

# Offshore outsourcing and backshoring patterns in the Italian manufacturing sector: the role of learning and local spillovers

**Jacopo Canello**<sup>1</sup>

<sup>1</sup>Department of Geography and Earth Sciences, UNC Charlotte

E-mail: [jcanello@uncc.edu](mailto:jcanello@uncc.edu)

**Paolo Pavone**

Soluzioni per il Sistema Economico S.p.A.

E-mail: [ppavone@sose.it](mailto:ppavone@sose.it)

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## 1. Introduction

In the last decades, the number of businesses engaged in international activities has increased dramatically. In this context, the role of production internationalization has been particularly relevant: firms invest in existing or new production facilities abroad or establish new relationships with foreign suppliers in an attempt to exploit the benefits arising from lower labor costs, access to natural resources and foreign markets, and the possibility to leverage diverse sources of knowledge (Kinkel & Maloca, 2009). According to UNCTAD (2004), two main forms of production internationalization are commonly identified:

- *Offshoring*: production within a unit located abroad, belonging or being participated by the offshoring firm;
- *Offshore Outsourcing*: production outside the firm and outside the country by non-affiliated suppliers.

Offshoring and offshore outsourcing processes have been responsible for the international fragmentation of production activities that is now evident in both developed and developing countries, leading to the emergence of global production

networks. Given the increasing importance of these dynamics, a number of empirical investigations have recently inspected the micro- and macro-level dynamics associated with these activities, focusing on the impacts generated by production internationalization on both the domestic and foreign regions involved in these processes. Several contributions have provided evidence of the determinants of production internationalization activities and of the productivity gains for the internationalized firms (Baldone, Sdogati & Tajoli, 2001; Mariotti, Mutinelli & Piscitello, 2008; Chiarvesio, Di Maria & Micelli, 2010), while macro-level studies have identified spillover effects associated with the presence of MNCs' subsidiaries in the host region (Menghinello et al., 2010; Driffield et al., 2010; Marin & Bell, 2006) and also consequences on the firm ecology in the region where the internationalized firms are located (Falzoni & Tajoli, 2012; Geishecker & Gorg, 2005; Hijzen et al., 2005). The core of the existing debate have been focused on large firms, which often choose forms of direct participation in local companies producing abroad. However, these businesses are not alone in their journey: indeed, several case studies have shown that SMEs often engage in internationalization activities (Cutrini, 2011; Canello, 2017). Previous research has shown a higher propensity to choose light forms of production internationalization, such as offshore outsourcing, when access to financial resources is limited and the entrepreneurs lack the required know-how and propensity to risk (Kinkel & Maloca, 2009). However, the process leading SMEs to establish new links with international subcontractors is still relatively poorly understood.

This paper explores the main determinants of offshore outsourcing and backshoring in the manufacturing sector, focusing on the impact of learning and spatial spillovers and drawing on new firm-level data on Italian Small and Medium Enterprises (SMEs) specialized in clothing and footwear production. The empirical analysis is based on the 2007-2012 period and aims to assess whether production internationalization activities by neighbouring firms influence the decision of small businesses to outsource production abroad and to identify the role of spatial factors in explaining the duration and stability of subcontracting relationships established with foreign suppliers. The economic literature has provided empirical evidence of the effects of learning in influencing the likelihood a firm would engage in export activities (Koenig, Mayneris & Poncet, 2010; Fernandes & Tang, 2014). However, the role of these factors in production internationalization decisions has often been overlooked due to the lack of appropriate firm-level data. In this respect, the use of the Italian Ministry of Economic and Finance Annual Survey (IMEFAS) is beneficial in that it includes a wide number of SMEs that are not part of the most widely known firm-level databases and contains a number of structural information that allow to map production internationalization activities over time. The main database has been integrated, allowing to identify the spatial spillovers associated with both offshoring and offshore outsourcing activities, in order to evaluate whether the learning effect takes place only within smaller producers or is rather extended to leader firms operating in the same areas.

This work contributes to the literature in three main ways. Firstly, the analysis is implemented on an extensive sample on micro and small firms that permits greater generalization than case studies. To the best of our knowledge, this is the first work that provides a comprehensive analysis of offshore outsourcing and backshoring dynamics in a specific sector for an entire country, providing further evidence in support of the dynamics involving global production networks. In this respect, Italy represents a particularly interesting case for the analysis, considering the large diffusion of subcontracting activities in several manufacturing sectors. Secondly, the analysis focus on soft forms of production internationalization, i.e. the 'grey area' of production internationalization' that has often been overlooked by the relevant literature due to the lack of appropriate microdata: despite the lack of extensive empirical investigations on the matter, these activities are particularly widespread among smaller firms that do not have the resources to engage in direct forms of participation in foreign activities. Thirdly, the particular structure of the database allows us to detect the spillover effects associated with both offshore outsourcing and offshoring activities, thus providing an interesting perspective on the potential interconnections between these two activities.

The present paper has major potential implications not only for academia but also for policy makers. Indeed, the analysis of the indirect effects generated by local learning on offshore outsourcing activities is expected to add new knowledge to understand the production internationalization process, thus promoting more informed decisions that are in line with local and national policy goals. The identification of spillover effects provide evidence of indirect effects stemming from direct incentives towards production internationalization activities: if that is the case, the provision of financial support to new investments abroad is expected to generate a snowball effect in the regions where the target firms are located, thus increasing the likelihood that neighboring producers would engage in the same activities.

The paper is structured as follows: in the second section, a brief overview of the literature on production internationalization is presented and discussed, focusing on the different determinants driving the decision of large firms and SMEs to relocate part of the production process in a foreign country. The third section includes the empirical analysis and is divided into four main subsections: after presenting the main features of the database used for the analysis and the main features of the empirical approach used, a descriptive analysis of the internationalization activities is presented, focusing on the main differences between offshore outsourcing and offshoring activities and the different profile of the firms involved in such activities. The results of the two main parts of the empirical investigation are then presented and discussed. Finally, section 4 presents the main concluding remarks.

## **2. Production internationalization and the role of spillovers in the Italian manufacturing sector: a review of the literature**

In the economic literature, the entrepreneurial decision to engage in international activities has been framed by two competing theories. On the one hand, internationalization is seen as the result of a rational process where firms ponder costs and benefits associated with the investment and choose the location that maximizes their expected utility (Porter, 1985; Dunning, 1988). This approach has been challenged by several contributions (e.g. Melin, 1992), which have argued that entrepreneurs are in fact making decisions under limited information. Under this alternative view, control of foreign assets is often not achieved through a perfect ex ante plan but tends to be the result of a complex trial-and-error process where firm-specific factors are often not sufficient to explain the development of successful strategies. Such an approach can be effectively explained using the gambler's earning hypothesis proposed by Buckley (1989) in international business theory, which states that entrepreneurs begin the internationalization game with small stakes and then reinvest their winnings into the game until "a real 'killing' is made".

Although the neoclassical framework can be effectively used to explain the behaviour of Multinational Corporations (MNCs), the alternative view tends to be more appropriate in the context of SMEs, which are playing an increasingly relevant role in the global markets (Lloyd-Reason & Sears, 2007): the larger international presence of these firms in the last decades has been explained by several factors, including the lower sunk costs associated with internationalization following the introduction of ICT technology and the significant reduction of transportation costs. Despite their limited financial and managerial resources and the higher propensity towards risk-averse behaviors (Coviello & McAuley, 1999), most SMEs are characterized by less bureaucracy and tend to be more responsive to international opportunities (Di Gregorio et al., 2009). Given internationalization decisions in SMEs are rarely preceded by an accurate analysis of the locational advantages and costs associated with this strategy, most entrepreneurs tend to be influenced by other factors, such as the interaction with other local actors. In fact, when information on foreign opportunities is costly to acquire, learning from firms located in the same geographical area can increase the chances of successful investment decisions (Sharma & Johanson, 1987): in this respect, the signals received from other entrepreneurs already engaged in the same activities abroad is likely to reduce the uncertainty associated with this process. One of the core theories in this context is the so called 'network perspective', which states that the organization's set of network relationships is the most influential aspect to consider when evaluating internationalization decisions (Coviello & McAuley, 1999): according to this theory, the links built by the firm often become bridges to exploit foreign opportunities. This factor is especially relevant in production internationalization activities, that require a relevant organizational transformation compare to the one needed for sales-oriented internationalization. Contrary to leader firms, where relocation is mainly the

result of an internal learning process initiated through exporting activities, SMEs' internationalization choices are often the result of a collective learning or imitation effect, where first movers generate spillovers for SMEs working in the same locality.

The abovementioned approach appears to be particularly suitable to explain the recent evolution of production internationalization activities in the manufacturing sector in Italy. The peculiar path towards internationalization of manufacturing firms in this country has been influenced by the structure of the national economy, characterized by the widespread diffusion of small and medium enterprises which, especially in the so called 'Made in Italy' sectors, tend to be predominantly concentrated inside industrial districts. Within these contexts, firms tend to continuously share information through voluntary and involuntary mechanisms, such as inter-firm mobility of skilled workers and locally rooted demonstration effects concerning several aspects of production, such as subcontracting decisions (Giuliani, 2005): neighboring firms share solutions to solve certain production problems (including the decision to engage in offshoring and offshore outsourcing activities), stimulating a learning process where imitation lead to the emergence of best-practices that are shared among the local community.

Although production internationalization processes are not new in Italy, the complex mechanisms behind these phenomena are still relatively poorly understood given the lack of appropriate micro-data: this issue explains the apparent paradox of a manufacturing economy characterized by a high exporting capacity and a reduced presence of Italian firms abroad in terms of foreign direct investments: according to the empirical investigation performed by Basile et al. (2003) inside Italian IDs, the share of firms involved in offshoring activities in these areas was only 1.9% during the late 1990s. In fact, the apparent lack of production internationalization among Italian firms is motivated by the presence of a grey area of soft internationalization driven by the short-term perspective of local firms mainly interested in curbing production costs and minimizing risks and sunk costs (Amighini and Rabellotti, 2006). In this respect, soft forms of internationalization are beneficial in that they do not require the same amount of information on overseas partners and the same initial investment in customization that is required when long distance production networks are established (Cutrini, 2011). Although the importance of these activities has emerged in a number of empirical investigations focused on specific geographical areas (Cutrini, 2011; Amighini & Rabellotti, 2006; Tattara, 2009; Tattara & Gianelle, 2007), its relevance from a country-level perspective was never testified by extensive analyses.

The evolution of light internationalization in the recent decades in Italy has been described by Cutrini (2011) through the identification of two waves of offshore outsourcing in the footwear industry. During the first wave in the early 2000s, the tendency to engage in international subcontracting was concentrated among larger firms and was limited to specific parts of the production process: on the other hand, small firms were reluctant to internationalize and opted to become subcontractors of global fashion companies. The second wave of internationalization took place at the end of the 2000s and was characterized by a widespread tendency to outsource larger

parts of the production process in foreign countries: more firms became engaged in internationalization activities, including several small subcontractors which were forced to overcome their initial reluctance and go abroad in an attempt to follow final good producers. In most cases, following the same path of other local entrepreneurs was easier since first-movers could provide information about the foreign country (Cutrini, 2011). A similar trend was identified by Sammarra and Belussi (2006) in the fashion industry, where suppliers decided to migrate abroad to follow the delocalization already undertaken by their customers.

Overall, the sparse evidence of local spillover effects in production internationalization is confined to case studies, and the dynamics of offshore outsourcing strategies is still largely unknown. Although the economic literature has provided empirical evidence of the effects of learning in influencing the likelihood a firm would engage in export activities (Koenig, Mayneris & Poncet, 2010; Fernandes & Tang, 2014), the role of these factors in production internationalization has often been overlooked due to the lack of appropriate firm-level data. The aim of the following sections is thus to contribute to fill the existing gap in the empirical literature, evaluating the role of local learning in influencing the offshore outsourcing decisions of SMEs.

### **3. Investigating the main patterns of offshore outsourcing and backshoring activities among the Italian manufacturing firms**

The empirical analysis proposed in this paper is developed in two different directions: first, the determinants of offshore outsourcing are inspected through a firm-level approach, evaluating the role of internal learning (proxied by the firm's previous international experience as exporter) and isolating the effect of spatial proximity associated with local learning from neighboring firms. If such effect is present, it is expected that, with all else equal, the probability for a firm to relocate production abroad is higher in regions characterized by greater concentrations of internationalizing firms in the years immediately preceding the investment decision. The first hypothesis can be formalized as follows:

*H<sub>1</sub>: Local learning leads to more offshore outsourcing activities among SMEs*

The investigation also focuses on the duration of offshore outsourcing strategies, assessing whether imitative behaviors are more likely to result in conscious decisions that lead to long lasting investments. If this is the case, it is expected that the probability to break the links with foreign suppliers and move production back to the home country will be lower in the short term among firms which have been influenced by their neighbors' behavior. Thus, the second main hypothesis can be formalized as follows:

*H<sub>2</sub>: Local learning leads to more successful and lasting offshore outsourcing activities among SMEs*

Before proceeding with the empirical analysis, the next two subsections present the characteristics of the main data sources used for the investigation and provide an overview of the recent dynamics of production internationalization activities in the two sectors considered (i.e. footwear and clothing production).

### *3.1. The database used for the empirical investigation*

The main data source used to implement the empirical analysis is the Italian Ministry of Economy and Finance Annual Survey (IMEFAS), which includes all Italian firms with a turnover lower than 7.5 million Euros that are required to fill out the questionnaire: this information is normally used to implement a system of presumptive assessment based on a mix of multivariate analysis and multiple regression targeted to both deter Italian SMEs tax evasion and encourage taxpayers voluntary compliance. This database is extremely comprehensive of the Italian manufacturing firm population, considering the fragmented structure of the economic system in this country. According to the Eurostat data, in 2007, manufacturing firms with less than 10 employees accounted for 81% of the total manufacturing population. The wide majority of these businesses are not part of the most commonly used firm-level data sources, even though they represent the ‘backbone’ of most Italian IDs (Canello, 2017). Moreover, the structure of this database is particularly suitable to address one of the most important issues associated with this type of analysis, that is, the measurement of the intensity of offshore outsourcing activities: the empirical literature tends to rely on indirect aggregate measures, which cannot be directly associated with the specific firm in the locality, or ad-hoc surveys focused on a limited number of firms that limit the possibility of generalizations. The former is particularly inappropriate to study offshore outsourcing activities, since imports and exports of both intermediate and final goods are included in this aggregate measure (Tattara, 2009). However, even outward FDIs do not always represent an adequate proxy to study production internationalization processes. The use of this variable is justified when the local internationalizing firm population is predominantly formed by medium- and large-sized businesses, whereas it tends to be not as effective when the focus is placed on small firms located inside IDs. In such cases, light forms of internationalization, such as subcontracting and informal agreements, are most commonly chosen by the internationalizing firms (Tattara, 2009). The structure of this database is particularly suitable to identify soft internationalization activities, given it contains firm-level information on subcontracting costs associated with offshore outsourcing. Moreover, the use of this data source allows to track the evolution of production internationalization activities over time, with the possibility to identify the start and the end point of the offshore outsourcing activity.

Despite the benefits associated with the use of the IMEFAS database, a consistent analysis of the impact of production internationalization strategies should also consider the effects generated by outward FDIs, which are generally implemented by larger firms

that are excluded from the survey. Information on offshore outsourcing is integrated with data on outward Foreign Direct Investment (FDI) extracted from AIDA BvD. This archive contains not only information on the population of multinational corporations (MNCs) in Italy, but also data on Italian companies having a controlling interest in a foreign firm. Information on outward FDI is crucial to evaluate whether the learning process is restricted to SMEs involved in offshore outsourcing activities or whether outward FDIs also generate local spillovers stimulating production internationalization decisions among SMEs. The Italian firms extracted from AIDA are those with turnover higher than 7.5 million euro to avoid the risk of duplicate observations in the sample.

The sample used for the empirical analysis includes all SMEs operating during the 2006-2012 period in two manufacturing sectors (clothing and footwear production<sup>†</sup>) where the impact of production internationalization has been particularly widespread during the recent decades. Although traditional sectors are less involved in international activities than high-tech sectors, anecdotal evidence indicates that footwear and clothing production firms are highly internationalized (Tattara, 2009).

### *3.2. The dynamics of offshoring and offshore outsourcing activities during the 2007-2012 period*

The descriptive analysis of offshoring and offshore outsourcing activities presented in this section provides some preliminary pieces of evidence on the differences existing between the two groups of firms engaged in the main types of internationalization activities. The general picture emerging from this investigation supports the claim that large firms and SMEs tend to follow different strategies depending on their characteristics and their operational needs when they internationalize their business.

Table 1 shows the main structural characteristics of firms engaged in offshoring and offshore outsourcing activities during the 2007-2012 period. The first relevant aspect relates to the number of firms following the light internationalization route: despite the time span under investigation includes the years immediately following the financial crisis, where the backshoring process was well under way in both sectors, the average number of firms outsourcing part of the production process in foreign countries is 741. Despite these internationalized firms represent a small share of the SMEs that are included in the empirical analysis, their presence is still relevant compared to the group of firms internationalizing through the establishment of foreign subsidiaries. This finding is noteworthy also considering that 6.426 manufacturing firms in Italy were engaged in outward FDIs in 2009 (Mariotti & Mutinelli, 2010) and that the activities considered in this analysis account only for a relatively small share of the manufacturing sector. This data confirms that, when the analysis of active internationalization is limited to offshoring activities, a significant part of this phenomenon is inevitably

<sup>†</sup> These manufacturing industries are proxied in this empirical analysis by the sector studies D07B and D08U. The list of ATECO Codes included in these Sector Studies can be found in the Italian Tax Revenue Office website.



**Table 1.** Main characteristics of firms engaged in offshore outsourcing and offshoring activities (average values over the 2007-2012 period)

	Clothing production		Footwear production	
	<i>Offshore outsourcing</i>	<i>Offshoring</i>	<i>Offshore outsourcing</i>	<i>Offshoring</i>
Number of firms	486	322	255	105
Duration of internationalization activity	3.02	3.86	2.81	4.11
Turnover	2.333.955	41.626.846	2.886.648	45.109.899
Number of employees	12.23	168	17.23	165
% of export on turnover	18.35		36.00	
Cost of subcontracting production in foreign countries	684.464		293.064	
Cost of subcontracting production in Italy	324.555		275.670	
Number of subsidiaries in foreign countries		2.31		2.68
% of firms located inside Industrial Districts	22%		47%	

Source: author's elaborations on IMEFAS and AIDA data

ignored. The profile of these internationalized firms tend to differ by the sector considered: firms operating in footwear production are generally larger both in terms of turnover and number of employees, have a higher propensity towards exporting and tend to display a more balanced relationship between foreign and national suppliers, as suggested by the distribution of subcontracting costs between Italy and foreign countries. Moreover, footwear producers engaged in offshore outsourcing are more concentrated inside industrial districts and the duration of relocation activities in this sector is lower (2.81 years) compared to the clothing industry (3.02).

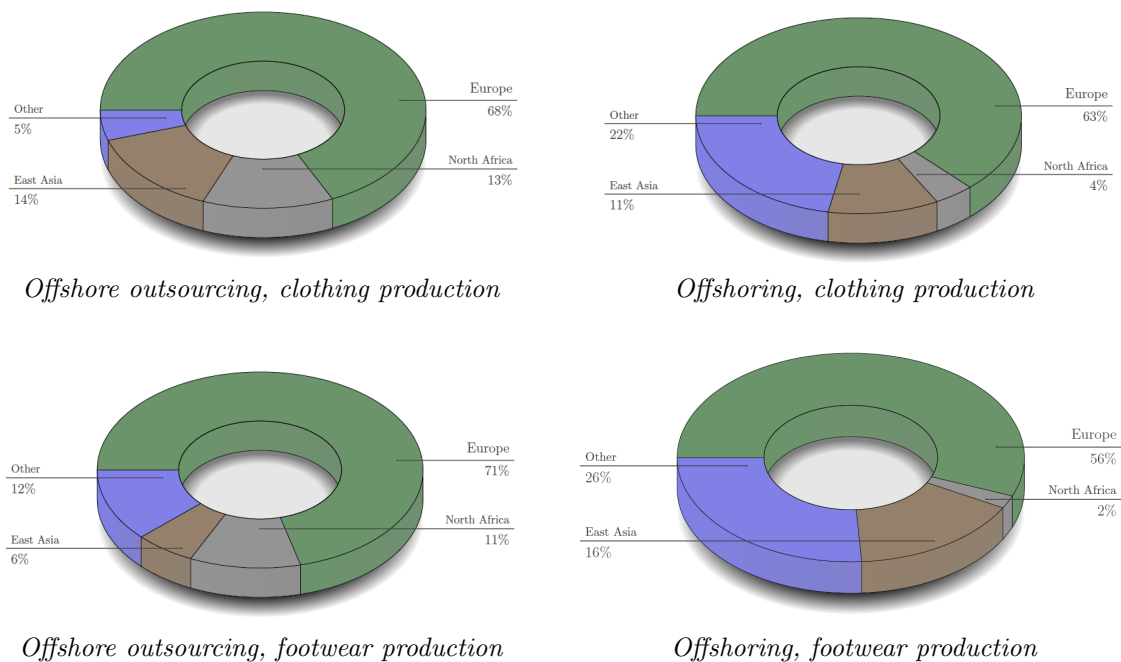
Further relevant information emerges when the profile of this subset of firms is compared with that of firms that internationalize through greenfield or brownfield FDI<sup>‡</sup>. Consistently with the expectations, the latter group is made by more structured firms, both in terms of turnover (about 20 times larger on average) and labor force: on average, these companies own or control between two and three foreign subsidiaries for a period of about 4 years. The differences between the two sectors considered tend to be less evident.

The structural differences emerged from the analysis of Table 1 are also evident when the destination of internationalization activities is considered (Figure 1). First, the tendency to choose Europe over the other world regions seems to be less evident for firms engaged in offshoring strategies. Second, firms in both industries tend to choose subcontractors located in North Africa relatively more often, while the same area seems not to be an attractive destination for Foreign Direct Investments (only 4%

<sup>‡</sup> Distinguishing between the two types of FDI is not possible with the information at disposal.

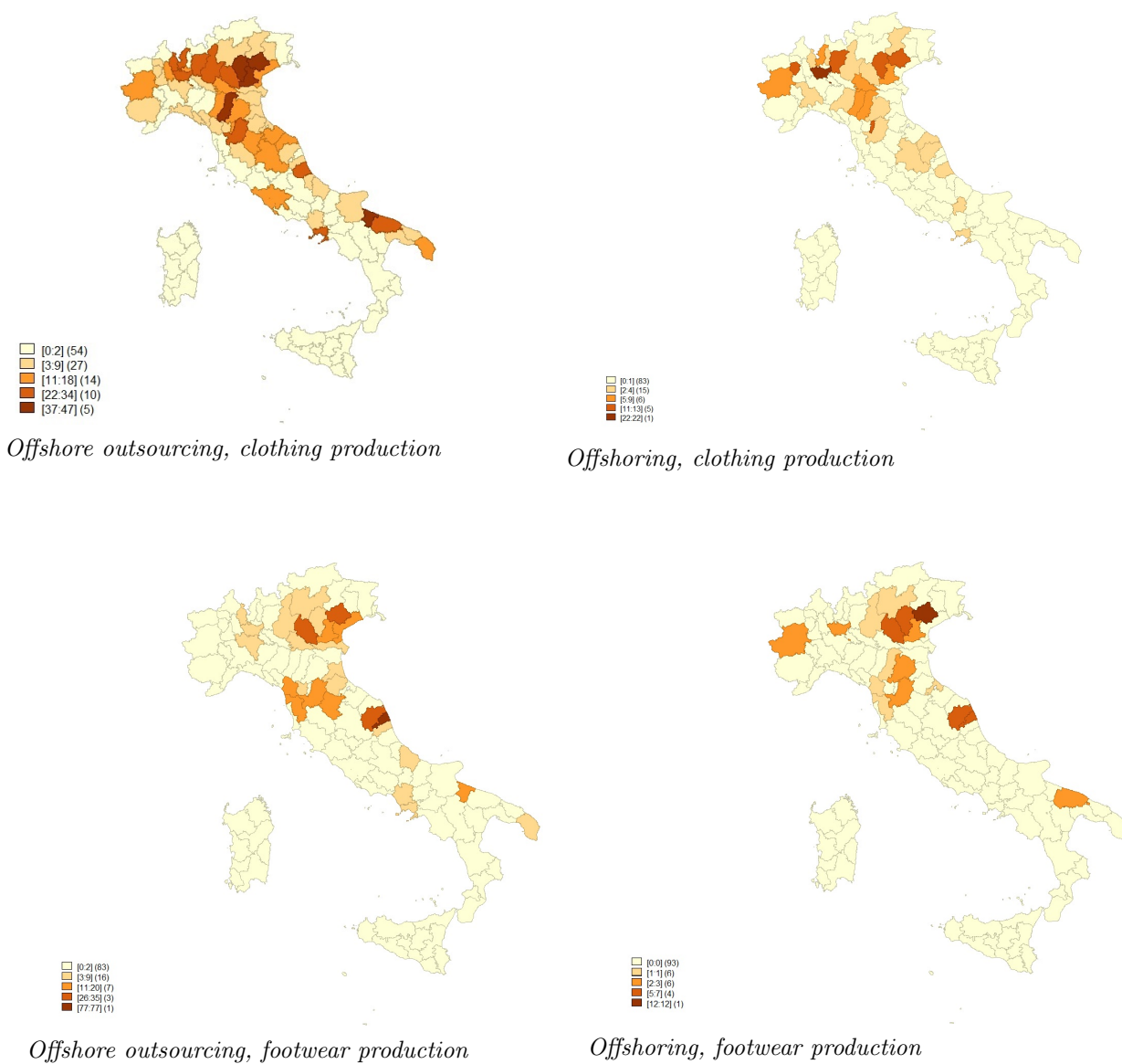
of clothing firms and 2% of footwear producer choose to invest in production facilities in this area). Third, the pattern of internationalization in East Asia seems to follow a completely opposite logic as far as the two sector are concerned: clothing producers are more propense to choose light forms of internationalization in this region, while footwear firms show a strong propensity to engage in direct forms of participation.

Finally, the analysis of the geographical distribution of the two groups of firms (Figure 2) suggests the relatively higher tendency of producers located in the Southern regions to engage in offshore outsourcing activities, while the diffusion of FDI is almost non-existent in this part of the Country. Both in the clothing and in the footwear sector, internationalized firms are mainly located in the area known as Third Italy, including the North-Eastern part of the Country and other regions in Central Italy (such as Emilia-Romagna, Marche and Tuscany) where the presence of industrial districts is particularly widespread. The comparison of the territorial concentration in the two sectors reveals the presence of two distinct patterns: in footwear production, companies engaged in relocation activities tend to be localized in the same areas, whereas the clothing production shows a highly differentiated trend. On the one hand, outward FDIs are highly concentrated in the Northern provinces; on the other hand, offshore outsourcing activities display a more even distribution, with a relatively high presence of internationalized firms also in the Southern part of the country.



**Figure 1.** Destination of offshoring and offshore outsourcing activities, year=2008

Source: author's elaborations on IMEFAS and AIDA data



**Figure 2.** Geographical location of Italian firms engaged in offshoring and offshore outsourcing activities, year=2008

Source: author's elaborations on IMEFAS and AIDA data

### 3.3. The determinants of offshore outsourcing: a dynamic logit approach

The first part of the empirical analysis aims to evaluate the role of internal learning and local geographic spillovers from neighboring businesses in influencing the firm's decision to engage in production internationalization. The methodology used to test hypothesis  $H_1$  is a dynamic logit regression with random effects, where the discrete dependent variable is equal to 1 if at time  $t$  the firm engages in offshore outsourcing activities in one of the four main geographical regions identified in the analysis (i.e. Europe, North Africa, East Asia or other countries)<sup>§</sup>. The starting model can be specified as follows:

$$y_{ijt} = \beta_0 + \beta_1 y_{ij1} + \beta_2 y_{ijt-1} + \gamma' x_{it-1} + \delta' \bar{x}_{it-1} + \alpha_i + \epsilon_{it} \quad t = 2, \dots, n.$$

Where the dependent variable  $y_{ijkt}$  is a dummy that is equal to one if the firm located in the  $i$ th province and operating in the  $j$ th sector subcontracts at least one stage of its production process to foreign suppliers at time  $t$ . The set of regressors includes the lagged value of the dependent variable  $y_{ijkt}$  to capture the autoregressive nature of this process and a set of firm-level and province-level variables that are also lagged at time  $t-1$  to avoid endogeneity issues<sup>¶</sup>.

To relax the assumption of independence between the observable time-varying characteristics and the error term, the initial model has been modified by including the individual mean of the time-varying covariates. This approach was proposed by Mundlak (1978) and assumes that the regression function of  $\epsilon_i$  is linear in the means of all the time-varying covariates.

The key explanatory variables are the previous international experience of the firm (proxy for internal learning), measured as the share of exports on revenues at time  $t-1$ , and the intensity of outward FDI and offshore outsourcing activities in the same geographical area where the firm is located. The specification also includes a set of financial and structural variables that are used to control for other firm-level factors that are believed to influence internationalization activity.

A description of the variables included in the model and their expected effect on the probability to engage in offshore outsourcing activities is presented below.

#### Firm – Level Factors

- *Size*: This variable is measured through the number of salaried workers employed by the firm. The literature has generally found a positive relationship between size and the probability to engage in production internationalization activities (e.g. Fillis, 2001; Urata and Kawai, 2000).

<sup>§</sup> The decision of using this territorial disaggregation is motivated by the nature of data at disposal. Indeed, in the IMEFAS database information on offshore outsourcing activities is only available at this territorial detail.

<sup>¶</sup> A similar approach was followed by Koenig et al. (2010) in their analysis of local spillovers in exporting activities.

- *Value added per employee*: productivity is an important determinant of internationalization decisions. The literature has reported the presence of self-selection mechanisms that lead more efficient firms to engage in internationalization decisions, both in the case of export and FDIs.
- *Presence of Financial Constraints*: a dummy equal to 1 if the firm has access to credit. The literature has shown that the presence of credit rationing plays a key role in determining the production internationalization propensity of the firm: indeed, capital and finance requirements tend to generate barriers to implement internationalization strategies (Fillis, 2001). Focusing on a sample of Italian firms, De Bonis et al. (2010) show that longer bank-firm relationships have a positive effect on the probability for Italian firms to engage in both offshoring and offshore outsourcing activities, while no significant impact is detected on firm's propensity to export.
- *Extension of market area served*: this categorical variable indicates the location of the relevant demand for firm products. When the target of the products sold by the firm is a national rather than a regional market the chances of choose light forms of production internationalization is expected to be higher.
- *Export*: this variable is measured as the share of turnover associated with exporting activities. The literature has highlighted that previous experience in foreign markets stimulates a learning process, thus reducing the information costs needed to overcome the 'liability of foreignness' (Zaheer, 1995): this beneficial impact is associated with factors such as the accumulation of managerial resources and deeper knowledge of institutional and cultural factors of foreign countries. This dynamics has been clearly identified in exporting activities: firms often start serving markets that are culturally and physically proximate before approaching more distant markets (Kinkel & Maloca, 2009). However, this learning process can also influence production internationalization: in an empirical analysis focused on Italian Industrial Districts, Mariotti et al. (2008) find a positive impact of previous exporting experience on the probability to engage in FDIs. Similar results are found by Kinkel and Maloca (2009) in their analysis of the German manufacturing sector.
- *Implementation of high value-added production activities*: this variable is a dummy equal to 1 if the firm carries out high-value added production activities. When the coefficient is positive it means that firms tend to keep inside high- value added activities while outsourcing low-value added activities.
- *Supplier*: the probability of engaging in production internationalization activities is generally lower for firms operating as suppliers, considering their dependency upon the choices of the contracting firms. However, in some cases suppliers are forced to build up foreign production capacities to follow their customers (Kinkel et al., 2007). The decision to engage in production internationalization can also be taken autonomously by a supplier in an attempt to upgrade its position in the production chain: in this respect, the recent emergence of advanced forms of internationalized

subcontractors (Buciuni and Pisano, 2015) is the consequence of an autonomous effort to build more solid positions in the global production networks.

*Contextual Factors (Domestic Country)*

- *Location in an Industrial District*: the ID effect on offshore outsourcing activities is evaluated in this model through the procedure proposed by Canello and Pavone (2016). The dummy is equal to 1 if the Local Labour Market Area where the firm is located is identified as an industrial district by the algorithm. Inside these organizational systems, the tendency to outsource production to local suppliers is expected to be higher, given the presence of a shared system of values and trust that reduces transaction costs and fosters long-term relationships between buyers and suppliers. The role of the business climate, the quality of the local labour market and the diffusion of knowledge spillovers can limit the need to engage in offshore outsourcing activities.
- *Number of firms engaged in offshore outsourcing activities in the same province*: this variable is expected to capture the spillover effect associated with offshore outsourcing activities implemented by neighbouring firms. It is expected that a larger presence of firms engaged in international subcontracting stimulates the decision of a small firm to internationalize production.
- *Number of firms engaged in offshoring activities in the same province*: the model aims to evaluate whether spillover effects are restricted to small firms engaging offshore outsourcing activities or if production internationalization activities of large neighbouring firms have the same triggering effect on offshore outsourcing decisions. This effect is captured through the number of firms engaged in outward FDI in the province where the firm is located.

Finally, the model includes a set of regional and sectoral dummies to capture the effects associated with the specific location of the firm and of the industry in which the firm is operating (i.e. footwear or clothing).

The results of the model are presented in Table 2. The coefficient to most covariates is significant and its sign is consistent with the expectations. The results suggest that local spillovers influence offshore outsourcing decisions of SMEs, contributing to reduce the costs associated with production internationalization activities: learning from offshore outsourcers located in close proximity helps SMEs to improve their awareness of foreign opportunities and increase their knowledge of international markets, generating a positive impact on the likelihood of choosing international subcontracting strategies. This finding is consistent with previous contributions in the literature (Henisz and Delios, 2001; Ellis, 2000) and suggests that learning or imitation contributes to reduce the SMEs' gap in terms of know-how, capacity and management skills and facilitates the diffusion of light forms of production internationalization. Interestingly, local spillovers seem to be mainly generated by other small firms engaged in offshore outsourcing, while

**Table 2.** Dynamic Probit Model: Probability to engage in offshore outsourcing among manufacturing firms in Italy, period 2007-2012, industries: clothing and footwear production

	Coefficient	<i>Std. err.</i>
y_2005	0.527***	0.039
yt-1	2.531***	0.032
Export (% of sales)	-0.019	0.050
Extension of market area served	0.132***	0.037
Financial constraints (1 if firm has access to credit)	0.095	0.058
Value added per employee	0.001***	0.000
Supplier	0.094	0.063
Location inside an industrial district	-0.055	0.035
# of firms engaged in offshoring activities at t-1	-0.011	0.010
# of firms engaged in offshore outsourcing activities at t-1	0.018***	0.002
Industry dummies	Yes	
Territorial dummies	Yes	
Observations	117.505	
Groups	17.338	

Source: author's elaborations on IMEFAS and AIDA data

no significant spatial effect is detected as far as offshoring strategies implemented by large firms are concerned. The analysis also reveals the lack of significance associated with internal learning: for SMEs, previous international experience does not increase the likelihood to engage in soft production internationalization.

### 3.4. Evaluating the duration of offshore outsourcing: the impact of local spillovers on backshoring patterns

The second part of the empirical investigation focuses on the analysis of the duration patterns of offshore outsourcing activities implemented by the Italian manufacturing firms included in the sample. The main aim in this case is to evaluate whether firms characterized by higher spatial effects at the time of their internationalization decision are those engaging in more durable offshore outsourcing activities. Evidence of this pattern would suggest that learning from other outsourcers results in more conscious choices that tend to last longer.

Backshoring, intended as the process of moving production back to the home country, is one of the most relevant patterns of manufacturing activities in several industrialized countries in the recent past: according to Fratocchi et al. (2014) this tendency is evident in both labour and capital-intensive industries. The same trend emerges from the analysis of Cutrini (2011), which shows that several footwear producers brought back production or are planning to do so in the future. Although this process is often interpreted as a consequence of the deterioration of locational advantages influencing the original decision, Kinkel and Maloca (2009) has recently provided a different explanation, stating that backshoring is often the result of short term corrections of prior location misjudgments. This view is consistent with Tattara (2009), who claims that the engagement in short-term subcontracting relationships abroad is often detrimental to the firm as it affects quality and time to market. Following this approach, the duration of offshore outsourcing activities can be effectively used as a proxy for the success of this particular form of production internationalization.

The methodology used to test hypothesis  $H_2$  is the Cox Proportional Hazard Model, which represents the most popular approach for the analysis of survival data. The sample selected for the analysis includes all firms that have started outsourcing in a foreign country during the period 2007-2012 and have been engaged in this activity for at least one year during the period considered. The model can be specified as follows:

$$h(t_i) = \exp(\beta_0 + \beta' \mathbf{x}_i) h_0(t_i) \quad i = 1, \dots, n.$$

where the hazard  $h(t_i)$  for firm  $i$  at time  $t$  is the product of the baseline hazard rate, which is left unspecified, and a linear function of a set of covariates that are expected to influence the probability of backshoring. The baseline hazard rate is the hazard function for a firm whose covariates take all 0 values. This specification is called proportional hazards model as it requires the assumption that the hazard for each firm is a fixed proportion of the hazard of any other firm in the sample. The estimation process is implemented through partial likelihood, and it requires the preliminary elimination of the intercept and the application of the maximum likelihood methodology to the residual portion of the function.

The set of covariates includes time-varying and time-invariant variables that are



believed to influence the duration of offshore outsourcing activities, following the indications provided by the recent literature (Fratocchi et al., 2016). Several of these variables are those included in the dynamic logit specification, as factors influencing the production internationalization decision tend also to have an impact on the duration of these activities. The key aspect of the investigation, i.e. the role of learning and local spillover, is captured by the following two variables:

- *Export*: this variable is measured as the share of turnover associated with exporting activities in the year preceding the beginning of offshore outsourcing. The presence of international sales suggests that an internal learning process may have occurred inside the firm, increasing the knowledge regarding international markets and the awareness of potential opportunities to exploit locational advantages to improve the efficiency of the production process. The extent to which this internal learning process occurs also among SMEs in light internationalization activities is inspected in the model.
- *Number of firms engaged in offshore outsourcing activities in the same province*: this variable is expected to capture the spillover effect associated with offshore outsourcing activities implemented by neighbouring firms in the year preceding the start of offshore outsourcing. A higher number of internationalized firms is likely to stimulate more learning and imitation opportunities, leading SMEs to exploit their interpersonal links to drive location decisions, decreasing the likelihood of durable internationalization strategies.

The results of the model are reported in Table 3. The coefficients of the main explanatory variables are significant and the sign is that expected. As far as firm-level factors are concerned, the model shows that higher risks of moving production back to the home country are associated with lower return on investments, presence of losses and smaller company size (measured as the number of employees). Not surprisingly, the risk of backshoring diminishes when the share of subcontracting costs in a specific foreign region is higher relative to the total costs of subcontracting: greater investments in a foreign country generate higher sunk costs that reduce the incentive to move production back to the national borders in the short term. The contextual variables also play a relevant role in shaping the production decisions of the firms: specifically, the presence of a higher number of migrant firms in the region where the firm is located increases the risk of backshoring. This finding is consistent with the recent literature: indeed, the presence of migrant firms provides the opportunity to subcontract part of the production process without investing resources to establish new links in foreign countries (Canello, 2016; Mingione, 2009). In this respect, the interaction between local producers and migrant suppliers can stimulate a process that has been defined as "in situ offshoring" (Ceccagno, 2015) and reduces the firm's propensity to outsource the production process in a foreign country.

The analysis of duration patterns provides similar results, suggesting that when internationalization decisions are driven by imitation/learning, SMEs are more likely to

**Table 3.** Cox PH Model: Relative risks of backshoring among manufacturing firms in Italy, period 2007-2012, industries: clothing and footwear production

	Hazard ratio
Share of outsourcing costs in the foreign region	0..981***
Supplier	1.199**
Profits (1 if yes)	0.643***
Export (% of sales)	1.000
Wage cost per employee	0.990***
Return on Investments	1.000***
Size (Number of employees)	0.984***
# of firms engaged in offshore outsourcing activities at t-1	0.994***
# of migrant firms operating in the area	1.000*
Industry dummies	Yes
Territorial dummies	Yes

engage in more successful foreign subcontracting relationships that tend to last longer. Again, internal learning, proxied by the exporting experience in the years immediately preceding the offshore outsourcing decision, does not provide significant benefits in terms of duration of these activities. In this respect, the role played by internal factors is not as crucial as it is when larger firms are concerned.

#### **4. Concluding remarks**

This paper has provided evidence of the main patterns of offshore outsourcing decisions in the manufacturing sector, focusing on the impact of learning and spatial spillovers and drawing on new firm-level data on Italian Small and Medium Enterprises (SMEs) specialized in clothing and footwear production. The empirical analysis uses an integrated approach, combining different data sources and providing a more extensive assessment of the main patterns of production internationalization, following the recommendations provided by the recent literature (Menghinello, 2009). In fact, the use of microdata from large international databases is suggested as a promising approach to explore more articulated forms of ID internationalization.

The general picture emerging from the analysis confirms that offshore outsourcing represents a relevant part of production internationalization activities in Italy, involving a large number of manufacturing firms. The profile of these producers tends to be significantly different from the companies that choose direct forms of participation in foreign production units: the former group includes smaller firms that are generally located in the North Eastern and Central part of the country and display an attitude to maintain links with domestic subcontractor networks. As far as the destination regions are concerned, the descriptive analysis shows that the majority of both offshoring and offhsoring activities are localized in Europe, although several producers engage in subcontracting relationships with suppliers located outside the continent.

The core of the empirical investigation has been oriented towards two different directions: the analysis has preliminarily inspected the main determinants of 'soft' internationalization activities, providing evidence of the micro- and macro-level factors that drive the decision of small firms to establish new relationships with foreign suppliers. In the second part of the analysis, the focus has moved to the duration of offshore outsourcing: following the recent contributions of the literature (e.g. Kinkel & Maloca, 20009; Fratocchi, 2014), we have argued that backshoring is more often the short term consequence of a biased decision due to the lack of know-how and managerial competencies rather than a conscious choice motivated by changing economic circumstances. Following such an approach, the duration of production internationalization can be assumed to be a proxy of the success of the strategy chosen.

The results of the first part of the investigation suggest that local spillovers influence offshore outsourcing decisions of SMEs, contributing to reduce the costs associated with production internationalization activities: learning from offshore outsourcers located in close proximity helps SMEs to improve their awareness of foreign opportunities and increase their knowledge of international markets, generating a positive impact on the likelihood of choosing international subcontracting strategies. This finding is consistent with previous contributions in the literature (Henisz and Delios, 2001; Ellis, 2000) and suggests that learning or imitation contributes to reduce the SMEs' gap in terms of know-how, capacity and management skills and facilitates the diffusion of light forms of production internationalization. Interestingly, local spillovers seem to be mainly

generated by other small firms engaged in offshore outsourcing, while no significant spatial effect is detected as far as offshoring strategies implemented by large firms are concerned. The analysis also reveals the lack of significance associated with internal learning: for SMEs, previous international experience does not increase the likelihood to engage in soft production internationalization.

The analysis of duration patterns provides similar results, suggesting that when internationalization decisions are driven by imitation/learning, SMEs are more likely to engage in more successful foreign subcontracting relationships that tend to last longer. Again, internal learning, proxied by the exporting experience in the years immediately preceding the offshore outsourcing decision, does not provide significant benefits in terms of duration of these activities. In this respect, the role played by internal factors is not as crucial as it is when larger firms are concerned.

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