

The Effect of the Exchange Policy (EX) on the Output Cost (OC) during Financial Crisis in Malaysia: From Management Perspective (1998-2014)

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Abstract

This paper examines the effects of exchange policy on the output cost during financial crisis in Malaysia. Scholars have yet to agree on the issue concerning the appropriate exchange measures, particularly with respect to the question of whether or not exchange policy is more effective tool in dealing with financial crisis. Majority of comprehensive theoretical frameworks are fragmented. Only very few studies were conducted in developing nations. The results of this research provide theoretical support for the extended model. Moreover, this work has added to the understanding of output cost during financial crisis in Malaysia theories research.

Keywords: Exchange Policy (EX), Output Cost (OC), Financial Crisis (FC)

1. Introduction

For more than twenty years prior to the global financial crisis, volatility in aggregate economic activity 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, structural changes in inventory management, and good luck (Bernanke, 2004; Blanchard and Simon, 2000; Summers, 2016). Agarwal and Narayanan (2003) estimated time series data from 1960 to 2007 on budget deficit (BD), GDP, trade openness (TO), exchange rate (ER) and inflation (CPI). The empirical findings show that there was significant inverse long run relation among prices and openness which confirmed the existence of Romer’s hypothesis in Pakistan.

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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. 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. 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 and Narayanan, 2003).

During the middle of 2007, 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. At the meeting of heads of state of the Asia Pacific Economic Cooperation (APEC) forum in Vancouver in November 1997, US President Bill Clinton first characterized the Asian crisis as "a few small glitches in the road"-a description that has given way to less rosy scenarios as evidence of the depth and breadth of the crisis has accumulated. As shown in tables 1 and 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 (as measured from the end of June, just before the floating of the Thai baht). 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).

Understanding the factors that determine the effectiveness of exchange policy in financial crisis with reference to Central Bank of Malaysia within the period from 2007 to 2014 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 exchange

policy in Financial Crisis. This is attainable via an expansion according to a number of ways for assessing the effect of the exchange policy on the country's economy. Somehow, considering that interest rate is not applicable within the context of developing countries, changes in discount rate and international reserves are used instead. This study contributes to the literature on this subject via the effectiveness of exchange policy, while decreasing output cost during financial crisis Malaysia (Bin Ibrahim, 2010). It can thus be said that this study brings to the table a comprehensive theoretical focusing on the antecedent's factors of the effectiveness of exchange policy in Financial Crisis with Reference To Central Bank of Malaysia in the Period of (1998-2014).

The financial crisis is among the most controversial issue documented in the optimal macroeconomic policy literature, specifically, in the topic of exchange policy over the financial crisis. This has created a gap which will be bridged by this study by looking into the effectiveness of fiscal policy during the financial crisis in developing nations.

2. Theoretical Background

2.1 Financial Crisis

The financial crisis usually has been associated with output loss or cost. The recent financial crisis in 2008 has again posed a question among the researchers as for the effectiveness of fiscal policy over the period of financial crisis. Regarding the question for appropriate fiscal measures, there is not yet consensus among the researchers whether or not fiscal policies are more effective tool to deal with financial crisis. To address this question, Fetai (2013) examine 83 financial crisis episodes in 66 developing and emerging countries following the methods used by Gupta et al. (2007), Hutchison, Noy & Wang (2010) and Li and Tang (2010). Fetai (2013) assess the effectiveness of fiscal policy and including controls macroeconomic variables in order to control various determinants of output cost during the financial crisis. For robustness check and endogeneity test Fetai (2013) employ GMM estimator.

There are several studies that investigate the effectiveness of exchange policy on output growth during the financial crisis. In the literature, most of the studies agree that fiscal policy is more effective during the financial crisis and therefore exchange expansion can reduce output loss or output cost (IMF report, 2008a & 2008b). An exchange-rate regime is the way an authority manages its currency in relation to other currencies and the foreign exchange market. It is closely related to monetary policy and the two are generally dependent on many of the same factors. The exchange rate of an economy affects aggregate demand through its effect on export and import prices, and policy makers may exploit this connection. Deliberately altering exchange rates to influence the macro-economic environment may be

regarded as a type of monetary policy. Changes in exchange rates initially work their way into an economy via their effect on prices (Céspedes, Chang & Velasco 2004).

Lane & Milesi-Ferretti (2012) show that the period before the crisis was characterized by an increase in current account imbalances, which has been reduced after the crisis (2008-2010). The authors also address the role of real exchange rates, domestic demand and domestic output in the external adjustment controlling for differences in exchange rate regimes. The results indicate that the adjustment for countries with current account deficit relies primarily on reducing the demand and not on expenditure switching policies. There is also evidence that changes in investment flows are relevant for the financial account adjustment based on official external assistance and liquidity provision by the monetary authority (European Central Bank) in order to allow private capital flows. Finally, the work also highlights that large output losses for countries with higher current account deficits underlines the risk of excessive deficits.

The financial crisis (both banking and currency crisis) is one of the most controversial issue in the literature regarding optimal macroeconomic exchange policy over the financial crisis. I attempted to fill this gap in the literature by the investigation of the effectiveness of exchange policy during the financial crisis in the developing and emerging countries and what kind of macroeconomics measure should be used in the developing and emerging countries during the economic crisis in order to alleviate economic recession (Uhlig, 2002).

2.2 Fiscal Policy in Malaysia

The 1997-98 Asian financial crises originating from Thailand struck one country after another in almost no time, Malaysia being among the later victims. The literature has since been full of books and articles on the subject (Hasan, 2002). However, much has not been written exclusively about the Malaysian experience. The position of the country has largely been examined in comparative discussions on the subject. Such discussions, though useful, often tend to generalize the analysis beyond reasonable limits. Economic structures, social environment, political settings, and international relations of the countries that were caught in the turmoil have been much diverse to allow meaningful comparisons between them on the causes of the crisis, their response to it, or the results they obtained (Hasan, 2002).

Gorton & Metrick (2012) summarize 16 documents (academic papers and reports from regulatory and international agencies) and draw some important lessons from the history of financial crises. One aspect that is similar in the history of crises is a system-wide leverage increase in the years prior to the crisis indicating that it is a strong predictor of crises for the past two centuries. Another common characteristic of major crises since the World War II is the increase in housing prices. The international financial crisis of 2008 was also characterized by significant banking runs, especially for short-term debt where the novelty is

that such runs took place in the shadow banking system (money- market mutual funds, commercial paper, securitized bonds, and repurchase agreements), introducing a new source of systemic vulnerability. The challenge for policy makers is to understand how this has ultimately affected the real side of the economy. For the above reasons, the material one comes across in the current literature discussing the causes of the crisis in Malaysia, her policy response to it, and the results she obtained carries little conviction and is at times misleading. 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. Exchange policy plays major roles in guiding investment and spending behavior to meet development and stabilization goals in both the public and private sectors.

2.2.1 Exchange policy in Malaysia: Institutions, history, and the issue of exchange deficits

Exchange policy in Malaysia is designed to serve both stabilization and development goals in meeting key objectives such as growth, equity, macroeconomic stability, reform and restructuring, as well as pursuing sectorial and regional development. The federal constitution provides the fundamental institutional structure for exchange policy in Malaysia, as it grants the federal government revenue-raising power, via most important taxes, and the power to expend operating and development allocations. State and local governments are responsible for providing essential services, however; intergovernmental transfers and loans from federal government supplement their relatively small and inelastic revenue base. Public finance accounts are divided into operating and development accounts, with the size of the budget for each determined by revenues and the government's capacity to raise non-inflationary financing, respectively (IMF, 1999). Various statutory bodies and non-financial public enterprises (NFPEs) share these operating and development expenditures in pursuing government objectives (IMF 1999).

● New Economic Policy and thereafter: The role of fiscal policy

For the above reasons, the material one comes across in the current literature discussing the causes of the crisis in Malaysia, her policy response to it, and the results she obtained carries little conviction and is at times misleading. The present study essentially is specific to the country. It uses weekly data for the selected variables: stock market indices, interest rates, and foreign exchange ratios Hasan, (2002). The main source for the data has been the Business section of the New Strait Times, Kuala Lumpur, and comprises of the closing quotation for each Tuesday.¹ If the Tuesday quotation was not available for any reason, the closing quotation of the day nearest to it was taken. Thus, the work has important distinctive features. During this period, rural poverty and unemployment rates both rose dramatically, due to drops in primary commodity prices in international markets (Ritchie 2004).

BNM implements its commitment to price stability without an explicit inflation-targeting framework (McCauley 2006). In reality, exchange rate stability represents another key monetary policy objective (McCauley 2006). In tackling competing imperatives, BNM claims that the key issue is the maintenance of a flexible exchange rate and monetary independence in the face of increasingly volatile capital flows (Ooi 2009).

On the foreign exchange market, sterilized intervention is BNM's major instrument, although it tends to work more effectively in combination with capital controls (McCauley 2006). While Malaysia abandoned its official commitment to bilateral exchange rate stability in 2005, sterilized intervention is still used to influence the level and volatility of exchange rates on a regular basis. On the other hand, the shutdown of the offshore market for ringgit in 1998 marked the beginning of de-internationalization of the ringgit, which barred the international convertibility of the ringgit and forced foreign holders of ringgit assets to repatriate their assets (Pepinsky 2007). Despite the development of a non-deliverable off-shore market in 2005, the re-internationalization of the ringgit is still a topic under discussion, possibly to be pursued, cautiously and progressively, in the future (McCauley 2006; BNM 2013).

Although an exchange surplus was achieved between 1993 and 1997, a deficit reappeared in 1998 and was maintained thereafter. Prolonged exchange expansion after 1997 indicates that the crisis of that year might have served as a trigger and justification for increased spending. However, unsustainably high government expenditures, including massive infrastructural upgrading, counterbalanced by unstable petroleum levies, predated the crisis (Narayanan 1996).

● **Exchange deficit: Economic and political perspectives**

Different financial distortions, for example, can lead to different types of risks, which in turn imply the use of multiple intermediate targets. Moreover, the relevant distortions can change over time and vary by country circumstances. Excessive leverage among corporations may give way, for example, to excessive leverage in the household sector. Factors, such as development of financial sector and exchange rate regime, can greatly affect the types of risks economies face. Much is still unknown on these factors and implications for the formulation of macro prudential policies. As new macro prudential frameworks are being established, policymakers have also been increasingly turning their attention to the complex dynamics between macro prudential and monetary policies. These hinge importantly on the "side effects" that one policy has on the other, but conceptual models and empirical evidence on these issues are still at early stages (see IMF (2013)).

In the case of a cooperative game only among the fiscal policies of the EMU member countries, in which the ECB stays outside, the fear of inflationary pressure due to an excessive expansionary fiscal policy will determine very small welfare gains. Their policy implication is straightforward: the SGP might have a very strong limiting impact on the

efforts for a positive or active cooperation in EMU which would lead to more output and employment but will deal with interest rates and exchange rate disturbances, which can alter the equilibrium in investment and savings in EMU (Eichengreen and von Hagen, 1996).

Past studies have also found that poor identification of monetary policy shocks can lead to paradoxical results such as the exchange rate puzzle dealt with in Cushman and Zha's (1997) study where monetary tightening was found to result in depreciation instead of appreciation.

2.3 Output Cost during Financial Crisis

Using a non-recursive contemporaneous restriction structural VAR, Kim and Roubini (2000) found that in the non-US G-7, monetary shocks have transitory real effects on the exchange rate consistent with the theoretical models. On the other hand, in a bid to identify the sources of business cycle fluctuations in the Euro area, Smets and Wouters (2002) estimate a stochastic dynamic general equilibrium (DGE) model using Bayesian VAR estimation techniques including a number of frictions such as capital utilization, adjustment costs in capital accumulation and habit formation in consumption, and a sticky, but forward-looking nominal wage. A set of structural shocks such as supply shocks, demand shocks, mark-up shocks, and monetary policy shocks is also included. The study results show that the major source of variation in output, inflation and interest rates are monetary policy, preference shocks, and labor supply shocks. On the other hand, productivity shocks adversely affect employment in both the sticky and the flexible price and wage economy. Furthermore, based on the results, they emphasize that the SDGE model with sticky prices and wages is suited for monetary policy analysis.

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The review here clearly shows that further analytical research and empirical work on these issues are needed. Macroeconomic models need to better reflect the roles of financial intermediaries. Current models are often limited in the way that they capture financial frictions. In terms of financial stress, they often assume that available instruments can fully

offset financial shocks and abstract from effects, such as those of monetary policy on financial stability. More realistic modelling of the channels that give rise to financial instability and the actual transmission of policies and instruments is needed. In particular, the supply side of finance is not well understood and models with realistic calibrations reflecting periods of financial turmoil are still missing (Brunnermeier and Sanikov, 2012). The roles of liquidity and leverage in such periods have yet to be examined using models better suited to address the relevant policy questions. More insights, including from empirical studies, are necessary to help calibrate these models and allow the formulation of policy prescriptions that can be adapted to different country circumstances. Only with progress in modelling financial crises, can one hope to not only avoid some of these episodes and be prepared with better policies when they occur, but also to minimize their impacts.

2.4 Related Studies on the Financial Crisis

Jordan and Anderson's (1974) procedure was criticized by Schmidt and Waud (1973). In their study the authors analysed problems arising with the use of the Almon lag technique. When reviewing the model developed by Jordan and Anderson, they argued that the constraining technique led to biased results. Instead of using a four-quarter Almon distributed lag function they experimented with alternative lagging. They found that fiscal variables were more statistically significant than fiscal results attained by the Jordan and Anderson model. Hence, while Schmidt and Waud were unable to reject the importance of exchange policy, they were unable to conclude that fiscal policy actions are ineffective.

Jayaraman (2006) argues that monetary policy's role is minimised with increased liberalisation and dismantling of exchange controls. The same author argues that although this led many small states to rely more on fiscal policy as their main tool for development, macroeconomic situations in some small states have become worrisome due to their fiscal excesses. Cheng (2006) used the VAR Model to examine the impact of a monetary policy shock on output, prices, and the nominal effective exchange rate in Kenya using data covering the period 1997- 2005. The main results suggest that an exogenous increase in the short-term interest rate tends to be followed by a decline in prices and appreciation of the nominal exchange rate, but has insignificant impact on output. Taking into consideration that the monetary stance is perceived to have little impact on agriculture in Kenya, which is often largely driven by exogenous factors beyond the control of the Central Bank of Kenya (CBK), such as weather, agriculture's large share of Kenya's GDP appears to provide the reason for the insignificant relationship between total output and monetary policy. The study therefore isolated agriculture and examined the monetary impact on non-agricultural output. The findings indicated that, like total GDP, monetary policy had little impact on non-agricultural output.

Obstfeld & Rogoff (2009) make a case that the global imbalances of the 2000s and the recent global financial crisis are intimately connected. Both have their origins in economic policies followed in a number of countries in the 2000s and in distortions that influenced the transmission of these policies through U.S. and ultimately through global financial markets. In the U.S., the interaction among the Fed's monetary stance, global real interest rates, credit market distortions, and financial innovation created the toxic mix of conditions making the U.S. the epicenter of the global financial crisis. Outside the U.S., exchange rate and other economic policies followed by emerging markets such as China contributed to the United States' ability to borrow cheaply abroad and thereby finance its unsustainable housing bubble.

Neoclassical channels of monetary policy have dominated research of effectiveness of monetary policy. Peersman and Smets (2001) used the VAR model to show that monetary tightening induced real appreciation in the exchange rate in the Euro area and that the effect on the exchange rate was minor but tended to persist longer than in the US economy. Other studies on the MPTM used VAR to identify the effectiveness of channels of monetary policy transmission. Kim and Roubini (2000) used a structural VAR approach with non-recursive restrictions to model the reaction function of the monetary authorities and the structure of the economy to identify monetary policy shocks. Their results indicate that the effects of monetary policy contractions in non-US G-7 induces appreciation of the exchange rate that, however, depreciates with time after a few months, which is in line with the uncovered interest parity condition. In Asian economies, Hung and Pfau (2009) documented a strong exchange rate channel in Vietnam, while Abdul (2009) was not able to find evidence on the relevance of the exchange rate in India. Disyatat and Vongsinsirikul (2003) assessed the monetary policy channels and the pass-through from the repurchase to retail interest rates Thailand's economy. Similarly, Agha et al. (2005) found a weak exchange rate channel in Pakistan.

2.5 Fiscal Policy in Managing Financial Crisis

Malaysia was hit hard by the global financial crisis of 2008–09. Anticipating the downturn that would follow the episode of extreme financial turbulence, Bank Negara Malaysia (BNM) let the exchange rate depreciate as capital flowed out, and preemptively cut the policy rate by 150 basis points. Against this backdrop, this paper tries to quantify how much deeper the recession would have been without the BNM's monetary policy response. Taking the most intense year of the crisis as our baseline (2008:Q4–2009:Q3), counterfactual simulations indicate that rather the actual outcome of a –2.9 percent contraction, growth would have been –3.4 percent if the BNM had not implemented countercyclical and discretionary interest rate cuts. Furthermore, had a fixed exchange rate regime been in place, simulations indicate that output would have contracted by –5.5 percent over the same four quarter period. In other words, exchange rate flexibility and the interest rate cuts implemented by the BNM helped

substantially soften the impact of the global financial crisis on the Malaysian economy. These counterfactual experiments are based on a structural model estimated using Malaysian data (Elekdag Lall & Alp, 2012).

Shingjergji & Idrizi (2014) studied bank' performance in Albania during the period 2002-2013 using return on asset as a measure of profitability, while as independent variables used: the capital adequacy ratio, exchange rate between euro and Albanian Lek, total loans, NPL ratio and interest rate spread.

Noman & Khudri (2015) mentioned that study deals with the impact of fiscal and monetary policies on economic growth in Bangladesh. The data were collected on annual scale from the period of 1979-80 to 2012-13. The study employed line diagram, correlation matrix, multiple linear regression models and trend analysis on fiscal (i.e., government revenue and expenditure) and monetary variables (i.e., exchange rate, interest rate, inflation, broad money, and narrow money). The major objectives of this study are to evaluate the trends in policy variables and examine the impact of fiscal and monetary instruments on economic growth (RGDP). A study also attempts to make recommendations based on the research findings. In accordance with the findings narrow money, broad money, exchange rate, government revenue and expenditure have positive correlation with RGDP indicating that the unit increase in the abovementioned variables will lead to the unit increase in RGDP. On the contrary, inflation rate and interest rate on deposit have negative impact on RGDP. The results further revealed that there has been fluctuation in the trend of interest rate and inflation rate throughout the observed period and a drastic fall has occurred in narrow money between year 1999-00 and 2001-02. The upward trends have been observed in broad money, exchange rate, government revenue and expenditure. The results also showed that more than 75% of the total variation of dependent variable of each model (i.e., model 1, model 2, model 3 and model 4) used in this study is explained by the explanatory variables of the given model. The study concluded that exchange rate, interest rate, inflation rate, government revenue and government expenditure are significant variables that affect economic growth in Bangladesh.

3. Conclusion

In calculating the effect of exchange policy on the economy, assumptions are often made regarding various parameters, for example the use of official policies to influence the exchange rate that emerges in the foreign-exchange market, takes three principal forms. First, the monetary authorities may intervene by buying and selling, currencies in the foreign-exchange market. Such intervention may or may not be sterilized. Second, the monetary authorities may use monetary policy to stabilize the long-run real exchange rate without associated reserve movements. Third, the monetary authorities may use capital controls as a means of stabilizing simultaneously the exchange rate and the volume of money. Less

important methods of managing exchange rates include the use of fiscal policy, of administrative controls over imports and exports, of special inducements to foreign central banks to hold reserves in a particular currency, and of various devices intended to alter levels of official reserves without intervening or borrowing. (For example, central banks may place dollar i reserves with their commercial banks, which, in turn, lend them in the Eurodollar market, or they may convert their short-term dollar assets into longer-term assets, thereby reducing the officially defined level of their dollar reserves.

Many countries are now in a situation where a highly expansionary exchange policy has resulted in large budget deficits and a heavy public debt burden. High, rapidly growing public debt may increase the risk of financial instability in various ways, for example through reduced confidence in publicly issued means of payment, and increase the risk of heavy losses by financial institutions in connection with default on the public debt.

Previous studies (Sánchez, Biscarri, & de Gracia 2005) mentioned variables the behavior of exchange rates in Spain during the 18th century. We analyze the exchange rates quoted in London on three Spanish cities between 1699 and 1826. After a brief review of how the Spanish monetary system worked and how exchange rates were determined, we assess to which extent the exchange rate responded to market fundamentals by testing two theoretical models of exchange rate determination. The results suggest that purchasing power parity held during the 18th century, with the exchange rate tracking quite closely the behavior of inflation differentials. Deviations from PPP appeared at the end of the century, due mostly to changes in the real exchange rate caused by the bilateral trade between Spain and Great Britain and, maybe, due to productivity differentials.

This study concluded that during an evolving EM financial crisis, it is often said that the crisis would not have occurred if the respective government had pursued fiscal and monetary policies consistent with exchange rate commitments. The same can be said for an inflation target band of 1 per cent if there is a need to smooth non cyclical short term movements in interest rates or in exchange rates. It is also, In the early eighties, two experiences were crucial to determine the experts view: the collapse of the Latin American Southern Cone experiences with pre-announced exchange-rate-based disinflation programmes and the successful growth record of the Asian tigers. With both inputs, many researchers from both the IFIs and academy recommended not only not to peg national currencies but also to try to sustain depreciated real exchange rates (under PPP or any other benchmark of long run equilibrium) in order to promote an export led growth strategy.

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