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The net foreign asset position and government size

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ABSTRACT

This paper analyzes the relationship between the net foreign asset position of a country, and government size and consumption–wealth ratio in a stochastically growing small open economy. The model suggests that more indebted countries are associated with bigger governments when utility-enhancing government spending is also volatility-reducing. More indebted countries would have a higher volatility originating from domestic sources, thus encouraging government to increase its size. Consumption–wealth ratio would also be higher for more indebted countries. The empirical evidence based on a sample of 49 countries for the period 1970–2009 broadly supports the main results of the model across many different specifications.

1. Introduction

The current economic and financial turmoil has been preceded and accompanied by excessive imbalances in the external net foreign asset position of many countries. According to the data on International Investment Position published by the International Monetary Fund, China and Germany, for instance, had creditor positions reaching almost 36% of their GDP in 2009, while Spain, Portugal and Ireland had debtor positions almost amounting to, or surpassing, 100% of their GDP in 2009. The economic and financial consequences provoked by these imbalances are multifold.

This paper analyzes a little-documented relationship between the net foreign asset position of a country and its government size.[1] The impact of the net foreign asset position on consumption–wealth ratio is also studied. In this paper, we offer two main contributions. First, the model employed suggests that more indebted countries are associated with bigger governments. Intuitively, when public spending is utility-enhancing then more indebted countries, i.e., countries where the share of domestic capital in domestic wealth is larger, would have a higher volatility originating from domestic sources, thus encouraging government to increase its size when public spending is also volatility-reducing. Government size is proxied by government consumption, which, in turn, refers to goods that, very broadly speaking, contribute to household welfare via the utility function.[2] Larger government consumption–wealth ratios are also associated with larger private consumption–wealth ratios because they are complements: more indebted countries are also related to larger consumption–wealth ratios. Second, we find that the empirical evidence for 49 countries (22 industrial and 27

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[1] See Song, Storesletten, and Zilibotti (2012) for a recent reference on the relationship between government debt and the size of government. The literature has usually focused on the impact of government debt on output and productivity. See, for instance, Reinhart, Reinhart, and Rogoff (2012) or Afonso and Tovar Jalles (2013).

[2] It may include, for instance, education, health care, defense, and public order. We will not deal with productive spending for simplicity.

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developing countries) broadly supports the positive relationship between the size of the debtor position of a country, and the size of its government and the consumption–wealth ratio suggested by the model across different specifications.

Related issues have been researched extensively.[3] The relationship between openness and the size of government has been widely studied in the literature. Theoretically openness can be associated with both a larger and lower size of the public sector.[4] According to the compensation hypothesis, more open economies have a larger public sector to compensate for higher external risk.[5] On the contrary, according to the efficiency hypothesis (or conventional wisdom), more open economies are associated with a lower sized-public sector due to an increased mobility of inputs and tax competition. The relationship between trade openness and the size of government was analyzed and boosted by Rodrik (1998): more open economies have been found to be associated with a bigger size of government as "government expenditures are used to provide social insurance against external risk" (p. 997).[6] Epifani and Gancia (2009) recently found that the positive association between trade openness and government size is robust across countries and over time for a large dataset of 143 countries during the period 1950–2000. However, several studies have also cast doubts on the robustness of the original result, finding the opposite.[7]

The impact of financial openness on government size has received, on the contrary, less attention and the focus has been mainly empirical. Liberati (2007) found a negative relationship between capital openness and government size for a sample of 20 developed countries for the period 1967–2003, but he acknowledged that different studies have led to different conclusions. In contrast, Kimakova (2009) found a positive association between financial openness and the size of government for a sample of 87 countries for the period 1976–2003. However, recent research based on portfolio choice models, given the huge increase in cross-border holdings of assets and liabilities, has studied the impact of financial openness on the size of government both theoretically and empirically, offering further insights.

The size of government has been found to be positively associated with the degree of financial openness due to risk diversification when government is utility-enhancing (Erauskin, 2013). However, more open economies have also been found to be associated both theoretically and empirically with a lower size of productive government in a stochastic small open economy when spending is productive and volatility-reducing: the lower risk associated with more open economies (through risk diversification) implies that the government is less inclined to increase the scale of its activity (Erauskin, 2011). Koethenbuerger and Lockwood (2010) showed that more open economies (that thus suffer more tax competition) may be theoretically associated with bigger government since setting higher capital tax rates in the domestic economy may not create such an enormous capital outflow if countries want to hold a well diversified portfolio. Therefore, different results for the optimal size of government in open economies depend on different types of government expenditure. However, little is present in the literature on the impact of the net foreign asset position on government size.[8]

In a key theoretical contribution Turnovsky (1999) found that an open economy is associated with a greater size of government if and only if it is a net creditor nation, when government spending is utility-enhancing, or productive and volatility-enhancing, since a stochastically growing open economy is able to export some of its domestic risk.[9] However, although his theoretical finding was related to the empirical work by Rodrik (1998); Alesina and Wacziarg (1998) on government size and openness, instead it referred crucially to the relationship between the net foreign asset position of a country and its size of government.

The model presented in this paper contains a key feature: government spending reduces volatility, which is a fundamental departure from previous contributions, especially Turnovsky (1999). We provide empirical evidence supporting this feature, based on our own sample, as we shall see below. It has also been well-documented in the literature [Galí (1994); Fatás and Mihov (2001); Andrés, Doménech, and Fatás (2008)].[10]

The paper is organized as follows. In Section 2 we characterize a stochastic growth model of a small open economy. The welfare-maximizing size of the public sector and the main implications of the model are derived in Section 3. The sources of data employed are described in Section 4. The empirical evidence is gathered in Section 5, followed by our conclusions in Section 6.

2. The model

The analytical framework is a stochastically growing small open economy in continuous time, where government spending is utility-enhancing and volatility-reducing. The country produces and consumes a single traded good. The representative agent holds two assets in the portfolio: domestic capital, K, and foreign bonds, B. Domestic capital is not traded, and foreign bonds are traded.[11]

[3] This is the case for the relationship between financial openness and economic performance as well. See, for instance, a nice survey by Pagano (1993), a key reference such as Obstfeld (1994); Gehringer (2013) for recent evidence on this issue in the context of the European economic and monetary integration.

[4] See Schulze and Ursprung (1999); Tridimas and Winer (2005) for a recent survey on the determinants of the size of government. Liberati (2007); and Epifani and Gancia (2009) provide good reviews of the literature.

[5] See also Alesina and Wacziarg (1998), where country size explains the positive relationship between government size and trade openness. Recent research by Ram (2009) suggests, on the contrary, that country size cannot explain the positive relationship between openness and government size for a sample of 150 countries during 41 years. We deal with this issue controlling for country size below.

[6] This argument is not new. As far as we know, Cameron (1978) pioneered on the "compensation hypothesis" (as it has become known).

[7] See Liberati (2007); and Epifani and Gancia (2009) for references.

[8] A few papers have tackled somewhat related issues regarding consumption. See Ghironi, Iscan, and Rebucci (2005); Schmitt-Grohé and Uribe (2003), for instance. However, this is not the case for government size, to our knowledge.

[9] See also Barro (1990); Turnovsky (1996).

[10] See also Čorić and Pugh (2013), for recent evidence supporting that foreign direct investment stabilizes output volatility.

[11] See Barro (1990) for the pioneer work and Turnovsky (1999) for an extension to a stochastic small open economy. The small open economy assumption, which precludes foreign ownership of domestic capital, is a standard one in the literature. How relaxing this assumption may affect the results is discussed below.