Journal of Monetary Economics 56 (2009) 1135–1147

Contents lists available at ScienceDirect

Journal of Monetary Economics

journal homepage: www.elsevier.com/locate/jme

A quantitative assessment of the decline in the U.S. current account ☆

Kaiji Chen [a], Ayşe İmrohoroğlu [b], Selahattin İmrohoroğlu [b,*]

[a] University of Hong Kong, China
[b] Marshall School of Business, University of Southern California, USA

ARTICLE INFO

Article history:
Received 10 May 2008
Received in revised form
27 October 2009
Accepted 28 October 2009
Available online 5 November 2009

JEL classification:
E21
E62
F41

Keywords:
Neoclassical growth model
Current account balance
Total factor productivity

ABSTRACT

Low frequency changes in the U.S. current account can be understood in terms of the influence of differences in productivity growth rates across time and across countries using standard growth theory. In particular, the secular decline is primarily driven by the increase in the U.S. TFP growth rate relative to its trading partners. Differences in population growth rates or fiscal policy have no significant effects on the low frequency changes in the U.S. current account.

1. Introduction

The net national saving rate and the current account balance have been declining in the U.S. since the 1960s. Fig. 1 shows that the saving rate has declined from an average of 15% in 1960s to 10% in 1980s and 8.6% in 1990s while the current account balance (CA) has declined from a small surplus to a 5% deficit in 2004.

Several explanations have been put forward to understand the causes of the current account deficit. Fogli and Perri (2006) argue that the decline in U.S. business cycle volatility has led to lower precautionary saving resulting in lower current account balances. Mendoza et al. (2009) suggest that the U.S. has been accumulating foreign liabilities because the financial markets in the rest of the world are not as well developed. Backus et al. (2005) mention that the current account deficit in the U.S. may be mainly due to the weak economic conditions in several high-surplus countries relative to the U.S. Attanasio et al. (2007), Domeij and Floden (2006), Henriksen (2005), and Krueger and Ludwig (2007) highlight the importance of demographic differences between regions leading to large and persistent current account imbalances.[1]

☆ We thank the editor (Bob King) and an anonymous referee for their comments. We also thank the seminar participants at USC, University of California at Riverside, Federal Reserve Banks of Atlanta, Chicago and New York, Conference on Economic Dynamics at the University of Tokyo, 2006 Annual Meetings of the Society for Economic Dynamics, CEMFI, Madrid, IIES, Stockholm University, Indiana University, Purdue University, CERGE-EI, Charles University in Prague, University of Iowa, and the University of Mannheim for helpful comments.

* Corresponding author. Tel.: +1 213 740 6546.
E-mail address: selo@marshall.usc.edu (S. İmrohoroğlu).

[1] These deficits have been a source of concern for many. For example, Obstfeld and Rogoff (2004) predict that the current account imbalances in the U.S. will result in a 30% depreciation of the dollar. Roubini and Setser (2005) suggest that the U.S. is on an unsustainable and dangerous path. Summers (2004) cautions that the current account deficit in the U.S. has all the hallmarks of a particularly serious situation.

0304-3932/$ - see front matter © 2009 Elsevier B.V. All rights reserved.
doi:10.1016/j.jmoneco.2009.10.014

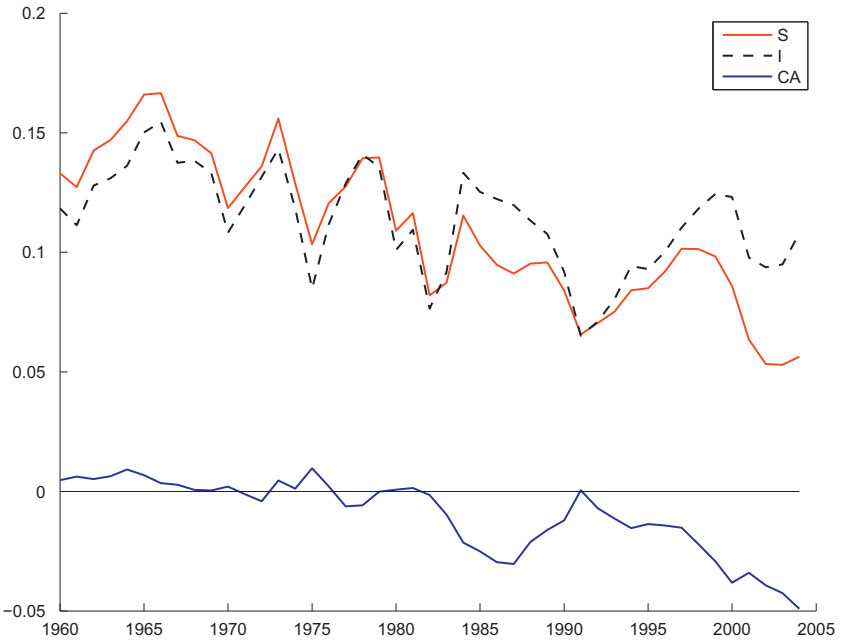

Fig. 1. U.S. saving and investment rate and the CA balance. U.S. data on net national saving and investment as a percent of net national product and the CA balance as a percent of GNP between 1960 and 2004.

Demographic factors have also been considered in explaining the secular decline in the saving rate. For example, Gokhale et al. (1996) attribute the decline in the saving rate to the redistribution of resources through social security and medicare, from young consumers with low marginal propensities to consume, to older generations with high marginal propensities to consume.[2]

This paper explores the quantitative implications of changes in TFP growth rates, factor income tax rates, population growth rates and depreciation rates in the U.S. relative to its trading partners on the secular movements in the net national saving and investment rates and the current account balance using the standard growth theory.[3] There have been significant changes in these exogenous factors since 1960s in the U.S. and the rest of the world (ROW). We specify a two-country, perfect foresight economy where differences between the U.S. and the ROW with respect to the exogenous variables are introduced as driving forces. For the ROW, attention is restricted to a subset of OECD countries for which there are consistent measurements of their TFP growth rates, population growth rates, shares of government purchases in output, and tax rates on capital and labor income for 1960–2004.

The key finding is that low frequency changes in the U.S. current account can be understood in terms of the influence of differences in productivity growth rates across time and across countries. The secular decline in the U.S. current account balance is primarily driven by the increase in the U.S. TFP growth rate relative to the ROW. Secular movements in the U.S. saving and investment, however, are mainly driven by domestic factors including the population growth rate and the depreciation rate as well as the U.S. TFP growth rate.

The paper is organized as follows. Section 2 presents the growth model used in the paper and its calibration. The quantitative findings are presented in Section 3. Concluding remarks are given in Section 4. The online appendix available on this journal's supplementary material website contains results from our sensitivity analysis, data sources and calibration details.

2. The model

Consider a perfect foresight, two-country growth economy. In each country $i=\{1,2\}$, there is a stand-in household with N_t^i working-age members at date t. Households are assumed to own the capital, K_t^i, and rent it to businesses. Both physical capital and labor are immobile across countries. There is a risk-free bond traded internationally each period. This allows for national saving in one country to finance either domestic or foreign investment. The representative household in country i

[2] Attanasio (1998), Summers and Carroll (1987), and Boskin and Lau (1988a, b) also point to demographic factors in explaining the decline in the saving rate. Another set of papers have focused on the possible relationship between the increase in stock prices and the boom in consumer spending. For example, see Parker (1999), Juster et al. (2000), and Poterba (2000), among others.

[3] The approach in this paper is similar to that in Chen et al. (2006 and 2007).