CHAPTER 8

CONCLUSION

8.1 Summary and Policy Implications

In this thesis we have focused on investigating the model that can explain nominal rigidities and incomplete exchange rate pass-though, which are a foundation of the characteristics of the Thai economy. Verification of the ability of the model to provided to ensure that the model represents a reasonable description of the Thai Economy. The main objective of this thesis is, therefore, the estimation and the interpretation of the behavior of the Thai economy.

In this study, we developed a New Open Economy Macroeconomic (NOEM) model. It is strictly based on the microeconomic foundations in the New-Keynesian tradition as a small open economy DSGE model. There are representative households, representative firms, a central bank, and the exogenous foreign sector. All agents optimize their behavior with respect to their constraints. The keys features of the model are enriched by habit formation for consumption as Justiniano and Preston (2004) suggested, while the terms of trade is held at the dock, implying the incomplete exchange rate pass-through, as proposed by Monacelli (2005).

Parameters of the solved model are estimated by the Bayesian method with Markov Chain Monte-Carlo simulation technique (MCMC). This method combines prior information with historical data. The estimation procedure employs the Kalman filter to compute the maximum log-likelihood function.

The estimated parameters indicate some structural characteristics of the Thai economy. The representative household is influenced by the higher level of the habit persistence in consumption. The representative household has its consumption behavior that does not want to change. The low elasticity of substitution between domestic and foreign consumption goods indicates a low possibility of substitution between goods in this study (given US as a foreign country).

The average duration of the price stickiness is three quarters for domestic producers and two quarters for importers. It suggests that the domestic prices and the import prices are sticky and incomplete exchange rate pass-through.

A description of the monetary policy by the modified Taylor rule expressed by Woodford (2001) together with the estimated parameters can provide an alternative way of analysis the behavior of the bank of Thailand. The results indicate that the monetary authority gives priority to inflation rather than output growth under the inflation targeting regime.

The impulse response functions offer a plausible way of explaining the dynamic behavior of the economy in response to various shocks and the reaction of the monetary authority. It is noticeable that a habit formation plays an important role in inducing a significant hump-shaped response of consumption to shocks. The behavior of the interest rate is well defined as the central bank has adopted the inflation targeting framework. The total influence of the technology shock on the economy is still the most important driver of output growth. The negative impacts on output stem from the positive temporary domestic inflation shock, the real exchange rate shock (appreciation) and the interest rate shock. However, the interest rate and the domestic inflation shocks exhibit relatively high negative impacts on output. The period of the response of output to the interest rate shock takes a quit long time to reach its steady-state. The reaction of monetary authority depends on the trade-off between output and inflation, as dictated by the Taylor's rule.

8.2 Limitations and Suggestions for Further Study

Because this study is a primary work in the estimation of a small open New-Keynesian model, there are some limitations with respect to the model and the data that may affect the accuracy of the results. Firstly, the model is a simple approximation of the reality with only two sources of nominal rigidities (the law of one price and the pass-through of exchange rate movement to import prices), and a linear production function in labor input with a simple monetary rule. This approximation should be expanded to cover all agents, for example government sector, the two sector of production (an intermediate-goods and finished-goods

producing firms). The future research should employ the minimization of welfare loss function for the optimal monetary policy rule.

The structural change is another limitation. There are structural breaks in the Thai economy at the economic crises in 1997 and when the Bank of Thailand adopted the inflation targeting as an anchor in 2000. The structural breaks prevent us from using longer time series.

Thirdly, throughout our estimation, the proxy used in the estimation is also a limitation. According to the definition of output gap in the model, availability of data series makes it difficult to generate the accurate output gap. Chamthom et al. (2000) study the potential output through output gap but data series still limit in the period during the study since 1993-2000.

Lastly, previous study results are very important for comparing with the result obtained in this investigation. The lack of similar empirical works for the Thai and other emerging economies prevent us from evaluating the results of our estimates.

For the further study, exchange rate economics is one of the most challenging areas within macroeconomics and a controversially debated issue in monetary policy design. The question over whether or not the central bank should intervene in the foreign exchange market must be incorporated in the monetary policy rule. In the sense of New Keynesian open economy perspectives, the model typically suggests a limited response to the exchange rate changes. Therefore, the role of the open economy determining robust rules when the central bank faced various model misspecification errors should be taken in to account (Kirdan, 2006).

The sustained rise in oil prices observed in recent years poses a challenge to the investigation of the impact of oil prices shocks on the Thai economy by constructing a DSGE model, with the a flexible inflation targeting strategy.