Economics Bulletin

Volume 40, Issue 1

Travel Visas and Trade Finance

Veysel Avsar
Texas A&M University Corpus Christi

Abstract

We examine the impact of Turkey's removal of visa policies on trade finance using cross-country cross-industry payments data on international transactions. Exploiting the variation in visa requirements across countries and over time, we find that the removal of visa barriers significantly increases exporter-financed trade to Turkey. Our results suggest that easier personal interactions between global business partners as a result of liberal visa policies help them build trust and make it easier for them to monitor transactions and mitigate credit risks.

Citation: Veysel Avsar, (2020) "Travel Visas and Trade Finance", *Economics Bulletin*, Volume 40, Issue 1, pages 567-573
Contact: Veysel Avsar - veysel.avsar@tamucc.edu.
Submitted: October 11, 2019. **Published:** February 22, 2020.

1. INTRODUCTION

Clinching a deal and cementing long term business relationship in global markets require significant exchange of information. Research has shown that informational asymmetries distorts global trade flows (Chaney, 2014) and an essential way to overcome these barriers is to increase networks and communication. That is why, personal interactions via face-to-face meetings have long been recognized as an input to global business and many studies demonstrated the positive effects of communication (Freund and Weinhold, 2004) and business travels (Kulendran and Wilson, 2000; Aradhyula and Tronstad, 2003; Cristea, 2011; Poole 2010; Yilmazkuday and Yilmazkuday, 2017) on cross-border transactions.

One of the channels through which networks and face-to-face interactions can increase international trade is the credit channel. Offering trade finance is risky. Thus, business partners often need to be on the ground to build and maintain trust and accurately evaluate the default risks. Business travels can help companies mitigate these risks and facilitate their business activities. In this study, we build on this argument and investigate the casual relationship between travel visas and trade finance, using the removal of travel visas in Turkey in early 2000s as a natural experiment. Using highly disaggregated industry-level import data on trade finance, our findings suggest that removal of travel visas increased the exporter-financed trade transactions to Turkey.

Trade finance is the heart of international business activity. According to a World Trade Organization report, 80% of global trade is financed by credit. An exporter can complete an international transaction by two main methods: through cash in advance, where the buyer collects payment before the goods are shipped, and on an open account (extending trade credit) where the payment is received some time after the delivery. In global business, financial institutions also act as intermediaries to reduce the risk of the transactions and provide other financing options such as letter of credit and documentary collections. Niepmann and Schmidt-Eisenlohr (2017) show that letter of credit method constitutes about 13 percent and documentary collections about 2 percent of cross border transactions.

A recent study by the Boston Consulting Group has shown that a typical trade finance transaction involves about 20 documents, large number of people from companies, banks and shippers, and leads to more than 5,000 data field interactions, which takes up to around 4 weeks. The risk in this exchange is not limited to credit risk but also involves other ones such as fraud, paper forgery or duplicate invoicing. Liberal visa policies can increase personal interactions between global business partners, help them build trust, and make it easier for them to monitor transactions and evaluate above noted risks. Liberal visa policies can also make companies more competitive by freeing more resources and time, which enables them to be more flexible to extend trade credit in an international exchange. Therefore, we hypothesize that removal of trade barriers by importing country increase the exporter financed trade. Using alternative estimations, we provide strong support for this hypothesis.

2. DATA

Data on method of payments in export transactions is purchased from Turkish Statistical Institute (TUIK). This database documents the use of different payment terms in import transactions in Turkey at the 2-digit level of ISIC Revision 3 and covers the years from 2002 to 2012. This data also reports the trade partners, which allows us to examine the effect of variation in visa policy on trade finance.[1]

We collected the information on the changes in visa policy from *T.C. Resmi Gazete (Official Gazette of the Republic of Turkey),* official publication of Turkey that publishes the new legislation and other official announcements. Over the years of our sample, Turkey lifted visa restrictions for 33 countries. We list the countries and the years of the removal of visas in Table 1.

Table 1. List of countries whose citizens provided exemption

Country	Visa removal year
Albania	2009
Andorra	2005
Brunei	2009
Kosovo	2009
Croatia	2008
United Arab Emirates	2008
Azerbaijan	2007
Mongolia	2007
Uzbekistan	2007
Tajikistan	2007
Lithuania	2009
Turkmenistan	2007
Latvia	2006
Jordan	2010
Venezuela	2005
Lebanon	2010
The Czech Republic	2004
Georgia	2006
Estonia	2008
Kuwait	2007
Venezuela	2005
Guatemala	2005
Slovenia	2010
Saudi Arabia	2010
Romania	2009
Syria	2009
Haiti	2007
Djibouti	2009
Mauritius	2008
Libya	2010

[1] For detailed description of trade finance data, see Turkcan and Avsar (2016).

The industry data is matched with two cross-country data. First, for GDP per capita, we utilized *World Development Indicators (WDI).* Second, following Glady and Potin (2011), Hoefele et al. (2016), the financial costs are proxied by the net interest margin which is the net interest income of the banks relative to their total earning assets. This variable comes from *the World Bank Global Financial Development Database*. Finally, geographical distance between countries are obtained from CEPII database.

3. EMPIRICAL ANALYSIS and RESULTS

Fixed effects estimation

To estimate the causal impact of visas on trade flows, we begin by the following equation:

$$\ln(OA_{ijt}) = \beta_0 + \beta_1 visafree_{it} + \beta_2 LnGDPpercapita_{it} + \beta_3 NetInterestMargin_{it} + \varphi_i + \theta_j + \vartheta_t + \varepsilon_{ijt} \quad (1)$$

where OA_{ijt} is the value of imports executed under open account terms from country *i* in industry *j*, $visafree_{it}$ is dummy variable equal to 1 when there is no visa restriction in place and to zero otherwise. $LnGDPpercapita_{it}$ is the log of the per capita income and $NetInterestMargin_{it}$ is the net interest income of the banks relative to their total earning assets in the exporter's country.

Our empirical analysis revolves around estimating the effect of the removal of visas on the exporter-financed trade for the countries for which Turkey lifted the visa requirements (treatment) in our sample, compared to a control group of countries that it did not. To do so, we must construct a control group of countries which are similar to those in the treatment group in terms of the likelihood of having no visa restrictions. Since our data covers between 2002 and 2012, a natural control group is the countries for which Turkey removed the visas after 2012. We list the countries in control group in Table 2.

Trade relationships in terms of payment methods depends on some country-level omitted variables, such as distance and cultural ties. To account for this, we include country fixed effects, φ_i. On the other hand, certain product categories like technology intensity and complexity of the products may require more intense relationships, which can impact the dynamics of trade finance. To remedy this potential bias, we add industry fixed effects, θ_j. Further, we used year fixed effects, ϑ_t, to control for the aggregate variations in Turkey such as business cycle, exchange rate and current account shocks.

Table 3 displays the results for equation 1. We report the results without fixed effects in specification 1, and with fixed effects in 2. As shown, the coefficient of the treatment variable (visa removal) is positive and significant. This suggests that removal of visas significantly increased exporter-financed (open account) exports to Turkey. With respect to the size of the estimate, we obtain around 11% increase in the value of exports settled under open account as a result of removal of visa barriers.

Table 2. Countries in the Control Group
Country
Algeria
Angola
Belize
Benin
Bosnia and Herzegovina
Cambodia
Chad
Slovakia
Dominican Republic
Ecuador
Gabon
Ghana
Guinea
Hungary
Ivory Coast
Mozambique
Nicaragua
Nigeria
Qatar
Senegal
Seychelles
Thailand
Democratic Republic of the Congo

Table 3. Estimation Results

Dependent variable: Log of the value of imports from country i in industry j		
	1	2
Visa removal	1.298***	0.121**
	(8.91)	(2.24)
Log (GDP per capita)	0.931***	0.479
	(20.45)	(1.23)
Net Interest Margin	-0.288***	0.0189
	(-14.07)	(0.73)
Year fixed effects	No	Yes
Industry fixed effects	No	Yes
Country fixed effects	No	Yes
N	11270	11270

***Notes**: 1) Each specification includes a constant term, year, industry and country fixed effects 3) t statistics in parentheses. ***, **, * denote significance at 1%, 5% and 10% levels, respectively.*

Robustness checks

Hoefele et al (2016) use fractional response model for exporter-financed transactions in which the dependent variable is the share of exports under open account terms in total exports. We also follow a similar strategy to check the sensitivity of our results, replace our dependent

variable with a share variable, which is between 0 and 1, and estimate a fractional response model. Our finding remains salient after this exercise. The first column in Table 4 reports the results for the marginal effects from the fractional response model. In line with the previous estimation, our visa removal variable is positive and significant.

Table 4. Probit Model Results

	1	2
Visa removal	0.015*	0.021**
	(1.95)	(2.47)
Control variables	No	Yes
Year fixed effects	No	Yes
Industry fixed effects	No	Yes
Country fixed effects	No	Yes
		10604

***Notes**: 1) This table presents the marginal effectsl 2) Each specification includes a constant term, control variables; and year, industry and country fixed effects 3) t statistics in parentheses. ***, **, * denote significance at 1%, 5% and 10% levels, respectively.*

Table 5. Ordered Logit Estimation

	1	2	3
	Marginal effects for Pre-shipment	**Marginal effects for letter of credit**	**Marginal effects for Post shipment**
Visa removal	-0.018**	0.015**	0.023**
	(-2.35)	(2.38)	(2.33)
Control variables	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
Country fixed effects	Yes	Yes	Yes

***Notes**: 1) This table presents the marginal effects for three trade financing terms. 2) Each specification includes a constant term, control variables; and year, industry and country fixed effects 3) t statistics in parentheses. ***, **, * denote significance at 1%, 5% and 10% levels, respectively.*

We also try two more maximum likelihood-based models to check the sensitivity of our results. First, following Antras and Foley (2015), we estimate a probit model. In this model, our dependent variable is a dummy and unity if the value of imports from country *i* in industry *j* under open account terms dominates the cash in advance and letter of credit transactions combined. This robustness check does not shake the confidence we have in our basic results either. The second column in Table 4 shows the average marginal effects estimated from probit model when we include all fixed effects. As shown, visa variable is positive and significant again. Exporters to Turkey are 2% more likely to choose exporter-financed terms over pre-shipment terms if Turkey removes the visa barriers for their country.

Further, we also performed ordered logit regression. To do so, we classified method of payments as pre-shipment terms, letter of credit and open account terms. The dependent variable is equal to 1 if majority of exports to a specific destination for an industry occurred under pre-

shipment terms. Similarly, it becomes 2 for letter of credit and 3 for open account method. Table 5 demonstrates the ordered logit estimations. We show the marginal effects of the visa removal on the probability of pre-shipment, letter of credit and open account terms in specifications 1,2 and 3 respectively. Estimates suggest that removal of travel visas decreases the likelihood of cash in advance terms, whereas increase the likelihood letter of credit and open account terms. According to marginal effects reported in Table 5, removal of travel visa for a trading partner is associated with a 2.3% increase in the likelihood of having an export transaction under open account terms and a 1.8% decrease in the likelihood of cash in advance terms. Finally, empirical literature on trade has adopted Poisson maximum likelihood estimator to correct for zero trade flows. This method estimates the non-linear form of gravity model by using the level of trade as dependent variable and avoids dropping zero trade. The result of this exercise is reported in Table 6. As shown, our findings are insensitive to this exercise as well. Overall, our key finding of strong positive coefficients on visa removal variable seems to persist in maximum-likelihood models.

Table 6. Poisson Maximum Likelihood Estimation

Dependent variable: Value of the value of imports from country *i* in industry *j*

	1	2
Visa removal	0.379**	0.009***
	(2.39)	(345.42)
Control variables	Yes	Yes
Year fixed effects	No	Yes
Industry fixed effects	No	Yes
Country fixed effects	No	Yes

***Notes**: 1) This table presents the marginal effects for three trade financing terms. 2) Each specification includes a constant term, control variables; and year, industry and country fixed effects 3) t statistics in parentheses. ***, **, * denote significance at 1%, 5% and 10% levels, respectively.*

4. CONCLUSION

While travel visas have long been familiar to trade economists, incorporating this into empirical work has, somewhat ironically, been delayed. To our knowledge, Neumayer (2011), Czaika and Neumayer (2017) and Umana Dajud (2019) are the only studies that investigates the effect of travel visas on international trade. This study aims to increase the understanding of the influence of removal of visas on international trade flows by offering the trade finance channel for the first time. Results in this paper suggests that liberal visa policies of Turkey in early 2000s significantly increased exporter-financed shipments to Turkey. Our results are insensitive to inclusion of extensive set of fixed effects and different estimation methods.

REFERENCES

Chaney, T. (2014). The network structure of international trade. *American Economic Review*, *104*(11), 3600-3634.

Freund, C. L., & Weinhold, D. (2004). The effect of the Internet on international trade. *Journal of international economics*, *62*(1), 171-189.

Kulendran, N., & Wilson, K. (2000). Is there a relationship between international trade and international travel?. *Applied Economics*, *32*(8), 1001-1009.

Aradhyula, S., & Tronstad, R. (2003). Does tourism promote cross-border trade?. *American Journal of Agricultural Economics*, *85*(3), 569-579.

Cristea, A. D. (2011). Buyer-seller relationships in international trade: Evidence from US States' exports and business-class travel. *Journal of International Economics*, *84*(2), 207-220.

Poole, J. (2010). Business travel as an input to international trade. *UC Santa Cruz*.

Yilmazkuday, D., & Yilmazkuday, H. (2017). The role of direct flights in trade costs. *Review of World Economics*, *153*(2), 249-270.

Niepmann, F., & Schmidt-Eisenlohr, T. (2017). International trade, risk and the role of banks. *Journal of International Economics*, *107*, 111-126.

Glady, N., & Potin, J. (2011). Bank intermediation and default risk in international trade-theory and evidence. *ESSEC Business School, mimeo*.

Hoefele, A., Schmidt-Eisenlohr, T., & Yu, Z. (2016). Payment choice in international trade: Theory and evidence from cross-country firm-level data. *Canadian Journal of Economics/Revue canadienne d'économique*, *49*(1), 296-319.

Antras, P., & Foley, C. F. (2015). Poultry in motion: a study of international trade finance practices. *Journal of Political Economy*, *123*(4), 853-901.

Neumayer, E. (2011). On the detrimental impact of visa restrictions on bilateral trade and foreign direct investment. *Applied geography*, *31*(3), 901-907.

Czaika, M., & Neumayer, E. (2017). Visa restrictions and economic globalisation. *Applied Geography*, *84*, 75-82.

Umana-Dajud, C. (2019). Do visas hinder international trade in goods? *Journal of Development Economics*, *140*, 106-126.