Are 'happy firms' all alike? A comparison between globally engaged Italian and German manufacturing firms

Alessandro Arrighetti and Fabio Landini

Department of Economics and Management
University of Parma

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Incipit

Happy families are all alike; every unhappy family is unhappy in its own way

Anna Karenina, L. Tolstoj

Topic of the paper: similarity vs. diversity among successful and unsuccessful firms across countries

Motivation

Parts of the socio-economic and industrial economics literature suggest a growing convergence among economic institutions and business strategies

Under the pressure of globalization and neo-liberalism:

a) Convergence towards a predominant institutional model of capitalism,(consolidation state (Streeck, 2014), political liberalism (Simmons, B. A., Dobbin, F., & Garrett, G. 2006), etc.)

b) Emergence of a predominant strategic paradigm for successful firms, integrated global engagement (GLOBENG): innovation, human capital, export (Guariglia and Bridges, 2008; Ito e Lechevalier, 2010; Golovko and Valentini 2011; Love e Roper, 2015)

Motivation

Nevertheless, there remain significant differences in the performances of countries and firms

For instance, after more than 50 years of "institutional convergence" within the EU framework there remains significant differences in performance across countries (Monfort, Cuestas & Ordóñez 2013)

At the firm-level, there is persistent and widening heterogeneity of firm performance within countries and industries (Syverson, 2011; Bartlesmam et al. 2013)

Research questions

1) Do firm-level differences still exist in spite of (apparent) growing similarities among economic institutions across countries?

2) Does the adoption of GLOBENG strategy at least partially mitigate the magnitude of differences among firms?

Literature

Institutional setting: rule and practices (more or less formal) (Hall and Gingerich, 2004), collective resources (Hall and Thelen, 2009) and institutional bodies (Deeg and Jackson, 2007; Arrighetti et al., 2008)

The institutional setting affects firms' strategies and organizational architectures by defining the constraints and resources available to them (Burroni and Trigilia, 2009; Schneider Schulze-Bentrop and Paunescu, 2010)

At the same time, the institutional setting is the outcome of historical patterns of industrial relations and economic policy; it is therefore highly differentiated across countries, e.g. Varieties of Capitalism (Hall and Spskice, 2001)

It follows that differences in institutional settings across countries are likely to produce significant differences (both firm-specific and institution-related) also among the firms belonging to them

HP1: ***Firms belonging to different institutional settings are significantly different in terms of both firm-specific and institution-related variables***

Literature

Growing evidence supports the view of GLOBENG as a strategic paradigm that ensures success in globalized markets regardless of the country of origin Guariglia and Bridges, 2008; Ito and Lechevalier, 2010; Golovko and Valentini 2011; Love and Roper, 2015)

GLOBENG involves a set of deliberate investment decisions: choice of exporting is linked to investments to boost productivity through increased internal knowledge, innovation and skills of the workforce (Aw et al. 2011; Criscuolo, et al., 2005; Ma et al., 2014)

GLOBENG is a complex and relatively minority strategy – in UK nearly 22% of manufacturing firms is GLOBENG (Harris and Moffat, 2011)

The limited set of variables that characterize GLOBENG and their interdependence implies growing similarities among firms adopting it independently of the institutional setting they belong to.

They same should not hold for firms that are not GLOBENG

HP2: ***Across institutional settings, firms adopting a GLOBENG strategy are more similar than firms not adopting a GLOBENG strategy***

Data

Dataset: EFIGE Survey, 2008 - ITA, GER, FRA, SPA, HUN, UK)

Our sample: ITA 2,731; GER 2,136.

We limit our analysis to ITA and GER for two reasons:

a) In both ITA and GER manufacture is the predominant industry

b) ITA and GER are characterized by different institutional settings

Institutional settings: Germany (1)

Hall and Soskice (2011): Coordinated market economy

Bank-oriented system with access to inside information; few reference banks (Hausbank) and long-lasting relations (Quack and Hildebrandt, 1995; Zysman, 1983)

Corporate governance: concentrated ownership, stock cross-holdings and explicit role of the banks as principal owner (Edwards and Nibler 2000; Franks and Mayer, 2001)

Workers' representatives in corporate supervisory board facilitates consensual and decentralized decision process (Soskice 1996; Hall and Soskice 2001)

Reliance on workers with industry and firm-specific skills is facilitated by training system and long term job tenure (Hall and Soskice, 2001)

Institutional settings: Germany (2)

Industry associations support the adoption of technical standards, which contribute to a common knowledge-base among firms.

This facilitates collaboration among personnel from different firms (Lutz, 1993; Soskice, 1997b) and helps to implement intellectual property rights (IPRs), primarily as industry-specific technical standards and trade marks (Bekkers et al., 2002; Dutfield, 2009).

In recent decades, post-fordist manufacturing has evolved i into a productive system that Sorge and Streeck (1988) define as Diversified Quality Production (DQP)

High production volumes previously constituted by standardized, price-competitive products have been replaced with equally high production volumes of customized, quality-competitive products.

Institutional settings: Italy (1)

"Mediterranean model": widespread state intervention, significant non-market coordination in the corporate governance arena, together with 'liberal market' orientation in labor relations (Regini, 1995; Rhodes 1997; Rhodes and Apeldoorn, 1997).

Mixed market economy (MME): limited social protection and high employment protection (Molina and Rhodes, 2007)

Low levels of social protection deter labor force to invest in specific skills curbing the development of high-tech sectors.

High levels of product-market regulation and state intervention help maintain stable bank-industry relations with more than one bank per single firm and contain the growth of financial markets (Molina and Rhodes, 2007; p. 226).

Both the above mentioned institutional arrangements promote an industrial specialization based on small-scale firms that compete mainly on low priced, low quality goods

Institutional settings: Italy (2)

Post-fordism and globalization favored a model of flexible specialization: increasing vertical disintegration, extension of labor division among firms, economies of specialization and a significant drive to the acquisition of competences outside the enterprise (Piore e Sabel 1984; Barca e Magnani, 1989; Arrighetti e Ninni, 2014)

Holtho (2013) define such specific business system as coordinated industrial district: high cluster formation, together with considerable state involvement in economy and a relevant union strength.

Despite recent convergence towards the German system, some original traits remain: role of the family firm, low R&D, the heavy incidence of the production on order, focus on initial and intermediate stages of the production chain (Giunta e Rossi 2017).

Finally, commitment to vocational training is severely limited (Regini, 1995, Brunello, 2002, Conti, 2005).

Variables

Integrated Global Engagement (GLOBENG):

1) Export > 0 and/or firm is MNC

2) % R&D investment on total turnover > industry mean (Ateco 2 digits)

3) % Employees with university degree > industry mean (Ateco 2 digits)

Industry means are computed pooling Italian and German firms

Variables

Firm-specific variables:

Log(AGE) = logarithm of firm age

Log(SIZE) = logarithm of total number of employees

INTCOMP (d) = presence of competitors located abroad

WITHECOLLAR = % of white collars on total employees

R&D EMPL = % employees involved in R&D on total employees

EXTKNOWL (d) = R&D activities acquired from external sources

INNOPROD (d) = product innovation

INNOPROC (d) = process innovation

SALESINNO = % of turnover from innovative product sales

Variables

Institution-related variables:

TRAINING = % employees involved in formal training programs

DECENTR (d) = decision process in the firm is decentralized

OWNERCONC = % capital owned by the main shareholder

NBAKNS = number of banks the firm interacts with

IPR = use patent, industrial design, trademark and/or copyright

FIXTERM = % employees with fix-term contract

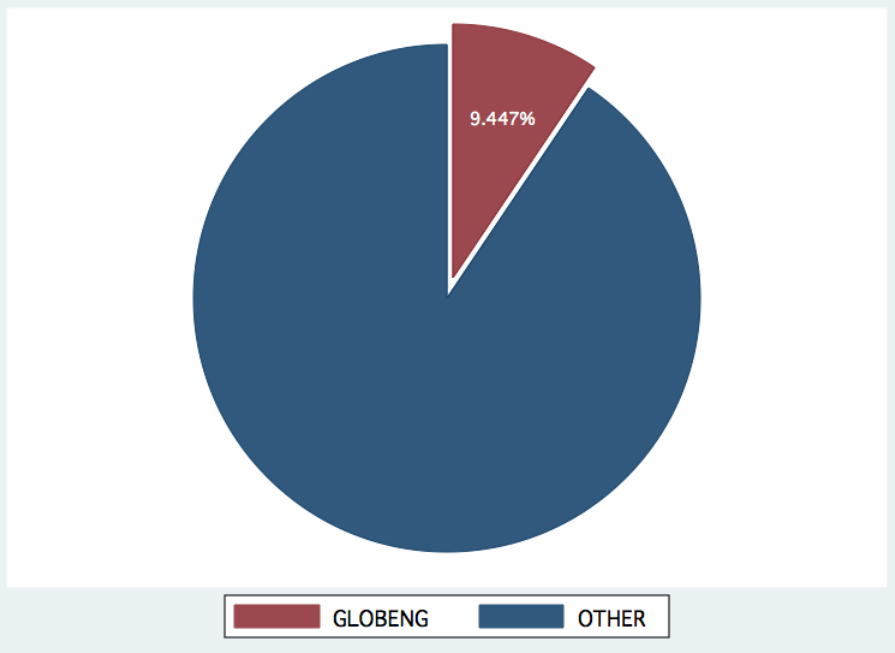
ISO (d) = adoption of quality certification (e.g. ISO9000)

SPECORDER (d) = 100% of turnover comes from a single product/business and is made up by sales of produced-to-order goods

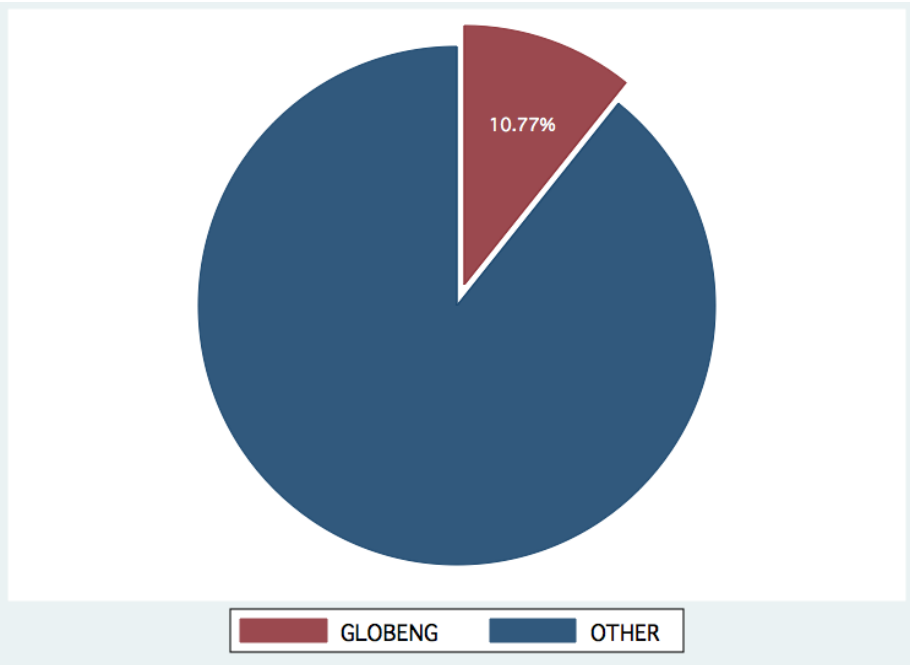
Descriptive analysis

Figure 1 – Share of GLOBENG firms across countries

a) Italy

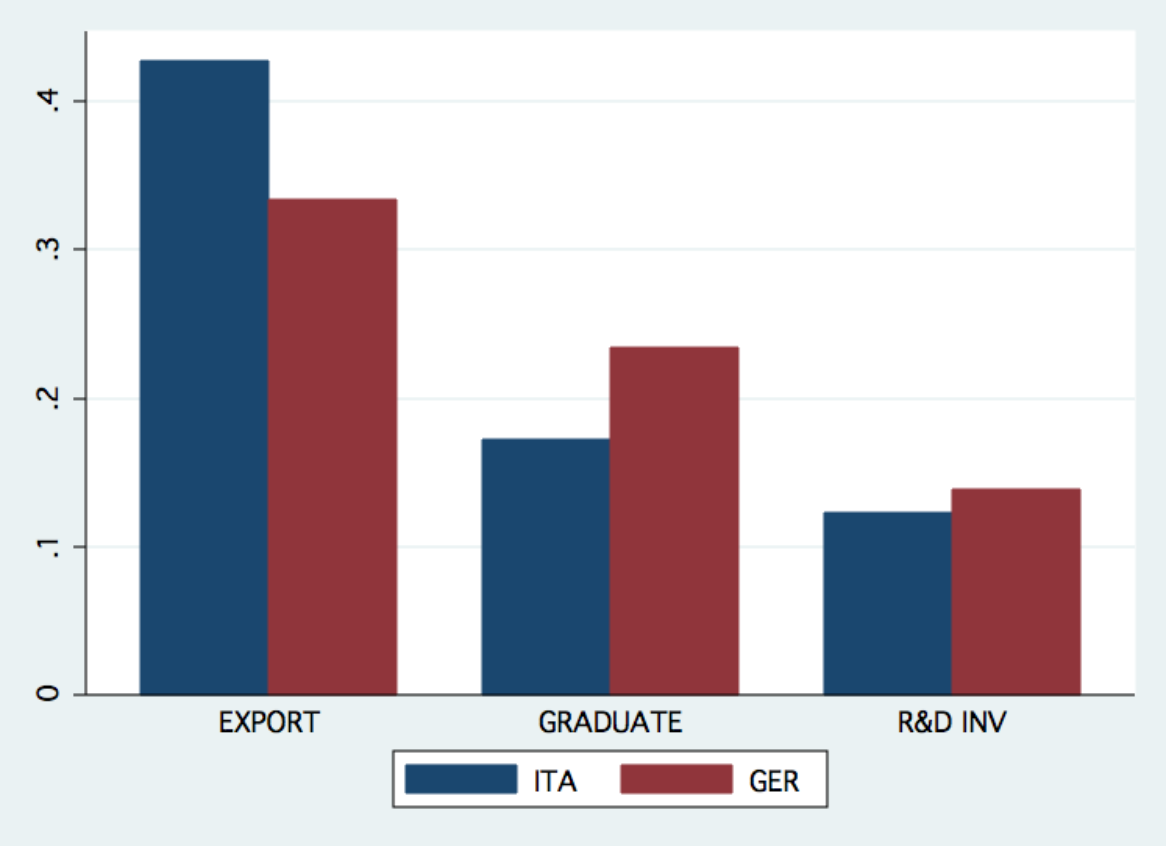


b) Germany



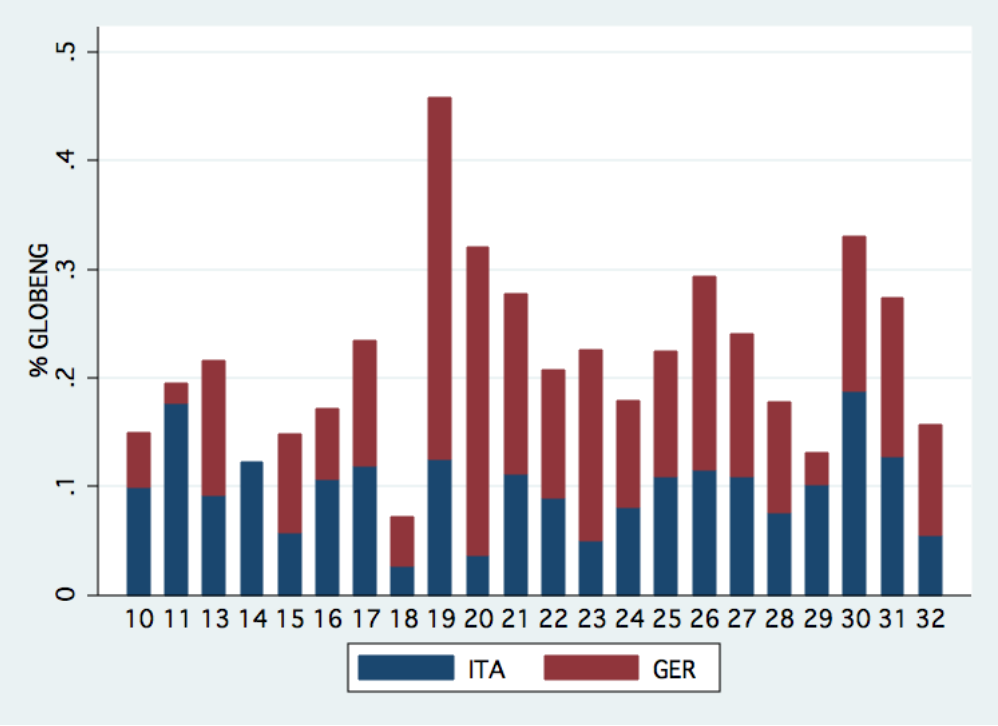
Descriptive analysis

Figure 2 – GLOBENG firms: export, graduate employees, R&D



Descriptive analysis

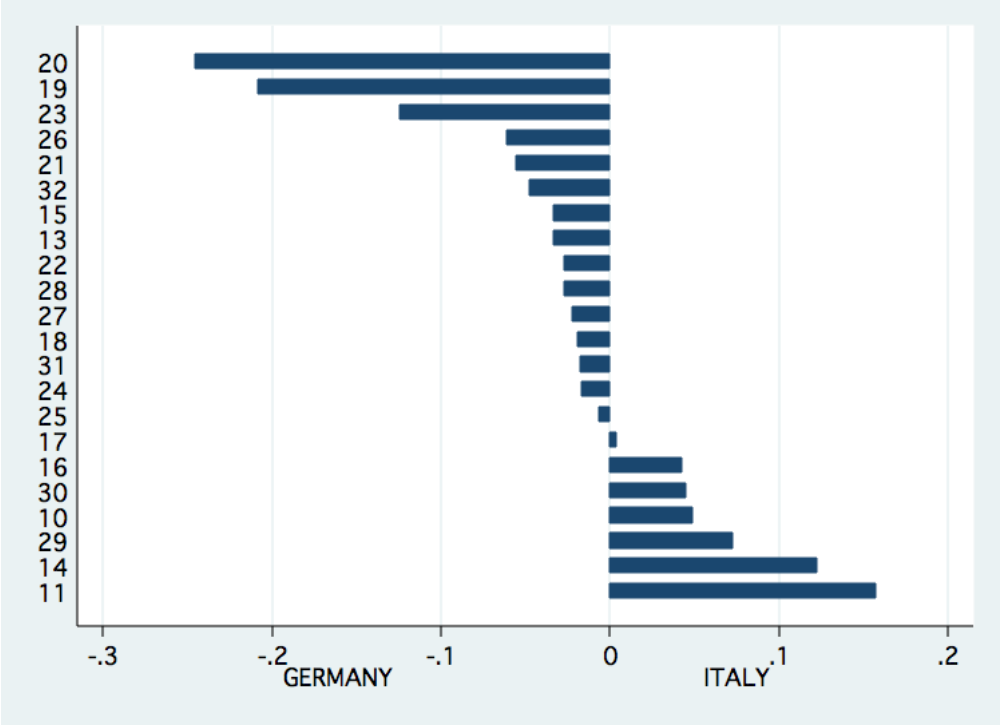
Figure 3 – Share of GLOBENG firms across industries



10) Manufacture of food products; 11) Manufacture of beverages; 13) Manufacture of textiles; 14) Manufacture of wearing apparel; 15) Manufacture of leather and related products; 16) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials; 17) Manufacture of paper and paper products; 18) Printing and reproduction of recorded media; 19) Manufacture of coke and refined petroleum products; 20) Manufacture of chemicals and chemical products; 21) Manufacture of basic pharmaceutical products and pharmaceutical preparations; 22) Manufacture of rubber and plastic products; 23) Manufacture of other non-metallic mineral products; 24) Manufacture of basic metals; 25) Manufacture of fabricated metal products, except machinery and equipment; 26) Manufacture of computer, electronic and optical products; 27) Manufacture of electrical equipment; 28) Manufacture of machinery and equipment n.e.c.; 29) Manufacture of motor vehicles, trailers and semi-trailers; 30) Manufacture of other transport equipment; 31) Manufacture of furniture; 32) Other manufacturing

Descriptive analysis

Figure 4 – Difference in the share of Italian and German GLOBENG firms across industries



10) Manufacture of food products; 11) Manufacture of beverages; 13) Manufacture of textiles; 14) Manufacture of wearing apparel; 15) Manufacture of leather and related products; 16) Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials; 17) Manufacture of paper and paper products; 18) Printing and reproduction of recorded media; 19) Manufacture of coke and refined petroleum products; 20) Manufacture of chemicals and chemical products; 21) Manufacture of basic pharmaceutical products and pharmaceutical preparations; 22) Manufacture of rubber and plastic products; 23) Manufacture of other non-metallic mineral products; 24) Manufacture of basic metals; 25) Manufacture of fabricated metal products, except machinery and equipment; 26) Manufacture of computer, electronic and optical products; 27) Manufacture of electrical equipment; 28) Manufacture of machinery and equipment n.e.c.; 29) Manufacture of motor vehicles, trailers and semi-trailers; 30) Manufacture of other transport equipment; 31) Manufacture of furniture; 32) Other manufacturing

Univariate analysis

Table 1 – Italian vs. German firms: univariate analysis

	ITA (N = 2731)		GER (N = 2136)		
	mean	**sd**	**mean**	**sd**	**F-Test**
Log(*AGE*)	3.146	0.746	3.380	0.998	***
Log(*SIZE*)	3.441	0.889	3.736	1.065	***
INTCOMP (d)	0.112	0.315	0.152	0.359	***
WITHECOLLAR	0.233	0.163	0.301	0.256	***
R&D EMPL	0.067	0.110	0.102	0.169	***
EXTKNOWL (d)	0.118	0.322	0.111	0.314	
INNOPROD (d)	0.494	0.500	0.487	0.500	
INNOPROC (d)	0.448	0.497	0.408	0.492	**
SALESINNO	0.116	0.203	0.099	0.168	***
TRAINING	0.125	0.237	0.238	0.288	***
DECENTR (d)	0.157	0.364	0.308	0.462	***
OWNERCONC	0.582	0.271	0.770	0.269	***
NBAKNS	4.235	2.818	2.618	2.397	***
IPR	0.326	0.655	0.434	0.862	***
FIXTERM	0.071	0.170	0.049	0.096	***
ISO (d)	0.171	0.377	0.475	0.499	***
SPECORDER (d)	0.472	0.499	0.254	0.435	***

Univariate analysis

Table 2 – GLOBENG and OTHER firms: univariate analysis

	GLOBENG					OTHER				
	ITA (N = 258)		GER (N = 230)			ITA (N = 2473)		GER (N = 1906)		
	mean	sd	mean	sd	F-Test	mean	sd	mean	sd	F-Test
Log(*AGE*)	3.218	0.795	3.137	1.046		3.139	0.740	3.410	0.989	***
Log(*SIZE*)	3.723	1.067	4.038	1.111	***	3.411	0.863	3.699	1.054	***
INTCOMP (d)	0.202	0.402	0.235	0.425		0.103	0.304	0.142	0.349	***
WITHECOLLAR	0.336	0.190	0.372	0.253	*	0.222	0.156	0.292	0.255	***
R&D EMPL	0.148	0.146	0.178	0.184	**	0.058	0.101	0.093	0.165	***
EXTKNOWL (d)	0.279	0.449	0.300	0.459		0.101	0.301	0.088	0.284	
INNOPROD (d)	0.795	0.405	0.813	0.391		0.463	0.499	0.448	0.497	
INNOPROC (d)	0.574	0.496	0.570	0.496		0.435	0.496	0.388	0.487	***
SALESINNO	0.218	0.259	0.225	0.224		0.106	0.194	0.083	0.153	***
TRAINING	0.176	0.248	0.314	0.303	***	0.120	0.235	0.229	0.285	***
DECENTR (d)	0.225	0.418	0.465	0.500	***	0.150	0.357	0.289	0.453	***
OWNERCONC	0.617	0.258	0.732	0.275	***	0.578	0.272	0.774	0.268	***
NBAKNS	4.903	3.756	3.261	4.230	***	4.165	2.693	2.540	2.057	***
IPR	0.709	0.940	0.991	1.163	***	0.285	0.604	0.366	0.792	***
FIXTERM	0.084	0.179	0.066	0.126		0.070	0.170	0.047	0.092	***
ISO (d)	0.225	0.418	0.617	0.487	***	0.166	0.372	0.458	0.498	***
SPECORDER (d)	0.372	0.484	0.204	0.404	***	0.483	0.500	0.260	0.439	***

Note: * = sig. 10%; ** = sig. 5%; ***= sig. 1%.

Multivariate analysis

Table 3 – ALL, GLOBENG and OTHER firms: probit estimates

	(1) ALL	(2) GLOBENG	(3) OTHER
	DV: dummy = 1 if the firm is Italian, 0 otherwise		
Log(*AGE*)	-0.067***	0.009	-0.078***
	(0.01)	(0.03)	(0.01)
Log(*SIZE*)	-0.102***	-0.047	-0.122***
	(0.01)	(0.03)	(0.01)
INTCOMP (d)	-0.053**	0.060	-0.073**
	(0.03)	(0.07)	(0.03)
WITHECOLLAR	-0.214***	-0.042	-0.251***
	(0.04)	(0.14)	(0.05)
R&D EMPL	-0.535***	-0.084	-0.662***
	(0.07)	(0.17)	(0.08)
EXTKNOWL (d)	0.060**	0.041	0.072**
	(0.03)	(0.06)	(0.03)
INNOPROD (d)	0.067***	0.048	0.056**
	(0.02)	(0.08)	(0.02)
INNOPROC (d)	0.081***	0.072	0.082***
	(0.02)	(0.06)	(0.02)
SALESINNO	0.103*	0.059	0.157**
	(0.06)	(0.14)	(0.07)
TRAINING	-0.232***	-0.338***	-0.227***
	(0.03)	(0.10)	(0.04)
DECENTR (d)	-0.165***	-0.163***	-0.170***
	(0.02)	(0.06)	(0.02)
OWNERCONC	-0.515***	-0.375***	-0.523***
	(0.03)	(0.10)	(0.03)
NBAKNS	0.085***	0.028***	0.104***
	(0.00)	(0.01)	(0.00)
IPR	-0.009	-0.009	-0.009
	(0.01)	(0.03)	(0.01)
FIXTERM	0.396***	0.310	0.453***
	(0.07)	(0.21)	(0.08)
ISO (d)	-0.324***	-0.362***	-0.326***
	(0.02)	(0.05)	(0.02)
SPECORDER (d)	0.190***	0.217***	0.188***
	(0.02)	(0.06)	(0.02)
Industry dummy	*Yes*	*Yes*	*Yes*
Obs	4867	488	4379
LogL	-2124.757	-231.148	-1834.208
Chi2	2424.658***	212.608***	2328.545***

Multivariate analysis

Table 4 – ALL, GLOBENG and OTHER firms: size dummies

	(1) ALL	(2) GLOBENG	(3) OTHER
	DV: dummy = 1 if the firm is Italian, 0 otherwise		
Log(*AGE*)	-0.070***	0.011	-0.081***
	(0.01)	(0.03)	(0.01)
MICRO (d)	0.287***	0.241***	0.314***
	(0.02)	(0.08)	(0.02)
SMALL (d)	0.232***	0.162**	0.257***
	(0.02)	(0.07)	(0.02)
LARGE (d)	0.05	0.081	0.04
	(0.04)	(0.10)	(0.04)
INTCOMP (d)	-0.059**	0.055	-0.081***
	(0.03)	(0.07)	(0.03)
WITHECOLLAR	-0.207***	-0.027	-0.245***
	(0.04)	(0.14)	(0.05)
R&D EMPL	-0.550***	-0.119	-0.672***
	(0.07)	(0.17)	(0.08)
EXTKNOWL (d)	0.054*	0.036	0.065**
	(0.03)	(0.06)	(0.03)
INNOPROD (d)	0.072***	0.059	0.060**
	(0.02)	(0.08)	(0.02)
INNOPROC (d)	0.089***	0.079	0.089***
	(0.02)	(0.06)	(0.02)
SALESINNO	0.104*	0.066	0.153**
	(0.06)	(0.14)	(0.07)
TRAINING	-0.243***	-0.351***	-0.238***
	(0.03)	(0.10)	(0.04)
DECENTR (d)	-0.167***	-0.157**	-0.173***
	(0.02)	(0.06)	(0.02)
OWNERCONC	-0.524***	-0.389***	-0.531***
	(0.03)	(0.10)	(0.03)
NBAKNS	0.083***	0.027***	0.102***
	(0.00)	(0.01)	(0.00)
IPR	-0.01	-0.009	-0.012
	(0.01)	(0.03)	(0.01)
FIXTERM	0.406***	0.315	0.466***
	(0.07)	(0.21)	(0.08)
ISO (d)	-0.321***	-0.355***	-0.323***
	(0.02)	(0.05)	(0.02)
SPECORDER (d)	0.194***	0.215***	0.194***
	(0.02)	(0.06)	(0.02)
Industry dummy	*Yes*	*Yes*	*Yes*
Obs	4867	488	4379
LogL	-2097.125	-227.638	-1810.81
Chi2	2479.923***	219.628***	2375.341***

Multivariate analysis

Table 5 – ALL, GLOBENG and OTHER firms: logit estimates

	(1) ALL	(2) GLOBENG	(3) OTHER
	DV: dummy = 1 if the firm is Italian, 0 otherwise		
Log(*AGE*)	-0.077***	0.004	-0.087***
	(0.01)	(0.04)	(0.01)
Log(*SIZE*)	-0.137***	-0.083**	-0.150***
	(0.01)	(0.03)	(0.01)
INTCOMP (d)	-0.038	0.105	-0.068**
	(0.03)	(0.07)	(0.03)
WITHECOLLAR	-0.245***	-0.045	-0.290***
	(0.05)	(0.16)	(0.05)
R&D EMPL	-0.532***	-0.101	-0.636***
	(0.08)	(0.19)	(0.09)
EXTKNOWL (d)	0.050*	0.031	0.060*
	(0.03)	(0.07)	(0.03)
INNOPROD (d)	0.063***	0.040	0.057**
	(0.02)	(0.09)	(0.03)
INNOPROC (d)	0.074***	0.062	0.077***
	(0.02)	(0.06)	(0.02)
SALESINNO	0.132**	0.103	0.166**
	(0.07)	(0.15)	(0.08)
TRAINING	-0.239***	-0.373***	-0.234***
	(0.04)	(0.12)	(0.04)
DECENTR (d)	-0.189***	-0.188***	-0.189***
	(0.02)	(0.07)	(0.03)
OWNERCONC	-0.533***	-0.425***	-0.541***
	(0.03)	(0.11)	(0.04)
NBAKNS	0.137***	0.063***	0.151***
	(0.01)	(0.01)	(0.01)
IPR	-0.018	-0.010	-0.018
	(0.01)	(0.03)	(0.02)
FIXTERM	0.488***	0.395	0.522***
	(0.08)	(0.24)	(0.09)
ISO (d)	-0.339***	-0.365***	-0.344***
	(0.02)	(0.05)	(0.02)
SPECORDER (d)	0.197***	0.240***	0.192***
	(0.02)	(0.06)	(0.02)
Industry dummy	*Yes*	*Yes*	*Yes*
Obs	4867	488	4379
LogL	-2051.962	-224.998	-1789.024
Chi2	2570.249***	224.909***	2418.913***

Conclusion

Our results confirm that there remain significant differences among firms embedded in different institutional settings

These differences are more contained for GLOBENG firms although institution-related characteristics remain significantly different

“Happy firms are more similar than unhappy ones, but still institutions matter…”

Conclusion

The comparison between Italy and Germany reveals that the share of GLOBENG is rather similar in the two manufacturing systems, 9.4% vs. 10.7%

At the same time, Italian firms that are not GLOBENG appear significantly weaker than the German ones

"While Italian happy firms are as happy as the German happy firms, Italian unhappy firms are much more unhappy than the German unhappy firms…"