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**Internationalization and Performance  
of Italian Enterprises**

Valeria Gattai

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Dipartimento di Economia, Metodi Quantitativi e Strategie di Impresa  
Università degli Studi di Milano - Bicocca

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# Internationalization and Performance of Italian Enterprises

Valeria Gattai<sup>1</sup>

## Abstract

This paper surveys recent contributions about internationalization and performance of Italian enterprises. It covers both theoretical and empirical studies taking a microeconomic perspective and studying a potential link between firms' global involvement and heterogeneity in economic, human capital & innovation and financial measures. The discussion is organized in an intuitive and non-technical way. More than 40 papers are analyzed from a multifaceted perspective, considering their research outline, internationalization measures, performance indicators, causality and results.

**JEL:** F1, F2, L2

**Keywords:** Internationalization, Performance, Italy, Firm-level data, Survey

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<sup>1</sup> University of Milan Bicocca, DEMS; email: [valeria.gattai@unimib.it](mailto:valeria.gattai@unimib.it). Financial support from University of Milan Bicocca, Kites Bocconi and MIUR is gratefully acknowledged. The usual disclaimer applies.

## 1. Introduction

The last few decades have documented an impressive increase in firms' international involvement, drawing researchers' attention on the characteristics of international versus domestic enterprises.

Starting from the seminal contribution of Bernard and Jensen (1995), scholars all over the world have begun to investigate the relationship between internationalization and performance at the microeconomic level. They suggest that globally engaged enterprises tend to be a minority, compared with purely domestic players, but they perform better on a number of economic, human capital & innovation and financial indicators. This is one of the most striking evidence of the new millennium and it holds irrespective of the country and the year where the analysis is set.

If the first contributions based on US data, large longitudinal datasets have recently become available also in Europe, triggering new academic research on the topic. Among European countries, Italy counts for an exceptionally wide range of firm-level data sources thus providing a privileged locus to test Bernard and Jensen (1995)'s intuition. Yet, dozens of papers about internationalization and performance of Italian enterprises have been written in the last 20 years, across different fields of study - from International Economics to Industrial Organization - all sharing a microeconomic perspective and making use of firm-level information. This adds fresh evidence to the debate and provides very interesting findings. However, since most contributions ground on the same databases results are quite alike. Put another way, while many papers go over and over the same findings again, some important aspects are still ignored.

In light of the above discussion, the present manuscript is intended to provide a critical survey about internationalization and performance of Italian enterprises, namely a *synthesis* and an *evaluation* of the related literature. As a synthesis, it is suitable for scholars and practitioners in search of a comprehensive overview of the previous papers. As an evaluation, it should be of particular interest for those wishing to offer an original contribution, addressing the missing points of the existing studies. For these reasons, we try to keep a balance between a state-of-the-art description of the *past* research and a list of suggestions about a tentative *future* agenda.

The discussion is organized in an intuitive and non-technical way, so as to meet with the favour of a large audience. At the same time, we devote particular effort to analyze the different papers from many points of view, including their research outline, internationalization measures, performance indicators, causality and results. While the main text compares all 44 contributions on the basis of these issues, Table 1 focuses on one paper at a time. Therefore, we advise the reader to consider both parts together, to have a cross-literature overview first and in-depth analysis of the single contributions thereafter. To facilitate comparisons between Table 1 and the main text we keep the same titles in the columns of the former and the sections of the latter.

We believe this survey carries some important differences, compared with the previous ones on related issues. On the one hand, we narrow down the scope for research, delimiting more restrictively the literature of interest. Differently from Helpman (2006) and Tybout (2003), that overview various developments in trade theories, our focus is more specific on the link between internationalization and performance. Moreover, we restrict attention to firm-level studies, rather than reviewing both micro and macro contributions, as in Lopez (2005) and Singh (2010). Finally, we depart from Greenaway and Kneller (2007) and Wagner (2007) due

to the single country nature of the present study<sup>2</sup>. On the other hand, having identified the topic more precisely, this paper offers a richer description of the literature and gives a larger number of details. For instance, we investigate all forms of international involvement, rather than focusing only on export (Wagner 2007, Lopez 2005), import (Singh 2010) or foreign direct investment (FDI) (Greenaway and Kneller 2007). Then, we cover all performance variables, instead of restricting attention to productivity, as in Wagner (2007), Lopez (2005) and Singh (2010). Last, but not least, we comment more recent contributions, which is quite a relevant plus, given the fast growing nature of the literature of interest. For all these reasons, we believe this manuscript provides a complementary rather than an alternative picture with respect to the existing ones.

The remainder of the paper is organized as follows. Section 2 describes the research outline of the different studies; Sections 3 and 4 compare all internationalization and performance measures; Section 5 investigates causality issues and Section 6 contains the main results. Section 7 then concludes and sets future lines of research.

## **2. Research outline**

### ***2.1 Approach***

Roughly speaking, papers can be denoted as *empirical* or *theoretical*, based on their respective approach.

All contributions reviewed in this paper are empirical.

Adding to the empirical investigation, Basile (2001a, b), Becchetti and Gonzales (2001), Crinò and Epifani (2012) and Razzolini and Vannoni (2009, 2011) provide *also* a theoretical explanation of the link between internationalization and performance of Italian enterprises. In particular, using a simple short-run microeconomic model of export behaviour, Basile (2001a, b) show that export is positively correlated with firms' size, process innovation, group affiliation and the relative profitability of product innovation abroad and it is negatively correlated with firms' average labour cost and location in the South of Italy. In a partially different framework, Becchetti and Gonzales (2001) model firms' exporting decision as a function of size and ownership structure, predicting that larger enterprises and those characterized by lower degree of family ownership and higher number of controlling shareholders tend to export more. By extending Melitz (2003)'s framework to endogenous product quality and non-iceberg transportation costs, Crinò and Epifani (2012) prove that the correlation between export intensity and productivity is negative in trade with lower income and/or distant countries. Finally, Razzolini and Vannoni (2009, 2011) combine the choice of export and subcontracting, deriving a clear productivity ranking across different categories of foreign involvement. As a result, firms that export only are the best performing, while firms that work only as subcontractors of domestic enterprises are the worst.

### ***2.2 Data***

All contributions covered in the present survey base on firm-level longitudinal datasets, differing in terms of *type* and *source*.

As for the type of data, out of 44 papers, 42 focus on the manufacturing sector and 2 on the service one (Conti et al. 2010a, b); moreover, 40 develop a single country analysis,

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<sup>2</sup> One may argue that the single country nature of this study prevents from generalisation. However, it should be noted that it favours comparability of results getting rid of country fixed effects. Moreover, since this paper is structured as to highlight not only results but also data, empirical methodology and measurement issues it should be interesting, as a research agenda, independently of the reader's nationality.

considering only Italian enterprises and 4 take a cross-countries perspective using different datasets for individual economies (ISGEP 2008; Mayer and Ottaviano 2008), or a single harmonic database encompassing multiple home markets (Barba Navaretti et al. 2011, 2012). As for the sources, there is a good deal of variety. While most studies refer only to one data source, a few papers merge two of them, in order to exploit complementarities in the available information (Castellani and Zanfei 2007, Castellani and Giovannetti 2008, 2010, Castellani et al. 2010, Giovannetti et al. 2009, 2013, Serti and Tomasi 2008a, b, 2012, Serti et al. 2010) or employ different sources alternatively, as a robustness check for their empirical results (Barba Navaretti et al. 2007; Ferragina and Quintieri (2001)

In what follows, we provide a brief description of each data source to allow comparisons in terms of size, time span, stratification and focus. Rather than following the alphabetical order, we list the various sources from the most to the least widely used.

- *Mediocredito Centrale/ Capitalia*. This is main sample survey on Italian enterprises, carried on by a large banking institution on a periodical base. It was managed by Mediocredito Centrale until 1997, by Capitalia until 2003 and by Unicredit thereafter. Data are collected through a multiple choice questionnaire, sent every 3 years to around 4,000 companies. The survey covers all Italian firms with more than 500 employees and a stratified sample (by size, industry and location) of firms from 11 to 500 employees. While part of the sample in each wave is fixed, the other is completely renewed; the choice of firms to be dropped and added is casual, but still aimed at maintaining the stratified nature of the data. Until 2001, the survey involved only manufacturing enterprises, but starting from the 9<sup>th</sup> wave (2001-2003) it was extended to the service industry. As far as the focus is concerned, Mediocredito Centrale/Capitalia contains both quantitative and qualitative information, ranging from balance sheet details, to business, employment, innovation, management and internationalization (export, offshoring, FDI and foreign penetration operations). At this stage, it should be mentioned that this dataset is basically a longitudinal one: even if each wave covers three years, most questions refer to the entire period, which makes it impossible to set panel regressions, unless two or more waves are merged. However, this exercise is not always feasible, since the questionnaire design changes from time to time. See Table 1 for more details about the 31 papers in which Mediocredito Centrale/Capitalia data are employed.

- *Capitalia + ICE-Reprint*. In 4 out of 44 papers, Capitalia data are merged with information from the ICE-Reprint database. While the former has been extensively described above, the latter provides a census of inward and outward FDI in Italy for firms with a turnover larger than 2.5 mln Euro. As far as the inward (outward) side is concerned, the ICE-Reprint database displays the contact details of the parent (Italian) company and its Italian (foreign) affiliate, by home (host) country. Castellani and Giovannetti (2008, 2010), Giovannetti et al. (2009, 2013) use the ICE-Reprint database to detect Italian enterprises engaged in FDI on a yearly base<sup>3</sup>, defined as those having foreign affiliates in a particular point in time. Hence, in their papers, performance indicators are fully derived from Capitalia, while internationalization measures come both from Capitalia and ICE-Reprint.

- *Micro1 + COE*. Administered by ISTAT, the Italian central statistical office, Micro1 is a longitudinal dataset containing balance sheet information on the universe of Italian manufacturing firms with more than 20 employees. Data are collected every year, for about 20,000 enterprises. COE represents ISTAT's external trade register and it provides firm-level information on export and import over the 1990s. All incoming (import) and outgoing (export) invoices are registered, so that it is possible to keep track of all international

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<sup>3</sup> The Capitalia survey identifies foreign direct investors across the entire three-year period covered in each wave, not on a yearly base.

transactions of Italian enterprises. In particular, COE displays information on trade status and volumes, destination of export and origin of import. Castellani et al. (2010), Serti and Tomasi (2008a, b, 2012) and Serti et al. (2010) merge these two datasets to obtain a large panel (around 15,000-20,000 firms per year) with performance indicators derived from Micro1 and internationalization measures from COE.

- *EFIGE*. These data have been collected in 2008 within the research project “European Firms in a Global Economy” (EFIGE). To the best of our knowledge, it represents the first attempt at collecting ex ante homogeneous data on a cross-country base, by means of a common questionnaire, administered by GfK Eurisko. The sample includes around 3,000 manufacturing firms for France, Spain and Italy, more than 2,000 for UK and Germany and 500 for Austria and Hungary. The sampling design follows stratification by sector and firm size; to correct for the over-representation of large companies and guarantee representativeness, a weighted procedure is adopted. The result is a large dataset including both qualitative and quantitative information on firms’ structure, employment, investment, innovation, internationalization (import, export, FDI and international outsourcing) and finance, adding to balance sheet details from Amadeus. All questions concern the year 2008, with a very few extensions to 2009 and 2007; therefore, EFIGE turns out to be a cross-sectional database. Barba Navaretti et al. (2011, 2012) make use of EFIGE data to analyze the link between internationalization and performance of Italian, adding to European enterprises.

- *Invind*. The Invind database has been administered by the Bank of Italy since 1972 and it surveys manufacturing firms with more than 20 employees, for around 2,000 observations every year. Although the main focus of this census may vary from year to year, information on balance sheet items and internationalization (export) is always included. This gives Invind a panel structure, even if it is employed in Barba Navaretti et al. (2007) and Bugamelli and Gallo (2012) only on a cross-sectional base.

- *Centrale dei bilanci*. Established in the early 1980s, jointly by the Bank of Italy, the Italian Banking Association and a pool of leading banks, Centrale dei Bilanci is an organization in charge of gathering and managing yearly-base information on borrowers belonging to the manufacturing sector. The result is a large panel dataset, containing balance sheet and internationalization (export) details for approximately 30,000 firms per year. These firms are not randomly drawn, but rather selected as borrowers from one of the pooled banks, which skews the sample towards larger companies, located in the North of Italy. To the best of our knowledge, only Bugamelli and Infante (2003) employ Centrale dei Bilanci data to study the link between internationalization and performance of Italian enterprises.

- *CIS + ELIOS*. The Community Innovation Survey (CIS) is a survey administered by Eurostat and involving enterprises from all European countries. It aims at assessing various aspects of firms’ innovative behaviour and performance by means of a common questionnaire. The European Linkage and Ownership Structure (ELIOS) is a dataset, developed by the University of Urbino, which combines information from Dun & Bradstreet’s Who Owns Whom and Bureau van Dijk’s Amadeus. Data refer to the year 1996 and they cover approximately 800 Italian manufacturing firms. As far as the internationalization strategies are concerned, ELIOS distinguishes among export, productive FDI and commercial FDI. By merging CIS and ELIOS, Castellani and Zanfei (2007) derive a cross sectional database to explore the link between innovation, export and FDI.

- *Federmeccanica*. Ferragina and Quintieri (2001) use the Federmeccanica database to study the economic performance of exporters versus domestic enterprises in 1995. Data have a longitudinal nature, they capture around 2,400 enterprises and they cover only one industry, mechanics, within the manufacturing sector. Balance sheet information is very detailed,

especially for what concerns employment and wages; on the contrary, the only information about internationalization is on the export status and intensity.

- *Indagine Regione Marche*. The Indagine Regione Marche cross-sectional dataset originates from a field study, carried out as part of a research project, funded by Regione Marche in 1996, on the technological opportunities and organizational constraints of firms located in a regional area classified as “objective 2” (i.e. an area, in the EU, affected by industrial decline and to which European Structural Funds are devoted). The sample is stratified by size, industry and location; within the manufacturing sector, only “supplier dominated” and “specialized suppliers”<sup>4</sup> are included. As mentioned in Sterlacchini (1999), 143 firms out of 150 answered a multiple choice questionnaire, focused on balance sheet items, innovation and internationalization (export).

- *SDOE*. Campanini and Falzoni (2001) ground their empirical research on the SDOE Archive by Infocamere. This is a longitudinal database containing balance sheet and internationalization details of about 700 exporters. The sample is further restricted by firms’ size, industry and geography, since SDOE covers only small and medium enterprises, belonging to the manufacturing sector and located in the province of Bergamo. Data have a cross-sectional nature and they refer to the year 1994. Since all sampled enterprises are exporters, the only information about internationalization exploited in Campanini and Falzoni (2001) is about export intensity, to distinguish between firms that export more or less than 20% of their sales.

### ***2.3 Empirical strategy***

By and large, the empirical strategy adopted in the different papers consists in a combination of descriptive statistics and econometric regressions, to better explore the relationship between internationalization and performance. A few exceptions are due to Bonaccorsi (1992) that employ only descriptive statistics and Castellani (2002), Crinò and Epifani (2012), Giovannetti et al. (2009, 2013), Serti and Tomasi (2008a) and Serti et al. (2010) that provide only econometric analysis.

Depending on data availability, most authors run cross sectional regressions, while panel estimates appear only in Bugamelli and Infante (2003), Castellani et al. (2010), Castellani and Giovannetti (2008), Imbruno (2008a, b), ISGEP (2008), Razzolini and Vannoni (2009, 2011), Serti and Tomasi (2008 a, b, 2012), and Serti et al. (2010).

More details about the econometric models are described in Table 1.

## **3. Internationalization measures**

This section is entirely devoted to internationalization measures. In (3.1) we present all categories of international involvement considered in the existing literature. In (3.2) we discuss the main comparison strategies to investigate heterogeneity in performance between international versus domestic players.

### ***3.1 Categories of international involvement***

Taking advantage of the rich datasets available in Italy and described in Section 2.2, firms’ international involvement is measured quite exhaustively throughout the literature. To facilitate comparisons among the different papers and have a clue on the most widely used proxies, our discussion is organized as follows. First we identify the main classes of

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<sup>4</sup> See Bell and Pavitt (1993).

international involvement and characterize their relative importance by looking at the number of contributions dealing with them. Second, for each category, we describe in details the available measures.

- *Export*. It is the most widely used class of international involvement, appearing in 42 out of 44 contributions. It is considered both as the only category of foreign exposure, to study performance premia of exporters versus domestic enterprises, and together with import, two-way trading and FDI, to see whether performance premia vary with different degrees of internationalization. It is measured as export status (a dummy taking value 1 for exporters), status of “big exporters” (a dummy taking value 1 for “big exporters”, namely firms exporting more than a certain threshold that may vary throughout the literature), status of exporters by geographical area (a dummy taking value 1 for firms exporting to a given geographical area that may vary throughout the literature), export value, export growth rate (growth rate of export value), export intensity (export over sales), number of destinations, number of exporters, number of exported goods and number of foreign clients.

- *FDI*. It is the second most widely used category of foreign involvement, considered in 12 out of 44 contributions. It is always combined with other means of internationalization, such as export, import, international outsourcing, foreign penetration operations, commercial or production partnerships and offshoring. It is measured as FDI status (a dummy taking value 1 for investors), status of production FDI (a dummy taking value 1 for investors in production FDI), status of commercial FDI (a dummy taking value 1 for investors in commercial FDI), number of investors and FDI intensity (percentage of firm’s turnover from FDI).

- *Import*. The link between import and performance of Italian enterprises is analyzed only in Castellani et al. (2010), Serti and Tomasi (2008b, 2012), Serti et al. (2010). Import is never considered alone, vis-à-vis domestic operations, but always combined with export and two-way trading. It is measured as import status (a dummy taking value 1 for importers), number of imported goods, number of origins, status of importers by geographical area (a dummy taking value 1 for firms importing from a given geographical area) and status of “big importers” (a dummy taking value 1 for firms importing more than a certain threshold that may vary throughout the literature).

- *Two-way trading*. All papers dealing with import also include two-way trading, to characterize foreign involvement of firms engaged both in import *and* in export. This enables authors to disentangle performance premia due to sole import, sole export, or the sum of the two, comparing players belonging to these classes among themselves and with domestic enterprises. Two-way trading is usually measured through a status variable (a dummy taking value 1 for firms engaged in import and export).

- *Subcontracting*. Subcontracting is an internationalization mode that embraces all sales of articles which are ordered in advance and where marketing duties rest with the giver of the order (Sharpston 1975). It involves two firms, namely a buyer and a seller. In Giunta and Scalera (2007), the seller is Italian and the buyer is a foreign enterprise, while Razzolini and Vannoni (2009, 2011) analyze the opposite scenario. Subcontracting is considered both alone (Giunta and Scalera 2007) or together with export (Razzolini and Vannoni 2009, 2011). The available measures include subcontracting status and intensity.

- *Offshoring*. It is defined as firms’ choice to realize part of their production process in a foreign country, no matter whether internally or externally with respect to their boundaries. Only 3 out of 44 contributions include offshoring and consider it alone (Benfratello et al. 2009) or together with export (Casaburi et al. 2007; Castellani 2007) and FDI (Casaburi et al. 2007). Offshoring is measured as offshoring status (a dummy taking value 1 for offshorers)



and status of offshorers by geographical area (a dummy taking value 1 for firms offshoring to a given geographical area that may vary throughout the literature).

- *International partnerships.* International partnerships denote a non equity internationalization mode involving commercial or production collaboration between Italian and foreign enterprises. They are considered only in Bugamelli et al. (2000, 2001), compared with export and FDI. They are simply measured through the status of commercial partnership and the status of production partnership.

- *International outsourcing.* International outsourcing is defined as firms' choice to externalize part of their production process to an independent foreign enterprise. It appears only in Barba Navaretti et al. (2011), together with export and FDI. It is measured as international outsourcing intensity (percentage of firm's turnover from international outsourcing) and the number of outsourcers.

- *Foreign penetration operations.* This label is employed in Basile et al. (2003) to gather various types of sales outlets, promotional initiatives and trade agreements. Foreign penetration operations are never considered alone, as the only category of foreign involvement, but rather combined with export and FDI. They are measured as foreign penetration operations status.

### **3.2 Comparison strategy**

Having described all categories of international involvement, it is worth spending a few words on the comparison strategies adopted in the literature.

Remember that the main goal of the surveyed papers is to investigate a potential link between internationalization and performance of Italian enterprises. Therefore, identifying some categories of foreign exposure (as in 3.1) is the first step to study performance differences of global versus domestic enterprises. The second step then relates to the comparison strategy, namely the choice on how to compare performance of firms characterized by different degree of internationalization.

A careful inspection of the literature suggests that there are two main comparison strategies. Those who opt for the first strategy build one variable for each class of foreign exposure and then compare global enterprises with themselves and with domestic players. Suppose, for instance, that the dataset contains information on export and FDI status. In this case, there would be one dummy for exporters and one for firms engaged in FDI. In the end, authors would be able to compare performance of exporters versus investors versus domestic players. Those who opt for the second strategy consider, instead, one variable encompassing all categories of international exposure and build an index of increasing foreign involvement. In the previous example, there would be only one discrete variable, combining export, FDI and domestic operations. Then, authors would study how performance varies with changes in the values of the above mentioned index.

To be quite honest, the large majority of the papers take the first perspective and only 2 of them choose the second. In particular, Basile et al. (2003) consider a foreign expansion index taking value 0 for domestic enterprises, 1 for exporters, 2 for firms engaged in export and foreign penetration operations and 3 for firms engaged in export, foreign penetration operations and FDI. This measure clearly reflects the idea that different internationalization modes are complements rather than substitutes. Indeed, it is built according to a cumulative process in which each category incorporates the previous one. A similar view is taken by Benfratello and Razzolini (2009) where internationalization is a discrete variable taking value

1 for domestic enterprises, 2 for firms engaged in export and 3 for firms engaged in export and FDI.

#### **4. Performance indicators**

Performance indicators can be grouped into three main categories, called economic, human capital & innovation and financial variables. In what follows we characterize their relative importance and describe all the available measures.

##### **4.1 Economic**

Economic variables are the most widely used performance indicators in the literature of interest. They appear in 39 out of 44 papers and capture different aspects of firms' life and balance sheet details. Economic variables include:

- *Size*. It is proxied by the number of employees, sales and sales per employee.
- *Productivity*. It is defined as labour productivity (value added per employee), growth rate of labour productivity and Total Factor Productivity (TFP), estimated through econometric procedures<sup>5</sup>.
- *Wage*. It is measured as average wage, wage of blue collars and wage of white collars.
- *Age*. It is defined as the difference between year  $t$ , when the analysis is set and the year of foundation.
- *Capital* and *capital intensity* (capital per employee). They appear in numeric values.
- *Value added* and *value added per capital*. They appear in numeric values.
- *Investment in tangible assets*. It appears in numeric values.
- *International experience*. It is defined as a dummy for past experience as an exporter, a dummy for the number of destinations, a dummy for the type of distribution channels, a dummy for executives working abroad, the number of foreign affiliates and a dummy for commercial or technical collaboration with foreign enterprises.
- *Type of ownership and control*. It is proxied by a dummy for family ownership, a dummy for foreign ownership, a dummy for the type of controlling party (individual, holding, institution and foreign control), the share of executives related to the family or individual who owns the firm and the number of controlling shareholders.
- *Type of customers*. It is defined as a dummy for selling to large companies and a dummy for selling to small and medium enterprises (SMEs).
- *Labour flexibility*. It is measured with a dummy for employing any form of labour considered as flexible by the Italian law.
- *District affiliation*. It is proxied by a dummy for district affiliation.
- *Group affiliation*. It is defined as a dummy for group affiliation.
- *Survival probability*. It is considered as a minimum performance requirement and defined as the difference between year  $t$ , when the analysis is set and the year of foundation plus 1.

##### **4.2 Human capital & innovation**

This type of variables characterizes firms' endowment of intangible resources. They are the second most widely used performance indicators, appearing in 23 out of 44 contributions. They include:

- *Human capital* indicators, such as the share of white collars, the share of blue collars, the share of graduates, the share of permanent employees and the share of R&D personnel.

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<sup>5</sup> More details about TFP estimation can be found in Castellani and Giovannetti (2010) and Crinò and Epifani (2012), where several econometric techniques are compared.

- *Innovation variables*, measured as Research & Development (R&D) investment, R&D investment per employee, R&D investment per sale, investment in intangible assets, a dummy for R&D investment, Information Technology (IT) investment per employee, Information & Communication Technology (ICT) investment, a dummy for hardware investment, a dummy for software and TeLeCommunication (TLC) investment, a dummy for product innovation, a dummy for product or process innovation, a dummy for process or service innovation, a dummy for investment to reduce the use of raw materials, a dummy for investment to reduce the use of labour force, a dummy for investment to improve firm's product quality, a dummy for investment to improve firm's productivity, a dummy for technical collaboration with competitors/clients/suppliers, a dummy for investment to develop new products, the share of investment in innovative plants, the share of innovation costs due to purchase of innovation capital, the share of innovation costs due to purchase of engineering and pre-product development, the level of automation of the production process, a dummy for patent application, a dummy for firm's certification, the number of PC per employee and the number of years since the first ICT was adopted.

### **4.3 Financial**

Even though financial variables complete the picture about firms' performance, giving precious information on their health, they are rarely studied in conjunction with internationalization of Italian enterprises.

To the best of our knowledge, the only exception is due to Giunta and Scalera (2007), where Return on Investment (ROI) is included in the empirical analysis.

## **5. Causality**

Having described the existing papers' research outline, internationalization measures and performance indicators, it is worth spending a few words on causality issues. While all surveyed contributions investigate a potential *correlation* between firms' internationalization and performance, they differ in terms of *causality* direction and econometric tricks to deal with it.

### **5.1 Direction**

There are two alternative although not mutually exclusive hypotheses why firms engaged in international activities could be better performing than domestic enterprises.

The first hypothesis, called *self-selection (SS)*, suggests that causality runs from performance to internationalization. According to this view, there are *ex-ante* performance differences between firms that will become international and firms that will keep serving the domestic market. The intuition is that operating abroad involves additional costs - related to transportation, marketing, human capital and production - that provide a natural entry barrier to less successful firms. Put another way, more performing enterprises self select into the international markets, because they are the only players that can afford the extra costs of doing business abroad. To be concise, we adopt the following notation:

$$\text{Internationalization} = f(\text{Performance}, \text{Control}) \quad (1)$$

Equation (1) says that, under the self-selection assumption, internationalization is considered as a function of performance and control variables.

The second hypothesis, called *learning-by-internationalization (LI)*, postulates that causality runs the other way round, from internationalization to performance. In this sense, *ex-post* performance differences emerge as a result of firms' exposure to the international arena. This

learning process is likely to occur through three channels. First, interacting with foreign competitors and customers, firms derive information about reducing costs and quality rising processes; second, operating abroad, firms increase their scale and become more efficient; third, competing in foreign markets, firms are strongly encouraged to invest in R&D and innovate a lot to keep pace with their rivals. For all these reasons, globally-engaged enterprises are expected to improve faster than domestic players, thus improving their performance. Consistently with (1), the following notation is employed:

$$Performance = f(Internationalization, Control) \quad (2)$$

Equation (2) says that, under the learning-by-internationalization assumption, performance is considered as a function of internationalization and control variables.

The great bulk of the surveyed papers makes the self-selection hypothesis and runs regressions accordingly; the econometric model is set as in (2) only in 13 out of 44 studies, while Casaburi et al. (2007), Castellani (2002), Ferragina and Quintieri (2001), Imbruno (2008a), ISGEP (2008) and Serti and Tomasi (2008a, 2012) consider both sides of causality. At this stage, it is worth mentioning that this classification of papers simply bases on how econometric regressions are sketched, namely on the choice of internationalization measures and performance indicators as regressor or regressand.

## 5.2 Econometric tricks

While it is possible to identify the underlying assumption of SS or LI in all the surveyed papers, seeing whether the empirical model resembles (1) or (2), only a few contributions take causality issues as seriously as to employ sophisticated econometric tricks to deal with them. In the rest of the literature, statistically significant coefficients are simply interpreted as a signal of correlation, rather than causality, independently from the regressor/regressand choice. Econometric tricks to deal with causality include: lagged variables, panel data, the study of performance dynamics and an explicit test for causality. A brief description of each tool is provided below.

- *Lagged variables.* Once lagged variables are introduced, equation (1) becomes:

$$Internationalization_{it} = f(Performance_{i(t-k)}, Control_{it}) \quad i = 1..n \quad k = 1..(t-1) \quad (1')$$

The intuition is straightforward. Under the self-selection assumption, to assert the effect of performance on internationalization, foreign involvement of firm  $i$  at time  $t$  is regressed on firm's  $i$  performance on a previous point in time, generically called  $t-k$ , to correct for possible simultaneity bias.

Similarly, equation (2) becomes:

$$Performance_{it} = f(Internationalization_{i(t-k)}, Control_{it}) \quad i = 1..n \quad k = 1..(t-1) \quad (2')$$

In (2'), performance of firm  $i$  at time  $t$  is regressed on firm's  $i$  foreign involvement at  $t-k$ , to investigate a potential effect of internationalization on economic, human capital & innovation and financial variables. Lagged variables appear in Basile (2001 a, b), Bratti and Felice (2012), Castellani (2002) and Sterlacchini (2001).

- *Panel data.* When panel data are available, the SS and LI equations look like:

$$Internationalization_{it} = f(Performance_{it}, Control_{it}) \quad i = 1..n \quad t = 1..l \quad (1'')$$

$$Performance_{it} = f(Internationalization_{it}, Control_{it}) \quad i = 1..n \quad t = 1..l \quad (2'')$$

Differently from the previous case, here internationalization variables and performance indicators take values on multiple years, which enables researchers to correctly assess the causality direction, overcoming the limits of a cross-sectional analysis. Panel data are

employed in Bugamelli and Infante (2003), Castellani and Giovannetti (2008), Castellani et al. (2010), Imbruno (2008b), Razzolini and Vannoni (2009, 2011), Serti and Tomasi (2008b) and Serti et al. (2010).

- *Study of performance dynamics*

Following Pavcnik (2002), Casaburi et al. (2007) report the evolution over time of a productivity index by industry, defined as TFP of firm  $i$  at time  $t$  minus mean industry  $j$  productivity in the base year, as shown in Equation (3).

$$TFPindex_{it} = (y_{it} - \hat{y}_{it}) - (y_j - \hat{y}_j) = TFP_{it} - TFP_j \quad i = 1..n \quad j = 1..m \quad t = 1..l \quad (3)$$

In particular, they aggregate individual TFP through a weighted average, where weights are given by each firm's value added share with respect to total value added in the same year. Indexes are then normalized taking 1998 as a base year. The intuition for looking at performance dynamics to deal with causality issues is straightforward. If firms involved in international operations at time  $t$  turn out to be outperforming in dynamic (adding to static) terms, namely from year  $t$  on, evidence is in favour of a learning process, according to which internationalization affects performance. On the contrary, if the productivity dynamics of globally engaged enterprises is not any better than the one of domestic players, the self-selection argument receives empirical support.

- *Explicit test for causality.* To perform a proper test for causality, it is crucial to compare the performance of firms that become international (called international starters) versus firms that keep serving the domestic market during a given period of time. This is the strategy of Ferragina and Quintieri (2001), Imbruno (2008a), ISGEP (2008) and Serti and Tomasi (2008a, 2012).

Under the SS hypothesis, better players become international. This means that we should expect to find significant differences in performance indicators between future international starters and future non starters several years before some of them become international. Put another way, to correctly assess the self-selection argument, we need to check whether today's international starters were more performing than today's non starters in the past, when none of them operated abroad. Formally, the following model is estimated:

$$Performance_{it-k} = f(Internationalization_{it}, Control_{it-k}) \quad i = 1..n \quad k = 1..(t-1) \quad (1''')$$

In (1''') all firms that did not internationalize between  $t-k$  and  $t-1$  are selected and the average difference in performance indicators in year  $t-k$  between those firms that internationalized in  $t$  and those that did not are computed.

To test the second hypothesis, namely that international involvement fosters performance, post-entry differences in performance indicators growth rates between international starters and non starters need to be investigated. A formal test thus compares firms that did not internationalize between  $t-k$  and  $t-1$ , but did so in  $t$  and at least a couple of years between  $t+1$  and  $t+k$  (the so called international starters) and firms that did not internationalize in any year between  $t-k$  and  $t+k$ . The estimated equation is set as follows:

$$Performance_{it+k} - Performance_{it+1} = f(Internationalization_{it}, Control_{it}) \quad i = 1..n \quad k = 1..(t-1) \quad (2''')$$

## 6. Results

This section reviews the most important findings about internationalization and performance of Italian enterprises. It is organized in two subsections: (6.1) comments the degree of internationalization of the Italian economy and (6.2) summarizes the main performance premia or discounts related to foreign exposure. Doing this way, we intend to compare the

Italian experience with the general wisdom, according to which globally engaged enterprises are “the happy few”. This famous label, appearing in Mayer and Ottaviano (2008), suggests that firms engaged in international business tend to be a minority in the respective populations, but they enjoy a superior performance compared with domestic players.

### ***6.1 Degree of internationalization***

Most of the surveyed papers (33) present empirical evidence on the degree of internationalization of the Italian economy. This results from the intersection between the so called intensive and extensive margins of internationalization (Mayer and Ottaviano 2008). The intensive margin tells how many firms are engaged in global operations, while the extensive margin says how much these players are actually involved in international business, according to different parameters such as the number of markets, the number of goods, the volume of trade, the percentage of trade etc.

Intensive and extensive margins vary with category of foreign involvement.

For instance, exporters seem to be the majority of Italian enterprises. Depending on the dataset, they turn out to be 60%, 65%, 67%, 69% or 75% of the entire population. Results slightly change if we dissect data by historical period, intensity, industry and geographical area. Indeed, Bugamelli and Infante (2003) document that exporters were the minority during the 1980s, but they became the majority one decade later. Campanini and Falzoni (2001), Castellani et al. (2010) and Mayer and Ottaviano (2008) report that “big”<sup>6</sup> exporters are the minority of Italian enterprises. Conti et al. (2010 a, b) find that exporters of services are just 24% of the entire population. Finally, Barba Navaretti et al. (2008) show that export in the South of Italy is more concentrated than in the North. Broadly speaking, export seems to be highly concentrated, given that a small group of big traders is responsible for a large amount of trade (Casaburi et al. 2007; Castellani et al. 2010; ISGEP 2008; Mayer and Ottaviano 2008).

Empirical evidence about import and two-way trading resembles the one on export, since both activities involve more than 50% of Italian firms and they are clearly controlled by a small number of big players (Serti and Tomasi 2008b, 2012; Serti et al. 2010).

Results are quite different if we look, instead, at foreign direct investment. Depending on the dataset, firms engaged in FDI turn out to be only 6%, 8%, 9%, 10% or 11% of the entire population (Barba Navaretti et al 2011; Bugamelli et al. 2000, 2001; Casaburi et al. 2007; Castellani and Giovannetti 2008, 2010; Giovannetti et al. 2009, 2013) and the same applies to international partnerships (Bugamelli et al. 2000, 2001), offshoring (Casaburi et al. 2007) and international outsourcing (Barba Navaretti et al. 2011).

Finally, a few papers simply report that Italian firms exposed to international business of any kind are the majority, without distinguishing by category of foreign involvement (Basile et al. 2003; Benfratello and Razzolini 2009; Castellani and Zanfei 2007)<sup>7</sup>.

To conclude, Italian actors moving in the international stage are not “few” at all, which stands at odds with the overall picture of Lopez (2005), Wagner (2007), Greenaway and Kneller (2007) and Singh (2010). Even though they are not few, one might still wonder if they are “happy”. The following subsection summarizes the main findings on this.

### ***6.2 Performance premia/discounts***

The great bulk of the literature emphasizes the existence of performance premia related to foreign exposure of Italian enterprises. This means that globally engaged firms are “happy”,

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<sup>6</sup> See Section 3 for a definition of “big exporters”.

<sup>7</sup> In this case, results are probably driven by the massive presence of exporters in the respective datasets.

namely they turn out to be better than domestic enterprises on a number of economic, human capital & innovation and financial variables. This holds irrespective of the data and the causality direction, running from internationalization to performance or the other way round. Only a few studies (8) identify performance discounts related to foreign involvement. For instance, Benfratello et al. (2009) show that more investment in innovation is associated with less offshoring; Bugamelli and Infante (2003) find that average wage has a negative impact on firms' probability to export; age is negatively correlated with production partnerships in Bugamelli et al. (2000, 2001); productivity is negatively correlated with subcontracting in Giunta and Scalera (2007) and Razzolini and Vannoni (2009, 2011), negatively correlated with export intensity to low income destinations and not correlated with export intensity to high income destinations in Crinò and Epifani (2012).

Those who believe that globally engaged enterprises are happy usually make two types of arguments. First, for each category of foreign involvement, they show that firms belonging to that specific class are better than domestic players. This holds for export, import, two-way trading, FDI, international outsourcing, offshoring, foreign penetration operations, subcontracting and international partnerships. Second, a few papers encompassing multiple categories of foreign involvement identify a clear performance ranking for players with different degree of internationalization. For instance, Benfratello and Razzolini (2009) find that productivity of firms engaged in export and FDI is higher than productivity of exporters, which is higher than productivity of domestic players. Casaburi et al. (2007) show that offshorers of final goods are more productive than offshorers of inputs and exporters. Castellani and Zanfei (2007) prove that firms engaged in production FDI are more productive and innovative than firms engaged in commercial FDI which, in turn, are more productive than exporters. In Serti and Tomasi (2008b, 2012), Castellani et al. (2010) and Serti et al. (2010), two-way traders are better than importers which, in turn, are better than exporters, based on all performance indicators. Finally, in Mayer and Ottaviano (2008) and Castellani and Giovannetti (2008, 2010), firms engaged in FDI are more productive than exporters which, in turn, are more productive than domestic players. More details are available in Table 1.

## **7. Conclusion**

This manuscript surveys recent contributions about internationalization and performance of Italian enterprises, adopting a microeconomic view and making use of firm-level data. More than 40 papers have been carefully analyzed according to a multifaceted perspective that takes into account their research outline, internationalization measures, performance indicators, causality and results. We believe this was a useful exercise to highlight some robust findings that are summarized below.

First, Italian enterprises engaged in international business are the majority. This is not obvious given the massive presence of small and medium firms across Italian industries. Despite their small scale, local firms show a neat international attitude.

Second, Italian firms involved in foreign operations turn out to be better than their domestic counterparts, on a number of economic, human capital & innovation and financial variables. This means that there exist a strong correlation between internationalization and performance. Third, there is evidence both in favour of a self-selection and a learning-by-internationalization argument. Put another way, better Italian firms tend to operate abroad but, at the same time, operating abroad is likely to foster their economic performance.

While the reader should be familiar with the second result - which is quite established in the international debate - she would probably be surprised by the first and the third that somehow contradict the general wisdom. Indeed, globally engaged enterprises from Italy are a lot, not few as in the rest of the world (6.1); moreover, they learn from the international arena and not simply self-select into the export market, as their foreign counterparts (5.1).

While these findings might be biased by the data employed in the empirical analysis, they still point to the existence of an “Italian case” that deserves more attention. How?

We strongly believe that a good answer would come from the data. On the one hand, the availability of large surveys of Italian enterprises triggered academic research on the topic, and stimulated the fast growing literature reviewed in this paper. Data were there, researchers simply had to use them. It was relatively comfortable and quick. On the other hand, most of these surveys were not originally designed to deal with the internationalization/performance issue. Hence, they carry two important limitations that potentially plague the descending empirical literature. First, they contain lots of information that is useless to investigate the topic while lacking crucial ones. Second, given that dozens of papers share the same data source, it is very hard to find new evidence and diversify empirical findings across the various contributions.

A possible solution against these problems would come from collection of original data. This could involve survey interviews of a large sample of Italian enterprises, in-depth case studies or a mix of the two. The questionnaire should be designed as to embrace all aspects of internationalization and performance that are potentially relevant for empirical purposes. For instance, all performance variables could be included. This would correct for the over-representation of economic against human capital & innovation and financial indicators in the existing studies. At the same time, all classes of foreign involvement could be carefully identified, to balance the overwhelming attention paid to export so far<sup>8</sup>. Finally, the questionnaire could be designed as to explore a large number of details for each internationalization strategy, allowing for a better dissection of trade. For example: what is the object of export? Do Italian firms trade intermediate products, final goods or collateral services? Which activities are kept within firms’ boundaries and which are usually externalized?

Collecting data is a hard and long process, but it might be challenging as well. For this reason, we recommend researchers to take this chance seriously, going one step further in dissecting the Italian case.

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<sup>8</sup> While export is surely more common than other internationalization strategies, we suspect it has been widely investigated because it was easier to measure. Categories of foreign involvement such as FDI, subcontracting, outsourcing or offshoring often result from authors’ elaborations from many distinct questions of the Mediocredito Centrale/Capitalia – or similar – surveys. However, elaborations of this sort necessarily entail a very low number of observations, due to missing values.



Table 1: Research outline, internationalization measures, performance indicators, causality and results in the surveyed papers.

1. Study	2. Research outline	3. Internationalization measures	4. Performance indicators	5. Causality	6. Results
Barba Navaretti et al. (2007)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003); Invind (2000-2005)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS, Probit, Ordered Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (growth rate; status; status of “big exporters”, i.e. firms exporting more than 40% of sales in more than 3 countries)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees, sales) - age - productivity (TFP) - type of ownership &amp; control (dummy for the type of controlling party: individual, holding, institution, foreign control)</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars - share of blue collars - share of R&amp;D personnel - n. of PC per employee - years since first ICT was adopted - dummy for R&amp;D investment</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%).</p> <p><b>6.2 Performance premia/discounts:</b> Big exporters are older, larger and more productive; they enjoy more investments in R&amp;D, more foreign control and a higher share of white collars and R&amp;D personnel, than firms with less exposure to export.</p>
Barba Navaretti et al. (2008)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; status of “big exporters”, i.e. firms exporting more than 40% of sales in more than 3 countries)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees) - age - productivity (TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of blue collars - share of graduates - share of R&amp;D personnel - dummy for R&amp;D investment</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Export, in the South of Italy, is more concentrated than in the rest of the country.</p> <p><b>6.2 Performance premia/discounts:</b> Big exporters are larger, older, more productive and they enjoy a higher share of graduates and R&amp;D personnel, a lower share of blue collars and more R&amp;D investment than firms with less exposure to export. Average values in the South are lower than in the North, except for productivity. Moreover, being located in the South decreases firms' probability of being big exporters.</p>
Barba Navaretti et al. (2011)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b></p>	<p><b>3.1 Categories of international involvement:</b> - export (intensity; n. of</p>	<p><b>4.1 Economic:</b> - size (employees) - productivity (labour productivity)</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b></p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%).</p>

	<ul style="list-style-type: none"> <li>- Type: manufacturing sector, cross-countries analysis (Austria, France, Germany, Hungary, Italy, Spain, UK)</li> <li>- Source: Efige (2008)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Descriptive statistics</li> <li>- Regressions: cross-section (OLS, LPM)</li> </ul>	<p>exporters; n. of destinations)</p> <ul style="list-style-type: none"> <li>- FDI (intensity; n. of investors)</li> <li>- international outsourcing (intensity; n. of outsourcers)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.2 Human capital &amp; innovation:</b></p> <ul style="list-style-type: none"> <li>- share of blue collars</li> <li>- share of graduates</li> <li>- R&amp;D investment per sale</li> <li>- dummy for product innovation</li> </ul> <p><b>4.3 Financial:</b></p> <p>none</p>	<p>none</p>	<p>Firms engaged in FDI or international outsourcing are the minority (6%).</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>The n. of exporters, investors and outsourcers increases with firms' size, productivity, human capital and innovation.</p>
Barba Navaretti et al. (2012)	<p><b>2.1 Approach:</b></p> <ul style="list-style-type: none"> <li>- Empirical</li> </ul> <p><b>2.2 Data:</b></p> <ul style="list-style-type: none"> <li>- Type: manufacturing sector, cross-countries analysis (Austria, France, Germany, Hungary, Italy, Spain, UK)</li> <li>- Source: Efige (2008)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Descriptive statistics</li> <li>- Regressions: cross-section (Probit, OLS)</li> </ul>	<p><b>3.1 Categories of international involvement:</b></p> <ul style="list-style-type: none"> <li>- export (value; status; status of exporters to China and India)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b></p> <ul style="list-style-type: none"> <li>- size (employees)</li> <li>- productivity (labour productivity)</li> <li>- international experience (dummy for executives working abroad for at least one year)</li> <li>- type of ownership &amp; control (dummy for family ownership; share of executives related to the family/individual who owns the firm)</li> </ul> <p><b>4.2 Human capital &amp; innovation:</b></p> <p>none</p> <p><b>4.3 Financial:</b></p> <p>none</p>	<p><b>5.1 Direction:</b></p> <ul style="list-style-type: none"> <li>- self-selection</li> </ul> <p><b>5.2 Econometric tricks:</b></p> <p>none</p>	<p><b>6.1 Degree of internationalization:</b></p> <p>none</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>Exporters enjoy larger size, productivity and international experience, less centralized control and family ownership than non exporters. Within the group of exporters, those selling to China and India are the best performing.</p>
Basile (2001a, b)	<p><b>2.1 Approach:</b></p> <ul style="list-style-type: none"> <li>- Theoretical</li> <li>- Empirical</li> </ul> <p><b>2.2 Data:</b></p> <ul style="list-style-type: none"> <li>- Type: manufacturing sector, single country analysis</li> <li>- Source: Mediocredito Centrale (1989-1991; 1992-1994; 1995-1997)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Descriptive statistics</li> <li>- Regressions: cross-section (Probit, Tobit, Cragg model, sample selection model)</li> </ul>	<p><b>3.1 Categories of international involvement:</b></p> <ul style="list-style-type: none"> <li>- export (status; intensity)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b></p> <p>none</p> <p><b>4.2 Human capital &amp; innovation:</b></p> <ul style="list-style-type: none"> <li>- dummy for product/process innovation</li> <li>- dummy for investment to improve firm's product quality</li> <li>- dummy for investment to improve firm's productivity</li> <li>- dummy for investment to develop new products</li> <li>- dummy for investment to reduce the use of raw materials</li> <li>- dummy for investment to reduce the use of labour force</li> </ul> <p><b>4.3 Financial:</b></p> <p>none</p>	<p><b>5.1 Direction:</b></p> <ul style="list-style-type: none"> <li>- self-selection</li> </ul> <p><b>5.2 Econometric tricks:</b></p> <ul style="list-style-type: none"> <li>- lagged variables</li> </ul>	<p><b>6.1 Degree of internationalization:</b></p> <p>Exporters are the majority (60%).</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>Innovation is positively correlated with export. However innovation and export are less pronounced in the South of Italy than in the rest of the country.</p>

Basile et al. (2003)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1989-1991; 1992-1994; 1995-1997)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Ordered Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - foreign penetration operations (status) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable encompassing all categories to build an index of increasing foreign involvement.</p>	<p><b>4.1 Economic:</b> none</p> <p><b>4.2 Human capital &amp; innovation:</b> - dummy for product/process innovation - dummy for investments to develop new products - dummy for investments to reduce the use of labour force</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Firms engaged in international operations of any kind are the majority of Italian enterprises.</p> <p><b>6.2 Performance premia/discouts:</b> More foreign involvement is associated with more innovative effort.</p>
Becchetti and Rossi (2000)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1989-1991)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit, Tobit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - dummy for district affiliation</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discouts:</b> Being located in a district has a positive correlation with firms' export probability and export intensity.</p>
Becchetti and Gonzales (2001)	<p><b>2.1 Approach:</b> - Theoretical - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1992-1994)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit, Logit, Conditional log-log, Tobit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees) - type of ownership and control (dummy for family ownership; number of controlling shareholders)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discouts:</b> Firms' size is positively correlated with the export probability and intensity, while family ownership and the number of controlling shareholders are negatively correlated.</p>
Benfratello and Razzolini (2009)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Multinomial Logit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable encompassing all categories to build an index of increasing foreign involvement.</p>	<p><b>4.1 Economic:</b> - productivity (TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Firms engaged in international operations of any kind are the majority (75%).</p> <p><b>6.2 Performance premia/discouts:</b> Productivity of firms engaged in export and FDI is higher than productivity of exporters, which is higher than productivity of domestic players.</p>

Benfratello et al. (2009)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit, Maximum Likelihood)</p>	<p><b>3.1 Categories of international involvement:</b> - offshoring (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> none</p> <p><b>4.2 Human capital &amp; innovation:</b> - dummy for hardware investment - dummy for software and TLC investment</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> More investment in innovation is associated with less offshoring.</p>
Bonaccorsi (1992)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1986-1988)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - size (employees)</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority.</p> <p><b>6.2 Performance premia/discounts:</b> Size is positively correlated with firms' export probability, not correlated with export intensity.</p>
Bratti and Felice (2012)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (1998-2000; 2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> none</p> <p><b>4.2 Human capital &amp; innovation:</b> - dummy for product innovation</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - lagged variables</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority.</p> <p><b>6.2 Performance premia/discounts:</b> Export has a positive impact on innovation.</p>
Bugamelli et al. (2000, 2001)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1989-1991; 1992-1994; 1995-1997)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status) - international partnerships (status of commercial partnership; status of production partnership)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees) - age</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority. Firms engaged in FDI or international partnerships are the minority.</p> <p><b>6.2 Performance premia/discounts:</b> Size is positively correlated with all internationalization measures. Age is positively correlated with export, negatively correlated with production partnerships, and not correlated with FDI and commercial partnerships.</p>

Bugamelli and Infante (2003)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Centrale dei Bilanci (1982-1999)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Random Effect Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees) - productivity (labour productivity) - international experience (dummy for past experience as an exporter) - dummy for group affiliation - dummy for district affiliation - wage</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> - panel data</p>	<p><b>6.1 Degree of internationalization:</b> Exporters were the minority (35%) during the 1980s, but they became the majority (60%) one decade later.</p> <p><b>6.2 Performance premia/discounts:</b> Size, productivity, past experience as an exporter and location within a group/district increase firms' probability to export, while the average wage has a negative impact.</p>
Bugamelli and Gallo (2012)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Invind (2007-2010)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status of "big exporters", i.e. firms exporting more than 15 mln Euro in 2007)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees, sales) - productivity (labour productivity) - value added - international experience (dummy for commercial or technical collaboration with foreign enterprises, number of foreign affiliates) - wage - type of ownership &amp; control (dummy for family ownership, dummy for foreign ownership) - investment in tangible assets</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars - share of graduates - share of foreign employees - share of permanent employees - R&amp;D investment - dummy for investment in intangible assets</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Big exporters are the minority (11%).</p> <p><b>6.2 Performance premia/discounts:</b> Big exporters have larger size, value added, productivity, R&amp;D investment, investment in intangible assets, international experience; they pay higher wages and exhibit a larger share of white collars, foreign employees, graduates than the rest of the sample. On the contrary, big exporters display less investment in tangible assets and lower probability of family ownership.</p>
Campanini and Falzoni (2001)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: SDOE (1994)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status of "big exporters", i.e. firms exporting more than 20% of sales)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (employees, sales) - international experience (dummy for n. of destinations; dummy for type of distribution channel)</p> <p><b>4.2 Human capital &amp; innovation:</b> - dummy for firm's certification</p> <p><b>4.3 Financial:</b></p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Big exporters are the minority.</p> <p><b>6.2 Performance premia/discounts:</b> Export is positively correlated with international experience, while it is not affected by size and innovation.</p>

Casaburi et al. (2007)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (1998-2000; 2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status) - offshoring (status; status of offshorers in EU; status of offshorers of inputs; status of offshorers of final goods)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p>none</p> <p><b>4.1 Economic:</b> - size (employees, sales) - productivity (labour productivity, TFP) - capital intensity - wage</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - TFP dynamics (evidence in favour of self-selection)</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%). Firms engaged in FDI (8%) and offshoring (7%) are the minority. Export is concentrated in the hands of top 1%, top 5%, top 10% of exporters.</p> <p><b>6.2 Performance premia/discounts:</b> Firms engaged in any international activity are better performing than domestic players. As far as productivity is concerned, offshorers of final goods are more productive than offshorers of inputs and exporters.</p>
Castellani (2002)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1989-1991; 1992-1994)</p> <p><b>2.3 Empirical strategy:</b> - Regressions: cross-section (Probit, Tobit, QL-PW, OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity);</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity; growth rate of labour productivity)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - lagged variables</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> Productivity does not affect firms' export status, but it positively affects export intensity. Export intensity has a positive impact on productivity, while export status has none.</p>
Castellani (2007)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS, Probit, Tobit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - offshoring (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (sales per employee)</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars - share of blue collars - share of graduates - share of R&amp;D personnel - R&amp;D investment - ICT investment - dummy for product/process innovation</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> Exporters and offshorers are larger, more productive, more innovative and they employ better human capital than domestic players.</p>

Castellani and Zanfei (2007)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: CIS (1994-1996) + ELIOS (1996)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status of production FDI, status of commercial FDI)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity; TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> - dummy for patent application - dummy for product/process innovation - dummy for technical collaboration with competitors/clients/suppliers</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Firms engaged in international activities are the majority of Italian enterprises.</p> <p><b>6.2 Performance premia/discounts:</b> Firms engaged in production FDI are more productive and innovative than firms engaged in commercial FDI which, in turn, are more productive than exporters.</p>
Castellani and Giovannetti (2008)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (1998-2000; 2001-2003) + Ice Reprint (2001)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Pooled OLS, fixed effects)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity; TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - panel data</p>	<p><b>6.1 Degree of internationalization:</b> Exporters (not engaged in FDI) are the majority (65%). Firms engaged in FDI are the minority (10%).</p> <p><b>6.2 Performance premia/discounts:</b> Firms engaged in FDI are more productive than exporters which, in turn, are more productive than domestic players.</p>
Castellani et al. (2010)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: MICRO1 (1989-1997) + COE (1993-1997)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Pooled OLS, fixed effects)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; n. of exported goods; n. of destinations) - import (status; n. of imported goods; n. of origins) - two-way trading (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity; TFP) - size (employees, sales) - capital intensity</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> - panel data</p>	<p><b>6.1 Degree of internationalization:</b> Firms trading many goods in many markets are the minority of traders, but they are responsible for a good deal of Italian trade.</p> <p><b>6.2 Performance premia/discounts:</b> Two-way traders perform better than importers which, in turn, perform better than exporters, according to all performance indicators.</p>
Castellani and Giovannetti (2010)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (1998-2000; 2001-2003) + Ice Reprint (2001)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%). Firms engaged in FDI are the minority (9%).</p> <p><b>6.2 Performance premia/discounts:</b> Firms engaged in FDI are more productive than exporters which, in turn, are more productive than domestic players.</p>

<p>Conti et al. (2010a, b)</p>	<p><b>2.1 Approach:</b> - Empirical <b>2.2 Data:</b> - Type: service sector, single country analysis - Source: Capitalia (2001-2003) <b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit, Truncated regressions)</p>	<p><b>3.1 Categories of international involvement:</b> - export (intensity; status; status of exporters to EU; status of exporters to extra EU; status of exporters to extra EU industrial countries) <b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity) - age - dummy for group affiliation - type of customers (dummy for selling to large companies; dummy for selling to SMEs) - labour flexibility (dummy for employing any form of labour considered as flexible by the Italian law) <b>4.2 Human capital &amp; innovation:</b> - share of graduates - dummy for service/process innovation <b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection <b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters, in the service industry, are the minority (24%). <b>6.2 Performance premia/discounts:</b> Selling to large companies, belonging to industrial groups and firms' age are positively correlated with the export status. Human capital and productivity are positively correlated with the status of exporters to more distant countries. More flexible labour and a lower share of national sales are positively correlated with the export intensity. Innovation is positively correlated with the export intensity to more distant countries.</p>
<p>Crinò and Epifani (2012)</p>	<p><b>2.1 Approach:</b> - Theoretical - Empirical <b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003) <b>2.3 Empirical strategy:</b> - Regressions: cross-section (Truncated regression)</p>	<p><b>3.1 Categories of international involvement:</b> - export (intensity) <b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (TFP) <b>4.2 Human capital &amp; innovation:</b> none <b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection <b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%). <b>6.2 Performance premia/discounts:</b> Productivity is negatively correlated with firms' export intensity to low income destinations, and not correlated with export intensity to high income destinations.</p>
<p>Ferragina and Quintieri (2001)</p>	<p><b>2.1 Approach:</b> - Empirical <b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1995-1997); Federmeccanica (1995) <b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity) <b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity, TFP) - size (employees, sales) <b>4.2 Human capital &amp; innovation:</b> - share of white collars - share of graduates - R&amp;D investment per employee - IT investment per employee - share of investment in innovative plants <b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization <b>5.2 Econometric tricks:</b> - explicit test for causality (support to self-selection)</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75% according to Mediocredito Centrale data, 65% according to Federmeccanica data). <b>6.2 Performance premia/discounts:</b> By and large there exists a positive correlation between export and all performance indicators.</p>



Giovanetti et al. (2009)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003) + Ice Reprint (2001)</p> <p><b>2.3 Empirical strategy:</b> - Regressions: cross-section (duration analysis, Cox proportional hazard regressions)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - survival probability</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%). Firms engaged in FDI are the minority (11%).</p> <p><b>6.2 Performance premia/discounts:</b> Internationalization is positively correlated with firms' survival probability. Large internationalized firms are more likely to survive.</p>
Giovanetti et al. (2013)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (2001-2003) + Ice Reprint (2001)</p> <p><b>2.3 Empirical strategy:</b> - Regressions: cross-section (cross sectional time series non linear model with GLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; status of exporters to EU25) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (sales)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (75%). Firms engaged in FDI are the minority (11%).</p> <p><b>6.2 Performance premia/discounts:</b> Firms engaged in international operations of any kind are larger than domestic players.</p>
Giunta and Scalera (2007)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: (Capitalia 1995-1997; 1998-2000)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (OLS, GMM)</p>	<p><b>3.1 Categories of international involvement:</b> - subcontracting (intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity) - value added per capital - wage</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> - ROI</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> Subcontracting is positively correlated with firms' performance indicators. However, it is negatively correlated with productivity, wage and value added per capital for firms located in the South.</p>
Imbruno (2008a)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: (Capitalia 1998-2000; 2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Pooled, OLS, fixed effects, random effects)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - explicit test for causality (evidence in favour of self-selection)</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are more the majority (more than 70%).</p> <p><b>6.2 Performance premia/discounts:</b> Exporters are more productive than domestic enterprises.</p>

Imbruno (2008b)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Capitalia (1998-2000; 2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Pooled, OLS, fixed effects, random effects)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - panel data</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (more than 70%).</p> <p><b>6.2 Performance premia/discouts:</b> Export status and export intensity have a positive impact on firms' productivity, and this effect is larger the more integrated the geographical area.</p>
ISGEP (2008)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, cross-countries analysis (Austria, Belgium, Chile, China, Colombia, Denmark, France, Germany, Italy, Ireland, Slovenia, Spain, Sweden, UK) - Source: (for Italy) MICRO1 (1989-1997) + COE (1993-1997)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Logit), panel (Pooled OLS, fixed effects)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (sales per employee) - productivity (labour productivity; TFP)</p> <p><b>4.2 Human capital &amp; innovation:</b> none</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - explicit test for causality (support to self-selection in all countries, to learning-by-internationalization only in Italy)</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the majority (69% in Italy). Export is concentrated in the hands of top 1%, top 5%, top 10% of exporters.</p> <p><b>6.2 Performance premia/discouts:</b> Exporters are more productive than domestic firms. Productivity premia increase with export intensity in all countries. However, they are larger the lower the participation rates and GDP per capita, the more restrictive the trade policies, the less effective the government, the worse the regulatory quality and the more distant the destination market.</p>
Mayer and Ottaviano (2008)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, cross-countries analysis (Belgium, Germany, France, Hungary, Italy, Norway, UK) - Source: (for Italy) Capitalia (1998-2000; 2001-2003)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics</p>	<p><b>3.1 Categories of international involvement:</b> - export (value; status; intensity; n. of destinations; n. of exported goods; n. of foreign clients) - FDI (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity; TFP) - size (employees) - capital intensity - wage - value added</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> Exporters are the minority in all the sampled countries, except for Italy. Export is concentrated in the hands of large exporters (defined in terms of value, intensity, n. of foreign clients and n. of destinations).</p> <p><b>6.2 Performance premia/discouts:</b> Exporters and firms engaged in FDI are better than domestic players, with respect to all performance indicators. Moreover, firms engaged in FDI are more productive than exporters which, in turn, are more</p>

					productive than domestic players.
Razzolini and Vannoni (2009, 2011)	<p><b>2.1 Approach:</b></p> <ul style="list-style-type: none"> <li>- Theoretical</li> <li>- Empirical</li> </ul> <p><b>2.2 Data:</b></p> <ul style="list-style-type: none"> <li>- Type: manufacturing sector, single country analysis</li> <li>- Source: Capitalia (1998-2000; 2001-2003)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Descriptive statistics</li> <li>- Regressions: panel (Pooled OLS)</li> </ul>	<p><b>3.1 Categories of international involvement:</b></p> <ul style="list-style-type: none"> <li>- export (status)</li> <li>- subcontracting (status)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b></p> <ul style="list-style-type: none"> <li>- productivity (labour productivity; TFP)</li> </ul> <p><b>4.2 Human capital &amp; innovation:</b></p> <p>none</p> <p><b>4.3 Financial:</b></p> <p>none</p>	<p><b>5.1 Direction:</b></p> <ul style="list-style-type: none"> <li>- learning-by-internationalization</li> </ul> <p><b>5.2 Econometric tricks:</b></p> <ul style="list-style-type: none"> <li>- panel data</li> </ul>	<p><b>6.1 Degree of internationalization:</b></p> <p>Exporters are the majority, and many of them are also subcontractors.</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>Exporters are more productive than non exporters. Subcontractors are less productive than non subcontractors.</p>
Serti and Tomasi (2008a)	<p><b>2.1 Approach:</b></p> <ul style="list-style-type: none"> <li>- Empirical</li> </ul> <p><b>2.2 Data:</b></p> <ul style="list-style-type: none"> <li>- Type: manufacturing sector, single country analysis</li> <li>- Source: MICRO1 (1989-1997) + COE (1993-1997)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Regressions: panel (Pooled OLS)</li> </ul>	<p><b>3.1 Categories of international involvement:</b></p> <ul style="list-style-type: none"> <li>- export (n. of exporters; value; intensity; status)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b></p> <ul style="list-style-type: none"> <li>- productivity (labour productivity, TFP)</li> <li>- size (employees, sales)</li> <li>- capital</li> <li>- capital intensity</li> <li>- wage</li> </ul> <p><b>4.2 Human capital &amp; innovation:</b></p> <ul style="list-style-type: none"> <li>- share of white collars</li> </ul> <p><b>4.3 Financial:</b></p> <p>none</p>	<p><b>5.1 Direction:</b></p> <ul style="list-style-type: none"> <li>- self-selection</li> <li>- learning-by-internationalization</li> </ul> <p><b>5.2 Econometric tricks:</b></p> <ul style="list-style-type: none"> <li>- explicit test for causality (support to both hypothesis)</li> </ul>	<p><b>6.1 Degree of internationalization:</b></p> <p>none</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>There exists a positive correlation between export and all performance indicators.</p>
Serti and Tomasi (2008b)	<p><b>2.1 Approach:</b></p> <ul style="list-style-type: none"> <li>- Empirical</li> </ul> <p><b>2.2 Data:</b></p> <ul style="list-style-type: none"> <li>- Type: manufacturing sector, single country analysis</li> <li>- Source: MICRO1 (1989-1997) + COE (1993-1997)</li> </ul> <p><b>2.3 Empirical strategy:</b></p> <ul style="list-style-type: none"> <li>- Descriptive statistics</li> <li>- Regressions: panel (Pooled OLS, fixed effects)</li> </ul>	<p><b>3.1 Categories of international involvement:</b></p> <ul style="list-style-type: none"> <li>- export (status; status of exporters to EU; status of exporters to High-Medium Income Countries; status of exporters to Low Income Countries; status of exporters to more than one area)</li> <li>- import (status; status of importers from EU; status of importers from High-Medium Income Countries; status of importers from Low Income Countries; status of importers from more than one area)</li> <li>- two-way trading (status)</li> </ul> <p><b>3.2 Comparison strategy:</b></p> <p>One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b></p> <ul style="list-style-type: none"> <li>- productivity (labour productivity, TFP)</li> <li>- size (employees, sales)</li> <li>- capital intensity</li> </ul> <p><b>4.2 Human capital &amp; innovation:</b></p> <ul style="list-style-type: none"> <li>- share of white collars</li> </ul> <p><b>4.3 Financial:</b></p> <p>none</p>	<p><b>5.1 Direction:</b></p> <ul style="list-style-type: none"> <li>- learning-by-internationalization</li> </ul> <p><b>5.2 Econometric tricks:</b></p> <ul style="list-style-type: none"> <li>- panel data</li> </ul>	<p><b>6.1 Degree of internationalization:</b></p> <p>Traders are the majority (75%) and many of them (65%) are two-way traders. Moreover, trade is more concentrated in high income, large and nearby destinations.</p> <p><b>6.2 Performance premia/discounts:</b></p> <p>Two-way traders are better than importers which, in turn, are better than exporters, in term of all performance indicators. Moreover, trade premia are market specific. Firms trading in more geographical areas are the best performing. Among exporters, those selling outside the EU are the best performing; the opposite is true for importers.</p>

Serti et al. (2010)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: MICRO1 (1989-1997) + COE (1993-1997)</p> <p><b>2.3 Empirical strategy:</b> - Regressions: panel (OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; status of “big exporters”, i.e. firms exporting more than 50%, 70%, 90% of sales to EU, High-Medium Income Countries, Low Income Countries, more than one area) - import (status; status of “big importers”, i.e. firms importing more than 50%, 70%, 90% of sales from EU, High-Medium Income Countries, Low Income Countries, more than one area) - two-way trading (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - wage - wage of blue collars - wage of white collars</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - panel data</p>	<p><b>6.1 Degree of internationalization:</b> Traders are the majority. In particular, exporters account for 67%, importers for 62% and two-way traders for 56%.</p> <p><b>6.2 Performance premia/discounts:</b> Two-way traders are better than importers which, in turn, are better than exporters, in term of wage and skill premia. Firms exporting to/importing from more distant markets exhibit larger wage and productivity premia.</p>
Serti and Tomasi (2012)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: MICRO1 (1989-1997) + COE (1993-1997)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: panel (Pooled OLS)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; status of “big exporters”, i.e. firms exporting more than 50%, 70%, 90% of sales to EU, High-Medium Income Countries, Low Income Countries, more than one area) - import (status; status of “big importers”, i.e. firms importing more than 50%, 70%, 90% of sales from EU, High-Medium Income Countries, Low Income Countries, more than one area) - two-way trading (status)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - productivity (labour productivity, TFP) - size (employees) - capital intensity</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of white collars</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection - learning-by-internationalization</p> <p><b>5.2 Econometric tricks:</b> - explicit test for causality (support to self-selection)</p>	<p><b>6.1 Degree of internationalization:</b> Traders are the majority (75%) and many of them are two-way traders. Moreover, trade is more concentrated in the EU and High-Medium Income Countries.</p> <p><b>6.2 Performance premia/discounts:</b> Two-way traders are better than importers which, in turn, are better than exporters, in term of all performance indicators. Moreover, trade premia are market specific, and they depend on some macroeconomic variables such as geographical distance and the level of development.</p>
Sterlacchini (1999)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Indagine Regione Marche (1994-1996)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (sales)</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of innovation costs due to purchase of innovation capital - share of innovation costs due to purchase of engineering and pre-product development</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> none</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> Small firms belonging to non high-tech intensive sectors innovate a lot. This innovative activity is positively correlated with export</p>

	- Regressions: cross-section (Probit, Tobit)		- level of automation of the production process <b>4.3 Financial:</b> none		intensity, while export probability is increasing in size.
Sterlacchini (2001)	<p><b>2.1 Approach:</b> - Empirical</p> <p><b>2.2 Data:</b> - Type: manufacturing sector, single country analysis - Source: Mediocredito Centrale (1989-1991)</p> <p><b>2.3 Empirical strategy:</b> - Descriptive statistics - Regressions: cross-section (Probit, Tobit)</p>	<p><b>3.1 Categories of international involvement:</b> - export (status; intensity)</p> <p><b>3.2 Comparison strategy:</b> One variable for each category, to compare international enterprises with themselves and with domestic players.</p>	<p><b>4.1 Economic:</b> - size (sales)</p> <p><b>4.2 Human capital &amp; innovation:</b> - share of R&amp;D personnel - dummy for product/process innovation</p> <p><b>4.3 Financial:</b> none</p>	<p><b>5.1 Direction:</b> - self-selection</p> <p><b>5.2 Econometric tricks:</b> - lagged variables</p>	<p><b>6.1 Degree of internationalization:</b> none</p> <p><b>6.2 Performance premia/discounts:</b> There exists a positive correlation between size and export only for small firms. For small firms, export is positively correlated with process innovation; for medium enterprises, export is positively correlated with the share of R&amp;D personnel.</p>

## 8. References

Barba Navaretti G., Bugamelli M., Faini R., Schivardi F. and A. Tucci (2007) *Le imprese e la specializzazione produttiva dell'Italia. Dal macrodeclino alla microcrescita?*, Crenos, Miscellaneous Publication.

Barba Navaretti G., Basile R., Benfratello L., Castellani D., Cerisola S. and A. Salvi (2008) *Le imprese e il mercato internazionale: quali prospettive per il Mezzogiorno italiano?*, Luca D'Agliano Policy Report.

Barba Navaretti G., Bugamelli M., Schivardi F., Altomonte C., Horgos D. and D. Maggioni (2011) *The Global Operations of European Firms*, Second EFIFE Policy Report, Bruegel, 12.

Barba Navaretti G., Bugamelli M., Cristadoro R. and D. Maggioni (2012), *Do Firms Exporting to China and India Look Different?*, Bank of Italy Occasional Papers, *Questioni di Economia e Finanza*, 112.

Basile R. (2001a) *Export Behaviour of Italian Manufacturing Firms over the Nineties: The Role of Innovation*, *Research Policy*, 30(8), 1185-1201.

Basile R. (2001b) *Innovazione e propensione ad esportare delle imprese italiane e ruolo del Mezzogiorno*, in Quintieri B. (Editor) *Le imprese esportatrici italiane: caratteristiche, performance e internazionalizzazione*, Il Mulino: Bologna, 119-147.

Basile R., Giunta A. and J.B. Nugent (2003) *Foreign Expansion by Italian Manufacturing Firms in the Nineties: an Ordered Probit Analysis*, *Review of Industrial Organization*, 23(1), 1-24.

Becchetti L. and S.P.S. Rossi (2000) *The Positive Effect of Industrial District on the Export Performance of Italian Firms*, *Review of Industrial Organization*, 16(1), 53-68.

Becchetti L. and J.H.S. Gonzales (2001) *Struttura proprietaria e accesso ai mercati esteri delle piccole e medie imprese italiane*, in Quintieri B. (Editor) *Le imprese esportatrici italiane: caratteristiche, performance e internazionalizzazione*, Il Mulino: Bologna, 187-217.

Bell, M. and Pavitt, K. (1993) *Accumulating Technological Capability in Developing Countries*, *World Bank Economic Review*, Supplement, 257-281.

Benfratello L. and Razzolini T., (2009) *Firms' Productivity and Internationalisation Choices: Evidence from a Large Sample of Italian Firms*, in Piscitello L. and G. Santangelo (Editors) "Multinationals and local competitiveness", Franco Angeli, 2009.

Benfratello L., Razzolini T. and A. Sembenelli (2009) *Does ICT Investment Spur or Hamper Offshoring? Empirical Evidence from Microdata*, Department of Economics and Public Finance "G. Prato" Working Paper Series, 5.

Bernard A. and J.B. Jensen (1995) *Exporters, Jobs and Wages in US manufacturing: 1976-1987*, *Brookings Papers on Economic Activity, Microeconomics*, 67-119.

Bonaccorsi A. (1992) On the Relationship between Firms Size and Export Intensity, *Journal of International Business Studies*, 23(4), 605-635.

Bratti M. and G. Felice (2012) Are exporters more likely to introduce product innovation?, *The World Economy*, 35(11), 1559-1598.

Bugamelli M., Cipollone P. and L. Infante (2000) L'internazionalizzazione delle imprese italiane negli anni novanta, *Rivista Italiana degli Economisti*, 3, 349-386.

Bugamelli M., Cipollone P. and L. Infante (2001) Le imprese italiane all'estero: una valutazione quantitativa per strategia di accesso, in Quintieri B. (Editor) *Le imprese esportatrici italiane: caratteristiche, performance e internazionalizzazione*, Il Mulino: Bologna, 17-60.

Bugamelli M. and L. Infante (2003) Sunk Costs to Exports, Bank of Italy Research Papers, 469.

Bugamelli M. and M. Gallo (2012) The big exporters in Italy: Characteristics, strategies and performance, *Economia e Politica Industriale/Journal of Industrial and Business Economics*, 39(1), 119-137.

Campanini L. and A.M. Falzoni (2001) Pmi ed attività esportativa: mercati, prodotti e caratteristiche d'impresa, in Quintieri B. (Editor) *Le imprese esportatrici italiane: caratteristiche, performance e internazionalizzazione*, Il Mulino: Bologna, 91-117.

Casaburi L., Gattai V. and G.A. (2007), Firms' International Status and Heterogeneity in Performance: Evidence From Italy, *Rivista di Politica Economica*, special issue May-June, 151-187.

Castellani D. (2002) Export Behaviour and Productivity Growth: Evidence from Italian Manufacturing Firms, *Weltwirtschaftliches Archiv/Review of World Economics*, 138(4), 605-628.

Castellani D. (2007) L'internazionalizzazione della produzione in Italia: caratteristiche delle imprese ed effetti sul sistema economico, *L'Industria*, 28(3), 467-493.

Castellani D. and A. Zanfei (2007) Internationalisation, Innovation and Productivity: How Do Firms Differ in Italy?, *The World Economy*, 30(1), 156-176.

Castellani D. and G. Giovannetti (2008) Imprese internazionalizzate e produttività: il ruolo delle competenze organizzative e manageriali, *l'Industria*, 29(3), 385-403.

Castellani D. and G. Giovannetti (2010) Productivity and the International Firm: Dissecting Heterogeneity, *Journal of Economic Policy Reform*, 13(1), 25-42.

Castellani D., Serti F. and C. Tomasi (2010) Firms in International Trade: Importers and Exporters Heterogeneity in the Italian Manufacturing Industry, *The World Economy*, 33(3), 424-457.

Conti G., Lo Turco A. and D. Maggioni (2010a) Exporters in Services: New Evidence from Italian Firms, *Applied Economic Quarterly*, 56(1), 73-98.

Conti G., Lo Turco A. and D. Maggioni (2010b) Backward Linkages and the Export Performance of Business Services. Evidence from a Sample of Italian Firms, Dipartimento di Scienze Economiche e Sociali, Facoltà di Economia Giorgio Fuà, Università Politecnica delle Marche, Working Paper, 352.

Crinò R. and P. Epifani (2012) Productivity, quality and export behaviour, *The Economic Journal*, 122 (565), 1206-1243.

Ferragina A. and B. Quintieri (2001) Caratteristiche delle imprese esportatrici italiane, in Quintieri B. (Editor) *Le imprese esportatrici italiane: caratteristiche, performance e internazionalizzazione*, Il Mulino: Bologna, 61-89.

Giovannetti G., Ricchiuti G. and M. Velucchi (2009) Size, Innovation and Internationalization: a Survival Analysis of Italian Firms, *Applied Economics*, 1(1), 1-10.

Giovannetti G., Ricchiuti G. and M. Velucchi (2013) Heterogeneity in managerial strategies and internationalization of firms: the case of Italy, *Economia e Politica Industriale/Journal of Industrial and Business Economics*, 2(1), 51-66.

Giunta A. and D. Scalera (2007) L'impresa subfornitrice: redditività, produttività e divari territoriali, *Economia e Politica Industriale/Journal of Industrial and Business Economics*, 3, 123-176.

Greenaway D. And R. Kneller (2007) Firm Heterogeneity, Exporting and Foreign Direct Investment: a Survey, *Economic Journal*, 117(February), F134-F161.

Helpman E. (2006) Trade, FDI, and the Organization of Firms, *Journal of Economic Literature*, 44(3), 589-630.

Imbruno M. (2008a) International Trade and Firm Productivity within the Italian Manufacturing Sector: Self-Selection or Learning-by-Exporting?, Università degli Studi di Foggia, Quaderni del Dipartimento di Scienze Economiche, Matematiche e Statistiche, 21.

Imbruno M. (2008b) Exporting, Productivity and Market Integration: Italian Manufacturing Firms within the European Context, Università degli Studi di Foggia, Quaderni del Dipartimento di Scienze Economiche, Matematiche e Statistiche, 22.

ISGEP (2008) Understanding Cross-Country Differences in Exporter Premia: Comparable Evidence fro 14 Countries, *Weltwirtschaftliches Archiv/Review of World Economics*, 144(4), 596-635.

Lopez R.A. (2005) Trade and Growth: Reconciling the Macroeconomic and Microeconomic Evidence, *Journal of Economic Surveys*, 19 (4), 623-648.

Mayer T. and G.I.P. Ottaviano (2008) I pochi eletti: nuovi fatti sull'internazionalizzazione delle imprese europee, *L'industria*, 29(2), 221-244.



Melitz M.J. (2003) The impact of Trade on Intra-Industry reallocations and Aggregate Industry Productivity, *Econometrica*, 71(6), 1661-1694.

Pavcnik N. (2002) Trade liberalization, exit, and productivity improvement: Evidence from Chilean plants, *Review of Economic Studies*, 69(1), 245-276.

Razzolini T. and D. Vannoni (2009) Strategie di export passive, produzione su commessa e performance, *L'Industria*, 30(3), 437-465.

Razzolini T. and D. Vannoni (2011) Export Premia and Sub-contracting Discount Passive Strategies and performance in Domestic and Foreign Markets, *The World Economy*, 34(6), 984-1013.

Serti F. and C. Tomasi (2008a) Self-Selection and Post-Entry Effects of Exports: Evidence from Italian Manufacturing Firms, *Weltwirtschaftliches Archiv/Review of World Economics*, 144(4), 660-694.

Serti F. and C. Tomasi (2008b) Firm Heterogeneity: Do Destinations of Exports and Origins of Imports Matter? in Piscitello L. and G. Santangelo (Editors) "Multinationals and Local competitiveness", Franco Angeli.

Serti, F., Tomasi, C. and A. Zanfei (2010) "Who trades with whom? Exploring the links between firm's international activities, skills and wages", *Review of International Economics*, 18(5), 951-971.

Serti F. and C. Tomasi (2012) Self-Selection along Different Export and Import Markets, *Economics Letters*, 117(1), 102-105.

Sharpston M. (1975) "International Sub-Contracting", *Oxford Economic Papers*, 27(1), 94-135.

Singh T. (2010) Does International Trade Cause Economic Growth? A Survey, *The World Economy*, 33(11), 1517-1564

Sterlacchini A. (1999) Do Innovative Activities Matter to Small Firms in Non R&D-Intensive Industries? An Application to Export Performance, *Research Policy*, 28, 819-832.

Sterlacchini A. (2001) The Determinants of Export Performance: A Firm-Level Study of Italian Manufacturing, *Weltwirtschaftliches Archiv/Review of World Economics*, 137(3), 450-472.

Tybout J. (2003) Plant- and Firm-Level Evidence on "New Trade Theories, in Choi K.E. and J. Harrigan (Eds), *Handbook of International Trade*, Oxford: Basil-Blackwell.

Wagner J. (2007) Exports and Productivity: A Survey of the Evidence from Firm-Level Data, *The World Economy*, 30(1), 60-72.