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ScienceDirect
Journal of International Money and Finance 27 (2008) 1430–1452
Journal of International Money and Finance
www.elsevier.com/locate/jimf

Does openness to trade make countries more vulnerable to sudden stops, or less? Using gravity to establish causality

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Abstract

Openness to trade is one factor that has been identified as determining whether a country is prone to sudden stops in capital inflows. Several authors have offered empirical evidence that having a large tradable sector reduces the contraction necessary to adjust to a given cut-off in funding. Such studies may, however, be subject to the problem that trade is endogenous. We use the gravity instrument for trade openness, which is constructed from geographical determinants of bilateral trade. We find that openness indeed makes countries *less* vulnerable to crises, and that the relationship is even stronger when correcting for the endogeneity of trade.

JEL classification: F32; F36; F41

Keywords: Sudden stops; Current account adjustment; Trade; Gravity model

1. Introduction

A "sudden stop" — an abrupt cut-off in capital inflows — entails a resource transfer to creditors, from the debtor country. Often it also entails a financial or currency crisis in the latter, accompanied by a sharp fall in output.[1] Broadly speaking, there are two opposing views on

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[1] The expression "sudden stops" was first popularized by Dornbusch et al. (1995). Calvo (1998) provided the first analytic approach to the problem of sudden stops.

0261-5606/$ - see front matter
doi:10.1016/j.jimonfin.2007.10.004

the relationship between a country's openness to trade and whether it is prone to these external crises. The first view is that trade openness makes a country more vulnerable to crises. A country highly integrated into world markets is more exposed to shocks coming from abroad. The second view is that countries that are open to international trade are *less* vulnerable to shocks generating in foreign markets. If the ratio of trade to GDP is structurally high, it is easier to adjust to a cut-off in international financing of a given magnitude. This paper tests the relationship between trade openness and vulnerability to sudden stops to help choose between the two hypotheses. Such tests have been done before, but without fully taking into account the possible endogeneity of trade. Our incremental contribution here is to use the gravity instrument for trade openness – which aggregates geographically determined bilateral trade across a country's partners – to correct for the possible endogeneity of trade.

The view that openness makes countries more vulnerable to crises comes in a number of forms. One variant is that a weakening in a country's export markets is sometimes the trigger for a sudden stop in capital flows, so that a high-trade country is more vulnerable. Another variant notes that sudden stops in finance often extend to a loss in trade credit – especially for imports, but sometimes also even for exports – and that the resulting shrinkage in trade is more painful if trade was a larger share of the economy. A third variant says that openness to trade in practice goes hand in hand with openness to financial flows, for example, because much trade needs multinational corporations, who in turn need to be able to move money across national borders; or because it is harder to enforce capital controls if trade is free.[2] In the limiting case, a country that is in autarky with respect to trade must have a net capital account of zero due to the balance of payments adding up constraint. Regardless the specific reasoning, the notion that globalization leads to crises is a generalization that appeals to many.

The view that openness to trade makes countries *less* vulnerable also comes with a number of different specific mechanisms that have been proposed. Rose (2005) argues that the threatened penalty of lost trade is precisely the answer to the riddle ''why do countries so seldom default on their international debts?'' and offers empirical evidence that strong trade links are correlated with low default probabilities.[3] International investors will be less likely to pull out of a country with a high trade/GDP ratio, because they know the country is less likely to default. A higher ratio of trade is a form of ''giving hostages'' that makes a cut-off of lending less likely. In an early contribution, Sachs (1985) suggested that Asian countries had been less vulnerable to debt crises than Latin American countries in the early 1980s – despite similar debt/GDP ratios – because they had higher export/GDP ratios which enabled them to accommodate the shocks better.[4] More recently, Martin and Rey (2006) show in the setting of a general equilibrium model that when emerging markets start opening their financial account but are closed to trade in goods, they are more prone to financial crises because profits and dividends depend on volatile domestic demand. Therefore, a policy implication of the model is that trade openness reduces the vulnerability to financial crises.

[2] Aizenman (2008), and Aizenman and Noy (2004).

[3] Rose's argument has been contested. Martinez and Sandleris (2006) argue that in the aftermath of defaults, there seems to be no evidence of a larger decline in bilateral trade with creditor countries affected by the default. This would imply that the declines in trade are not due to punishments imposed by these creditor countries.

[4] Countries that are more open to trade can *export away* part of the external shock that entails a given cut-off in financing. This is true if it must adjust either with or without nominal or real exchange rate flexibility. See Cavallo and Frankel (2007) for a discussion. Also, Guidotti et al. (2004) provide evidence that economies that trade more recover fairly quickly from the output contraction that usually comes with the sudden stop, while countries that are more closed suffer sharper output contraction and a slower recovery.