Global Financial Crisis, Trade Credit Insurance and Scope Adjustment of Multiproduct Exporting Firms

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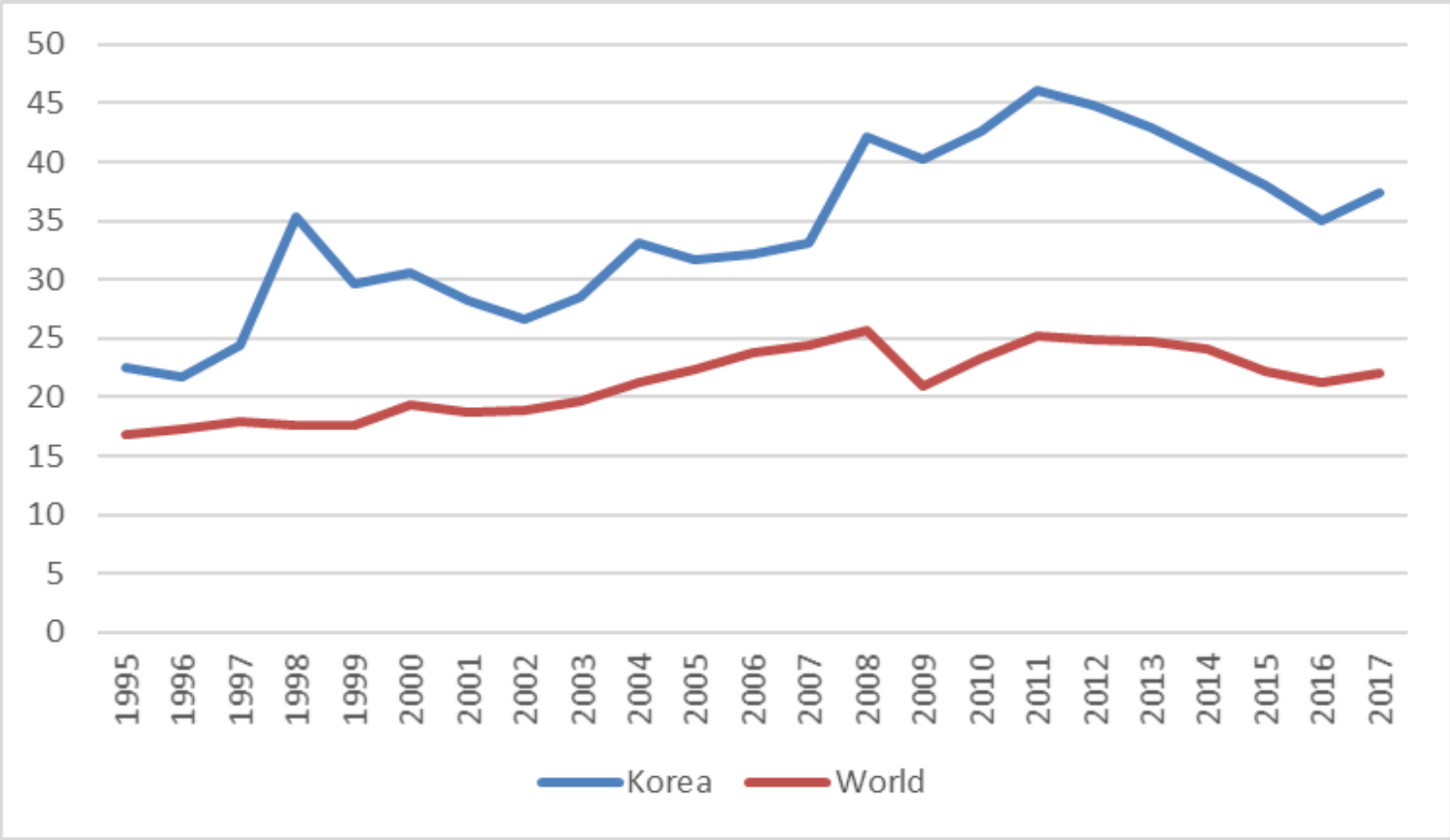
Motivation: **Deeper and longer trade collapse disproportionate to GDP fall**

Export/ GDP (%) 1995-2017



Motivation: **Financial Crisis and Trade Collapse**

Consumption side

- Demand shock
- Durable goods and postponable goods

Production Side

- Financial constraints
- liquidity shortages
- High political and commercial risk

Motivation: **Firm response to macroeconomic shocks**

Intensive margins

- scale adjustment
- explain 80% of change of trade before crisis→ 57% during the crisis (Alvarez and Saez, 2014)
- explored mostly in previous research (Bernard et al. 2009)

Extensive margins

- scope adjustment
- explain 20% before crisis→ 43% during crisis
- hardly examined

Motivation: **Firm response to macroeconomic shocks**

Unexpected Risks during the Financial Crisis

Commercial risk

protracted default, insolvency or bankruptcy, loss due to the non payment of valid debt by their debtors

Political risk

such as currency inconvertibility; war and civil disturbance; confiscation, expropriation and nationalization

Motivation: **Firm response to macroeconomic shocks**

Dealing with Unexpected Risks during the Financial Crisis

Letter of Credit (L/C)

- bank's agreement to guarantee the payment of a buyer's obligation
- only cover a single transaction for a single buyer

Factoring

- allows a supplier to pre-finance its receivables

Trade Credit Insurance

Motivation: **Firm response to macroeconomic shocks**

What is Trade Credit Insurance?

-insurance policy and a risk management product
-by private insurance companies or governmental export credit agencies to business entities
-to cover the payment loss
-resulting from delivery of goods and services

Motivation: **Firm response to macroeconomic shocks**

What is Trade Credit Insurance?

- covers a portfolio of buyers and pays an agreed percentage of an invoice.
- premium rate reflects the average credit and political risk of the insured portfolio of buyers.

Motivation: **Firm response to macroeconomic shocks**

Role of Trade Credit Insurance (TCI)

- TCI can reduce the costs by transferring commercial and political risk to insurer
- may affect firm decision on product or country scope during the crisis
- Higher risk-taking behavior of firms with high TCI
- increase scope more (or decrease less) than firms with low TCI

Main Issue: **Asymmetric Information between buyer and seller in TCI market**

Moral hazard

- Riskier exporters with large amount of TCI may increase the number of export products or sell to more countries.

Adverse selection

- Only riskier exporters with large scope of export products or destinations would buy the TCI.

- Due to the limited data availability, cannot distinguish between two

Main Issue: **Asymmetric Information between buyer and seller in TCI market**

Testable hypothesis

Compared to other exporters with low TCI, an exporter with high TCI would

- increase the numbers of export products and export destination
- drop core products
- drop politically less risky countries

during 1998 Asian financial crisis and 2008 Global financial crisis

Related Literature

Financial Constraint and Export Performance

- Effects of financial constraint on firms' entry decision to export market (Gorg and Spaliara (2018), Muuls(2015), Manova(2013), Bellone et al.(2010), Paravisini et al.(2015))

Export Loans or Insurance on Export Performance

- Positive effects of export insurance or guarantees on trade volume (Auboin and Engemann (2014), Felbermayr and Yalcin (2013), Janda et al.(2013), Baltensperger and Herger (2009), Moser et al.(2008), Egger and Url(2006))

Related Literature

- Country or Industry level studies
- Average effects, without extensive margins

Contribution of This Paper

- First firm-level evidence on TCI-export linkage
- Extensive margins (product churning and country diversification)
- Heterogeneous firm response to export insurance during the crises
- Implication on different risk preference among exporters with level of TCI

Research Question

- What is the response of multiproduct exporting firms to financial crisis in terms of scope of products and destination countries?
- Which product is more likely to be dropped or added during the crisis?
- Which country is more likely to be dropped or added during the crisis?
- Any role of TCI in scope adjustment of exporting firms during the crisis?
- Does the TCI as an export subsidy alters the incentive of exporting firms?

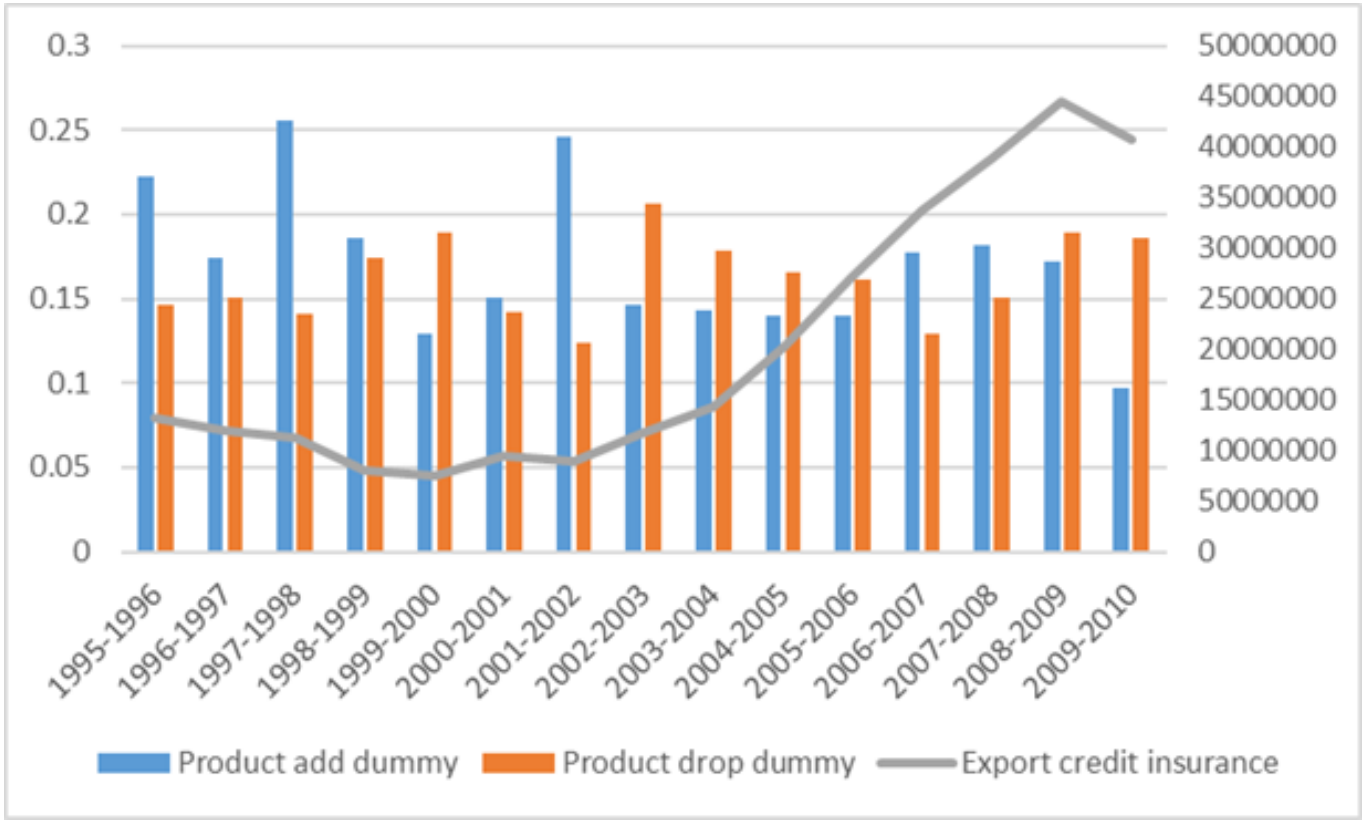
Overview: Financial crisis and multiproduct exporting firms

Average number of product and destination country per exporting firm

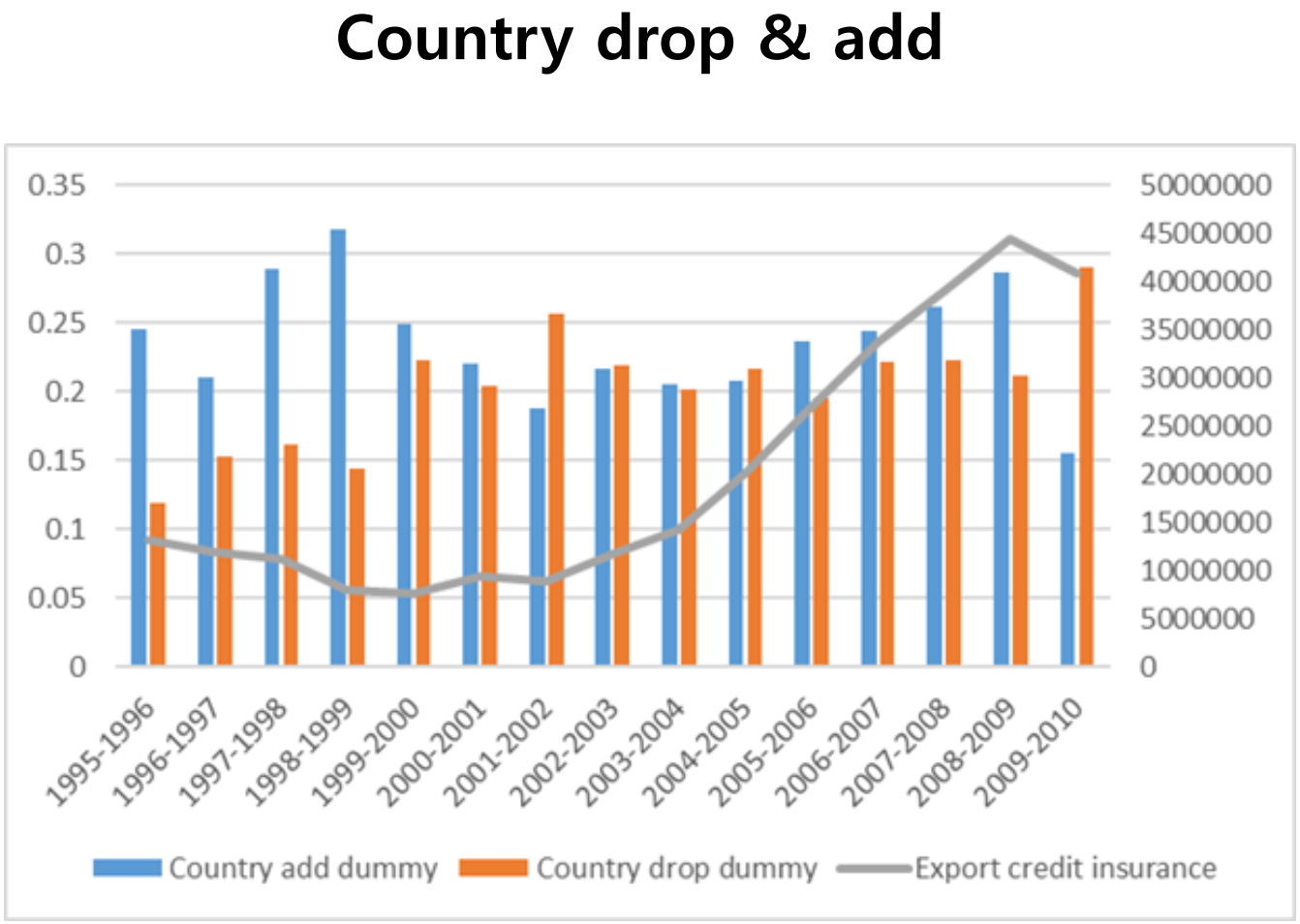
Year	Number of product		Number of country	
	>TCI median	<TCI median	>TCI median	<TCI median
1996	1.962406	1.76	7.196078	2.227
1997	1.995327	1.954	7.502146	2.257
1998	2.40201	1.629	10.40741	1.894
1999	2.239583	1.414	13.37017	2.705
2000	2.298013	1.19	15.55346	1.555
2006	3.007463	2.04	11.23632	2.8
2007	2.957516	2.115	10.70175	2.485
2008	3.089109	1.607	11.8092	2.246
2009	3.152174	1.547	13.50133	2.45
2010	3.059072	1.474	13.91131	2.066

Overview: Financial crisis and Product Churning of Multiproduct Exporting firms

Product drop & add



Overview: Financial crisis and Country Diversification of Multiproduct Exporting firms



Overview: Financial crisis and multiproduct exporting firms

Product change of firms during the crisis

	Percentage of firms											
	All firms				Single firm				Multiproduct firm			
Period	No Activity	Drop only	Add only	Drop and Add	No Activity	Drop only	Add only	Drop and Add	No Activity	Drop only	Add only	Drop and Add
1996-1999	26	26	30	18	42	N/A	43	15	4	52	18	26
2006-2009	26	23	25	26	43	N/A	38	19	8	39	13	40

Empirical Strategy: **Number of Product/ Country**

Difference-in-difference (DID) estimation methodology to compare the change of the number of products produced by firms before and after crisis based on the level of TCI

$$Product_{it} = \beta_1(TCI_i \times Crisis_t) + \gamma_i + \delta_t + \varepsilon_{it}$$

$Product_{it}$: the number of products produced by a firm between 1996 and 1999 (or 2006 and 2009)

$Crisis_t$: a dummy variable taking 0 before year 1998 (or 2008) of GFC, and 1 otherwise

TCI_i : a dummy variable that equals 1 if a firm used above-median TCI between 1998 and 1999 (2008 and 2009) and 0 otherwise

Empirical Strategy: **Drop/ Add of Product**

To determine whether firms drop or add core products under crisis, and this effect differs depending on amount of TCI

$$TCI_i = \alpha_1 Z_i + \epsilon_i$$

$$Drop_{ip}(or\ Add) = \alpha_2\left(Core_{ip} \times \widehat{TCI}_i\right) + \gamma_i + \varepsilon_{ip}$$

$Drop_{ip}$: a dummy variable taking 1 if a product *p* exported by firm *i* before 1998 (or 2008) is dropped during the financial crisis (after 1998 or 2008) and 0 otherwise

$\widehat{TCI}_i$: predicted value of the regression of TCI dummy variable on firm characteristics *Z*

$Core_{ip}$: a dummy variable taking 1 if a product *p* belongs to the same product category of firm *i* and 0 otherwise.

Empirical Strategy: **Drop/ Add of Destination Country**

To determine whether country with high political risk is more likely to be dropped and whether a firm with high TCI responds differently during the crisis

$$Drop(or\ Add)_{ic} = \alpha_1 Risk_c + \alpha_2\left(Risk_c \times \widehat{TCI}_i\right) + X_c + Z_i + \varepsilon_{ic}$$

$Drop(or\ Add)_{ic}$: a dummy variable taking 1 if a destination country *c* of exporting firm *i* before 1998 (or 2008) is dropped since 1998 (or 2008) and 0 otherwise

Risk : either political risk (*Law*, *Political*) or financial development (*Credit*) of destination country

X : a vector of country characteristics such as distance, real GDP and real exchange rate

Data

- Annual firm-product-country level data (at least two consecutive years before/ after crisis)
- Asian financial crisis (1996-2000): 624 firms
- Global financial crisis (2006-2010): 1259 firms
- 2~10 HS code products
- 222 destination countries
- Trade Credit Insurance: Korea Trade Insurance Corporation (KSURE)
- Firm and industry characteristics: NICE KISVALUE, KLEMS
- Gravity variables: CEPII, WDI, Bruegel Institute
- Country risk: Worldwide Governance Indicators

Empirical Results: **Role of TCI on Product Scope during Crisis (Panel DID)**

Period	1996-2000			2006-2010		
	(1)	(2)	(3)	(4)	(5)	(6)
	All firms	Single-product firms	Multiproduct firms	All firms	Single - product firms	Multiproduct firms
Crisis	-0.076**	0.087***	-0.545***	-0.102***	0.090***	-0.518***
	(0.030)	(0.027)	(0.061)	(0.021)	(0.017)	(0.042)
TCI×Crisis	0.125***	0.145***	0.328***	0.091***	0.084***	0.267***
	(0.038)	(0.041)	(0.070)	(0.025)	(0.022)	(0.045)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,231	1,461	770	4,927	3,049	1,878
Number of firms	621	432	189	1,258	821	437
R-squared	0.664	0.498	0.638	0.760	0.459	0.747

Empirical Results: **Product characteristics, TCI and Product Drop (First stage)**

	1996-1999		2006-2009	
TCI	Coef.	Std. Err.	Coef.	Std. Err.
lnSales	0.142**	0.064	0.064***	0.020
lnLabor_prod	-0.123	0.110	0.103**	0.044
lnAge	-12.088	16.603	3.532	3.699
lnCapital_int	0.045	0.101	0.007	0.033
lnQuick_ratio	0.379**	0.154	-0.111***	0.036

Empirical Results: **Product characteristics, TCI and Product Drop (Second stage)**

Period	1996-1999				2006-2009			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Core	-0.325***				-0.221***			
	(0.067)				(0.052)			
Core× $\widehat{TCI}$		-0.282**				-0.256***		
		(0.105)				(0.063)		
Quality			-0.958***	-6.260***			-0.166*	0.027
			(0.284)	(2.149)			(0.086)	(0.474)
Quality× $\widehat{TCI}$				5.635**				-0.321
				(2.328)				(0.496)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	731	117	715	115	1,867	744	2,092	873
R-squared	0.378	0.327	0.409	0.400	0.358	0.336	0.419	0.365

Empirical Results: **Product characteristics, TCI and Product Add (1996-1999)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All firms				Single-product firms				Multiproduct firms			
Core	0.047				0.053				0.020			
	(0.110)				(0.274)				(0.046)			
Core× $\widehat{TCI}$		0.081				0.246				0.008		
		(0.235)				(0.737)				(0.217)		
Quality			-0.182	-1.659			-0.570*	-7.491			-0.0414	-2.585
			(0.174)	(3.137)			(0.338)	(7.267)			(0.137)	(2.498)
Quality× $\widehat{TCI}$				2.066				16.38				2.955
				(3.169)				(14.33)				(2.525)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,484	198	1,473	194	750	81	755	79	731	117	715	115
R-squared	0.442	0.412	0.468	0.421	0.494	0.614	0.534	0.645	0.331	0.195	0.333	0.210

Empirical Results: **Product characteristics, TCI and Product Add (2006-2009)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	All firms				Single-product firms				Multiproduct firms			
Core	0.042				0.081				0.021			
	(0.062)				(0.190)				(0.051)			
Core× $\widehat{TCI}$		-0.001				0.079				-0.028		
		(0.079)				(0.300)				(0.072)		
Quality			0.139	-0.060			0.271	0.473			-0.197	0.473
			(0.114)	(0.60)			(0.184)	(1.492)			(0.286)	(1.492)
Quality× $\widehat{TCI}$				0.208				-0.574				-0.574
				(0.701)				(1.978)				(1.978)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,119	1,077	3,373	1,231	1,241	333	1,273	358	1,867	744	358	358
R-squared	0.445	0.421	0.521	0.455	0.555	0.577	0.657	0.610	0.326	0.338	0.018	0.610

Empirical Results: **Role of TCI on Country Scope during crisis (Panel DID)**

Period	1996-2000			2006-2010		
	(1)	(2)	(3)	(4)	(5)	(6)
	All firms	Single-country firms	Multi-country firms	All firms	Single-country firms	Multi- country firms
Crisis	0.054	0.257***	-0.348***	-0.063**	0.199***	-0.361***
	(0.044)	(0.045)	(0.077)	(0.027)	(0.027)	(0.044)
TCI×Crisis	0.463***	0.262***	0.844***	0.220***	0.350***	0.329***
	(0.068)	(0.075)	(0.113)	(0.037)	(0.061)	(0.051)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,232	1,293	939	4,934	2,198	2,736
Number of firms	623	391	232	1,259	633	626
R-squared	0.841	0.596	0.831	0.895	0.641	0.877

Empirical Results: **Country characteristics, TCI and Country Drop**

	1996-1999						2006-2009					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Law	-0.021	0.200*					-0.010	-0.084***				
	(0.015)	(0.107)					(0.008)	(0.023)				
Law× $\widehat{TCI}$		-0.270**						0.092***				
		(0.129)						(0.026)				
Political			-0.007	0.152					-0.009	-0.072***		
			(0.016)	(0.117)					(0.009)	(0.024)		
Political× $\widehat{TCI}$				-0.193						0.078***		
				(0.144)						(0.027)		
Credit					-0.030*	0.259**					-0.005	-0.067**
					(0.018)	(0.109)					(0.012)	(0.033)
Credit× $\widehat{TCI}$						-0.333**						0.076**
						(0.134)						(0.034)
lnDist	0.039**	0.043***	0.038**	0.045***	0.025	0.049**	0.022**	0.022**	0.021**	0.021*	0.020*	0.020*
	(0.016)	(0.016)	(0.016)	(0.016)	(0.018)	(0.020)	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)
lnRGDP	-0.014**	-0.010	-0.016**	-0.012*	-0.014**	-0.009	-0.007**	-0.007**	-0.008**	-0.008**	-0.007*	-0.007*
	(0.006)	(0.007)	(0.006)	(0.006)	(0.005)	(0.007)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)	(0.004)
lnREER	-0.070	0.016	-0.065	0.020	-0.028	0.001	-0.520	-0.477	-0.525	-0.489	-0.492	-0.465
	(0.056)	(0.072)	(0.056)	(0.073)	(0.074)	(0.086)	(0.335)	(0.345)	(0.359)	(0.366)	(0.364)	(0.373)
lnSales	0.002	-0.002	0.002	-0.004	0.002	-0.007	-0.02***	-0.019***	-0.02***	-0.02***	-0.020***	-0.018***
	(0.008)	(0.015)	(0.008)	(0.015)	(0.009)	(0.016)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
lnLabor_prod	-0.13***	-0.161***	-0.13***	-0.160***	-0.14***	-0.14***	-0.028**	-0.028***	-0.028**	-0.028***	-0.028**	-0.028**
	(0.024)	(0.027)	(0.024)	(0.028)	(0.029)	(0.032)	(0.01)	(0.010)	(0.010)	(0.011)	(0.011)	(0.010)
lnCapital_int	0.037**	-0.009	0.037**	-0.007	0.041**	-0.0004	2.367***	2.203***	2.356***	2.254***	2.376***	2.281***
	(0.017)	(0.019)	(0.016)	(0.019)	(0.020)	(0.022)	(0.599)	(0.605)	(0.596)	(0.599)	(0.614)	(0.608)
lnAge	-5.175**	-4.594	-5.223**	-4.401	-3.148	-0.313	0.008	0.009	0.008	0.008	0.009	0.009
	(2.389)	(2.973)	(2.391)	(2.974)	(2.738)	(3.158)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Observations	1,015	684	1,015	684	769	529	5,085	5,085	5,085	5,085	4,917	4,917
R-squared	0.042	0.072	0.040	0.066	0.040	0.064	0.019	0.021	0.019	0.020	0.017	0.018

Empirical Results: **Country characteristics, TCI and Country Add (1996-1999)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All firms			Single-country firms			Multi-country firms		
Law	0.017			-0.255			0.026		
	(0.044)			(0.250)			(0.050)		
Law× $\widehat{TCI}$	-0.014			0.493			-0.022		
	(0.054)			(0.398)			(0.060)		
Political		0.060			-0.392			0.069	
		(0.045)			(0.294)			(0.048)	
Political× $\widehat{TCI}$		-0.063			0.674			-0.072	
		(0.055)			(0.438)			(0.057)	
Credit			-0.039			0.035			-0.057
			(0.054)			(0.238)			(0.058)
Credit× $\widehat{TCI}$			0.022			-0.012			0.043
			(0.062)			(0.352)			(0.066)
lnDist	0.036**	0.037**	0.022	-0.01	-0.003	0.015	0.040**	0.042**	0.023
	(0.016)	(0.016)	(0.019)	(0.044)	(0.030)	(0.037)	(0.018)	(0.018)	(0.021)
lnRGDP	0.002	0.002	0.006	0.013	0.013	0.010	0.002	0.002	0.006
	(0.005)	(0.005)	(0.004)	(0.009)	(0.010)	(0.011)	(0.005)	(0.005)	(0.004)
lnREER	0.059	0.059	0.149***	-0.204	-0.281*	-0.148	0.0510	0.049	0.156***
	(0.061)	(0.061)	(0.049)	(0.175)	(0.155)	(0.173)	(0.06)	(0.067)	(0.055)
lnSales	-0.018***	-0.018***	-0.012*	-0.014	-0.030	-0.033	-0.024***	-0.024***	-0.015**
	(0.006)	(0.006)	(0.006)	(0.041)	(0.041)	(0.063)	(0.006)	(0.006)	(0.006)
lnLabor_prod	-0.034	-0.035	-0.061***	-0.120**	-0.126**	-0.119*	-0.014	-0.015	-0.047**
	(0.021)	(0.021)	(0.019)	(0.051)	(0.051)	(0.058)	(0.023)	(0.023)	(0.020)
lnCapital_int	-0.015	-0.014	-0.011	-0.045	-0.033	-0.010	-0.031	-0.030	-0.024
	(0.024)	(0.024)	(0.026)	(0.053)	(0.051)	(0.071)	(0.027)	(0.0276)	(0.029)
lnAge	20.81***	20.82***	17.96***	-3.164	-0.144	0.907	25.63***	25.64***	21.24***
	(3.250)	(3.245)	(3.506)	(5.30)	(4.604)	(9.340)	(3.633)	(3.613)	(3.678)
Observations	718	718	560	49	49	46	669	669	514
R-squared	0.057	0.058	0.057	0.126	0.131	0.091	0.074	0.075	0.069

Empirical Results: **Country characteristics, TCI and Country Add (2006-2009)**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All firms			Single-country firms			Multi-country firms		
Law	0.022			-0.047			0.029		
	(0.024)			(0.074)			(0.024)		
Law× $\widehat{TCI}$	-0.062**			0.137			-0.070**		
	(0.029)			(0.119)			(0.028)		
Political		0.006			-0.030			0.006	
		(0.023)			(0.085)			(0.024)	
Political× $\widehat{TCI}$		-0.021			0.131			-0.020	
		(0.029)			(0.126)			(0.029)	
Credit			0.054			-0.008			0.056*
			(0.034)			(0.126)			(0.032)
Credit× $\widehat{TCI}$			-0.140***			0.041			-0.142***
			(0.040)			(0.178)			(0.036)
lnDist	0.017*	0.015	0.001	-0.006	0.003	0.023	0.026**	0.025**	0.010
	(0.009)	(0.010)	(0.009)	(0.040)	(0.039)	(0.041)	(0.010)	(0.012)	(0.009)
lnRGDP	-0.008**	-0.011**	-0.005	-0.027	-0.025	-0.028*	-0.010**	-0.013**	-0.006*
	(0.004)	(0.005)	(0.003)	(0.018)	(0.017)	(0.015)	(0.004)	(0.005)	(0.003)
lnREER	-0.563	-0.721	-0.301	-1.933	-2.042	-1.821	-0.579	-0.721	-0.284
	(0.403)	(0.438)	(0.398)	(1.839)	(1.928)	(1.938)	(0.423)	(0.450)	(0.411)
lnSales	-0.036***	-0.035***	-0.037***	-0.009	-0.008	-0.003	-0.029***	-0.028***	-0.030***
	(0.003)	(0.003)	(0.003)	(0.021)	(0.020)	(0.021)	(0.003)	(0.003)	(0.003)
lnLabor_prod	0.050***	0.050***	0.054***	0.028	0.027	0.027	0.047***	0.047***	0.050***
	(0.009)	(0.009)	(0.009)	(0.036)	(0.036)	(0.036)	(0.008)	(0.009)	(0.008)
lnCapital_int	-0.008	-0.009	-0.011	0.010	0.011	-0.006	-0.013	-0.013*	-0.014*
	(0.009)	(0.009)	(0.009)	(0.041)	(0.041)	(0.040)	(0.008)	(0.008)	(0.008)
lnAge	-2.70***	-2.801***	-2.637***	1.283	1.558	0.358	-2.591***	-2.697***	-2.521***
	(0.617)	(0.610)	(0.624)	(3.187)	(3.101)	(3.350)	(0.617)	(0.612)	(0.623)
Observations	5,412	5,412	5,234	328	328	318	5,084	5,084	4,916
R-squared	0.032	0.029	0.039	0.036	0.038	0.031	0.029	0.025	0.035

Robustness Check (Placebo Effects): **Product Characteristics, TCI and Product dropped**

Period	1995-1997				2004-2007			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Core	-0.105*				-0.047			
	(0.057)				(0.054)			
Core× $\widehat{TCI}$		-0.257				-0.046		
		(0.176)				(0.073)		
Quality			0.132	-3.757			-0.006	-0.368
			(0.253)	(4.531)			(0.135)	(1.017)
Quality× $\widehat{TCI}$				5.206				0.433
				(6.092)				(1.035)
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	314	48	300	47	1,526	628	1,428	590
R-squared	0.245	0.269	0.233	0.257	0.480	0.465	0.491	0.474

Robustness Check (Placebo Effects): **Country Risk, TCI and Country dropped**

Period	1995-1997			2004-2007		
	(1)	(2)	(3)	(4)	(5)	(6)
Law	-0.028			0.014		
	(0.021)			(0.019)		
Law× $\widehat{TCI}$	0.016			-0.019		
	(0.017)			(0.023)		
Political		-0.010			0.015	
		(0.020)			(0.019)	
Political× $\widehat{TCI}$		0.001			-0.021	
		(0.020)			(0.025)	
Credit			-0.015			0.021
			(0.025)			(0.026)
Credit× $\widehat{TCI}$			0.005			-0.034
			(0.020)			(0.029)
lnDist	-0.007	-0.009	-0.013	0.006	0.007	0.005
	(0.008)	(0.009)	(0.011)	(0.006)	(0.006)	(0.006)
lnRGDP	0.007**	0.007**	0.007*	-0.003*	-0.004*	-0.003
	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
lnREER	0.043	0.045	0.073	-0.350	-0.340	-0.282
	(0.048)	(0.049)	(0.065)	(0.215)	(0.207)	(0.222)
lnSales	7.30e-05	0.0003	0.0002	0.001	0.001	0.0004
	(0.001)	(0.001)	(0.001)	(0.003)	(0.003)	(0.003)
lnLabor_prod	0.026*	0.029*	0.021	-0.04***	-0.04***	-0.04***
	(0.014)	(0.015)	(0.017)	(0.008)	(0.008)	(0.008)
lnCapital_int	-0.001	3.15e-05	0.002	0.003	0.003	0.004
	(0.016)	(0.017)	(0.020)	(0.006)	(0.006)	(0.006)
lnAge	-2.036*	-2.106*	-1.627	0.140	0.134	0.064
	(1.162)	(1.158)	(1.098)	(0.611)	(0.610)	(0.625)
Observations	418	418	322	4,186	4,186	4,042
R-squared	0.034	0.028	0.029	0.009	0.009	0.009

TCI and Post Crisis Firm Performances (Panel DID)

Period	1996-2002					2006-2012				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variables	ROA	ROS	Productivity	Quick ratio	Sales growth	ROA	ROS	Productivity	Quick ratio	Sales growth
TCI	2.232	0.852	-0.601***	0.822	0.032	-0.151	-3.064	1.034***	0.013	0.125
	(5.202)	(7.191)	(0.213)	(0.506)	(0.392)	(4.458)	(86.14)	(0.206)	(0.559)	(0.200)
Post Crisis	3.559***	1.564	0.150***	4.721***	0.068	3.207***	9.869	0.432***	3.847***	0.085**
	(1.240)	(1.714)	(0.052)	(0.121)	(0.092)	(0.698)	(13.49)	(0.033)	(0.087)	(0.035)
TCI×Post Crisis	-1.691	-1.427	-0.059	-0.286**	-0.022	0.071	8.265	-0.064**	0.024	-0.104***
	(1.158)	(1.601)	(0.048)	(0.113)	(0.094)	(0.654)	(12.63)	(0.031)	(0.082)	(0.033)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,034	1,034	1,000	1,034	690	2,958	2,958	2,826	2,958	2,320
Number of firms	179	179	176	179	176	462	462	456	462	458
R-squared	0.269	0.196	0.877	0.898	0.348	0.257	0.163	0.878	0.839	0.281

Conclusions

- During the financial crisis, exporters with high TCI vis-à-vis ones with low TCI,

  - decrease less or even expand the scope of product and destination countries during the financial crisis.
  - less likely to drop core products
  - less likely to retrieve from countries with low level of financial development and high political risk since 2008

- Trade credit insurance and risk preference of exporters are positively correlated.

- This may arise either from moral hazard or adverse selection problem.

Thank you!!!!!