

Foreign bank presence and business regulations

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Abstract.

We examine the impact of foreign bank presence on a host countries' business regulatory environment. We employ a panel dataset of 87 developing economies for the 1995-2013 period and measure the efficiency of business regulations using the indices from the Heritage and the Fraser datasets. Our results show that foreign bank presence exerts a positive impact on the efficiency of business regulations; however, we find no evidence in favor of a more pronounced positive effect when foreign banks originate from countries that have a more efficient business regulatory environment. Moreover, host countries' administrative requirements and, particularly, bureaucracy costs benefit from a foreign bank presence; however, cost and time procedures to start a business do not.

Keywords: Foreign banks, business regulations, panel data

JEL classification codes: F21, G21, K20, O57

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1. Introduction

In a large number of countries, regulatory standards have been in the midst of a deregulatory dynamic in recent years (Drahos and Braithwaite, 2001). However, business regulations, a part of the wider regulatory spectrum, are of utmost importance for entrepreneurs, policy makers and academics. This importance is because the efficiency of the business regulatory environment translates into procedures and regulations that facilitate business entry, increase competition, ease market pricing and impede the creation of barriers to trade (Gwartney et al., 2015). This efficiency leads to an economic environment in which it is easier for entrepreneurship to flourish and firms to compete on an equal footing (World Bank, 2014), which results in enhanced economic growth prospects.

During the same period, the foreign bank presence soared in nearly all countries, following the financial liberalization wave which, however, exhibited different pace/speeds worldwide and, in certain cases, reversals, and which was bolstered by the increase in international trade. The geographic areas that exhibited a significant increase in foreign bank entry include Asia, Africa, Latin America, Middle East and Eastern Europe (Clarke *et al.*, 2001; Lehner and Schnitzer, 2008; Claessens and Van Horen, 2014).

Most empirical research examines how business regulations and the institutional environment affect the establishment, behavior and operation of foreign banks and, more generally, of multinational companies (MNCs). In this paper, we focus on a different aspect: whether the foreign bank presence has a regulatory impact in host countries. Specifically, we explore the impact of the foreign bank presence on the efficiency of public business regulations in host developing countries, that is, regulations set and enforced by the sovereignty in which firms operate. Importantly, we address reverse causality and endogeneity concerns by using appropriate techniques and control regressions.

The remainder of this paper is organized as follows. The second section reviews the literature on the foreign bank presence and business regulations, delineates the conceptual framework and formulates the research questions. The third section presents and discusses the data, and the fourth section presents the empirical methodology and analyzes the results. Finally, the fifth section concludes.

2. Literature review and conceptual framework

Financial sector FDI, i.e., foreign bank presence, along with real sector FDI, facilitates the integration of host economies into the international economy, the promotion of greater allocative efficiency and technology adoption, the moderation of the magnitude of business cycles, better wages and growth prospects. (Goldberg, 2004). In addition to the effects on real economic activity, FDI exerts a positive influence on the institutional quality of the host countries in the long run, as Kwok and Tadesse (2006) illustrate for the case of corruption.

Focusing on the foreign bank presence, its beneficial impact on access to credit of the host countries' firms is documented in Giannetti and Ongena (2012) and Clarke *et al.* (2006). Consequently, foreign bank presence contributes to the host country's financial sector development through the increase in external financing and, hence, to the export share and trade balance improvement of manufactured goods (Beck, 2002).

However, these positive outcomes for the host economy are not limited to an increase in the amount of funds available to local firms. Recent empirical evidence documents another important aspect of the foreign bank presence related to the enlargement of the business opportunities for the domestic export-oriented sectors. Specifically, Paravasini *et al.* (2014) find that foreign banks are not substitutes to domestic banks in the provision of credit to local firms; the former have a comparative advantage over the latter in lending and specialization in the export market in which their headquarters are located.

Furthermore, because foreign banks tend to be more efficient than domestic banks in developing countries (Berger, 2007; Berger *et al.*, 2000), their presence enhances the growth prospects of the economy through accelerating productivity (Levine, 2001; Claessens and van Horen, 2007). Despite the disadvantage foreign banks have relative to their domestic peers due to the non-possession of soft information on local borrowers, this disadvantage may not be germane to their targeted host nation activity, as multinational retail banking is relatively rarely observed (Guillen and Tschoegl, 1999). Foreign bank lending is mainly directed to higher quality borrowers and is cheaper, due to these firms' increased availability of collateral, which serves as a device for the screening process (Sengupta, 2007).

Nevertheless, more recent evidence suggests that foreign banks also lend to small and medium enterprises; however, their share in this type of lending is lower than that of domestic banks in developing countries. Therefore, foreign banks rely on lending technologies such as asset-based lending, leasing and credit scoring and on centralized organizational structures rather than on relationship lending (Berger and Udell, 2006; de la Torre *et al.*, 2010; Beck *et al.*, 2012).

In turn, business regulations are particularly important for a country's institutional and economic development. Indicatively, a stricter and non-competitive business regulatory environment provides the seeds of corruption, as firms attempt to overcome the regulatory burden (Shleifer and Vishny, 1993); this constitutes an important obstacle to economic growth (Djankov *et al.*, 2006).

However, business regulations evolve over time, with forward and backward movements, as countries, particularly developing economies, strive to climb the ladder of international competitiveness and improve the business climate (Braithwaite and Drahos, 2000). International forces, which are composed of globalization and changes in international industrial organization, have been very intense in recent years and have profound implications

for regulation and governance (Mayer and Gereffi, 2010). These forces have proven more powerful than potentially opposing domestic ones. The overall effect on business regulations resulted in the worldwide spread of a set of regulatory norms across countries, termed as "globalization of regulation" (Drahos and Braithwaite, 2001). Such globalization does not imply that business regulations have been harmonized across countries or that they move monotonically. On the contrary, it implies that, to an extent, "principles, standards, rules, guidelines and models of regulation have converged", as Braithwaite and Drahos (2000) notably indicate.

2.1 Formulation of the research hypotheses

Given the above, we delineate the potential impact of foreign bank presence on the host country's business regulatory environment.

Foreign banks have the objective of increasing their profits and market shares in the host country. Therefore, these banks are interested in attracting firms with increased collateral values, given their disadvantage in the possession of soft information on local borrowers and better growth prospects. Moreover, foreign banks have increased expertise in international business and are more experienced in collaborating with more competitive clients. Additionally, through their global network, reputation and specialization in services for the more extroverted local firms, these banks could affect the manner in which local markets operate and compete. These advantages of foreign banks relative to domestic ones, particularly in developing countries, combined with their higher efficiency, may result in their higher interest and ability for a more competitive business environment for the host country that would, in turn, expand the foreign banks' present and future profit opportunities.

Thus, a higher foreign bank presence in the host developing country results in a more internationalized banking system with more sophisticated risk management techniques and

more loanable funds available for domestic firms. Moreover, a higher foreign bank presence in a country leads to productivity advances and increased economic growth opportunities for the host country, as well as in improvement in the business conduct. Additionally, an increased foreign presence in the domestic banking system may render more power to foreign banks in favor of economic and regulatory reforms.

Given the preceding discussion, the main research hypothesis that we examine in this paper can be formulated as follows:

H1a: The level of foreign bank presence in a country positively affects the efficiency of business regulations over time.

If the foreign bank presence affects the business regulatory environment of the host country, such an effect could be more pronounced the larger the gap in the efficiency of business regulations that foreign banks encounter in the local economy compared to that in the foreign bank's home country. In such a case, a possible "regulatory transfer" channel may be present, in which foreign banks that originate from more efficient regulatory environments serve as sources of institutional diffusion for the host countries. This rationale helps us to more explicitly formulate the following hypothesis:

H1b: The presence of foreign banks from countries with a more efficient business regulatory environment could have a more pronounced positive effect on the efficiency of the host country's business regulations over time.

3. Data description

We developed a large unbalanced panel dataset with annual data for 87 developing economies¹ for the 1995-2013 period. The list of countries in our sample is reported in Table A.1 of the Appendix. It is worth noticing that the sample does not include International Financial Centres or countries that rank in the top of the list according to the Financial Secrecy Index (i.e., tax havens). Table 1 lists the variables employed, in addition to their definition and sources.

Insert Table 1 here

3.1 Dependent variables

We measure the efficiency of business regulations at the country level using two indices from two different international sources. Both indices are aggregate measures of the efficiency of government regulation of business, are suitable, by construction, for cross-country and time-series analyses and are widely used in the literature. The first is the business freedom index from the Heritage Foundation and is available annually from 1995 onward. This index is constructed from an array of measurements of the difficulty of starting, operating and closing a business and ranges from 0 to 100, with higher values indicating a freer business environment.

The second is the Fraser business regulations index, which measures a number of regulatory obstacles in firm operation and activity. This index is derived from an array of six sub-components based on Global Competitive Report questions and World Bank's Doing Business data that measure administrative requirements, bureaucracy costs, time and costs to start a business, bribes and favoritism, licensing restrictions and the cost of tax compliance. This index, as all Fraser Institute's indices, is available annually from 2000 to 2013 and at

¹ According to the IMF's World Economic Outlook (2015) list.

five-year intervals before 2000. The scale of this index is from 0 to 10; higher values indicate a lower business regulatory burden.

Additionally, to obtain further insights from our analysis, we examine the influence of the foreign bank presence on specific aspects of the regulatory environment firms encounter. Thus, we also use the first three of the six Fraser business regulations index sub-components noted above as dependent variables, i.e., administrative requirements, bureaucracy costs and time and costs to start a business. These sub-components are the most important aspects of the business regulatory environment, and they are available from 2000 onward. These variables are also scaled from 0 to 10; higher values indicate a lower regulatory burden or higher product quality standards in the case of bureaucracy costs.

Table 2 presents summary statistics, i.e., the mean, standard deviation and the minimum and maximum values for the dependent variables, in addition to the explanatory and control variables employed in the analysis and presented below. Table 3 reports the pair-wise correlation matrix.

Insert Tables 2 and 3 here

As Table 3 indicates, although the Heritage business freedom index and the Fraser business regulations index target capturing the same aspect, i.e., the efficiency of government regulation of business, possible methodological differences in their calculation result in a correlation coefficient of 0.41 for our sample.

3.2 Main explanatory variables

We use two measures for the foreign bank presence: The first is the (log) foreign bank count, i.e., the natural logarithm of the percentage of foreign banks among total banks in a country.

The second is the (log) foreign bank market share, i.e., the natural logarithm of the percentage of foreign bank assets plus off balance sheet items among total bank assets plus off balance sheet items. We use the natural logarithm of the foreign bank presence variables to estimate the impact of a percentage change, rather than a percentage point change, of the foreign bank presence on the developing host country's business regulatory environment. Both measures are calculated from the Claessens and van Horen (2015) updated dataset,² whereas the bank balance sheet data for the construction of the foreign bank market share measure originate from BankScope. A bank is defined as foreign owned when 50% percent or more of its shares are owned by foreigners (Claessens and van Horen, 2014).

The foreign bank market share variable is constructed for the 2004-2013 period due to BankScope's limitations on bank asset data availability before 2004 (Claessens and Van Horen, 2014). The rationale behind the choice of including off balance sheet items in the calculation of foreign bank market share is to capture the activity of banks, particularly foreign owned, in the provision of financing activities such as trade finance instruments, e.g., letters of credit and guarantees and/or the use of derivatives to hedge their positions in the real sector.³

The correlation coefficient between the two foreign bank presence measures, as reported in Table 3, is 0.78 for our developing countries sample, which reflects the recent developments in global financial integration. As Claessens and van Horen (2015) note, the financial crisis resulted in a non-uniform evolution of the importance of foreign bank presence across countries, i.e., the growth in foreign bank market shares. In some countries, this importance was strengthened, whereas in others, it was weakened; the overall trend is characterized by a retrenchment after 2008, although this is smaller for developing than for developed economies. Figure I presents the fluctuations of the cross-sectional mean of the

² This dataset is available online at <http://www.dnb.nl/en/onderzoek-2/databases/index.jsp>.

³ We are thankful to an anonymous referee for noting this aspect to us.

foreign bank count and the foreign bank market share over the 1995-2013 period in our sample. As it is apparent from this figure, the retrenchment of the foreign bank market share after 2008 is also present in our developing countries' sample, whereas the foreign bank count exhibits a leveling-off circa 2012.

Insert Figure 1 here

4. Empirical methodology and results

We estimate a dynamic panel model of the form:

$$y_{it} = a + \beta y_{it-1} + \gamma FB_{it-n} + \sum_j \delta_j X_{jt-1} + \varepsilon_t + u_{it} \quad (1)$$

where y_{it} denotes the regulatory variable for country i at time t . The inclusion of the lagged dependent variable y_{it-1} captures possible institutional persistence. FB_{it-n} is (log) foreign bank presence at year $t - n$. We use three different time lags for the foreign bank presence, i.e., n takes the values 1, 2 or 3, to examine how the potential impact of the foreign bank presence on business regulations is related to the length of the time lag n . ε_t is a full set of time dummies to control for shocks that are common to all countries, whereas u_{it} is the residual term.

X_{jt-1} is a j -dimension array of control variables measured at year $t - 1$ that may affect business regulations at year t . This array includes the natural logarithm of the GDP per capita, PPP (constant 2011 international \$) from the World Development Indicators, which measures the standard of living in the domestic economy. A higher level of per capita income is usually related to a higher level of international competitiveness for a country and thus, it is, *ceteris paribus*, related to a more competitive business regulatory environment.

The GDP growth rate and the inflation rate, based on the GDP deflator, from the World Development Indicators are two variables that strive to capture the prevailing economic conditions during the business cycle. A higher growth rate is expected to be negatively related to the incentives of the government for regulatory reforms, whereas a higher inflation rate possibly indicates a less competitive business environment; thus, we anticipate a negative relation with business regulations. The ratio of bank credit to bank deposits from the Global Financial Development Database proxies for the availability of funds in each country. Higher values of this variable are expected to positively impact business regulations. The inward FDI flows to GDP from the UNCTAD database and the trade to GDP, i.e., the sum of the country's imports plus exports as a share of GDP, from the World Development Indicators, are two variables that are used to control for the FDI attractiveness and the degree of integration of each country into international trade networks, respectively. The expected sign of these two measures is ambiguous because higher values could signal either a suspension of business regulatory reforms on a "good as it is" rationale or could provide the seeds of the implementation, or the continuation, of more efficient regulatory policies.

Finally, the X_{jt-1} array also comprises the size of government index⁴ from the Fraser Institute and the two dummy variables, denoted as Left-wing and Right-wing. These latter variables take the value of 1 if the chief executive party's orientation of the host country with respect to economic policy is leftist (communist, socialist, social democratic or left-wing) or rightist (conservative, Christian democratic or right-wing), and 0 otherwise. For the construction of these two dummy variables, we relied on the Database of Political Institutions (Beck *et al.* 2001). The size of government index proxies for the size of government interference with the economy, such as the level of government consumption, transfers and subsidies, government enterprises and investment and the top marginal tax rate and is

⁴ We linearly interpolate this index for the 1996-1999 period to employ the entire 1995-2013 period when the Heritage's business freedom index is used as the dependent variable.

expected to have a negative sign. The expected sign of the Left-wing (Right-wing) dummy is ambiguous. In principle, a left-wing (right-wing) government could be less (more) prone to undertake more efficient regulatory reforms. However, there are countries in recent years, as, e.g., the Philippines or the apartheid era South Africa, in which a right-wing government actually opposed regulatory reforms in favor of incumbent elites.

We estimate Equation (1) using the fixed effects OLS estimation method with robust standard errors clustered by country.⁵ Through the country fixed effects we essentially control for the host country's financial system (bank- or market-based) following La Porta *et al.* (1997), a characteristic which could impact upon the nature of regulatory diffusion.

The results from this analysis are reported in Table 4, which consists of two panels. Panel A reports the results when the foreign bank count is used as a measure of the foreign bank presence, whereas Panel B reports the relevant results when the foreign bank market share is the main explanatory variable.

Insert Table 4 here

As Panel A in Table 4 indicates, the lagged foreign bank count positively impacts both business regulation indices. The significance of the relevant coefficients is 5% (1% in column V) when the one and two year time lags of the foreign bank count are used, whereas it decreases to the 10% level when the three year lag of this foreign bank presence measure is employed (columns III and VI). Regarding Panel B, the results show that the lagged foreign bank market share is significant at the 5% level only for the Heritage business freedom index and for one- and two-year time lags.

⁵ We also estimate equation (1) using the Arellano-Bover/Blundell-Bond GMM technique (Arellano and Bover, 1995; Blundell and Bond, 1998) to control for the potential endogenous relationship between business regulations and the explanatory and control variables. The results, available upon request, are essentially similar to those with the fixed effects OLS estimation method.

Interestingly, these coefficients are larger than the relevant coefficients of lagged foreign bank count (coefficient/t-statistic: 1.607/2.324 in column VII vs. 1.284/2.311 in column I and 1.743/2.070 in column VIII vs. 1.023/2.035 in column II). In contrast, as columns X to XII report, the lagged foreign bank market share is not significant when the Fraser business regulation index is employed as the dependent variable; moreover the relevant coefficients bear a negative sign. This difference in the significance and the sign of foreign bank market share between the two regulatory indices may be attributed to the different way they are constructed, as well as in the differences in the evolution of foreign bank count and foreign bank market share in developing economies because of the crisis.

From the array of control variables when the foreign bank count is employed as the measure of the foreign bank presence in Panel A, lagged GDP per capita exerts a consistent positive impact on the Heritage business freedom index; however, the lagged inflation rate and Left wing dummy are negatively related (strongly for the latter variable) to the dependent variable. For the Fraser business regulation index, only the lagged GDP growth exerts a positive impact. All other lagged control variables are found to have no consistent significant effect on business regulations. In contrast, in Panel B where results with the foreign bank market share are reported, none control variable is consistently significant, except for Left wing (with negative sign) with the Heritage index.

4.1 Sensitivity analysis

To ensure that foreign bank presence's impact on business regulations does not capture an effect that is related to FDI in general, we used the FDI inflow to GDP as our main explanatory variable, as in Kwok and Tadesse (2006). This usage included 1-, 2- and 3-lags and we controlled for foreign bank count or foreign bank market share in the economy at t-1.

The results, available upon request due to space considerations, confirm that, in contrast to foreign bank presence, FDI does not have an impact on business regulations.

The CEE countries are very special in our context. The sudden transition from state-organized mechanisms to market-oriented systems both induced entry of foreign banks and large reforms in the system. In case they thereby adopted similar (but more rapid) reform patterns than other countries, this might be beneficial for our empirical analysis. To ensure that the presence of CEE countries does not drive our results, we conducted a sensitivity analysis by dropping these countries from the sample.⁶ The results for both measures of foreign bank presence confirm that this not the case.

Finally, we performed the Extreme Bounds Analysis on the foreign bank presence variables. Specifically, we estimated equation (1) by including, apart from the foreign bank presence measures, all possible combinations of the elements of the control array X comprising eight variables as presented above (the Left-wing and Right-wing dummy variables are treated as a pair). This analysis verifies the robustness of the findings reported in Table 4.

Therefore, the results overwhelmingly suggest that the foreign bank presence positively impacts the efficiency of the host country's business regulations, thus validating our research hypothesis H1a.

4.2 Foreign banks that originate from the more efficiently regulated countries

Foreign banks that originate from countries with more efficient business regulations may have superior experience and expertise and be more familiar with a more competent operation of firms. Subsequently, a rise in the presence of such foreign banks should have a more pronounced effect on the host countries' business regulations. To test this hypothesis, we first

⁶ These countries are, namely: Albania, Bulgaria, Croatia, Hungary, Republic of Moldova, FYROM, Poland, Romania, Russian Federation and Ukraine.

rank the countries according to the average efficiency of their business regulatory environment, over the 1995-2000 period, using the Heritage business freedom index and the Fraser business regulation index as measures.⁷ We choose the earlier available 1995-2000 period for this averaging to focus on the countries that have a longer tradition with a more efficient business regulatory environment. Then, we consider as home countries for the foreign banks in our sample only those that belong in the top 10 percentile⁸ of the distribution for these two average measures. Thus, we end up with two lists of countries. With respect to the Heritage business freedom index, the list comprises the following 21 countries which are (ranked from the highest to the lowest, and for equal values, in alphabetical order): Bahamas, Hong Kong, Singapore, Bahrain, Czech Republic, United Kingdom, Argentina, Canada, Chile, Cyprus, Denmark, Estonia, France, Ireland, Israel, Japan, Kuwait, Luxembourg, Malaysia, Mauritius, New Zealand, South Africa, Taiwan, United Arab Emirates, and United States. With respect to the Fraser business regulation index, the list includes 10 countries which are (ranked from the highest to the lowest): Singapore, Finland, New Zealand, Hong Kong, Iceland, United Kingdom, Estonia, United States, Denmark, and Netherlands.⁹

Then, we utilize the Claessens and van Horen (2015) dataset and construct two new foreign bank count explanatory variables for the 2001-2013 period, i.e., the (log) of the percentage among total banks only of those foreign banks whose home country belongs in each of these two lists. We denote these two variables as foreign bank count Heritage efficient and foreign bank count Fraser efficient, respectively. We repeat this procedure and calculate the relevant (log) foreign bank market share variables for the 2004-2013 period denoted as the foreign bank market share Heritage efficient and the foreign bank market share Fraser

⁷ Because the Fraser business regulation index is available at five-year intervals before 2000, we average the relevant values for 1995 and 2000 for each country.

⁸ The countries that belong to the 10th percentile threshold are approximately the same as those that belong to the 15th percentile of the distribution for both regulatory indices.

⁹ The differences between the two measures of business regulations explain the differences in these two lists of countries.

efficient, respectively. However, it is worth noticing that these foreign bank presence variables do not explain the total level of the foreign bank presence, measured either as the foreign bank count or the foreign bank market share, in each host country; in addition, they do not cover all developing countries in the sample, in accordance with the manner in which they are constructed (refer to Table 2 for their descriptive statistics). Using these four new explanatory variables, we replicate the results of Table 4 and report the findings in Table 5.

Insert Table 5 here

Table 5 is composed of two parts: Part I shows the results when the foreign bank count Heritage efficient and the foreign bank market share Heritage efficient are employed as the main explanatory variables, in Panel A and Panel B, respectively. Analogously, Part II reports the relevant results when the Fraser efficient foreign bank presence measures are used instead, in Panel C for the foreign bank count Fraser efficient and in Panel D for the foreign bank market share Fraser efficient. For brevity, only the results of the main explanatory variables are reported.

As Part I of Table 5 indicates, both the foreign bank count and the foreign bank market share variables exert a positive, albeit weaker in terms of statistical significance and, in most cases, in terms of magnitude, impact on the business regulation indices. The only exception is, as in Table 4, the results for the foreign bank market share Heritage efficient when the Fraser business regulation index is employed (columns X to XII) which are insignificant. A similar picture emerges in Part II when the Fraser efficient foreign bank presence measures are used.

In sum, the above results do not provide evidence in favor of a 'regulatory transfer' channel working through foreign banks that originates from a more efficient business regulatory environment. Therefore, our research hypothesis H1b is not validated.

4.3 Foreign bank presence as an 'event'

To further elucidate our first research hypothesis, we employ an alternative empirical approach based on the event study methodology. In this setting, we transform each continuous foreign bank presence variable, i.e., the foreign bank count and the foreign bank market share, into a dummy variable that takes the value of 1 if the foreign bank presence exceeds a predefined threshold and 0 otherwise. In other words, we treat the foreign bank presence above a threshold at a given country-year as an 'event'. Subsequently, we examine whether this 'event' exerts an impact on the Fraser business regulations index sub-components, i.e., administrative requirements, bureaucracy costs and time and costs, to start a business in the host country in the one-, two- and three-year time horizons.

This modeling choice strives to serve three purposes: The first, and most important, purpose is to help us identify whether a certain threshold of the foreign bank presence in the host country plays a role in impacting the business regulatory environment. Given our discussion in Section 2, we would expect that the higher the threshold is, the higher the impact of foreign bank presence on regulations. Furthermore, we would also expect that the longer the time horizon is, the higher the impact of foreign bank presence above a given threshold on business regulations. The second purpose is to offer additional evidence against reverse causality issues by treating this 'event' as endogenous using an appropriate instrument. Finally, the third purpose is to provide further robust empirical evidence through the use of an alternative modeling choice.

We use four different thresholds for the construction of the relevant foreign bank presence dummy variables, namely the 10%, 20%, 30% and 40% of the foreign bank count or the foreign bank market share. Thus, we are able to explore more extensively whether the increased foreign bank presence in the host country's banking system affects its business regulations.

The treatment effects model employed has the following form:

$$FBx_{it} = b_0 + b_1z_{it} + e_{it} \quad (2)$$

$$y_{it+n} = a_0 + a_1y_{it} + a_2\widehat{FBx}_{it} + \sum_j a_3X_{jit} + \varepsilon_t + u_{it+n} \quad (3)$$

where FBx_{it} is

$$FBx_{it} = \begin{cases} 0, & FB_{it} < x \\ 1, & FB_{it} \geq x \end{cases}$$

and $x \in \{10\%; 20\%; 30\%; 40\%\}$. Equation (2) is the treatment equation, i.e., a probit model, in which z is an instrumental variable that affects the probability of the foreign bank presence being greater than the threshold x in country i ; however, for identification purposes, z should not directly affect the response variable y , i.e., the business regulatory environment in the country. We use the host country's (log) population as a proxy for the potential market size, following Detragiache *et al.* (2008). The rationale is that foreign banks, which operate in many countries, strive to diversify country risk; thus, the smaller the country, the larger the benefit is for foreign banks in this diversification strategy and subsequently, the greater probability of an increased foreign bank presence is. We presume that a country's potential market size, proxied by its population, does not directly affect the business regulatory environment; thus, satisfying the exclusion restriction criterion.

Equation (3) models the response of administrative requirements, bureaucracy costs and time and costs to start a business of country i at year $t + n$ when the foreign bank

presence at year t exceeds the threshold x . This group of country-years is the treatment group, whereas the remainder serve as a control group. Thus, the coefficient of interest is a_2 , which captures the average effect on business regulatory components at year $t + n$ when foreign bank presence exceeds the threshold x at t .

The j -dimension vector X_j is the same as that employed in equation (1) and controls for all other factors that may shape business regulations, thus making the treatment and control groups comparable. We also include the dependent variable at t to capture possible regulatory persistence and control for possible differences in the trend of the variable between the treated and control groups before the treatment that may introduce a bias into the estimation of a_2 . ε_t is a full set of time dummies to control for shocks common to all countries. We simultaneously estimate equations (2) and (3) using a two-step consistent estimator of the parameters.

As previously, we perform this analysis for $n =$ one, two and three years after the 'event' to explore the time frame in which the impact of the foreign bank presence on business regulatory components materializes. Furthermore, the use of the four distinct foreign bank presence dummies for each of the two foreign bank presence measures enables us to identify the level above which the host country's regulatory environment is influenced.

The results are reported in Tables 6, 7 and 8 for administrative requirements, bureaucracy costs and cost and time procedures to start a business, respectively. For brevity, we show only the coefficients of the four foreign bank count dummies in Panel A and the four foreign bank market share dummies in Panel B in each Table, in addition to the results from the first stage probit model.

Beginning with Table 6, the results in Panel A show that a foreign bank count above 30% exerts a positive impact on the administrative requirements in the two- and three- year time horizon. The instrument is very strong in the first stage probit in all cases, with a

negative coefficient, as in Detragiache *et al.* (2008). However, the impact of the foreign bank market share on administrative requirements is stronger than that of the foreign bank count, as the results in Panel B suggest. Indeed, the coefficients of the foreign bank market share dummies are larger than the relevant dummies in Panel A, whereas they are progressively more significant, beginning with the threshold of 20% and the one-year horizon. As expected, for each bank presence dummy in both Panels, the coefficients gradually increase as we move towards longer time horizons; this indicates that the foreign bank presence share in the domestic economy affects, to an increasing extent, the administrative requirements in the host country as time passes. However, within each time horizon and for the foreign bank market share dummies, there is no consistent pattern of increase in the coefficients of the foreign bank market share dummies as we move across the different thresholds, whereas there is essentially no increase for the foreign bank count dummies.

Insert Table 6 here

Regarding Table 7, the results in both Panels A and B show that foreign bank presence impacts bureaucracy costs in the host country more heavily and with a positive sign. All coefficients of the foreign bank presence dummies are significant at the 1% level, whereas their magnitude is much larger in a one-to-one comparison with the relevant coefficients in Table 6. Again, as in Table 6, the coefficients gradually increase for each bank presence dummy as we move towards longer time horizons; however, within each time horizon, the results reveal a diminishing impact of the foreign bank presence's threshold on bureaucracy costs.

Insert Table 7 here

Last, Table 8 reveals that the foreign bank presence does not affect the cost and time procedures to start a business in the host country because all dummy coefficients are insignificant.

Insert Table 8 here

The above results may be related to the specific nature of the business regulations. The administrative requirements explain measures that reflect the general regulations that horizontally affect domestic and foreign businesses in the host country. Bureaucratic costs mainly reflect the country's product/service quality, which could be improved through the presence of foreign banks. Export-oriented firms tend to produce products and/or services of high quality because they are confronted with fierce competition in international markets. These firms benefit most from the presence of foreign banks, which provide additional channels of funding to these types of firms. Furthermore, this evidence may reflect an attempt by host governments for enhancement and dispersion within the domestic markets of the foreign banks' superior expertise through more stringent product quality standards.

5. Summary and conclusions

The entry of foreign banks into local banking markets has attracted much attention in the literature. Most empirical research thus far has examined how the institutional environment in a country provides the framework for the establishment and strategy of foreign banks. In this study, we highlight the other side of the picture; we examine whether the presence of foreign banks affects business regulations in host countries.

We formulate two research propositions that provide the framework of our analysis. The first hypothesis seeks to provide evidence that the level of foreign bank presence in a country positively affects the efficiency of business regulations over time. Under the second hypothesis, we examine whether the foreign bank presence from countries with more efficient business regulations has a more pronounced positive effect on the host country's business regulations over time.

We empirically examine our propositions using an unbalanced panel dataset for 87 developing economies over the 1995-2013 period and carefully address reverse causality and endogeneity concerns by using appropriate techniques and control regressions. We use two different dependent variables: The first is the Heritage business freedom index constructed by the Heritage Foundation, which is an overall indicator of the efficiency of the government regulation of business. The second is the Fraser business regulations index, which measures a number of regulatory obstacles in firm operation, such as administrative requirements, bureaucracy costs and cost and time procedures to start a business. We conduct our analysis using two distinct measures of foreign bank presence: the first employs the number of foreign banks among total banks in a country, and the second explains the market share of foreign banks in the host country's banking system, considering also the off balance sheet activities of banks.

Our results provide support in favor of the positive effects on the efficiency domestic business regulations that can be attributed to the presence of foreign banks. Specifically, it is shown that the foreign bank presence positively affects both business regulation indices, with the exception of foreign bank market share and the Fraser business regulation index over the 2004-2013 period; this finding is consistent with our first proposition. However, the second proposition is not verified by our empirical analysis. Foreign banks that originate from the

more efficient business regulation countries do not appear to consistently influence the efficiency of the host countries' business regulatory environment.

The empirical support for our first hypothesis is further strengthened by the estimate of a model in which the foreign bank presence above a threshold is treated as an endogenous 'event'. The estimated equations provide confirmation of the above findings with respect to the host countries' administrative requirements and, particularly, bureaucracy costs. In contrast, costs and time procedures to start a business in the host country do not appear to benefit from the foreign bank presence.

References

- Arellano, M., and Bover, O. (1995). Another Look at the Instrumental-Variable Estimation of Error-Component Models, *Journal of Econometrics* 68, 29-52.
- Beck, T. (2002). Financial development and international trade: Is there a link?, *Journal of International Economics* 57, 107–131.
- Beck, T., Clarke, G., Groff, A., Keefer, P., and Walsh, P. (2001). New tools in comparative political economy: The Database of Political Institutions, *World Bank Economic Review* 15, 165-176.
- Beck, T., Ioannidou, V., and Schäfer, L. (2012). Foreigners vs. Natives: Bank lending technologies and loan pricing, CentER Discussion Paper No. 55, Tilburg University.
- Berger, A. N. , (2007). International Comparisons of Banking Efficiency, *Financial Markets Institutions and Instruments* 16, 119-143.
- Berger, A.N., and Udell, G.F. (2006). A more complete conceptual framework for SME finance, *Journal of Banking and Finance* 30, 2945-2966.
- Berger, A. N., DeYoung, R., Genay, H., and Udell, G.F. (2000). Globalisation of financial institutions: Evidence from cross-border banking performance, *Brookings-Wharton Papers on Financial Service* 3, 23-120.
- Blundell, R. and Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models, *Journal of Econometrics* 87, 115-143.
- Braithwaite, J., and Drahos, P. (2000). *Global business regulation*, Cambridge University Press.
- Čihák, M., Demirgüç-Kunt, A., Feyen, E., and Levine, R. (2012). Benchmarking Financial Systems Around the World, *World Bank Policy Research Working Paper* 6175, World Bank, Washington, D.C.
- Claessens, S., and Van Horen, N. (2007). Location decisions of foreign banks and competitive advantage, *World Bank Policy Research Working Paper* 4113.
- _____ (2014). Foreign banks: Trends and impact, *Journal of Money, Credit and Banking* 46, 295-326.
- _____ (2015). The impact of global financial crisis on banking globalization, *IMF Economic Review*, forthcoming.
- Clarke, G., R.G., Cull, R., and Pería, M.S. (2006). Foreign bank participation and access to credit across firms in developing countries, *Journal of Comparative Economics* 34, 774–795.

- Clarke, G., R.G., Cull, R., Pería, M.S., and Sánchez, S.M. (2001). Foreign bank entry: Experience, implications for developing countries and agenda for further research, *World Bank Research Observer* 18, 25–59.
- de la Torre, A., Martinez Peria, M.S., and Schmukler, S. (2010). Bank involvement with SMEs: Beyond relationship lending, *Journal of Banking and Finance* 34, 2280-2293.
- Detragiache, E., Tressel, T., and Gupta, P. (2008). Foreign banks in poor countries: Theory and evidence, *Journal of Finance* 63, 2123-2160.
- Djankov, S., McLiesh, C., and Ramalho, R.M. (2006). Regulation and growth, *Economics Letters* 92, 395–401.
- Drahos, P., and Braithwaite, J. (2001). The globalization of business regulation, *Journal of Political Philosophy* 9, 103-128.
- Giannetti, M., and Ongena, S. (2012). “Lending by example”: Direct and indirect effects of foreign banks in emerging markets, *Journal of International Economics* 86, 167–180.
- Goldberg, L.S. (2004). Financial sector FDI and host countries: New and old lessons, NBER Working Paper No. 10441.
- Guillen, M. F., and Tschoegl, A.E. (1999). At last the internationalization of retail banking? The case of the spanish banks in Latin America, *The Wharton School*.
- Gwartney J.D., Hall, J.C., and Lawson, R. (2015). *Economic Freedom of the World: 2015 Annual Report*, Fraser Institute.
- Heritage Foundation. *Economic Opportunity and Prosperity: The 2015 Index of Economic Freedom*, www.heritage.org/index.
- Kwok, C.C.Y., and Tadesse, S., (2006). The MNC as an agent of change for host-country institutions: FDI and corruption, *Journal of International Business Studies* 37, 767-785.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R. (1997). Legal determinants of external finance, *Journal of Finance* 52, 1131-1150.
- Lehner, M., and Schnitzer, M. (2008). Entry of foreign banks and their impact on host countries, *Journal of Comparative Economics* 36, 430–452.
- Levine, R. (2001). International financial liberalization and economic growth, *Review of International Economics* 9, 688-702.
- Mayer, F. and Gereffi, G. (2010). Regulation and economic globalization: Prospects and limits of private governance, *Business and Politics* 12, Article 11.
- Paravasini, D., Rappoport, V., and Schnabl, P. (2014). Comparative advantage and specialization in bank lending, working paper.

Sengupta, R. (2007). Foreign entry and bank competition, *Journal of Financial Economics* 84, 502–528.

Shleifer, A., and Vishny, W. (1993). Corruption, *Quarterly Journal of Economics* 108, 599–617.

World Bank (2014). *Doing Business 2015: Going Beyond Efficiency*. Washington, DC: World Bank.

World Economic Outlook, Database (2015)—WEO Groups and Aggregates Information, April 2015

Table 1 Definitions and sources of variables

| Variable | Definition | Source |
|---|--|--|
| Dependent variables | | |
| Business freedom | Measures the efficiency of government regulation of business, and is derived from an array of measurements of the difficulty of starting, operating, and closing a business. Higher values indicate higher freedom. | Heritage Foundation (2015) |
| Business regulations | Measures the efficiency of government regulation of business. Higher values indicate higher efficiency. | Fraser Institute (Gwartney <i>et al.</i> , 2015) |
| <i>Business regulations sub-components</i> | | |
| Administrative requirements | Measures the extent to which compliance of firms to administrative requirements (permits, regulations and reporting) is burdensome (lower values) or not burdensome (higher values). | Fraser Institute (Gwartney <i>et al.</i> , 2015) |
| Bureaucracy costs | Measures the stringency of the country's product/service quality, energy and other regulations (except environmental). Higher values indicate greater stringency. | |
| Cost and time procedures to start a business | Measures the cost and time of starting a limited-liability business. It is the average of three indices that measure the time (in days) required to starting a new business, the fee costs to be paid to regulatory authorities, and the minimum capital requirements (as a share of per-capita income). A higher value indicates that it takes less time or is less costly to start a new business. | |
| Explanatory variables | | |
| (log) Foreign bank count | Natural logarithm of the percentage of foreign banks among total banks. | Claessens and van Horen (2015), Bankscope and authors' calculations. |
| (log) Foreign bank market share | Natural logarithm of the percentage of foreign banks assets plus off balance sheet items among total bank assets plus off balance sheet items. | |
| (log) Foreign bank count Heritage efficient | Natural logarithm of the percentage of foreign banks among total banks only of those foreign banks whose home country belongs in the top 10 percentile of the distribution of the average, over the period 1995-2000, Heritage business freedom index. | |
| (log) Foreign bank count Fraser efficient | Natural logarithm of the percentage of foreign banks among total banks only of those foreign banks whose home country belongs in the top 10 percentile of the distribution of the average, over the period 1995-2000, Fraser business regulation index. | |
| (log) Foreign bank market share Heritage efficient | Natural logarithm of the percentage of foreign banks assets plus off balance sheet items among total bank assets plus off balance sheet items only of those foreign banks whose home country belongs in the top 10 percentile of the distribution of the average, over the period 1995-2000, Heritage business freedom index. | |
| (log) Foreign bank market share Fraser efficient | Natural logarithm of the percentage of foreign banks assets plus off balance sheet items among total bank assets plus off balance sheet items only of those foreign banks whose home country belongs in the top 10 percentile of the distribution of the average, over the period 1995-2000, Fraser business regulation index. | |
| Foreign bank count (market share) dummy 10;20;30;40 | Dummy variable that equals 1 if foreign bank count (foreign bank market share) equals or is greater than 10%; 20%; 30% or 40%, respectively, and 0 otherwise | |
| Control variables | | |
| (log) GDP per capita | (log) GDP per capita, PPP (constant 2011 international \$) | World Development Indicators |

| | | |
|------------------------------|--|--|
| GDP growth | GDP growth (%) | |
| Inflation | Inflation, based on the GDP deflator (%) | |
| Trade to GDP | Trade (% of GDP) | |
| Bank credit to bank deposits | Bank credit to bank deposits (%) | Global Financial Development database (Čihák <i>et al.</i> , 2012) |
| Inward FDI flow | Inward direct investment flows, as a share of GDP | United Nations Conference on Trade and Development (UNCTAD) statistics |
| Size of government | Measures the size of government interference with the economy (government consumption, transfers and subsidies, government enterprises and investment, top marginal tax rate). | Fraser Institute (Gwartney <i>et al.</i> , 2015) |
| Left-wing | Dummy variable that equals 1 if the chief executive party's orientation of the host country with respect to economic policy is leftist (communist, socialist, social democratic, or left-wing) and 0 otherwise | Database of Political Institutions (Beck <i>et al.</i> , 2001) and authors' calculations |
| Right-wing | Dummy variable that equals 1 if the chief executive party's orientation of the host country with respect to economic policy is rightist (conservative, Christian democratic, or right-wing) and 0 otherwise | |
| Instrument | | |
| (log) population | Natural logarithm of the host country's population | World Development Indicators |

Table 2 Summary Statistics

| Variable | Obs. | Mean | St. Dev. | Min. | Max. |
|--|-------|-------|----------|--------|---------|
| Dependent variables | | | | | |
| Business freedom | 1,588 | 61.39 | 12.12 | 26.80 | 100.00 |
| Business regulations | 1,049 | 5.66 | 0.93 | 2.81 | 8.22 |
| <i>Business regulations sub-components</i> | | | | | |
| Administrative requirements | 1,005 | 3.64 | 1.25 | 0.94 | 7.88 |
| Bureaucracy costs | 999 | 5.29 | 1.27 | 0.37 | 9.95 |
| Starting a business | 1,058 | 7.88 | 1.71 | 1.99 | 9.93 |
| Explanatory variables | | | | | |
| (log) Foreign bank count | 1,626 | 3.54 | 0.74 | 1.14 | 4.61 |
| (log) Foreign bank market share | 759 | 3.42 | 1.11 | -0.32 | 4.61 |
| (log) Foreign bank count Heritage efficient | 893 | 2.67 | 0.74 | 0.76 | 4.14 |
| (log) Foreign bank count Fraser efficient | 775 | 2.50 | 0.66 | 0.76 | 4.14 |
| (log) Foreign bank market share Heritage efficient | 579 | 2.33 | 1.53 | -3.48 | 4.58 |
| (log) Foreign bank market share Fraser efficient | 469 | 2.27 | 1.39 | -3.92 | 4.56 |
| Foreign bank count dummy 10 | 1,626 | 0.93 | 0.25 | 0 | 1 |
| Foreign bank count dummy 20 | 1,626 | 0.78 | 0.42 | 0 | 1 |
| Foreign bank count dummy 30 | 1,626 | 0.64 | 0.48 | 0 | 1 |
| Foreign bank count dummy 40 | 1,626 | 0.50 | 0.50 | 0 | 1 |
| Foreign bank market share dummy 10 | 759 | 0.86 | 0.35 | 0 | 1 |
| Foreign bank market share dummy 20 | 759 | 0.71 | 0.45 | 0 | 1 |
| Foreign bank market share dummy 30 | 759 | 0.60 | 0.49 | 0 | 1 |
| Foreign bank market share dummy 40 | 759 | 0.52 | 0.50 | 0 | 1 |
| Control variables | | | | | |
| (log) GDP per capita | 1,647 | 8.61 | 1.06 | 6.15 | 11.61 |
| GDP growth | 1,647 | 4.51 | 4.84 | -17.67 | 88.96 |
| Inflation | 1,647 | 18.91 | 160.45 | -27.63 | 5399.51 |
| Bank credit to bank deposits | 1,593 | 96.18 | 70.62 | 8.61 | 898.01 |
| Inward FDI flow | 1,645 | 3.88 | 4.78 | -14.37 | 53.81 |
| Trade to GDP | 1,639 | 77.74 | 34.78 | 15.58 | 220.41 |
| Size of government | 1,653 | 6.76 | 2.17 | -11.40 | 27.20 |
| Left-wing | 1,566 | 0.30 | 0.46 | 0 | 1 |
| Right-wing | 1,566 | 0.19 | 0.39 | 0 | 1 |
| Instrument | | | | | |
| (log) population | 1,653 | 16.42 | 1.52 | 12.49 | 21.03 |

Notes: The table reports descriptive statistics for the variables employed in the analysis. Sample period is 1995-2013. For the variables' definitions and sources, see Table I.

Table 3 Pairwise correlation matrix

| | Business freedom | Business regulations | Administrative requirements | Bureaucracy costs | Starting a business | (log) Foreign bank presence | (log) Foreign bank market share | GDP per capita | GDP growth | Inflation | Bank credit to bank deposits | Inward FDI flows | Openness | Size of government | Left-wing | Left-wing |
|---------------------------------|------------------|----------------------|-----------------------------|-------------------|---------------------|-----------------------------|---------------------------------|----------------|------------|-----------|------------------------------|------------------|----------|--------------------|-----------|-----------|
| Business freedom | 1 | | | | | | | | | | | | | | | |
| Business regulations | 0.41 | 1 | | | | | | | | | | | | | | |
| Administrative requirements | 0.19 | 0.57 | 1 | | | | | | | | | | | | | |
| Bureaucracy costs | -0.13 | 0.13 | 0.00 | 1 | | | | | | | | | | | | |
| Starting a business | 0.34 | 0.63 | 0.08 | 0.00 | 1 | | | | | | | | | | | |
| (log) Foreign bank presence | 0.18 | 0.24 | 0.06 | 0.13 | 0.15 | 1 | | | | | | | | | | |
| (log) Foreign bank market share | 0.13 | 0.03 | -0.06 | 0.14 | -0.03 | 0.78 | 1 | | | | | | | | | |
| GDP per capita | 0.52 | 0.28 | 0.03 | -0.22 | 0.33 | -0.05 | -0.23 | 1 | | | | | | | | |
| GDP growth | -0.15 | 0.07 | 0.12 | -0.05 | 0.08 | -0.08 | -0.20 | -0.08 | 1 | | | | | | | |
| Inflation | -0.07 | -0.21 | -0.06 | -0.03 | -0.14 | -0.01 | -0.09 | -0.06 | -0.02 | 1 | | | | | | |
| Bank credit to bank deposits | -0.04 | 0.02 | 0.05 | 0.01 | 0.10 | -0.21 | -0.27 | 0.06 | 0.07 | -0.05 | 1 | | | | | |
| Inward FDI flows | 0.05 | 0.19 | 0.13 | 0.07 | 0.14 | 0.12 | 0.10 | 0.05 | 0.11 | 0.01 | 0.05 | 1 | | | | |
| Trade to GDP | 0.19 | 0.31 | 0.20 | -0.10 | 0.20 | 0.14 | -0.05 | 0.31 | 0.04 | 0.03 | 0.16 | 0.28 | 1 | | | |
| Size of government | 0.00 | 0.09 | 0.04 | 0.02 | 0.08 | -0.05 | -0.04 | -0.03 | -0.08 | -0.01 | -0.18 | 0.04 | -0.10 | 1 | | |
| Left-wing | 0.02 | 0.02 | -0.05 | 0.08 | 0.05 | 0.11 | 0.04 | 0.03 | 0.03 | 0.03 | 0.13 | 0.04 | -0.03 | -0.03 | 1 | |
| Right-wing | 0.08 | -0.02 | 0.02 | -0.02 | -0.07 | 0.08 | 0.17 | 0.05 | -0.09 | 0.02 | -0.07 | -0.05 | -0.03 | 0.00 | -0.32 | 1 |
| (log) population | -0.29 | -0.32 | -0.12 | -0.08 | -0.13 | -0.38 | -0.39 | -0.17 | 0.06 | 0.02 | 0.13 | -0.18 | -0.44 | -0.02 | 0.09 | -0.09 |

Notes: Sample period is 1995-2013. For the variables' definitions and sources, see Table I.

Table 4 Foreign bank presence and business regulations

| Dependent variable: | Panel A: Foreign bank count | | | | | | Panel B: Foreign bank market share | | | | | |
|--------------------------------|-----------------------------|-----------------------|-----------------------|-----------------------------|----------------------|----------------------|------------------------------------|-----------------------|----------------------|-----------------------------|---------------------|---------------------|
| | Heritage business freedom | | | Fraser business regulations | | | Heritage business freedom | | | Fraser business regulations | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Lagged dependent | 0.768*** (35.347) | 0.770*** (34.924) | 0.768*** (37.134) | 0.617*** (11.029) | 0.604*** (10.694) | 0.601*** (10.981) | 0.495*** (12.660) | 0.327*** (5.307) | 0.606*** (13.313) | 0.555*** (12.405) | 0.474*** (5.833) | 0.662*** (8.327) |
| Foreign bank presence t_{-1} | 1.284** (2.311) | | | 0.131** (2.552) | | | 1.607** (2.324) | | | -0.018 (-0.603) | | |
| Foreign bank presence t_{-2} | | 1.023** (2.035) | | | 0.163*** (3.040) | | | 1.743** (2.070) | | | -0.007 (-0.247) | |
| Foreign bank presence t_{-3} | | | 0.876* (1.769) | | | 0.097* (1.669) | | | 0.424 (0.686) | | | -0.053 (-1.140) |
| GDP per capita t_{-1} | 3.100* (1.907) | 3.363* (1.981) | 3.384* (1.945) | 0.036 (0.264) | 0.016 (0.110) | 0.026 (0.173) | 0.036 (0.008) | 4.633 (0.878) | -2.277 (-0.488) | 0.178 (0.744) | 0.270 (0.864) | 0.429* (1.900) |
| GDP growth t_{-1} | -0.029 (-1.008) | -0.038 (-1.268) | -0.042 (-1.331) | 0.008** (2.552) | 0.008** (2.437) | 0.008** (2.381) | -0.051 (-1.057) | -0.122* (-1.954) | -0.042 (-0.986) | 0.006 (1.548) | 0.003 (0.806) | 0.000 (0.116) |
| Inflation t_{-1} | -0.000* (-1.740) | -0.001* (-1.690) | -0.004** (-2.131) | -0.000 (-0.495) | -0.000 (-0.362) | -0.001 (-0.819) | -0.038* (-1.696) | -0.008 (-0.315) | -0.021 (-1.348) | 0.002 (1.520) | 0.002** (2.147) | -0.000 (-0.293) |
| Bank credit/Deposits t_{-1} | 0.001 (0.354) | 0.001 (0.243) | 0.000 (0.012) | 0.000 (0.925) | 0.000 (0.513) | 0.000 (0.611) | -0.015** (-2.144) | -0.007 (-0.667) | -0.000 (-0.010) | 0.000 (0.102) | 0.000 (1.403) | 0.000 (0.405) |
| Inward FDI flow t_{-1} | -0.030 (-0.854) | -0.028 (-0.783) | -0.047 (-1.263) | 0.000 (0.027) | 0.000 (0.079) | 0.002 (0.436) | -0.126 (-1.426) | -0.096 (-0.810) | -0.063 (-1.326) | -0.001 (-0.228) | 0.005 (1.378) | 0.002 (0.641) |
| Trade to GDP t_{-1} | 0.015 (1.151) | 0.015 (1.080) | 0.016 (1.138) | -0.000 (-0.126) | -0.000 (-0.084) | -0.000 (-0.118) | 0.046 (1.625) | 0.048 (1.146) | 0.030 (1.195) | 0.001 (0.477) | -0.000 (-0.114) | -0.001 (-0.372) |
| Size of government t_{-1} | -0.013 (-0.111) | -0.020 (-0.139) | 0.067 (0.630) | 0.025 (0.879) | 0.024 (0.804) | 0.018 (0.596) | 0.600* (1.734) | 0.674 (1.654) | 0.435 (1.416) | 0.027 (0.813) | 0.006 (0.193) | -0.025 (-0.825) |
| Left-wing t_{-1} | -1.575*** (-3.905) | -1.638*** (-4.025) | -1.613*** (-3.979) | 0.004 (0.072) | 0.009 (0.178) | 0.018 (0.351) | -2.471*** (-3.441) | -2.494*** (-2.758) | -1.360* (-1.956) | -0.038 (-0.649) | -0.061 (-0.934) | -0.029 (-0.581) |
| Right-wing t_{-1} | -0.067 (-0.150) | -0.207 (-0.445) | -0.187 (-0.397) | 0.072 (1.130) | 0.079 (1.324) | 0.093 (1.639) | -1.443* (-1.692) | -2.328** (-2.326) | 0.486 (0.676) | 0.042 (0.641) | -0.007 (-0.100) | -0.074 (-1.201) |
| Diagnostics | | | | | | | | | | | | |
| Obs. | 1404 | 1344 | 1272 | 1019 | 998 | 977 | 661 | 590 | 517 | 648 | 583 | 510 |
| No. of countries | 87 | 87 | 87 | 87 | 87 | 87 | 86 | 86 | 85 | 86 | 86 | 85 |
| Adj. - Rsq | 0.65 | 0.64 | 0.64 | 0.67 | 0.67 | 0.66 | 0.38 | 0.24 | 0.44 | 0.61 | 0.54 | 0.42 |

Notes: The table reports coefficient estimates of equation (1). Estimation method is fixed-effects OLS with robust standard errors clustered by country. Panel A reports the results when the (log) foreign bank count is used as measure for foreign bank presence. Panel B reports the result when the (log) foreign bank market share is used as measure for foreign bank

presence. For variable definitions and sources, see Table 1. The dependent variables of each regression are noted in the first line of the table. A full set of time dummies is included in all regressions. Unbalanced panel, sample period is 1995 – 2013 in Panel A and 2004 – 2013 in Panel B. *t*-statistics are reported in parentheses. One (*), two (**) and three (***) asterisks denote significance at respectively the 10%, 5% and 1% level.

Table 5. Foreign banks from the more efficiently regulated countries during the 1995-2000 period

| Part I: Foreign banks from top countries according to the Heritage business freedom index | | | | | | | | | | | | |
|---|----------------------------------|-------------------|------------------|------------------------------------|--------------------|--------------------|---|--------------------|------------------|------------------------------------|--------------------|--------------------|
| Panel A: Foreign bank count | | | | | | | Panel B: Foreign bank market share | | | | | |
| Dependent variable: | Heritage business freedom | | | Fraser business regulations | | | Heritage business freedom | | | Fraser business regulations | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Foreign bank presence _{t-1} | 1.284** (2.168) | | | 0.091 (1.537) | | | 0.476 (1.179) | | | 0.011 (0.493) | | |
| Foreign bank presence _{t-2} | | 1.098* (1.921) | | | 0.117* (1.755) | | | 0.900* (1.940) | | | -0.028 (-1.327) | |
| Foreign bank presence _{t-3} | | | 0.778 (1.502) | | | 0.102 (1.501) | | | 0.030 (0.100) | | | -0.051 (-1.546) |
| Diagnostics | | | | | | | | | | | | |
| Obs. | 842 | 836 | 824 | 750 | 745 | 736 | 501 | 437 | 374 | 487 | 451 | 367 |
| No. of countries | 73 | 73 | 72 | 73 | 73 | 72 | 70 | 68 | 66 | 70 | 70 | 66 |
| Adj. - Rsq | 0.61 | 0.62 | 0.60 | 0.63 | 0.63 | 0.64 | 0.39 | 0.33 | 0.44 | 0.58 | 0.51 | 0.53 |
| Part II: Foreign banks from top countries according to the Fraser business regulations index | | | | | | | | | | | | |
| Panel C: Foreign bank count | | | | | | | Panel D: Foreign bank market share | | | | | |
| Dependent variable: | Heritage business freedom | | | Fraser business regulations | | | Heritage business freedom | | | Fraser business regulations | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Foreign bank presence _{t-1} | 0.256 (0.406) | | | 0.107* (1.673) | | | 0.727 (1.636) | | | 0.009 (0.422) | | |
| Foreign bank presence _{t-2} | | 0.278 (0.428) | | | 0.134** (2.518) | | | 1.066** (2.458) | | | -0.037 (-1.347) | |
| Foreign bank presence _{t-3} | | | 0.217 (0.341) | | | 0.131** (2.267) | | | 0.053 (0.167) | | | -0.038 (-1.441) |
| Diagnostics | | | | | | | | | | | | |
| Obs. | 731.000 | 729.000 | 722.000 | 655.000 | 652.000 | 647.000 | 386.000 | 330.000 | 279.000 | 379.000 | 326.000 | 276 |
| No. of countries | 71 | 71 | 71 | 70 | 70 | 70 | 65 | 62 | 61 | 65 | 62 | 61 |
| Adj. - Rsq | 0.58 | 0.58 | 0.58 | 0.63 | 0.63 | 0.65 | 0.35 | 0.29 | 0.35 | 0.58 | 0.56 | 0.60 |

Notes: The table reports coefficient estimates of equation (1) for foreign banks that originate from the more efficiently regulated countries for the 1995-2000 period according to the Heritage business freedom index in Part I, and according to the Fraser business regulations index in Part II. For expositional brevity only the results on the foreign bank presence variable are reported. Estimation method is fixed-effects OLS with robust standard errors clustered by country. For variable definitions and sources, see Table 1. The dependent variables of each regression are noted in the first line of each Panel. A full set of time dummies is included in all regressions. Unbalanced panel, sample period is 2001 – 2013. *t*-statistics are reported in parentheses. One (*), two (**), and three (***) asterisks denote significance at respectively the 10%, 5% and 1% level.

Table 6 Foreign bank presence as an 'event': Impact on administrative requirements

| Panel A: Foreign bank count | | | | | | | | | | | | |
|---|---------------------|---------------------|----------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|----------------------|
| | 1 year ahead | | | | 2 years ahead | | | | 3 years ahead | | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Foreign bank count dummy 10 | 0.06 (0.26) | | | | 0.06 (0.20) | | | | 0.01 (0.03) | | | |
| Foreign bank count dummy 20 | | 0.09 (0.67) | | | | 0.18 (1.18) | | | | 0.21 (1.29) | | |
| Foreign bank count dummy 30 | | | 0.16 (1.35) | | | | 0.28* (1.94) | | | | 0.36** (2.17) | |
| Foreign bank count dummy 40 | | | | 0.13 (1.43) | | | | 0.26** (2.24) | | | | 0.33** (2.56) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.32*** (-6.72) | -0.33*** (-9.68) | -0.33*** (-10.26) | -0.42*** (-12.09) | -0.33*** (-6.68) | -0.34*** (-9.60) | -0.33*** (-9.86) | -0.43*** (-11.75) | -0.34*** (-6.64) | -0.36*** (-9.53) | -0.34*** (-9.45) | -0.44*** (-11.34) |
| Obs. | 877 | 877 | 877 | 877 | 800 | 800 | 800 | 800 | 723 | 723 | 723 | 723 |
| Pseudo-Rsq. | 0.14 | 0.12 | 0.11 | 0.15 | 0.15 | 0.13 | 0.11 | 0.15 | 0.16 | 0.14 | 0.11 | 0.16 |
| Panel B: Foreign bank market share | | | | | | | | | | | | |
| Foreign bank market share dummy 10 | 0.19 (0.79) | | | | 0.64* (1.69) | | | | 0.85* (1.83) | | | |
| Foreign bank market share dummy 20 | | 0.26* (1.70) | | | | 0.66*** (2.67) | | | | 0.95*** (2.81) | | |
| Foreign bank market share dummy 30 | | | 0.18* (1.93) | | | | 0.43*** (3.13) | | | | 0.59*** (3.44) | |
| Foreign bank market share dummy 40 | | | | 0.22** (2.27) | | | | 0.50*** (3.45) | | | | 0.67*** (3.74) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.18*** (-4.53) | -0.23*** (-6.50) | -0.39*** (-9.92) | -0.38*** (-9.59) | -0.17*** (-4.20) | -0.22*** (-5.89) | -0.39*** (-9.30) | -0.38*** (-9.06) | -0.17*** (-3.78) | -0.20*** (-5.05) | -0.37*** (-8.42) | -0.37*** (-8.27) |
| Obs. | 622 | 622 | 622 | 622 | 555 | 555 | 555 | 555 | 484 | 484 | 484 | 484 |
| Pseudo-Rsq. | 0.04 | 0.06 | 0.14 | 0.13 | 0.04 | 0.05 | 0.13 | 0.13 | 0.03 | 0.04 | 0.12 | 0.12 |

Note: The table reports coefficient estimates and t-statistics (in parentheses) of the two-stage treatment effects model of equations (2) and (3) for the Fraser's administrative requirements sub-component of business regulations. For expositional brevity only the results on the foreign bank presence dummy variables and on the instrument in equation (2) are presented. For variable definitions and sources, see Table 1. A full set of time dummies is included in all second stage regressions. Sample period is 2000 – 2012. One (*), two (**), and three (***) asterisks denote significance at respectively the 10%, 5% and 1% level.

Table 7 Foreign bank presence as an 'event': Impact on bureaucracy costs

| Panel A: Foreign bank count | | | | | | | | | | | | |
|---|---------------------|---------------------|----------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|----------------------|
| | 1 year ahead | | | | 2 years ahead | | | | 3 years ahead | | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Foreign bank count dummy 10 | 1.96*** (4.68) | | | | 2.43*** (5.06) | | | | 2.38*** (4.96) | | | |
| Foreign bank count dummy 20 | | 1.09*** (4.55) | | | | 1.40*** (5.07) | | | | 1.40*** (5.04) | | |
| Foreign bank count dummy 30 | | | 0.91*** (4.26) | | | | 1.24*** (4.86) | | | | 1.35*** (5.01) | |
| Foreign bank count dummy 40 | | | | 0.69*** (4.17) | | | | 0.94*** (4.89) | | | | 1.03*** (5.15) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.32*** (-6.69) | -0.33*** (-9.64) | -0.33*** (-10.22) | -0.42*** (-12.12) | -0.33*** (-6.64) | -0.34*** (-9.55) | -0.33*** (-9.82) | -0.43*** (-11.77) | -0.34*** (-6.61) | -0.36*** (-9.49) | -0.33*** (-9.43) | -0.44*** (-11.37) |
| Obs. | 869 | 869 | 869 | 869 | 791 | 791 | 791 | 791 | 716 | 716 | 716 | 716 |
| Pseudo-Rsq. | 0.14 | 0.12 | 0.11 | 0.15 | 0.15 | 0.13 | 0.11 | 0.15 | 0.16 | 0.14 | 0.11 | 0.16 |
| Panel B: Foreign bank market share | | | | | | | | | | | | |
| Foreign bank market share dummy 10 | 1.51*** (3.07) | | | | 2.75*** (3.38) | | | | 2.89*** (3.02) | | | |
| Foreign bank market share dummy 20 | | 0.92*** (3.28) | | | | 1.88*** (4.15) | | | | 2.04*** (3.59) | | |
| Foreign bank market share dummy 30 | | | 0.52*** (3.51) | | | | 1.05*** (5.44) | | | | 1.08*** (4.87) | |
| Foreign bank market share dummy 40 | | | | 0.53*** (3.41) | | | | 1.03*** (5.22) | | | | 1.05*** (4.64) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.18*** (-4.52) | -0.23*** (-6.49) | -0.39*** (-9.92) | -0.38*** (-9.61) | -0.17*** (-4.18) | -0.22*** (-5.87) | -0.39*** (-9.30) | -0.38*** (-9.06) | -0.17*** (-3.76) | -0.20*** (-5.03) | -0.37*** (-8.42) | -0.37*** (-8.27) |
| Obs. | 617 | 617 | 617 | 617 | 549 | 549 | 549 | 549 | 479 | 479 | 479 | 479 |
| Pseudo-Rsq. | 0.04 | 0.06 | 0.14 | 0.13 | 0.04 | 0.05 | 0.13 | 0.13 | 0.03 | 0.04 | 0.12 | 0.12 |

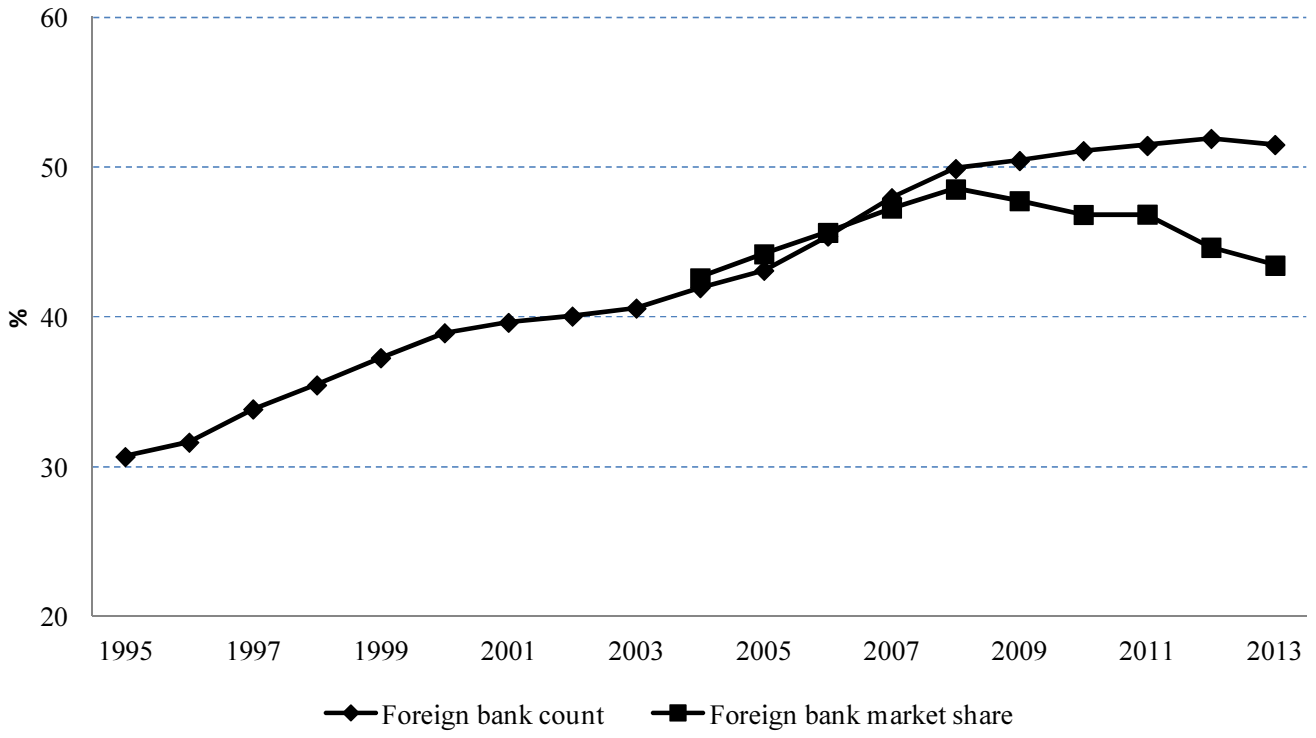
Note: The table reports coefficient estimates and t-statistics (in parentheses) of the two-stage treatment effects model of equations (2) and (3) for the Fraser's bureaucracy costs sub-component of business regulations. For expositional brevity only the results on the foreign bank presence dummy variables and on the instrument in equation (2) are presented. For variable definitions and sources, see Table 1. A full set of time dummies is included in all second stage regressions. Sample period is 2000 – 2012. One (*), two (**), and three (***) asterisks denote significance at respectively the 10%, 5% and 1% level.

Table 8 Foreign bank presence as an 'event': Impact on starting a business procedures

| Panel A: Foreign bank count | | | | | | | | | | | | |
|---|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|----------------------|----------------------|---------------------|---------------------|----------------------|
| | 1 year ahead | | | | 2 years ahead | | | | 3 years ahead | | | |
| | I | II | III | IV | V | VI | VII | VIII | IX | X | XI | XII |
| Foreign bank count dummy 10 | 0.16 (0.57) | | | | 0.46 (1.26) | | | | 0.30 (0.81) | | | |
| Foreign bank count dummy 20 | | -0.15 (-0.90) | | | | -0.10 (-0.48) | | | | -0.11 (-0.51) | | |
| Foreign bank count dummy 30 | | | -0.14 (-0.93) | | | | -0.09 (-0.43) | | | | -0.08 (-0.38) | |
| Foreign bank count dummy 40 | | | | -0.12 (-1.01) | | | | -0.11 (-0.69) | | | | -0.12 (-0.67) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.32*** (-6.79) | -0.30*** (-9.05) | -0.30*** (-9.35) | -0.37*** (-11.17) | -0.34*** (-6.76) | -0.31*** (-8.96) | -0.30*** (-8.91) | -0.38*** (-10.79) | -0.35*** (-6.74) | -0.33*** (-8.93) | -0.30*** (-8.54) | -0.39*** (-10.44) |
| Obs. | 921 | 921 | 921 | 921 | 842 | 842 | 842 | 842 | 765 | 765 | 765 | 765 |
| Pseudo-Rsq. | 0.14 | 0.10 | 0.08 | 0.11 | 0.15 | 0.10 | 0.08 | 0.12 | 0.16 | 0.11 | 0.08 | 0.12 |
| Panel B: Foreign bank market share | | | | | | | | | | | | |
| Foreign bank market share dummy 10 | 0.05 (0.18) | | | | 0.05 (0.16) | | | | 0.03 (0.06) | | | |
| Foreign bank market share dummy 20 | | -0.04 (-0.27) | | | | -0.01 (-0.05) | | | | -0.06 (-0.20) | | |
| Foreign bank market share dummy 30 | | | -0.02 (-0.25) | | | | 0.01 (0.05) | | | | -0.01 (-0.08) | |
| Foreign bank market share dummy 40 | | | | -0.03 (-0.29) | | | | 0.01 (0.08) | | | | -0.00 (-0.01) |
| First stage probit | | | | | | | | | | | | |
| (log) population | -0.17*** (-4.35) | -0.22*** (-6.18) | -0.38*** (-9.59) | -0.36*** (-9.10) | -0.17*** (-4.00) | -0.21*** (-5.55) | -0.37*** (-8.98) | -0.36*** (-8.58) | -0.16*** (-3.57) | -0.19*** (-4.69) | -0.36*** (-8.09) | -0.35*** (-7.78) |
| Obs. | 643 | 643 | 643 | 643 | 574 | 574 | 574 | 574 | 502 | 502 | 502 | 502 |
| Pseudo-Rsq. | 0.04 | 0.05 | 0.12 | 0.11 | 0.03 | 0.05 | 0.12 | 0.11 | 0.03 | 0.04 | 0.11 | 0.10 |

Note: The table reports coefficient estimates and t-statistics (in parentheses) of the two-stage treatment effects model of equations (2) and (3) for the Fraser's starting a business procedures sub-component of business regulations. For expositional brevity only the results on the foreign bank presence dummy variables and on the instrument in equation (2) are presented. For variable definitions and sources, see Table 1. A full set of time dummies is included in all second stage regressions. Sample period is 2000 – 2012. One (*), two (**) and three (***) asterisks denote significance at respectively the 10%, 5% and 1% level.

Figure 1.
Cross-sectional mean



Appendix

Table A.1 List of countries included in the sample

| Country | Income Group | Region |
|----------------------------|----------------------|----------------------------|
| Albania | Upper middle income | Europe & Central Asia |
| Algeria | Upper middle income | Middle East & North Africa |
| Angola | Upper middle income | Sub-Saharan Africa |
| Argentina | Upper middle income | Latin America & Caribbean |
| Armenia | Lower middle income | Europe & Central Asia |
| Azerbaijan | Upper middle income | Europe & Central Asia |
| Bahrain | High income: nonOECD | Middle East & North Africa |
| Bangladesh | Low income | South Asia |
| Barbados | High income: nonOECD | Latin America & Caribbean |
| Benin | Low income | Sub-Saharan Africa |
| Bolivarian Republic | Upper middle income | Latin America & Caribbean |
| Bolivia | Lower middle income | Latin America & Caribbean |
| Bosnia and Herzegovina | Upper middle income | Europe & Central Asia |
| Botswana | Upper middle income | Sub-Saharan Africa |
| Brazil | Upper middle income | Latin America & Caribbean |
| Bulgaria | Upper middle income | Europe & Central Asia |
| Burkina Faso | Low income | Sub-Saharan Africa |
| Burundi | Low income | Sub-Saharan Africa |
| Cambodia | Low income | East Asia & Pacific |
| Cameroon | Lower middle income | Sub-Saharan Africa |
| Chile | High income: OECD | Latin America & Caribbean |
| China | Upper middle income | East Asia & Pacific |
| Colombia | Upper middle income | Latin America & Caribbean |
| Congo, Democratic Republic | Lower middle income | Sub-Saharan Africa |
| Costa Rica | Upper middle income | Latin America & Caribbean |
| Cote d'Ivoire | Lower middle income | Sub-Saharan Africa |
| Croatia | High income: nonOECD | Europe & Central Asia |
| Dominican Republic | Upper middle income | Latin America & Caribbean |
| Ecuador | Upper middle income | Latin America & Caribbean |
| Egypt | Lower middle income | Middle East & North Africa |
| El Salvador | Lower middle income | Latin America & Caribbean |
| FYROM | Upper middle income | Europe & Central Asia |
| Georgia | Lower middle income | Europe & Central Asia |
| Ghana | Lower middle income | Sub-Saharan Africa |
| Guatemala | Lower middle income | Latin America & Caribbean |
| Honduras | Lower middle income | Latin America & Caribbean |
| Hungary | Upper middle income | Europe & Central Asia |
| India | Lower middle income | South Asia |
| Indonesia | Lower middle income | East Asia & Pacific |
| Jamaica | Upper middle income | Latin America & Caribbean |
| Jordan | Upper middle income | Middle East & North Africa |
| Kazakhstan | Upper middle income | Europe & Central Asia |
| Kenya | Low income | Sub-Saharan Africa |
| Kuwait | High income: nonOECD | Middle East & North Africa |
| Kyrgyzstan | Low income | Europe & Central Asia |
| Lebanon | Upper middle income | Middle East & North Africa |
| Madagascar | Low income | Sub-Saharan Africa |
| Malawi | Low income | Sub-Saharan Africa |
| Malaysia | Upper middle income | East Asia & Pacific |
| Mali | Low income | Sub-Saharan Africa |

| | | |
|----------------------|----------------------|----------------------------|
| Mauritania | Lower middle income | Sub-Saharan Africa |
| Mauritius | Upper middle income | Sub-Saharan Africa |
| Mexico | Upper middle income | Latin America & Caribbean |
| Mongolia | Lower middle income | East Asia & Pacific |
| Morocco | Lower middle income | Middle East & North Africa |
| Mozambique | Low income | Sub-Saharan Africa |
| Namibia | Upper middle income | Sub-Saharan Africa |
| Nepal | Low income | South Asia |
| Nicaragua | Lower middle income | Latin America & Caribbean |
| Niger | Low income | Sub-Saharan Africa |
| Nigeria | Lower middle income | Sub-Saharan Africa |
| Pakistan | Lower middle income | South Asia |
| Panama | Upper middle income | Latin America & Caribbean |
| Paraguay | Lower middle income | Latin America & Caribbean |
| Peru | Upper middle income | Latin America & Caribbean |
| Philippines | Lower middle income | East Asia & Pacific |
| Poland | High income: OECD | Europe & Central Asia |
| Republic of Moldova | Lower middle income | Europe & Central Asia |
| Romania | Upper middle income | Europe & Central Asia |
| Russian Federation | High income: nonOECD | Europe & Central Asia |
| Rwanda | Low income | Sub-Saharan Africa |
| Senegal | Lower middle income | Sub-Saharan Africa |
| South Africa | Upper middle income | Sub-Saharan Africa |
| Swaziland | Lower middle income | Sub-Saharan Africa |
| Tanzania | Low income | Sub-Saharan Africa |
| Thailand | Upper middle income | East Asia & Pacific |
| Togo | Low income | Sub-Saharan Africa |
| Trinidad and Tobago | High income: nonOECD | Latin America & Caribbean |
| Tunisia | Upper middle income | Middle East & North Africa |
| Turkey | Upper middle income | Europe & Central Asia |
| Uganda | Low income | Sub-Saharan Africa |
| Ukraine | Lower middle income | Europe & Central Asia |
| United Arab Emirates | High income: nonOECD | Middle East & North Africa |
| Uruguay | High income: nonOECD | Latin America & Caribbean |
| Vietnam | Lower middle income | East Asia & Pacific |
| Zambia | Lower middle income | Sub-Saharan Africa |
| Zimbabwe | Low income | Sub-Saharan Africa |