Abstract

This thesis consists of six chapters that delve into the macroeconomic effects of taxation, employing time series analysis and a survey using the DSGE model.

Chapter 2 employs a VAR model and Granger causality analysis to investigate the factors influencing private consumption, with a focus on three factors: pension, prices, and the real exchange rate. The empirical results suggest that prices negatively influence private consumption, exchange rate changes have a small effect on private consumption, and pension does not affect private consumption. Furthermore, Chapter 2 describes in detail the theory and application of VAR and provides a reference for the time series analysis.

Chapter 3 focuses on clarifying the effects of consumption tax on macroeconomic variables. The effects of consumption tax are estimated by employing a SVAR model and the identification of shocks is achieved by the Blanchard–Perotti approach. In addition, an alternative identification scheme, the Cholesky decomposition, is also applied to identify the shocks in the model. The results reveal that a positive consumption tax shock has a negative effect on private consumption and GDP, but its effect is insignificant. In contrast, the positive consumption tax shock does not impact government consumption. Furthermore, a positive government consumption shock has a positive effect on private consumption, providing empirical evidence of the Edgeworth complementarity between government consumption and private consumption. GDP is also affected positively by the government consumption shock.

Chapter 4 aims to explore the macroeconomic effects of consumption tax by reviewing recent studies using the DSGE model. This survey reveals that an increase in consumption tax has different effects when used as different government expenditures. When used as merit goods expenditure and government investment expenditure, it has positive effects in the short and long term, respectively. When used as public goods expenditure, it has a negative effect. Furthermore, this survey concludes that a consumption tax hike has a negative effect on the economy. To mitigate the negative effect of the consumption tax hike and to promote economic development, the implementation of a corporate tax reduction policy is recommended. Additionally, this survey indicates that the consumption tax has a less negative effect than the income tax. Furthermore, this survey provides us with the knowledge of not only consumption tax but also corporate and income taxes.

Chapter 5 adopts a TVP-VAR model to analyze and shed light on the effects of corporate tax cuts on the Japanese economy during the period spanning from 1994 to

2019. The TVP-VAR model facilitates the examination of the effects of corporate tax shocks over time and identifying corporate tax shocks at different periods. The findings indicate that the effects of corporate tax vary over time. Overall, corporate tax shocks influence corporate R&D investment, corporate equipment investment, and GDP positively. Furthermore, the cumulative corporate tax multiplier shows that it does not vary completely with the Japanese business cycle.

Chapter 6 investigates the time-varying impacts of consumption tax shocks on government spending, private consumption, and GDP using the TVP-VAR model. The results reveal that the impacts of consumption tax shocks on macroeconomic variables vary over time and the time-varying impacts are characterized differently. Furthermore, the results show that the consumption tax shocks in 1997 and 2014 had different impacts. In general, a consumption tax shock has a positive impact on government spending but a negative effect on GDP. When a consumption tax hike occurs, the negative impact on private consumption is significant. Additionally, the more consumption tax does not guarantee a stronger positive impact of consumption tax shocks on government spending.