

FIRM HETEROGENEITY AND EXPORTS: EVIDENCE FROM GREEK FIRMS

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In the last decade the Greek economy....

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		-12.5	

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Twin Deficits



Fiscal Crisis

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Twin Deficits



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Twin Deficits



Fiscal Crisis



Economic Adjustment



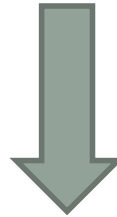
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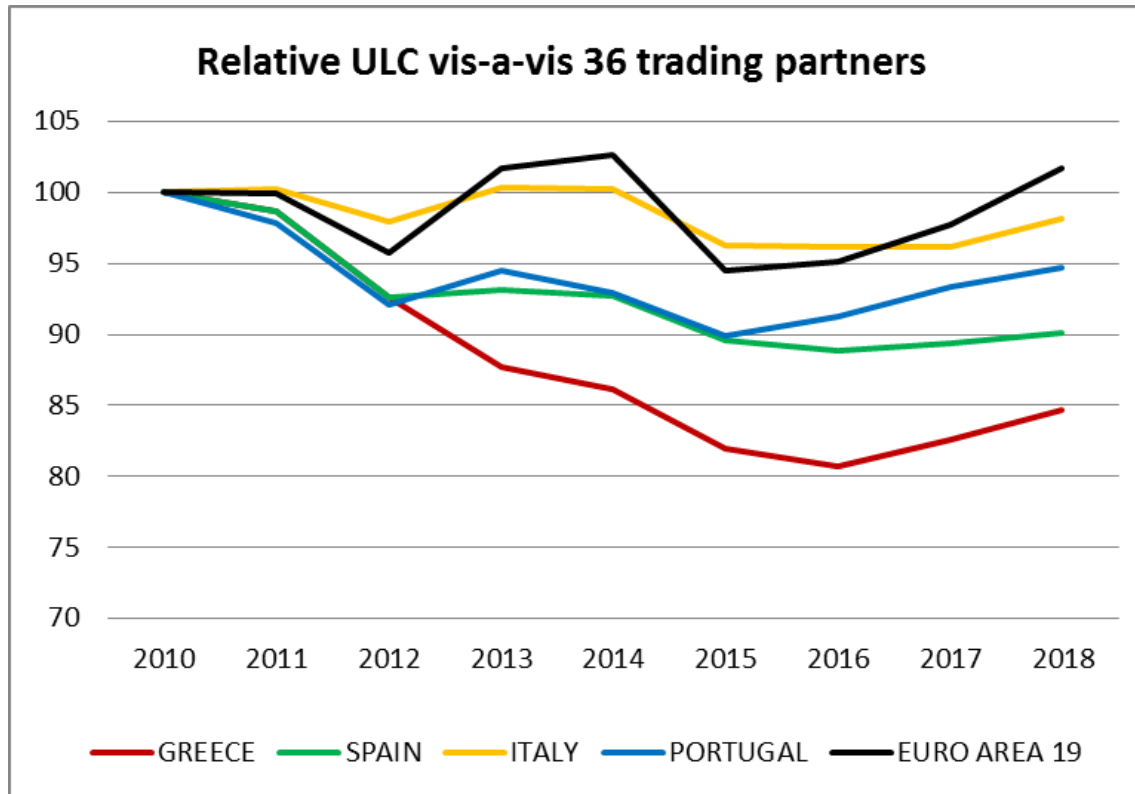


Necessary condition:

Export based growth

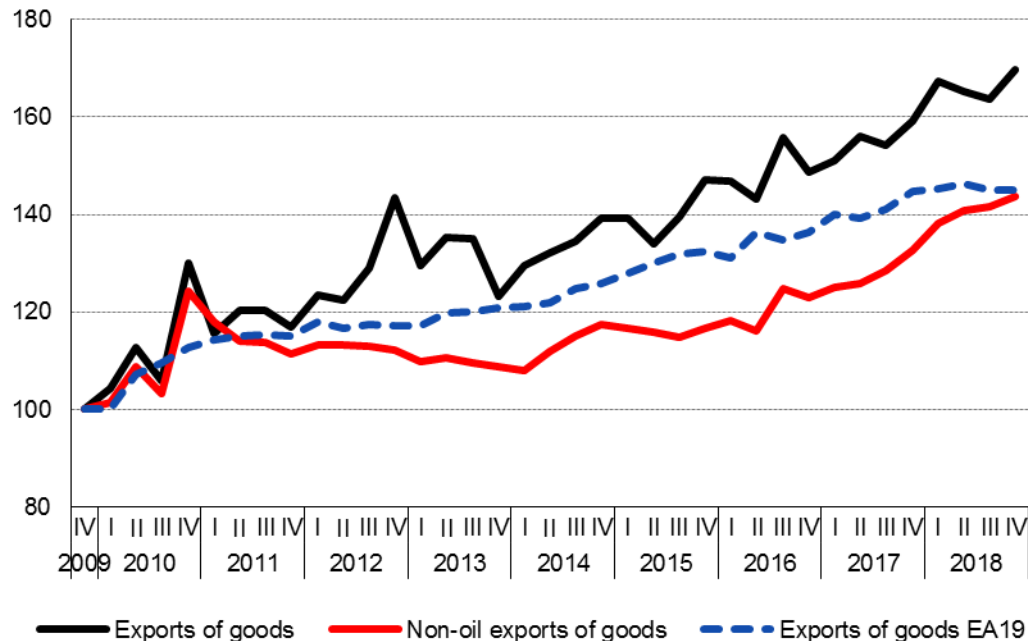
Competitiveness

- In terms of competitiveness gains Greece outperformed Euro area



Export performance

- In terms of exports of goods Greece did not perform better than Euro area if oil is not included.



- However, economic recovery will boost imports
- Export performance may not be sufficient to ensure that low CA deficits will continue in good times

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What determines the export performance of Greek exporting firms?

The importance of firm heterogeneity

- Given the importance of exports for sustainable growth an extensive theoretical and empirical literature attempts to explore and explain the behavior of exporting firms.
- The availability of micro datasets on firms allowed the departure from the assumption of a representative firm within each industry.
- Empirical research with firm-level data has to a large extent replaced the traditional approaches with standard trade statistics at the product level.
- This literature indicates that firm heterogeneity affects trade and can be influential for aggregate outcomes
- For surveys see Bernard et al. (2007, 2012), Redding (2011), Melitz and Trefler (2012) and Melitz and Redding (2014)

This literature documented a number of empirical facts:

- More productive firms export with a higher probability and have higher export revenue [Bernard & Jensen (1995). Melitz & Redding (2014)]
- Larger firms export more. to more markets [Bernard. Redding & Schott (2007)]
- Exporters pay higher wages and are more skill intensive [Yeaple (2005). Verhoogen (2008)]
- There is a strong link between exports and innovation at the firm level [Aw. Roberts and Xu (2011). Arndt (2012). Aghion. Bergeaud. Lequien & Melitz (2018). Chalioti. Drivas. Kalyvitis & Katsimi (2018)]
- Financial Conditions are important to exporters [Manova (2013). Feenstra. Feenstra. Li & Yu (2014). Dinopoulos. Kalyvitis & Katsimi (2017)]
-

Evidence from Greek Exporting Firms

- *what & where* is exported?
 - *who exports?*

Evidence from Greek Exporting Firms

- *what & where* is exported?



who exports?

- *why?*

Evidence from Greek Exporting Firms

- *what & where* is exported?



- *who exports?*

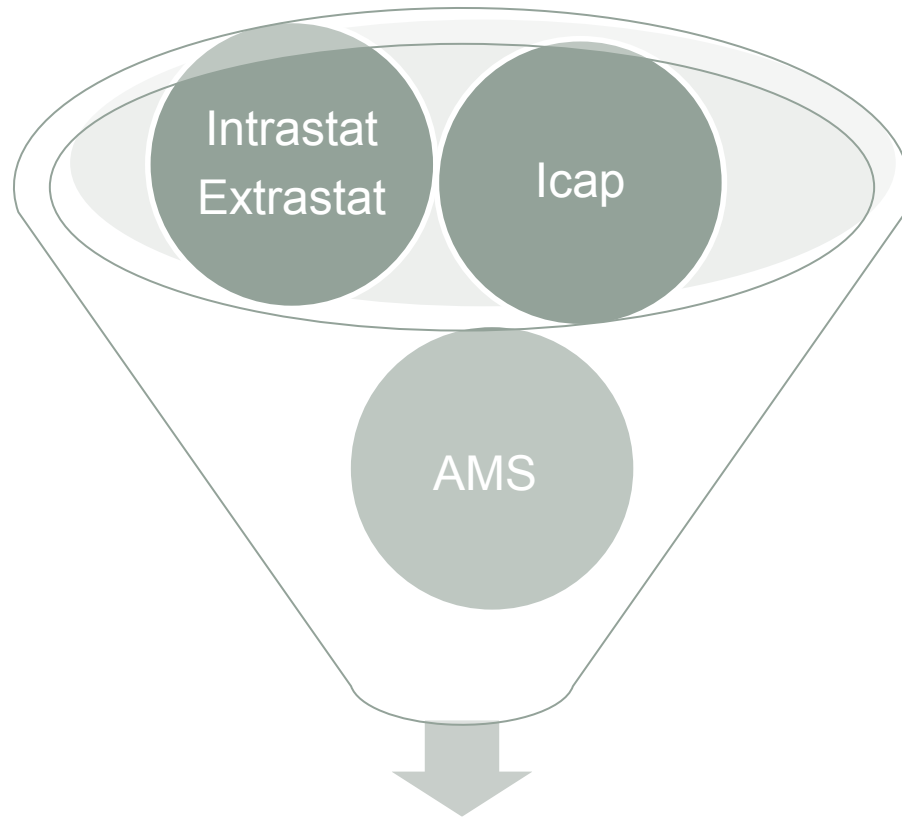
- *why?*



Policy implications

We use a newly compiled dataset on Greek exporting firms that merges data from three main sources for 2003-2015.

- Trade data at the firm-product-destination level from the Intrastat/Extrastat databank (ELSTAT).
- Firm-level variables from the Annual Manufacturing Survey (ELSTAT).
- Financial variables from the ICAP database which collects balance sheet and financial information on Greek firms.

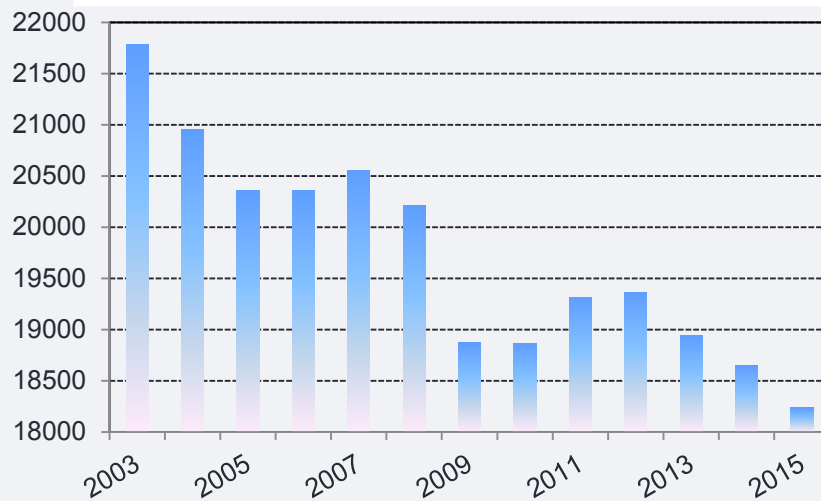


Greek exporting firms
2003-2015

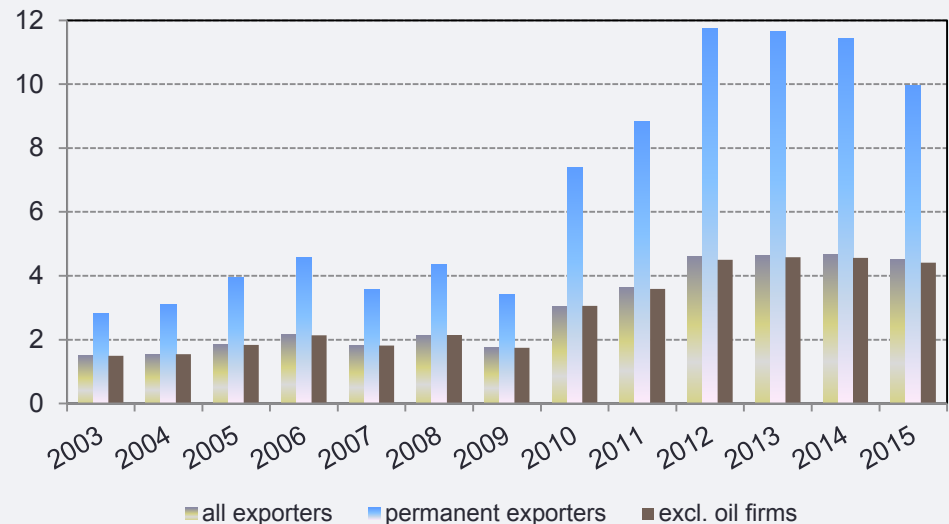
The number of exporting firms decreased during the crisis....

-but remaining or new firms export more

Number of exporters



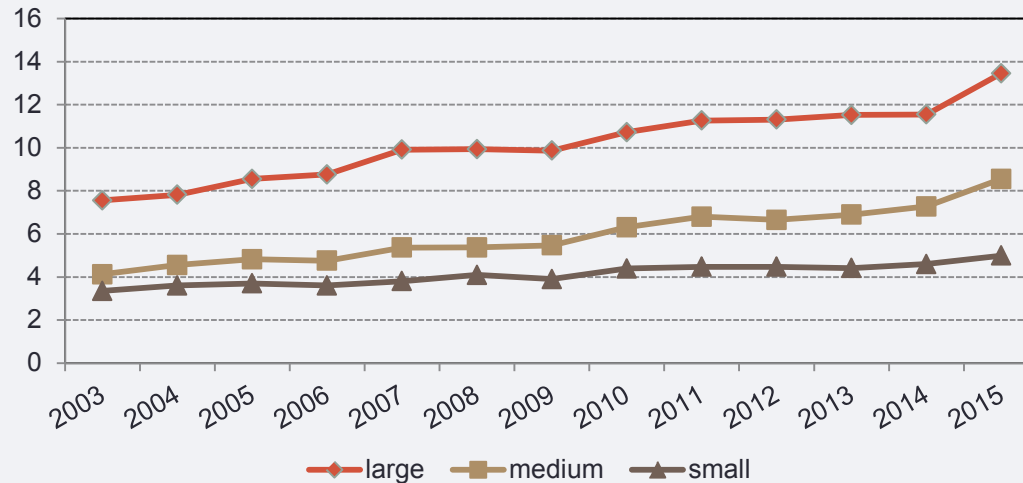
Average value of exports per firm (bil. €)



More products per firm

- the number of products exported by Greek firms increases over time

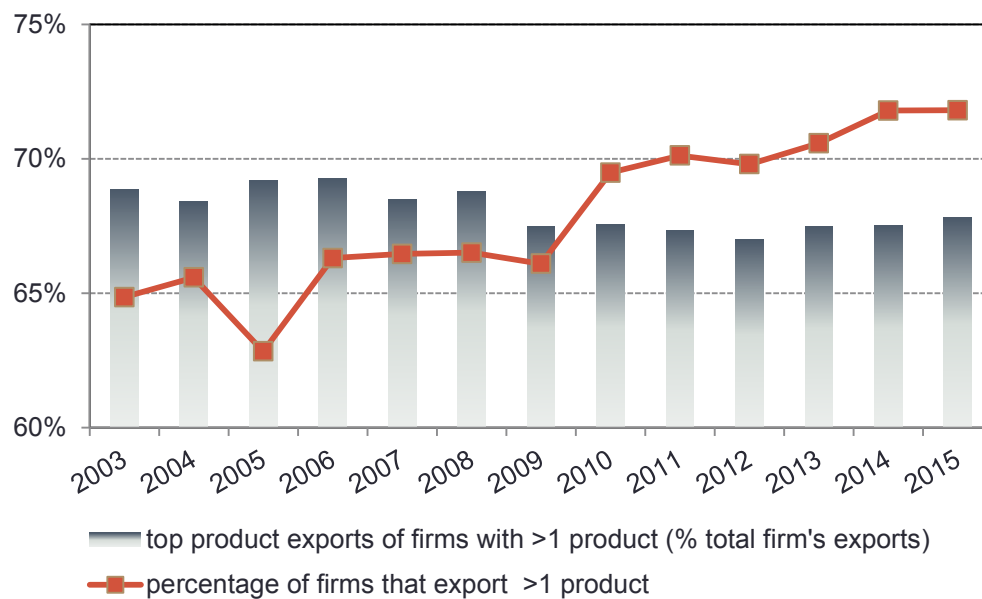
Number of products and the size of the firm



The importance of “top” product

- On average 68% of firm’s exports concerns the “top” product

Firms that export > 1 product (% total firms)
and "top product" exports (% of exports)



The importance of new markets

- exports are increasing through access in more export markets.

Exports by destination and number of destinations
(per company)



Geographical breakdown of the top 10 destinations

- ▶ The majority of export firms does not export to leading export destinations of the country

	Destination	% exports	% firms
2015			
1 ^{os}	Italy	0.11	0.17
2 ^{os}	Germany	0.07	0.19
3 ^{os}	Turkey	0.07	0.09
4 ^{os}	Cyprus	0.06	0.30
5 ^{os}	Bulgaria	0.05	0.25
6 ^{os}	USA	0.05	0.14
7 ^{os}	United Kingdom	0.04	0.11
8 ^{os}	Egypt	0.04	0.07
9 ^{os}	Lebanon	0.03	0.04
10 ^{os}	Saudi Arabia	0.03	0.03

Size matters

- ▶ Exports are made by a small number of very large firms
 - a firm belonging to the 1% of firms with higher exports, exports on average over 100 times more than the rest of the firms (99%)

- ▶ The concentration holds even without oil exporters

- ▶ a firm belonging to the 1% of firms with higher exports, exports on average over 60 times more than the rest of the firms (99%)

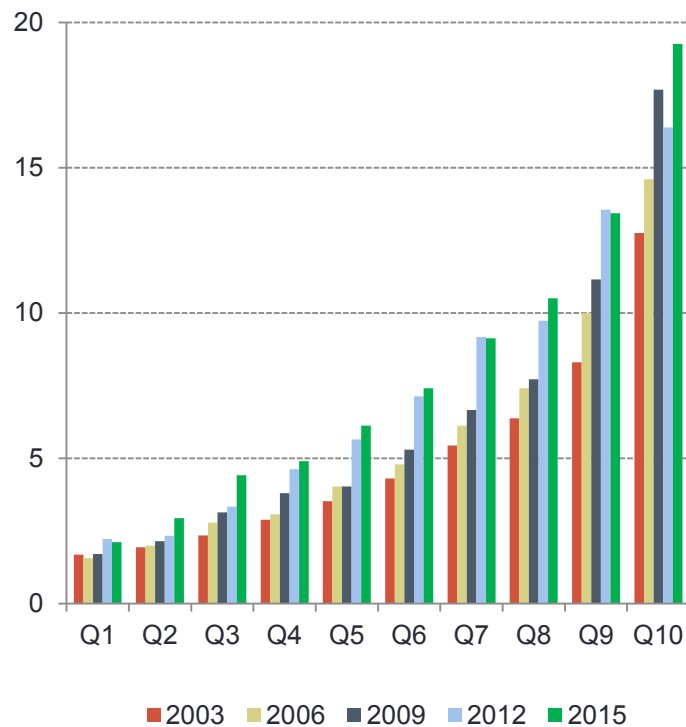
Concentration is increasing

Average value of exports of large firms to the remaining firms

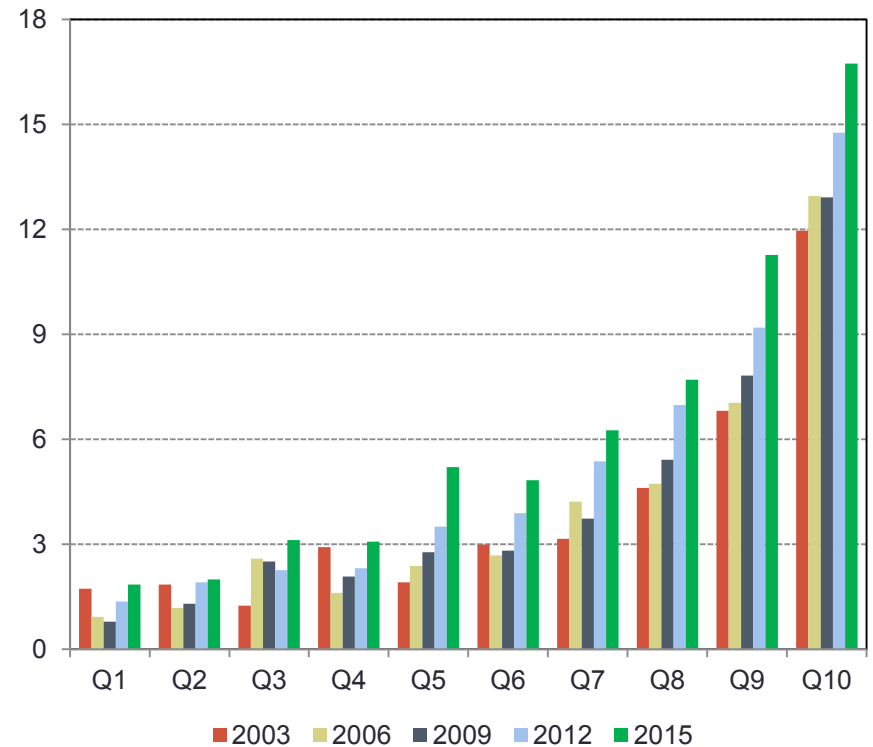
	All exporting firms	
	1%/99%	5%/95%
2003	67.8	49.2
2006	99.2	60.3
2009	67.2	44.7
2012	179.9	91.3
2015	135.0	74.8
Period average	123.3	69.1

Size matters: number of products and destinations

Number of products and firm size

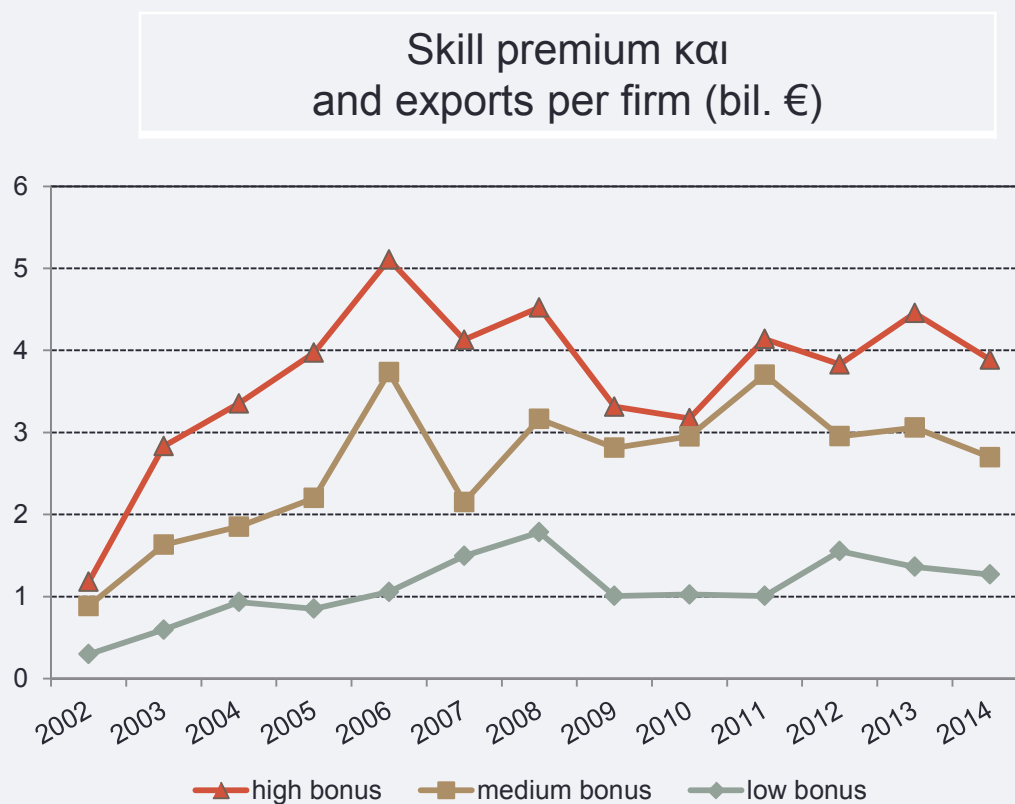


Number of destinations and firm size



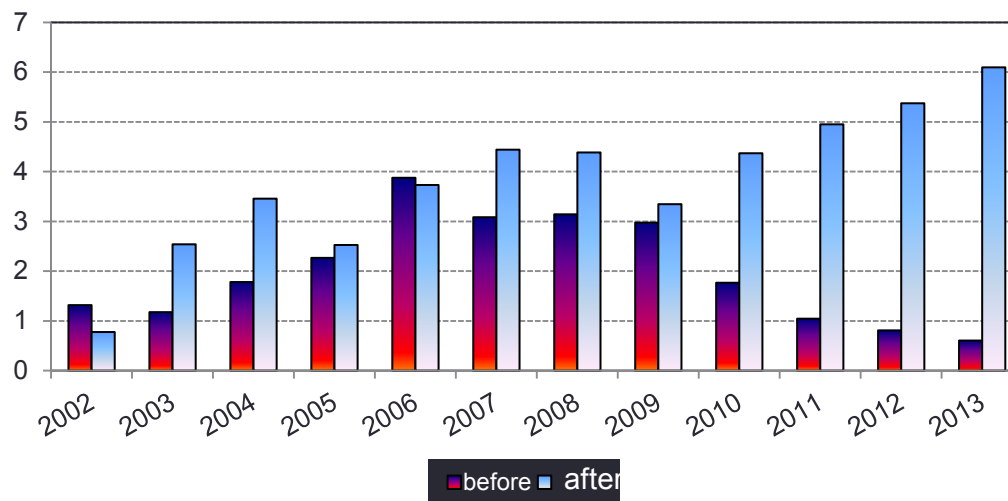
Exporters and skills

- Exports are related to skills



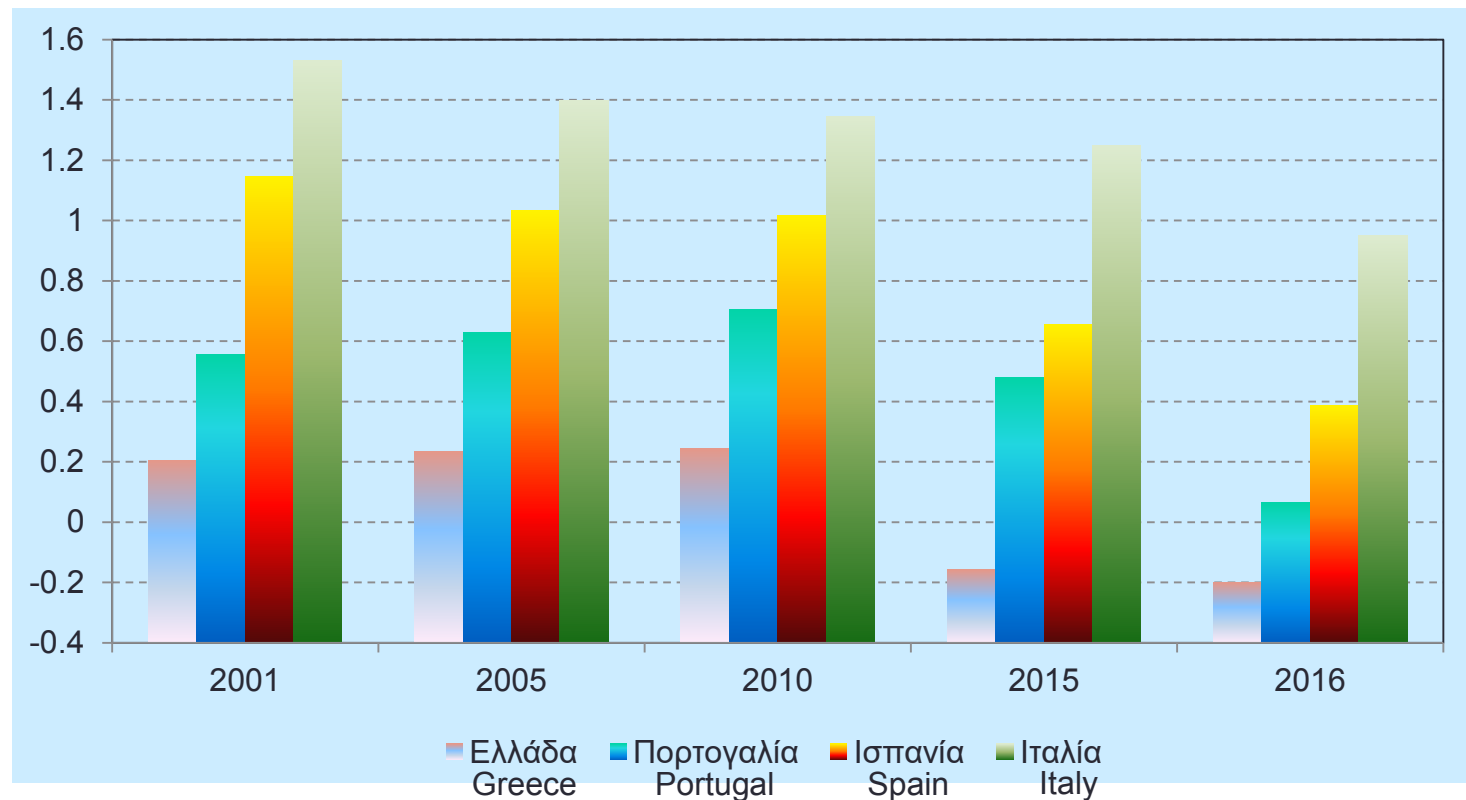
The importance of innovation

- firms with patents on export markets have perform better

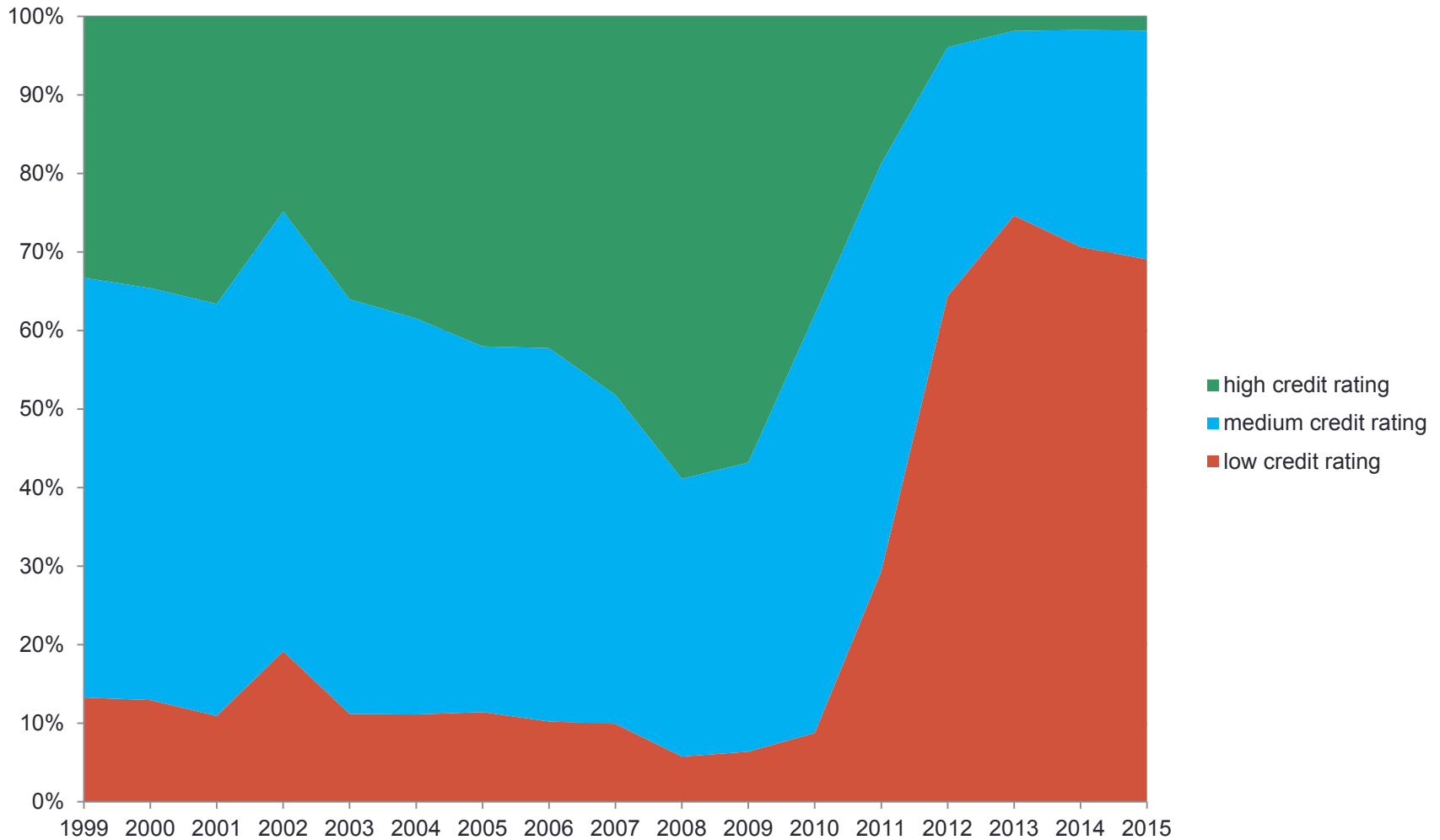


But the integration of advanced technology in exports is low....

The Economic Complexity Index (ECI) reflects the degree to which exports are knowledge-intensive



Credit rating of exporting firms (ICAP)

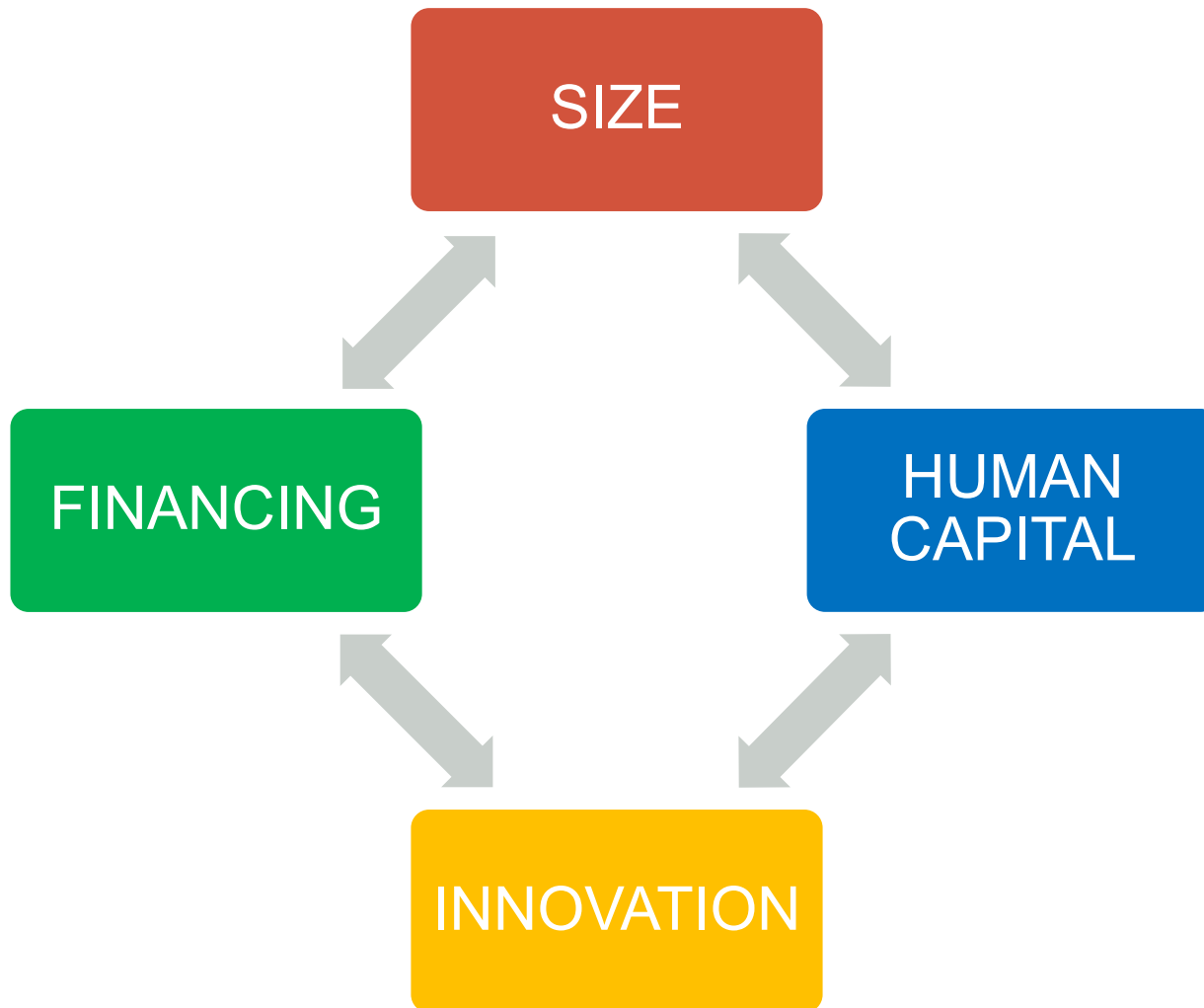


Who was “hurt” by the crisis?

- the crisis has affected mainly smaller export firms
- 30-35% of Greek exporting firms “exit” the export market in the period 2008-2014
- the reduction in the number of exporting firms was compensated by the 'entry' of new firms (at 90% on average)

	<i>Export value (sample period 2003-2015)</i>						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Total assets	1.093***	0.933***	0.907***	0.892***	0.790***	0.747***	0.860***
	(25.76)	(18.10)	(16.91)	(15.94)	(4.66)	(4.52)	(4.50)
Productivity		0.506***	0.526***	0.479***			
		(5.92)	(5.87)	(5.17)			
Skill premium			0.674***	0.715***	1.078**	1.050**	0.211
			(5.82)	(5.93)	(2.28)	(2.27)	(0.39)
Financial Rating				0.558***	1.184***		
				(4.98)	(3.28)		
R&D Employment					0.372**	0.445***	
					(2.38)	(2.92)	
Financial Rating (t-1)						1.216***	0.944**
						(3.79)	(2.38)
R&D Employment (t-1)							0.355**
							(2.38)
Year FE	YES	YES	YES	YES	YES	YES	YES
N	8771	8763	8382	7404	451	443	356

Policy implications



Thank you for your attention



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