a gap in the literature and advances the knowledge regarding global economic uncertainty and stability of the domestic financial system, financial liberalization and economic growth. Besides, the study is valuable to policymakers in formulating more effective strategies in response to future risks, hence, sustaining financial stability and economic growth.

1.2 Background of the Study

In the last couple of decades or so, the world experienced dramatically abrupt crises. A sudden spike of globally shocking events, such as the Asian financial crisis in 1997, global financial crisis (GFC), 2007-08, and most recently, the Greek sovereign debt crisis, 2010 and the Eurozone crisis, 2011, seems to emphasize that the global economy in the last couple of decades tend to be highly risky. These crises have caused widespread fear and concern worldwide, and gained attention from policy makers. One of the most remarkable crises is the Great Recession, 2007-08, which originated from the United States, and its impact transmitted worldwide, adversely affecting both developed and developing economies. The GFC is considered as the worst event since 1930 (World Economic Outlook, International Monetary Fund, 2008). Resulting from this crisis, the real gross domestic product (GDP) reported a sharp drop of 7.5% while the emerging market economies recorded 4% during the fourth quarter of 2008 (IMF, 2009). The spike in global economic uncertainty increases brought by the Great Recession is still at a high level until today.

As defined by Bacchetta & van Wincoop (2013) and Gourio, Siemer & Verdelhan (2013), global uncertainty is described as a global nature of panic resulting from worldwide news release. The news grasps attention to the extent of raising fear on a global scale.

> "*The global nature of the panic is a result of a news event that makes a particularly weak macro fundamental somewhere in the world (e.g. Greek sovereign debt in 2010) the sudden focal point of fear everywhere."* (Bacchetta & van Wincoop, 2013, p. 512)

Figures 1 and 2 below show the graphs of global uncertainty measured by proxies of implied volatility, VXO, and economic policy uncertainty (EPU) as suggested by Bloom (2009) and Baker, Bloom & Davis (2016) respectively. As shown in the graphs, uncertainty clearly ran widespread in the last two decades, rising sharply during recession and drops deeply during boom periods. The graphs show uncertainty is high during recession periods, such as during crisis events of the Gulf War I, and II, Asian crisis, GFC, Eurozone crisis and Greek sovereign debt crisis. Global uncertainty

shocks tend to be transmitted and spread across both developed and developing countries and hence affect their financial and macroeconomic performance.

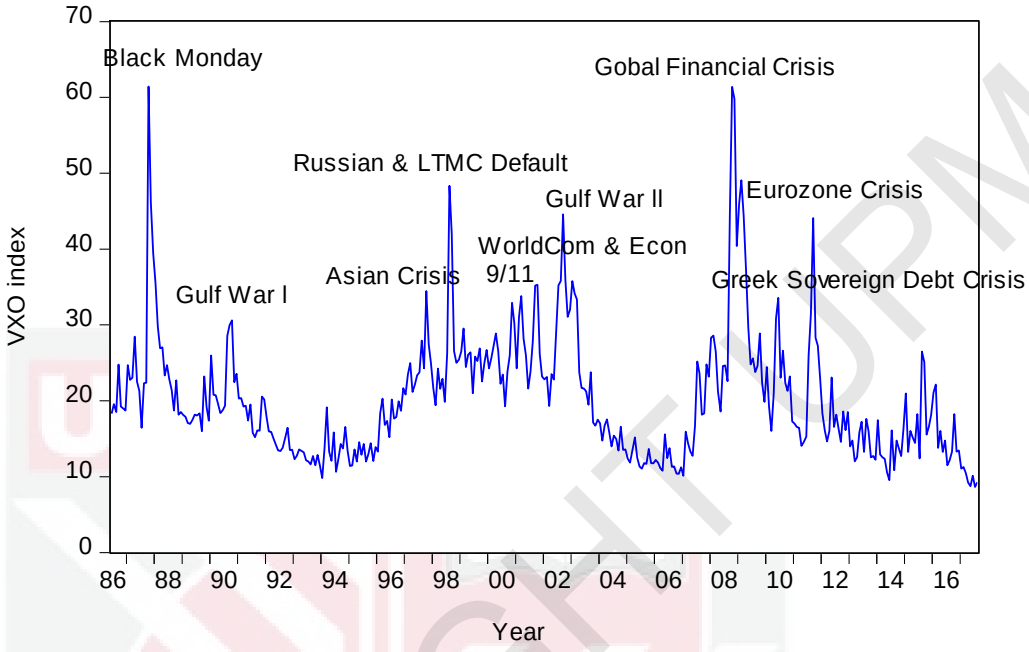

Figure 1.1: Monthly CBOE Index of % Implied Volatility
(Source : Chicago Board Options Exchange)

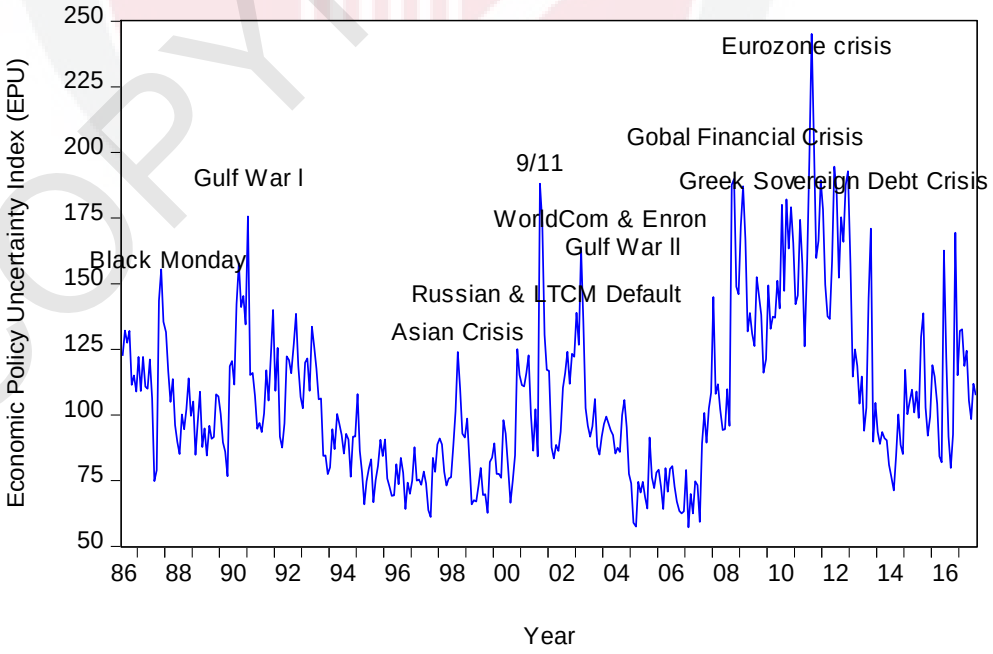

Figure 1.2: Monthly Economic Policy Uncertainty Index
(Source: http://www.policyuncertainty.com)

Besides, macroeconomic variables in many countries seem more vulnerable and volatile in recent years. Crises that frequently erupted in the last couple of decades are more uncertain resulting in unpredictable future macroeconomic conditions. The problem of inflation rate is higher in the developing countries than developed countries (World Economic Outlook, IMF 2008). This vulnerable macroeconomic condition subsequently raises macroeconomic uncertainty. Nowadays, developed countries also experience a significant drop in their macroeconomic stability. Therefore, it is not surprising that several recent studies paid attention to the impact of macroeconomic uncertainty on the macroeconomic performance and business cycle in developed countries. For instance, a higher inflation rate that is typically reported in developing countries prompts rises in inflation uncertainty as theorized by Friedman (1977). The inflation uncertainty then may cause the slow down on economic growth (Grier & Perry, 2000; Hartmann & Roestel, 2013; Zamin, Baharumshah, Law, & Habibullah, 2017; Zubaidi Baharumshah & Soon, 2014). This is also known as the Friedman-Ball hypothesis. Indeed, domestic uncertainty has an effect on investments, such as the expected returns on stock (Fama, 1976) and capital flows (Schmidt & Zwick, 2015). Higher domestic uncertainties, such as rising inflation, can result in reluctance on the part of foreign investors to invest in domestic capital, thereby contributing to real economic costs (Fountas, Karanasos, & Kim, 2002). Nevertheless, inflation uncertainty can lead to a positive effect on growth as the rising uncertainty will cause savings rates to increase, as argued by Dotsey & Sarte (2000).

A rise in uncertainty may be a significant factor to explain a slowdown in the economic performance and discouraging financial performance. Generally speaking, uncertainty will influence people's perspectives and confidence, which in turn, influence their behavior and decisions, thereby, affecting financial and economic performance (Bloom, 2014).

> "*Global activity has weakened and become more uneven, confidence has fallen sharply recently, and downside risks are growing*"
>
> (World Economic Outlook, International MonetaryFund, 2011, p. 1)

A simple example is the correlation between uncertainty and investment. During high uncertainty, investors tend to suspend their investment for security reasons and become reluctant to take any risk. They prefer to "wait-and see" rather than invest[2] when uncertainty is high since probability of their return is broadened and risk to loss is high (Bernanke, 1983; Cukierman, 1980). This reluctance during high uncertainty dampens private investment. This example clearly illustrates that uncertainty influences the people's perspectives, which in turn affect their decisions, hence, the economy.

[2] In other words, they prefer to postpone their investment.

Moreover, global and macroeconomic factors have been considered as important factors for the high volatility of capital flows in recent years. Global (common) and domestic factors, which are typically called *push* and *pull* factors, are increasingly becoming a topic of discussion in literature on international finance, especially in the aftermath of the GFC. The *push* factors comprise the components of global uncertainty, global interest rates and global liquidity, while the *pull* factors consist of components such as inflation uncertainty, the spread of interest rates, debt-to-GDP ratio, and exchange rates. Higher risk shocks stemming from global and domestic conditions may increase the volatility of capital flows. The increased volatility will magnify the effects on growth performance in the future. For instance, the global uncertainty of *push* factors may lead to an episode of a rising volume of capital flight, which will subsequently lead to the collapse of the economy. The same is true of the *pull* factors, such as inflation uncertainty, which may potentially increase capital flight, and hence, dampen economic growth. Since the *push* and *pull* factors potentially correlate with the volatility of capital flows, it is relevant to consider these *push* and *pull* factors as important variables in explaining the capital flows-economic growth nexus.

The implication of increases in uncertainty shocks on financial and macroeconomic performance is now a central topic of discussion worldwide among policy makers and economists. The rise in banking crisis and financial fragility has caused fear for policy makers in both developed and developing countries. Moreover, whether the high fluctuation and instability of capital flows in recent years motivate the gains and losses of financial openness on growth is still controversial until today. The rises of global uncertainty may severely effect the domestic financial system and raises vulnerability of capital flows, which in turn can harm economic growth. Realizing the more risky global and macroeconomic conditions, economists and policy makers tend to think more seriously about strategies for mitigating future severe risks from global factors while maintaining macroeconomic stability. They propose increasing absorptive shocks capacity to speed up recovery following global risk shocks[3]. In tandem with the uncertainty issue being one of the most current discussions among policy makers, economists and scholars in recent years, this study intends to examine the distinctive issues that address specific questions related to the global and macroeconomic uncertainties in an attempt to confer and expand understanding with regards to the uncertainty.

The Needs for Improvement of Institutional Quality for an Effective Risk Mitigation Policy

As global and macroeconomic conditions are getting more risky, economists and policy makers are considering more seriously the strategy for mitigating global risks in the future thereby maintaining macroeconomic stability. Effective hedging against the risk shocks stemming from global uncertainty and vulnerability of macroeconomic

[3]The issue of resilience and recovery is one of many important issues mentioned in the recent International Monetary Fund (IMF) and World Bank reports.

stability is crucial in reducing the cost to an economy especially its economic growth. A country that is successful in dealing and managing the global shocks and at the same time maintaining the stability of domestic factors receive more merit in enjoying the gains of financial development and capital flows, and directly and indirectly for growth enhancement. In contrast, inability of a country to deal with and manage the uncertainty increases the possibility for a country's growth downfall.

The GFC experience has motivated many countries to find a strategy in increasing resilience and absorptive capacity of global uncertainty shocks. At the same time, increase in vulnerability of domestic macroeconomic factors that may directly or indirectly harm financial and economic growth performance induce them to scrutinize an effective strategy in reducing the risk of changes in global factors and maintaining stability of domestic factors in alleviating from a decline in growth. Many countries – both developed and developing countries - have constructed and designed policies, both fiscal and monetary, in an attempt to alleviate the risk shocks from global factors and maintain stability of domestic factors to ensure growth sustainability. Overall, several countries have successfully reduce the harm from global risk and vulnerability of domestic factors in preventing destructive growth, while some others failed.

In a country, institutions play a central role that determines the structure of economic activity and performance (North, 1991). It is well accepted that institutional quality is an important determinant for economic growth[4]. According to this view, good institutional quality ensure the enforcement of property rights of investors, hence attracting investment and subsequently lead to growth acceleration. In contrast, a country with low institutional quality that have problems such as social and political instability will have a severe effect on economic growth since it will hinder foreign investors from investing in the country, hence leading to contraction in growth. Institutional legacy plays an important role in designing and implementing policies in a country. While every country has designed the best policies that they think is better for stability in economic performance, the degree of success of such policies is determined by the effectiveness and efficiency of the institutions in implementing them. Countries that have political and social problems (weak institutions) are more prone to failure in implementing effective policies to deal with changes in the global environment and maintain macroeconomic stability (Calderón & Fuentes, 2012; Duncan, 2014; Henisz, 2004; Rodrik, 1998, 1999). As a result, growth will decrease and the economy may collapse. For instance, the political problems and high levels of corruption in developing countries such as Latin America contribute to weaknesses in the implementation of the countercyclical policies of the countries, and hence, these policies are not effective in slowing down the economic growth (Caldero´n & Schmidt-hebbel, 2003). Weak political instability in emerging market economies is the factor behind countercyclical monetary policy in emerging market economies that contribute to large economic fluctuation in emerging market economies (Duncan, 2014). In

[4] For other theoretical views, see also Acemoglu et al. (2001), Hall & Jones (1999), Knack & Keefer (1995), and North (1991).

contrast, most of the OECD countries have implemented countercyclical policies in response to the GFC (Calderón, Duncan, & Schmidt-Hebbel, 2016).

Improvement and reform of institutional quality in a country may be the pivotal and basic strategy to increase ability of the country in reducing the potential harm from global risk and vulnerability of domestic factors especially on its growth performance. This is relevant since institutions will determine the effectiveness of policies in confronting the global environment and macroeconomic performance. Examining different institutional quality helps us to understand the different ability of a country to manage risks from global and domestic factors. The weaknesses of institutions are worsened by global risks, leading to increased vulnerability and macroeconomic volatility in a country. Indeed, good quality institutions are the main catalyst for more effective policies (e.g. monetary and fiscal) in maintaining macroeconomic stability and mitigating risk shocks (Acemoglu, Johnson, Robinson & Thaicharoen 2003; Calderón et al., 2016; Calderón & Fuentes, 2012; Duncan, 2014). When a country has high quality institutions, adjustment of policies in view of the risk shocks will be more efficient and effective. Thus, the country can successfully bail out the negative effects resulting from high uncertainty shocks. Conversely, when a country has weak institutions and political problems, the policy implementation for mitigating the risk shocks is often unsuccessful.

1.3 Problem Statements

1.3.1 Challenges in Achieving Stability and Development of Financial Sectors in Environment of Rises in Global Uncertainty and Its Consequence on Economic Growth

Many countries – both developed and developing – nowadays are engulfed with financial fragility especially in the aftermath of the GFC, 2007-08. The increase in bank crisis and widespread financial fragility are among the top policy agenda in many countries (Beck, 2012). Destabilized stock markets and bank fragility that frequently occurred in recent years have called upon attention to the implication of financial repression on an economy, especially its economic growth. Besides, the costs which burdened the financial institutions encourage policy makers and economists to identify the potential major factor in causing devastation to the stability of the financial system.

Financial systems are prone to changes in the global economic environment. Increases in global uncertainty in the last couple of decades have potential spillover effects on domestic financial and macroeconomic performance. Domestic financial systems nowadays have to confront with the systemic risk of global uncertainty and asymmetric information on probability of defaults from borrowers stemming from the rising uncertainty. In view of the rises in global uncertainty, policymakers have become more cautious to prevent financial institutions from collapse. The higher systemic risk due to high global uncertainty can distort the balance sheet of banks and upset the financial market performance. Following the global uncertainty, the probability of financial

institutions losing their capital and buffer stocks is high. If the financial intermediaries are unable to manage their losses properly and maintain stability in the financial system, macroeconomic uncertainty shocks would be severely detrimental to their performance. Consequently, this may lead to failure and collapse of the financial institutions.

The fragility and slowing down of the domestic financial system in recent years might be due to an increase in global uncertainty. The shock from a crisis event can lead to uncertainty in the global economic environment and this global uncertainty may significantly spillover through the integration of capital flows to affect domestic financial intermediaries and stock markets, and subsequently, slow down the economic growth. An increase in global uncertainty will affect the liquidity of major banks, and will speed up the inter-bank spillover of the negative effects of global uncertainty to affect domestic banks. Moreover, an increase in global uncertainty will cause asset prices to drop, and these lowered asset prices will consequently have an impact on domestic stock markets and the balance sheets of financial intermediaries. This example of the spillover effect of global uncertainty may have a significant affect on the domestic financial system. An increase in global uncertainty will slow down the high volatility of capital flows such as a leading episode of a 'sudden stop' or reduction in capital inflows that will consequently cause a drop in the capital of financial intermediaries and the high volatility of the stock market.

An increase in repression in the financial sector contributes to an increase of "financial friction"[5] to firms and households, resulting from the shrinking financial sector. Following rises of global uncertainty, financial institutions are reluctant to increase and lend loanable funds to firms and households. They tend to be more cautious in providing and adding the loanable funds to firms and households. The limited availability of credit in the financial market for firms and households consequently upset the firm's productivity and innovation, while households will tend to reduce their consumption. The fall in the firm's productivity and household consumptions subsequently suppresses economic growth. In practice, small-sized firms tend to suffer more severely due to credit restriction and may probably exit the industries when the firms can hardly sustain their businesses in the struggling economic situation.

Indeed, several recent studies indicate a dampening of the positive effect of financial development on economic growth (Arcand, Berkes & Panizza 2012; Ductor & Grechyna, 2015; Law & Singh, 2014; Rousseau & Wachtel, 2011). The reduction of a significant positive effect of financial development on economic growth seems to have evidently intensified following the widespread financial repression in the last two decades. While there are several recent empirical studies on the direct effect of

[5] Financial friction refers to the limitation of obtaining credit facilities or external funds for the firms (see Bernanke, Gertler, & Gilchrist, 1996). This limitation represents a constraint for the firms to get additional funds for innovation and expansion of their businesses.

financial development on economic growth that documented the reduction in significant positive effect of financial development on economic growth, it is noteworthy to explore the potential major factor which explains the diminishing effect of financial development on economic growth.

1.3.2 Effect of Capital Flows in the Presence of Increasing Global Changes (Push) and Macroeconomic Condition (Pull) Factors

In terms of capital flows, the increased volatility of capital flows in the last couple of decades has caused fear and raised concern among policy makers worldwide. The episodes of a sharp decline in capital inflows or typically called a "sudden stop"[6], capital flight, reversal of capital, and short-term capital (Stiglitz, 1999) in recent years have increased, hence may harm economic growth. High volatility of capital flows are attributable to bankruptcy, contraction of credit, financial repression, balance of payment crisis, which consequently hamper economic growth (Baharumshah & Thanoon, 2006; Calvo, Izquierdo & Mejia 2004; Calvo, Izquierdo & Mejia, 2008; Calvo & Reinhart, 2000).

The issue of gains and losses of capital flows on growth remains a puzzle (Kose, Prasad & Terrones, 2009) despite ample literature on the impact of capital flows on economic growth. The mixed results in previous studies remain unresolved and inconclusive until today. Several studies have attempted to explain the different findings of the impact of capital flows on economic growth. A popular view that explains the different impacts of capital flows on economic growth is that heterogeneous institutional quality in the countries determines the gains and losses of capital flows on their economic growth (Kose, Prasad & Terrones, 2009; Rodrik & Subramanian, 2009; Slesman, Baharumshah & Wohar, 2015). According to this view, different levels of institutional quality of a country determine the absorptive capacity of the country for capital mobility, which subsequently determines the gains and losses of capital flows. However, institutional quality alone may not fully explain the differences of gains and losses of capital flows on the economic growth of a country.

According to Calvo, Leonardo & Reinhart (1993), capital inflows are also determined by external (*push*) factors – such as the capital inflows into Latin America, which is partly explained by the lower U.S. interest rate – and subsequently affects the economic growth. The global or *push* factors might be driven by a slowing down in capital flows and subsequently, will have a negative impact on economic growth. For instance, a high global uncertainty may intensify the volatility of capital flows, which will consequently exacerbate the negative impact on the economic growth. High global

[6] "Sudden stop" is a large drop in capital inflows (see Calvo, 1998; Calvo, Izquierdo & Mejia, 2008; Calvo & Reinhart, 2000).

liquidity, on the other hand, may reduce the potential unfavourable effect of the volatility of capital flows on economic growth. Similarly, low global interest rates may also lead to an episode of an extensive drop in foreign capital inflows, and this scarcity of capital will be detrimental, especially to developing countries. The same can be said of the factors that drive the domestic or *pull* factors. Inflows of domestic capital from foreign investors may be at a low level when countries have a high vulnerability towards *pull* factors. The slowing down in foreign capital inflows and domestic capital will consequently affect economic growth. In other words, the *push* and *pull* factors potentially influence the effects of the volatility of capital flows on economic growth.

The increased instability in the international financial markets and current account imbalances in recent years has prompted scholars to examine the factors determining the capital flows[7]. A vast literature has attempted to explain the relationship between *push* and *pull* factors, and capital flows[8]. Although the *push* and/or *pull* factors are recognized as determinants of capital flows or volatility of capital flows, the question of how large and significant these *push* and/or *pull* factors are in influencing the financial openness and economic growth link remain unaddressed. The literature on the *push* and *pull* factors only tend to focus on the relationship between the *push* and *pull* factors and capital flows, without considering the subsequent effect on economic growth. Generally speaking, the issue of gains and losses of capital flows on economic growth remains inconclusive. The *push* and *pull* factors could be a probable explanation of the divergence in the scholars view towards the inconclusive findings of the impact of capital flows on economic growth.

1.3.3 Strategy in Mitigating the Risk Shock from Global and Macroeconomic Factors on Economic Growth

Many countries nowadays are fearful and concerned about the negative effects of global risks on their economy. The frequent occurrence of crises in the last couple of decades have encouraged many countries to increase their absorptive capacity and resilience against global risks. It is noteworthy to highlight that both developed and developing countries are vulnerable to the negative effects of global uncertainty shocks since they are highly integrated. At the same time, they are also confronted with vulnerability of domestic factors, which directly or indirectly is detrimental to economic growth. Since these risk shocks of *push* and *pull* factors directly or indirectly affect economic growth, there is a need to find an effective strategy to increase the resilience and alleviate the changes and risk of global factors and stability of domestic macroeconomic factors in ensuring the sustainability of economic growth.

[7] Many argue that capital flows are more volatile which subsequently increase the negative effect on economic growth (Stiglitz,1999). These scholars tend to investigate the factors that significantly influence the capital flows.

[8] For example, Bacchetta & van Wincoop, 2013; Broto, Díaz-cassou, & Erce, 2011; Forbes & Warnock, 2012; Fratzscher, 2012; Neumann et al., 2009; Schmidt & Zwick, 2015).

Why have some countries been successful in mitigating and reducing the external or *push* factor shocks and in maintaining the stability of the *pull* factors, while others, especially developing countries, have failed in preventing destructive global shocks and stabilizing the domestic or *pull* factors? This question might be answered and explained in terms of the level of institutional quality of both the formal/political and informal/social institutions of a country. Political and social institutions be important driven factors in determining the effectiveness for the countries in mitigating the risk shock of global factors and reducing the vulnerability of domestic factors in preventing from growth collapse. High political instability and social problems in country high potentially contribute the failure of country in mitigating the global shocks and high vulnerability of domestic factors, which consequently contribute to destructive on economic development. High good political institutions quality such as stable in political system, high democracy and low internal conflict have high potentially for successful policies formulation.

Many countries have embarked into policy formulation to deal with internal and external risks. When a country fails to minimize an external risk shock, people tend to blame the policies. There may be other fundamental elements to explain policy failure in minimizing the risk shocks. Policies alone are not enough in ensuring the stability of economic performance in confronting with *push* and *pull* factors. Improving institutional quality in the country may be a fundamental component for effective implementation of policies in mitigating the shock from global factors and maintaining the stability of domestic factors for enhancing growth performance. Therefore, it is crucial to investigate empirically the role of institutional quality in mitigating the risk of *push* and *pull* factors for sustainability economic growth.

North (1991) suggested that institutions consist of both the formal and informal. The formal consists of rules such as laws and property rights, while the informal consists of such things as traditions and codes of conduct. The author argued that institutions shape the economy of a country as part of its growth process. The formal or political institutions relate to policy implementation. Countries which face instability in their political institutions for example Latin America high tendency of failure to implement effective policies in mitigating the risk from external factors and stablize the macroeconomic factors in their own countries. The developing countries are normally the ones that face instability and problems in their political institutions and typically find it harder to effectively increase their resilence towards external and internal macroeconomic factors and hence fail to enhance economic growth. The situation is the same for the informal or social institutions. Countries that have high social prolems such as war in their society increase the magnitude of negative effect of external risk to its economy (Rodrik, 1998, 1999) and this leads them to be more vulnerable towards domestic macroeconomic factors. Therefore, it is crucial to investigate empirically the role of institutional quality in mitigating the risk of *push* and *pull* factors for sustainability economic growth.

1.4 Objectives of the Study

1.4.1 General Objective

Generally, this thesis intends to explore and engage the issue of driven global uncertainty shocks in distorting both the domestic financial system and capital flows and hence on economic growth.

1.4.2 Specific Objectives

1) To examine the role of global uncertainty in affecting financial development and finance-growth nexus;

2) To examine the role of *push* and *pull* factors in influencing capital flows and the relationship with economic growth in an attempt to explain the controversial issue of gains and losses from financial openness on the economic growth; and

3) To examine the role of institutional quality in mitigating the risk of *push* and *pull* factors on economic growth.

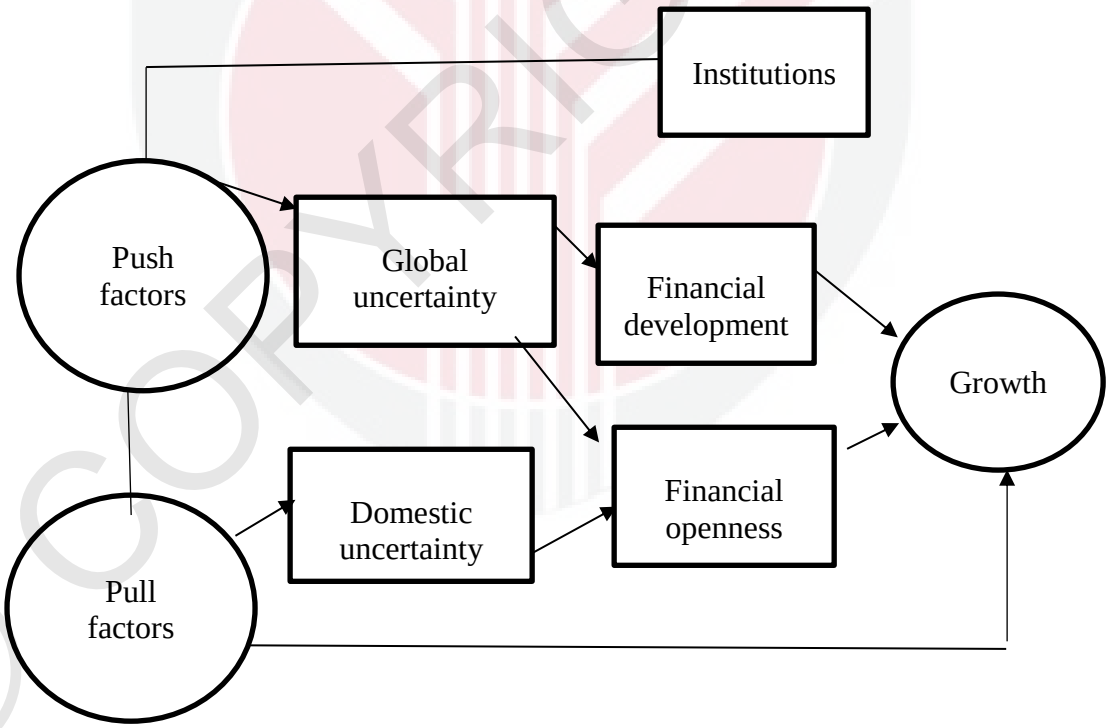

Figure 1.3: Framework of Study

The framework of this study showed the interlinkages between all the objectives of this thesis. Global or external factors, which are typically called *push* factors, and domestic factors, which are called *pull* factors in the literature, play an important role

in influencing capital integration across borders and consequently, have an impact on the domestic stability of financial systems and hence, on economic growth. One of the components of the *push* factors, namely global uncertainty, may play a significant role in the performance of domestic financial systems and hence, affect the finance-growth nexus. The increasing fragility of a domestic financial system and a reduction in the positive effects of the performance of the domestic financial system on economic growth might stem from the increasingly deleterious effects of rising global uncertainty shocks. Therefore, the first objective of this study was to examine the potential significant spillover effect of global uncertainty on the performance of the domestic financial system and hence, the finance-growth nexus. The aim of this study with regard to this objective was to examine the direct effects of the response of a domestic financial system to global uncertainty shocks and the indirect effects of global uncertainty on the relationship between financial development and growth.

The *push* and *pull* factors drive capital flows. Global factors, such as global interest rates and global uncertainty, may determine capital flows. A high degree of global uncertainty and low global interest rates can cause foreign capital flows to drop significantly. As a consequence, the cost of capital flows on economic growth will be higher. Likewise, the high vulnerability of *pull* factors can result in a drop in the attraction of foreign investors to invest, and this will have an effect on the valuable benefits of foreign capital inflows, and hence these will become the factors that drive capital flows. The gain and loss of capital flows and growth might be explained by the level of the *push* and *pull* factors. The second objective of this study was to examine the role of the *push* and *pull* factors in influencing and explaining the gain and loss of capital flows on economic growth.

Finally, yet just as importantly, the last objective of this study was to examine the roles of institutions in mitigating the risk of *push* and *pull* factors. The increasing risk of the *push* and *pull* factors directly or indirectly affect capital flows and economic growth. Therefore, the ability of countries to mitigate the risk of the *push* and *pull* factors, and to increase their resilience against the risk of the *push* or external and *pull* factors, which will potentially slow down the economic growth, will provide benefits in maintaining the stability of the economic growth of those countries. This study examined the hypothesis of the importance of the role of institutional quality in determining the ability of countries to mitigate the risk of global and domestic factors on growth performance.

The objectives of this study were unique from those of previous studies in that the stability of capital flows, domestic financial performance and economic growth were incorporated with global and domestic factors, especially global uncertainty and domestic uncertainty. This study of the interlinkages between the global economic environment factors, particularly of global uncertainty, that are significantly driving the volatility of capital flows, the performance of the domestic financial system and economic growth, will extend the knowledge with regard to the links between global and domestic factors, financial performance and economic growth. Indeed, with the

potential fundamental factors in place for developing a strategy to mitigate the global and domestic factors for stable growth, this study contributes to policy making and the literature regarding an effective strategy for maintaining stable economic growth.

Departing from previous studies, the bring innovation to the role of global uncertainty in triggering possibly lower financial development and future to financial development and growth relationship. There is a large number of studies exploring the linkages between uncertainty and real economic activities, however, there is a scarcity of literature that investigates the correlation of uncertainty and the financial system. Indeed, there is no study yet to be found which examines the significant role of spillover effects of global uncertainty to financial system development and hence economic growth linkages. Therefore, this study brings the novelty and contribute to the literature and at the same time, directly or indirectly provide an exciting opportunity to extend and advance knowledge regarding uncertainty, financial repression and economic growth. The thesis use relevant previous studies to explain and pinpoint argument and findings of the significant role of global uncertainty in distorting financial performance and future financial development and economic growth linkages.

1.5 Contributions of the Study

Maintaining the stability and development of the financial system and obtaining gains from financial openness for economic growth acceleration are among the top policy agenda in many countries – both developed and developing countries. However, in the last couple of decades many countries were confronted with challenges from risk of changes to the global environment that tend to be highly uncertain especially in the aftermath of the GFC. The rise of global economic uncertainty and the repercussions from crises that erupted in recent years have prompted increasing concern for policy makers of the destruction caused by spillover effects of global uncertainty on financial and macroeconomic performance. The severe effects that hit many countries worldwide resulting from the global uncertainty have brought the issue of global spillover effects particularly from global uncertainty shock as key discussions across the globe. This issue should be dissected in depth in an attempt to support policy makers in curbing future risks, increasing the resilience of countries during global uncertainty shock, and maintaining financial and economic stability.

By investigating the important effect of global factors such as global uncertainty in an economy and resolving many untapped questions of the driven factors of rises in instability of the domestic financial system performance and capital flows. This study provides an exciting opportunity to advance knowledge in the issue of reduction in gains of the financial system and capital flows on growth. Mitigating the negative effects of risk in the financial system and capital flows and preventing financial repression is undeniably a major concern of policy makers, and understanding the mechanism behind the deterioration of financial development is the first step in the direction of maintaining stabilization and development in both financial and growth

performance. By doing so will lead to more effective strategic planning in improving the resilience of countries during the global risks while maintaining both financial and economic stability. Therefore, findings in this research will not only contribute to the literature, but can also be the basis for policy to increase regulation in achieving stability for both macroeconomic and financial performance.

For first objective, this study offers some important insights into the literature of financial development and economic growth. The increases of financial fragility and decreases of the positive effect of financial development on economic growth that are shown in recent finance-growth nexus literature has caused increasing concern in many countries. This destructive effect on financial systems and widening of financial repression can cause a collapse in growth. Therefore, it is crucial to investigate the potential major driven factors that distort financial systems performance and hence cause decreases in merit of financial system development on economic growth acceleration. Departing from previous studies, the bring innovation to the role of global uncertainty in triggering possibly lower financial development and future to financial development and growth relationship. There is a large number of studies exploring the linkages between uncertainty and real economic activities (e.g Bachmann & Bayer, 2013; Baker et al., 2016; Bloom, Floetotto, Jaimovich, Saporta-Ekston & Terry, 2018; Leduc & Liu, 2016). However, there is a scarcity of literature that investigates the correlation of uncertainty and the financial system; and there is no study yet to be found which examines the significant role of spillover effects of global uncertainty to financial system development and hence economic growth linkages. Therefore, this study brings the novelty and contribute to the literature and at the same time, directly or indirectly provide an exciting opportunity to extend and advance knowledge regarding uncertainty, financial repression and economic growth.

The thesis use relevant previous studies to explain and pinpoint argument and findings of the significant role of global uncertainty in distorting financial performance and future financial development and economic growth linkages. Mitigating the negative effects of systemic risk in the financial system and preventing financial repression is undeniable a major concern of policy makers and understanding the mechanism behind the deterioration of financial development is the first step in the direction of maintaining stabilization and development of the financial system. Therefore, findings in this research not only contributes to the literature, but can be a basis for policy formulation to increase regulation to achieve macroeconomic and financial system stability.

Policy makers can reap advantages from this study as a basis in formulating strategies for alleviating and managing future risks. Given the significant negative spillover of global uncertainty shocks in dampening financial development, and reduction of the merits of financial systems on growth acceleration as in research findings in this study, policymakers have to face challenges in maintaining the stability and development of the domestic financial system since they are unable to control the global uncertainty shocks that affect the domestic financial system. Policy makers should implement

increase the effectiveness of policies in mitigating the global uncertainty, reduce capital control of capital inflows especially during increases global uncertainty to reduce contagion effect and hence can increase financial stability. For example, policy makers increases strategy in reducing contagion deleterious effect during high global uncertainty such as through macro-prudential, and managing flows of capital inflows and outflows in the country and improving institutional quality.

Next, in this study, it not only focuses on domestic financial systems performance, but also investigate the still on-going debate and controversy regarding the issue of gains and losses of financial openness especially in the aftermath of the GFC. Even though the gains and losses are not new, the increase in fluctuations of capital flows such as the episode of a sudden stop that increases the cost rather than benefits especially to developing countries may lead many scholars to re-examine the impact of financial openness on economic growth. Moreover, the mixed results of existing studies and mixed theoretical conclusions regarding the effect of financial openness on the issue of gains and losses of financial openness have persuaded major discussions in many countries around the world. Indeed, this issue of the effect of financial openness on economic growth is an important policy for policy makers to contemplate[9]. The increased destruction or volatility of capital flows in the last couple of decades has caused fear and raised concern among policy makers worldwide. Therefore, it is crucial to examine the factors that drive the impact of financial openness on growth. Moreover, this study does not intend to re-examine the direct effect of financial openness on growth, as it is abundant in existing literature. Instead, this study examines the indirect effect of the importance of *push* and *pull* factors in determining the impact of financial openness on economic growth, and hence may explain the puzzle of mixed results in gains and losses of financial openness of previous studies. hope to fill the gap in the capital flows and growth literature and extend the growing literature on the importance of driven *push* and *pull* factors on capital flows.

In addition, this study not only contribute to examining the potential destruction of changes and vulnerability of the *push* and *pull* factors directly and indirectly on economic growth, but at the same time we propose improvement in institutional quality as a vital effective strategy for increasing resilience towards risk of *push* and *pull* factors that can harm economic growth. We examine empirically the interrelationship among *push* and *pull* factors, institutions and economic growth. Many countries are scrutinizing a strategy for alleviating the potential destruction of global factors especially global uncertainty, and at the same time reduce vulnerability of macroeconomic factors on growth. Therefore, investigation of the role of institutions will be beneficial for policy makers to formulate a more effective strategy to manage in mitigating the risks, and increase the country's sustainability of economic growth during global and domestic risk shocks. Reforming institutional quality, increase external and internal risk management especially during high uncertainty can reduce

[9] One of the important decision is whether to open up the finance across borders or to impose restriction on capital flows. Since capital flows is one source of external funds and related with contagion risk, policy makers see this issue as vital.

potential detrimental effect of uncertainty on financial and economic performance and hence can enhance financial stability.

1.6 Organization of the Study

The rest of the thesis is as follows: Chapter 2 presents a literature review – both theorethical and empirical. In this chapter, it will look at the existing literature that relates with objectives, so that it can observe the gaps that we hope to fill up in this thesis to show the contribution, differences and novelty of this study with other existing previous studies.

Chapter 3 presents first objective regarding the importance of spillover global uncertainty shocks in distorting domestic financial development and hence explaining the decreases of financial development and economic growth that is shown in recent literature. Next, in Chapter 4, it presents objective two relating to the *push* and *pull* factors, capital flows and economic growth. In this chapter, it emphasized the important role of changes in global factors and domestic factors in determining the impact of financial openness on economic growth. The puzzle of gains and losses of financial openness on growth may be explained by the *push* and *pull* factors. For last objective, the role of institutions in mitigating the risk of the *push* and *pull* factors on economic growth is discussed in Chapter 5.

Last but not least, Chapter 6 provides a general conclusion, major finding and policy implication, and recommendation for future work. In this chapter, it summarizes objectives and empirical findings of all objectives and the implication for policy of findings. Recommendation potential future work on this subject should be useful and interesting to be explored for research.

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