Estimating Trade Finance and Financial Development on Trade flows of Albania

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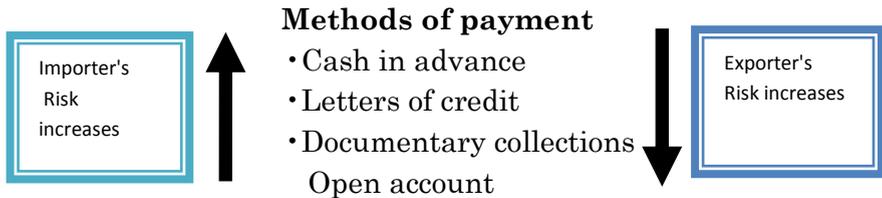Tirana, Albania

Abstract:

This paper analyses the effect of trade finance on the trade flows of Albania, and focuses in particular on the role of financial development and the availability of financial services and instruments. Also this paper analyses the effect of country risk on the availability of financial services and instruments. I use World Bank's data on export, import, and other macroeconomic masses, for the period 2006-2015.Also I use data from World Economic Forum on financial development and the availability of financial services. I find a significantly positive effect of the availability of trade finance on trade flows of Albania, and a significantly positive effect on availability of trade finance when risk increases.

Key words: trade finance; formatting; international trade; export; availability of trade finance; risk, financial development.

INTRODUCTION

Why do traders need trade finance? Trade finance contributes to tackling the information asymmetry between importers (buyers) and exporters (sellers). Trade finance enhances international trade in terms of facilitating payment, mitigating risks and providing information about the status of payments

or shipments. The various trade finance instruments differ in terms of the balance of risk between exporter and importer. From the perspective of the exporter, *cash in advance* is least risky (and the most risky for the importer). The importer pays for the goods at an agreed date before the goods are shipped and the exporter receives payment while keeping control of the goods. *[1]*

| Importer's Risk increases | ⬆ | **Methods of payment**
• Cash in advance
• Letters of credit
• Documentary collections
   Open account | ⬇ | Exporter's Risk increases |

LITERATURE REVIEW

Niepmann and Schmidt- Eisenlohr (2013) *[6]* show in addition that the supply shocks of individual banks regarding letters of credit do not only affect overall export growth in the United States but also have heterogeneous effects for different export destinations. They also showed that a supply shock regarding trade finance has stronger effects on the exports of smaller and more risk-prone countries and larger effects in times of general insecurity.

JaeBin Ahn *[4]* - paper provides a portrait of the pattern of payment methods in international trade at the national level, by employing the universe of Colombian and Chilean import transactions data. The data reveal a striking predominance of the post-shipment payment system: the post-shipment term accounts for 80_90 percent of total import transactions in Colombia and Chile. A subsequent econometric analysis strongly supports the validity of the model. A portrait of the pattern of payment methods in international trade at the national level. Colombian and Chilean imports. uncovers a strikingly high prevalence of the post- shipment payment terms

in general as well as the lack thereof in trade with Asian countries, which is not easily reconciled with existing theory models of trade finance or trade credit. As an attempt to explain those observed patterns of payment methods, this paper proposes alternative model of trade finance that features the self-liquidating and recourse nature of account receivables financing, which makes trade financing cost for transactions with the post-shipment payment term cheaper than that with other payment terms. To the extent that account receivables financing markets are less developed or their advantages are diluted by other implicit or explicit state policies on trade payment controls, it also explains why the post-payment term is less frequently used in Asia.

Marc Auboin and Martina Engemann *[2]*-Several researchers have used micro level data to establish the link between trade finance and trade, especially so during the financial crisis, and have found diverting results. This paper analyses the effect of trade credit on trade on a macro level through a whole cycle. We employ Berne Union data on export credit insurance, the most extensive dataset on trade credits available at the moment, for the period of 2005-2011. Using an instrumentation strategy we can identify a significantly positive effect of insured trade credit, as a proxy for trade credits, on trade. The effect of insured trade credit on trade is very strong and remains stable over the cycle, not varying between crisis and non-crisis periods. This paper establishes a strong causal link between short-term trade credit insurance, as a measure of trade credit, and trade at a macro level through a full cycle. Using quarterly country-level data of export credit insurers from the Berne Union for the period of 2005 to 2011, we find that a 1 % increase in trade credit granted to a country leads to a 0.4 % increase in real imports of that country. This effect does not vary between crisis and non-crisis periods.

Steven van Bommel *[5]*- examines the relationship between a reduction in trade finance products and the sales performance of firms situated in Eastern-European countries. This thesis divided firms in terms of export-orientation, size, location and financial institution. The dataset covers the years 2007-database resulting in more than 50,000 firms. His first hypothesis states that as exporting firms are more reliant on export finance due to the nature of their transactions they would have been hit harder by the reduction in trade finance. I have however not found evidence supporting this hypothesis, although exporting firms have experienced a sharper degree in loan supply, non-exporting firms show a larger decrease in sales in 2008 and 2009. When regressing the export dummy, results show no significant difference in sales performance between exporting and non-exporting firms indicating that although the reduction in trade finance harming exporting firms more, has had no significant impact on their sales performance.

Clara Brandi Birgit Schmitz Bonn (2015) *[1]*- Their paper analyses the effect of trade finance on the trade flows of industrialized, emerging and developing economies and focuses in particular on the role of trade openness. A one per cent increase in commitments is followed by a 0.27-0.54 per cent increase in total imports in the next year. They find that trade openness is a very important determinant, not only of import flows but also of how trade credit insurance impacts on trade flows. The more open a country is to trade, the less important is the trade credit insurance effect on imports; when a country is more open to trade, the more frequent exchanges of goods support reliable importer – exporter relationships, so that trade partners do not have to rely as much on trade finance instruments. The second stage results reveal a significantly positive effect of the availability of trade. A one per cent increase in commitments is followed by 0.27 per cent increase in credit on trade. Their findings indicate that trade credit

insurance does not play an important role for trade flows going to OECD, high income, and advanced economies. But import flows to non-OECD, lower and middle-income and developing countries are heavily supported by a higher flow of trade credit insurance. One per cent increase in trade credit insurance leads to 0.34-47 per cent increase in total imports. This, in turn, suggests that the availability of trade finance is a strong driver for trade in developing economies.

Nicolas Glady and Jacques Potin *(2011) [3]-* This paper analyses the effect of trade credit on trade on a macro level through a whole cycle. They identify a significantly positive effect ofinsured trade credit, on trade. The effect of insured trade credit on trade is very strong and remains stable over the cycle, not varying between crisis and noncrisis periods. This paper establishes a strong causal link between short-term trade credit insurance, as a measure of trade credit, and trade at a macro level through a full cycle. They find that a 1 % increase in trade credit granted to a country leads to a 0.4 % increase in real imports of that country.

THE GRAVITY MODEL

Application of gravity model, on examining the international trade, has become a common practice.

To evaluate the effect of availability of financial services, risk of the country and financial development in our trade flows, in this paper I use the gravity model.

Taking into consideration the above works, this paper attempts to address businesses and banks of Albania to use the financial instruments. This paper attempts giving an answer to these questions:

What kind of impact has the financial development in our trade flows, including also the financial development of the partner countries?

What impact has the availability of financial instruments in our trade flows, knowing that with the rise of risk the usage of the financial instruments rises too?

What impact has the risk of the country in our trade flows?

Should the usage of the financial instruments in Albania rise with the increase of the country's risk?

DATA AND SPECIFICATION

Financial Development Index. It is an index that provides information about the level of financial development of the country being monitored constantly from some voices such as: the availability of financial services, ease to borrow, the protection of investors, policy exchange flows, financing through the market of local capital, availability of capital restriction on capital flows, quality of banks, regulation of securities exchanges and the legal rights index.

According to the World Economic Forum, Albania is a country driven by efficiency for years, and many sectors are not performing properly. Albania's financial development has a very good law where from a scale of 0-10, for finance laws we rate 0, in 144 countries we were ranked in the 11th place, in 2015.

In this gravity model will integrate this index to see the impact on our trade flows. According commercial development theory it should have a positive impact on trade flows.

Availability of financial services Index. According to the World Economic Forum there is a ranking of countries, from [1 = not at all; 7 = provides a wide variety] weighted average, for the question: Does your country's financial sector provide a wide range of instruments and services for the business? Albania, from 144 countries ranks in the 115th place, in 2015.

In the model, this variable will be used as independent to understand the impact on our trade flows and in a special panel as dependent variable to see how influenced mainly by the country risk. According to theory, the availability of financial instruments influenced positively our trade flows, mainly exports, thus decreasing the risk of trade transactions with other countries.

The risk of the country. In this gravity model the risk is include as an independent variable which adversely affects our trade flows. In the other hand, it affects positively on the use of financial bank instruments. Thus, high country risk or of the trade is translated into higher usage the financial instruments. The data for this variable are taken from the database of Coface.

Gross Domestic Product and Gross Domestic Product per capita (real) are variables which indicate the size of the economy and are the basis of gravity model. The variables have been taken by the World Bank databases. According to this theory their impact is positive on trade flows.

Distance. Distance between countries has a negative effect to the trade and we expected that our trade flows are affected negatively. The data for this variable are taken from 'Distance Between Cities Places On, Map'. Distance is also an important variable for the gravity model.

Export and Import (real) of each country are the main variables for the model which will see the impact of the above factors. The data are taken from the World Bank. The model will be used as dependent variables.(Trade= export + import).
Data model are taken from the database of World Bank and the World Economic Forum COFACE. Based on the gravity model, in order to give answers to these questions, have been built

some panels of data, are taken as dependent variables Export, imports, external trade (Ex+Im) and the Index of Availability of financial instruments, for the business. Data for the evaluation of financial development have a time span of 10 years (2006-2015). While the data for the evaluation of financial services for trade have six years spam (2010-2015). The countries evaluated in model are 42.

As independent variables were taken: Gross domestic product of Albania and of the other countries in the model; Gross domestic product/capita of Albania and of the other countries; the index of financial development in Albania and Partner countries, the "risk of the country" of 41 countries and Albania; the distance between Albania and other countries respectively.

Variables are in US Dollar and are evaluated on logarithm with EViews. For the evaluation of the data is used fixed effect for the States.

In this paper is used the 'fixed effect' because it keeps constant (fixed) the average of the effects per each state. While including the 'fixed effect' it can control for differences in the average between states. Fixed effect holds within the group what's needed by eliminating the big jumps which transform the effect or show an exaggerated influence.

The building variables model doesn't only tend to look at the impact of the data of Albania on trade flows but also the impact of "the masses" of other countries that are taken in consideration.

I employ the following specification:

$$\log(\text{real Ex}) = \beta_0 + \beta_1 \cdot \log(\text{divfin Al/ divfinH}) + \beta_2 \cdot \log(\text{realGDPAL}) + \beta_3 \cdot \log(\text{realGDP H}) + \beta_4 \cdot \log(\text{GDP/capitaAl}) + \beta_5 log(\text{GDP/capitaH}) + \beta_6 log(\text{Distance al-h}) + \beta_7 (\text{Risk Al- Risk H}) + \alpha_i + \epsilon_{it}$$

ESTIMATION RESULTS

The baseline results of estimating the specification presented in Table 1 and 2.

The evaluating results are consistent with the theory. In the following table imports are influenced by the GDP / capita of Albania, where for a one percent increase in GDP / capita increased imports by 1.18326 percent. For a one percent increase in GDP of Albania we have a 0.095992 percent increase in imports. Furthermore, a one percent increase of the Albanian Financial Development in relation to the financial development of other countries imports is increased by 0.107548 percent. The results are verified by high explanation of the model, 94.5116 percent of the variation of the data.

Risk for imports under the theory has a negative impact, so for a one unit increase in country risk, imports decreased by -0.005310 percent.

Exports are affected positively by the GDP /capita of Albania, for an increase of one per cent of GDP / capita, exports increased by 4.507981 percent. Exports also positively affected by increased financial development in relation to other countries, for a one percent increase in financial development, exports increased by 1.696143 percent in relation to other countries. The model has a good explanation of the variation of data, by 74.1528 percent.

Risk as for imports and for exports has a negative impact, so for a one unit increase in country risk, decreased exports by -0.020773 percent.

For trade in general (EX + IM) has had good results for these variables. For one percent increase of GDP, trade increases by 2.087521percent. Foreign GDP increases trade by 0.003516 percent for one percent of its growth. F Distance and GDP are in the right mark but statistically unimportant. The explanation of the variation in the model is around average, and this is proved by the above results, 92.5125 percent.

Dependent variables	Log Import 2006-2015	Log Export 2006-2015	Log Ex+Im 2006-2015
independent variables			
Log GDP/Capita AL	1.183260*** (0.042669)	4.507981*** (0.240483)	
Log GDP/capita h			0.003516*** (0.001266)
Log GDPAL	0.095992** (0.048685)		2.087521*** (0.168598)
Log GDPh			0.000257 (0.000975)
Log Distance			-0.000518 (0.000373)
Log (financial development AL/financial development h)	0.107548*** (0.029656)	1.696143*** (0.128139)	
Country Risk AL – country risk h	-0.005310*** (0.001929)	-0.020773*** (0.010120)	
Adjusted R-squared	0.945116	0.741528	0.925125
Durbin-Watson stat	2.105315	1.584164	1.892449
F-statistic	161.068 Prob(F-statistic) (0.000000)	24.99432 Prob(F-statistic) (0.000000)	569.3607 Prob(F-statistic) (0.000000)
Cross-section fixed (dummy variables)	yes	yes	
Cross-section weights (PCSE) standard errors & covariance (d.f. corrected	yes	yes	
obsevime	410	410	410
White cross-section standard errors & covariance (d.f. corrected)			yes

Tab. 1 Source: Author The significance level is indicated by ***, **, * indicating significance at 1%, 5% and 10%level,respectively.

For the table below, were evaluated variables with a 6-year span (2010-2015), fixed effect for states, integrating index of the availability of financial services for the business.

Imports are negatively affected by the index of the availability of financial services and services for businesses in relation to other countries, for a one percent increase in their imports rises by -0.107548 percent. The model has an explanation of the variation of data, by 57.1586 percent.

Exports are positively influenced by the index of the availability of financial instruments and services for businesses in relation to other countries, a growing one per cent of their

exports increase by 0.412984 percent. The model has a good explanation of the variation of data, 67.1586 percent.

Dependent variables / Independent variables	Log Importe 2010-2015	Log Exporte 2010-2015	Log(Availability of financial services Index AL / Availability of financial services Index h)
Log Distance			-0.007746*** (0.003119)
Log GDP/capita H			-0.111380*** (0.02297)
Log GDP h			0.053220*** (0.020018)
Log(Availability of financial services Index AL / Availability of financial services Index h)	-0.107548*** (0.076463)	0.412984*** (0.074724)	
Country risk AL-Country Risk H			0.049643*** (0.001428)
Adjusted R-squared	0.572491	0.671586	0.617026
Durbin-Watson stat	2.506353	2.414052	0.547315
F-statistic	7.208697 Prob(F-statistic) (0.000000)	10.48109 Prob(F-statistic) (0.000000)	50.34123 Prob(F-statistic) (0.000000)
Cross-section fixed (dummy variables)	yes	yes	
Cross-section weights (PCSE) standard errors & covariance (d.f. corrected		yes	yes
obsevime	246	246	246
White cross-section standard errors & covariance (d.f. corrected)	yes		

Tab. 2 Source: Author The significance level is indicated by ***, **, * indicating significance at 1%, 5% and 10%level, respectively.

We see the results of the last panel of evaluation 'Availability of Financial Instruments and services' as dependent variable to know how is affected by other variables. For example it is positively affected by risk of the country, as high as the risk should be the highest is the availability of financial instruments for trade, the higher their use. Specifically, if the risk increases by one unit the availability of financial services

and instruments for the business increases 0.049643 percent. Positive also is the impact of foreign GDP, for one percent increase in its availability increase by 0.053220 percent compared to foreign GDP. The distance for one per cent increase in its, reducing the availability by -0.007746 percent. Foreign GDP / capita adversely affect the availability of financial instruments, for one percent increasing on the availability of financial instruments and services decreased by -0.111380 percent.

CONCLUSIONS

This paper has investigated the effect of Financial Development Index and Availability of financial instruments Index on the trade flows of Albania also the effect of country risk on Availability of financial services Index by financial institution in Albania. Except the strong effect of the macroeconomic masses on trade flows of Albania I find that Financial Development Index has a strong positive effect on trade flows especially on exports, Financial Instruments and services' has a strong positive effect on trade flows and risk has a positive effect on the Availability of financial instruments Index. This means that Trade Finance instruments under a right Financial Development and availability helps Albanian trades to mitigate country risk, including here and the risk of payment in international transactions.

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