



PUEY UNGPHAKORN INSTITUTE
FOR ECONOMIC RESEARCH



Dissecting Thailand's International Trade: Evidence from 88 Million Export and Import Entries

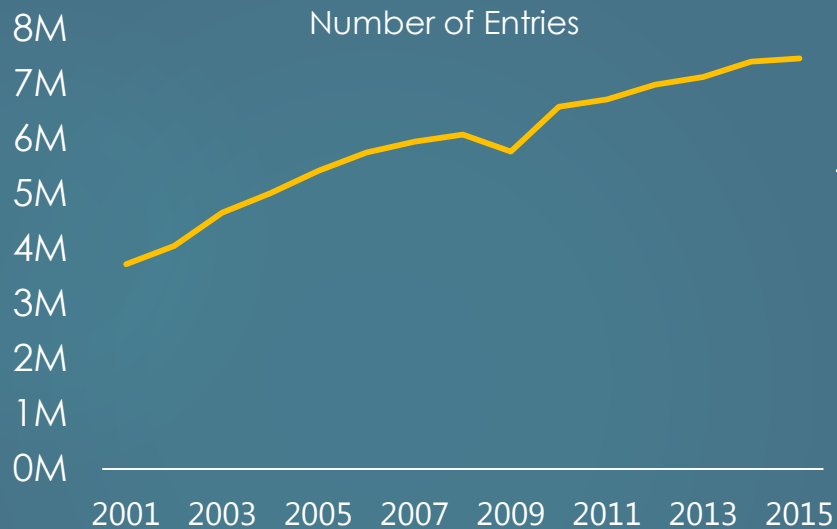
TOSAPOL APAITAN

PITI DISYATAT

KRISLERT SAMPHANTHARAK

Data Overview

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Number of traders

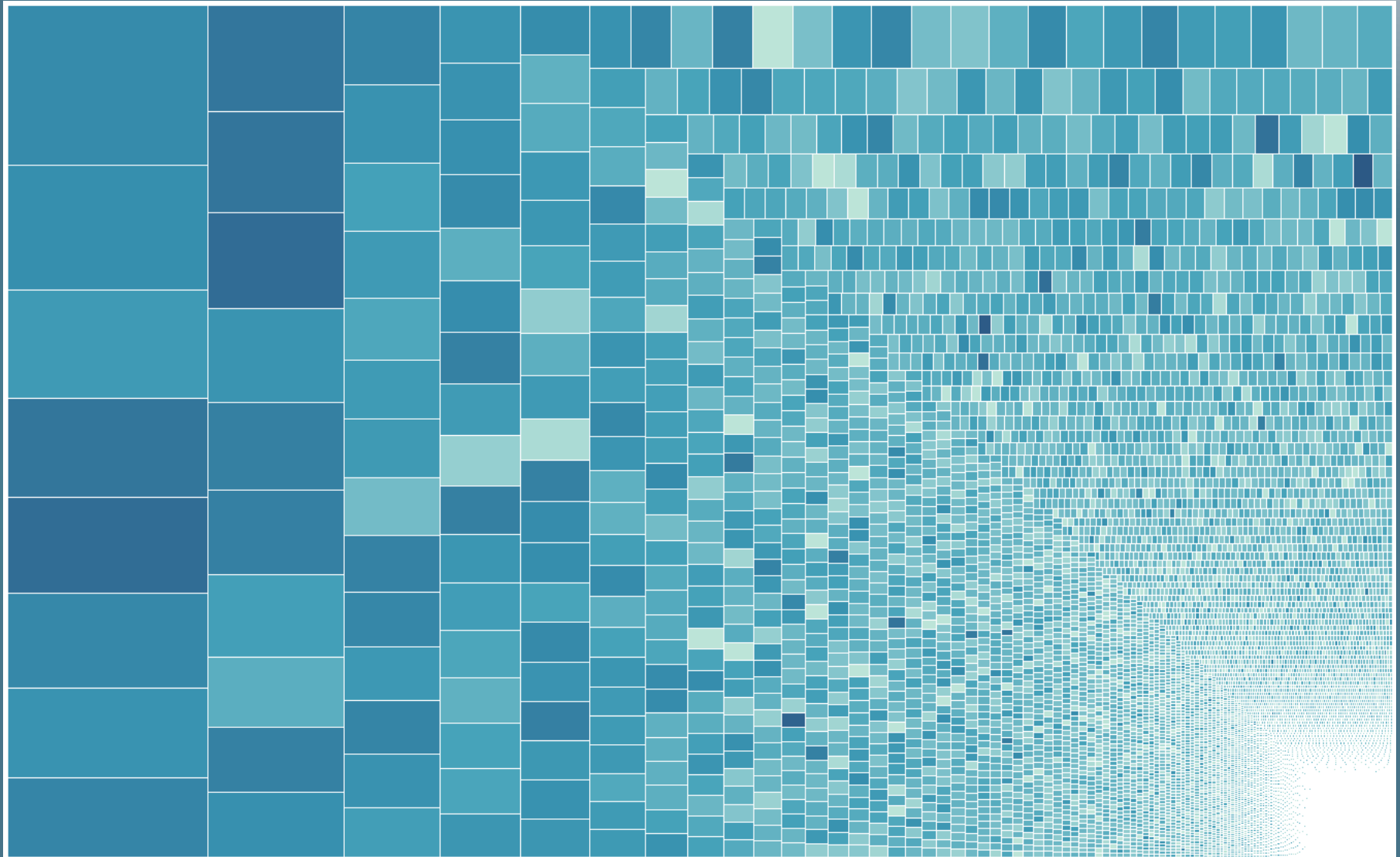
	2001	2007	2011	2015
Total number of traders	44,292	66,157	92,382	95,245
Exporters	21,309	31,481	37,809	36,647
Importers	35,952	51,595	74,020	78,303
Hybrid traders	12,969	16,919	19,447	19,705

Number of products (6-digit HS)

	2001	2007	2011	2015
Export	4,385	4,633	4,725	4,770
Import	4,848	4,923	4,888	5,011

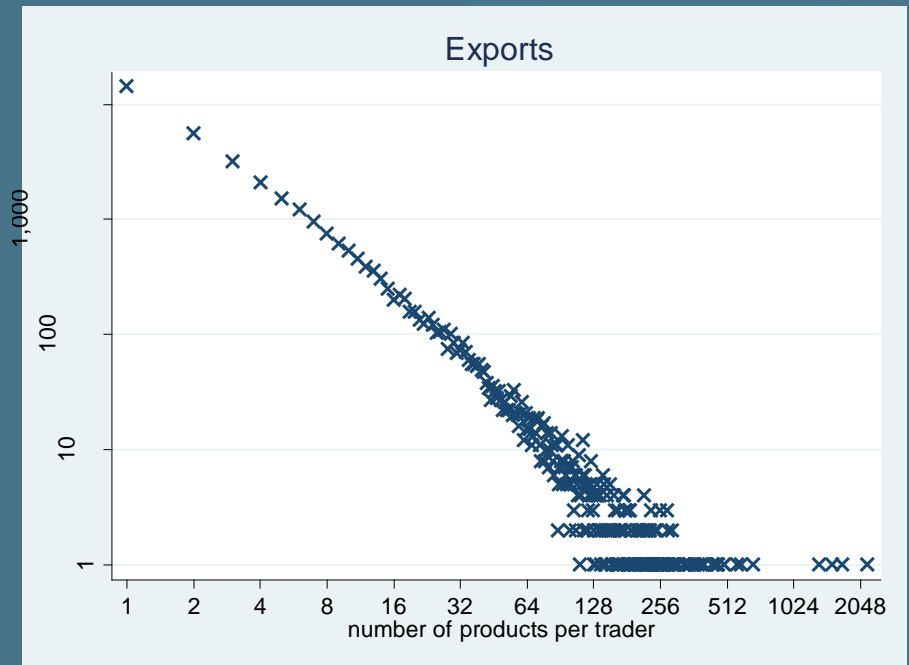
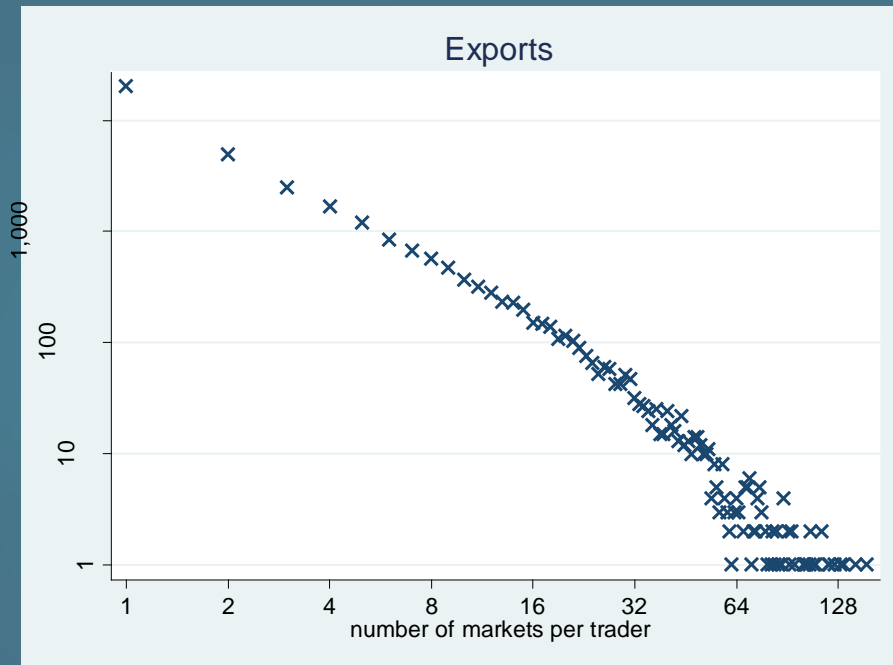
A mosaic of Thailand's export

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Most exporters export a single product or to a single market

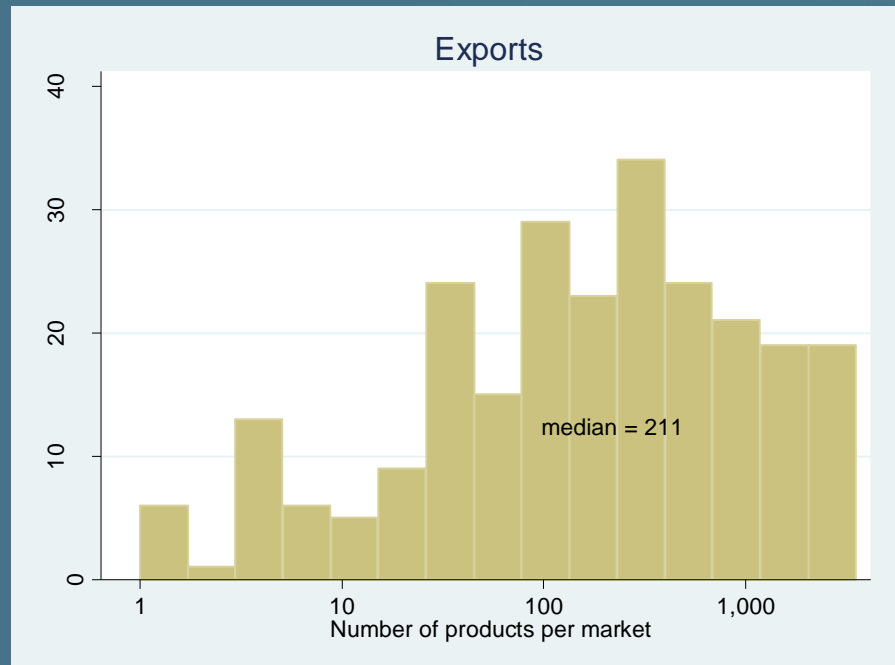
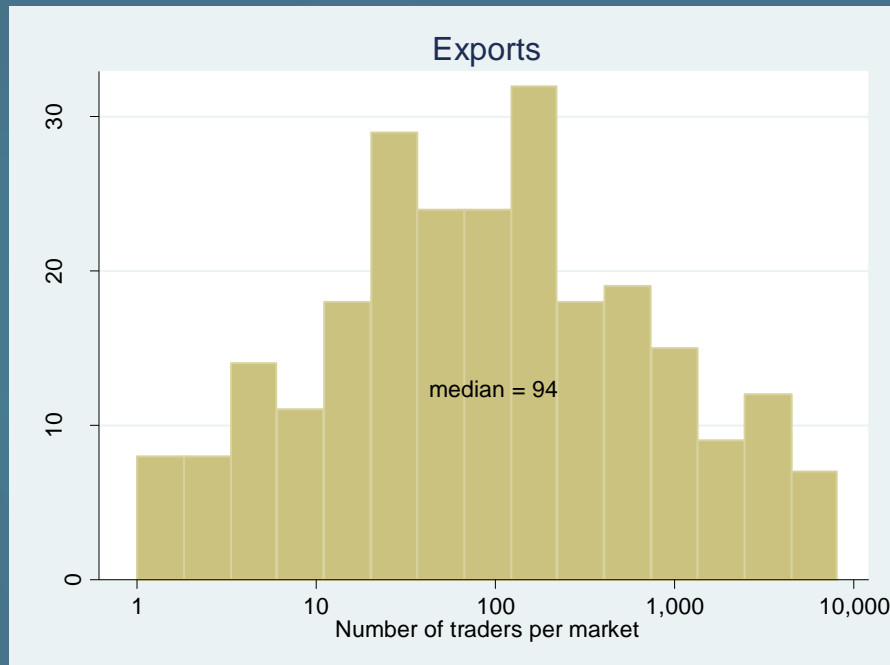
Distribution of number of export markets/products per trader in 2015



Source: Thai Customs Department; Authors' calculation.

Exporters are specialized in markets but diversified in products

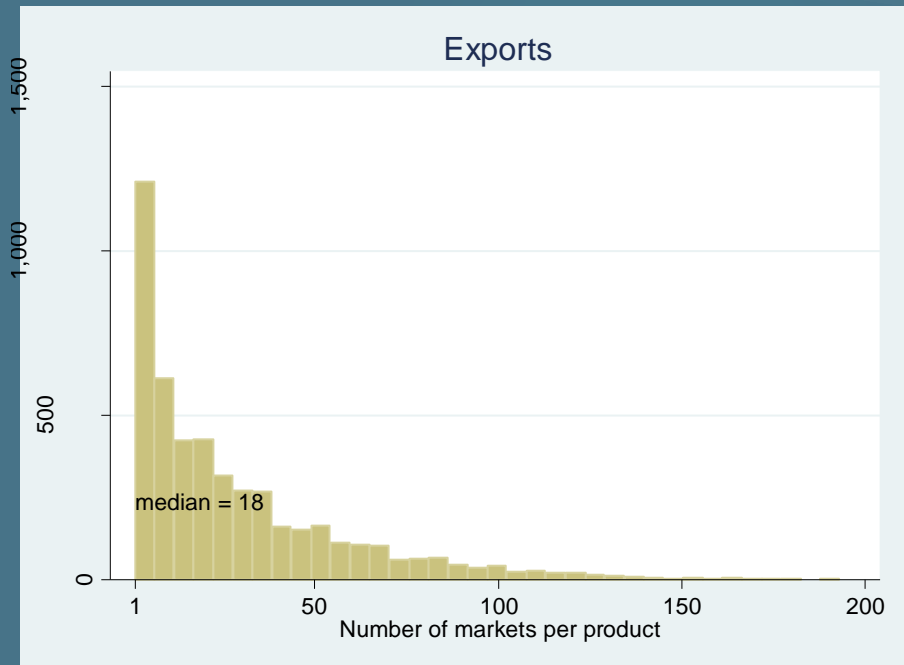
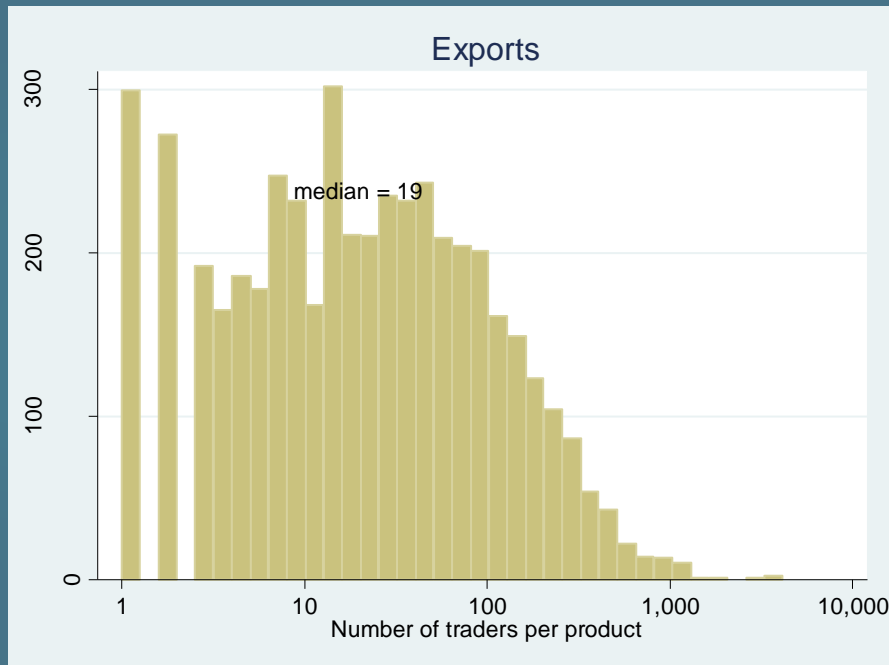
Distribution of number of exporters/products per market in 2015



Source: Thai Customs Department; Authors' calculation.

Few exporters per product and few “global products”

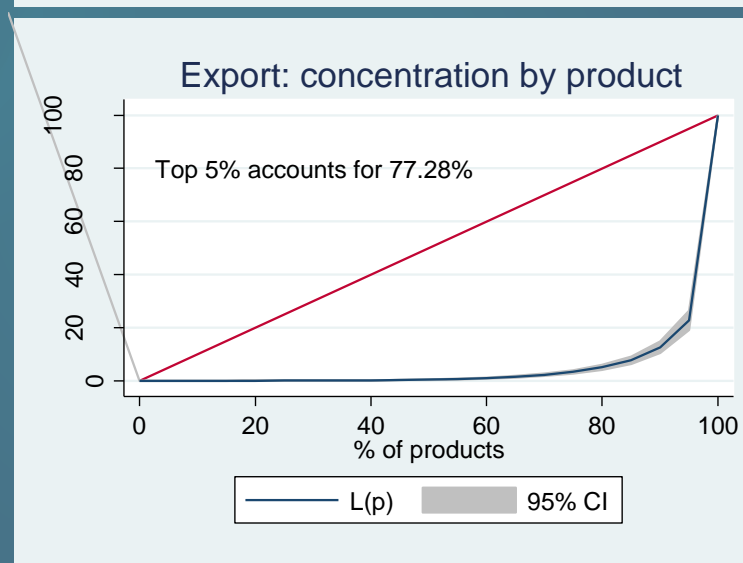
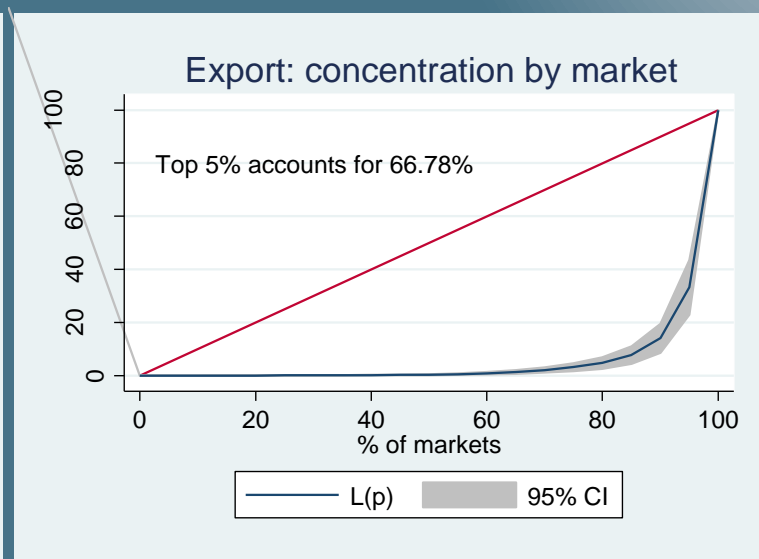
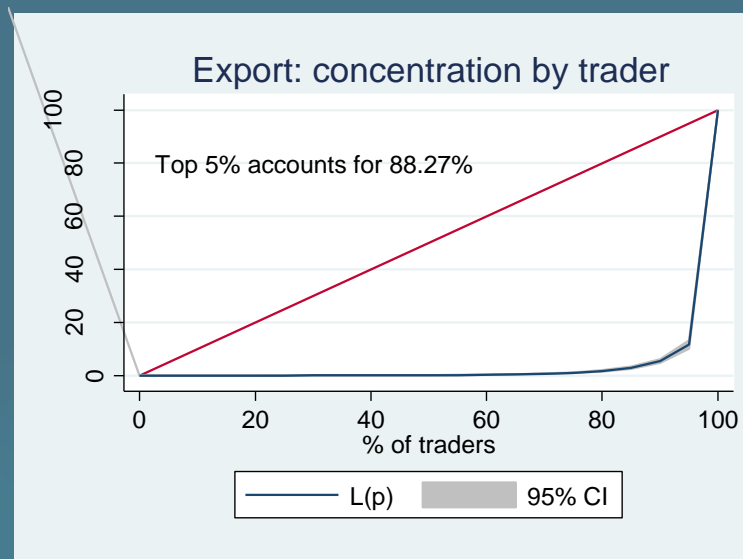
Distribution of number of exporters/markets per product in 2015 exports



Source: Thai Customs Department; Authors' calculation.

Very high concentration

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Lorenz curves for exports (2015)

Source: Thai Customs Department; Authors' calculation.

Few multi-market and multi-product exporters dominate

Distribution of Exporters and Export Value (2015)

Share of traders

Number of products	Number of countries						All
	1	2	3	4	5-29	30+	
1	33.3%	3.1%	1.0%	0.5%	1.2%	0.0%	39.2%
2	8.0%	3.9%	1.2%	0.7%	1.5%	0.0%	15.3%
3	3.3%	2.0%	1.2%	0.6%	1.6%	0.0%	8.7%
4	1.9%	1.0%	0.7%	0.5%	1.4%	0.0%	5.7%
5-29	7.3%	3.1%	2.5%	1.9%	9.8%	0.7%	25.4%
30+	1.4%	0.4%	0.2%	0.2%	2.6%	0.8%	5.7%
All	55.4%	13.6%	6.8%	4.5%	18.1%	1.6%	100.0%

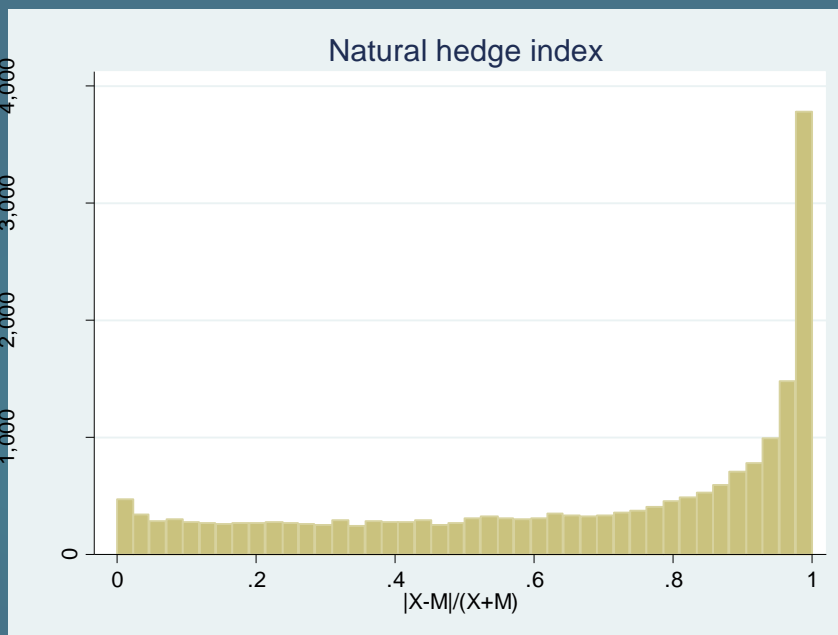
Share of value

Number of products	Number of countries						All
	1	2	3	4	5-29	30+	
1	1.9%	0.9%	0.4%	0.2%	1.4%	0.1%	4.9%
2	0.4%	0.4%	0.3%	0.3%	1.7%	0.1%	3.3%
3	0.2%	0.3%	0.3%	0.2%	1.9%	0.5%	3.4%
4	0.1%	0.1%	0.1%	0.1%	1.7%	0.4%	2.7%
5-29	0.8%	0.6%	0.7%	0.5%	18.1%	10.0%	30.7%
30+	0.6%	0.2%	0.1%	0.2%	15.2%	38.7%	55.0%
All	4.0%	2.6%	1.9%	1.5%	40.1%	49.8%	100.0%

Source: Thai Customs Department; Authors' calculation.

International trade dominated by hybrids

Simultaneous Exporting and Importing



Fraction of Hybrid Traders

	2001	2007	2011	2015
Number of hybrid traders				
Total	12,969	16,919	19,447	19,705
As % of exporters	60.9%	53.7%	51.4%	53.8%
As % of importers	36.1%	32.8%	26.3%	25.2%
Value traded by hybrid traders				
As % of total exports	92.4%	93.4%	92.5%	93.3%
As % of total imports	90.4%	92.1%	91.9%	89.7%

Source: Thai Customs Department; Authors' calculation.

Hybrids are diversified

Distribution of Hybrid Exporters and Export Value (2015)

Share of traders

Number of products	Number of countries						All
	1	2	3	4	5-29	30+	
1	1.3%	1.0%	0.3%	0.2%	0.3%	0.0%	3.2%
2	1.4%	2.8%	0.9%	0.5%	0.9%	0.0%	6.5%
3	1.0%	1.9%	1.4%	0.7%	1.2%	0.0%	6.2%
4	0.7%	1.3%	1.1%	0.7%	1.3%	0.0%	5.0%
5-29	3.5%	6.3%	6.4%	5.9%	25.3%	0.6%	48.1%
30+	0.8%	1.3%	1.5%	1.5%	22.8%	3.2%	31.0%
All	8.7%	14.6%	11.6%	9.5%	51.7%	3.9%	100.0%

Share of value

Number of products	Number of countries						All
	1	2	3	4	5+	30+	
1	0.0%	0.0%	0.1%	0.0%	0.4%	0.0%	0.6%
2	0.0%	0.1%	0.2%	0.0%	0.2%	0.0%	0.6%
3	0.1%	0.1%	0.1%	0.1%	0.4%	0.0%	0.7%
4	0.0%	0.0%	0.0%	0.1%	0.4%	0.1%	0.7%
5-29	0.2%	0.3%	0.5%	0.5%	9.0%	2.9%	13.3%
30+	0.1%	0.2%	0.4%	0.6%	35.7%	47.4%	84.5%
All	0.4%	0.8%	1.2%	1.4%	46.0%	50.4%	100.0%

Source: Thai Customs Department; Authors' calculation.

Stylized Fact 1:

TRADE IS HIGHLY CONCENTRATED

- Across traders, markets, products
- Implications for shock transmission

Few firms export

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Overview of Trading Firms (2013)

	Number of Firms	Percent of Total
International trading firms	53,182	12.2%
Exporting firms	24,965	5.7%
Pure exporters	7,396	1.7%
Hybrids	17,569	4.0%
Pure importers	28,217	6.5%
Domestic firms	381,939	87.8%
Total	435,121	100.0

Source: Thai Customs Department; Authors' calculation.

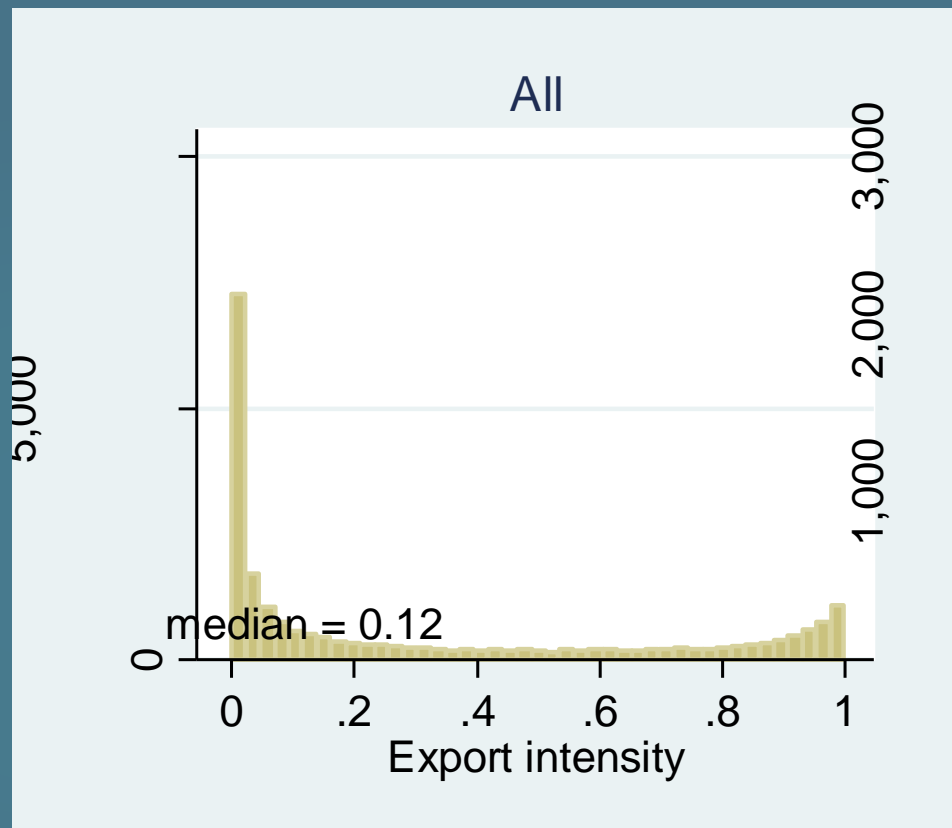
Stylized Fact 2:

EXPORTERS ARE RARE

- Neglects indirect exports

Bi-polar engagement of firms in exporting

Export Intensity of Export Firms (2013)

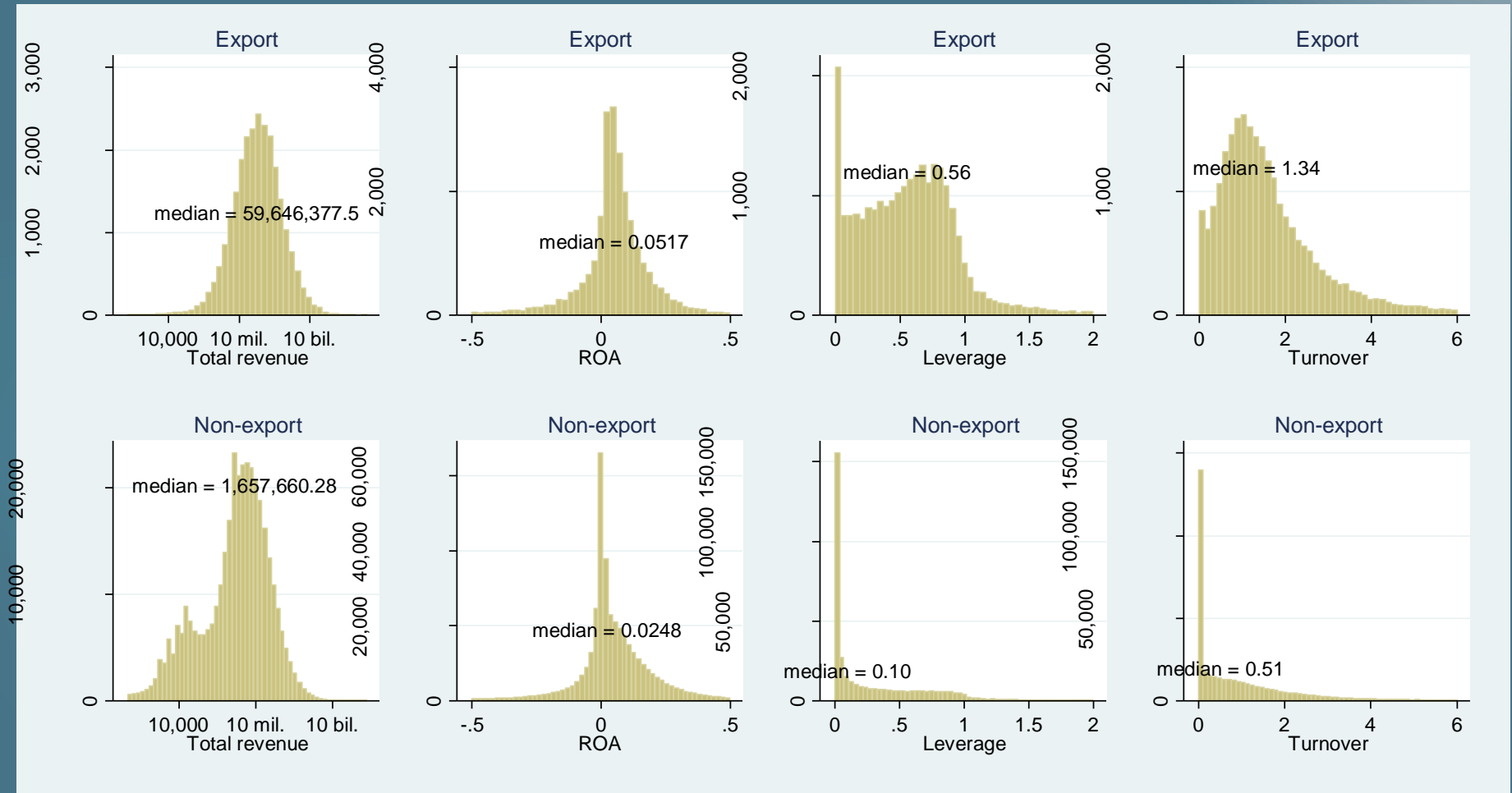


Source: Thai Customs Department; Authors' calculation.

Exporters are bigger and better

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Firm Characteristics – Exporters versus Non-exporters



Stylized Fact 3:

EXPORTERS ARE SPECIAL

- Size, capital intensity, profitability, efficiency
- Evidence points to self-selection

The dynamic evolution of Thai exports

Overview of Thai Export Dynamics (2011-2015)

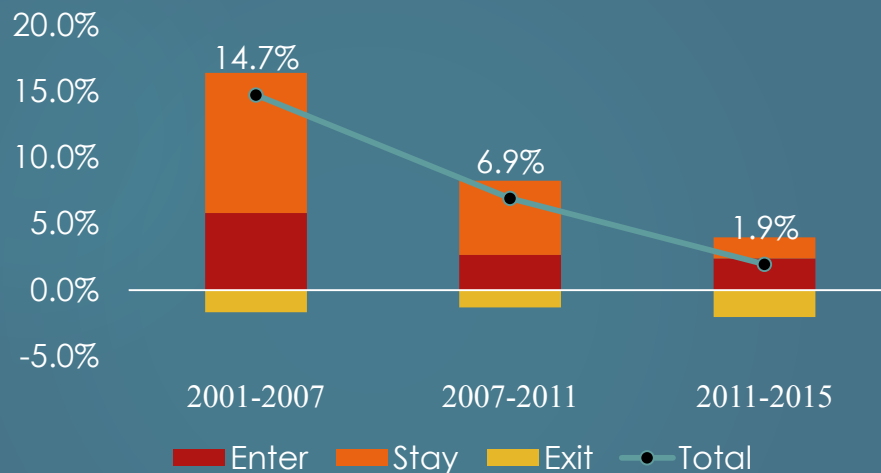
Annual Averages	
Fraction of new traders	37.0%
Fraction of lost traders	32.9%
Value-weighted fraction of new traders	1.7%
Value-weighted fraction of lost traders	0.8%
Churning rate	69.9%

Contribution of incumbent traders has declined

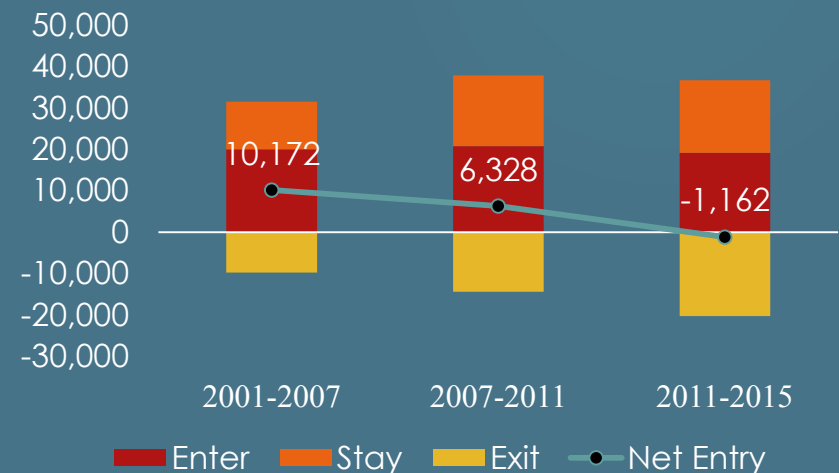
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Export Growth Decomposition at Trader Level

Value growth (annual avg.)



No. of traders

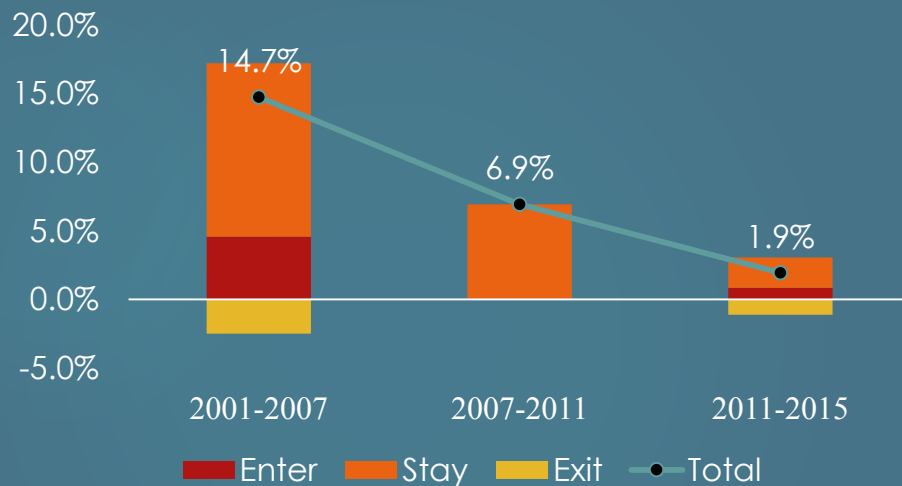


Growth is driven by existing products

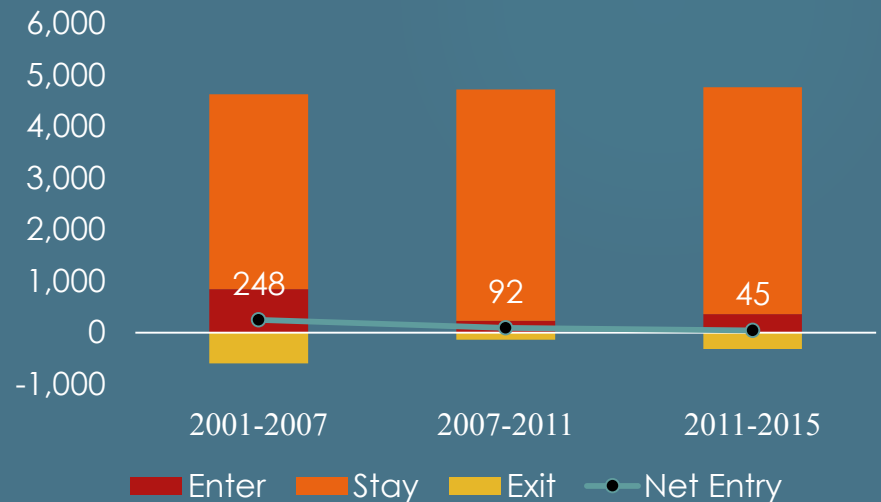
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Export Growth Decomposition at Product Level

Value growth (annual avg.)



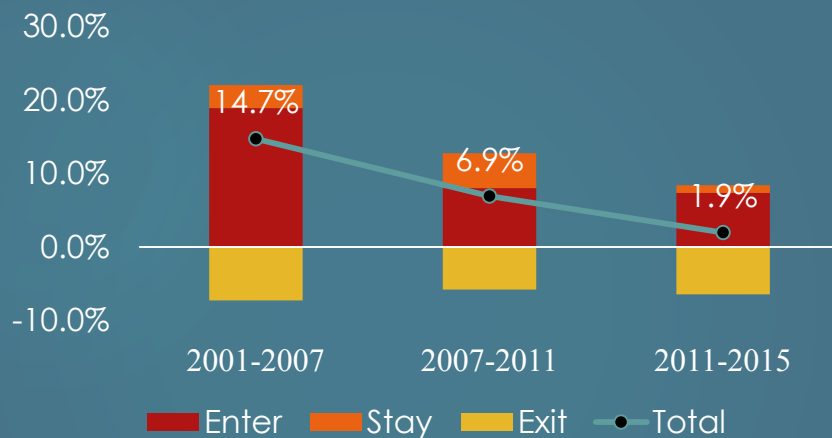
No. of products



The extensive margin plays a big part in export growth

Export Growth Decomposition at PMT Level

Value growth (annual avg.)



No. of relationships



New entrants follow well-trodden path

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Export Growth Decomposition at Firm Level

	Enter		Stay	Exit	Total
	New PMs	Old PMs			
2001-2007	1.3%	4.5%	10.6%	-1.7%	14.7%
2007-2011	0.3%	2.3%	5.6%	-1.3%	6.9%
2011-2015	0.2%	2.2%	1.6%	-2.0%	1.9%
2001-2015	2.0%	4.5%	6.9%	-1.9%	11.4%

Export value vs. number of traders

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Export Value Growth (Annual Average – 2011-2015)

	Agricultural Products	Food	Mineral Products	Chemicals & Rubbers	Wood & Leather Products	Textiles & Wearing Apparels	Metals & Other Materials	Machinery	Transportation	Miscellaneous	All sectors
ASEAN	2.3%	7.9%	-3.3%	-0.1%	3.4%	2.5%	14.8%	4.0%	7.9%	9.9%	3.5%
Australia	-2.5%	2.4%	-12.2%	1.6%	-9.0%	8.8%	0.0%	3.4%	25.7%	8.2%	9.2%
China	18.2%	42.4%	-2.2%	-5.0%	6.7%	1.2%	17.5%	-3.9%	15.3%	66.1%	0.3%
East Asia	-0.9%	1.2%	-12.5%	-6.7%	3.0%	6.7%	2.8%	5.3%	24.2%	16.9%	0.5%
EU	-5.3%	-1.8%	-23.5%	-8.0%	1.5%	-7.9%	0.2%	4.7%	15.4%	2.2%	0.4%
Hong Kong	5.3%	12.2%	-9.8%	-10.8%	-1.4%	0.1%	1.0%	4.2%	0.1%	18.0%	2.8%
India	-9.0%	5.6%	-6.6%	-1.4%	10.0%	1.8%	-0.2%	10.6%	13.3%	16.2%	3.5%
Japan	-2.2%	-0.9%	-8.8%	-7.1%	4.6%	4.9%	0.5%	0.5%	-0.2%	-0.5%	-1.5%
US	-4.8%	-0.8%	-24.7%	-2.7%	6.3%	-1.9%	5.7%	17.0%	18.5%	9.5%	5.9%
Rest of the World	-7.4%	-0.2%	-4.6%	-3.8%	6.2%	-4.9%	-7.2%	1.9%	14.3%	0.5%	0.0%
All regions	-0.2%	2.2%	-5.6%	-4.0%	4.3%	-1.9%	1.5%	4.3%	12.9%	9.5%	1.9%

Source: Thai Customs Department; Authors' calculation.

Export value vs. number of traders

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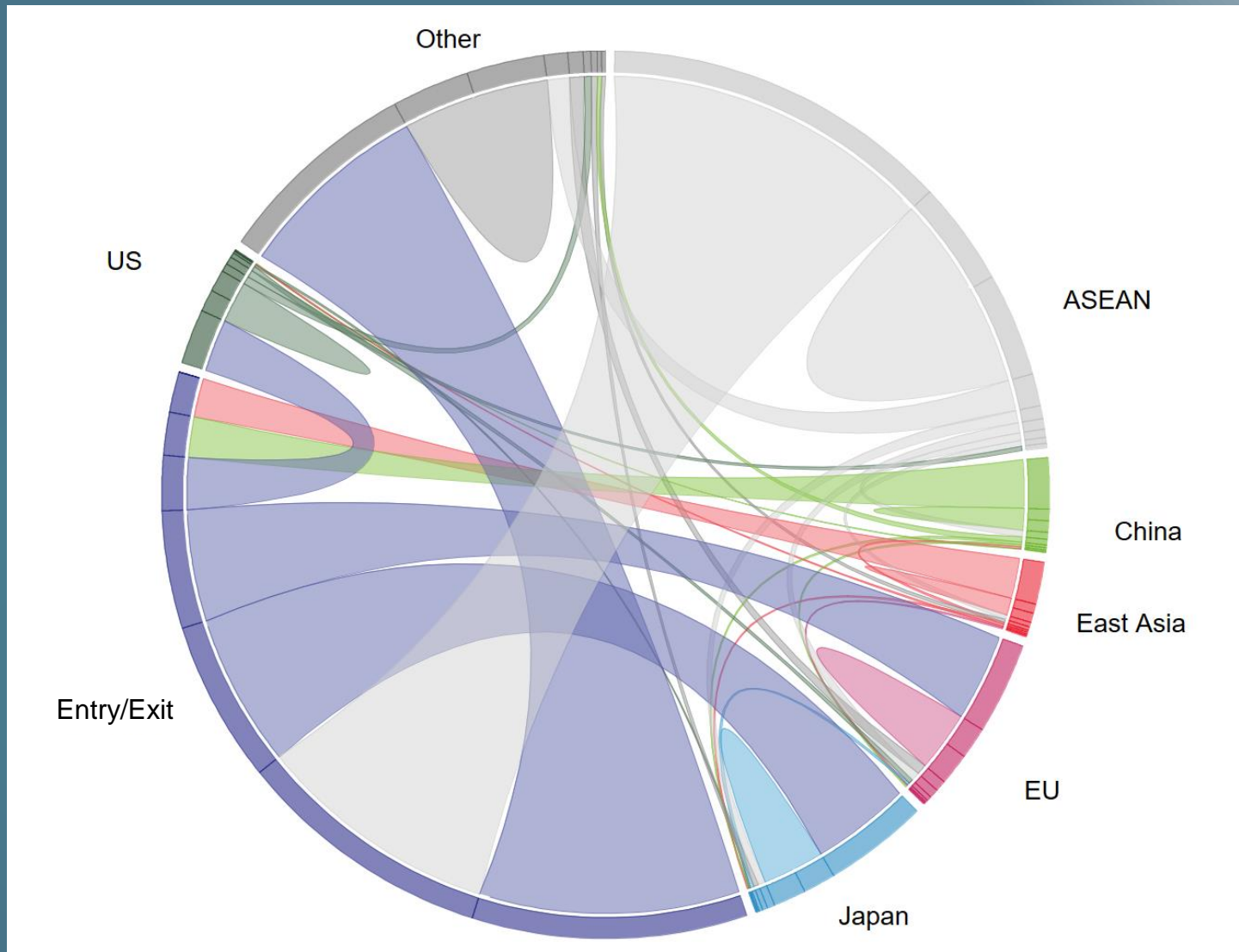
Growth in Number of Exporters

	Agricultural Products	Food	Mineral Products	Chemicals & Rubbers	Wood & Leather Products	Textiles & Wearing Apparels	Metals & Other Materials	Machinery	Transportation	Miscellaneous	All sectors
ASEAN	18.0%	37.1%	26.3%	18.4%	6.0%	10.0%	15.5%	16.1%	18.9%	24.5%	13.2%
Australia	-10.8%	15.4%	3.9%	-0.3%	-22.3%	-23.2%	-10.7%	-2.6%	17.1%	-9.2%	-7.6%
China	20.7%	46.8%	-15.7%	9.8%	6.4%	2.0%	10.8%	11.4%	10.8%	25.3%	10.0%
East Asia	13.5%	15.0%	3.7%	4.5%	2.5%	-9.2%	1.7%	-0.1%	21.2%	7.5%	0.9%
EU	-9.2%	0.6%	-28.1%	-3.5%	-19.9%	-20.6%	-11.2%	0.6%	14.9%	-4.4%	-9.9%
Hong Kong	-4.3%	19.8%	-23.2%	-5.3%	-17.8%	-16.6%	-5.1%	-2.2%	24.3%	-0.3%	-4.9%
India	-4.4%	-8.2%	-1.8%	11.2%	-18.6%	-15.8%	-3.7%	12.4%	20.3%	-4.3%	-1.7%
Japan	-1.9%	-8.2%	2.3%	3.3%	-45.4%	-39.0%	-26.7%	-24.4%	10.8%	-40.4%	-13.7%
US	8.5%	4.0%	-10.9%	4.9%	-11.3%	-10.7%	-2.6%	2.4%	18.5%	10.4%	-0.5%
Rest of the World	4.7%	11.3%	5.4%	3.0%	-18.2%	-35.0%	-5.9%	4.1%	10.2%	0.1%	-9.8%
All regions	11.6%	20.4%	13.6%	8.9%	-19.3%	-24.8%	-7.4%	-2.1%	12.1%	-4.8%	-3.1%

Source: Thai Customs Department; Authors' calculation.

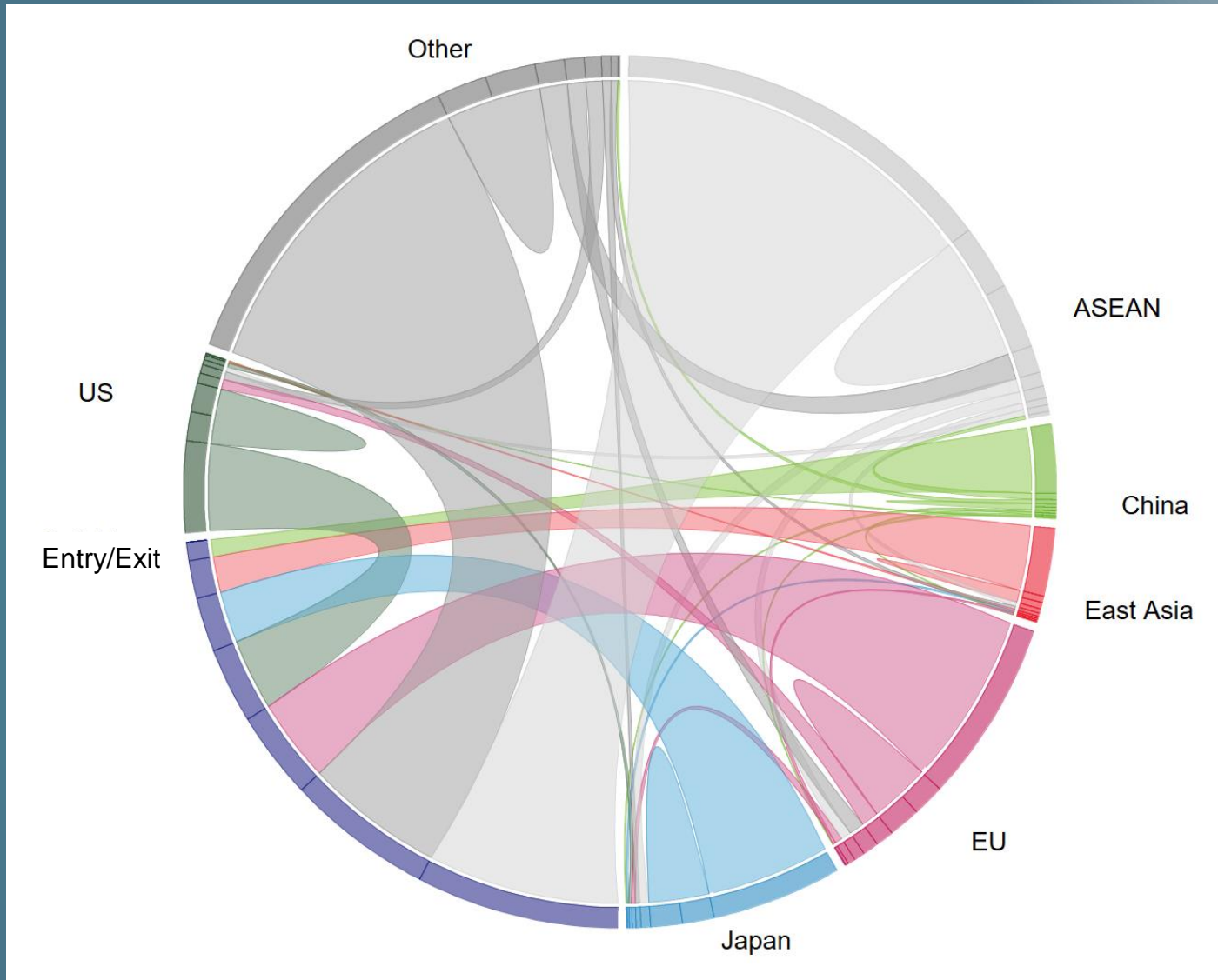
A kaleidoscope of Market Migration (2011-2015)

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A kaleidoscope of Market Migration (2001-2007)

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Stylized Fact 4:

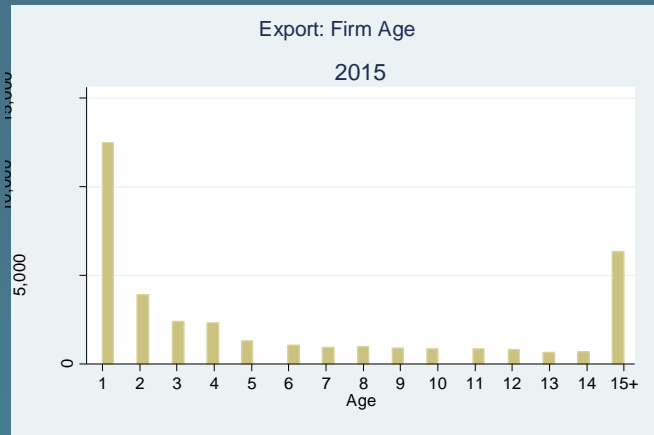
THERE IS A GREAT DEAL OF CHURN AMONG THAI EXPORTERS

- Survival of the fittest?
- Extensive margin as main driver

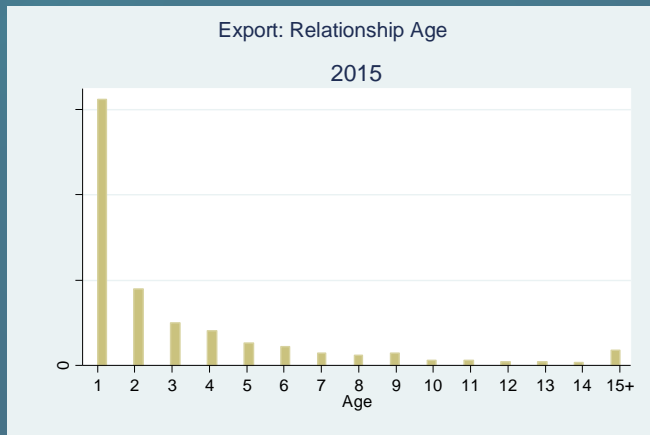
Long-Term Relationships

Distribution of Relationship by Age (years)

Distribution of durations at firm level



Distribution of durations at PMF level



Long-Term Relationships (2015)

Fraction of value traded by long term relationships

At trader level	64%
At PMT level	19%

Average growth of value traded by long term relationships (2001-2015)

At trader level	7%
At PMT level	5%

Fraction of long term relationships

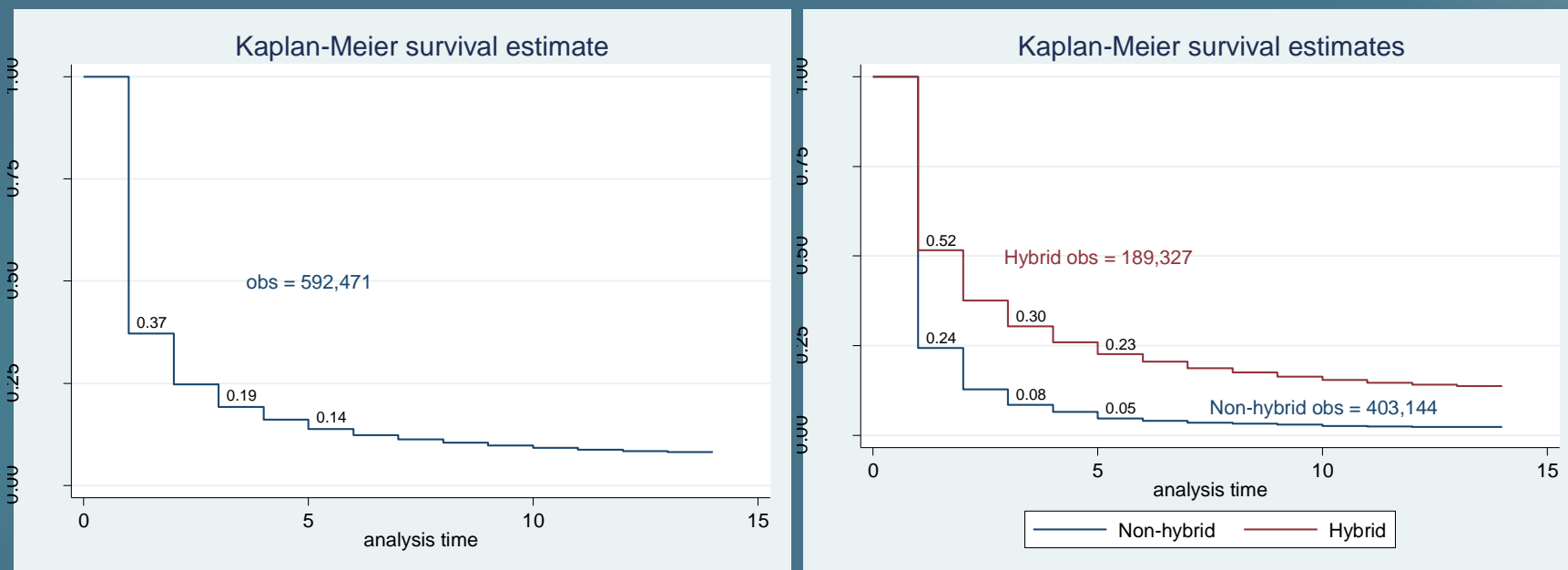
At trader level	17%
At PMT level	3%

Source: Thai Customs Department; Authors' calculation.

Export duration is short-lived

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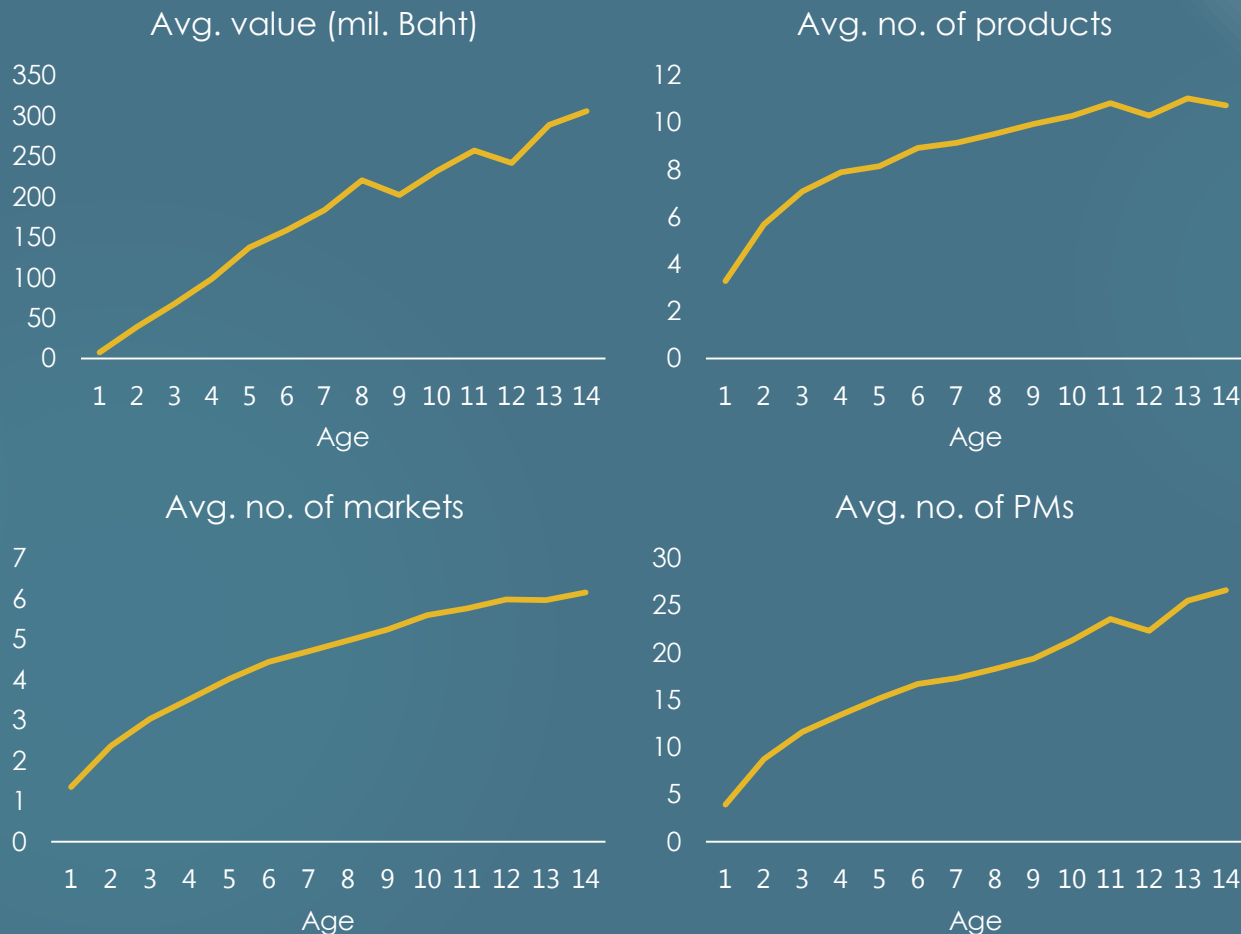
Survival Probability at Trader Level



How special are the survivors?

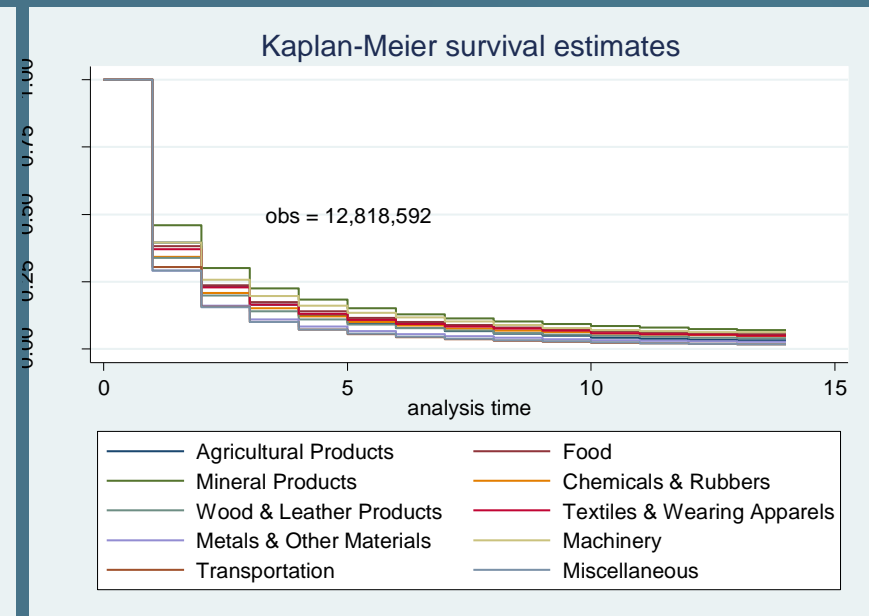
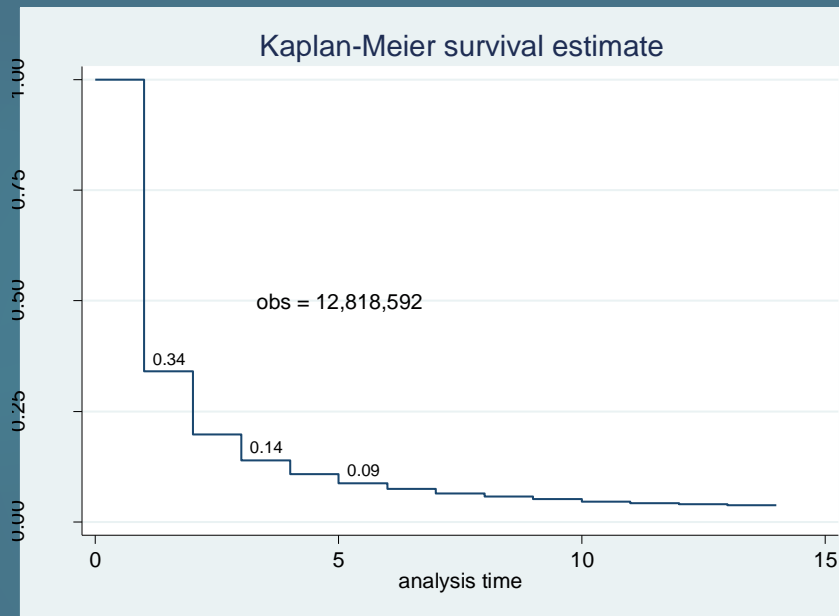
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Characteristic of Surviving Exporters



Relationships are even more precarious

Survival Probability at PMT Level



Stylized Fact 5:

EXPORTING IS FRAGILE

- Not only “to enter”, but also “to survive”
- Survivors occupy a large share of exports

Takeaways

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- ▶ *Exporting is highly concentrated at all levels*
 - ▶ Firm specific shock is aggregate shock.
 - ▶ Aggregate instrument may not be appropriate
 - ▶ Should encourage diversification
- ▶ *Exporting is hard and exporters are special*
 - ▶ Evidence points to self-selection
 - ▶ Focus not on helping exporters get better but allowing good firms to become exporters.
 - ▶ Entry costs are key (tariff, market access, distribution channels, rules regulation, information, transport costs etc).
- ▶ *Assessing welfare requires granular perspective*
 - ▶ Winners and losers, employment, political economy etc. all occur on extensive margins