



International portfolio diversification and the structure of global production

Joseph B. Steinberg

University of Toronto, Department of Economics, 150 St. George Street, Toronto, M5S 3G7, Canada



ARTICLE INFO

Article history:

Received 7 March 2016

Received in revised form 15 December 2017

Available online xxxx

JEL classification:

F36

F41

Keywords:

Country portfolios

International portfolio diversification

Production structure

ABSTRACT

In recent decades, country portfolio home bias has fallen in advanced economies but not in emerging economies. I use a dynamic general equilibrium model to show that changes in the distribution of global production and absorption explain this pattern. For advanced economies, whose share of world output fell as their trade openness rose, the model predicts an unambiguous drop in home bias. By contrast, emerging economies' growth in both size and trade openness have opposing implications for portfolios. To quantify these forces I calibrate the model to real and counterfactual input–output tables. Jointly, changes in the global production structure account for much of the decline in home bias in advanced economies and lack thereof in emerging economies. Country size and trade openness account for most of this effect. Consistent with theory, the increase in the intermediate share of trade had little impact.

© 2018 Elsevier Inc. All rights reserved.

1. Introduction

Since the 1990s, advanced economies' country portfolios have shifted towards foreign assets while emerging economies' portfolios have not. Concurrently, the structure of global production and absorption has changed in several key ways: emerging economies have grown relative to advanced economies, openness to international trade has risen, and trade consists increasingly of intermediate inputs instead of final goods. In this paper, I use theory and quantitative analysis to show that changes in the global production structure explain trends in international portfolio diversification.

Fig. 1 depicts the stylized facts that motivate this study. Fig. 1a shows that the mean level of international portfolio diversification, measured as the fraction of national wealth held in foreign assets, has risen dramatically in the United States and other advanced economies since the 1990s but has changed little in emerging economies and the rest of the world. Recent studies by Coeurdacier and Rey (2013) and Mukherjee (2015) have documented similar trends. Figs. 1b, 1c, and 1d show that, at the same time, the structure of global production has changed in three key ways. First, emerging economies and the rest of the world have grown relative to advanced economies. Second international trade has grown substantially.¹ Third, trade in intermediate inputs has grown faster than trade in final goods as documented by Hummels et al. (2001), Johnson (2014b), and Johnson (2014a), among others.

E-mail address: joseph.steinberg@utoronto.ca.

URL: <http://www.economics.utoronto.ca/steinberg/>.

¹ I measure each region's openness to trade as the sum of its imports and exports as a fraction of world GDP, rather than the region's own GDP. This measure disentangles changes in region size from changes in openness; using the standard measure, a region that grows in relative size but not openness would trade more and thus affect other regions' openness. My quantitative exercise is designed with exactly this sort of disentanglement in mind.

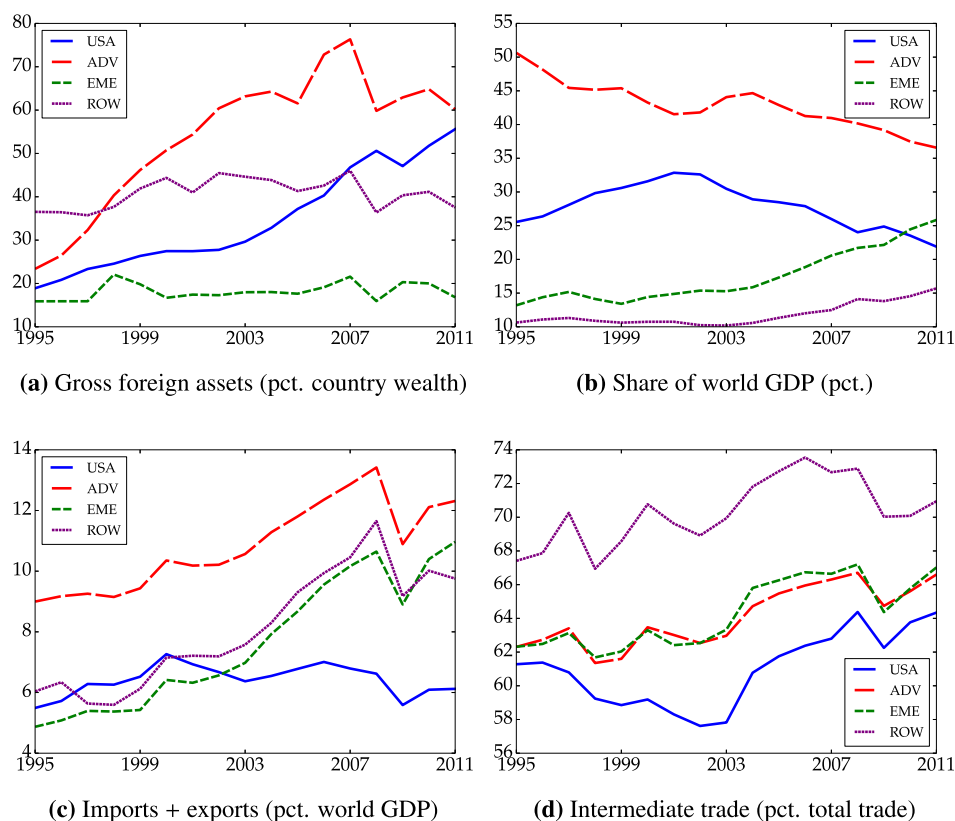


Fig. 1. Changes in international portfolio diversification and the global production structure.

In the theoretical section of the paper, I derive a closed-form expression for equilibrium portfolios in a workhorse international macro model (Backus et al., 1994, 1995) with trade in intermediate inputs and an arbitrary number of symmetric countries. In this setting, equilibrium international portfolio diversification is decreasing in country size, which is inversely related to the number of countries, and increasing in trade in both final goods and intermediate inputs. These results integrate and generalize the findings of Baxter and Jermann (1997), who argue that larger countries should hold more wealth in domestic assets, and Heathcote and Perri (2013), henceforth HP, who show that openness to trade increases diversification. For advanced economies, whose share of world GDP has fallen while their openness to trade has grown, these two forces work together. For emerging economies and the rest of the world, however, who have grown in both size and trade openness, these forces work in opposition. Thus, changes in the global production structure explain why international portfolio diversification has risen in advanced economies but not in emerging economies and the rest of the world.

I also derive two new theoretical results about the effects of the global production structure on international portfolio diversification. First, openness to trade in intermediate inputs has the same impact on portfolio diversification as trade in final goods. This suggests that the increasing share of intermediate inputs in international trade has not contributed to the patterns in Fig. 1a. My quantitative results are consistent with this prediction. Second, trade and country size have complementary effects on portfolio diversification. This provides insight into the differences between the quantitative results for the United States and the results for other advanced economies.

In the quantitative section of the paper, I use a calibrated version of the model to assess the contributions of changes in the global production structure to changes in portfolio diversification. This version of the model features four asymmetric regions – the same four regions in Fig. 1 – and CES technologies that I calibrate to match input–output data from the World Input Output Database (Timmer et al., 2015). To quantify the overall impact of changes in the global production structure on international portfolio diversification, I calibrate and solve the model twice, first using the 1995 input–output table and then using the 2011 table. The differences between these two input–output tables capture all aspects of change in the global production structure between 1995 and 2011: changes in relative country size, increased trade openness, and increased trade in intermediate inputs. The difference in each region's equilibrium portfolio diversification between these two calibrations is the model's assessment of the combined impact of these changes on that region's portfolio diversification. For advanced economies, overall change in the global production structure had a large impact on portfolio diversification. For the United States, equilibrium diversification rises by 7.33 percentage points, about a fifth of the increase observed in the data. For other advanced economies, diversification rises by 18.66 percentage points, more than half of the observed

Download English Version:

<https://daneshyari.com/en/article/7388165>

Download Persian Version:

<https://daneshyari.com/article/7388165>

[Daneshyari.com](https://daneshyari.com)