

学位論文及び審査結果の要旨

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Exchange rate pass-through (ERPT) is the degree to which the exchange rate movements have an impact on the domestic prices. The ERPT analysis is a key issue for macroeconomic indications. First, ERPT has an important effect on imports, exports, and investment (Égert and MacDonald 2008, p.11). Second, ERPT plays a vital role in adjusting current account imbalances (Obstfeld 2006, p.16). Third, ERPT is one of the most influential channels of the monetary transmission mechanism.

Recently, Vietnam has experienced different levels of inflation. The inflation rate reached 25 percent in 2008, which is the highest level since 1996 (Phan, 2014). As a result of the global economic slowdown, the inflation rate in Vietnam declined slightly in 2009. After then, the inflation rate climbed rapidly, peaking at roughly 20 percent in the third quarter of 2011. The impact of the tightened monetary policy contributed to a decline in the inflation rate to 4 percent in 2014, which was following by the domestic price deflation in several months of 2015. Inflation rate started to rise again in 2016. In short, Vietnam's economy presents an appealing situation to analyze the possible interaction of macroeconomic variables under different regimes of inflation.

Noticeably, Vietnam is one of the fast growing economies in the world. The annual growth rate of this country was approximately 6 percent from 2012 to 2016 and forecast to increase in the next five years (OECD, 2019). Moreover, the demand for oil and other energy sources increases in order to maintain rapid economic growth. Consequently, the growing relative importance of developing countries such as Vietnam in world oil demand leads to an

interest in examining the influence of oil price fluctuations on macroeconomic activities in these economies.

In order to examine these issues, this dissertation employs time-series method including a Structural Vector Autoregression Model (VAR), threshold Structural VAR model. The main idea are discussed more details in the three chapters.

In chapter 2, “Revisiting the exchange rate pass-through: The case of ASEAN5 countries”, using the Vector Autoregression framework, we investigate the exchange rate pass-through (ERPT) in ASEAN countries including Thailand, Indonesia, Malaysia, the Philippines and Vietnam. We find that exchange rate changes do matter for price levels in all sample countries. The ERPT are different cross-country due to the diversity of macroeconomic factors affecting ERPT. Moreover, monetary policy could play a vital role in controlling domestic inflation. The variance decomposition analysis shows that the exchange rate shock accounts for around 25 percent of CPI variation in Vietnam, which is highest among five economies. Lastly, the oil price shock is the important factor to explain the inflation rate in all sample countries.

In chapter 3, “The determinants of inflation in Vietnam: A threshold structural vector autoregression approach”, we investigate the macroeconomic determinants of inflation in Vietnam while allowing for a non-linear relationship between those variables. This chapter employs a threshold structural vector autoregression model to examine the response of domestic prices to various macroeconomic shocks. Based on the estimated threshold level of inflation, we divide the sample period into high and low inflation regimes. The empirical results find evidence of a nonlinear relationship between inflation and some macroeconomic variables. The responses of domestic price to the monetary policy shock and the credit shock change significantly between the two inflation regimes. As a result, the source of price fluctuations depends on the inflation regime. Moreover, the reactions of monetary policymakers in Vietnam to the domestic price shock are different among the two inflation regimes.

In chapter 4, “Does the oil price matter in Vietnam? An empirical investigation in a nonlinear framework”, we investigate the nonlinear effect of oil price shocks on macroeconomic activities in Vietnam. We do that by conducting a threshold structural Vector autoregression (VAR) with five variables: world oil price, output gap, interest rate, nominal effective exchange rate (NEER), and domestic price (CPI). The model separates two regimes with the world oil price threshold. Our results indicate that the oil price shock and output gap, interest rate, NEER, and CPI have a regime-dependent relationship. We find that the macroeconomic responses are different among regimes. The monetary policy tools are more effective in the case of the low oil price regime than the high one.

The main messages of the three empirical works are as follows:

In chapter 2, pass-through does matter for domestic prices for all sample countries. The alternatives in the structure of the economy might lead to the fluctuations in pass-through. Monetary policy could play a vital role in controlling domestic inflation. This reflects the

success of adopting the flexible exchange rate regime and inflation targeting in some cases. For Vietnam, exchange rate stability is essential for price stability while depreciation could not employ as the means for encouraging economic growth because it will significantly increase CPI. The oil price fluctuations become more important sources of price changes in all sample countries.

Chapter 3's results represent a key aspect of implementing the monetary policy in Vietnam. The credit is a useful tool in the case of high inflation periods. On the other hand, the interest rate is a useful monetary policy instrument in the low inflation case. Therefore, the State Bank of Vietnam (SBV) can attain price stability through the credit channel in the high inflation period and the interest rate channel as the economy shifts to the low inflation case. Moreover, the SBV should pay attention to the impact of external shocks on inflation.

In chapter 4, the impact of external shock such as world oil price on macroeconomic indicators in Vietnam is significant, and diverse across distinct oil price levels. In this case, the policymakers should continuously observe the oil price changes to implement the appropriate monetary and fiscal policy. Furthermore, the influence of the retail oil market stability instruments should be examined in other empirical research papers.

In summary, this dissertation contributes some interesting key findings to academic research. It also provides some ideas for monetary policy implement in Vietnam.

Table 1A: Overview of the three research papers

	Chapter 2	Chapter 3	Chapter 4
Objectives	Examining the ERPT to domestic prices + What is the impact of exchange rate changes on the domestic prices? + What is the main source of domestic prices fluctuations?	Investigates the macroeconomic determinants of domestic prices in Vietnam in association with the inflation level.	Investigate the nonlinear effect of oil price shocks on economic activities in Vietnam.
Method	VAR model Cholesky decomposition	A threshold structural VAR model The Tsay (1998) method to test for the threshold nonlinearity of the model Imposes a non-recursive identification scheme on the contemporaneous structural parameter	A threshold VAR model The Balke (2000) method to find possible threshold values Cholesky decomposition
Variables	Oil prices, output gap, money supply,	World oil price, the U.S federal fund rates,	World oil price, output gap, interest

	exchange rate and domestic prices.	output, CPI, monetary policy, domestic credit and the exchange rate.	rate, nominal effective exchange rate (NEER) and CPI
Countries	Indonesia, Malaysia, the Philippines, Thailand and Vietnam	Vietnam	Vietnam
Period	2008M1-2016M12	2008M1-2016M12	2008M1-2018M12
Results	+ Exchange rate changes do matter for price levels in all above countries. + The ERPT to domestic prices are incomplete and decrease along the distribution chain. + The variance decomposition analysis shows that the exchange rate shock is the main source of CPI fluctuations in Vietnam. + The oil price shock is the important factor to explain the inflation rate in five countries.	+ There exists a nonlinear relationship between inflation and several macroeconomic variables. + The source of price fluctuations depends on the inflation regime. + The reactions of monetary policymakers in Vietnam to the domestic price shock differ among the two inflation regimes.	+ The oil price shock and output gap, interest rate, NEER, and CPI have a regime-dependent relationship. + Monetary policy is more effective in the low oil price regime than the high one.

#### 審査結果の要旨

本論文は、ベトナムおよび他の ASEAN 4 か国を対象として、為替レートのパススルーとマクロ経済変数間の相互依存に関する実証分析を行った、序論と結語を含む 5 つの章で構成されている。その柱となる第 2~4 章の概要と評価は次の通りである。

第 2 章ではベトナムと他の ASEAN 4 か国を対象として、為替レートの変動が輸入価格に及ぼす影響を構造 VAR モデルで分析した結果、生産者物価へのパススルー率がインドネシアとベトナムを除く他の ASEAN 諸国で先行研究よりも大きな値をとること、ベトナムの消費者物価に対する輸入のパススルー率が他の ASEAN 諸国と比べて大きな値をとることを示した。続く第 3 章では、Threshold VAR モデルを用いて、高インフレ期と低インフレ期で国内物価に影響を与える要因が異なることを示している。特に、高インフレ期で、インフレ率上昇に対する金融政策変数の反応が大きいこと、低インフレ期では原油価格上昇などの外的ショックがインフレ率に有意な影響を及ぼすことが示されている。第 4 章では、原油価格を閾値に選び、同様

の Threshold VAR モデルを用いて原油価格高騰期と原油価格低下期の二つに分けて推定した結果、原油価格高騰期に、為替レートのパススルーが有意に正の値をとり、実質産出高、国内インフレ、金融政策変数が原油価格上昇に対して有意に正の反応を示すことが確認された。

本論文の特徴は、ベトナムを分析の対象として、Threshold VAR モデルを用いてインフレ率を基準とした二つのレジーム（高インフレ期と低インフレ期）、そして原油価格を基準とした二つのレジーム（原油価格高騰期と原油価格低下・安定期）に分けて、国内インフレや金融政策変数が為替レートや原油価格にどう反応するのか、二つのレジームで反応が異なるのか否かを実証的に分析している点にある。しかし、論文全体を通じて、推定結果の解釈の仕方、そして先行研究と比較してのオリジナルな貢献が必ずしも明確ではない。第3章では、インフレ率が閾値を超えている場合でも、閾値を超えてインフレ率が上昇している局面と、インフレ率が低下して閾値に近づいている局面を必ずしも同じレジームに含めることはできないだろう。これは第4章の原油価格を閾値とした分析にも当てはまる課題である。著者もこれらの課題を理解しており、さらに改善すべく研究を進めている。今後は適切に閾値を選び、先行研究と比較して分析結果のオリジナルな貢献を明確にするよう、実証分析をさらに深めていくことが期待される。

本論文の各章は今後適切な改訂を行えば査読付き学術雑誌に掲載されることが可能な水準にあると考えられる。本論文審査委員一同は、本学府の博士号審査基準③に照らして、Le Thanh Binh 氏の学位請求論文 “Exchange rate pass-through, the determinants of inflation and the oil price issues: An investigation of Vietnam and some ASEAN countries” が博士（経済学）の学位を授与するに値するものと判断する。