

論文審査の要旨及び担当者

No.1

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(論文審査の要旨)			
論文題名 : Essays on Macroeconomics, Energy Prices and Policies			
<p>Victoriia Alekhina's dissertation is entitled "Essays on Macroeconomics, Energy Prices and Policies" and comprises four chapters. These chapters investigate the relationships between macroeconomic variables, energy prices, and policies over the last two decades. The thesis includes the following four chapters.</p>			
<p>Chapter One "The Role of Industrial Production in Global Oil Price Determination Over the Last Two Decades"</p> <p>In this first chapter, Victoriia investigates the recent oil price drivers. Her idea is to compare the role of supply and demand factors in recent oil price formation. She provides theoretical aggregate demand-aggregate supply oil price modelling framework as well as empirical analysis using vector autoregressive approach. She analyses industrial production index as an alternative proxy of oil demand, also, she compares the impact of oil demand from Organization for Economic Co-operation and Development (OECD), People's Republic of China and India on oil prices. The result that she obtained shows that recently oil prices were mostly driven by oil demand from large energy consumers (OECD and China), and less by oil supply factors.</p>			
<p>Chapter Two "Exogeneity of World Oil Prices to the Russian Federation's Economy and Monetary Policy"</p> <p>In the second chapter the author focuses on the impact of oil price changes on the economy and monetary policy of Russia. She investigates the interrelationship between Russia's gross domestic product (GDP), consumer price index (CPI) inflation rate, Ruble/US Dollar exchange rate and interest rate and world oil prices using a vector autoregression approach. Also, Victoriia examines the monetary policy rule for Russia, using the modified Taylor equation and associated Taylor rule (that includes the oil price gap).</p> <p>Her results show that the impact of the oil price fluctuations on Russia's GDP, CPI inflation rate, interest rate, and exchange rate was significant between 2000 and 2016 and that there is a growing dependence of the economy on oil export revenues. Moreover, oil prices have an impact on monetary policy decisions of Russia. In the end, she suggests that it would be beneficial for this economy to diversify from too much reliance on energy revenues.</p>			
<p>Chapter Three "The Role of Energy Security in Economic Growth in Asia: Quantitative Analysis and Policy Options"</p>			

In this chapter Victoriaia examines the impact of energy security on real GDP per capita growth in Asia. She uses quantifying indicators of four energy security dimensions (energy availability, applicability, affordability and acceptability) and integrates them into the cross-country generalized method of moments model of GDP growth per capita. Her results suggest that energy security is significantly associated with GDP per capita growth and that improving energy security in Asia would be beneficial in terms of GDP per capita growth. She also discusses policy options for improving energy security in Asia.

Chapter Four “Asymmetric Pass-Through of Oil Price to Gasoline Price: Case Study of Russian Federation and South Korea”

In this fourth and final chapter the author examines asymmetry of oil prices pass-through to gasoline prices in Russia and South Korea. Author’s purpose was to test whether oil prices transmit to gasoline prices asymmetrically and what could be possible reasons for the asymmetry. For empirical analysis she uses nonlinear autoregressive distributed lags (NARDL) model and finds that in South Korea oil pass-through to gasoline prices more symmetrically while in Russia there is a notable asymmetry of oil-gasoline pass-through. Based on the obtained results and her research, she explains that one of the possible reasons for the asymmetry could be monopolistic energy market. She suggests that it is necessary to improve fuel prices monitoring and the competitiveness of the fuel market in the future.

【評価】

The research in the chapters in this dissertation are motivated by the importance of the interactions of energy, macroeconomic variables, and macroeconomic policies. Chapter 1 contributes to the research in the field of macroeconomics with energy variables. Early research in this field such as Hamilton (1983) focused on the causality direction of the supply of oil in the world to macroeconomic variables, while more recent research such as Kilian (2009) also examines the reverse causality direction of the world demand to oil prices. Kilian (2009) used dry-cargo ocean-shipping freight rates as the demand indicator, and Victoriaia’s use of industrial production as an alternative indicator is an important innovation based on new data that have recently become available.

In much research the field of macroeconomics with energy variables, monetary policies have not been investigated, and the Russian economy has not been investigated. Oil is important for the Russian economy (e.g., about 45% of the Russian Federation’s budget revenues in fiscal year 2015 was related to oil and gas), and Russia and other non-OPEC oil exporting countries became important in the world oil market around 1997. Therefore, Chapter 2’s research on the interactions of oil prices, macroeconomic variables, and macroeconomic policies in Russia is novel and important.

Chapter 3 studies the relationship between energy security variables such as energy import dependence

and economic growth in Asia by Generalized Method of Moments, and Chapter 4 studies asymmetric pass throughs of oil prices to gasoline prices in Russia and Korea by NARDL model. These chapters use sophisticated econometric methods to study important problems for the theme of this dissertation to make advancement.

In the discussion of the results of this dissertation, some queries were raised about the interpretation and use of econometric methods. In particular, it may be possible to improve the analysis for short-run and long-run effects. In Chapter 1, both Vector Autoregression (VAR) of the first differences of the variables and Vector Error Correction Model (VECM) techniques are applied, but VAR is mis-specified if cointegration is present. In Chapter 4, counterintuitive results are obtained for Russia that even negative world oil price shocks have positive effects on gasoline prices. These puzzling effects may be resolved if permanent and temporary shocks are separated in the analysis. None of these points detract from the overall value of this dissertation, but provide suggestions for avenues for future research in this area.

Part of Chapter 2 has been published in *Eurasian Economic Review* as a joint paper with Naoyuki Yoshino with Victoria as the first author, and part of Chapter 3 has been published in *Singapore Economic Review* as her single-authored paper.

For these reasons, it is the unanimous view of all five examiners that Victoria Alekhina should be awarded a Doctoral Degree in Economics from Keio University.