

# Foreign Banks and Trade

## Bridging the Information Gap?

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## Abstract

Foreign banks can play an important role in facilitating international trade. Most research has focused on the financing role banks can play, but less is known about the information role. This paper estimates a gravity model using sub-regional data from Turkey between 2002 and 2010 to explore whether foreign banks promote trade through the information channel. The presence of a foreign banks from a trade partner promote the exports of the sub-region.

In addition, the analysis finds that the footprint of these foreign banks matters more for exports than the presence of these banks and the level of financial development of the sub-region. Banks from countries neighboring trade partners can also decrease exports. When taking into account financial conditions and examining the differential impacts during the recent financial crisis, the analysis finds that the footprint of foreign banks has the largest impact on trade.

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# Foreign Banks and Trade: Bridging the Information Gap?\*

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## 1 Introduction

Foreign banks can promote exports by providing trade financing, enforcing contracts and reducing information asymmetries. [Claessens, Hassib, and van Horen \(2015\)](#) show that sectors that are more dependent on external finance export more when a foreign bank is present in the country. They focus on the financing aspects of foreign banks, but they do not examine the other roles foreign banks may play in boosting exports. Indeed foreign banks can also reduce information asymmetries for exporting firms, especially in countries where there are fewer financing constraints. These foreign banks can help firms assess the profitability of a given product in the foreign market and provide valuable information about export market conditions. It is difficult, however, to disentangle the information role foreign banks play from the financing role.

In this paper we examine the effects foreign banks have on exports of sub-regions in Turkey. Turkey has experienced a large expansion in exports, growing by over 250 percent between 2002 and 2008. The export boom can be attributable to a variety of reason such as devaluation of the Turkish lira, improved macroeconomic conditions, and entry into the EU-Turkey Customs Union.<sup>1</sup> The focus on Turkey allows us to isolate the bank's information

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\*We thank Mehmet Celbis for kindly sharing the sub-regional trade data.

<sup>1</sup>See [Aysan and Hacıhasanoglu \(2007\)](#) for a discussion on the macroeconomic determinants of Turkey's export boom and [Cebeci and Fernandes \(2015\)](#) for an analysis of the microdynamics behind this growth.

role from its financing role. Firstly the analysis on a single economy allows us to better control for country-wide elements such as the quality of institutions, the rule of the law, and political economy macro conditions that will have similar economic implications across the sub-regions. As a result, we can focus on the local effect of foreign banks on the sub-regions exports. Secondly, and more importantly, many Turkish firms tend not to rely on external financing for exports, suggesting a diminished role of banks in financing export activities in Turkey. [Acar \(2009\)](#) finds that many firms (over 70%) rely on own financing and retained earnings –and not trade financing or bank financing– to fund their production activities. Moreover, 60% of Turkish firms in 2008 do not use the common letter of credit to finance their export activities, but rely on cash on delivery. With a smaller role in trade financing, foreign banks may play a larger role in providing an information channel to promote exports. Preliminary analysis suggests that foreign banks play an important role for export promotion. [Figure 1](#) presents a positive correlations between aggregate exports and the local share of foreign bank branches. The positive correlation holds even after excluding Istanbul, where most foreign banks will be located.

We find that foreign banks increase the exports of sub-regions in Turkey. Controlling for the level of financial development and standard gravity variables, a one standard deviation increase in the presence of foreign banks will increase the log of exports by 0.02 standard deviations. Moreover, we not only examine the extensive margin of the information channel, or the presence of the foreign bank, but also the intensive margin, or the footprint of these foreign banks in the sub-regions. We show that the intensive margin of the information channel matters for exports more than the extensive margins and the level of financial development. A one standard deviation increase in the shares of foreign banks in the sub-region will increase the log of exports by 0.08 standard deviations. We also document some spillover effects of banks from countries that are neighboring the trade partner, or regional countries. In particular, we find that the presence of foreign banks from regional trade-partner countries can increase exports. As the footprint of these banks from regional countries increases, exports to the trade partner decreases, pointing to a trade diversion effect. The negative effects of banks from regional countries on exports are mitigated by the positive effects of bank branches from the trade partner. We find that our results hold when we account for the financial crisis.

The paper relates to two strands in the literature. First, we add to the recent growing literature on the role of foreign banks in the economy. [Giannetti and Ongena \(2009\)](#) explore the impact of foreign bank lending on the growth and financing of Eastern European firms from 1993 to 2002. Foreign lending is related to increases in sales, assets and use of financial debt, with a mitigated impact on small firms. The information channel appears to

play an important role as young (connected) firms benefitted the most (least) from foreign bank entry.<sup>2</sup> Exploiting sectoral data from more than 90 countries between 1995 and 2007, [Claessens, Hassib, and van Horen \(2015\)](#) investigate whether the local presence of foreign banks stimulates exports. This paper is closely related to ours. Foreign banks can promote trade but they focus on the financing roles these banks play in increasing exports by relying on the sectors dependence on external finance from [Rajan and Zingales \(1996\)](#) in their identification strategy. In contrast, our paper focuses on how the presence and footprint of foreign banks affect the sub-national exports of one country.

Our paper highlights the information roles foreign banks can play in promoting trade. Turkey presents a distinct case to examine the information role of foreign banks as firms in Turkey are less reliant on foreign banks for trade financing. As discussed in [Acar \(2009\)](#) above, over 70% of firms use their own capital or retain earnings to finance production activities and Turkish exporters are financed by cash on delivery.<sup>3</sup> In fact, the survey of Turkish firms by [Acar \(2009\)](#) finds that the decline in Turkish exports during the financial crisis is a result of decreases in foreign demand rather than issues with trade finance (See [Ahn \(2015\)](#) for a theoretical discussion). [Demir and Javorcik \(2016\)](#) also confirm the findings in the survey with data from the Turkish Statistical Institute for a subset of exports. They show that in 2002 a majority of textiles and clothing from Turkey to the EU (92%) and non-EU countries (76%) were financed by open account transactions and documentary collection methods.<sup>4</sup> These firms do not rely on the banks to provide credit financing.

Second, we contribute to the emerging literature that examines how networks can overcome information barriers in international trade. Information asymmetries and the lack of information about the final destination present large fixed costs to trade, especially for firms exporting differentiated goods. [Rauch \(1999\)](#) finds that colonial ties and common languages between countries are more important for trade of differentiated goods than homogeneous goods.<sup>5</sup> Many firms overcome these informational barriers by relying on business and social networks to facilitate sales and increase the matches between buyers and sellers ([Rauch](#)

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<sup>2</sup>The authors caution that the role of foreign banks may be magnified by the low level of development of banking systems at the time of the analysis, and compounded by the limited ability of local banks to screen for viable loans.

<sup>3</sup>While the cash on delivery method is riskier for Turkish exporters, many firms do not have the bargaining power to negotiate better terms with their foreign partners.

<sup>4</sup>Open account transactions are sales where the goods are shipped and delivered before payment is due. With documentary collection methods, a bank collects the payment on behalf of the exporter but the banks do not guarantee the payment. These methods are in contrast to the letter of credit, where the bank makes a commitment from the importer to pay the exporter.

<sup>5</sup>[Chaney \(2008\)](#) presents a theoretical model that shows that less differentiated goods (having a higher elasticity of substitution) makes export participation or the extensive margin less sensitive to changes in trade barriers.

(2001)). Rauch and Trindade (2002) show that the overseas Chinese network has promoted trade between countries with larger number of Chinese immigrants. Similarly, Combes, Lafourcade, and Mayer (2005) find that business and social networks play a similar role in promoting the exports of French firms. Chaney (2014) show how networks can be incorporated into theoretical models of international trade. Our paper provides evidence on how foreign banks create informational links between trade partners and help to increase trade flows.

The paper proceeds in three sections. Section 2 discusses the empirical methodology and the data used in the analysis. Section 3 presents the results on the relationship between foreign banks and exports in the Turkish sub-regions. Section 4 concludes.

## 2 Empirical Methodology and Data

We examine the impact of foreign banks on Turkish international trade and in particular we aim to focus on the information channel through which they may operate. Foreign banks have strong ties with their parent country and are better placed to assess the profitability of a given product in that market and provide information about the export market conditions (information channel). With respect to this channel, we explore whether the extensive margin –the presence of the foreign bank– and the intensive margin –the footprint of the bank(s)– are economically and statistically significant. Foreign banks may also provide financing for firms that export to their home countries, which can blur the effects of the information channel. However, as discussed above, a large proportion of firms in Turkey do not use trade financing for their exports.

Exporters may gain easier and better access to finance when a larger number of financial services is present in the sub-region in which they operate (financing development). We control for the level of financial development or the amount of available financing in each sub-region, in order to net out the pure financing contribution to trade. Empirical evidence at both the aggregate and industry levels points to a positive relationship between sound financial markets and international trade. Using aggregate panel data of 30 years and 65 countries, Beck (2002) shows that countries with a higher level of financial development have (i) higher shares of manufactured exports in both GDP and total merchandise exports, and (ii) a higher trade balance in manufactured goods. Similarly, Manova (2008) shows that equity market liberalizations increase exports disproportionately in financially vulnerable sectors that require more outside finance or use fewer collateralizable assets. Addressing reverse causality, Manova (2013) shows that more thriving financial markets encourages growth in international trade, rather than the other way around.

The empirical specification is a standard log-linearized gravity equation. We are agnostic about the theoretical model and can appeal to the simple Armington model in [Anderson and Van Wincoop \(2003\)](#). The presence and footprint of the foreign banks are introduced in the iceberg trade cost function. The baseline specifications are as follows:

$$\text{Log}(\text{Exports}_{ijt}) = \alpha + \beta \text{Financial development}_{it} + \gamma \text{Trade-partner bank}_{ijt} + X_{ijt}\delta + \epsilon_{ijt} \quad (1)$$

$$\text{Log}(\text{Exports}_{ijt}) = \tau + \phi \text{Financial development}_{it} + \chi \text{Share}(\text{Trade-partner bank}_{ijt}) + X_{ijt}\psi + \omega_{ijt} \quad (2)$$

where  $\text{Log}(\text{Exports}_{ijt})$  is the log of exports from sub-region  $i$  to trade-partner country  $j$  in time  $t$ .  $X_{ijt}$  is a vector of controls including the standard elements of a gravity equation such as the economic size of the origin and destination economies,  $\text{Log}(\text{Sub-regional GVA}_{it})$  and  $\text{Log}(\text{Country GVA}_{jt})$ , as well as the distance between trading partners,  $\text{Log}(\text{Distance}_{ij})$ , to proxy for bilateral trade costs. Moreover it includes fixed effects for the sub-region, trade partner and time to capture elements that are either time-invariant but space specific (e.g. the quality of the institutions and infrastructures, at least over the short time period considered) or time specific but space invariant (such as global economic trends). These fixed effects will also account for the multilateral resistance terms highlighted by [Anderson and Van Wincoop \(2003\)](#).

The main variables of interest in the specification relate to the information channel. This is captured with two variables that will be estimated in separate regressions. *Trade-partner bank* $_{ijt}$  ( $Yes=1$ ) is a dummy variable that equals one if a bank from the partner country  $j$  is present in sub-region  $i$ , and it captures the extensive margin of the information channel. *Share*(*Trade-partner bank* $_{ijt}$ ) is defined as the share of branches of the bank from the trade partner country  $j$  in sub-region  $i$ , and it captures the intensive margin of the information channel. *Financial development* $_{it}$  is defined as the sub-regions level of financial development at time  $t$ . The coefficients  $\gamma$  and  $\chi$  respectively capture the importance of the extensive and intensive margins of the information channel, while  $\beta$  and  $\phi$  reflect the importance of financial development for exports.

Other foreign banks from the region of the trade partner may have a spillover effect on exports. Compared to more remote financial institutions, these banks from neighboring countries are more knowledgeable about the destination country and can likely provide information and credit to the exporting firms in the sub-region. We assess the role of having a bank from a geographical region of the trade partner on the sub-regions exports to that trade partner. We replace the information channel variables with similar variables that capture the presence of a bank from the trade partners region and the number of branches these

banks have.

The empirical framework is altered as follows:

$$\text{Log}(\text{Exports}_{ijt}) = \alpha + \beta \text{Financial development}_{it} + \gamma \text{Regional trade-partner bank?}_{ijt} + X_{ijt} \delta + \epsilon_{ijt} \quad (3)$$

$$\text{Log}(\text{Exports}_{ijt}) = \tau + \phi \text{Financial development}_{it} + \chi \text{Share}(\text{Regional trade-partner bank}_{ijt}) + X_{ijt} \psi + \omega_{ijt} \quad (4)$$

where *Trade-partner regional bank?<sub>ijt</sub>* is a dummy variable that equals one if Turkish sub-region *i* has a bank from countries close to trade partner *j*, and *Share(Trade-partner regional bank<sub>ijt</sub>)* is the share of branches of the bank from countries close to the trade partner. We consider countries that are close to the trade partner to be those within the same region as the trade partner.<sup>6</sup> The other variables in Equations 3 and 4 are defined as above.

Finally, we want to distinguish the effect of the information channels before and during the crisis. A dummy variable that captures the crisis period will be interacted with the variables for the financing and information channels in the regressions. The dummy *Crisis?<sub>t</sub>* (*Yes=1*) takes the value one for the years 2008 to 2010, the last year in our sample. As such it captures the latest financial crisis, taking into account the delay in contagion from the US.

The analysis will use data on 26 Turkish sub-regions and 180 partner countries between 2002 and 2010. It primarily relies on two data sources. First, NUTS 2 sub-regional economic data come from [Celbis, Nijkamp, and Poot \(2014\)](#).<sup>7</sup> The NUTS 2 sub-regional economic data are collected by [Celbis, Nijkamp, and Poot \(2014\)](#), and provide information on the main variables used in the analysis. The sub-regional exports (*Exports<sub>ijt</sub>*) is the total value of bilateral exports of sub-region *i* to country *j* at time *t*.<sup>8</sup> Sub-regional gross value added (*Regional GVA<sub>it</sub>*) is obtained from Turkstat and the trade-partner country gross value-added is from the UN Statistics Division.<sup>9</sup> All three variables are measured in constant 2005 100,000 USD. Bilateral distance between the Turkish sub-region and trade partner country (*Distance<sub>ij</sub>*) is measured as the Euclidean distance between the most populous province of

<sup>6</sup>We use seven geographical aggregates, defined according to the World Development Indicators. Namely, they are East Asia and Pacific, Europe and Central Asia, Latin America and Caribbean, Middle East and North Africa, North America, South Asia, Sub-Saharan Africa.

<sup>7</sup>The term NUTS stands for “Nomenclature of Units for Territorial Statistic” and is defined in the 2002 agreement between the Turkish authorities and Eurostat. There are three NUTS level: NUTS 1 identifies 12 regions, NUTS 2 26 sub-regions, and NUTS 3 81 provinces. The classification is not a one-to-one mapping of the administrative territorial subdivision of Turkey and is used mainly for statistical purposes and comparability with other EU countries.

<sup>8</sup>The analysis does not cover Belgium and the Islamic Republic of Iran as these countries are not available in the data from [Celbis, Nijkamp, and Poot \(2014\)](#).

<sup>9</sup>The sub-regional GVA data is compiled in terms of 1998 national currency. To correct for inflation and exchange rate fluctuations, [Celbis, Nijkamp, and Poot \(2014\)](#) rely on the external currency deflator and the USD conversion rate provided by the Turkey Regional Ministry of Development.



the sub-region and the capital of the partner country.<sup>10</sup>

Second, we exploit financial information disaggregated at the sub-regional and provincial levels from the Bank Association of Turkey.<sup>11</sup> The data contains information on the number of branches of local and foreign banks and the number of loans in each Turkish sub-region. The definition of the level of financial development in each sub-region ( $Financial\ development_{it}$ ) is the ratio of credit to gross value added computed at the sub-regional level. The measure is popular in the financial development literature. As King and Levine (1993) initially pointed out, the measure can be used as proxy because lending to the private sector rather than only to government and state-owned enterprises is more likely to stimulate growth in the sector by promoting corporate control capacities and risk evaluations. While we are aware of the limitations of this variable, it is the best indicators available given the data and the subnational nature of the analysis.<sup>12</sup>

### 3 Results

We first examine the effects of foreign banks on exports, which are summarized in Table 2. The intensive margin and the extensive margin of the information channel and the level of financial development positively affect the exports of Turkish sub-regions. We compare the effects of each variable on exports in separate regressions in columns (2) to (4), by examining the standardized coefficients. A one standard deviation increase in financial development leads to a 0.03 standard deviation increase in  $Log(Exports_{ijt})$ . Similarly a one standard deviation increase in the presence of foreign banks will increase the log of exports by 0.02 standard deviations. When the share of bank branches increases by one standard deviation, the log of exports increase by 0.08 standard deviations. These initial regressions suggest that while the level of financial development and the extensive margin of the information channel are equally important for exports, the intensive margin of the information channel is most important for exports.

The intensive and extensive margins of the information channel remain important after accounting for the sub-regional level of financial development in the regressions in the last two columns of Table 2. The level of financial development is important, and as important as the extensive margin of the information channel, but the intensive margin of the information channel is more important for the sub-regions exports. All coefficients for financial development and the information channels are statistically significant. The signs on the

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<sup>10</sup>See Celbis, Nijkamp, and Poot (2014) for the different sources of information to construct the variable.

<sup>11</sup><https://www.tbb.org.tr>

<sup>12</sup>Refer to Levine (2005) for a discussion on the measurement of financial development.

gravity variables are as expected: the larger the size of the sub-region and the trade-partner economy, the larger the exports to the trade partner; the further away in distance is the trade partner, the smaller the exports.

Next we examine if there are spillover effects from the banks from other neighboring trade-partner countries. The results in Table 3 indicates that the presence of banks from countries within the region of the trade partner continues to promote exports. However, a higher share of regional banks from neighboring countries reduces exports to the trade partner. The results suggest that foreign banks from neighboring countries have a trade diversion effect, where the sub-region trades more with regional countries that have a larger bank presence and substitute away from trade with the trade-partner country. When both the shares of bank branches from the trade partner and neighboring countries are included in the regression, the trade diversion effect is present but the presence of bank branches from the trade partner mitigates this effect. A one standard deviation increase in the share of regional bank branches decreases  $\text{Log}(\text{Exports}_{ijt})$  by 0.06 standard deviations. In contrast, a one standard deviation increase in the share of bank branches from the trade partner increases  $\text{Log}(\text{Exports}_{ijt})$  by 0.08 standard deviations. The net effect on  $\text{Log}(\text{Exports}_{ijt})$  is positive. The role of the level of financial development remains unchanged from baseline results. A one standard deviation increase in financial development increases  $\text{Log}(\text{Exports}_{ijt})$  by 0.03 standard deviations.

Finally the data set allows us to investigate whether the role of foreign banks changes as financial conditions tighten. We include a dummy for the crisis period and interact it with the variables for financial development and the information channel. Tables 4 and 5 report the results. Again the intensive margins play a more significant role in boosting trade. When the  $\text{Share}(\text{Trade-partner bank}_{ijt})$  grows by one standard deviation during the crisis,  $\text{Log}(\text{Exports}_{ijt})$  increases by 0.05 standard deviation. The corresponding effect for either the financial development or the extensive margin is more muted at 0.01 increase in the standard deviation of exports.<sup>13</sup> The results are reversed when we examine the spillover effects of banks from the trade partners region, which is in line with the results above that do not control for the crisis period.

A possible concern is the endogeneity of the financial development as the supply and demand channels may influence and determine fluctuations of the variable. The level of fi-

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<sup>13</sup>The result can be interpreted through the lenses of Besedeš, Kim, and Lugovskyy (2014). They develop a theoretical model to show that credit constraints play a key role in early stages of exporting, but not in later stages. The model is supported by empirical evidence from product-level data on exports to 12 European Union members and the United States. In our case, we cannot control for the duration of export experience, and thus cannot directly test the implications of Besedeš, Kim, and Lugovskyy (2014). However, the information channel may have differential impacts on exports depending on the financial conditions faced by the sub-region.

nancial development may decline if firms reduce their demand for loans because, for example, their production falls as the economy slows down (demand channel). At the same time, a reduction in financial development may be due to the desire of financial institutions to reduce their leverage and exposure when financial conditions worsen (supply channel). We adopt two variables as possible instruments: the lagged value of financial development (assuming that only contemporaneous effects matter) and *Weighted domestic credit to private sector by banks (% of GDP)*. The latter captures the share of domestic credit to the private sector provided by banks, and it is weighted by the ratio of foreign bank branches to total number of branches in the region. [Ongena, Peydró, and Van Horen \(2015\)](#) uses matched firm-bank level data for Eastern Europe and Turkey to show that foreign-owned banks contracted their lending more during the financial crisis, than locally-funded domestic banks.

The results are summarized in Tables 6 and 7. The instruments appear highly correlated with the dependent variable, but not uncorrelated with the error term as we reject the null that the instruments are valid. The inclusion of the instrumental variables does not change our results.

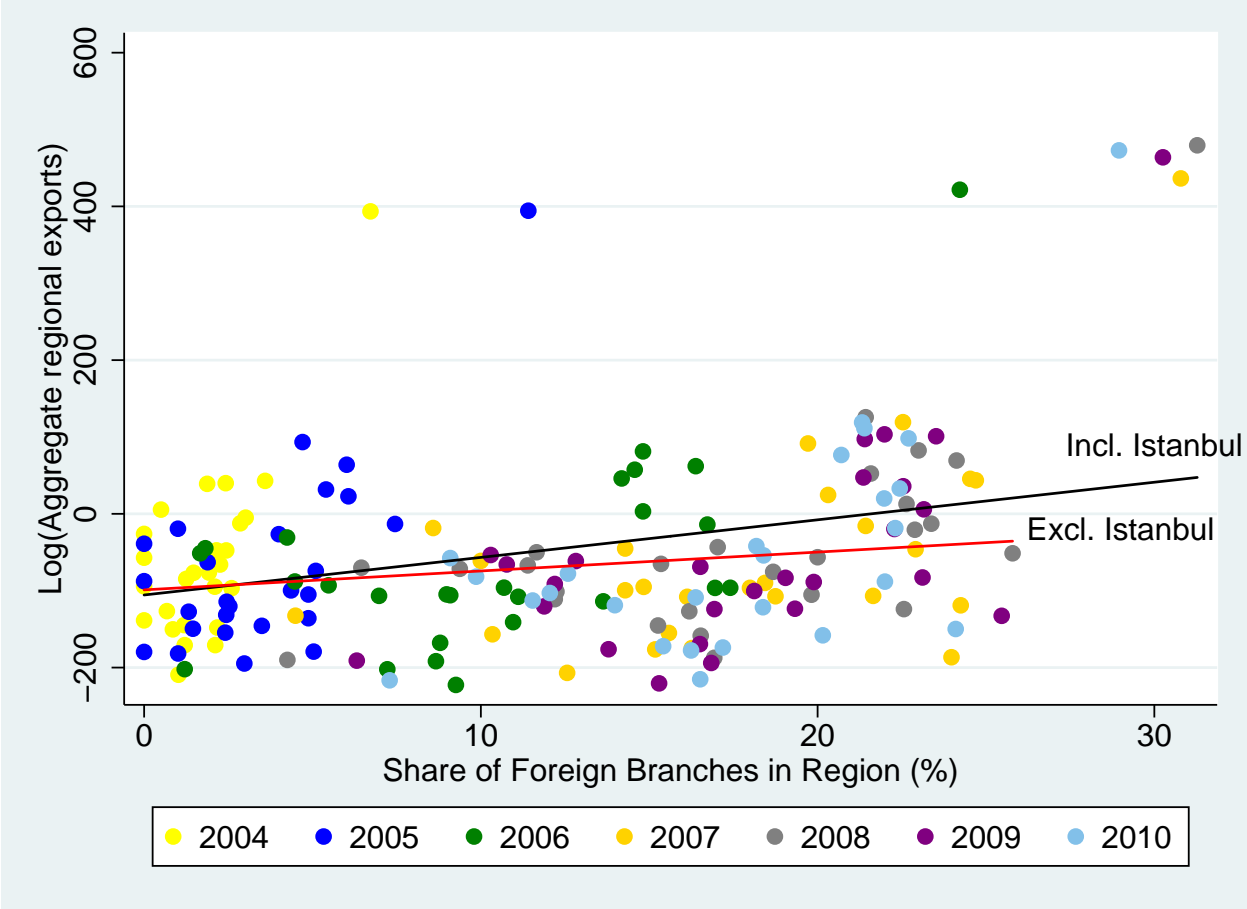
## 4 Conclusions

Foreign banks are important for trade as they provide finances and information to local firms. By focusing on Turkey where few firms use foreign banks to finance trade, we show the importance of the information channel that foreign banks play in promoting exports. We find that the presence of foreign banks will increase the exports of sub-regions in Turkey. The exports will further increase as the footprint or share of the foreign bank branches increases. We also show that there are spillover effects from other foreign banks of countries neighboring the trade partner: the presence of these foreign banks can increase exports to the trade-partner country but as their footprint increases, they can divert trade and reduce exports to the trade partner. The positive relationship between foreign banks and exports does not change with the financial crisis.

These results show that aside from financing, banks can play an important role in providing information and reducing information asymmetries for exporters. Questions remain on what are the mechanisms by which banks transmit the information to the exporters and whether the information from banks is unique and cannot be replicated by other agencies such as export promotion boards and chambers of commerce. We leave these questions for future research.

# 5 Figure

Figure 1: Aggregate trade and credit constraints



## 6 Table

Table 1: Summary statistics

	N	Mean	SD	Min	Max
Log(Exports)	42120	0.99	2.41	-11.66	10.77
Log(Sub-regional GVA)	42120	11.38	0.82	9.88	13.89
Log(Importer GVA)	42120	12.07	2.26	6.86	18.70
Log(Distance)	42120	8.42	0.81	5.58	9.79
Financial development ( $\frac{Loan}{GVA}$ )	42120	0.04	0.04	0.00	0.35
TP bank? (Yes=1)	42120	0.06	0.23	0.00	1.00
Share(TP branches)	42120	0.62	3.26	0.00	31.27
Regional TP bank? (Yes=1)	42120	0.06	0.23	0.00	1.00
Share(Regional TP branches)	42120	5.12	20.83	0.00	100.00
Crisis? (Yes=1)	42120	0.33	0.47	0.00	1.00
Weighted domestic credit to private sector by banks (% of GDP)	42120	0.54	2.79	0.00	27.56

Table 2: The role of bank branches from the trade-partner country

Financial development ( $\frac{Loan}{GVA}$ )		1.640***		1.640***	1.555***
		(0.228)		(0.228)	(0.233)
TP bank? (Yes=1)			0.209**	0.209**	
			(0.087)	(0.087)	
Share(TP branches)				0.057***	0.056***
				(0.005)	(0.005)
Log(Sub-regional GVA)	0.160	0.250	0.160	0.091	0.250
	(0.160)	(0.161)	(0.160)	(0.161)	(0.161)
Log(Importer GVA)	0.661***	0.661***	0.659***	0.777***	0.659***
	(0.084)	(0.083)	(0.083)	(0.088)	(0.083)
Log(Distance)	-1.360***	-1.360***	-1.360***	-1.341***	-1.360***
	(0.161)	(0.161)	(0.161)	(0.160)	(0.161)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	0.99	0.99	0.99	0.99	0.99
R <sup>2</sup>	0.546	0.547	0.547	0.549	0.547
N	42120	42120	42120	42120	42120

The dependent variable is the  $Log(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.

Table 3: The role of bank branches from the regional trade-partner country

Financial development ( $\frac{Loan}{GVA}$ )			1.640***	1.635***	1.539***
			(0.228)	(0.228)	(0.234)
Regional TP bank? (Yes=1)	0.209**		0.209**		
	(0.087)		(0.087)		
Share(Regional TP branches)		-0.004***		-0.004***	-0.007***
		(0.001)		(0.001)	(0.001)
Share(TP branches)					0.060***
					(0.006)
Log(Sub-regional GVA)	0.160	0.156	0.250	0.245	0.162
	(0.160)	(0.160)	(0.161)	(0.161)	(0.162)
Log(Importer GVA)	0.659***	0.672***	0.659***	0.672***	0.806***
	(0.083)	(0.084)	(0.083)	(0.084)	(0.089)
Log(Distance)	-1.360***	-1.358***	-1.360***	-1.358***	-1.338***
	(0.161)	(0.161)	(0.161)	(0.161)	(0.160)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	0.99	0.99	0.99	0.99	0.99
R <sup>2</sup>	0.547	0.547	0.547	0.547	0.550
N	42120	42120	42120	42120	42120

The dependent variable is the  $Log(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.

Table 4: The role of bank branches from the trade-partner country: before and after the crisis

Crisis? (Yes=1)	-0.859***	-1.033***	-1.020***	-0.925***	-0.903***
	(0.317)	(0.307)	(0.311)	(0.315)	(0.318)
Financial development ( $\frac{Loan}{GVA}$ )	0.992***			1.000***	0.756***
	(0.205)			(0.205)	(0.209)
Financial development ( $\frac{Loan}{GVA}$ ) $\times$ Crisis?	-0.354			-0.348	-0.101
	(0.390)			(0.390)	(0.391)
TP bank? (Yes=1)		0.340***		0.338***	
		(0.090)		(0.090)	
TP bank? $\times$ Crisis?		-0.470***		-0.472***	
		(0.072)		(0.072)	
Share(TP branches)			0.078***		0.078***
			(0.007)		(0.007)
Share(TP branches) $\times$ Crisis?			-0.047***		-0.046***
			(0.004)		(0.004)
Log(Sub-regional GVA)	0.120	0.227***	-0.036	0.143*	-0.097
	(0.086)	(0.085)	(0.090)	(0.086)	(0.091)
Log(Importer GVA)	0.653***	0.620***	0.698***	0.595***	0.678***
	(0.074)	(0.074)	(0.076)	(0.073)	(0.075)
Log(Distance)	-1.313***	-1.309***	-1.296***	-1.309***	-1.296***
	(0.161)	(0.161)	(0.160)	(0.161)	(0.160)
Log(Sub-regional GVA) $\times$ Crisis?	0.112***	0.121***	0.127***	0.111***	0.116***
	(0.020)	(0.019)	(0.019)	(0.020)	(0.020)
Log(Importer GVA) $\times$ Crisis?	0.071***	0.089***	0.070***	0.089***	0.070***
	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)
Log(Distance) $\times$ Crisis?	-0.141***	-0.153***	-0.136***	-0.153***	-0.136***
	(0.020)	(0.021)	(0.021)	(0.021)	(0.021)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	0.99	0.99	0.99	0.99	0.99
R <sup>2</sup>	0.549	0.549	0.551	0.549	0.551
N	42120	42120	42120	42120	42120

The dependent variable is the  $\text{Log}(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.

Table 5: The role of bank branches from the regional trade-partner country: before and after the crisis

Crisis? (Yes=1)	-1.033***	-0.930***	-0.925***	-0.823***	-0.925***	-0.230
	(0.307)	(0.308)	(0.315)	(0.316)	(0.315)	(0.333)
Financial development ( $\frac{Loan}{GVA}$ )			1.000***	1.008***	1.000***	0.797***
			(0.205)	(0.205)	(0.205)	(0.206)
Financial development ( $\frac{Loan}{GVA}$ ) × Crisis?			-0.348	-0.360	-0.348	-0.164
			(0.390)	(0.390)	(0.390)	(0.391)
Regional TP bank? (Yes=1)	0.340***		0.338***		0.000	
	(0.090)		(0.090)		(.)	
Regional TP bank? × Crisis?	-0.470***		-0.472***		0.000	
	(0.072)		(0.072)		(.)	
Share(Regional TP branches)		-0.002*		-0.002*		-0.003**
		(0.001)		(0.001)		(0.001)
Share(Regional TP branches) × Crisis?		-0.006***		-0.006***		-0.035***
		(0.001)		(0.001)		(0.003)
TP bank? (Yes=1)					0.338***	
					(0.090)	
TP bank? × Crisis?					-0.472***	
					(0.072)	
Share(TP branches)						0.067***
						(0.006)
Share(TP branches) × Crisis?						0.093***
						(0.012)
Log(Sub-regional GVA)	0.227***	0.243***	0.143*	0.158*	0.143*	-0.034
	(0.085)	(0.085)	(0.086)	(0.086)	(0.086)	(0.089)
Log(Importer GVA)	0.620***	0.627***	0.595***	0.602***	0.595***	0.633***
	(0.074)	(0.074)	(0.073)	(0.073)	(0.073)	(0.074)
Log(Distance)	-1.309***	-1.304***	-1.309***	-1.304***	-1.309***	-1.266***
	(0.161)	(0.161)	(0.161)	(0.161)	(0.161)	(0.159)
Log(Sub-regional GVA) × Crisis?	0.121***	0.118***	0.111***	0.109***	0.111***	0.057***
	(0.019)	(0.019)	(0.020)	(0.020)	(0.020)	(0.022)
Log(Importer GVA) × Crisis?	0.089***	0.089***	0.089***	0.089***	0.089***	0.086***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Log(Distance) × Crisis?	-0.153***	-0.162***	-0.153***	-0.162***	-0.153***	-0.155***
	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)	(0.021)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	0.99	0.99	0.99	0.99	0.99	0.99
R <sup>2</sup>	0.549	0.549	0.549	0.549	0.549	0.555
N	42120	42120	42120	42120	42120	42120

The dependent variable is the  $\text{Log}(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.



Table 6: The role of bank branches from the trade-partner country: IV

Financial development ( $\frac{Loan}{GVA}$ )	6.627*** (1.040)	6.674*** (1.039)	5.951*** (1.074)	6.674*** (1.039)	6.628*** (1.042)	6.674*** (1.039)	5.861*** (1.079)
TP bank? (Yes=1)		0.186** (0.084)				0.186** (0.084)	
Share(TP branches)			0.061*** (0.006)				0.065*** (0.006)
Regional TP bank? (Yes=1)				0.186** (0.084)			
Share(Regional TP branches)					-0.004*** (0.001)		-0.008*** (0.001)
Log(Sub-regional GVA)	0.305* (0.185)	0.307* (0.185)	0.209 (0.186)	0.307* (0.185)	0.300 (0.185)	0.307* (0.185)	0.192 (0.186)
Log(Importer GVA)	0.832*** (0.093)	0.830*** (0.093)	0.968*** (0.098)	0.830*** (0.093)	0.847*** (0.094)	0.830*** (0.093)	1.004*** (0.100)
Log(Distance)	-1.348*** (0.164)	-1.348*** (0.164)	-1.327*** (0.163)	-1.348*** (0.164)	-1.347*** (0.164)	-1.348*** (0.164)	-1.323*** (0.163)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	1.02	1.02	1.02	1.02	1.02	1.02	1.02
F stat	49	41	57	41	42	41	48
Kleibergen-Paap LM test p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hansen J stat p-value	0.000	0.000	0.577	0.000	0.000	0.000	0.487
R <sup>2</sup>	0.554	0.554	0.557	0.554	0.554	0.554	0.557
N	37440	37440	37440	37440	37440	37440	37440

The dependent variable is the  $\text{Log}(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.

Table 7: The role of bank branches from the trade-partner country: IV, before and after the crisis

Crisis? (Yes=1)	-0.645*	-0.707**	-0.595*	-0.707**	-0.594*	-0.707**	0.114
	(0.349)	(0.347)	(0.350)	(0.347)	(0.348)	(0.347)	(0.367)
Financial development ( $\frac{Loan}{GVA}$ )	11.014***	9.998***	2.486	9.998***	10.147***	9.998***	2.685
	(1.922)	(1.890)	(1.921)	(1.890)	(1.882)	(1.890)	(1.914)
Financial development ( $\frac{Loan}{GVA}$ ) × Crisis?	-5.905***	-5.219***	0.320	-5.219***	-5.255***	-5.219***	0.430
	(1.551)	(1.531)	(1.545)	(1.531)	(1.523)	(1.531)	(1.550)
TP bank? (Yes=1)		0.312***				0.312***	
		(0.085)				(0.085)	
TP bank? × Crisis?		-0.436***				-0.436***	
		(0.070)				(0.070)	
Share(TP branches)			0.081***				0.068***
			(0.007)				(0.007)
Share(TP branches) × Crisis?			-0.042***				0.092***
			(0.004)				(0.012)
Regional TP bank? (Yes=1)				0.312***			
				(0.085)			
Regional TP bank? × Crisis?				-0.436***			
				(0.070)			
Share(Regional TP branches)					-0.003**		-0.004***
					(0.001)		(0.001)
Share(Regional TP branches) × Crisis?					-0.006***		-0.033***
					(0.001)		(0.003)
Log(Sub-regional GVA)	-1.265***	-1.118***	-0.515**	-1.118***	-1.118***	-1.118***	-0.449*
	(0.251)	(0.247)	(0.245)	(0.247)	(0.246)	(0.247)	(0.244)
Log(Importer GVA)	0.541***	0.506***	0.782***	0.506***	0.509***	0.506***	0.723***
	(0.094)	(0.094)	(0.100)	(0.094)	(0.094)	(0.094)	(0.099)
Log(Distance)	-1.306***	-1.302***	-1.287***	-1.302***	-1.296***	-1.302***	-1.255***
	(0.164)	(0.164)	(0.163)	(0.164)	(0.164)	(0.164)	(0.162)
Log(Sub-regional GVA) × Crisis?	0.092***	0.089***	0.068**	0.089***	0.085***	0.089***	0.004
	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.027)	(0.029)
Log(Importer GVA) × Crisis?	0.066***	0.082***	0.064***	0.082***	0.083***	0.082***	0.080***
	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
Log(Distance) × Crisis?	-0.113***	-0.124***	-0.106***	-0.124***	-0.133***	-0.124***	-0.126***
	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)	(0.020)
Regional (exporter) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country (importer) FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean dep. var.	1.02	1.02	1.02	1.02	1.02	1.02	1.02
F stat	75	63	67	63	64	63	61
Kleibergen-Paap LM test p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Hansen J stat p-value	0.000	0.000	0.137	0.000	0.000	0.000	0.300
R <sup>2</sup>	0.553	0.554	0.558	0.554	0.554	0.554	0.562
N	37440	37440	37440	37440	37440	37440	37440

The dependent variable is the  $\text{Log}(Export_{it})$  expressed in 100,000 constant USD. Robust standard errors clustered at the pair level are reported in brackets. The symbols \*\*\*, \*\*, \* represent significance at the 1%, 5%, and 10% level.

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