Arrighetti, Alessandro; Landini, Fabio

**Working Paper**

# Are “Happy” Firms All Alike? A Comparative Analysis of Italian and German Manufacturing Systems

Economics Department Working Papers - Università Di Parma, No. 2018-EP08

Alessandro Arrighetti[a] and Fabio Landini[a,b]

# ARE "HAPPY" FIRMS ALL ALIKE? A COMPARATIVE ANALYSIS OF ITALIAN AND GERMAN MANUFACTURING SYSTEMS

a) Department of Economics and Management, University of Parma, Italy
b) ICRIOS, Bocconi University, Italy

December 2018

DEPARTMENT OD ECONOMICS WORKING PAPER.
UNIVERSITÀ DI PARMA. DECEMBER 2018 EP08/2018

**Abstract**

Recent works in the socio-economic and comparative political economy literature suggest the emergence of a predominant neoliberal model of capitalism, which is gradually being adopted by most advanced countries. A similar trend is present in the management literature where competitive advantages are increasingly being associated with a predominant strategic paradigm (*integrated global engagement*) leaning on the complementarities among R&D, human capital and entry into foreign markets, regardless of the country and industry a firm belongs to. While both views imply a growing tendency towards institutional and strategic homologation, other studies show only a partial convergence in institutional settings and highlight the presence of considerable heterogeneity in managerial conducts. In this paper we explore these contrasting interpretations by comparing the characteristics of manufacturing firms in Italy and Germany. The analysis suggests that *(a)* independently of the country of origin, globally engaged firms are relatively similar in characteristics that are usually positively correlated with economic performance such as size, age and innovation, but remain highly differentiated in terms of institutions-related variables; b*)* firms that have not adopted a strategy of global engagement are markedly heterogeneous in terms of both structural characteristics and institutions-related variables. In other words, global engagement is associated with a lower degree of the differentiation between Italian and German firms, but the variety of institutional settings continues to affect the evolution of businesses. Policy implications are discussed.

**Keywords**: *varieties of capitalism; business strategy; global engagement, firm heterogeneity; Italy; Germany.*

**JEL codes**: P51 (Comparative Analysis of Economic Systems); B52 (Current Heterodox Approaches: Historical Institutional Evolutionary); L25 (Firm Performance: Size, Diversification, and Scope); D22 (Firm Behavior: Empirical Analysis); F23 (Multinational Firms, International Business).

Happy families are all alike; every unhappy family is unhappy in its own way.
L. Tolstoj, Anna Karenina.

## 1. Introduction

Recent works in the socio-economic and comparative political economy literature put into question the validity of the varieties of capitalism (VoC) approach (Hall and Soskice, 2001) arguing that, under the combined pressure of globalisation and neoliberalism, different models of capitalism are gradually converging (Crouch and Streek, 1997; Dore, 2000; Lutz, 2004). Baccaro and Howell (2011), for instance, identify similar trends in the evolution of industrial relations among countries, with liberalization of wage bargaining being now a common trait in most advanced systems. A similar point is made by Amable (2003, 2018) who argue that the diversity of models of capitalism is evolving under the dynamics of capitalism itself, which imposes common trajectories to institutions influencing the financial system and employment relationship. With particular reference to the EU, Streeck (2014, 2016) frames the tendency towards institutional homologation within the emergence of the so-called *consolidation state*, which limits the scope for institutional differentiation under the fiscal constraints of conservative public finance. In sum, this literature proposes the emergence of one predominant neoliberal paradigm for the coordination of advanced capitalism systems, which implies that firms belonging to distinct countries face institutions that are becoming the more and more similar with each other.

A similar trend is present in the management literature where a growing number of contributions support the emergence of a predominant paradigm also for the design of business strategies. To be competitive in contemporary globalised financial capitalism, it is argued, firms need to be active on two main fronts: knowledge investments and internationalisation. Being a knowledge-based, i.e., carrying out R&D investments, adopting innovation and hiring skilled personnel, and internationally active firm (hereinafter *integrated globally engagement – GLOBENG*), in fact, ensures lasting competitive advantages, regardless of the country of origin and the industry of activity (Guariglia and Bridges, 2008; Ito and Lechevalier, 2010; Golovko and Valentini 2011;

Love and Roper, 2015). In this sense, *GLOBENG* represents a novel strategic orthodoxy that seems exempt from institutional and technological constraints. The relative neutrality with regard to the industry of activity and country of origin and the limited number of factors that characterize the paradigm suggest that *GLOBENG* firms are both "happy" (i.e. potentially highly competitive) and alike to each other (in terms of structural characteristics) nearly everywhere.

Taken together these two research streams point at a growing tendency towards institutional and strategic homologation. While at the country level, institutional settings are increasingly shaped by similar neoliberal institutions, at the firm level, successful businesses within each country base their competitiveness on similar strategic conducts. In this sense the current stage of capitalism evolution could be depicted as one of gradual softening of the differences among firms and countries, eventually leading to the definition of just one comprehensive archetype.

In our view, however, this conclusion is at best premature for at least two reasons. First of all, at the macro level there is extensive evidence suggesting that economic performance remains highly differentiated even among countries with relatively similar institutions. In Europe, for instance, there still are widening gaps in countries' GDP per worker growth rate despite more than 50 years of "institutional convergence" within the EU framework (Monfort et al., 2013). In addition, while disparities in GDP per capita among EU countries have diminished, they have actually increased within countries (Bongardt et al 2013). As Bouvet (2007) shows, the importance of the within country component of interregional income inequality, instead of waning, has increased over time, notably since the mid-1990s. Part of this result is also due to the fact that, although the direction of institutional reforms is often similar across countries, substantial differences in institutional practices have remained and could partially explain the persisting disparities (Hall and Gingerich, 2009). Moreover, at the micro level, we observe persistent and rising heterogeneity in firm strategies and performance also within the same country and industry (Syverson, 2011; Bartlesman et al. 2013; Landini et al., 2017). This suggests that, rather than converging, capitalist systems are experiencing a growing degree of differentiation, which is in need of further investigation.

In this paper we explore these issues by comparing the characteristics of manufacturing firms in Italy and Germany. We focus on these two countries because we want to contrast production systems with a comparable size and competitiveness of manufacturing industries. Moreover, while being originally classified as belonging to different VoC (Hall

and Soskice, 2001; Molina and Rhodes, 2007), Italy and Germany have shared a common project of institutional harmonization under the auspices of the EU, which has involved several socio-economic dimensions (Cowles et al. 2001).

We base our comparative analysis on a two-by-two taxonomy of firm strategies and characteristics. In particular, we distinguish firms depending on whether or not they adopt a *GLOBENG* strategy. Moreover, we classify firm characteristics in two groups: those that can be reasonably considered a direct consequence of the institutional and historical features of the distinct models of capitalism (i.e. institutions-related), and those that do not (i.e. firm-specific). On this basis we want to investigate if Italian and German firms are differentiated by both firms-specific and institutions-related variables, and the extent to which such differences reduce when we consider *GLOBENG* firms. Our hypothesis is that a high level of international engagement matches a reduction of the differentiation between firms, but the variety of capitalism continues to influence the evolution of businesses: that is, companies are similar in terms of firm-specific characteristics even though they are located in different countries, but result to be different as for variables associated with the national institutional setting. With respect to the other firms (the vast majority) that for various reasons have not adopted the global engagement model, we expect even more heterogeneity: without a fulcrum on which to hang the change of business practices and in the absence of complementary benefits that bind together innovation, productivity and exports, it is expected that firms evolve towards uneven trajectories that reflect the variety of accumulated resources and the diversity of economic opportunities arising over time. Such heterogeneity of evolutionary trajectories is amplified by geographical extension of the markets, increasing product variety and complexity of product mix, hyper-competition, demand uncertainty and reduction of competitive firm advantage (Appelbaum et al. 2000, Thomas and D'Aveni 2009; Koren, 2010). The consequence is that not-*GLOBENG* firms develop strongly diversified and dissimilar conducts ("their own way"), especially in reference to the firm-specific characteristics.

Our results confirm these hypotheses. In both countries *GLOBENG* firms represent nearly the 10% of all firms, which suggest that the adoption of such strategy is conditional on internal resources and prerequisites not commonly available. Moreover, the fact that the share of *GLOBENG* is similar suggests that the adoption of such strategy is not country specific. However, while Italian and German *GLOBENG* exhibit comparable values in firm-specific variables, they exhibit significant differences as far as institutions-

related variables are concerned, i.e. the *GLOBENG* strategy takes a different form in the two countries. As expected, such differences are even stronger for not-*GLOBENG* firms, as they involve both typologies of firm characteristics.

Our results make two main contributions to the literature. First of all, we contribute to the debate on the varieties of capitalism (Streeck, 2009; Hall, 2009; Schmitter and Streeck, 1985; Boyer, 1990; Hall and Soskice and, 2001; Amable 2003; Hall and Thelen, 2009) by highlighting that, despite growing convergence in institutional archetypes among advanced capitalist systems, there remain significant firm-level differences. In this sense, we provide support for the position that considers historical patterns of institutional differentiation still important categories to compare socio-economic systems in contemporary globalized financial capitalism (see Schneider et al., 2010; Schneider and Paunescu, 2012; Hotho, 2013; Landini and Pagano, 2019).

Secondly, we make a contribution to the management literature by stressing the importance of linking strategic conducts and institutions (Witcher and Chau, 2012; Bruton et al., 2014). On this respect our results show that, when undertaken in different countries, the *GLONBENG* strategy tends to be adapted to the institutional features of the socio-economic system firms are embedded in, leading to the emergence of distinct forms of global engagement. At the same time the similarity of firms adopting the *GLONBENG* profile while operating in different countries suggests that in some strategic approaches firm-specific characteristics can be more relevant in determining the evolution of businesses than variables linked with institutional and historical backgrounds.

The remaining parts of the paper are organized as follows. The next section is dedicated to illustrating the peculiarities of the German vs Italian institutional settings and the characteristics of the global engagement strategy. Section 3 describes data and variables used in the empirical analysis. Section 4 discusses the results. Finally, Section 5 concludes.

## 2. Background literature

### *2.1 Models of capitalism*

The VoC literature has gathered ample evidence on the differentiated impact that national institutional archetypes have on the behaviour of domestic firms (Sorge and Streeck, 1988 e 2016; Hall and Soskice, 2001; Amsden, 2001; Deeg and Jackson, 2007). Following this

approach, institutions expand or narrow the degrees of strategic freedom that firms have and shape their organizational architecture (Burroni and Trigilia, 2009; Schneider et al., 2010). In other words, the institutional framework within which firms operate may condition what they can do (Hall e Soskice, 2001).

In general, institutions accomplish a composite set of functions. They are the rules and practices, more or less formal, that actors take into account in their decision making (Hall and Gingerich, 2004), collective resources that actors may legitimately use to attain their ends (Hall and Thelen, 2009) and organizational bodies that facilitate collective action solutions by setting incentives, imposing constraints or creating collective goods (Deeg and Jackson, 2007; Arrighetti et al., 2008). These institutional functions, by changing the long-run availability of resources and the context in which firms operate, influences their strategies, patterns of interaction and above all their ability to overcome coordination issues. Typically, as suggested by Hall and Soskice (2001), the *institutional setting* of a country results from the interaction among business or employer associations, trade unions, and legal or regulatory systems designed to facilitate information-sharing and collaboration or to overcome market failures. However, also organizational bodies such as local governments, innovation centres, chambers of commerce, consortia, etc., participate in determining its configuration (Arrighetti et al., 2008).

Institutions have different origins and evolution from country to country, although in several contexts they have similar traits and converging features. Factors that often affects the composition of the institutional setting include the degree of centralization of policy interventions, the role of public investment in R&D and adoption of technical and quality standards. As a consequence, national institutional configuration can be highly differentiated, providing diverse incentive schemes and heterogeneous opportunities for firms operating in different countries (Hall and Soskice, 2001; Hall and Thelen, 2009).

Here below we illustrate the essential features of the German and Italian institutional settings as discussed in the VoC approach.

### *2.1.1 The German institutional setting*

Hall and Soskice (2001) define Germany as the prototype of *coordinated market economy* (CME). Conventions, formal rules and organizational bodies interact in a coordinated system of relationships linking financial markets, manufacturing firms, technology supply networks, education and vocational training structures. Germany is characterized by credit-based and bank-oriented financial system in opposition to the Anglo-Saxon

capital-market system (Zysman, 1984). Banks and investors have access at inside information about the past performance record and projects of the firm. In exchange, they provide firms with “patient capital”, which evaluates investment returns mainly over the long term, enabling the company to develop innovations with deferred profitability. This scheme of firm-bank relationship helps to mitigate the effect of recessions on employment by avoiding mass layoffs and retaining competencies and skills acquired by the employees The nature of the ties between firms and the credit system, being focused on long term exchange and on a logic of partnership, leads to the selection of a few reference banks (Hausbank) and, in the case of SMEs, often only one. Historical and institutional legacies hence lead to numerically reduced but long-lasting bank-company relations (Quack and Hildebrandt 1995).

A further feature of the German institutional setting is a corporate governance model based on a highly concentrated ownership, cross-holdings of stocks among related firms and an explicit role of the banks as principal owner (Edwards and Nibler 2000; Franks and Mayer, 2001). The rationale behind this model is that concentrated ownership, combined with workers' representation on corporate supervisory boards, creates strong incentives to monitor manager’s performance, while at the same time encouraging the adoption of longer-term competitive and investment strategies (Clark and Wojcic 2005). Consequently, the process through which firms design the competitive strategy, being shared among top managers, employee representatives, and major shareholders, is mostly consensual. This approach facilitates information sharing, network monitoring and decentralization of choices ( Hall and Soskice 2001). Practices of decentralized exchange of information and the presence of highly skilled workers with remarkable work autonomy feed production strategies based on incremental innovation and improvements of production processes (Sorge and Warner 1986)

Making extensive use of labour with industry-specific and/or firm-specific skills, firm competiveness is associated with both education and training systems capable of providing workers with such skills and long term job tenures that strengthen the workers’ commitment to invest in skill improvement and work effort. In addition, the model of industrial relations that is based on industry-level bargaining reduces the risk of running into *hold-up* problems and limits the *poaching* of skilled workers by competitors (Hall and Soskice, 2001).

The German model is also characterized by high degree of cooperation among firms and organizational bodies, especially in innovation related fields. A significant number of

research projects are carried out jointly by companies, often in collaboration with quasi-public research institutes spread across the country (Soskice, 1997). The development and adoption of common technical standards are supported by industry associations and contribute to the development of shared technological interfaces. This facilitates the collaboration among workers of different firms (Soskice, 1997) and helps to implement intellectual property rights (IPRs), primarily as industry-specific technical standards and trademarks (Bekkers et al., 2002; Dutfield, 2009).

Finally, with reference to the actual organization of production activities, the described institutional setting has in recent years directed the post-Fordist manufacturing change into a productive system that Sorge and Streeck (1988) define as Diversified Quality Production (DQP). High production volumes based on standardized and price-competitive products have been replaced with equally high production volumes of customized and quality-competitive goods. Such an adjustment was favoured by several factors, among which institutions played a pivotal role. In fact, the adoption of the new model was supported, not only by the availability of a flexible technology allowing for a rapid switch to non-routine production, but also by the presence of occupational training systems for manual workers, enabling them to handle flexible technology and less routinized production processes. In addition, a pattern of industrial relations focused on high wages and employment security forced managers to develop profitable production regimes consistent with an expensive and formally rigid labour market, limiting external flexibility, but promoting internal flexibility (Sorge and Streeck 2016). The outcome was that German manufacturing firms have evolved towards a well-characterized and specific production system based on the internal accumulation and protection of knowledge, the exploitation of economies of scale, a relatively high level of vertical integration and high quality products for the final market.

### *2.1.2 The Italian institutional setting*

The characterization of the Italian institutional setting is less straightforward than the German one. In the taxonomy proposed by Hall and Soskice (2001) and based on the distinction between CME and *liberal market economy* (LME), Italy is left into a relatively nuanced picture together with other countries such as France and Spain. A similar position is taken by Hall and Gingerich (2004) who identify the ambiguity of the Italian model (and of other southern European countries as well) in the fact that it exhibits institutional capacities for strategic coordination in labour relations and corporate governance that are

at the same time higher than those of LMEs but weaker than in CMEs. Other authors believe Italy belongs instead to a specific institutional archetype called *Mediterranean* and characterized by widespread state intervention in the economy, significant non-market coordination in the field of corporate governance and a relatively more "liberal" orientation in labour markets compared to CMEs (Regini, 1995; Rhodes and van Apeldoorn, 1997).

Molina and Rhodes (2007) discuss Italy as an example of *mixed market economy* (MME), that is a system with hybrid connotations in which elements that characterize CMEs and LMEs have their own relevance, without a clear dominance of one over the other. The authors focus their attention on the relationship between welfare systems and production regimes, emphasizing two points. First of all, MMEs tend to give priority to employment protection over social protection, with direct consequences for skill formation. Low levels of social protection, in fact, deter the labour force from investing in specific skills with the consequence of curbing the development of high-tech sectors. Secondly, in terms of production regimes, MMEs appear to be "more fragmented than either LMEs or CMEs by large-firm/small-firm, public-private and territorial divides" (Molina and Rhodes, 2007; p.224). In addition, the presence of lower competitive pressures due to 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). Moreover, as highlighted by Burroni and Trigilia (2009) with particular reference to Italy, the field of corporate governance is still dominated by pyramid leveraging and cross-shareholding, together with family control. Overall, the combination of these institutional arrangements promote an industrial system based on small-scale firms that compete mainly on low-priced, low-medium-quality goods. Investments in formal vocational training are relatively low and limited is the need to dedicate resources to the development of common technical standards.

With respect to the actual organization of production activities, in Italy the move towards post-Fordism took a different route compared to Germany. An extended division of labour among firms went together with an emphasis on the exploitation of economies of specialization and a significant incentive to acquire competences outside the firm (Piore and Sabel 1984; Barca and Magnani, 1989; Arrighetti and Ninni, 2014). While in Germany improvements in production efficiency were achieved through the sustained competitiveness of large and medium-sized firms, in Italy they resulted from the division

of labour among a growing number of small business following the model of so-called flexible specialization. According to Holtho (2013) the one emerging in Italy in those years was a specific type of business system, labelled coordinated industrial districts, which was characterized by high cluster formation, considerable state involvement in the economy and a relevant union strength.

Despite in recent years the manufacturing systems of the two countries have become more similar, mainly due to the increasingly relevant role played by medium-sized manufacturing enterprises (Coltorti, 2004; Arrighetti and Ninni, 2014; Arrighetti and Traù, 2013), many traits of Italy's original structure persist. In particular, the role of family business and the heavy incidence of production on order must be emphasized, together with a manufacturing specialization that remains focused on the initial and intermediate stages of the production chain, rather than on the final ones (Giunta e Rossi 2017). Finally, human resources and managerial practices score below the average recorded in competing countries (Bloom et al., 2012) and the commitment to vocational training remains severely limited (Regini, 1995, Brunello, 2002, Conti, 2005).

In sum, notwithstanding an intensive pressure towards uniformity, the institutional setting and production regime of German and Italian capitalism exhibit significant differences. We expect that the latter are likely to produce significant differences (both firm-specific and institution-related) also among the firms belonging to them. On this basis, the first hypothesis that we put forward is:

*Hypothesis 1: Firms belonging to different models of capitalism are significantly different in terms of both firm-specific and institution-related variables*

*2.2 Integrated Global Engagement*

Independently of the model of capitalism a firm belong to, a growing body of research in the management literature supports the importance of competitive strategies based on so-called integrated global engagement (*GLOBENG*). The latter originates from a composite set of contributions. The literature on internationally active firms, for instance, has shown that a significant presence in foreign markets via either export or FDI, an adequate propensity towards innovation and R&D investments and high level of human capital are factors that strengthen the firms' competitive advantages (Aw et al. 2011; Criscuolo et al.

2010; Ma et al., 2014; Harris and Moffat, 2011). This conclusion is supported by the growing evidence on the pivotal role of knowledge and competences as competitive drivers (Baldwin and Gu 2003; Lages et al. 2009; Andrews and Criscuolo, 2013), the role of human capital (in terms of education and vocational training) in the management of innovation and the likelihood to become exporters (Ito and Lechevalier 2010), and the contribute of R&D and innovation experience to fuel the qualitative upgrading of the goods sold in international markets (Lages, et al., 2009; Love and Roper 2015).

The high degree of interdependence among export, FDI, R&D and human capital allows firms to exploit complementarities and enhances the benefits of solutions involving simultaneous investments in all these functional areas (Aw et al., 2008). In fact, the effort in R&D, mediated by high quality of human capital, raises the product competitiveness and facilitates their positioning in foreign markets (Bernard et al., 2009). The decision to enter a foreign market, in turn, increases the volume of sales, making it easier for firms to sustain the (tangible and intangible) fixed costs associated with innovation and R&D (Golovko and Valentini 2011). The ways in which these activities are performed may differ across firms, but there are strong incentives to integrate and synchronize investments in these different areas, so as to maximize the joint benefits associated with them (Aw et al., 2007; Criscuolo et al., 2010).

Being a *GLOBENG* firm is not a trait firms are endowed with at their birth, but rather the result of deliberate decisions that may take time to mature. Recent works, for instance, describe the entry in international markets of innovative firms as a self-selected (Helpman et al., 2004; Cassiman et al., 2010), relatively rare (Bernard et al., 2007) and discretional decision (Aw et al., 2007), which is associated with (or preceded by) a set of deliberate investment decisions. These works portrait *GLOBENG* firms as companies that do not implement a unique initiative, but a combination of multiple activities during the evolution of their business. The outcome is a strategic profile in which the choice to export or undertake FDI is linked to investment and accumulation of resources aimed at boosting productivity through increased internal knowledge, innovation and human capital. The endogenous (strategic) nature of such choices is widely discussed in the recent microeconomic debate (Aw et al., 2009; Ito and Lechevalier, 2010).

The composite nature of the *GLOBENG* strategic profile (and its relative complexity) implies that not all firms are actually able to adopt it. In fact, the firms that simultaneously export and/or undertake FDI, invest in innovation and hire qualified employees represent a subset of all exporting enterprises. According to Harris and Moffat (2011) in UK they

represent only 22% of the manufacturing firms, while in the non-manufacturing sector this share drops to 7.5 %. The relatively small number of *GLOBENG* firms, however, is not interpreted as the result of specific limitations within the UK's institutional setting but rather as a consequence of the scarcity of the internal resources that are necessary to adopt such a complex strategy.

The limited set of variables that characterize the *GLOBENG* strategic profile and their strong interdependence suggest the existence of a convergence process through which firms adopting this strategy become more and more similar with each other, regardless of the institutional setting and industry of activity. Furthermore, convergence is expected to go beyond the variables that characterize the strategic profile and to include also some structural characteristics that are functional to the overall implementation of such strategy. Along these lines previous works have indeed showed that, compared to other firms, internationally engaged firms are more efficient (Bernard and Jensen 1995; Wagner 2007, Andrews et al., 2015, Harris et al., 2010), larger (Castellani and Zanfei, 2007; Criscuolo et al., 2010; Ito and Lechevalier, 2010), older (Rasiah, 2003; van Dijk, 2002) and more capital intensive (e.g., Tybout 2001; Baldwin and Hanel 2003). Moreover, they develop more product and process innovation (Criscuolo et al., 2004, 2008), exhibit greater propensity to absorb external knowledge (Wignaraja, 2008; Fletcher ert al., 2013; Shearmur et al., 2015) and present a higher weight of non-manual workers (Manasse et al., 2004).

Obviously, firms that for any reason do not adopt a *GLOBENG* strategy are not subject to the same structural constraints. Rather, they can adopt differentiated strategic conducts and follow markedly heterogeneous evolutionary trajectories. The absence of constraints imposed by interdependences among firm activities (e.g. export, R&D and human capital) leaves more alternatives for the design of competitive strategies. The latter will still depend on the interaction between market opportunities and accumulated internal resources, but for not-*GLOBENG* firms the resulting outcome can be much more differentiated. Clearly, this should also translate in more severe differences with respect to structural and firm-specific characteristics (e.g. size, age, propensity towards innovation, workforce organization).

On this basis we put forward the following hypothesis:

*Hypothesis 2: Across distinct models of capitalism, firms adopting a GLOBENG strategy are more similar than firms not adopting a GLOBENG strategy*

# 3 Empirical analysis

*3.1 Data and variables*

The analysis in this paper relies on EFIGE data, a unique dataset of European manufacturing firms. The EFIGE dataset has several distinctive features (for details see Altomonte and Aquilante, 2012). First, it is a stratified sample built to be representative of the manufacturing structure of the countries covered. Second, it contains data that are fully comparable across countries, since it is derived from responses to the same questionnaire, administered over the same time span. Third, it provides both qualitative and quantitative information on the firm's internal structure (e.g. property structure, workforce, investments, technological innovation, R&D, internationalization), which allow a deeper analysis than just balance sheet information. Thirdly, most of the questions in the survey refer to 2008; they thus allow one to compare firm characteristics before the beginning of the recession (Altomonte et al., 2013). Although the original dataset contains information for several European countries, we restrict the analysis to Italy and Germany. After data cleaning, we remain with a total of 4876 firms, out of which 2731 are Italians and 2136 are Germans.

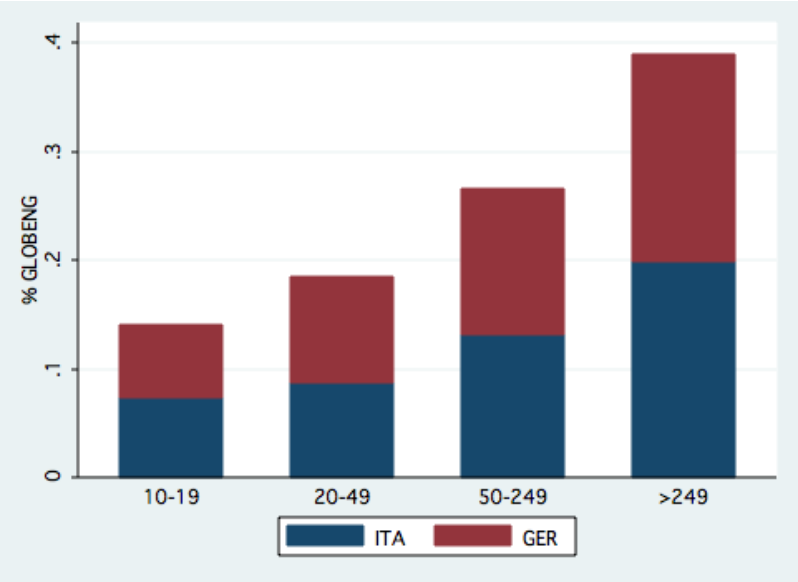
The focus of our empirical analysis is the identification of the firms that adopt a *GLOBENG* strategic profile. Not having access to detailed information about strategic planning and orientation we must rely on proxy variable that capture how such strategy translates into observable firm-level characteristics. In line with the above discussion we focus on four main variables: a) the share of export over the annual turnover (*EXPORT*); b) a dummy variable taking value equal to one if the firm is either controlled by a foreign owner or run at least part of its production in another country through FDI (*MNC*); c) the share of R&D investments over annual turnover (*R&D*); and d) the percentage of employees with university degree (*GRADUATE*). The first two variables capture the extent to which a firm is engaged in some form of international activity, either as exporter or multinational company. The third variable measures the firm's propensity to carry out innovation-related activities. The fourth variable is a proxy of the human capital available within the firm. Then, we classify as *GLOBENG* the firms that satisfy the following three conditions: (i) *EXPORT*>0 and/or the firm is *MNC*; (ii) *R&D* > $\underline{R\&D}$; and (iii) *GRADUATE* > $\underline{GRADUATE}$, where $\underline{R\&D}$ and $\underline{GRADUATE}$ is the Italian and German pooled industry average (using ATECO 2 digits classification) of *R&D* and *GRADUATE*

respectively. In other words, *GLOBENG* is a dummy variable selecting the firms that in 2008 are internationally engaged, present higher-than-pooled-industry-mean R&D investment and higher-than-pooled-industry-mean human capital. Notice that since we compute industry means by pooling Italian and German firms, our classification selects the firms that are most likely to adopt a *GLOBENG* strategic profile in general, i.e. relative to the other firms of both countries, and not in relation to the other firms of each single country.

The share of firms classified as *GLOBENG* is similar in the two countries, 9.45% in Italy and 10.77% in Germany. Figure 1 shows the distribution of Italian and German *GLOBENG* firms for different size classes (number of employees). Three interesting facts stand out. First of all, in both countries the share of *GLOBENG* firms rises with firm size, which is in line with the idea that adopting a global engagement strategy entails large sunk costs (e.g. in R&D and export) and is therefore easier for firms that enjoy economies of scale. Secondly, even among small firms the share of *GLOBENG* firms is not marginal, being nearly 7% for firms with 10-19 employees, which confirms that size is an important but far from exhaustive determinant of the decision to adopt such strategy. Finally, the overall distribution of *GLOBENG* firms across size classes is very similar in the two countries, providing some initial evidence of similarity among globally engaged firms across distinct models of capitalism.

Further descriptive evidence in support of the similarity hypothesis comes from Figure 2, which show the total share of Italian and German *GLOBENG* firms across industries. Such share is between 10% and 30% in almost all industries, which suggests the absence of strong industry-specific effects. The split of the shares between countries is not significantly different, with few exceptions. In the manufacture of beverages (11) and wearing apparel (14), for instance, the large majority of *GLOBENG* firms is Italian. On the contrary, in the manufacture of coke and refined petroleum (19) and chemical products (20) most of the firms adopting a *GLOBENG* strategy are German. In all the other industries, however, the share of *GLOBENG* firms is almost the same in the two countries. It follows that, even in presence of different patterns of technological and sectorial specialization in Italy and Germany, neither the industry nor the country seems to be strong predictor of the probability that firms adopt a *GLOBENG* strategy

**Figure 1** –Italian and German *GLOBENG* firms: distribution across firm size classes

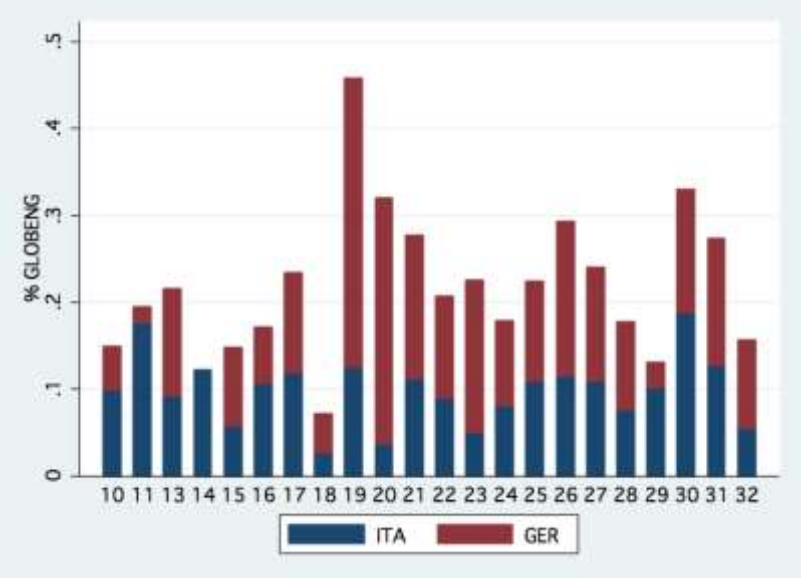



Note: the classes of firm size are defined as number of employees.

In addition to firm's strategic profile our analysis focuses on two main group of variables. The first one refers to variables can be considered a direct expression of firm's decisions or characteristics (firm-specific). The second group of variables consists instead of factors that, while still depending on firm's decisions, are strongly influenced by the institutional setting and organization of production that characterize the Italian and German models of capitalism (institutions-related). Clearly, to set a clear-cut distinction between these two groups of variables is difficult and it is forcedly based on some degree of arbitrariness. However, in classifying variables we closely rely on the VoC literature and consider as institutions-related variables only the ones that previous works discuss as distinguishing features of the two models of capitalism (see Sections 2.1.1 and 2.1.2).

In particular, among firm-specific variables we include the following: (the logarithm of) firm age (*AGE*); (the logarithm of) the total number of employees (*SIZE*); a dummy variable taking value equal to one if the firm face competitors located abroad, zero otherwise (*INTCOMP*); the share of white collar on the total number of employees (*WITHECOLLAR*); a dummy variable taking value equal to one if the firm acquire knowledge (e.g. R&D-related activities) from external sources, zero otherwise (*EXTKNOWL*); a dummy variable taking value equal to one if the firm carried out some product innovations, zero otherwise (*INNOPROD*); and finally a dummy variable taking value equal to one if the firm carried out some process innovations, zero otherwise (*INNOPROC*).

**Figure 2** – Share of Italian and German *GLOBENG* firms across industries




Note: 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.

We consider instead as institutions-related variables: the number of banks a firm interacts with (*NBAKNS*); the degree of ownership concentration measured as the share of capital owned by the main shareholder (*OWNERCONC*); a dummy variable taking value equal to one if the decision process in the firm is decentralized, zero otherwise (*DECENTR*); the share of employees involved in formal training programs (*TRAINING*); a measure of the propensity to rely on flexible labour such as the share of employees with fix-term contract (*FIXTERM*); an index variable going from zero to four counting whether the firm make use of different form of intellectual property rights such as patent, industrial design, trademark and/or copyright (*IPR*); a dummy variable taking value equal to one if the firm adopt quality certification (e.g. ISO9000), zero otherwise (*ISO*); and finally a

dummy variable taking value equal to one if 100% of the firm's turnover comes from a single product/business and is made up by sales of produced-to-order goods (*SPECORDER*).

Table 2 reports descriptive statistics distinguished by strategic profiles. The last column shows the result of F-tests on the difference between the profile means. On average, *GLOBENG* firms are larger, more exposed to international competition and have an internal organization of work with a larger share of white collars compared to the other firms, but present only a relatively weak difference in terms of age. With respect to innovation-related variables they are far more likely to introduce both product and process innovation and exhibit a greater propensity to rely on external knowledge sources than the other firms. Moreover, *GLOBENG* firms interact with a larger number of banks, present a more decentralized decision process, involve a larger share of employees in formal training, make larger use of intellectual property rights and quality certifications and are less likely to sales product-to-order goods compared to other firms. No significant difference emerges instead with respect to the degree of ownership concentration and only a relatively weak difference obtains in the use of flexible labour contracts. Overall, these results suggest that when taken together *GLOBENG* firms differentiate from the other firms in terms of both firms-specific and institutions-related variables. The key question is whether such differences persist also when we compare firm types across countries. This is the main issue on which we now turn.

### *3.2 Methodology*

To compare firm characteristics between countries we rely on two types of investigation. First we exploit an explorative univariate analysis in which we test for differences in variables' average values comparing Italian and German *GLOBENG* firms as well as Italian and German *OTHER* firms. This allows us to evaluate the magnitude of cross-country differences in firm-level characteristics distinguishing between different types of firms. Then, we run a set of multivariate probit regressions in which we test whether such differences persist even when we control for all variables simultaneously. In these regressions we set as dependent variable a dummy taking value equal to one if the firm is Italian and zero if it is German.

**Table 1** – *GLOBENG* and other firms: descriptive statistics

| | (1) ALL (N = 4867) | | (2) GLOBENG (N = 488) | | (3) OTHER (N = 4379) | | F-test (2) – (3) |
|---|---|---|---|---|---|---|---|
| | **Mean** | **Sd** | **Mean** | **Sd** | **Mean** | **Sd** | |
| Log(*AGE*) | 3.249 | 0.873 | 3.180 | 0.921 | 3.257 | 0.868 | * |
| Log(*SIZE*) | 3.570 | 0.981 | 3.871 | 1.098 | 3.537 | 0.961 | *** |
| *INTCOMP* (d) | 0.130 | 0.336 | 0.217 | 0.413 | 0.120 | 0.325 | *** |
| *WITHECOLLAR* | 0.263 | 0.211 | 0.353 | 0.222 | 0.253 | 0.208 | *** |
| *EXTKNOWL* (d) | 0.115 | 0.319 | 0.289 | 0.454 | 0.095 | 0.294 | *** |
| *INNOPROD* (d) | 0.491 | 0.500 | 0.803 | 0.398 | 0.456 | 0.498 | *** |
| *INNOPROC* (d) | 0.430 | 0.495 | 0.572 | 0.495 | 0.415 | 0.493 | *** |
| *NBAKNS* | 3.525 | 2.760 | 4.129 | 4.066 | 3.458 | 2.566 | *** |
| *OWNERCONC* | 0.664 | 0.286 | 0.671 | 0.272 | 0.663 | 0.287 | |
| *DECENTR* (d) | 0.223 | 0.417 | 0.338 | 0.474 | 0.211 | 0.408 | *** |
| *TRAINING* | 0.175 | 0.267 | 0.241 | 0.284 | 0.167 | 0.264 | *** |
| *FIXTERM* | 0.062 | 0.143 | 0.075 | 0.156 | 0.060 | 0.141 | ** |
| *IPR* | 0.373 | 0.754 | 0.842 | 1.060 | 0.321 | 0.693 | *** |
| *ISO* (d) | 0.304 | 0.460 | 0.410 | 0.492 | 0.293 | 0.455 | *** |
| *SPECORDER* (d) | 0.376 | 0.485 | 0.293 | 0.456 | 0.386 | 0.487 | *** |

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

The independent variables are instead the ones listed above to which we add industry (using the 2-digits NACE classification) fixed effects. The rationale behind such analysis is to evaluate the extent to which each variable is more or less likely to be associated with an Italian firm as opposed to a German one, controlling for all the other variables at the same time. A positive (negative) and significant coefficient could thus be interpreted as the fact that a relatively high (low) value of that variable is more likely to be associated with Italian rather than German firms. A not significant coefficient signal instead that with respect to that variable Italian and German firms are similar. To compare results across firm types the same analysis is carried out on the whole sample of firms as well as on the two subsamples of *GLOBENG* and *OTHER* firms.

## 4. Results

*4.1 Univariate analysis*

Table 2 reports the results of the univariate analysis. With respect to firm-specific

variables the differences between Italian and German *GLOBENG* firms turns out to be limited to SIZE (Italian firms are smaller than their German counterparts) and *WHITECOLLAR* (Italian companies present a lower share of white collars on total employment). The other firm-specific variables show similar values. High degree of differentiation emerges instead in institutions-related variables, with results that are quite in line with the predictions of VoC literature. In particular, Italian *GLOBENG* firms invest on average less in training (*TRAINING*), are less decentralized (*DECENTR*), present lower degree of ownership concentration (*OWNERCOCN*), interact with a larger number of banks (*NBANKS*), make relatively limited use of intellectual property protection (*IPR*) and quality certification (*ISO*), and operate to a larger extent on the basis of specialized produced-to-order goods (*SPECORDER*) compared to German *GLOBENG* firms.

The comparison of firms classified as OTHER (i.e. not adopting a GLOBENG strategy) suggests the latter present even more differences in firm-level characteristics than GLOBENG firms. In fact, not only they are dissimilar with respect to institutions-related variables, which confirms that institutional embeddedness has a remarkable impact on business activities, but they differ also as regards most of firm-specific variables. In particular, Italian OTHER firms are on average younger (AGE) and smaller, are less likely to have international competitors (INTCOMP), present a lower share of white collars, and are more likely to introduce process innovation (INNOPROC) compared to their German counterpart. No significant difference emerges instead with respect to the reliance on external sources of knowledge (EXTKNOWL) and the likelihood to introduce product innovation (INNOPROD).

Overall, the results of the univariate analysis provide support for our research hypotheses. While in general firms belonging to the Italian and German model of capitalism present significant differences in firm-level characteristics, such differences tend to weaken when we restrict the analysis to firm adopting a global engagement strategy. For the latter, in particular, the only factors that remain highly differentiated are the ones that have a direct association with specific aspects of the institutional setting that characterize the two countries. Obviously, these results hold considering one variable at a time and to make them more convincing we should move to a multivariate analysis. This is what we do in the next section.

**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 | *** |
| *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 | *** |
| *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%.

*4.2 Multivariate analysis*

Table 3 reports the results of the probit estimates. The estimated coefficients are translated into marginal and impact effects for the continuous and dummy variables, respectively. Column (1) reports the results for the whole sample of firms; columns (2) and (3) show the estimates for the subsamples of *GLOBENG* and *OTHER* firms.

When we consider the whole sample Italian and German firms turn out to differentiate along all firms-specific and institutions-related dimensions (except one, i.e. *IPR*). In general, the portrait that emerges is that Italian firms are smaller, younger, less likely to face international competitors and less prone to hire white collar than German firms. Such weaknesses are partially compensated by a greater propensity to rely on external sources of knowledge and introduce product and process innovations. In terms of institutions-related factor we confirm the results of the univariate analysis: all variables are highly significant in predicting the probability of being an Italian as opposed to a German firms and the signs of the coefficients are in line with the predictions of the VoC literature.

**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** | | |
| *GLOBENG* (d) | -0.002 | | |
| | (0.03) | | |
| Log(*AGE*) | -0.068*** | 0.006 | -0.079*** |
| | (0.01) | (0.03) | (0.01) |
| Log(*SIZE*) | -0.094*** | -0.046 | -0.111*** |
| | (0.01) | (0.03) | (0.01) |
| *INTCOMP* (d) | -0.059** | 0.060 | -0.076*** |
| | (0.03) | (0.07) | (0.03) |
| *WITHECOLLAR* | -0.240*** | -0.039 | -0.276*** |
| | (0.04) | (0.14) | (0.05) |
| *EXTKNOWL* (d) | 0.054** | 0.042 | 0.063** |
| | (0.03) | (0.06) | (0.03) |
| *INNOPROD* (d) | 0.066*** | 0.060 | 0.065*** |
| | (0.02) | (0.07) | (0.02) |
| *INNOPROC* (d) | 0.074*** | 0.078 | 0.070*** |
| | (0.02) | (0.05) | (0.02) |
| *TRAINING* | -0.250*** | -0.338*** | -0.247*** |
| | (0.03) | (0.11) | (0.04) |
| *DECENTR* (d) | -0.164*** | -0.160*** | -0.170*** |
| | (0.02) | (0.06) | (0.02) |
| *OWNERCONC* | -0.514*** | -0.381*** | -0.519*** |
| | (0.03) | (0.10) | (0.03) |
| *NBAKNS* | 0.085*** | 0.028* | 0.104*** |
| | (0.00) | (0.02) | (0.01) |
| *IPR* | -0.014 | -0.01 | -0.014 |
| | (0.01) | (0.03) | (0.01) |
| *FIXTERM* | 0.400*** | 0.317** | 0.453*** |
| | (0.06) | (0.16) | (0.07) |
| *ISO* (d) | -0.324*** | -0.364*** | -0.324*** |
| | (0.02) | (0.05) | (0.02) |
| *SPECORDER* (d) | 0.191*** | 0.219*** | 0.188*** |
| | (0.02) | (0.06) | (0.02) |
| *Industry dummy* | *Yes* | *Yes* | *Yes* |
| Obs | 4867 | 488 | 4379 |
| LogL | -2149.62 | -231.335 | -1863.61 |
| Chi2 | 1701.717*** | 155.508*** | 1356.733*** |

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

When we split the sample between *GLOBENG* and *OTHER* firms we find two main results of interest. Firstly, all the institutions-related variables remain highly significant in both subsamples, which confirm once more the relevant role played by institutional embeddedness as a driver of firm's activities. Secondly, we find that while firms-specific variables significantly differentiate between Italian and German *OTHER* firms, no firms-specific variable is significant when we compare Italian and German *GLOBENG* firms.

In this sense, *GLOBENG* firms seems to share common traits that are indeed independent of the country of origin.

Overall, the results of the multivariate analysis provide further support to our research hypotheses. In general, firms belonging to different models of capitalism are significantly different in terms of both firm-specific and institution-related variables. However, across distinct models of capitalism, firms adopting a *GLOBENG* strategy are more similar than firms not adopting a *GLOBENG* strategy.

With respect to the firms classified as *OTHER* the reported evidence provides an interesting portrait of the qualitative differences existing between the large majority of Italian and German firms. While on the one hand Italian firms score better than the German ones in self-reported product and process innovation as well as in the propensity to rely on external sources of knowledge, they do much worse in variables that are usually positively correlated with economic performance such as size, age and work organization. In this sense it seems that, although the two manufacturing systems have evolved different approaches towards innovation, in Italy the structural characteristics of firms not adopting a *GLOBENG* strategy is weaker than in Germany. When combined with the relative similarity among *GLOBENG* firms this result would suggest that the worse aggregate performance of the Italian manufacturing sector with respect the German one is manly driven by the former's reliance on a set of firms not adopting a strategy of global engagement that is much weaker than its German counterpart.

*4.3 Robustness checks*

In this section we provide two robustness checks. First of all, we estimate the same model as in Table 3 using a logistic rather than a probit model (see Table 4). Most of the results remain valid.

Another possible limitation of the previous estimates is that, when we restrict the analysis to GLOBENG firms, the lack of statistically significant effects for firm-specific variables could be driven by the reduced number of observations. For this reason, we run an additional model in which we consider all firms and we interact firm-specific variables with a dummy variable selecting the GLOBENG firms. Such an analysis is carried out using both a probit and logit model, results are reported in Table 5. In line with the above results all firm-specific variable are significant when considered in isolation and not significant when interacted with the dummy for GLOBENG firms. This confirms the lack

of significant differences in these traits for Italian and German firms that adopt a strategy of global engagement.

## 6. Conclusion

Recent trends in the comparative political economy and management literature suggest the existence of growing homologation among national institutional settings and firm's strategic conducts. The former tend to increasingly incorporate institutions that are part of the neoliberal model of capitalism. The latter are pushed towards the pursuing of competitive advantages on the basis of so-called integrated global engagement, a new strategic paradigm. However, the empirical evidence shows only a partial convergence in institutional choices and aggregated economic performance, while suggesting the existence of considerable heterogeneity in managerial practices among firms.

In this paper we explore these contrasting interpretations by comparing the characteristics of manufacturing firms in Italy and Germany. The analysis suggests that *(a)* independently of the country of origin, globally engaged firms are relatively similar in characteristics that are usually significant correlates of economic performance such as size, age and innovation, but remain different in term of institution-related variables; b*)* firms, that have not adopted the *global engagement* strategy, appear to be heterogeneous in terms of both structural characteristics and institution-related variables, with Italian companies that are on average less performing than their German counterparts. If these results are confirmed, the existing (and to some extent widening) gap of performance between the Italian and German manufacturing systems could thus be explained by the fact that, while Italian "happy" firms are as "happy" as the German happy firms, Italian "unhappy" firms are more "unhappy" than the German "unhappy" ones. In terms of policy implications this would imply considering the Italian "unhappy" firms as the main target of interventions aimed at reducing the performance gap between the two countries.

**Table 4 – *All*, *Globeng* and *Other* firms: logit estimates**

| | (1) ALL | (2) GLOBENG | (3) OTHER |
|---|---|---|---|
| | **DV: dummy = 1 if the firm is Italian, 0 otherwise** | | |
| *GLOBENG* (d) | -0.006 | | |
| | (0.03) | | |
| Log(*AGE*) | -0.078*** | 0.000 | -0.088*** |
| | (0.01) | (0.03) | (0.01) |
| Log(*SIZE*) | -0.128*** | -0.081* | -0.139*** |
| | (0.02) | (0.04) | (0.02) |
| *INTCOMP* (d) | -0.043 | 0.104 | -0.070** |
| | (0.03) | (0.08) | (0.03) |
| *WITHECOLLAR* | -0.272*** | -0.036 | -0.317*** |
| | (0.05) | (0.16) | (0.05) |
| *EXTKNOWL* (d) | 0.046 | 0.03 | 0.052 |
| | (0.03) | (0.07) | (0.03) |
| *INNOPROD* (d) | 0.069*** | 0.062 | 0.067*** |
| | (0.02) | (0.08) | (0.02) |
| *INNOPROC* (d) | 0.065*** | 0.07 | 0.064*** |
| | (0.02) | (0.06) | (0.02) |
| *TRAINING* | -0.259*** | -0.373*** | -0.256*** |
| | (0.04) | (0.12) | (0.04) |
| *DECENTR* (d) | -0.187*** | -0.185*** | -0.188*** |
| | (0.02) | (0.07) | (0.03) |
| *OWNERCONC* | -0.532*** | -0.434*** | -0.537*** |
| | (0.03) | (0.11) | (0.03) |
| *NBAKNS* | 0.137*** | 0.063 | 0.152*** |
| | (0.02) | (0.04) | (0.01) |
| *IPR* | -0.022 | -0.01 | -0.023 |
| | (0.01) | (0.03) | (0.02) |
| *FIXTERM* | 0.490*** | 0.401* | 0.519*** |
| | (0.08) | (0.22) | (0.09) |
| *ISO* (d) | -0.338*** | -0.368*** | -0.340*** |
| | (0.02) | (0.05) | (0.02) |
| *SPECORDER* (d) | 0.198*** | 0.242*** | 0.193*** |
| | (0.02) | (0.06) | (0.02) |
| *Industry dummy* | *Yes* | *Yes* | *Yes* |
| Obs | 4867 | 488 | 4379 |
| LogL | -2076.92 | -225.33 | -1816.89 |
| Chi2 | 919.134*** | 112.513*** | 862.352*** |

**Table 5 – Model with interaction terms: probit and logit estimates**

| | (1) Probit | (2) Logit |
|---|---|---|
| | DV: dummy = 1 if the firm is Italian, 0 otherwise | |
| *GLOBENG* (d) | -0.048 | -0.068 |
| | (0.14) | (0.16) |
| Log(*AGE*) | -0.068*** | -0.078*** |
| | (0.01) | (0.01) |
| Log(*SIZE*) | -0.096*** | -0.130*** |
| | (0.01) | (0.02) |
| *INTCOMP* (d) | -0.078*** | -0.070** |
| | (0.03) | (0.03) |
| *WITHECOLLAR* | -0.248*** | -0.291*** |
| | (0.04) | (0.05) |
| *EXTKNOWL* (d) | 0.067** | 0.057* |
| | (0.03) | (0.03) |
| *INNOPROD* (d) | 0.070*** | 0.071*** |
| | (0.02) | (0.02) |
| *INNOPROC* (d) | 0.074*** | 0.067*** |
| | (0.02) | (0.02) |
| Log(*AGE*)**GLOBENG* (d) | 0.008 | 0.002 |
| | (0.01) | (0.01) |
| Log(*SIZE*) **GLOBENG* (d) | 0.012 | 0.005 |
| | (0.03) | (0.04) |
| *INTCOMP* (d)**GLOBENG* (d) | 0.100 | 0.137** |
| | (0.06) | (0.06) |
| *WITHECOLLAR***GLOBENG* (d) | 0.056 | 0.143 |
| | (0.13) | (0.15) |
| *EXTKNOWL* (d)**GLOBENG* (d) | -0.048 | -0.037 |
| | (0.07) | (0.08) |
| *INNOPROD* (d)**GLOBENG* (d) | -0.047 | -0.027 |
| | (0.07) | (0.07) |
| *INNOPROC* (d)**GLOBENG* (d) | -0.01 | -0.019 |
| | (0.06) | (0.06) |
| *TRAINING* | -0.251*** | -0.261*** |
| | (0.03) | (0.04) |
| *DECENTR* (d) | -0.165*** | -0.188*** |
| | (0.02) | (0.02) |
| *OWNERCONC* | -0.515*** | -0.534*** |
| | (0.03) | (0.03) |
| *NBAKNS* | 0.084*** | 0.137*** |
| | (0.00) | (0.02) |
| *IPR* | -0.014 | -0.023 |
| | (0.01) | (0.01) |
| *FIXTERM* | 0.401*** | 0.494*** |
| | (0.06) | (0.08) |
| *ISO* (d) | -0.323*** | -0.338*** |
| | (0.02) | (0.02) |
| *SPECORDER* (d) | 0.191*** | 0.198*** |
| | (0.02) | (0.02) |
| *Industry dummy* | *Yes* | *Yes* |
| Obs | 4867 | 4867 |
| LogL | -2146.49 | -2073.28 |
| Chi2 | 1734.264*** | 918.576*** |

We believe the results of our analysis are important for two reasons. First of all, we provide support for the view according to which historical patterns of institutional differentiation continue to represent important criteria to compare socio-economic systems in contemporary capitalism. Secondly, on the managerial side, we show that even a paradigmatic and successful strategic profile like global engagement tends somehow to be adapted to the institutional features of the socio-economic system firms are embedded in. It follows that any type of managerial and/or policy interventions must take such degree of institutional embeddedness seriously, with interesting implications for policy design. First, similar interventions adopted in different countries cannot be implemented without considering possible uneven effects at the firm level: in some cases, improving and consolidating the long-term performance, in others, weakening it. Second, the same innovative or performance goals in different institutional and historical contexts, cannot be achieved through identical interventions, but require a combination of relatively general and country-specific tools.

**Acknowledgement**

We thank the participants to the SIEPI 2018 Annual Workshop at University of Ferrara, AISSEC 2018 Conference at University of Torino 2018, 2018 Management and Economics Seminar Series at University of Parma 2018 and SIE 2018 Conference at Emilia Romagna Region for the useful comments. The usual caveat applies.

**References.**

Altomonte, C. and Aquilante, T. (2012) 'The EU-EFIGE/Bruegel-Unicredit dataset', Working Papers, No. 753, Bruegel.

Altomonte, C., Aquilante, T., Békés, G. and Ottaviano, G. I. (2013) 'Internationalization and innovation of firms: evidence and policy', *Economic Policy*, 28(76), 663-700.

Amable, B. (2003) *The diversity of modern capitalism*. Oxford, Oxford University Press on Demand.

Amable, B. (2018) 'Diversity and the dynamics of capitalism', *European Journal of Economics and Economic Policies: Intervention*, 15(2), 238-248.

Amsden, A. H. (2001). *The rise of" the rest": challenges to the west from late-industrializing economies*. Oxford University Press, USA.

Andrews, D. and C. Criscuolo (2013) 'Knowledge-based capital, innovation and resource allocation', OECD Economics Department Working Papers, No. 1046, OECD Publishing, Paris.

Andrews, D., Criscuolo, C., and Gal, P. (2015) *Frontier firms, technology diffusion and public policy: micro evidence from OECD countries (Vol. 2)*, Paris, OECD Publishing.

Appelbaum, E., Bailey, T, Berg, P., and Kalleberg, A. (2000) *Manufacturing advantage*, Ithaca, NY, Cornell University Press.

Arrighetti, A., and Ninni, A. (2014) *La trasformazione 'silenziosa'. Cambiamento strutturale e strategie d'impresa nell'industria italiana*, Dipartimento di Economia Università di Parma, Collana di Economia Industriale e Applicata.

Arrighetti, A., Seravalli G., and Wolleb G., (2008) 'Social capital, institutions and collective action between firms'. In: Castiglione D., Van Deth J. and Wolleb, G. (eds) *Handbook of Social Capital*, Oxford, Oxford University Press, 520-550.

Arrighetti, A., and Traù, F. (2013) *Nuove strategie delle imprese italiane: competenze, differenziazione, crescita*, Roma, Donzelli Editore.

Aw, B., Roberts, M. J., and Winston, T. (2007) 'Export market participation, investments in R&D and worker training, and the evolution of firm productivity', *The World Economy*, 30(1), 83-104.

Aw, B., Roberts, M., and Xu, D. (2008) 'R&D investments, exporting, and the evolution of firm productivity', *American Economic Review*, 98(2), 451-456.

Aw, B., Roberts, M., and Xu, D. (2009) 'R&D investment, exporting, and productivity dynamics. NBER Working Paper No. 14670.

Aw, B. Y., Roberts, M. J., and Xu, D. Y. (2011). 'R&D investment, exporting, and productivity dynamics'*, American Economic Review*, 101(4), 1312-44.

Baccaro, L. and Howell, C. (2011) 'A common neoliberal trajectory: The transformation of industrial relations in advanced capitalism', *Politics & Society*, 39(4), 521-563.

Baldwin, J. R. and Gu, W. (2003) 'Export‐market participation and productivity performance in Canadian manufacturing', *Canadian Journal of Economics*, 36(3), 634-657.

Baldwin, J. R., and Hanel, P. (2003) *Innovation and knowledge creation in an open economy: Canadian industry and international implications*, Cambridge, UK, Cambridge University Press.

Barca F. and Magnani, M. (1989) *L'industria fra capitale e lavoro. Piccole e grandi imprese dall'autunno caldo alla ristrutturazione*, Bologna, Il Mulino.

Bartelsman, E., Haltiwanger, J., and Scarpetta, S. (2013) 'Cross-country differences in productivity: the role of allocation and selection', *American Economic Review*, 103(1), 305-34.

Bekkers, R., Verspagen, B., and Smits, J. (2002) 'Intellectual property rights and standardization: the case of GSM', *Telecommunications policy*, 26(3), 171-188.

Bernard, A. B., Jensen, J. B., and Lawrence, R. Z. (1995) 'Exporters, jobs, and wages in US manufacturing: 1976-1987', *Brookings Papers on Economic Activity. Microeconomics*, 1995, 67-119.

Bernard, A. B., Jensen, J. B., Redding, S. J., and Schott, P. K. (2007) 'Firms in international trade', *Journal of Economic perspectives*, 21(3), 105-130.

Bernard, A. B., Jensen, J. B., and Schott, P. K. (2009) 'Importers, exporters, and multinationals: a portrait of firms in the U.S. that trade goods'. In: Dunne, T., Jensen, J. B., Roberts, M. J. (eds) *Producer dynamics: new evidence from micro data*, Chicago, Chicago University Press, 513–52

Bloom, N., Genakos, C., Sadun, R., and Van Reenen, J. (2012) 'Management practices across firms and countries', *Academy of Management Perspectives*, 26(1), 12-33.

Bongardt, A., Torres, F., Hefeker, C., Wunsch, P., and Hermann, C. (2013) 'Convergence in the EU', *Intereconomics*, 48(2), 72-92.

Bouvet, F. (2007) 'Dynamics of regional income inequality in Europe and impact of EU regional policy and EMU', Annual North American Meeting of the Regional Science Association International, Savannah, GA, 2007.

Boyer, R. (1990) *The Regulation School: A Critical Introduction*, New York, Columbia University Press.

Brunello, G. (2002) 'Is training more frequent when wage compression is higher? Evidence form 11 European countries', CESifo Working Paper, No. 637 (4).

Bruton, G. D., Lau, C. M., and Obloj, K. (2014) 'Institutions, resources and firm strategies: a comparative analysis of entrepreneurial firms in three transitional economies', *European Journal of International Management*, 8(6), 697-720.

Burroni, L. and Trigilia, C. (2009) 'Italy: rise, decline and restructuring of a regionalized capitalism', *Economy and Society*, 38(4), 630-653.

Cassiman, B., Golovko, E., and Martínez-Ros, E. (2010) 'Innovation, exports and productivity', *International Journal of Industrial Organization*, 28(4), 372-376.

Castellani, D., and Zanfei, A. (2007) 'Internationalisation, innovation and productivity: how do firms differ in Italy?', *The World Economy*, 30(1), 156-176.

Clark, G. L., and Wójcik, D. (2005) 'Financial valuation of the German model: the negative relationship between ownership concentration and stock market returns, 1997–2001', *Economic Geography*, 81(1), 11-29.

Coltorti F. (2004), 'Le medie imprese italiane: nuovi aspetti economici e finanziari', *Economia e Politica Industriale*, 121, 5-26.

Conti, G. (2005) 'Training, productivity and wages in Italy', *Labour Economics*, 12(4), 557-576.

Cowles, M. G., Caporaso, J. A., and Risse-Kappen, T. (2001) *Transforming Europe: Europeanization and domestic change*, Ithaca, NY, Cornell University Press.

Criscuolo, C., Haskel, J., and Slaughter, M. (2004) 'Why are some firms more innovative? Knowledge inputs, knowledge stocks and the role of global engagement', Tuck School of Business, Mimeograph.

Criscuolo, C., Haskel, J. E., and Slaughter, M. J. (2010) 'Global engagement and the innovation activities of firms', *International Journal of Industrial Organization*, 28(2), 191-202.

Crouch, C. and Streeck, W. (1997) 'Il futuro della diversità dei capitalismi', *Stato e mercato*,

17(1), 3-30.

Deeg, R., and Jackson, G. (2007) 'Toward a more dynamic theory of capitalist variety', *Socio-Economic Review*, 5, 149–179.

Dore, R. P. (2000) *Stock market capitalism: Welfare capitalism: Japan and Germany versus the Anglo-Saxons*, Oxford, Oxford University Press.

Dutfield, G. (2009) *Intellectual Property Rights and the Life Science Industries: Past, Present, and Future*, Toh Tuck Link, World Scientific Publishing.

Edwards, J., and Nibler, M. (2000) 'Corporate governance in Germany: the role of banks and ownership concentration', *Economic Policy*, 15(31), 238-267.

Fletcher, M., Harris, S., & Richey, R. G., Jr. (2013). Internationalization knowledge: What, why, where, and when? *Journal of International Marketing*, 21(3), 47–71

Franks, J., and Mayer, C. (2001) 'Ownership and control of German corporations', *Review of Financial Studies*, 14(4), 943-977.

Giunta, A. and Rossi, S. (2017) *Che cosa sa fare l'Italia: La nostra economia dopo la grande crisi*, Bari, Gius. Laterza & Figli.

Golovko, E., and Valentini, G. (2011) 'Exploring the complementarity between innovation and export for SMEs' growth', *Journal of International Business Studies*, 42(3), 362-380.

Guariglia, A. and Bridges, S. (2008) 'Financial constraints, global engagement, and firm survival in the United Kingdom: evidence from micro data', *Scottish Journal of Political Economy*., 55 (4). pp. 444-464.

Hall, P. A. and Soskice, D. W. (2001) *Varieties of capitalism: The institutional foundations of comparative advantage*, Oxford, Oxford University Press.

Hall, P. (2009) 'Review: Re-forming the capitalism: institutional change in the German political economy (Oxford University Press) by Wolfgang Streeck', *European Journal of Sociology*, 50(3), 488-494.

Hall, P. A. and Gingerich, D. W. (2009) 'Varieties of capitalism and institutional complementarities in the political economy: An empirical analysis', *British Journal of Political Science*, 39(3), 449-482.

Hall, P. A., and Thelen, K. (2009) 'Institutional change in varieties of capitalism', *Socio-Economic Review*, 7(1), 7-34.

Harris, R., Moffat, J., and Li, Q. C. (2010) 'The impact of higher education institution-firm knowledge links on firm-level productivity in Britain', Scottish Institute for Research in Economics (SIRE) Working Paper, No. 2010-65.

Harris, R. and Moffatt, J. (2011) 'R&D, innovation and exporting. SERC Discussion Paper 73, March. London: Spatial Economics Research Centre (SERC).

Helpman, E., Melitz, M. J. and Yeaple, S. R. (2004) 'Export versus FDI with heterogeneous firms', *American Economic Review*, 94(1), 300-316.

Hotho, J. J. (2013) 'From typology to taxonomy: A configurational analysis of national business systems and their explanatory power', *Organization Studies*, 35(5), 671-702.

Ito, K. and Lechevalier, S. (2010) 'Why do some firms persistently outperform others? An investigation of the interactions between innovation and export strategies', RIETI Discussion Paper Series, No. 10-E-037.

Koren Y. (2010) *The global manufacturing revolution: product-process-business integration and reconfigurable systems*, New York, NY, John Wiley & Sons.

Lages, L. F., Silva, G. and Styles, C. (2009) 'Relationship capabilities, quality, and innovation as determinants of export performance', *Journal of International Marketing*, 17(4), 47-70.

Landini, F., Arrighetti, A. and Bartoloni, E. (2017) 'Sources of heterogeneity in firm performance: lessons from Italy', Department of Economics and Management Working Paper Series, University of Parma, No. 2017.02

Landini, F., and Pagano, U. (2019) 'Stakeholders' conflicts and corporate assets: an institutional meta-complementarities approach', *Socio-Economic Review*, forthcoming.

Love, J. H., and Roper, S. (2015) 'SME innovation, exporting and growth: A review of existing evidence', *International Small Business Journal*, 33(1), 28-48.

Lutz, S. (2004) 'Convergence within national diversity: the regulatory state in finance', *Journal of Public Policy*, 24(2), 169-197.

Ma, X., Yiu, D. W. and Zhou, N. (2014) 'Facing global economic crisis: Foreign sales, ownership groups, and corporate value', *Journal of World Business*, 49(1), 87-100.

Monfort, M., Cuestas, J. C., and Ordonez, J. (2013) 'Real convergence in Europe: A cluster analysis', *Economic Modelling*, 33, 689-694.

Molina, O. and Rhodes, M. (2007) 'The political economy of adjustment in mixed market economies: a study of Spain and Italy'. In Hancké, B., Rhodes, M. and Thatcher, M. (eds) *Beyond varieties of capitalism: conflict, contradictions, and complementarities in the European economy*, Oxford, Oxford University Press, 223–52.

Piore, S. and Sabel, C. (1984) *The second industrial divide*, New York, NY, Basic Books.

Quack, S. and Hildebrandt, S. (1995) 'Hausbank or Fournisseur? Bank services for small and medium sized enterprises in Germany and France', WZB Discussion Paper, No. FS I 95-102.

Rasiah, R. (2003). Foreign ownership, technology and electronics exports from Malaysia and Thailand. Journal of Asian Economics, 14, 785–811

Regini, M. (1995). 'La varietà italiana di capitalismo. Istituzioni sociali e struttura produttiva negli anni Ottanta', Stato e Mercato, 43(1), 3-26.

Rhodes, M. and van Apeldoorn, B. (1997) 'Capitalism versus Capitalism in Western Europe'. In Rhodes, M., Heywood, P. and Wrigh, V. (eds) *Developments in West European politics*, London, Macmillan, 171–89.

Shearmur, R., Doloreux, D., and Laperrière, A. (2015). 'Is the degree of internationalization associated with the use of knowledge intensive services or with innovation?', *International business review*, 24(3), 457-465.

Schmitter, P. and Streeck, W. (1985) *Private Interest Government*, London, Sage.

Schneider, M. R., and Paunescu, M. (2012) 'Changing varieties of capitalism and revealed

comparative advantages from 1990 to 2005: a test of the Hall and Soskice claims', *Socio-Economic Review*, 10(4), 731-753.

Schneider, M. R., Schulze-Bentrop, C. and Paunescu, M. (2010) 'Mapping the institutional capital of high-tech firms: a fuzzy-set analysis of capitalist variety and export performance', Journal of International Business Studies, 41(2), 246-266.

Sorge, A. and Streeck, W. (1988) 'Industrial relations and technical change: the case for an extended perspective'. In Hyman, R. and Streeck, W. (eds) *New Technology and Industrial Relations*. Oxford, Blackwell, 19–44.

Sorge, A., and Streeck, W. (2016) 'Diversified quality production revisited: the transformation of production systems and regulatory regimes in Germany', MPIfG Discussion Paper, No. 16/13.

Sorge, A., and Warner, M. (1986) *Comparative factory organization: An Anglo-German comparison of manufacturing management*, Aldershot, UK, Gower Publishing Company.

Soskice, D. (1997) 'German technology policy, innovation, and national institutional frameworks', *Industry and Innovation*, 4(1), 75-96.

Streeck, W. (2009) *Re-forming the capitalism: institutional change in the German political economy*. Oxford, Oxford University Press.

Streeck, W. (2014) *Buying time: the delayed crisis of democratic capitalism*, London, Verso Books.

Streeck, W. (2016) *How will capitalism end? Essays on a failing system*, London, Verso Books.

Syverson, C. (2011) 'What determines productivity?', *Journal of Economic literature*, 49(2), 326-65.

Thomas L. G. and D'Aveni R. (2009) 'The changing nature of competition in the US manufacturing sector, 1950-2002', *Strategic Organization*, 7(4), 387-431.

Tybout, J. R. (2001) 'Plant-and firm-level evidence on "new" trade theories', NBER Working Paper, No. w8418.

van Dijk, M. (2002). The Determinants of Export Performance in Developing Countries: The Case of Indonesian Manufacturing (Eindhoven Centre for Innovation Studies Working Paper, 02.01.

Wagner, J. (2007) 'Exports and productivity: a survey of the evidence from firm-level data', *The World Economy*, 30(1), 60-82.

Wignaraja, G. (2008) 'Ownership, technology and buyers: Explaining exporting in China and Sri Lanka', *Transnational Corporations*, 17(August (2)), 1–15

Witcher, B. J. and Chau, V. S. (2012) 'Varieties of capitalism and strategic management: managing performance in multinationals after the global financial crisis', *British Journal of Management*, 23, 58-7.

Zysman, J. (1984) *Governments, markets, and growth: financial systems and the politics of industrial change*, Ithaca, NY, Cornell University Press.