

Abstract

This dissertation studies different aspects of the transmission of international business cycles across countries. It consists of three chapters. In the first chapter, we study the role of trade in consumer durable goods and capital goods in the context of a two-country New Keynesian (NK) dynamic stochastic general equilibrium (DSGE) model. Our benchmark model, calibrated for the U.S. and its trading partners, is able to account for the high volatility and positive correlation of exports and imports observed in the data and discussed in the literature (Engel and Wang, 2011; Erceg, Guerrieri and Gust, 2008). Moreover, it can also match the conventional interest rate channel that is a centerpiece of the NK framework. We compare our baseline model with alternative two-country NK models with and without consumer durable goods and capital goods. Our simulations show that our benchmark model performs better in the international dimension than the comparison models. In a version of the benchmark model with flexible prices, we found only a limited role of consumer durable goods. However, the presence of a nominal sector and price rigidities make consumer durable goods more important for the international dimension of the model. We also discuss plausible channels and shocks that can generate the observed dynamics in the trade variables. In addition to the total-factor-productivity channel discussed in the literature, we show that the interest rate channel together with incomplete pass-through of import prices can also generate positive correlation between export and imports. On the other hand, the investment channel emphasized in the literature may generate negatively correlated trade flows contrary to the observed correlation in the data.

In the second chapter, we study the impact of oil price fluctuations on oil-importing developing economies focusing on Armenia and Georgia as examples of small open economies. We explicitly model the world oil market and allow for fundamental oil shocks that originate from different sources such as oil supply disruptions or fluctuations in world economic activity (Kilian, 2009). We use a structural vector autoregressive model for this purpose. In parallel to the structural model, we also examine overall energy flows and plausible oil shock transmission mechanisms for the developing economies at hand. This is useful for understanding the specificities related to developing economies, selection of the relevant variables for the model, and interpretation of the results from the model. We document a number of interesting findings. First, based on the identified impulse responses, different types of oil shocks have different effects on key macroeconomic variables with the effect of oil supply shocks being quantitatively small. This is consistent with the findings for developed economies. Thus, accounting for underlying reasons for increases in oil prices is important even for small open economies. Second, given that oil-market-specific demand shocks, which are considered important drivers of world oil prices, do not lead to higher inflation and in some cases even reduce the GDP, the demand channel can be an important transmission factor. Third, we find that real oil price jumps that stem from accelerating world economic activity have a positive effect on inflation (the effect is only marginally significant for Armenia). Given the high share of food items in the headline CPI of the developing economies under study and evidence that food prices are also driven by the dynamics in world economic activity

(Baumeister and Kilian, 2013), this result suggests that part of oil price shocks can be transmitted through food prices. Finally, we find that the structure of energy flows and the pricing of natural gas matter for the transmission of oil shocks.

The topic of the third chapter is similar to that of the second chapter, but there are differences in methodology. This chapter analyses the impact of oil price fluctuations on oil-importing developing economies, focusing on Georgia as an example of a small open economy. Our objective is to understand the role of oil price jumps and the relevant transmission channels, given the specificities of developing economies. Following Kilian (2009), we explicitly model fundamental oil shocks in the international oil market and use a dynamic stochastic general equilibrium (DSGE) model with New Keynesian features to quantify the impact of oil price shocks and identify the key channels of transmission. We concentrate on the monetary policy channel, but also look at other transmission channels. A simple extension of a DSGE model allows us to account for limitations of monetary policy due to partial dollarization and credibility issues. The key parameters of the model, including those related to the monetary transmission channel and other energy shocks transmission channels, are estimated using Bayesian methods. Consistent with the evidence from developing countries, we find that macroeconomic variables and monetary policy respond to different types of oil shocks differently. The impact of oil supply shocks is quantitatively small, while oil price changes due to shifts in world economic activity and oil-market-specific demand have strong effects. Thus, we conclude that accounting for the original structural reason for changes in oil prices is important for understanding their impact even for small open economies. We also find that the role of the monetary policy channel in the transmission of oil price shocks is limited compared to in developing economies, but is still quantitatively significant.