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# Financial Dependence and Intensive Margin of Trade

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## Abstract

This paper analyze the survival of developing countries exports using the methodology developed by Rajan and Zingales (1998). An exporter faces multiple obstacles when entering new markets: imperfect information about the market, quality requirements of the importing countries, trade and marketing costs etc. Only firms with sufficient financial resources and high productivity can enter the international market. Therefore, one can expect exporters from a country with a well functioning financial markets to survive longer than exporters from a country where the financial markets are underdeveloped. In particular, we check if the exports of industries heavily dependent on external finance survive longer in foreign markets when produced in countries with developed financial system.

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# 1 Introduction

Exporting firms face multiple obstacles when entering new markets: imperfect information about the market, quality requirements of the importing countries, trade and marketing costs etc. Only firms with sufficient financial resources and high productivity can enter the international market. (Melitz 2003; Chaney 2005; Berman 2009). Therefore, one can expect exporters from a country with a well functioning financial markets to survive longer than exporters from a country where the financial markets are underdeveloped.

Since Besedes and Prusa first paper -(2006)- an increasing number of papers have looked into the dynamics of trade using survival analysis. Identifying the determinants of duration of trade relationships is at least as important as understanding the factors driving firms' decision to export.

This is particularly relevant for developing countries for whom access to international market is a mean to achieve higher economic growth. At the product level developing countries export growth is driven primarily by the intensive margin (Besedes and Prusa 2007, Brenton and Newfarmer 2007). Brenton et al. (2009) show that higher export performance is to be expected from the securing (survival) and deepening of existing trade flows rather than the creation of new ones.

Therefore, identifying the determinants of the survival of trade flows is a key issue. This paper objective is to analyze the survival of developing countries exports using the methodology developed by Rajan and Zingales (1998). Building on the authors' work we investigate whether financial development facilitates country-product survival on the international market. In particular, we check if the exports of products from industries heavily dependent on external finance survive longer in foreign markets when produced in countries with developed financial system.

Our paper relates to two strand of the literature. The first examines the link between financial development and growth. This literature's main drawback is the difficulty to establish a casual relationship between financial development and growth as they both might be driven by a common omitted variable. In addition, financial development is typically proxied by the level of credit or the size of the stock market, which may expand due to anticipation of future growth opportunities. In their seminal paper, Rajan and Zingales (1998) propose a methodology to overcome these problems by looking at a specific channel through which financial development may trigger economic growth. They consider the differentiated impact of financial development across industries characterized by different level of external finance dependence.

This methodology has been applied intensively in finance and trade literature. Krozner, Laeven and Klingebiel (2007) analyze the effect of banking crises on industry growth. They show that industries dependent on external financing experience greater growth contraction of value added during the crisis. Levchenko, Ranciere and Thoenig (2008) study the impact of financial liberalization on the industrial growth and volatility. They find that financial liberalization increases both growth and volatility of the sectors relying on external finance. Pang and Wu (2009) study the effect of financial development on capital allocation across industries. Efficiency improvement in capital allocation is more prominent in the industries that depend on external finance. Manova (2008) applies Ralan Zingales methodology to international trade, studying the impact of equity market liberalization on export growth, she finds that equity market liberalization affect disproportionately more sectors intensive in external finance.

This paper also relates to the survival trade literature. Besedes and Prusa (2006a) show that prevalence of short spells in the US import is consistent with a matching model of trade formation. In a subsequent paper, Besedes and Prusa (2006b, 2007) show that survival rate of product level exports varies across types of goods (differentiated, referenced and homogeneous) and across countries (developed and developing countries).

These empirical findings find theoretical foundation in the work of Rauch and Watson (2003). The authors develop a model where developed country buyers look for the suppliers from developing countries. The search is costly and there is uncertainty about the ability of suppliers from developing countries to deliver large orders according to buyers' specification. The buyer learns about the quality of suppliers before making costly investment in their training, by making small orders which do not generate profit. The model predicts that the chances to start a relationship small increase with the search costs. More recently, Araujo and Ornelas (2007) propose a model highlighting the importance of partners reputation in the environment with low contract enforcement. In their model, producers from developed countries look for a partnership with distributors in overseas markets where contracting institutions are weak. Incomplete information about distributors type and imperfect contract enforcement in the host country allows for opportunistic behavior of some distributors, thus depressing trade. The more producer trade with his partners, the more he learns about its level of commitment. This allows in turn to increase the volume of trade substituting for adequate contract enforcement. Improvement in contract enforcement in the importing country rises the expected profit of foreign exporters by boosting the volume within existing partnership. On the other hand, it also reduces the frequency of defaults, slowing down the process of reputation building. The net effect on trade volume within existing partnerships depends on both

horizon of the analysis and the initial level of enforcement.

Our paper differs from existing empirical papers as it focuses on a particular channel through which finance may help trade relationship to survive. Financial markets and institutions help firms overcome moral hazard and adverse selection problem by reducing their costs of raising money from outsiders. Therefore, financial development can benefit the firms or industries that rely on external funding to support their operations. It can also improve firms' perspective in the promotion of their goods in the international market and increases the chance of surviving after trade is initiated.

The paper is organized as follows. Section (2) presents the empirical strategy and the estimation issues. In section (3) we present the country-product data used and show some descriptive statistics on country-product trade relationships survival. Section (4) presents the results and section (5) concludes.

## 2 Empirical strategy

The duration of a country' export for a given product is defined as the time (measured in years) that a trade relationship has been in existence without interruption. We define a trade relationship, the unit of observation, as a exporting-country\*product\*importing-country triplet. Duration analysis rely on conditional probabilities. The hazard rate of a trade relationship is the probability it dies after  $t$  periods given it has survived up to that point. Formally, let  $T \geq 0$ , denote the survival time ( length of a spell) of a given triplet with covariates  $x$ . Our trade flow data being reported annually, we consider the discrete-time hazard rate  $h(t)$ , given by:

$$h(t) = P(T = t|T \geq t, x) \quad t = 1, 2, \dots$$

To establish whether financial development increases the survival of trade flows we model the determinants of product-country survival and check whether the financial development interacted with the degree of external finance dependence of the industry is a statistically significant determinant of the exporting country's hazard of exiting a trade relationship. We examine the role of potential factors affecting trade duration estimating a stratified Cox proportional hazard model <sup>1</sup>. The model is semi-parametric, i.e. no assumptions are made about the nature or shape of the underlying failure distribution.

The underlying assumption of the proportional hazard model is that the hazard

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<sup>1</sup>The proportional hazards (PH) model was developed in order to estimate the effects of different covariates influencing the times-to-failure of a system. The model has been widely used in the biomedical field and more recently has received increasing attention from trade economists.

rate of trade relationships only depends on time at risk, and on explanatory variables affecting trade independently of time. The hazard function is parametrized as:

$$h(t, x, \beta) = h_0(t) \exp(x \cdot \beta)$$

the product of an arbitrary and unspecified baseline hazard rate,  $h_0(t)$ , which is a function of time only and positive function,  $\exp(x' \beta)$  independent of time, which incorporates a vector of explanatory variables  $x$ .  $\beta$  are the parameters to be estimated. The baseline hazard,  $h_0(t)$ , characterizes how hazard changes as a function of time and is allowed to differ across stratas, unlike the vector of parameters which is restricted to be the same for all stratas. The model is estimated by maximizing a partial likelihood function with respect to the vector of parameters  $\beta$  without specifying the form of the baseline hazard function  $h_0(t)$ . Since baseline hazard function is not specified, only the order of duration provides information about the unknown parameters. The estimated coefficients indicate the relationship between the explanatory variables and the hazard function (i.e. the risk for a trade relationship to end).

There are several issues which we need to keep in mind when analyzing the duration of export flows. First, observations may be right-censored. This is the case when trade relationships are still in progress in the final year of the sample period. One third of our observations are right censored. The Cox proportional hazard model can take care of right censoring of the data. Second, spells may be left-censored, which means that we cannot determine the date when they were initiated. In this situation, the actual length of the spells cannot be determined. To mitigate this problem, we estimate the model dropping left censored observations, that is the observations for which trade flows were recorded already in 1995. Such observations represent around 10% of all observations. Third, some trade relationships re-occur, exhibiting what is referred to as multiple spells of service. A country will service a the market for a specific good, exit and re-enter the market. Such consecutive exits may be interdependent. The first exit may make the second one more likely to occur or inversely exporters might learn from their initial failure and manage to stay in a relationship afterwards. To account for this issue in the main estimation, we treat multiple spells as independent but use a dummy variable for higher order spells

## 2.1 The empirical model

Because entering and trading on international markets is costly, exporters must have sufficient financial resources to sustain. This is particularly true for industries that

rely intensively on external financing<sup>2</sup>. Considering a trade relationship as a country  $i$  export to country  $j$  of product  $k$  from industry  $s$ , our main assumption is that exporting country level of financial development has a positive impact on the duration of trade relationships involving products from industries highly dependent on external finance. The external finance intensive industries are identified by Rajan and Zingales (1998) using US firm level data. This measure of external finance dependence captures technological demand for financing and is equal across countries. In their paper, the authors interact the level of financial development with the external finance dependence of the industry controlling for industry and country effects. This allows them to identify differentiated effect of financial development across industries within countries.

Following this methodology, our baseline hazard model writes:

$$h(t, x, \beta) = h_0(t) \exp(\beta_1 \cdot Fin\_Dev_{jt_0} * Ext\_Fin\_Dep_s + \sum_{l \geq 2} \beta_l \cdot x_{lt_0} + \delta_m + \varepsilon_{ijst_0}) \quad (1)$$

where

- $Fin\_Dev_{jt_0}$  is the exporting country  $j$  level of financial development at time  $t_0$ , initiation of the spell. We proxy the level of financial development by the ratio of private bank credit to GDP. We expect the coefficient to be negative and significant, meaning that financial development helps exports survival for external finance dependent industries.
- $Ext\_Fin\_Dep_s$  is the Rajan and Zingales measure of external finance dependence of ISIC-level industry  $s$ . The measure is time invariant.
- $\delta_m$  are various fixed effects (importer, industry, year, importer-time, industry-time).
- We estimate a stratified Cox model, we use the interaction between exporter and time as a stratification variable. Stratification is a way to accommodate fixed effects. It enables a flexible estimation of the model, allowing the baseline hazard rate to vary across exporters and time. Following this methodology we are not able to identify the overall effect of the financial development since it is absorbed by exporting country fixed effects (strata).

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<sup>2</sup>These industries do not generate sufficient cash flow to ensure their investment. In order to ensure firm's production meet international quality standard firms need to do big investment in production plant and machinery.



In our baseline specification we include a set of variables,  $x_{lt_0}$ , that may help describe the bilateral trade relationship apart from features captured by a comprehensive set of country industry time fixed effects:

- $\log initial\_export_{ijkt_0}$  : the (log) initial trade relationship value, export of product  $k$  by country  $j$  to country  $i$  at time  $t_0$  (initiation of the spell) in dollars. This stands as a proxy for the level of confidence trading partners have in the profitability of their trade relationship;
- $\log bilateral\_trade_{ijt_0}$  : the (log) value of aggregate bilateral trade to capture the exporter’s knowledge of the import market;
- $\log total\_export_{jkt_0}$  : the (log) value of total country  $j$  export of product  $k$ ; captures the experience of country  $j$  in exporting product  $k$  abroad;
- Gravity variables are highly successful in explaining patterns of trade; they may also be relevant for the duration of trade. Transport costs are measured with the (log) bilateral distance between both partners ( $\log dist_{ij}$ ). These distances are extracted from the CEPII database and are calculated as the sum of the distances in kilometers between the biggest cities of both countries, weighted by the share of the population living in each city. We also include a dummy variable “Common border” ( $cbord$ ) that equals one if both countries share a border. Bilateral trade can be fostered by countries’ cultural proximity. Similarity in culture can indeed increase the quality of the match between varieties produced in country  $i$  and tastes of consumers in country  $j$ . We therefore control for this proximity by introducing two dummies, respectively equal to one if both countries share a language ( $comlang\_off$ ) or if both partners have had a colonial relationship in the past ( $col$ ). Data come from the previously mentioned CEPII database.
- $\log GDP_{it_0}$ : the (log) value of GDP of the importing country  $i$  at initiation of the spell,  $t_0$ . A larger destination market may allow exporters to accommodate demand shocks more easily;
- $\log GDPpc_{it_0}$  : the (log) value of per capita GDP of the destination market  $i$  at initiation of the spell,  $t_0$ ; The variation in level of wealth may capture changes in preferences and tastes of the importing country, i.e. demand shocks that may reduce the probability to survive.
- $N\_suppliers_{ikt_0}$  : the number of countries supplying product  $k$  to country  $i$  at time  $t_0$  may proxy the degree of competition on this market.

- *multiple\_spell* : the dummy variable is defined for an *ijk* triplet. It takes value one if the trade relationship was initiated, stopped and started again. The existence of previous attempts for a given trade relationship may reflect either the ability (inability) of an exporting country to account for previous failures and learn from its mistakes. Both possible effects find support in the literature. In Besedes (2006) multiple spells are an indicator of exporting country low reliability, while Brenton and al (2009) support the hypothesis that previous experience in exporting helps maintaining trade relationships.

## 2.2 Estimation issues

### 2.2.1 Endogeneity problem

Our specification allows us to examine a specific channel through which financial development may affect survival of trade relationships. However we may still face possible endogeneity problem. Using the level of credit to GDP as a proxy for financial development introduces a potential endogeneity bias, as quantity of credits in economy expands in anticipation of future growth opportunities. Furthermore we may face a reverse causality issue. As shown by Do and Levchenko (2007), countries with comparative advantage in financially intensive goods have a higher demand for external finance, and therefore, higher financial development. Finally unobservable shocks may affect simultaneously the level of financial development and the duration of trade relationships.

For a given exporting country  $j$ , using the level of financial development at time  $t_0$ , i.e. at the initiation of the spell, is likely to mitigate the endogeneity problem, but does not eliminate it completely. Therefore

- (i) we estimate our model using the level of financial development in 1996.
- (ii) we estimate our model instrumenting the level of financial development with legal origin, following a two-step procedure:

**1<sup>st</sup> Step:** We regress cross countries the level of financial development over a dummies for legal origin and the latitude (see La Porta et al., 1998; Beck and al 2002).

$$Fin\_Dev_j = \beta_1.LO\_fr_j + \beta_2.LO\_uk_j + \beta_3.LO\_de_j + \beta_4.LO\_sc_j + \beta_5.LO\_so_j + latt_j + \varepsilon_j \quad (2)$$

where  $LO\_fr$  ( $LO\_uk$ ,  $LO\_de$ ,  $LO\_sc$ ,  $LO\_so$ ) is a dummy variable that takes value one whether country  $j$  legal system is based on French civil law ( British, German, Scandinavian or Socialist), zero otherwise, and  $latt_j$  is the country latitude.

**2<sup>nd</sup> Step:** We retrieve the predicted value of financial development from step one and incorporate it in our Cox PH model. To account for measurement errors we estimate equation (1) bootstrapping the standard errors.

$$h(t, x, \beta) = h_0(t) \exp(\beta_1 \cdot \widehat{Fin\_Dev}_{jt_0} * Ext\_Fin\_Dep_s + \sum_{l \geq 2} \beta_l \cdot x_{lt_0} + \delta_m + \varepsilon_{ijst_0}) \quad (3)$$

### 2.2.2 Omitted variables

In our specification we control for the omitted variable bias: (i) we stratify by exporting country-time to account for any omitted country (country-time) characteristics (economic development, infrastructure, road, etc. . .) that bias selection of countries into exporting. (ii) we include various fixed effects. Technical constraints forced us to limit the number of fixed effect variables. We therefore include only industry-specific, importer-specific effects to account for unobserved time invariant characteristics. We do not interact importer fixed effects or industry fixed effects with time dummies <sup>3</sup>.

### 2.2.3 Estimation procedure

All in all, the estimation procedure goes as follow:

(i) We begin estimating equation (1) including importer and industry effects (strata by exporter-time):

- a- using the level of financial development at the initiation of the spell
- b- using the level of financial development in 1996
- c- instrumenting the level of financial development using legal origin and the latitude of the country

In these specifications we should control for importer-time and industry-time effects. However this would result in including 29\*10 and 28\*10 additional dummies, which is not technically possible given the size of our sample. Therefore we might still have omitted variable bias. To address this issue and obtain an unbiased coefficient on our variable of interest we then :

(ii) estimate our baseline specification for each year of the sample period including importer and industry fixed effects (strata by exporter). In this case all fixed effects dimensions are accounted for. Nevertheless slicing the dataset by year might not be

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<sup>3</sup>Generally the use of fixed effects is not recommended for duration models due to incidental parameters problem. In our case true fixed effect would be exporter-importer-product-time effects. Including country-specific and industry-specific effects we can estimate consistently our equations using Cox proportional hazard model.

optimal use of the rich structure of our database. First, we cannot estimate the model for the last year, 2005, since all observations are right censored for that year. Second, the length of the spell decreases over time, i.e., the maximum length for a spell initiated in 1995 is ten years while a spell initiated in 2003 can at maximum lasts two years. It may not be a problem since we focus on the differentiated effect of our variable of interest across industries.

Results for specifications detailed in (i) are reported in section 4.2. Results for specification detailed in (ii) are reported in section 4.3.

### **3 Data and descriptive statistics**

#### **3.1 Sources**

To assess the empirical relevance of our hypothesis, we use data on detailed product level trade flows from the BACI database, developed by the CEPII (see Gaulier and Zignago 2008). Our dataset consists of highly disaggregated export data at the country-product level. The data covers export for 5010 products from 143 countries ( 114 developing countries ) to 30 OECD countries over the period 1995-2005. Each record includes the exporting country, the product code (6-digit HS), the country of destination and the export value in thousands US dollars.

One disadvantage of using this database is the relatively short time coverage, however this disadvantage is compensated by the fact that we use very detailed product level trade data. This is crucial for survival analysis as Besedes and Prusa showed that aggregation of data may introduce considerable bias since it may hide failures.

All bilateral gravity variables are taken from the CEPII database, GDP data comes from the WDI database. We use GDP reported in constant 2000 US dollars. The data for financial development is taken from Beck, Demirguc-Kunt, and Levine (2000) database which contains various indicators of financial development across countries and over time. We use the private credit to GDP as a proxy for country's financial development in our main specification. As a robustness check we use the stock market capitalization divided by the GDP. This ration measures the organized trading of firm equity as a share of national output and therefore should positively reflect liquidity on an economy-wide basis. Finally we use a dummy for equity liberalization constructed by Bekaert, Harvey and Lundblad (2005) using detailed chronology of important financial, economic and political events in a broad range of developing and developed countries. Rather than using the external finance dependence measure developed by Rajan and Zingales (1998) which is calculated for a mix of three-digit and four-digit ISIC industries, we adopt the

measure of external finance dependence used by Klingebiel, Kroszner and Laeven (2002). They recompute Rajan and Zingales measure for 3 digit ISIC level. Using concordance between ISIC and hs6, we are able to include this variable into the set of our regressors. Given that hs6 product classification is more disaggregated than the ISIC one, several hs6 product categories share the same value for external finance dependence. The data on legal origin used in the first step of the instrumental regression procedure, comes from La Porta et al.(1998).

### 3.2 Descriptive statistics

Table 1 presents summary statistics on duration of exports for our data. After correcting for left censoring, the full sample data consists of 2'785'203 trade relationships (exporter-product-importer triplets) corresponding to 4'287'659 spells over the sample period 1996-2005. The average spell duration is only about two years and the median duration is one year, confirming previous findings of Besedes and Prusa (2006). About one third of the spells are right censored. When considering single spell trade relationships the average duration increases. In a similar manner dropping all spells with initial trade value inferior to 10'000 dollars (100'000, or 1'000'000 dollars) increase the average and median duration. 65% of spells start with trade values lower to 10'000 dollars, 7,5% are initiated with trade values higher than 100'000 dollars and only 0,9% start with initial trade values greater than 1'000'000 dollars.

[Table 1: Descriptive Statistics]

Approximately 62% of trade relationships experience multiple spells. About 38% experience just two spells. Less than 20% have more than three spells (Table 2).

[Table 2: Description of exports duration data, 1996-2005]

## 4 Estimation results

### 4.1 Kaplan-Meier survival function

Before exploring the Cox estimations results, we begin characterizing duration of trade relationships non parametrically by estimating survival functions using the Kaplan-Meier estimator. In discrete time, the survivor function is defined as the probability that an individual survives at least to time  $t$ :

$$S(t) = P(T \geq t) \quad t = 1, 2, \dots$$

The Kaplan-Meier estimator of the survivor function at time  $t$  is defined as:

$$\hat{S}(t) = \prod_{t_i \leq t} [n_i - d_i/n_i]$$

where  $t_i, i = 1, 2, \dots$  is the ordered failure times,  $n_i$  denotes the number of spells alive (at risk) just before time  $t_i$ , including those who will die at time  $t_i$ . Let  $d_i$  denote the number of failures (deaths) at time  $t_i$ <sup>4</sup>.

Figure 1 presents the Kaplan Meier estimator of the survival function for OECD and non OECD countries. Differences in duration of exporting in the OECD and non OECD sample are important and significant. In line with previous studies we observe that OECD exports survive significantly longer than non OECD exports. The equality of the survival functions being rejected at a 1% level of significance for all tests (Logrank, Cox, Wilcoxon, and Tarone Ware). Therefore in the remainder of the paper, we analyze separately OECD and non OECD samples' exports duration.

[Figure1: Kaplan Meier Survival Estimates]

We identify industries according to their external finance dependence (using Rajan and Zingales measure). We rank industries by increasing order. We then, estimate the survival function of the first and last quartile of the industries distribution. The industry at the 25<sup>th</sup> percentile (low dependence) is beverages while the industry at the 75<sup>th</sup> percentile (high dependence) is machinery. Duration of exports varies with the degree of external finance dependence. Industries which are less dependent on external finance have higher survival rate (Figure 2 and 3). This is to be expected as external finance dependent sector are more vulnerable to liquidity shortages. This patterns is more accentuated for non OECD countries. We test for the equality of survival functions across industry types. The equality hypothesis is rejected for non OECD countries but we fail to reject it for OECD countries. Indeed, within the OECD sample, countries have similar level of financial development. Therefore, survival of firms on the international market may not be limited by access to financial resources. While in the non OECD sample, variation in the level of financial development across countries allows for differentiated survival of firms based on their need for external finance.

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<sup>4</sup>The conditional probability that a spell dies in the time interval from  $t_i - \Delta$  to  $t_i$ , given survival up to time  $t_i - \Delta$ , is estimated as  $\frac{d_i}{n_i}$ . The conditional probability that a spell survives beyond  $t_i - \Delta$ , given survival up to time  $t_i - \Delta$ , is estimated as  $\frac{n_i - d_i}{n_i}$ . In the limit as  $\Delta \rightarrow 0$ ,  $\frac{n_i - d_i}{n_i}$  becomes an estimate of the conditional probability of surviving beyond  $t_i$  given survival up to  $t_i$ .

[Figure 2: Kaplan Meier Survival Estimates across different industries, non OECD sample]

[Figure 3:Kaplan Meier Survival Estimates across different industries, OECD sample]

## 4.2 Baseline estimation

Table 3 details the estimation procedure to assess the effect of financial development on duration of exports for non-OECD countries. In the first column we regress the length of trade relationships over a set of country and product specific covariates.

$$Length_{ijk t_0} = \beta_0 + \beta_1 Fin\_Dev_{jt_0} * Ext\_Fin\_Dep_s + \sum_{l \geq 2} \beta_l x_{lt_0} + \delta_m + \varepsilon_{ijst_0} \quad (4)$$

where  $Length_{ijk t_0}$  is the duration of spell  $ijk$  initiated at  $t_0$ . We include exporter-time fixed effects, importer and industry fixed effects. We estimate equation (4) with conventional OLS. Results are reported in column (1). Although linear models are not appropriate for duration analysis, this gives us a first insight on the effect of financial development on exports survival. The coefficient on our interaction term is positive and significant; suggesting a positive effect of financial development on the duration of exports.

Column (2) to (6) reports coefficients obtained using a Cox semiparasitic proportional hazard model (equation(1)). We use exporter-time as the stratification variable. Column (2) reports results for the full sample (all trade relationships between 1996-2005) using the level of financial development at the initiation of the spell. In column (3) and (4) we report results adding consecutively industry and importer fixed effects. In the following specifications we always control for industry and importer specific characteristics. Column (5) reports results using the level of financial development in 1996. Finally, we estimate equation (1) instrumenting the level of financial development by legal origin and the latitude of the exporting country, results are shown in columns (6). In column (4) to (6) since the specification controls for exporting country-specific characteristics and industry-specific characteristics the interaction between external finance dependence and financial development captures the effect that varies both across countries and industries. Through out all specifications, the coefficient on the interaction term remains negative and significant. Financial development helps exports survival, by reducing the costs of external finance to firms which rely on external funds to support their operations.

Regarding traditional gravity covariates, all variables have expected sign and are highly significant, suggesting that they successfully explain patterns and duration of trade. Distance as a proxy for trade costs increases exports hazard rate. A common border decreases the hazard rate, everything else held constant. Cultural proximity variables, colonial ties and sharing a common language both increase the likelihood of sustaining bilateral trade flows over time.

The GDP of the importing country have expected negative sign. Interestingly, results suggests that holding GDP constant, exports to richer countries are on average shorter-lived. As changes in the level of GDPpc capture changing tastes and preferences in the importing country, GDPpc negatively influences the probability of exports to survive over time.

Interestingly the hazard rate decreases with the number of competitors. A possible explanation for this finding is as proposed by Nitsch (2007), that the number of competitors may just be a proxy for the size of the market. The multiple spells dummy variable increases the hazard rate. Suggesting as hypothesized by Besedes (2006), that multispell acts as an indicator of exporters poor reliability.

The initial export value plays a significant role as implied by Rauch and Watson (2003). Duration increases with the transaction size, that is spell that start with higher initial value remain in existence for longer periods of time. The aggregate bilateral trade variable enters the regression negatively capturing the exporter's knowledge of the import market. An increase in total exports of a product irrespective of the destination market favours duration, suggesting exporting experience is product specific.

[Table 3: Exports survival estimation results for nonOECD countries]

Results for OECD countries are shown in Table 4. Qualitatively results are similar for all specifications.

[Table 4: Exports survival estimation results for OECD countries]

### 4.3 Estimation for each cohort

We now estimate our baseline specification for each cohort in the sample. we define a cohort as the group of spells initiated the same year, we therefore have eight cohorts. Unlike in the baseline specification, we are able to control for all dimensions including importer and industry fixed effects. We use exporting country as the stratification variable. Results for non OECD (OECD) countries are reported in Table 5 (Table 6). Results for both non OECD and OECD countries are qualitatively similar to our baseline



results. The coefficient on our main interaction term is negative and significant but the effect is three times smaller than in the baseline specification (column (5) Tables 3 and 4). This is not surprising as we estimate our model for each cohort . This suggests that we may overestimate our coefficients in our baseline specification when considering full sample due to the fact we do not control for all fixed effects dimensions.

[Table 5: Cox proportional hazard estimates, nonOECD countries]

[Table 6: Cox proportional hazard estimates, OECD countries]

Table 7 and Table 8 show results where the level of financial development is instrumented by legal origin and the latitude of the exporting country. Since we use estimated variable as a regressor we bootstrap standard errors. Results are qualitatively the same as in Table 5 and Table 6. All variables have expected sign and are all statistically significant except for the interaction term coefficient in the year 1997 for the OECD countries (column (2) Table 7) .

[Table 7: Cox proportional hazard estimates, non OECD countries  
Financial development instrumented]

[Table 8: Cox proportional hazard estimates, OECD countries  
Financial development instrumented]

## 5 Robustness checks

### 5.1 Using stock market capitalization

In order to test whether our results are driven by the choice of the financial development variable, we re-estimate all specifications using an alternative proxy for financial development, the ratio of stock market capitalization to GDP. Results are shown in Table (A) to (D).

Results are robust to the change in the financial development variable.

[Table A: Cox proportional hazard estimates, non OECD countries, using Stock market Capitalisation as a proxy for Financial development]

[Table B: Cox proportional hazard estimates, OECD countries, Financial development instrumented]

[Table C: Cox proportional hazard estimates, non OECD countries, using Stock market Capitalisation as a proxy for Financial development ]

[Table D: Cox proportional hazard estimates, OECD countries, Financial development instrumented]

## 6 Concluding Remarks

In this paper we examine empirically the duration of 121 developing countries' exports to OECD countries at the product level (6-digit level) from 1995 to 2005. We focus on the duration of trade relationships, that is the intensive margin of trade, using semi parametric model.

While financial development implication in firms' decision to export, has been established both theoretically and empirically (Melitz, 2003; Chaney 2005; Berman 2009), our purpose is to assess the distinct effect of financial development on the duration of exports. Following seminal work of Rajan and Zingales we propose a distinctive methodology to investigate a particular channel through which financial development may help exports survive longer, therefore, the causality is clearly identified. By looking at the interaction term (between financial development and external finance dependence) rather than the direct effect of financial development and controlling for adequate country and industry fixed effects, we reduce the number of variables that we rely on as well as possible omitted variable bias. Finally we control for possible endogeneity problem instrumenting the level of financial development following an two step procedure.

The main result of the paper is that financial development helps exports survival by reducing the costs of external finance to firms. Firms with facilitated access to external finance can easily accommodate shocks and survive longer on the international market. This results is robust to a variety of robustness checks.

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## 7 Figures and Tables

Figure1: Kaplan Meier Survival Estimates  
OECD vs nonOECD

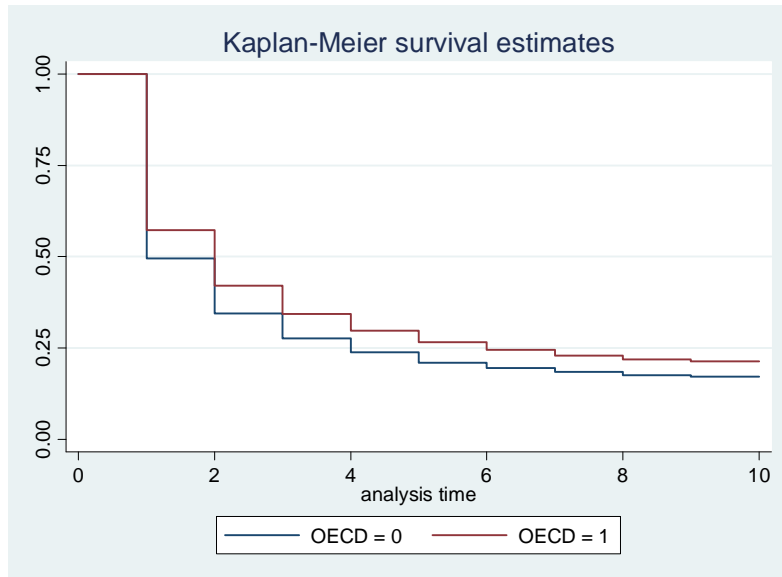
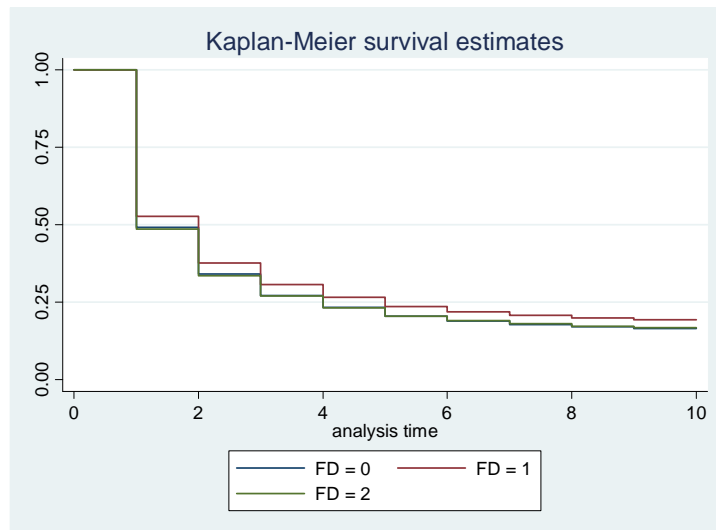


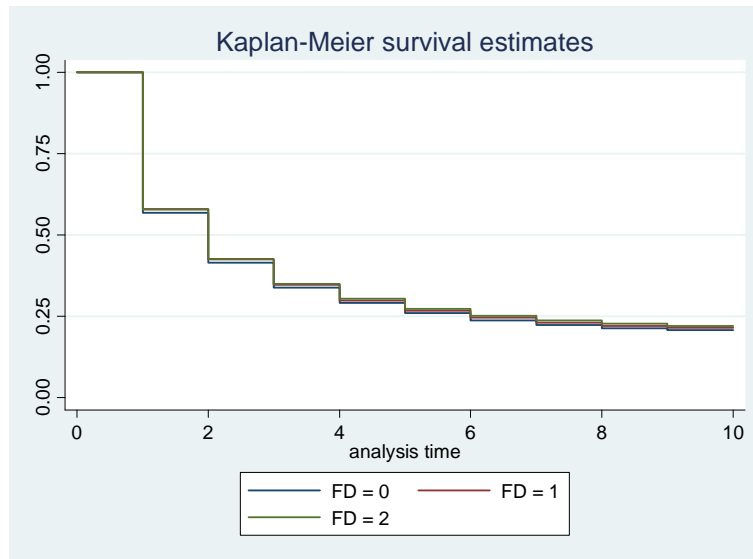
Figure 2: Kaplan Meier Survival Estimates across different industries,  
non OECD sample



FD=1 25<sup>th</sup> percentile (low dependence)  
FD=2 75<sup>th</sup> percentile (high dependence)

P values of the tests on equality of survival function ,Pr>chi2				
Variables/Tests	log rank	Wilcoxon-Breslow-Gehan	Tarone Ware	Cox
nonOECD	0.0000	0.0000	0.0000	0.0000

Figure 3: Kaplan Meier Survival Estimates across different industries, OECD sample



FD=1 25<sup>th</sup> percentile (low dependence)

FD=2 75<sup>th</sup> percentile (high dependence)

P values of the tests on equality of survival function ,Pr>chi2				
Variables/Tests	log rank	Wilcoxon-Breslow-Gehan	Tarone Ware	Cox
OECD	0.6977	0.0063	0.0558	0.7642

	Number of products-country triple	Number of spells	Number of spell		length	
			per product-country pair	of the spell	mean	median
Full sample	2'785'203	4'287'659	1.89	2	2.13	1
Observed stops	2'100'315	2'872'634	1.63	1	1.58	1
First spell	2'142'230	2'142'230	1	1	2.01	1
One spell only	1'644'947	1'644'947	1	1	2.60	1
Initial trade >10'000	1'214'143	1'496'773	1.43	1	2.45	1
Initial trade >100'000	288'169	322'016	1.23	1	2.67	2
Initial trade >1'000'000	38'530	42'554	1.21	1	2.67	2

number of spells	Freq.	Percent	Cum.
1	1,644,947	38.36	38.36
2	1,641,066	38.27	76.64
3	836,001	19.5	96.14
4	158,540	3.7	99.83
5	7,105	0.17	100
Total	4,287,659	100	

Table 3: Exports survival estimation results for nonOECD countries

Specification	Financial development is proxied by the private credit to GDP ratio.					
	(1) OLS	(2) Fin Dev	(3) Fin Dev at the initiation of spell	(4)	(5) Fin Dev in 1996	(6) 2 stages
ExtFinDep_Fin_Dev	0.379218*** (0.008577)	-0.148396*** (0.006555)	-0.148144*** (0.006616)	-0.154108*** (0.006617)	-0.152532*** (0.006793)	-0.260690*** (0.017485)
Fin_Dev	0.169256*** (0.013566)					
ExtFinDep	-0.273975*** (0.023734)	0.157811*** (0.004248)				
ln_initialexport	0.104071*** (0.000709)	-0.037372*** (0.000594)	-0.042924*** (0.000598)	-0.045013*** (0.000601)	-0.045013*** (0.000601)	-0.044889*** (0.000601)
ln_bilateraltrade	0.173298*** (0.000615)	-0.093046*** (0.000478)	-0.091512*** (0.000481)	-0.092083*** (0.000484)	-0.092067*** (0.000484)	-0.092741*** (0.000483)
ln_totalexport	0.065366*** (0.001513)	-0.027747*** (0.001012)	-0.029566*** (0.001011)	-0.038933*** (0.001133)	-0.038927*** (0.001133)	-0.038992*** (0.001133)
ln_dist	-0.374045*** (0.003375)	0.128655*** (0.002368)	0.133150*** (0.002369)	0.177404*** (0.002580)	0.177490*** (0.002580)	0.177028*** (0.002580)
cbord	0.205348*** (0.011488)	-0.084416*** (0.008230)	-0.084470*** (0.008234)	-0.059922*** (0.008667)	-0.059842*** (0.008667)	-0.059692*** (0.008667)
comlang_off	0.226974*** (0.004774)	-0.209491*** (0.003295)	-0.208954*** (0.003296)	-0.105504*** (0.003685)	-0.105435*** (0.003685)	-0.105171*** (0.003685)
col45	0.311424*** (0.007879)	0.017877*** (0.005078)	0.014473*** (0.005078)	-0.143678*** (0.005901)	-0.143682*** (0.005901)	-0.142453*** (0.005900)
Nsuppliers	0.033863*** (0.000118)	-0.016461*** (0.000085)	-0.015960*** (0.000091)	-0.017075*** (0.000094)	-0.017070*** (0.000094)	-0.016979*** (0.000094)
multiple_spell	-1.341975*** (0.002637)	0.428931*** (0.002092)	0.432415*** (0.002095)	0.440022*** (0.002100)	0.439950*** (0.002100)	0.439762*** (0.002100)
ln_GDPpc_o	-1.827924*** (0.046488)					
ln_GDP_o	1.053905*** (0.052106)					
ln_GDPpc_d	1.145642*** (0.082959)	0.037770*** (0.002640)	0.038145*** (0.002645)	0.192553*** (0.072212)	0.191965*** (0.072212)	0.193454*** (0.072211)
ln_GDP_d	-1.468638*** (0.077024)	-0.026831*** (0.001261)	-0.029000*** (0.001265)	-0.142861** (0.068247)	-0.142055** (0.068246)	-0.144556** (0.068245)
$R^2$	0.523					
Observations	1682766	1689982	1689982	1689982	1689982	1689982
fixed effect	industry,exporter importer year	no	industry	industry importer	industry importer	industry importer

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1





Table 4: Exports survival estimation results for nonOECD countries  
 Financial development is proxied by the private credit to GDP ratio.

Specification	(1) OLS	(2) Fin Dev	(3) Fin Dev	(4) at the initiation of spell	(5) Fin Dev in 1996	(6) 2 stages
ExtFinDep*Fin_Dev	0.1534948*** (0.006733)	-0.128183*** (0.005760)	-0.111635*** (0.005801)	-0.111184*** (0.005805)	-0.160442*** (0.005678)	-0.197196*** (0.008278)
Fin_Dev	0.0700914*** (0.0061027)					
ExtFinDep	0.2672129*** (0.0231209)	-0.031733*** (0.005120)				
ln_initialexport	0.1115979*** (0.0005494)	-0.079193*** (0.000487)	-0.082534*** (0.000491)	-0.083303*** (0.000491)	-0.083210*** (0.000491)	-0.083287*** (0.000491)
ln_bilateraltrade	1.996022 *** (0.0005832)	-0.104018*** (0.000440)	-0.109938*** (0.000448)	-0.110993*** (0.000451)	-0.110727*** (0.000451)	-0.110745*** (0.000452)
ln_totalexport	0.3491206*** (0.0011787)	-0.177612*** (0.001237)	-0.179330*** (0.001238)	-0.178837*** (0.001434)	-0.178791*** (0.001434)	-0.178280*** (0.001434)
ln_dist	-0.1934684*** (0.0026508)	0.025251*** (0.001413)	0.029342*** (0.001413)	0.143385*** (0.002226)	0.143512*** (0.002225)	0.143274*** (0.002226)
cbord	0.1655448*** (0.004812)	-0.330423*** (0.004087)	-0.329288*** (0.004087)	-0.213968*** (0.004308)	-0.214015*** (0.004308)	-0.215845*** (0.004308)
comlang_off	0.191167*** (0.0044482)	-0.198514*** (0.003531)	-0.198154*** (0.003531)	-0.147912*** (0.003758)	-0.148121*** (0.003758)	-0.146862*** (0.003758)
col45	0.2641345*** (0.0044482)	-0.561686*** (0.018234)	-0.545931*** (0.018237)	-0.201230*** (0.019123)	-0.203126*** (0.019122)	-0.208667*** (0.019128)
Nsuppliers	0.0500366*** (0.0001265)	-0.037258*** (0.000104)	-0.034353*** (0.000112)	-0.036104*** (0.000115)	-0.036204*** (0.000115)	-0.036165*** (0.000115)
multiple_spell	-2.178319*** (0.0022197)	0.980221*** (0.002039)	0.985867*** (0.002041)	0.987852*** (0.002040)	0.987620*** (0.002040)	0.987617*** (0.002040)
ln_GDPpc_d	-2.128062*** (0.0022197)	0.132477*** (0.002128)	0.122658*** (0.002132)	0.034946 (0.056645)	0.036917 (0.056644)	0.037054 (0.056644)
ln_GDP_d	2.858525*** (0.0582506)	0.140676*** (0.001190)	0.132664*** (0.001196)	0.378461*** (0.054751)	0.375867*** (0.054751)	0.375623*** (0.054751)
ln_GDPpc_o	-0.8061998*** (597842)					
ln_GDP_o	-0.3560661*** (0.0566768)					
$R^2$	0.72.					
Observations	2904282	2904282	2904282	2904282	2904282	2904282
Fixed effect	no fe.	industry,importer.	industry,importer	industry,importer.	industry,importer.	industry,importer.

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 5: Cox proportional hazard estimates, nonOECD countries  
Our measure of financial development is the private credit to GDP ratio.

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1996									
1997									
1998									
1999									
2000									
2001									
2002									
2003									
2004									
Ext_Fin_Dep * Fin_Dev	-0.091680*** (0.015304)	-0.095916*** (0.018394)	-0.087923*** (0.016682)	-0.186117*** (0.018344)	-0.145144*** (0.020663)	-0.119170*** (0.021484)	-0.157738*** (0.022409)	-0.143700*** (0.024736)	-0.087160*** (0.029197)
log initial_export	-0.081290*** (0.001534)	-0.019780*** (0.001927)	-0.017749*** (0.001942)	-0.022699*** (0.001913)	-0.026033*** (0.001709)	-0.027815*** (0.001757)	-0.033408*** (0.001774)	-0.031156*** (0.001722)	-0.025023*** (0.001866)
log dist	0.226952*** (0.006692)	0.157938*** (0.007624)	0.155797*** (0.007829)	0.150673*** (0.007540)	0.145058*** (0.007373)	0.130916*** (0.007500)	0.114545*** (0.007489)	0.129636*** (0.007767)	0.117421*** (0.008666)
cbord	-0.134507*** (0.020150)	-0.096885*** (0.023567)	-0.090034*** (0.024175)	-0.062207*** (0.023921)	-0.030617 (0.023470)	-0.056478** (0.024697)	-0.054478** (0.025914)	-0.068255** (0.026798)	0.023786 (0.029266)
comlang_off	-0.135903*** (0.009381)	-0.078884*** (0.011116)	-0.074167*** (0.011305)	-0.085668*** (0.010959)	-0.083487*** (0.010754)	-0.093350*** (0.011125)	-0.105684*** (0.011039)	-0.082081*** (0.011365)	-0.072124*** (0.012907)
col	-0.210336*** (0.014650)	-0.123641*** (0.017833)	-0.094851*** (0.017445)	-0.114212*** (0.017198)	-0.117693*** (0.017156)	-0.112820*** (0.017398)	-0.074937*** (0.017445)	-0.075712*** (0.018812)	-0.048072** (0.020908)
log bilateral_trade	-0.125174*** (0.001286)	-0.090343*** (0.001469)	-0.088040*** (0.001487)	-0.087590*** (0.001454)	-0.077776*** (0.001382)	-0.071508*** (0.001410)	-0.071870*** (0.001425)	-0.065144*** (0.001418)	-0.053919*** (0.001542)
log total_export	-0.068938*** (0.003090)	-0.045703*** (0.003572)	-0.045521*** (0.003620)	-0.042876*** (0.003459)	-0.032107*** (0.003242)	-0.028025*** (0.003250)	-0.034199*** (0.003283)	-0.020689*** (0.003282)	-0.017135*** (0.003566)
N_suppliers	-0.025652*** (0.000245)	-0.015386*** (0.000294)	-0.014603*** (0.000291)	-0.013943*** (0.000282)	-0.013517*** (0.000272)	-0.012182*** (0.000274)	-0.012475*** (0.000276)	-0.011374*** (0.000277)	-0.011556*** (0.000307)
multiple_spell	1.542451*** (0.005980)	0.678889*** (0.006404)	0.413660*** (0.006362)	0.284128*** (0.006243)	0.205949*** (0.006136)	0.118614*** (0.006232)	0.050690*** (0.006211)	-0.034722*** (0.006297)	-0.233429*** (0.007211)
Observations	286287	140460	141435	151957	157722	154223	162980	172882	180698

Standard errors in parentheses  
\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 6: Cox proportional hazard estimates, OECD countries  
Our measure of financial development is the private credit to GDP ratio.

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1996	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1997	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1998	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1999	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2000	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2001	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2002	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2003	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
2004	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
Ext_Fin_Dep * Fin_Dev_hat	-0.055397**	-0.036195	-0.071114***	-0.088481***	-0.081142***	-0.064280**	-0.066849**	-0.047215	-0.088991***
log initial_export	(0.024074)	(0.024002)	(0.024398)	(0.024901)	(0.025260)	(0.026318)	(0.027056)	(0.028844)	(0.033923)
log dist	-0.028895***	-0.029234***	-0.030761***	-0.037373***	-0.035786***	-0.039210***	-0.043498***	-0.041563***	-0.039408***
cbord	(0.001451)	(0.001456)	(0.001509)	(0.001535)	(0.001486)	(0.001570)	(0.001588)	(0.001610)	(0.001833)
comlang_off	0.079068***	0.084012***	0.095721***	0.089558***	0.097784***	0.098444***	0.108144***	0.096605***	0.122554***
col	(0.006448)	(0.006433)	(0.006658)	(0.006677)	(0.006806)	(0.007129)	(0.007225)	(0.007806)	(0.009259)
log bilateral_trade	-0.103737***	-0.084179***	-0.077533***	-0.120009***	-0.101471***	-0.115390***	-0.137645***	-0.180902***	-0.191374***
log total_export	(0.012176)	(0.012290)	(0.012768)	(0.012842)	(0.013148)	(0.013658)	(0.014357)	(0.015601)	(0.018334)
N_suppliers	-0.099904***	-0.111913***	-0.099329***	-0.099027***	-0.113956***	-0.102774***	-0.089438***	-0.070486***	-0.104421***
multiple_spell	(0.010590)	(0.010737)	(0.010984)	(0.011138)	(0.011347)	(0.011838)	(0.011929)	(0.013299)	(0.016005)
Observations	-0.105373*	-0.153758***	-0.203540***	-0.234448***	-0.145619**	-0.121142*	-0.157121**	-0.104335	-0.225661**
	(0.056196)	(0.056925)	(0.062170)	(0.053843)	(0.058637)	(0.063463)	(0.068137)	(0.072492)	(0.091588)
	-0.098036***	-0.090620***	-0.093030***	-0.090463***	-0.086130***	-0.084984***	-0.083536***	-0.076754***	-0.065747***
	(0.001325)	(0.001311)	(0.001345)	(0.001349)	(0.001348)	(0.001398)	(0.001416)	(0.001477)	(0.001698)
	-0.160275***	-0.150275***	-0.143784***	-0.136838***	-0.127744***	-0.132303***	-0.120758***	-0.119838***	-0.089851***
	(0.004209)	(0.004277)	(0.004461)	(0.004394)	(0.004409)	(0.004657)	(0.004688)	(0.005130)	(0.005869)
	-0.026386***	-0.025330***	-0.024794***	-0.025662***	-0.024887***	-0.025326***	-0.025043***	-0.024899***	-0.027008***
	(0.000359)	(0.000352)	(0.000356)	(0.000352)	(0.000350)	(0.000364)	(0.000366)	(0.000385)	(0.000446)
	1.215706***	1.126293***	0.860377***	0.686337***	0.533297***	0.418766***	0.311942***	0.153085***	-0.117007***
	(0.006127)	(0.005835)	(0.005671)	(0.005580)	(0.005586)	(0.005727)	(0.005738)	(0.005948)	(0.006778)
	227615	226856	214622	217728	216986	208993	220926	219128	236585

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 7: Cox proportional hazard estimates, nonOECD countries  
Our measure of financial development is the private credit to GDP ratio, instrumented.

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ext_Fin_Dep * Fin_Dev_hat	1996	1997	1998	1999	2000	2001	2002	2003
	-0.056193*	-0.116835***	-0.165797***	-0.107077***	-0.153609***	-0.168463***	-0.099724***	-0.066776*
log initial_export	(0.032730)	(0.030111)	(0.033997)	(0.033358)	(0.028391)	(0.035478)	(0.028482)	(0.034196)
	-0.021234***	-0.014753***	-0.019894***	-0.024406***	-0.026512***	-0.031871***	-0.031328***	-0.025641***
log dist	(0.001171)	(0.001174)	(0.001191)	(0.001008)	(0.001357)	(0.001177)	(0.001134)	(0.001312)
	0.153734***	0.155375***	0.153381***	0.147268***	0.130941***	0.114236***	0.134261***	0.115141***
cbord	(0.004788)	(0.005249)	(0.004695)	(0.004597)	(0.005334)	(0.004169)	(0.004809)	(0.005234)
	-0.121600***	-0.080737***	-0.057077***	-0.020920	-0.053014***	-0.037576**	-0.056284***	0.012960
comlang_off	(0.014953)	(0.016312)	(0.015325)	(0.018209)	(0.012536)	(0.017275)	(0.017932)	(0.017709)
	-0.082827***	-0.072000***	-0.079850***	-0.078826***	-0.089992***	-0.096826***	-0.080704***	-0.061077***
col	(0.007989)	(0.007682)	(0.005838)	(0.006650)	(0.007268)	(0.005691)	(0.007151)	(0.008556)
	-0.135296***	-0.096581***	-0.118026***	-0.129113***	-0.124948***	-0.085407***	-0.080494***	-0.057355***
log bilateral_trade	(0.011826)	(0.012273)	(0.009398)	(0.009865)	(0.010448)	(0.010038)	(0.010775)	(0.010832)
	-0.093942***	-0.090146***	-0.091204***	-0.080855***	-0.074784***	-0.074457***	-0.067322***	-0.055574***
log total_export	(0.001049)	(0.000973)	(0.000849)	(0.000780)	(0.000993)	(0.001064)	(0.000824)	(0.000964)
	-0.048054***	-0.049325***	-0.045725***	-0.034567***	-0.029749***	-0.035279***	-0.018593***	-0.017044***
N_suppliers	(0.001893)	(0.001961)	(0.002127)	(0.001564)	(0.001814)	(0.001978)	(0.001583)	(0.001800)
	-0.016544***	-0.014989***	-0.014418***	-0.013898***	-0.012575***	-0.012526***	-0.011591***	-0.011217***
multiple_spell	(0.000178)	(0.000189)	(0.000185)	(0.000181)	(0.000149)	(0.000180)	(0.000187)	(0.000206)
	0.764143***	0.565483***	0.443615***	0.326591***	0.208907***	0.119285***	0.008941**	-0.206200***
Observations	(0.003685)	(0.003316)	(0.003240)	(0.003219)	(0.004072)	(0.003834)	(0.003523)	(0.004602)
	158029	159093	170276	176496	173175	184243	196816	206098

Bootstrapped Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table 8: Cox proportional hazard estimates, OECD countries  
Our measure of financial development is the private credit to GDP ratio, instrumented.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ext_Fin_Dep * Fin_Dev_hat	-0.055397***	-0.036195*	-0.071114***	-0.088481***	-0.081142***	-0.064280***	-0.066849***	-0.047215**	-0.088991***
log initial_export	(0.015958)	(0.019016)	(0.016924)	(0.014542)	(0.020653)	(0.017806)	(0.018257)	(0.019105)	(0.024751)
	-0.028895***	-0.029234***	-0.030761***	-0.037373***	-0.035786***	-0.039210***	-0.043498***	-0.041563***	-0.039408***
log dist	(0.000993)	(0.001129)	(0.001017)	(0.001119)	(0.001120)	(0.001315)	(0.001142)	(0.001077)	(0.001447)
	0.079068***	0.084012***	0.095721***	0.089558***	0.097784***	0.098444***	0.108144***	0.096605***	0.122554***
	(0.004454)	(0.004379)	(0.005301)	(0.005606)	(0.004123)	(0.005438)	(0.005357)	(0.006175)	(0.008950)
cbord	-0.103737***	-0.084179***	-0.077533***	-0.120009***	-0.101471***	-0.115390***	-0.137645***	-0.180902***	-0.191374***
	(0.008272)	(0.007642)	(0.009820)	(0.008522)	(0.008061)	(0.013579)	(0.010980)	(0.012476)	(0.015492)
comlang_off	-0.099904***	-0.111913***	-0.099329***	-0.099027***	-0.113956***	-0.102774***	-0.089438***	-0.070486***	-0.104421***
	(0.007774)	(0.007253)	(0.008707)	(0.009119)	(0.008569)	(0.009239)	(0.009131)	(0.012638)	(0.011990)
col	-0.105373***	-0.153758***	-0.203540***	-0.234448***	-0.145619***	-0.121142**	-0.157121***	-0.104335	-0.225661**
	(0.029445)	(0.039989)	(0.051345)	(0.043183)	(0.046291)	(0.048842)	(0.055413)	(0.063433)	(0.090255)
log bilateral_trade	-0.098036***	-0.090620***	-0.093030***	-0.090463***	-0.086130***	-0.084984***	-0.083536***	-0.076754***	-0.065747***
	(0.000954)	(0.000888)	(0.000920)	(0.000910)	(0.001040)	(0.001196)	(0.000867)	(0.000997)	(0.001370)
log total_export	-0.160275***	-0.150275***	-0.143784***	-0.136838***	-0.127744***	-0.132303***	-0.120758***	-0.119838***	-0.089851***
	(0.003270)	(0.002395)	(0.003844)	(0.003744)	(0.002727)	(0.003039)	(0.003150)	(0.004178)	(0.005095)
N_suppliers	-0.026386***	-0.025330***	-0.024794***	-0.025662***	-0.024887***	-0.025320***	-0.025043***	-0.024899***	-0.027008***
	(0.000262)	(0.000239)	(0.000274)	(0.000267)	(0.000250)	(0.000251)	(0.000262)	(0.000270)	(0.000387)
multiple_spell	1.215706***	1.126293***	0.860377***	0.686337***	0.533297***	0.418766***	0.311942***	0.153085***	-0.117007***
	(0.005948)	(0.004130)	(0.004985)	(0.005011)	(0.003933)	(0.004269)	(0.004840)	(0.003592)	(0.004170)
Observations	227615	226856	214622	217728	216986	208993	220926	219128	236585

Standard errors in parentheses, bootstrapped

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table A: Cox proportional hazard estimates, nonOECD countries  
Our measure of financial development is the stock market capitalisation to GDP ratio.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ext_Fin_Dep_stmktcap_hat	-0.013810	-0.020879	-0.063420*	-0.114154***	-0.063618*	-0.074577**	-0.070375*	-0.039053	-0.012099
log initial_export	(0.037501)	(0.037566)	(0.037862)	(0.037414)	(0.036652)	(0.037620)	(0.038044)	(0.038069)	(0.042935)
	-0.021238***	-0.020188***	-0.014757***	-0.019890***	-0.024403***	-0.026513***	-0.031808***	-0.031294***	-0.025628***
log dist	(0.001825)	(0.001820)	(0.001844)	(0.001819)	(0.001619)	(0.001662)	(0.001678)	(0.001633)	(0.001768)
	0.153763***	0.150329***	0.155411***	0.153417***	0.147292***	0.130995***	0.114345***	0.134270***	0.115188***
cbord	(0.007317)	(0.007095)	(0.007424)	(0.006991)	(0.006909)	(0.007084)	(0.007069)	(0.007323)	(0.008022)
	-0.121644***	-0.097272***	-0.080664***	-0.057087**	-0.020961	-0.053021**	-0.037587	-0.056409**	0.012811
	(0.021537)	(0.023237)	(0.023823)	(0.023355)	(0.023077)	(0.024313)	(0.025319)	(0.025299)	(0.027577)
comlang_off	-0.082822***	-0.072373***	-0.071975***	-0.079852***	-0.078863***	-0.090010***	-0.096782***	-0.080730***	-0.061107***
	(0.010965)	(0.010506)	(0.010767)	(0.010431)	(0.010297)	(0.010647)	(0.010433)	(0.010822)	(0.012097)
col	-0.135366***	-0.128078***	-0.096540***	-0.117868***	-0.128979***	-0.124885***	-0.085324***	-0.080417***	-0.057325***
	(0.016898)	(0.016811)	(0.016585)	(0.016300)	(0.016361)	(0.016568)	(0.016351)	(0.017586)	(0.019436)
log bilateral_trade	-0.093984***	-0.091265***	-0.090169***	-0.091213***	-0.080863***	-0.074806***	-0.074489***	-0.067342***	-0.055597***
	(0.001418)	(0.001395)	(0.001415)	(0.001384)	(0.001316)	(0.001340)	(0.001354)	(0.001342)	(0.001455)
log total_export	-0.048033***	-0.047575***	-0.049319***	-0.045729***	-0.034574***	-0.029738***	-0.035271***	-0.018584***	-0.017029***
	(0.003267)	(0.003187)	(0.003324)	(0.003109)	(0.002964)	(0.002980)	(0.003011)	(0.002962)	(0.003131)
N_suppliers	-0.016538***	-0.015635***	-0.014983***	-0.014414***	-0.013895***	-0.012568***	-0.012520***	-0.011588***	-0.011212***
	(0.000288)	(0.000279)	(0.000277)	(0.000269)	(0.000258)	(0.000260)	(0.000260)	(0.000260)	(0.000286)
multiple_spell	0.764153***	0.718752***	0.565469***	0.443609***	0.326575***	0.208877***	0.119243***	0.008973	-0.206205***
	(0.006272)	(0.006078)	(0.005960)	(0.005781)	(0.005675)	(0.005762)	(0.005740)	(0.005808)	(0.006687)
Observations	158029	159247	159093	170276	176496	173175	184243	196816	206098

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table B: Cox proportional hazard estimates, OECD countries  
Our measure of financial development is the stock market capitalisation to GDP ratio.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ext_Fin_Dep_stmktcap	-0.283428*** (0.013870)	-0.091958*** (0.017415)	-0.108629*** (0.015306)	-0.053312*** (0.012677)	-0.023142** (0.010710)	-0.046026*** (0.012958)	-0.059716*** (0.018833)	-0.096955*** (0.022366)	-0.076068*** (0.023765)
log_initial_export	-0.106853*** (0.001029)	-0.029138*** (0.001456)	-0.035172*** (0.001511)	-0.041982*** (0.001537)	-0.039147*** (0.001485)	-0.041636*** (0.001569)	-0.045461*** (0.001587)	-0.042078*** (0.001609)	-0.039140*** (0.001831)
log_dist	0.099404*** (0.004584)	0.084446*** (0.006433)	0.098823*** (0.006650)	0.093016*** (0.006673)	0.099958*** (0.006804)	0.098698*** (0.007124)	0.107058*** (0.007220)	0.094999*** (0.007804)	0.117365*** (0.009260)
cbord	-0.213623*** (0.008521)	-0.083276*** (0.012288)	-0.083619*** (0.012760)	-0.127091*** (0.012844)	-0.103908*** (0.013149)	-0.116397*** (0.013658)	-0.136488*** (0.014362)	-0.175843*** (0.015599)	-0.183977*** (0.018338)
comlang_off	-0.145328*** (0.007599)	-0.113465*** (0.010742)	-0.103969*** (0.010990)	-0.101070*** (0.011141)	-0.113659*** (0.011349)	-0.102273*** (0.011842)	-0.089450*** (0.011932)	-0.069596*** (0.013302)	-0.102345*** (0.016007)
col	-0.172673*** (0.036374)	-0.149321*** (0.056915)	-0.249291*** (0.062149)	-0.251857*** (0.053826)	-0.147210** (0.058634)	-0.107875* (0.063450)	-0.154382** (0.068125)	-0.099886 (0.072472)	-0.221714** (0.091565)
log_bilateral_trade	-0.120393*** (0.001040)	-0.090420*** (0.001310)	-0.095141*** (0.001341)	-0.091185*** (0.001346)	-0.085142*** (0.001346)	-0.083457*** (0.001398)	-0.081371*** (0.001418)	-0.074262*** (0.001480)	-0.062641*** (0.001703)
log_total_export	-0.227888*** (0.003066)	-0.150161*** (0.004275)	-0.146815*** (0.004453)	-0.137095*** (0.004392)	-0.125222*** (0.004408)	-0.128742*** (0.004656)	-0.116023*** (0.004690)	-0.113229*** (0.005137)	-0.083287*** (0.005876)
N_suppliers	-0.039576*** (0.000254)	-0.025456*** (0.000352)	-0.025764*** (0.000356)	-0.025893*** (0.000352)	-0.024627*** (0.000350)	-0.024802*** (0.000365)	-0.024430*** (0.000367)	-0.024206*** (0.000387)	-0.026106*** (0.000449)
multiple_spell	2.752250*** (0.005447)	1.126303*** (0.005835)	0.650863*** (0.005770)	0.475297*** (0.005807)	0.340366*** (0.005884)	0.252028*** (0.006065)	0.162417*** (0.006086)	0.039141*** (0.006304)	-0.187234*** (0.007121)
Observations	934658	226856	214622	217728	216986	208993	220926	219128	236585

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses



Table C: Cox proportional hazard estimates, nonOECD countries  
Our measure of financial development is the stock market capitalisation to GDP ratio, instrumented.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Year	1996	1997	1998	1999	2000	2001	2002	2003	2004
Ext_Fin_Dep_stmktcap_hat	-0.013810	-0.020879	-0.063420*	-0.114154***	-0.063618*	-0.074577**	-0.070375*	-0.039053	-0.012099
log initial_export	(0.037501)	(0.037566)	(0.037862)	(0.037414)	(0.036652)	(0.037620)	(0.038044)	(0.038069)	(0.042935)
	-0.021238***	-0.020188***	-0.014757***	-0.019890***	-0.024403***	-0.026513***	-0.031808***	-0.031294***	-0.025628***
log dist	(0.001825)	(0.001820)	(0.001844)	(0.001819)	(0.001619)	(0.001662)	(0.001678)	(0.001633)	(0.001768)
	0.153763***	0.150329***	0.155411***	0.153417***	0.147292***	0.130995***	0.114345***	0.134270***	0.115188***
cbord	(0.007317)	(0.007095)	(0.007424)	(0.006991)	(0.006909)	(0.007084)	(0.007069)	(0.007323)	(0.008022)
	-0.121644***	-0.097272***	-0.080664***	-0.057087**	-0.020961	-0.053021**	-0.037587	-0.056409**	0.012811
comlang_off	(0.021537)	(0.023237)	(0.023823)	(0.023355)	(0.023077)	(0.024313)	(0.025319)	(0.025299)	(0.027577)
	-0.082822***	-0.072373***	-0.071975***	-0.079852***	-0.078863***	-0.090010***	-0.096782***	-0.080730***	-0.061107***
col	(0.010965)	(0.010506)	(0.010767)	(0.010431)	(0.010297)	(0.010647)	(0.010433)	(0.010822)	(0.012097)
	-0.135366***	-0.128078***	-0.096540***	-0.117868***	-0.128979***	-0.124885***	-0.085324***	-0.080417***	-0.057325***
log bilateral_trade	(0.016898)	(0.016811)	(0.016585)	(0.016300)	(0.016361)	(0.016568)	(0.016351)	(0.017586)	(0.019436)
	-0.093984***	-0.091265***	-0.090169***	-0.091213***	-0.080863***	-0.074806***	-0.074489***	-0.067342***	-0.055597***
log total_export	(0.001418)	(0.001395)	(0.001415)	(0.001384)	(0.001316)	(0.001340)	(0.001354)	(0.001342)	(0.001455)
	-0.048033***	-0.047575***	-0.049319***	-0.045729***	-0.034574***	-0.029738***	-0.035271***	-0.018584***	-0.017029***
N_suppliers	(0.003267)	(0.003187)	(0.003324)	(0.003109)	(0.002964)	(0.002980)	(0.003011)	(0.002962)	(0.003131)
	-0.016538***	-0.015635***	-0.014983***	-0.014414***	-0.013895***	-0.012568***	-0.012520***	-0.011588***	-0.011212***
multiple_spell	(0.000288)	(0.000279)	(0.000277)	(0.000269)	(0.000258)	(0.000260)	(0.000260)	(0.000260)	(0.000286)
	0.764153***	0.718752***	0.565469***	0.443609***	0.326575***	0.208877***	0.119243***	0.008973	-0.206205***
Observations	158029	159247	159093	170276	176496	173175	184243	196816	206098

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Table D: Cox proportional hazard estimates, OECD countries  
Our measure of financial development is the stock market capitalisation to GDP ratio, instrumented.

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Ext_Fin_Dep_stmktcap_hat	-0.139979***	-0.082210***	-0.133558***	-0.136495***	-0.096695***	-0.085877**	-0.054033	-0.064359*	-0.122601***
log initial_export	(0.031383)	(0.031310)	(0.031753)	(0.032222)	(0.032366)	(0.033699)	(0.034620)	(0.036441)	(0.042580)
	-0.028838***	-0.029200***	-0.030720***	-0.037342***	-0.035781***	-0.039205***	-0.043505***	-0.041553***	-0.039385***
log dist	(0.001451)	(0.001456)	(0.001509)	(0.001535)	(0.001486)	(0.001570)	(0.001588)	(0.001611)	(0.001833)
	0.079331***	0.084232***	0.095910***	0.089711***	0.097851***	0.098481***	0.108130***	0.096639***	0.122587***
cbord	(0.006449)	(0.006434)	(0.006658)	(0.006678)	(0.006807)	(0.007129)	(0.007225)	(0.007806)	(0.009259)
	-0.103571***	-0.084000***	-0.077223***	-0.119598***	-0.101092***	-0.115155***	-0.137288***	-0.180732***	-0.191011***
comlang_off	(0.012175)	(0.012288)	(0.012766)	(0.012840)	(0.013147)	(0.013656)	(0.014356)	(0.015600)	(0.018333)
	-0.100150***	-0.112143***	-0.099670***	-0.099382***	-0.114206***	-0.102930***	-0.089671***	-0.070672***	-0.104752***
col	(0.010590)	(0.010738)	(0.010984)	(0.011139)	(0.011347)	(0.011839)	(0.011929)	(0.013300)	(0.016005)
	-0.105212*	-0.153419***	-0.202806***	-0.232590***	-0.143800**	-0.119985*	-0.155245**	-0.103525	-0.224142**
log bilateral_trade	(0.056188)	(0.056916)	(0.062161)	(0.053829)	(0.058630)	(0.063457)	(0.068131)	(0.072484)	(0.091578)
	-0.097880***	-0.090548***	-0.092958***	-0.090437***	-0.086172***	-0.084996***	-0.083614***	-0.076771***	-0.065765***
log total_export	(0.001325)	(0.001310)	(0.001345)	(0.001349)	(0.001347)	(0.001397)	(0.001416)	(0.001477)	(0.001697)
	-0.160089***	-0.150102***	-0.143609***	-0.136748***	-0.127788***	-0.132302***	-0.120868***	-0.119806***	-0.089840***
N_suppliers	(0.004208)	(0.004277)	(0.004461)	(0.004394)	(0.004409)	(0.004657)	(0.004688)	(0.005131)	(0.005869)
	-0.026448***	-0.025363***	-0.024828***	-0.025681***	-0.024882***	-0.025330***	-0.025017***	-0.024901***	-0.027015***
multiple_spell	(0.000359)	(0.000352)	(0.000356)	(0.000352)	(0.000350)	(0.000364)	(0.000366)	(0.000385)	(0.000446)
	1.215869***	1.126345***	0.860382***	0.686337***	0.533321***	0.418828***	0.311969***	0.153135***	-0.116885***
Observations	(0.006127)	(0.005835)	(0.005671)	(0.005580)	(0.005586)	(0.005727)	(0.005738)	(0.005949)	(0.006778)
	227615	226856	214622	217728	216986	208993	220926	219128	236585

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Standard errors in parentheses

## 8 Appendices

### Appendix A: Data sources

Variable	Sources
Bilateral Gravity Variables	CEPII database,
GDP data	WDI 2007
Exchange Rates	<i>IMF, <a href="http://www.imf.org/external/np/fin/data/param_ms_m_th.aspx">http : //www.imf.org/external/np/fin/data/param_ms_m_th.aspx</a></i>
hs 6 Import Data	BACI database, Gaulier, G. et al. (2008),
Financial Development Variables	Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine, (2000)
Equity Market Liberalization	Bekaert, Geert, Harvey, Campbell R. and Lundblad, Christian T(2004)
External Finance Dependence Measure	Klingebiel, Daniela, Randal Kroszner, and Luc Laeven, (2005)
Legal origin and other instruments	Glaeser, Edward L., Rafael La Porta, Florencio Lopez-de-Silanes and Andrei Shleifer, (2004)

Appendix B: Exporter covered, Importer Covered  
Appendix C : Summary statistics

Variable	Summary	Obs	Mean	Std. Dev.	Min	Max
	NonOECD sample					
<i>code<sub>u</sub>ci<sub>o</sub></i>	Exporter name BACI	2031054	443.5095	251.5353	4	894
<i>code<sub>u</sub>ci<sub>d</sub></i>	OECD Importer name BACI	2030951	453.8776	258.1776	36	842
<i>hs6</i>	hs6 code as string	0				
<i>year</i>	year	2030951	2000.416	3.124904	1996	2005
<i>spellbegin</i>	the date of the beginning of the spell	2030951	2000.416	3.124904	1996	2005
<i>spellend</i>	the date of the end of the spell	2030951	2003.551	2.725426	1998	2006
<i>firstspell</i>	date of the first spell	2030951	1998.686	2.982008	1995	2005
<i>rcensoring</i>	dummy for recensoring data	2030951	0.3482452	0.4764143	0	1
<i>Nspell</i>	number of spells	2030951	1.820069	0.8638885	1	5
<i>multiple<sub>s</sub>l</i>	1 if multiple spell	2030951	0.5626123	0.4960643	0	1
<i>N_suppliers</i>	nmb exporters who supplythe product to an OECD importer	2030951	28.11842	14.36389	1	106
<i>ln<sub>g</sub>Import</i>	initial level of trade flow at the initiation of spell	2030951	8.742766	2.211212	-0.152232	21.97753
<i>ln<sub>0</sub>ECDImp 4</i>	total export of exporter to an OECD country	2030951	12.26145	2.898396	-0.152232	22.96606
<i>ln<sub>t</sub>Import2</i>	total amount of trade of the particular product for each exporter	2030951	19.33292	2.300894	2.197225	26.0841
<i>cbord</i>	1 for cborduity	2030951	0.0168379	0.128664	0	1
<i>comlang<sub>o</sub>ff</i>	1 for common official of	2030951	0.1244195	0.3300597	0	1
<i>col</i>	1 for pairs ever in colonial post 1945	2030951	0.0443369	0.2058425	0	1
<i>perdbgdp</i>	privite credit to GDP	1772639	0.462685	0.4310913	0.005513	1.767205
<i>stmkcap</i>	stock market capitalization to GDP	1762215	0.5303634	0.7963274	0.000438	5.27937
<i>ln<sub>q</sub>ist</i>	log distance	2030951	8.608159	0.7507459	5.287944	9.884789
<i>ln<sub>G</sub>DPpc<sub>o</sub></i>	log GDP pc of exporter in constant PPP dollars	2002548	8.535438	0.8212041	6.130321	10.34398
<i>ln<sub>G</sub>DPpc<sub>o</sub></i>	log GDP pc of exporter in constant PPP dollars	2002548	26.07335	1.669109	20.45495	29.69096
<i>ln<sub>G</sub>DPpc<sub>d</sub></i>	log GDP pc of importer in constant PPP dollars	2030951	10.03715	0.410394	8.680889	10.67023
<i>ln<sub>G</sub>DPpc<sub>d</sub></i>	log GDP of importer in constant PPP dollars	2030951	27.14893	1.34568	22.62955	30.03313
<i>Ext_Fin_Dep*<sub>p</sub>crdbgdp</i>	interaction term of private credit to GDP with measure of external finance dependence	1772639	0.1849682	0.2805006	-0.795242	2.014614
<i>Ext_Fin_Dep<sub>s</sub>tmktcap</i>	interaction term of stock market capitalization to GDP with measure of external finance dependence	1762215	0.2165638	0.4622824	-2.375716	6.018482
<i>legor<sub>u</sub>k</i>	<i>legor<sub>u</sub>k</i>	2031048	0.3763486	0.4844692	0	1
<i>legor<sub>f</sub>r</i>	<i>legor<sub>f</sub>r</i>	2031048	0.4036384	0.4906267	0	1
<i>legor<sub>s</sub>o</i>	<i>legor<sub>s</sub>o</i>	2031048	0.2200076	0.4142515	0	1
<i>legor<sub>g</sub>e</i>	<i>legor<sub>g</sub>e</i>	2031048	2.95E-06	0.0017188	0	1
<i>legor<sub>s</sub>c</i>	<i>legor<sub>s</sub>c</i>	2031048	2.46E-06	0.001569	0	1
<i>pcrdbgdp<sub>h</sub>at</i>	predicted value of private credit to GDP	2031046	0.3478887	0.1688441	0.018566	1.238806
<i>stmkcap<sub>h</sub>at</i>	predicted value of stock market capitalization to GDP	2031046	0.3716565	0.2252783	-0.0699	0.8836066
<i>Ext_Fin_Dep<sub>p</sub>crdbgdp<sub>d</sub>t</i>	interaction term of predicted value of private credit to GDP with measure of external finance dependence	2030951	0.1352077	0.1461368	-0.271611	0.6880798
<i>Ext_Fin_Dep<sub>s</sub>tmktcap<sub>t</sub></i>	interaction term of predicted value of stock market capitalization to GDP with measure of external finance dependence	2030951	0.1447983	0.1706931	-0.310627	0.7869227
<i>Ext_Fin_Dep<sub>f</sub>indep</i>	Rajan Zingales measure of external finance dependence	2030951	0.3864568	0.3372517	-0.45	1.14

Variable	Label	Obs	Mean	Std. Dev.	Min	Max
Summary OECD sample						
<i>code<sub>o</sub>aci<sub>o</sub></i>	Exporter name BACI	2971941	443.8334	255.1229	4	894
<i>code<sub>o</sub>aci<sub>d</sub></i>	Importer name BACI	2971776	444.4311	248.3649	36	842
hs6	hs6 code as string	0				
year	year	2971776	1999.517	3.235606	1996	2005
spellbegin	the date of the beginning of the spell	2971776	1999.517	3.235606	1996	2005
spellend	the date of the end of the spell	2971776	2003.819	2.714649	1998	2006
firstspell	date of the first spell	2971776	1997.429	2.462628	1995	2005
recensoring	dummy for recensoring data	2971776	0.4483871	0.4973291	0	1
Nspell	number of spells	2971776	1.881213	0.8937816	1	5
<i>multiple<sub>s</sub>l</i>	1 if multiple spell	2971776	0.5852157	0.4926849	0	1
N_suppliers	nmb exporters who supplythe product to an OECD importer	2971776	19.62201	11.10423	1	96
<i>ln<sub>g</sub>Import</i>	initial level of trade flow at the initiation of spell	2971776	9.298955	2.431616	-0.168957	23.66761
<i>lnOECDImp4</i>	total export of exporter to an OECD country	2971776	14.23879	2.476255	-0.089022	24.00176
<i>ln<sub>t</sub>Import2</i>	total amount of trade of the particular product for each exporter	2971776	20.83908	1.68248	10.15461	26.36362
cbord	1 for cborduity	2971776	0.0827431	0.2754936	0	1
<i>comlang<sub>o</sub>ff</i>	1 for common official of	2971776	0.0834131	0.2765056	0	1
col	1 for pairs ever in colonial post 1945	2971776	0.0027744	0.0525998	0	1
<i>region<sub>o</sub></i>	region of the exporter	0				
pcrdbgdp	prvite credit to GDP	2904282	0.8243577	0.4595668	0.141501	2.178503
stmktcap	stock market capitalization to GDP	2971776	0.6811464	0.519437	0.041367	3.034418
<i>ln<sub>d</sub>ist</i>	log distance	2971776	7.874273	1.165475	4.087945	9.88258
<i>lnGDPpc<sub>o</sub></i>	log GDP pc of exporter in constant PPP dollars	2971776	9.993979	0.4155773	8.680889	10.67023
<i>lnGDP<sub>o</sub></i>	log GDP of exporter in constant PPP dollars	2971776	26.77811	1.257697	22.62955	30.03313
<i>lnGDPp<sub>pc</sub>d</i>	log GDP pc of importer in constant PPP dollars	2971776	9.97357	0.4280116	8.680889	10.67023
<i>lnGDP<sub>d</sub></i>	log GDP of importer in constant PPP dollars	2971776	26.68119	1.368328	22.62955	30.03313
<i>Ext_Fin_Dep<sub>p</sub>crdbgdp</i>	interaction term of private credit to GDP	2904282	0.3233702	0.3513371	-0.980326	2.483493
<i>Ext_Fin_Dep<sub>s</sub>tmktcap</i>	interaction term of stock market capitalization to GDP with measure of external finance dependence	2971776	0.2602052	0.3222063	-1.365488	3.459237
<i>legor<sub>u</sub>k</i>	predicted value of external finance dependence	2971935	0.2058726	0.4043379	0	1
<i>legor<sub>f</sub>r</i>	<i>legor<sub>u</sub>k</i>	2971935	0.3241225	0.4680461	0	1
<i>legor<sub>s</sub>o</i>	<i>legor<sub>f</sub>r</i>	2971935	0.1261212	0.331986	0	1
<i>legor<sub>g</sub>c</i>	<i>legor<sub>s</sub>o</i>	2971935	0.190526	0.3927161	0	1
<i>legor<sub>s</sub>c</i>	<i>legor<sub>g</sub>c</i>	2971935	0.1533577	0.360332	0	1
<i>pcrdbgdp<sub>h</sub>at</i>	predicted value of private credit to GDP	2971933	0.6428134	0.3155924	0.018566	1.238806
<i>stmktcap<sub>h</sub>at</i>	predicted value of stock market capitalization to GDP	2971933	0.5828874	0.2333866	-0.0699	0.8836066
<i>Ext_Fin_Dep<sub>p</sub>crdbgdt</i>	interaction term of predicted value of private credit to GDP with measure of external finance dependence	2971776	0.252355	0.2611531	-0.557463	1.412239
<i>Ext_Fin_Dep<sub>s</sub>tmktcat</i>	interaction term of predicted value of stock market capitalization to GDP with measure of external finance dependence	2971776	0.2289627	0.2217344	-0.397623	1.007312
<i>Ext_Fin_Dep<sub>f</sub>in<sub>d</sub>ep</i>	interaction term of predicted value of external finance dependence to GDP with measure of external finance dependence	2971776	0.394613	0.3238843	-0.45	1.14
<i>Ext_Fin_Dep<sub>f</sub>in<sub>d</sub>ep</i>	Rajan Zingales measure of external finance dependence	2971776	0.394613	0.3238843	-0.45	1.14