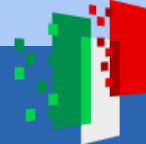




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National Research Council of Italy - Research Institute on Sustainable Economic Growth

RETHINKING CLUSTERS, ECOSYSTEMS, AND PLACES IN SUSTAINABILITY TRANSITIONS

VII International Conference on Cluster Research – 8th-9th-10th May 2024 – University of Padova

The Italian textile industry between globalization and sustainability: The role of clusters §

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Aims & research questions

Theoretical background

Data

Variable description and econometric model

Descriptive statistics

Empirical results

Discussion and conclusion

Aims

To investigate the effect of external economies of clusters on firm certification propensity

To investigate the effect of international trade on firm certification propensity

Research questions

1. Does territory matter for firm green strategies?
2. Do international markets allow firm to overcome entry barriers in green strategies?
3. Who benefit the most from green strategies among textile clusters?

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The decision to exploit green strategies may be influenced by the **local context** where firms are located (Blasi and Sedita, 2021), thanks to the literature about:

- geographical **proximity** (Torre and Rallet, 2005; Bellandi et al., 2021; etc.)
- **external economies** of scale (Becattini et al., 2009; Krugman, 1991; etc.)
- innovation **spillovers** (Cohen and Levinthal, 1990; etc.)

Spatial proximity may enable the exchange of knowledge and information about the environment regulations and green strategies (i.e. **Local Green Spillovers**), potentially affecting the green strategies of nearby firms (Gehman and Grimes, 2017; etc.).

Some firm-characteristics – such as their financial structure and economic performance – may affect the implementation of green strategies (Pietrovito, 2020; Tian and Lin, 2019).

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Aida: financial and ownership/management information.

Istat: information on firm export by value, products, and country of destination.

Istat: information on SLL and district localization.

Accredia: list of UNI-ISO 14001 certified firms

CNR-IRCRES: list of green product certified firms (Ecolabel UE, OEKO-TEX, Standard 100, Leather standard, Made in Green, STeP, FSC, RAF, RWS, RMS, RAS, RDS, NPF, SFA, GOTS, OCS, GRS, RCS); Financial rating scores

Sample

Data of 13,258 firms; 3 industries (13-14-15 Nace); 138 local area (SLL), one year (2020); 6,102 observations

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Variable descriptions and econometric model

Dependent variable

Green strategy propensity (1=certified firm; 0=non certified firm)

Explanatory variables

Local Green Spillovers (number of certified firms in each SLL and district)

Export-import propensity (number of exporting-importing firms in each SLL and district)

Export-import intensity at firm-level (ratios: export/turnover or import/turnover)

Controlling variables

Age; Size; Industry; District.

Econometric model

Nested logistic regression (Geographical macroarea -> Labour Local System -> Municipality)

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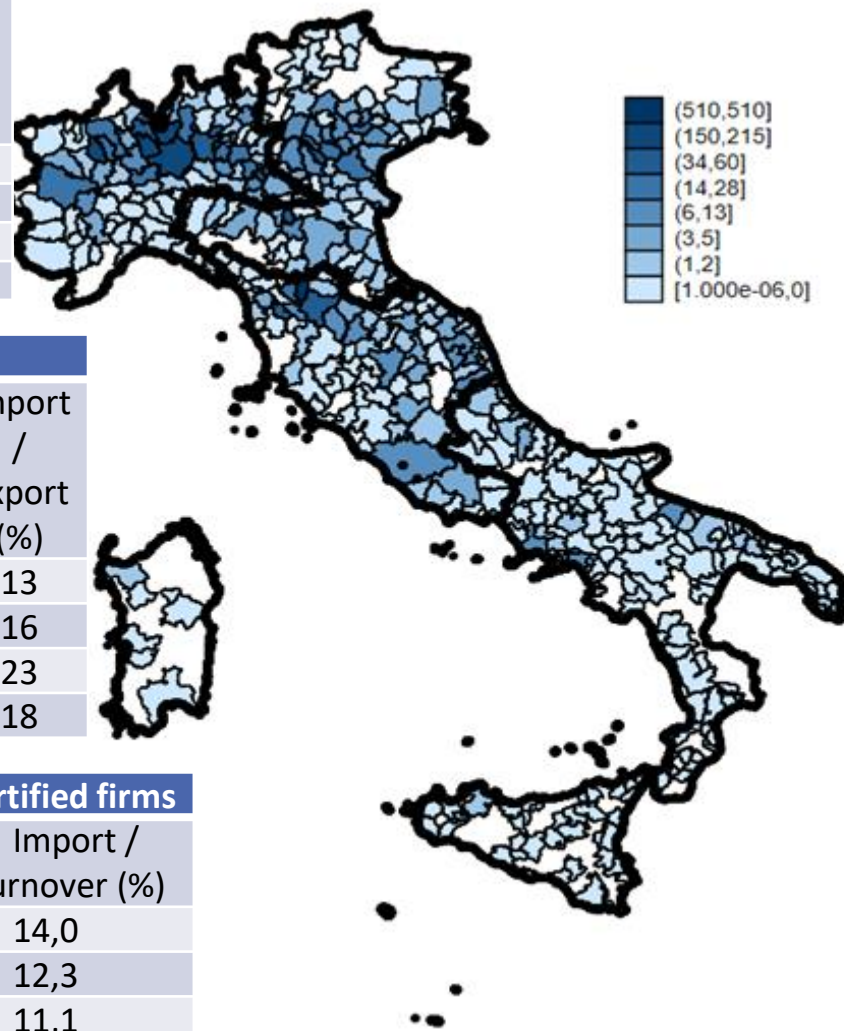
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Descriptive statistics

	1317 Certified firms			11940 Non-certified firms		
	Turnover / employee (000euros)	Turnover / firm (000euros)	Employee s / firm	Turnover / employees (000euros)	Turnover / firm (000euro s)	Emplo yees / firm
Textile	334	15.347	46	226	2.896	13
Clothing	373	22.475	60	271	4.295	16
Leather	375	34.107	91	295	6.740	23
Total	349	18.559	53	274	4.801	18



	1317 Certified firms			11940 Non-certified firms		
	Exports / firm (000 euros)	Import / firm (000 euros)	Import / export (%)	Exports / firm (000 euros)	Import / firm (000 euros)	Import / export (%)
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Total	349	18.559	53	274	4.801	18

	1317 Certified firms		11940 Non-certified firms	
	Export / turnover (%)	Import / turnover (%)	Export / turnover (%)	Import / turnover (%)
Textile	34,0	19,0	25,6	14,0
Clothing	42,1	19,3	33,3	12,3
Leather	40,0	17,4	34,3	11,1
Total	36,8	18,8	32,7	12,0

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Empirical results



VARIABLES	(1) cert_prop	(2) cert_prop	(3) cert_prop	(4) cert_prop	(5) cert_prop
var_production	-0.000	-0.000	-0.000	-0.000	-0.000
var_employment	0.026	0.064	0.066	0.073	0.076
var_debt	-0.002***	-0.006*	-0.006*	-0.006*	-0.006**
var_productivity	0.000	0.000	0.000	0.000	0.000
vertical integration	-0.147**	0.093	0.115	0.051	0.016
rating	0.823	0.599	0.648	0.672	0.711
age	0.024***	0.030***	0.030***	0.029***	0.029***
Exp_intensity		0.173	0.161	0.123	0.115
Imp_intensity		0.208	0.218	0.234	0.257
cert propensity_SLL_district			0.004	0.005*	0.013**
No district firms				-0.576**	-0.378
exp propensity_SLL_district					0.001
imp propensity_SLL_district					-0.005
2.size_quantile	1.036***	0.918***	0.938***	0.945***	0.942***
3.size_quantile	2.246***	2.016***	2.028***	2.046***	2.037***
4.size_quantile	3.675***	3.530***	3.534***	3.555***	3.541***
Ateco 14-clothing	-1.865***	-1.928***	-1.835***	-1.865***	-1.796***
Ateco 15-leather	-2.830***	-2.732***	-2.689***	-2.687***	-2.571***
d_district8 leather	0.331***	0.330***	0.354***	0.148	0.309**
d_district9 textileclothing	0.466***	0.250*	0.026	-0.029	-0.062
Constant	-4.955***	-4.674***	-4.777***	-4.502***	-4.511***
Observations	6,102	2,053	2,053	2,053	2,053
Number of groups	4	4	4	4	4

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Empirical results



VARIABLES	(1) cert_prop	(2) cert_prop	(3) cert_prop	(4) cert_prop	(5) cert_prop
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age	0.024***	0.030***	0.030***	0.029***	0.029***
Exp_intensity		0.173	0.161	0.123	0.115
ln_size	The decrease of the firm debt affects certification propensity; also firm age has a strong effect			0.234	0.257
control				0.005*	0.013**
N				-0.576**	-0.378
exp_intensity					0.001
imp propensity_SLL_district					-0.005
2.size_quantile	1.036***	0.918***	0.938***	0.945***	0.942***
3.size_quantile	2.246***	2.016***	2.028***	2.046***	2.037***
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Export or import intensity (ratios: export/turnover or import/turnover) has no effect on certification propensity					
imp_propensity_SLL_district					-0.005
2.size_quantile	1.036***	0.918***	0.938***	0.945***	0.942***
3.size_quantile	2.246***	2.016***	2.028***	2.046***	2.037***
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Exp_intensity		0.173	0.161	0.123	0.115
Imp_intensity		0.208	0.218	0.234	0.257
cert propensity_SLL_district			0.004	0.005*	0.013**

Local Green Spillovers (N certified firms_SLL_district) affects weakly the certification propensity

imp propensity_SLL_district					-0.005
2.size_quantile	1.036***	0.918***	0.938***	0.945***	0.942***
3.size_quantile	2.246***	2.016***	2.028***	2.046***	2.037***
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	(1)	(2)	(3)	(4)	(5)
VARIABLES	cert_prop	cert_prop	cert_prop	cert_prop	cert_prop
var_production	-0.000	-0.000	-0.000	-0.000	-0.000
var_employment	0.026	0.064	0.066	0.073	0.076
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cert propensity_SLL_district			0.004	0.005*	0.013**
No district firms				-0.576**	-0.378

District location has a (weak) effect

2.size_quantile	1.036***	0.918***	0.938***	0.945***	0.942***
3.size_quantile	2.246***	2.016***	2.028***	2.046***	2.037***
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cert propensity_SLL_district			0.004	0.005*	0.013**
No district firms				-0.576**	-0.378
exp propensity_SLL_district					0.001
imp propensity_SLL_district					-0.005

Local Export Spillovers (as well as Import) have not any effect

4.size_quantile	3.675***	3.530***	3.534***	3.555***	3.541***
Ateco14-clothing	-1.865***	-1.928***	-1.835***	-1.865***	-1.796***
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The main **results** are:

- The influence of firm age and firm size is significant in all the models
- Debt reduction increases investments in green strategies
- District localization has a (weak) influence on certification
- International trade does not affect green strategies
- Local Green Spillovers are weak

Contributions: intersection of strategic management, regional studies, and sustainable development literature

Policy implication

- Micro and Small firms need support to overcome the entry barriers in green strategies
- Diffusion of best practices at local level creates spillovers and an imitation process for increasing the certified firms (Local Green Spillovers)

Future research: to investigate the greenwashing phenomenon
to investigate the certifying intensity (number of certifications per firm)

Thank you for your attention!

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