Available online at www.sciencedirect.com

ScienceDirect

Procedia Economics and Finance 30 (2015) 175 – 186

Procedia
Economics and Finance

www.elsevier.com/locate/procedia

3rd Economics & Finance Conference, Rome, Italy, April 14-17, 2015 and 4th Economics & Finance Conference, London, UK, August 25-28, 2015

The Financial Channel in International Trade

Marta Arespa Castello[a], Diego Gruber[b]

[a] *Universitat de Barcelona, Gran Via de les Corts Catalanes, 585, Barcelona, Spain*
[b] *Kernel Analytics, Barcelona, Spain*

Abstract

Existent literature is by no means conclusive on the effects of trade finance on trade and the economy. We propose a suitable framework to explore the linkages between international trade and finance based on an international real business cycle model where firms require external finance to import and can be financially constrained. We find that credit shocks do affect the dynamic properties of the economy and they have the potential to cause significant deviations in trade and economic performance. The trade-to-GDP ratio falls following a negative credit shock, as the shock reduces the capability of firms to purchase foreign intermediate goods, thereby reducing efficiency and production. However, it forces a demand substitution towards domestic intermediate goods that limits GDP deterioration. We also find that financially developed countries trade more, are richer and more stable in terms of GDP and consumption, consistence with the empirical evidence. Finally, the model sheds light on persistent contradictions between theoretical business-cycle and their empirical counterparts, namely, the consumption/output anomaly and the volatility of consumption, imports and terms of trade relative to GDP.

© 2015 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Peer-review under responsibility of IISES-International Institute for Social and Economics Sciences.

Keywords: Trade finance; credit constraint; great trade collapse; RBC

1. Introduction

We refer to *trade finance* as either a) one of the mechanisms provided by financial institutions and governments to facilitate international trade activities, or b) an agreement whereby a customer can purchase goods on account, paying the supplier at a later date. When trade occurs across borders, sellers require either cash-in-advance payments or formal guarantees to cover themselves from the possibility of insolvency of their buyers. Importers are usually forced to turn to loans or letters of credit to satisfy exporter requirements before having their orders shipped. Most of these contracts are provided by financial institutions and require some form of collateral.

2212-5671 © 2015 Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).
Peer-review under responsibility of IISES-International Institute for Social and Economics Sciences.
doi:10.1016/S2212-5671(15)01281-2

Trade finance is an extremely important piece of the international trade mechanism; estimates find that around 90% of international trade relies on some form of credit (Auboin, 2009). Since the "great trade collapse”, a large number of studies has been devoted to clarifying the reasons why this episode occurred. In spite of these efforts, there is still little consensus on the effects of trade finance on macroeconomic variables and, specifically, on international trade performance.

We make a theoretical contribution to this debate within the framework of an International Real Business Cycle (IRBC) model. We propose a dynamic, quantitative, micro-founded macroeconomic model that builds on the standard model of IRBC proposed by (Backus, et al., 1992) (BKK). We introduce an additional requirement for importers, who must borrow proportionally to the value of the goods they wish to import. This feature enables us to shed some light on the role of credit in international trade performance.

Our model provides some relevant improvements over standard IRBC models. Indeed, imports are more volatile than GDP, our quantitative analysis does not suffer from the consumption/output anomaly (i.e., GDP cross-country correlation is larger than consumption cross-country correlation, as in the data), and the volatilities of consumption, imports, and terms of trade relative to GDP are close to those in recent US data. The latter is a property that, as far as we know, required the introduction of non-standard preferences into the model of IRBCs (Raffo, 2008). The financially constrained economy produces negative correlations for net exports and terms of trade with national output. These correlations are found to be positive in standard IRBC models (and in our non-constrained economy), opposite to data.

Using a counterfactual analysis we test the macroeconomic effects of alterations in the availability of finance to importers. Compared to a productivity shock of the same size, we find that trade finance does not appear to have a large effect on the behavior of macroeconomic aggregates over the business cycle. However, recent empirical literature show that, indeed, credit shocks account for a large share of the fluctuations of macro-magnitudes, as large as productivity shocks, suggesting that volatility is, indeed, much larger (See, for instance, (Helbling, et al., 2011) and (Hristov, et al., 2012)). A negative credit shock reduces the ability of a producer to use foreign inputs, thereby reducing efficiency, which negatively affects aggregate production. However it also stimulates demand for domestic goods, making them more expensive and harder to come by in foreign markets and reducing exports as well. The net effect on the trade balance is positive, which together with higher demand for domestic goods from constrained importers alleviates the fall in GDP. Hence trade falls faster than GDP in our model following a credit shock. However, unless the variance of credit shocks is much larger than that of productivity shocks, these effects appear to be small in comparison to the effects of productivity shocks, which remain the main drivers of business cycles in our model.

Section 2 presents the model setup and defines the equilibrium of the theoretical economy. Section 3 presents a number of international real-business cycle statistics. We use these numbers to calibrate the model and test its numerical properties. Section 4 contains our main results. Section 5 concludes.

2. The model economy

There are two countries. We denote foreign country variables by an asterisk. Countries are identical except for the stream of productivity shocks they receive. A country consists of four types of agents: Infinitely lived **households**, the ultimate holders of savings and debt in the model. **Final-good firms** put together a basket of domestically produced intermediate goods; their output is a final good that can be used for consumption or the accumulation of capital by households. Final goods are sold domestically in perfectly competitive markets. **Intermediate good firms** operate in a monopolistically competitive setting. They use a fixed amount of labor each period to combine domestic and foreign inputs and manufacture their goods. The amount of foreign inputs they use in production is limited by how much they can borrow to finance their imports. How much they produce depends also on their productivity level, which is affected by a random productivity shock. Production inputs are bought from domestic and foreign **input producers**, who combine capital and labor in their production process. They can sell their products in domestic markets or export to foreign intermediate good producers.

Download English Version:

https://daneshyari.com/en/article/981014

Download Persian Version:

https://daneshyari.com/article/981014

Daneshyari.com