Exporter Behavior, Country Size and Stage of Development: Evidence from the Exporter Dynamics Database

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Motivation

- Main objective is to understand how the micro structure of a country's export sector vary with country size and stage of development.
- We identify stylized facts using indicators from the Exporter Dynamics Database.
- We explore theoretical frameworks (heterogeneous firms, allocative efficiency) that can help us understand the facts.
- We discuss implications for future research.

Our main findings

- Larger economies and more developed economies have:
  - more exporters,
  - larger average exporter size, and
  - more concentrated export sectors among firms,

  after controlling for the sectoral distribution of exports and for export destinations.

- Entry and exit rates are significantly lower while entrant survival is significantly higher in more developed countries, controlling for the sectoral distribution of exports and for export destinations.

Our contribution

- First comparison of the micro structure of exports across a large number of countries of different sizes and at differing stages of development.
- The discussion of the stylized vis-à-vis theoretical frameworks highlights the implications that are not consistent with reality.

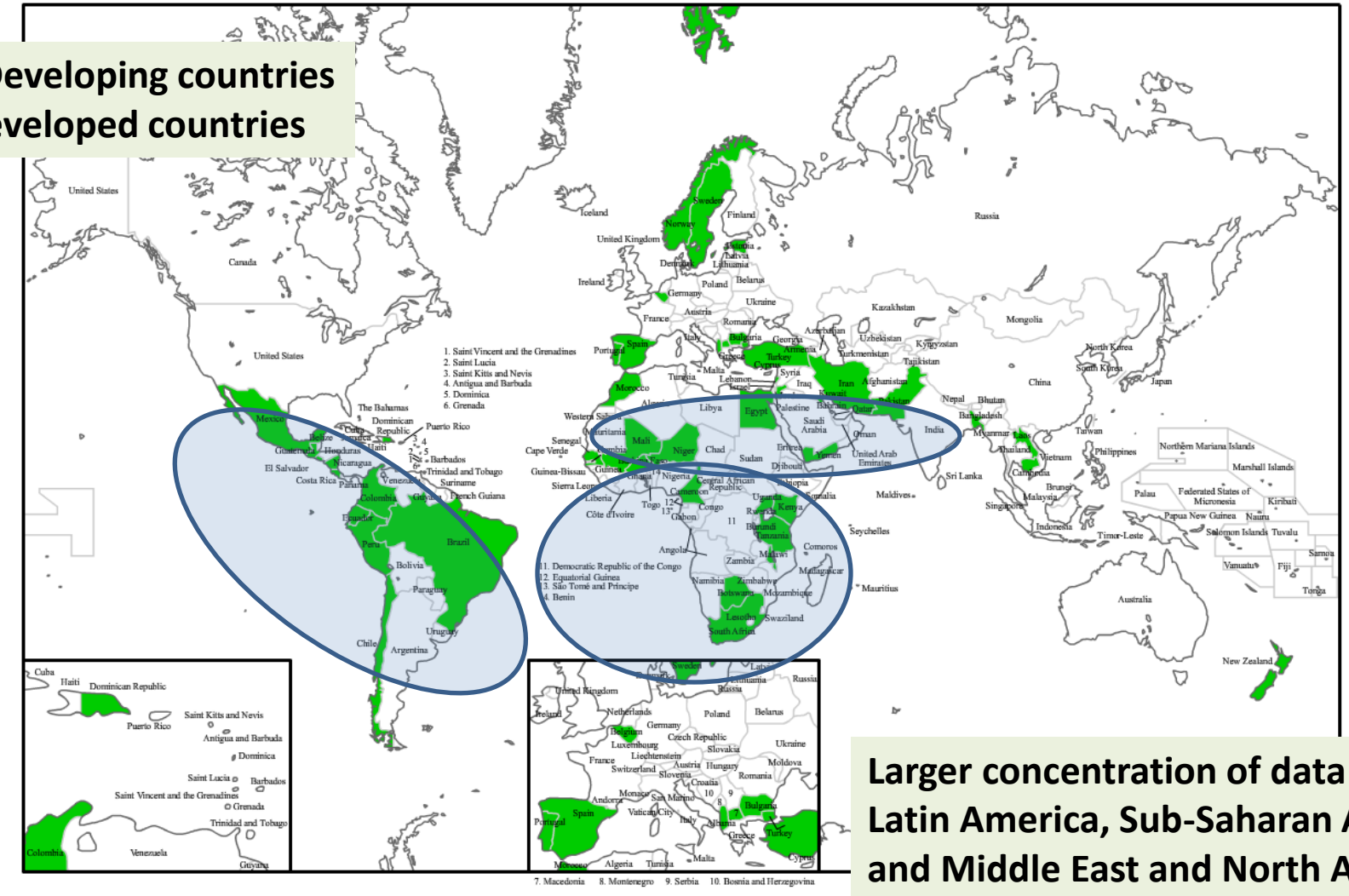
Outline of presentation

- The Exporter Dynamics Database
- Stylized facts on the characteristics and dynamics of export sector vs. country size and stage of development
- Discussion of the results in light of theory.
- Conclusion

THE EXPORTER DYNAMICS DATABASE

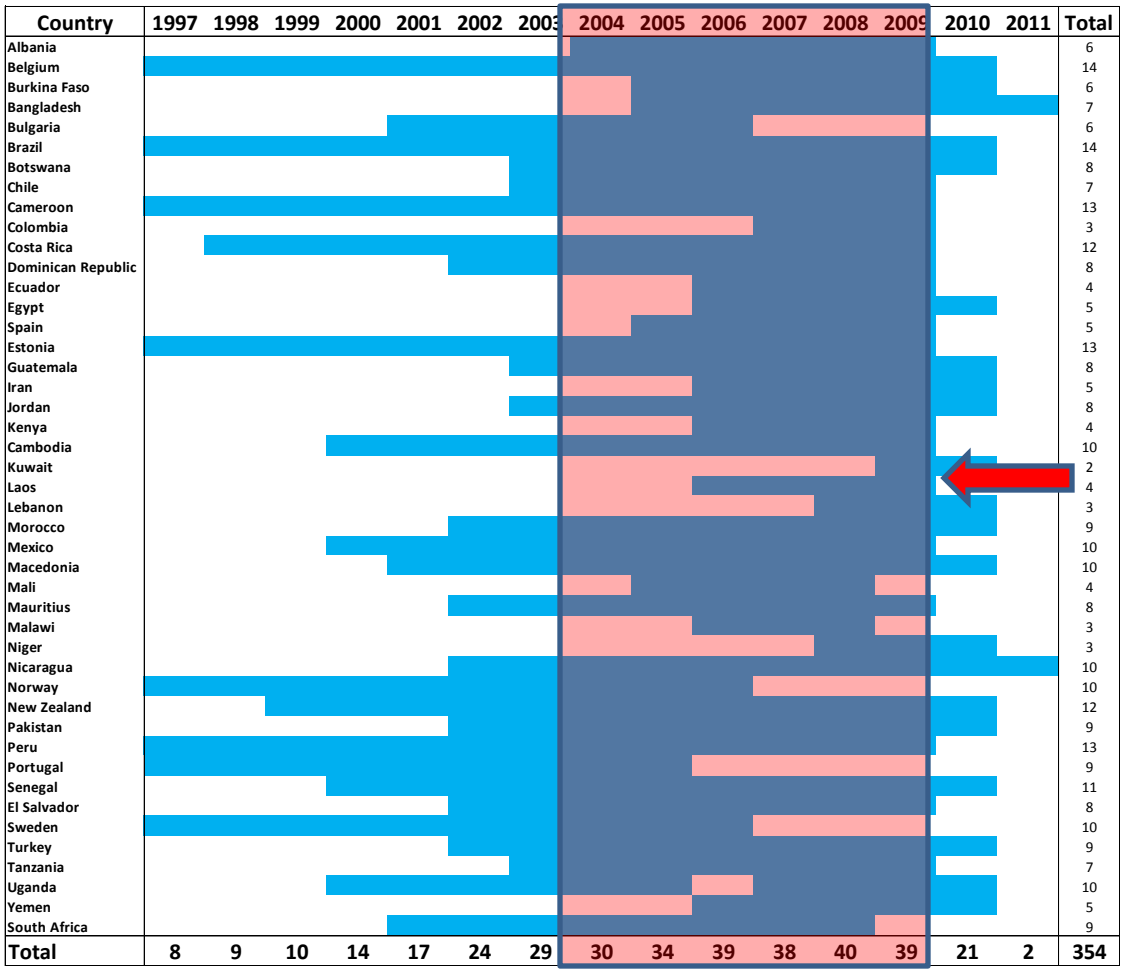
Exporter Dynamics Database covers 45 countries (expansion ongoing)

37 Developing countries
8 Developed countries



Larger concentration of data in Latin America, Sub-Saharan Africa and Middle East and North Africa

Exporter Dynamics Database covers mainly 2000s (update ongoing)



Country	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	Total
Albania																6
Belgium																14
Burkina Faso																6
Bangladesh																7
Bulgaria																6
Brazil																14
Botswana																8
Chile																7
Cameroon																13
Colombia																3
Costa Rica																12
Dominican Republic																8
Ecuador																4
Egypt																5
Spain																5
Estonia																13
Guatemala																8
Iran																5
Jordan																8
Kenya																4
Cambodia																10
Kuwait																2
Laos																4
Lebanon																3
Morocco																9
Mexico																10
Macedonia																10
Mali																4
Mauritius																8
Malawi																3
Niger																3
Nicaragua																10
Norway																10
New Zealand																12
Pakistan																9
Peru																13
Portugal																9
Senegal																11
El Salvador																8
Sweden																10
Turkey																9
Tanzania																7
Uganda																10
Yemen																5
South Africa																9
Total	**8**	**9**	**10**	**14**	**17**	**24**	**29**	**30**	**34**	**39**	**38**	**40**	**39**	**21**	**2**	**354**

2004 – 2009 is the most common period

Exporter Dynamics Database indicators

- Basic Characteristics
  - Number of exporters, exporter size (in export value terms), exporter growth
- Concentration/Diversification
  - Herfindahl indexes, share of top X% of exporters, number of products or destinations per exporter, number of exporters per product or per destination
- Firm Dynamics
  - Exporter entry, exit and one-year, two-year, three-year survival rates of new exporters
- Product Dynamics
  - Product entry, exit and survival rates for incumbent exporters and share of new products in exporter values
- Destination Dynamics
  - Destination entry, exit and survival rates for incumbent exporters and share of new destinations in exporter values
- Unit Prices

Indicators' disaggregation levels and further data

- Exporting country-year level (100 vars.)
- Exporting country-product-year level
  - HS 2-digit (116 vars.)
  - HS 4-digit (116 vars.)
  - HS 6-digit (92 vars.)
- Exporting country-destination-year level (77 vars.)
- Exporting country-product-destination-year level (for a restricted sample of 37 countries)

Summary Statistics: Diverse Sample

		Total Exports (bn USD)	Number of Exporters	Number of Exporters per 1000 Inhabitants	Mean Exports per Exporter ('000s USD)	Median Exports per Exporter ('000s USD)	Share of Top 5% Exporters	Entry Rate	Exit Rate	Entrant Survival Rate
ESP	Spain	229.9	89,798	2.00	2,559	21	86%	39%	38%	30%
TUR	Turkey	98.7	44,570	0.64	2,204	105	80%	32%	29%	55%
MEX	Mexico *	226.3	34,382	0.31	6,588	44	91%	35%	36%	39%
SWE	Sweden	129.5	30,126	3.32	4,299	17	92%	29%	28%	
BEL	Belgium	309.1	23,204	2.18	13,312	64	84%	31%	28%	40%
ZAF	South Africa *	58.8	21,721	0.45	2,699	29	92%	28%	26%	49%
BRA	Brazil	165.4	19,375	0.10	8,539	233	82%	22%	23%	54%
NOR	Norway	39.1	18,309	3.93	2,137	14	93%	38%	37%	
PRT	Portugal [a]	33.5	16,217	1.44	2,064	68	77%	30%	29%	45%
PAK	Pakistan *	16.8	15,023	0.09	1,116	62	73%	28%	27%	56%
BGR	Bulgaria *	12.9	13,804	1.79	934	22	83%	38%	40%	
IRN	Iran *	12.8	13,770	0.19	940	88	72%	47%	51%	41%
NZL	New Zealand	24.6	13,276	3.14	1,853	24	90%	29%	29%	42%
COL	Colombia *	19.1	9,768	0.22	1,957	58	81%	32%	31%	42%
EGY	Egypt *	14.3	8,370	0.11	1,717	65	79%	25%	27%	51%
CHL	Chile *	60.9	7,314	0.44	8,317	49	94%	38%	35%	35%
PER	Peru *	25.2	6,732	0.24	3,740	37	92%	39%	35%	44%
BGD	Bangladesh *	12.4	6,356	0.05	1,946	277	50%	28%	22%	61%
MAR	Morocco *	15.3	5,429	0.18	2,811	90	74%	33%	34%	43%
LBN	Lebanon *	3.4	5,177	1.24	659	38	78%			
KEN	Kenya *	4.0	5,057	0.14	796	18	81%	40%	44%	35%
EST	Estonia	9.3	4,915	3.66	1,885	109	69%	44%	41%	30%
GTM	Guatemala *	6.3	4,420	0.33	1,421	38	78%	31%	29%	42%
KWT	Kuwait [a]	3.0	3,315	1.23	915	27	86%	53%	53%	
ECU	Ecuador *	5.7	3,110	0.22	1,830	25	80%	41%	37%	41%
CRI	Costa Rica *	8.7	2,931	0.66	2,970	54	82%	29%	26%	48%
MKD	Macedonia *	2.2	2,926	1.43	751	24	83%	38%	35%	45%
DOM	Dominican Republic *	4.5	2,709	0.28	1,708	26	85%	44%	43%	40%
SLV	El Salvador *	4.2	2,554	0.42	1,648	30	82%	31%	30%	44%
MUS	Mauritius *	2.6	2,251	1.79	1,138	17	87%	30%	31%	43%
TZA	Tanzania *	2.3	1,899	0.05	1,180	17	86%	51%	46%	32%
ALB	Albania *	1.1	1,895	0.60	550	35	63%	39%	33%	47%
JOR	Jordan *	3.4	1,869	0.33	1,804	57	83%	38%	32%	49%
BWA	Botswana *	4.6	1,715	0.89	2,666	2	99%	42%	40%	39%
NIC	Nicaragua *	1.3	1,236	0.22	1,031	27	76%	36%	34%	47%
UGA	Uganda *	1.2	938	0.03	1,289	15	77%	47%	38%	29%
CMR	Cameroon *	1.7	938	0.05	1,879	19	82%	48%	46%	23%
SEN	Senegal *	0.9	727	0.06	1,228	73	71%	40%	37%	40%
MWI	Malawi *	0.6	631	0.05	1,077	8	91%	52%	61%	25%
KHM	Cambodia *	3.4	595	0.04	5,706	546	44%	33%	30%	57%
YEM	Yemen *	0.4	492	0.02	779	49	64%	52%	54%	
LAO	Laos	0.6	462	0.08	1,284	42	88%	52%	40%	50%
BFA	Burkina Faso *	0.5	425	0.03	1,177	37	85%	44%	41%	42%
MLI	Mali *	0.8	305	0.02	2,729	48	93%	43%	39%	45%
NER	Niger *	0.3	160	0.01	2,160	18	89%			

Averages for 2006-2008 period

The difference in number of exporters seems to mirror differences in countries' size and stage of development

There is tremendous difference between median and mean which reflects skewness in exporter size distribution in all countries

Also important variability across countries observed in measures of exporter dynamics

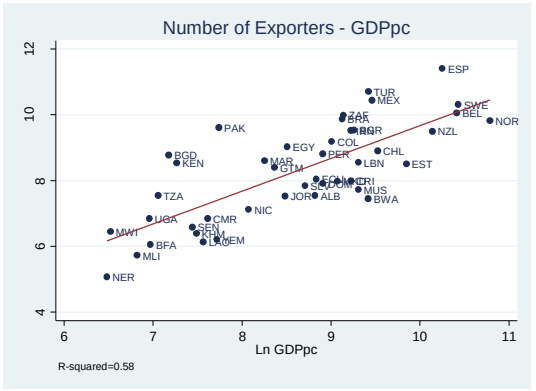
CHARACTERISTICS AND DYNAMICS OF EXPORT SECTOR VS. COUNTRY SIZE AND STAGE OF DEVELOPMENT: STYLIZED FACTS FROM THE DATABASE

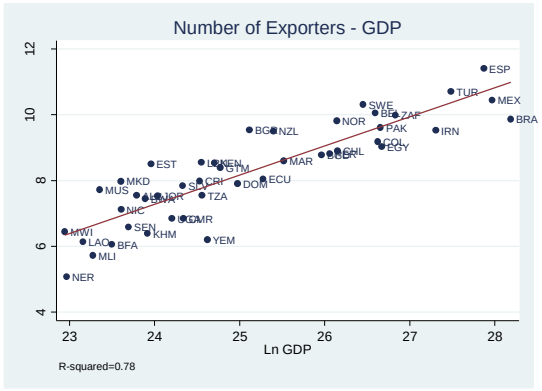
Regression analysis

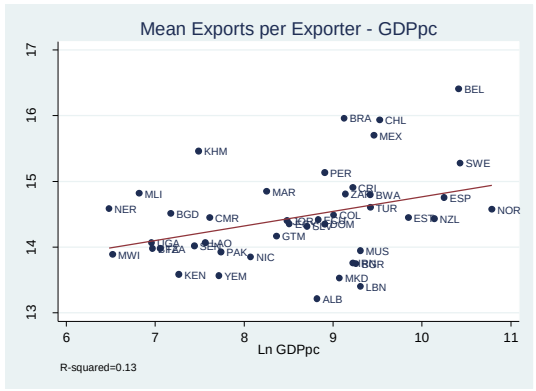
- We analyze export-sector characteristics (number of exporters, average exporter size and concentration) and exporter dynamics (entry, exit, entrant survival rates) separately.
- Using data for 2004-2008 period, we explore how these variables change as country size (GDP) and stage of development (GDP per capita) vary.
- Depending on the data level we used for the EDD indicators, we control for variation:
  - within sectors,
  - within destinations,
  - within sector-destinations;

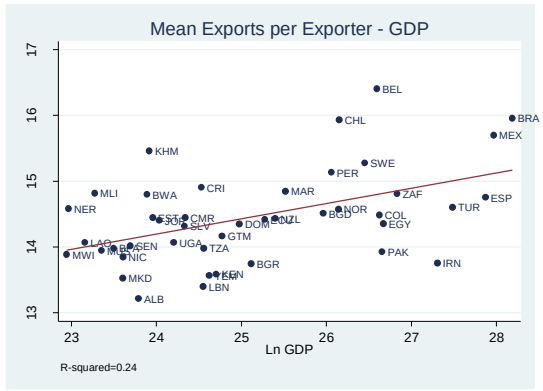
  in addition to year fixed effects in all specifications

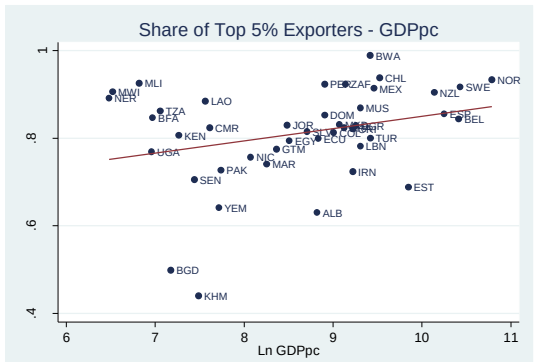
1st Fact: On Export-sector Characteristics: scatters

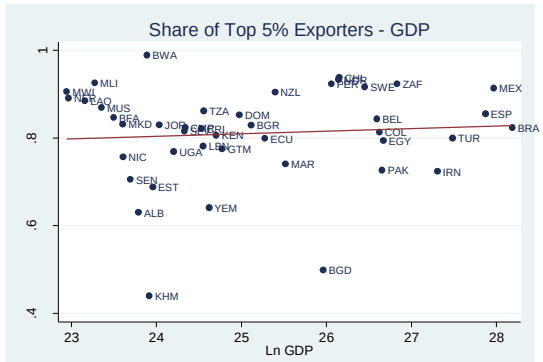












- Number of exporters, average exporter size and concentration vs. GDP per capita and GDP

1st Fact: On Export-sector Characteristics

	Country-Sector Regressions				Country-Destination Regressions				Country-Sector-Destination Regressions			
	Ln Total Exports	Ln Number of Exporters	Ln Mean Exports per Exporter	Share of Top 5% Exporters	Ln Total Exports	Ln Number of Exporters	Ln Mean Exports per Exporter	Share of Top 5% Exporters	Ln Total Exports	Ln Number of Exporters	Ln Mean Exports per Exporter	Share of Top 5% Exporters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Ln GDPpc	0.857***	0.462***	0.395***	0.045***	0.560***	0.376***	0.184***	0.060***	0.404***	0.192*	0.212***	0.022**
	(0.169)	(0.096)	(0.119)	(0.010)	(0.125)	(0.099)	(0.060)	(0.010)	(0.118)	(0.096)	(0.057)	(0.010)
Ln GDP	1.117***	0.696***	0.420***	0.039***	1.095***	0.803***	0.292***	0.039***	0.804***	0.456***	0.348***	0.034***
	(0.108)	(0.070)	(0.088)	(0.007)	(0.113)	(0.094)	(0.046)	(0.007)	(0.100)	(0.074)	(0.056)	(0.006)
Ln Distance					-1.317***	-1.025***	-0.292***	-0.044***	-1.010***	-0.520***	-0.490***	-0.046***
					(0.115)	(0.081)	(0.062)	(0.008)	(0.112)	(0.060)	(0.079)	(0.010)
Contiguity					1.510***	0.904***	0.606***	0.068***	0.744***	0.435***	0.310***	0.057***
					(0.276)	(0.183)	(0.167)	(0.018)	(0.097)	(0.085)	(0.079)	(0.016)
Common language					1.065***	0.826***	0.239***	0.074***	0.605***	0.533***	0.072	0.063***
					(0.188)	(0.147)	(0.080)	(0.016)	(0.180)	(0.105)	(0.119)	(0.015)
Common colonizer					0.636***	0.394**	0.242**	0.031	0.127	-0.125	0.252*	-0.042**
					(0.217)	(0.148)	(0.107)	(0.020)	(0.231)	(0.206)	(0.145)	(0.021)
Sector Fixed Effects	Yes	Yes	Yes	Yes								
Destination Fixed Effects					Yes	Yes	Yes	Yes				
Sector-Destination Fixed Effects									Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,335	14,335	14,335	10,096	19,434	19,434	19,434	10,419	287,800	287,800	287,800	63,748
R-squared	0.622	0.742	0.423	0.318	0.655	0.74	0.335	0.331	0.465	0.503	0.418	0.461

Larger countries and richer countries have both more and larger exporters and higher concentration.

Extensive margin => almost 2/3 of the variation across countries of different size
=> about half of the variation due to stage of dev.

1st Fact, robustness test: The Role of Intermediaries (1)

- Intermediaries will be observed as a single firm but it consolidates exports from many.
- Ahn, Khandelwal and Wei (2011) find that as exports surge in China, the share of trade through intermediaries fell. There are more direct exporters and less intermediaries.
- Thus, as a country develops, we expect the number of exporters to rise and their average size to fall.
- To examine explicitly the importance of intermediaries we estimate specifications where GDP per capita and GDP enter by themselves and interacted with a dummy variable identifying sectors with a larger presence of export intermediaries.

1st Fact, robustness test: The Role of Intermediaries (2)

	Country-Sector Regressions				Country-Sector-Destination Regressions			
	Ln Total Exports	Ln Number of Exporters	Ln Mean Exports per Exporter	Share of Top 5% Exporters	Ln Total Exports	Ln Number of Exporters	Ln Mean Exports per Exporter	Share of Top 5% Exporters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Ln GDPpc	1.114***	0.600***	0.514***	0.058***	0.686***	0.303**	0.383***	0.025
	(0.172)	(0.105)	(0.128)	(0.011)	(0.151)	(0.121)	(0.074)	(0.017)
Ln GDP	1.135***	0.671***	0.464***	0.042***	0.867***	0.489***	0.378***	0.036***
	(0.117)	(0.071)	(0.100)	(0.008)	(0.111)	(0.079)	(0.072)	(0.007)
Ln GDPpc * Industries with more intermediaries	-0.366***	-0.196***	-0.170**	-0.018**	-0.414***	-0.163***	-0.251***	-0.004
	(0.087)	(0.043)	(0.064)	(0.007)	(0.120)	(0.053)	(0.078)	(0.011)
Ln GDP * Industries with more intermediaries	-0.026	0.035	-0.061	-0.004	-0.089	-0.047	-0.042	-0.003
	(0.065)	(0.029)	(0.049)	(0.004)	(0.091)	(0.036)	(0.063)	(0.005)
Sector Fixed Effects	Yes	Yes	Yes	Yes				
Sector-Destination Fixed Effects					Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,335	14,335	14,335	10,096	287,800	287,800	287,800	63,748
R-squared	0.625	0.744	0.425	0.320	0.469	0.507	0.420	0.461

Larger numbers of exporters and larger average exporter size in richer countries and in larger countries. In sectors with more intermediaries, the effect of income per capita is smaller, yet it remains positive.

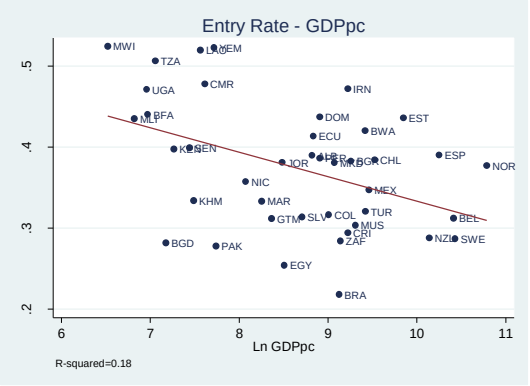
1st Fact, robustness test: Accounting for Zero-trade Flows

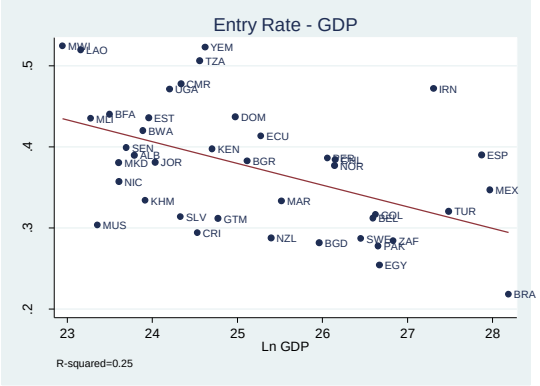
We use the non-linear Poisson pseudo-maximum-likelihood (PPML) to account for zeros

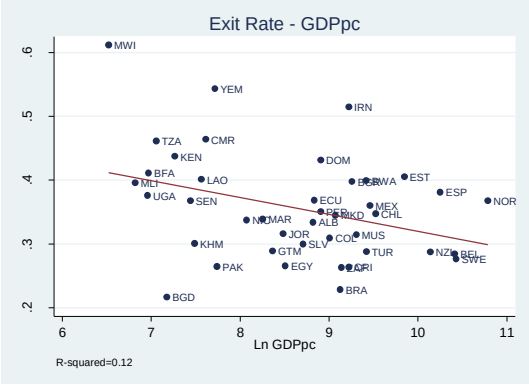
	Country-Sector Regressions PPML estimation				Country-Destination Regressions PPML estimation				Country-Sector-Destination Regressions PPML estimation			
	Total Exports ('000s USD)	Number of Exporters	Mean Exports per Exporter ('000s USD)	Share of Top 5% Exporters	Total Exports ('000s USD)	Number of Exporters	Mean Exports per Exporter ('000s USD)	Share of Top 5% Exporters	Total Exports ('000s USD)	Number of Exporters	Mean Exports per Exporter ('000s USD)	Share of Top 5% Exporters
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Ln GDPpc	0.871***	0.351***	0.448***	0.115***	0.592***	0.435***	0.309**	0.210***	0.480***	0.435***	0.601***	0.460***
	(0.239)	(0.093)	(0.126)	(0.025)	(0.154)	(0.130)	(0.146)	(0.049)	(0.135)	(0.161)	(0.138)	(0.136)
Ln GDP	0.770***	0.742***	0.101	0.092***	0.723***	0.831***	0.070	0.294***	0.772***	0.839***	0.309***	0.691***
	(0.122)	(0.081)	(0.093)	(0.015)	(0.070)	(0.090)	(0.095)	(0.036)	(0.081)	(0.078)	(0.075)	(0.076)
Ln Distance					-0.433***	-0.581***	0.203	-0.207***	-0.477***	-0.779***	(0.038)	-0.700***
					(0.096)	(0.085)	(0.171)	(0.048)	(0.147)	(0.082)	(0.219)	(0.097)
Contiguity					1.624***	0.576***	0.759***	0.131	2.012***	1.063***	1.014***	0.647***
					(0.183)	(0.125)	(0.232)	(0.084)	(0.138)	(0.128)	(0.280)	(0.161)
Common language					0.246	0.806***	0.622*	0.528***	1.001***	1.857***	1.181***	1.946***
					(0.182)	(0.193)	(0.326)	(0.082)	(0.163)	(0.209)	(0.279)	(0.165)
Common colonizer					0.251	0.422	(0.059)	0.292**	-0.478	-0.437	-0.132	-0.277
					(0.316)	(0.320)	(0.212)	(0.115)	(0.421)	(0.415)	(0.362)	(0.387)
Sector Fixed Effects	Yes	Yes	Yes	Yes								
Destination Fixed Effects					Yes	Yes	Yes	Yes				
Sector-Destination Fixed Effects									Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	15,166	15,770	15,166	10,927	33,174	36,354	33,174	23,176	2,195,590	2,810,480	2,195,590	846,452
R-squared	0.550	0.780	0.085	0.406	0.894	0.581	0.080	0.546				

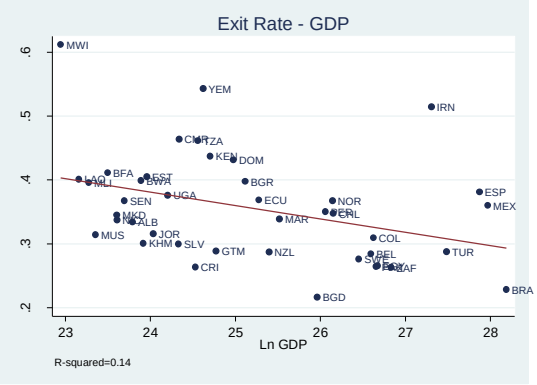
Our main results on stage of development are robust to the inclusion of zeros and the results on country size are weaker in the country-sector and country-destination regressions but remain strong in the country-sector-destination regressions.

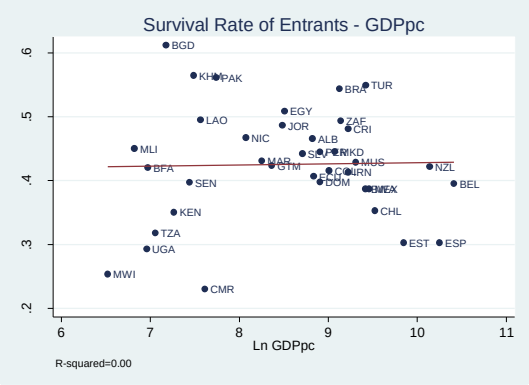
2nd Fact: On Exporter Dynamics: scatters

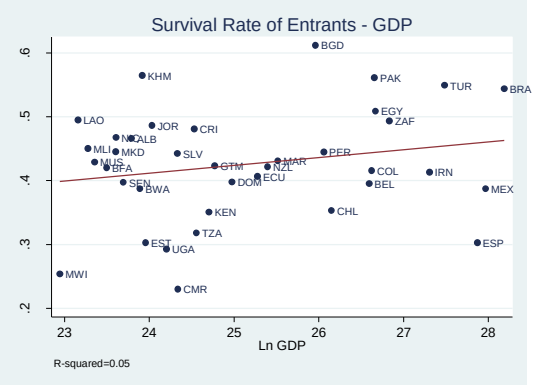












- Entry, Exit and Entrant Survival rates vs. GDP per capita and GDP

2nd Fact: On Exporter Dynamics

	Country-Sector Regressions					Country-Destination Regressions					Country-Sector-Destination Regressions				
	Entry Rate	Exit Rate	Entrant Survival Rate	Net Entry Rate	Turnover Rate	Entry Rate	Exit Rate	Entrant Survival Rate	Net Entry Rate	Turnover Rate	Entry Rate	Exit Rate	Entrant Survival Rate	Net Entry Rate	Turnover Rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Ln GDPpc	-0.061***	-0.061***	0.035***	-0.001	-0.114***	-0.035***	-0.036***	0.015*	0.001	-0.064***	-0.051***	-0.051***	0.023**	0.000	-0.087***
	(0.013)	(0.012)	(0.009)	(0.004)	(0.025)	(0.009)	(0.010)	(0.008)	(0.004)	(0.017)	(0.010)	(0.011)	(0.010)	(0.002)	(0.021)
Ln GDP	-0.004	-0.004	-0.001	0.001	-0.003	-0.031***	-0.030***	0.022***	0.000	-0.027**	-0.013*	-0.015**	0.013***	0.004	0.050***
	(0.010)	(0.009)	(0.006)	(0.004)	(0.018)	(0.009)	(0.008)	(0.005)	(0.003)	(0.013)	(0.007)	(0.006)	(0.004)	(0.003)	(0.015)
Ln Distance						0.052***	0.048***	-0.034***	0.003	0.057***	0.038***	0.035***	-0.023***	0.000	(0.022)
						(0.008)	(0.009)	(0.007)	(0.003)	(0.018)	(0.009)	(0.009)	(0.007)	(0.002)	(0.024)
Contiguity						(0.030)	-0.043**	0.037***	0.014*	-0.113***	(0.017)	-0.028**	0.015**	0.009**	(0.014)
						(0.021)	(0.021)	(0.013)	(0.008)	(0.035)	(0.010)	(0.011)	(0.007)	(0.004)	(0.025)
Common language						-0.043***	-0.031**	0.006	-0.010**	(0.037)	-0.023**	-0.024**	0.013*	0.003	0.072***
						(0.014)	(0.014)	(0.010)	(0.005)	(0.025)	(0.008)	(0.009)	(0.007)	(0.003)	(0.017)
Common colonizer						(0.021)	(0.022)	0.007	(0.005)	(0.025)	(0.020)	(0.022)	0.008	0.000	(0.035)
						(0.020)	(0.020)	(0.013)	(0.005)	(0.034)	(0.017)	(0.019)	(0.013)	(0.005)	(0.036)
Sector Fixed Effects	Yes	Yes	Yes	Yes	Yes										
Destination Fixed Effects						Yes	Yes	Yes	Yes	Yes					
Sector-Destination											Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,362	13,347	12,074	13,133	13,133	20,504	20,228	18,028	18,621	18,621	424,728	414,705	349,073	336,091	336,091
R-squared	0.248	0.248	0.156	0.011	0.263	0.192	0.181	0.102	0.018	0.139	0.171	0.171	0.114	0.035	0.217

Exporter dynamics change as countries get richer. In less developed countries, turnover is largely a process of entry and exit where many firms enter into export markets and exit almost immediately. In more developed countries, fewer but more resilient exporters enter in any given year, entrant survival is thus higher.

DISCUSSION OF THE FACTS IN LIGHT OF THEORY

Stylized Facts

a)	Number of exporters	⇧	as	Countries are larger
	Average exporter size	⇧	as	Countries are larger
	Concentration	⇧		Countries are more developed
b)	Entry rate	⇩		
	Exit rate	⇩	as	Countries are more developed
	Entrant Survival rate	⇧		

This is an outcome consistent with the predictions from the standard heterogeneous firm trade model.

Standard heterogeneous firm trade model

- The standard heterogeneous firm trade model (Melitz 2003) assumes firms are differentiated by their productivity, and that there is a fixed entry cost into exporting.
- Because of the entry costs, there is a cutoff productivity level, such that only firms at or above it will export. Thus, firms that export are more productive than firms that do not.
- This model assumes a common productivity distribution across countries. Thus, greater exports of larger countries are driven by a greater number of exporting firms, the extensive margin.
- The standard heterogeneous firm trade model implies that average exporter size, the intensive margin, should not vary with country size.
- This model has little to say about stage of development.

Stylized Facts

a) Number of exporters ↑
Average exporter size ↑ as Countries are more developed
Concentration ↑

b) Entry rate ↓
Exit rate ↓ as Countries are more developed
Entrant Survival rate ↑

These results are consistent with the literature on allocative efficiency and in particular with the “missing large” hypothesis.

Allocative efficiency

- Literature on resource misallocation shows that distortions that prevent firms from growing have important implications from a development perspective.

- Distortions to resource allocation, normally more prevalent in developing countries, affect the firm-size distribution in a given country, and are important to explain their weak firm dynamics. The implications of this literature are:

  – For number of exporters: If only the relatively larger and more productive firms can pay the fixed cost of exporting, then the more efficient the allocation of resources in a country is (more developed economies), the more high-productivity firms (exporters) there will be.

  => Our results on the number of exporters are consistent with this implication.

  – For exporter dynamics: In more developed countries, only the most productive firms grow and enter the export market, and these relatively good firms are less likely to exit. Thus, we expect entrant survival to be higher in more developed countries.

  => Our result on entrant survival is consistent with this implication. The higher entry in developing countries is consistent with a distortion related to uncertainty about the profitability of exporting.

Allocative efficiency

- For firm-size distribution: the implication on average exporter size vary depending on which group of firms are most constrained:
  - If taxes and regulations become heavy as firms grow, only the most productive can overcome these costs and there would be a "missing middle": a few large but few medium-sized firms (Tybout, 2000, 2014; Alfaro et al. , 2009). This would suggest that exporters are on average relatively large and their size distribution more concentrated at the top because of the missing middle, in less efficient countries.
  - If distortions disproportionately affect the largest firms, then there would be a "missing large": there are not enough very large firms (Hsieh and Klenow, 2009; Hsieh and Olken, 2014; Bento and Restuccia, 2014). In a world with more missing large firms, the exporters would on average be smaller and the concentration in the top 5 percent of firms would be lower in less efficient economies.

=> Our results on average exporter size and concentration support the **"missing large".**

Exporter size and concentration when resource allocation improves

- We examine how average exporter size and concentration change as revealed comparative advantage develops.
- We define an *export take-off* as an episode where the exports of country i in HS 2-digit sector j (X_{ij}) grew faster than total exports of that country (X_i), and also faster than world exports in that sector (X_j), over the same 8-year period.
- We examine whether export take-offs are associated with higher average exporter size and more exporter concentration.
- We regress average exporter size and the share of the top 5 percent on an interaction term [export take-off*last year of the 8-year period], plus corresponding fixed effects.

Exporter size and concentration resource allocation improves

	Country-Sector Regressions		Country-Sector-Destination Regressions	
	Ln Mean Exports per Exporter (5)	Share of Top 5% Exporters (6)	Ln Mean Exports per Exporter (7)	Share of Top 5% Exporters (8)
Indicator for Take-off * End Year Fixed Effect	1.458***	0.073***	2.023***	0.125***
	(0.124)	(0.012)	(0.106)	(0.009)
Country-Sector Fixed Effects	Yes	Yes		
Country-Sector-Destination Fixed Effects			Yes	Yes
Calendar Year Fixed Effects		Yes	Yes	Yes
Observations	4,207	3,211	45,400	12,901
R-squared	0.949	0.866	0.904	0.846

Increases in average exporter size and concentration are especially strong during episodes where export growth is a result of a gain in revealed comparative advantage.

These results are also consistent with the “missing large” hypothesis.

Conclusions

- The indicators in the EDD point to systematic ways in which the micro structure of exports changes as countries develop.
- Our results are mainly consistent with allocative efficiency in export markets improving as countries develop, and therefore, more productive and larger firms there will be.
- Exporter dynamics are also closely linked with stage of development. As countries develop, there is less wasteful entry and higher entrant survival. These results are also consistent with allocative efficiency.

Conclusions

- We hope that the measures in the Database will allow the examination of several interesting cross-country, cross-sector questions, and within-country questions.
- Open the door to questions such as: Does trade promote growth via firm size or firm count? What is the role of market access to explain differences in exporter behavior? What determines exporter survival? How is comparative advantage related to the typical exporter characteristics in an industry?
- EDD 2nd version to be released in September 2015. Updates and expansion covering over 70 countries.

Public and Free Access to Exporter Dynamics Database:

http://econ.worldbank.org/exporter-dynamics-database

Information provided also on 10 countries that authorized sharing of data at exporter-level