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The interest group theory of financial development: Evidence from regulation

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ABSTRACT

We use a new dataset of *de jure* measures of trade, capital account, product market, and domestic financial regulation for 91 countries from 1973 to 2005 to test [Rajan and Zingales's \(2003\)](#) interest group theory of financial development. In line with the theory, we find strong evidence that trade liberalization is a leading indicator of domestic financial liberalization. This result is robust to the use of different data frequencies (annual, 5-year intervals), estimation methods (OLS, 2SLS, system GMM) and a check for non-linear effects. However, in contrast to the theory, we do not find consistent evidence of an effect of capital account liberalization.

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1. Introduction

The role of economic openness in financial development has received particular attention since the contribution by [Rajan and Zingales \(2003\)](#). Their “interest group theory” stresses the role of trade and financial openness in reducing the influence of interest groups that oppose financial development. In a closed economy, incumbents benefit from financial repression and the resulting low financial development because it denies potential competitors the financial resources to enter the market. Increasing both trade and capital account openness undermines this *status quo*. Foreign entry in the domestic goods markets reduces rents and creates more investment needs for incumbents to counter competition and take advantage of new opportunities.¹ At the same time, opening up capital flows renders financial repression increasingly impossible to implement. Studies have tested the effect of trade and financial openness on the liberalization and development of the financial sector from various angles.

So far, tests of the interest group theory have relied on *de facto* measures of openness or financial development, for example trade/GDP or credit/GDP. However, lack of a consistent dataset of regulations across sectors has prevented the possibly most compelling test, namely to examine the effect of liberalization in other

sectors on domestic financial liberalization.² Such a test may be more appropriate than those based on *de facto* measures for several reasons. First, *de facto* openness may rise without any trade liberalization or reduction in rents: for example, higher commodity prices would tend to increase *de facto* openness in both importing and exporting countries with no change in trade policies and, possibly, even with an *increase* of rents in commodity exporting countries. Similarly, higher *de facto* financial depth indicators may not be an indication of domestic financial reform or of a smaller role of incumbents in domestic credit markets. For example, China's high deposit-to-GDP ratio co-exists with—or may even be partly explained by—financial repression and lack of domestic financial reform. Finally, *de facto* financial development measures are likely to rise when capital inflows are buoyant making the coefficient of *de jure* openness on *de facto* financial development endogenous if politicians prefer to liberalize in good times ([Henry, 2007](#)). Testing the interest group theory with *de jure* measures (which, as we acknowledge, have their own shortcomings³) is the first main innovation of this paper.

As our second key innovation—and an extension of the original interest group theory, we examine whether product market

² [Barlow and Radulescu \(2005\)](#) examine the effect of *de jure* trade liberalization on *de jure* domestic financial liberalization, but only for a relatively limited sample of transition countries over a 10-year period.

³ *De jure* measures do not capture the degree of enforcement of capital controls, which can change over time even if the legal restrictions themselves remain unchanged, and they do not always reflect the actual degree of integration of an economy into international capital markets. For example, China, despite extensive capital controls, has not been able to stop inflows of speculative capital ([Kose et al., 2006](#)).

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¹ [Tressel \(2008\)](#) shows that trade reforms foster output growth in export sectors that rely more intensively on imported intermediated goods.

liberalization has a positive effect on domestic financial liberalization, over and above the one of openness. We see this as an important complement to the role of openness in the interest group theory, because product market reform can be expected to trigger domestic financial sector reform for the same reasons as trade liberalization, by tilting the cost-benefit balance of financial liberalization for incumbent firms: product market liberalization is likely to increase the demand for external financing by creating new expansion opportunities; a need to invest to fend off new competitors; and lower profitability and thus reduced scope for internal financing of investment. We expect such an effect that undermines the *status quo* in favor of financial repression to be particularly pronounced for agriculture that in most developing countries constitutes the largest part of the population, electorate, and economy. Indeed, Rajan and Ramcharan (2008) show that the importance of incumbent farmers negatively affects financial liberalization, in line with the interest group theory.

If trade liberalization follows, or is part of, a broader process of product market liberalization, and we do not control for the latter, we risk attributing to openness an effect on domestic financial reforms that should be attributed to domestic product market policies. However, if we can confirm that *both* openness and product market deregulation positively affect domestic financial liberalization, this strengthens the evidence in favor of the role of openness—and highlights an additional role of domestic product market liberalization in the process of financial liberalization that has not been examined so far.

We present evidence on the effect of trade, capital account, and product market (in fact, agriculture, electricity, and telecommunications) liberalization on domestic financial liberalization based on a new dataset on structural reforms, including yearly observations for 91 countries during 1973–2005. While this dataset obviously builds on existing indices and methodology, most of the data is entirely new, and ours is—to the best of our knowledge—the largest existing dataset on structural reforms in high-, middle-, and low-income countries.

Our results provide further evidence in favor of the interest group theory as far as trade and domestic product market liberalization are concerned. Trade liberalization helps to predict domestic financial liberalization as long as 5 years ahead. This result is robust to controlling for product market liberalization. In contrast, there is little evidence that capital account liberalization helps to predict domestic financial liberalization beyond a 1-year horizon, and even this effect is limited to its securities markets component. However, product market liberalization is a robust leading indicator of domestic financial liberalization at short and long horizons: specifically, agriculture liberalization leads domestic financial liberalization in low- and middle-income countries, and liberalization of the energy and telecom sectors has a positive significant effect at low levels of domestic financial liberalization.

Our contribution adds to a rich literature that aims to explain the variation in financial development between countries and across time. Some of the main strands of the literature have focused on legal institutions (e.g., La Porta et al., 1997; Claessens and Laeven, 2003), economic institutions (e.g., Acemoglu et al., 2005), endowments (e.g., Beck et al., 2000; Acemoglu et al., 2001), culture (Stulz and Williamson, 2003), social capital (Guiso et al., 2004), and macro factors such as inflation (Boyd et al., 2001) and public debt (Hauner, 2008).

Several studies have tested the effect of trade and financial openness on the liberalization and development of the financial sector from various angles. Rajan and Zingales (2003) measured both openness (trade and capital flows) and financial development in *de facto* terms. Subsequent research has estimated the effects of *de jure* openness, specifically trade and capital account liberalization, on *de facto* financial development (Baltagi et al., 2009; Chinn and Ito, 2006). In a study that is particularly closely related to our approach, Braun and

Raddatz (2008) establish that countries where trade liberalization results in an increase in the relative strength of sectors that benefit from financial liberalization experience faster subsequent financial development than others. This finding is essentially the micro (sector-level) complement of our macro (country-level) analysis here. The literature has also established that *de facto* trade openness leads to financial liberalization (without distinction between domestic and capital account liberalization, see Abiad and Mody, 2005) and equity market liberalization (Kim and Kenny, 2007).

In the rest of the paper, Section 2 presents our novel dataset of structural reforms; Section 3 discusses the estimation strategy; Section 4 reports the results; and Section 5 concludes.

2. Data

We use a new dataset of indices of liberalization in trade, capital account, the domestic financial sector, and product markets—namely agriculture, electricity, and telecommunications—with annual observations from 1973 to 2005 for 91 countries of all income levels, selected on the basis of data availability. We here only briefly describe the data; see IMF (2009) for more detail.

Trade openness is measured by average tariff rates.⁴ Our data is unique in that: (i) it covers a large sample of countries on an annual basis for more than three decades; (ii) the index is constructed to be comparable over time and across countries; and (iii) it offers a continuous measure of the level of liberalization. The index provides an alternative to the widely used index by Sachs and Warner (1995) which has been criticized (Rodríguez and Rodrik, 2001) as dominated by information that is not necessarily capturing trade restrictions, namely the black market premium and the existence of an export marketing board. In our dataset, we consider the presence of export marketing boards more appropriately in the agriculture index (see below).

Financial openness is measured by qualitative indicators of restrictions on financial credits and personal capital transactions of residents and financial credits to nonresidents, as well as the use of multiple exchange rates. Domestic financial liberalization is measured by the simple average of six sub-indices: (i) credit controls, such as directed credit; (ii) interest rate controls, such as floors or ceilings; (iii) entry barriers in the banking sector, such as licensing requirements or limits on the participation of foreign banks; (iv) competition restrictions, such as limits on branches; (v) the degree of state ownership; and (vi) aggregate credit ceilings. This data comes from the database by Abiad et al. (2010) which follows the methodology in Abiad and Mody (2005) but provides for a tripling of the information through greater coverage and an additional index for aggregate credit ceilings.⁵

Product market liberalization is measured by two separate indices for the network industries and agriculture. The networks index is the simple average of the electricity and telecom markets sub-indices, which are constructed, in turn, from scores along three dimensions.⁶ All this data, which was coded based on legislation,

⁴ Tariff rates come from various sources, including IMF, World Bank, WTO, UN, and the academic literature (particularly Clemens and Williamson, 2004). The index uses average tariff rates when they are available and implicit weighted tariff rates to extrapolate the missing values. The index is normalized to be between zero and one: zero means the tariff rates are 60% or higher, while one means the tariff rates are zero.

⁵ As in Abiad and Mody (2005), the subindices are aggregated with equal weights. The original sources of the coded information are mostly various IMF reports and working papers, but also central bank websites, etc. Each sub index is coded from zero (fully repressed) to three (fully liberalized).

⁶ For electricity, the sub-indices capture (i) the degree of unbundling of generation, transmission, and distribution; (ii) whether a regulator other than government has been established; and (iii) whether the wholesale market has been liberalized. For telecom, they capture (i) the degree of competition in local services; (ii) whether a regulator other than government has been established; and (iii) the degree of liberalization of interconnection changes. The indices are coded with values ranging from zero (not liberalized) to two (completely liberalized).

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