The "China Effect" on Italian Exports

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Outline of the presentation

- Contribution
- Theoretical background (short/Marvasi)
- Empirical analysis: *general, by market of destination, by product & market*
- Main results
- Conclusions & scope for further work

Increasing role of China in the world trade

- China has rapidly increased the **types** of products exported;

- Overall, China's specialization is mainly in **low value added exports**;

- Since the accession to WTO (2001), data show a reallocation of traditional Chinese exports towards **more advanced products**.

The debate on China's export "sophistication"

- Lall and Albaladejo (2004): **already in the 90s**, Chinese exports were abandoning their low- tech specialization in favor of **medium and high- tech productions** (based on market shares analysis)

- Rodrik (2006): in 2003, the export structure of China was similar to that of a country with an income per capita three times higher

- The so-called **"China is special"** argument (Xu, 2007) proposed by Rodrik has been confirmed in two recent, studies by Schott (2008) and Fontagné et al. (2008) [more cautious and at higher disaggregation level]

# The evolving nature of China's comparative advantage

- **The nature of China Comparative Advantage (CA) is not changing but**
- **The number of sectors where it holds a CA is increasing** (Naughton, 2007; Branstetter and Lardy, 2006):
    - Vaidya et al. (2007): rising CA in end-of-the-spectrum products in high tech sectors (OECD classication); Van Aschee and Grange (2007): similar results for the electronic sector;
    - Amiti and Freund (2008) find evidence of rising specialization of Chinese exports over the last decade;
    - Indeed, unit value-based analysis shows that Chinese "high-tech" exports have gone through a rapid increase in quantities and declining prices (Kaplinsky and Santos-Paulino, 2005);

The impact of Chinese exports on Italian exports

- Increasing literature on the impact of China on different groups of countries (e.g. CGE: Shafaeddin, 2002; Yang, 2006);

- So far most of the analyses have focused on the **impact on other developing countries, especially Asia (more recently, Latin America and Africa)**;

- Little attention to developed countries:

  - Among them, Italy represents a case of interest, given the increasing overlap of the two country export structures (Amighini and Chiarlone, 2005).

The impact of Chinese exports on Italian exports

- Italy's specialization in low skilled production has been often used to explain the loss of world's market shares (De Nardis-Pensa, 2004; Lissovolik, 2008; Monti, 2005);
- Italian comparative advantages have remained fairly stable over time (De Mauro et al, 2010);
- In addition, the shift in Italian specialization has been more "within sectors" than "between sectors" (Giovannetti and Quintieri, 2008).
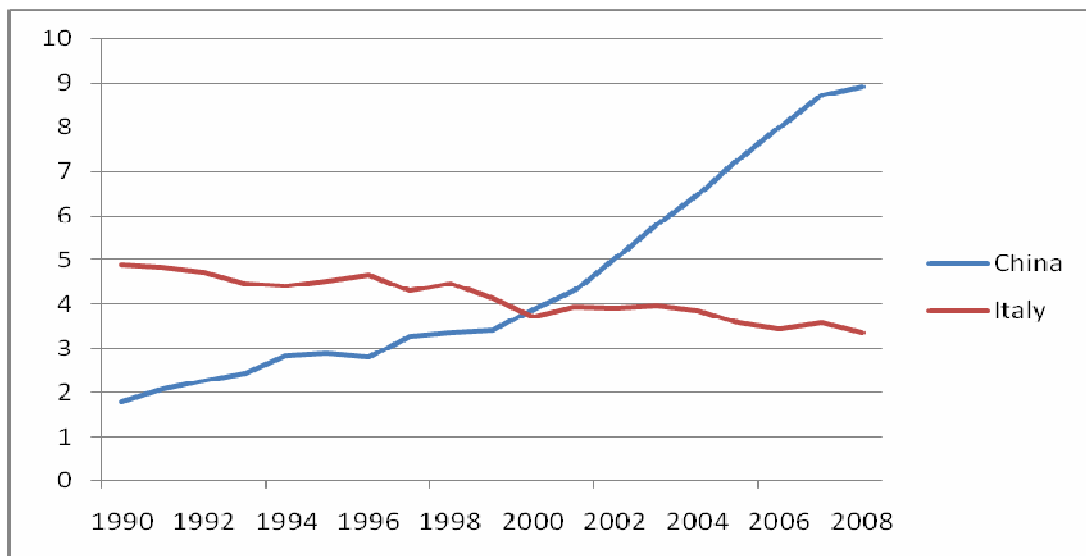
World market shares Goods & services

China's price competition

- Chinese export competitiveness has influenced the export prices of almost all country groups, including high income countries in low technology product markets (Fu et al., 2010);

- Bugamelli et al. (2010): the competitive pressure by Chinese exports has contributed to a decrease in output prices of domestic firms, especially the smaller and those specialized in traditional sectors.

Unit value of export

	ALL	SITC-6 Materials for manu.	SITC-7 Machinery & equ.	SITC-8 Consumer goods	SITC-65 Textile yarn	SITC-84 clothing acc	SITC-85 Footwear
Italy	228.87	246.05	231.16	259.84	304.91	386.51	86.46
China	78.97	70.62	100.42	56.03	15.96	37.53	16.39

The empirical analysis

- Gravity model of trade based on Eichengreen et al. (2004):

$$X^{IT}_{jh6i,t} = C + \beta_1 CH\_EXP_{jh6i,t} + \beta_2 GDP^{IT}_t + \beta_3 GDP_{jt} + \beta_4 UVRATIO_{jh6i,t} + \beta_5 T^{IT}_j + \varepsilon_{jh6it}$$

- Risk of endogeneity due to the contemporary presence of Italian and Chinese exports to the same markets ➔ Instrumental Variable model

Results – General Model

- Italian exports grow with an increase in demand; are mainly directed towards those countries with whom Italy shares a border.

- Exports decrease with distance and tend to further decrease in countries that lack an access to the sea.

- **The Chinese exports' coefficient presents a non significant (negative) sign, suggesting the absence of a competitive effect on total Italian exports**

- More competitive prices of Chinese exports compared to Italian ones trigger a decrease in domestic exports

	(I)
	General
lch_v_export	-0.00745
	(0.0145)
lit_gdp	-0.909***
	(0.0305)
Lgdp	0.576***
	(0.0101)
luvratio	0.0824***
	(0.00622)
landlocked	-0.312***
	(0.00960)
Contig	0.380***
	(0.0161)
Ldist	-0.667***
	(0.00874)
Constant	20.59***
	(0.956)
Observations	1,534,825
F-test	2686.61 (0.000)
Hansen J statistics	979.576 (0.000)

Results by levels of income

- Largest impact of Chinese exports on largest destination markets for Italian exports:
  - OECD countries (as in ISAE, 2005)
  - Middle-up income countries (incl. Russia, Turkey, South Africa, Poland, Romania and some Mediterranean countries, such as Libya and Lebanon).
- No impact on other groups, including low income countries
- The coefficient of relative prices turns negative in the case of OECD markets

	(II) OECD	(III) High (other)	(IV) Middle up	(V) Middle low	(VI) Low
lch_v_export	-0.741***	0.305***	-0.0861***	-0.0153	0.192***
	(0.0518)	(0.0129)	(0.0212)	(0.0224)	(0.0266)
luvratio	-0.115***	0.133***	0.0994***	0.111***	-0.00142
	(0.0216)	(0.00770)	(0.00810)	(0.00651)	(0.00631)
Observations	473,654	159,989	390,879	358,749	151,554

Results by sector - OECD

- Largest impact on low tech sectors
- Traditional products (i.e. SITC 6 and 8) report a larger impact compared to the relatively more sophisticated sector including machinery and equipment (SITC-7).
- In traditional sectors, however, despite a growing competitive pressure by Chinese products, Italian exports tend to compete on quality (De Nardis & Pensa, 2004)

	(I)	(II)	(III)	(IV)	(V)
	Low tech	High tech	SITC-6	SITC-7	SITC-8
lch_v_export	-0.794***	-0.259***	-0.707***	-0.566***	-0.652***
	(0.0615)	(0.0684)	(0.0873)	(0.0643)	(0.0693)
luvratio	-0.133***	-0.119***	-0.00998	0.00867	-0.0369
	(0.0260)	(0.0390)	(0.0412)	(0.0246)	(0.0307)
Observations	430,786	26,646	145,049	107,660	125,317

Results by subsectors - OECD

Only coefficient of Chinese exports

Description	Division (SITC)	Ch_exports
Leather	**61**	**0.8616***
Paper, paperboard and articles of paper	**64**	**-0.8535****
Textile yarn, fabrics, made-up articles	**65**	**-0.1551***
Non-metallic mineral	**66**	**-0.8924***
Machinery specialized for particular industries	**72**	**-0.9757***
Metalworking machinery	**73**	**-1.0273***
General industrial machinery and equipment	**74**	**-0.3639***
Office machines and automatic data-processing machines	**75**	**-0.9587****
Telecommunications apparatus and equipment	**76**	**0.0783**
Electrical machinery	**77**	**-0.5100***
Road vechicles	**78**	**-0.3621***
Other transport equipment	**79**	**0.7888***
Prefabricated buildings, sanitary, plumbing, heating and lighting fixtures	**81**	**0.6065****
Furniture	**82**	**0.0322**
Travel goods, handbags	**83**	**-0.1160**
Articles of apparel and clothing accessories	**84**	**-0.4998***
Footwear	**85**	**-0.5797**
Miscellaenous manufactured articles	**89**	**-0.3516***

Results by sectors – Middle income markets

- On average, weaker impact compared to OECD markets, exept for the consumer goods;
- Price competition stronger across sectors

	(I) Low tech	(II) High tech	(III) SITC-6	(IV) SITC-7	(V) SITC-8
lch_v_export	-0.0801***	0.0176	-0.0642**	-0.0784***	-0.634***
	(0.0224)	(0.0687)	(0.0300)	(0.0283)	(0.0871)
luvratio	0.112***	-0.0660**	0.163***	0.0526***	0.0644***
	(0.00866)	(0.0259)	(0.0150)	(0.0131)	(0.0189)
Observations	355,504	22,034	117,323	100,068	109,641

Results by subsectors – Middle income markets

Description	Division (SITC)	Coefficient
Prefabricated buildings, sanitary, plumbing, heating and lighting fixtures	81	-0.1178
Furniture	82	-0.1123**
Travel goods, handbags	83	-0.2104
Articles of apparel and clothing accessories	84	-1.1232***
Men's or boys coats, capes, jackets, suits,…not knitted or crocheted	841	-0.2770
Women's coats etc..not knitted or crocheted	842	-0.4367**
Men's or boys coats, capes, jackets, suits,…knitted or crocheted	843	0.8896
Women's or girls coats, capes, jackets, suits,…knitted or crocheted	844	-0.3233**
Articles of apparel, of textile fabrics	845	-0.7739***
Clothing accessories	846	-0.2514***
Articles of apparel and clothing accessories of other than textile fabrics	848	-0.8421
Footwear	85	-0.7216
Professional, scientific and controlling instruments	87	-0.2369**
Photographic apparatus, equipment and supplies and optical goods	88	0.1028
Miscellaenous manufactured articles	89	-0.6795***

Results by levels of inequality

- Previous results seem to show an advantage of Italian quality goods, less affected by the price effect of Chinese exports;

- We introduce a proxy for consumers' preference and run the model by inequality levels (measured by the Gini coeff.)

- Results show that the "China effect" is stronger for countries with more equal distribution;

- In unequal contexts there seem to be a polarization between consumers.

	(I)	(II)
	High inequality	Low inequality
lch_v_export	0.0891***	-0.575***
	(0.0180)	(0.0870)
lit_gdp	-1.806***	1.522***
	(0.0508)	(0.185)
lgdp	0.570***	0.991***
	(0.0115)	(0.0547)
luvratio	0.0956***	0.0137
	(0.00741)	(0.0155)
landlocked	-0.0678*	-0.209***
	(0.0353)	(0.0250)
contig		0.0879***
		(0.0307)
ldist	-0.452***	-0.632***
	(0.0181)	(0.0224)
Constant	43.51***	-55.94***
	(1.512)	(6.284)
Observations	116,899	107,769
Robust standard errors in parentheses		
*** p<0.01, ** p<0.05, * p<0.1		

Conclusions

- Italy is at risk of Chinese competition;
- Competitive effect significant in markets (OECD & Middle income) accounting for over 85% OF Italian exports
- Effect concentrated on low tech, traditional products
- High value added products more resilient to the Chinese pressure: quality upgrading = protection?

What's next?
To account for different income distribution

• Growing middle class of new consumers

India: Income Distribution