Reshoring by small firms: dual sourcing strategies and local subcontracting in value chains

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This article assesses how the reshoring of manufacturing activities by micro and small enterprises (MSEs) affects the performances of co-located subcontracting networks and the reconfiguration of global value chains (GVCs). We utilize quantitative microdata of Italian MSEs operating in the clothing and footwear industries during the 2008–2015 period. Empirically MSE reshoring does not have a significant impact on domestic subcontractors' birth rates and survival chances, whereas it is positively associated with their productivity growth. Most MSEs in our sample adopt a dual sourcing strategy, expanding their global production networks while preserving their local supply base. Local and global production networks are not two alternative paradigms of industrial organization; they can be complementary and mutually reinforce each other.

Introduction

After several decades of persistent and pervasive diffusion, global value chains (GVCs) are currently under pressure. From growing geopolitical tensions (Pegoraro et al., 2021) to the recent COVID-19 pandemic (Gereffi, 2020, 2021; Verbeke, 2020), and from the need to reduce firms' carbon footprint (Golgeci et al., 2021; Ponte, 2020) to developed-economy investments in novel high-tech production assets (Rehnberg and Ponte, 2018), a perfect storm seems to be battering the organization and functioning of established GVCs (Baldwin and Tomiura, 2020; Barbieri et al., 2020). GVCs are, today, facing the risk of being not only geographically reorganized but also strategically downgraded. The most visible effect of this new trend is the call for the relocation of production activities from developing to developed

economies, a process generally known as reshoring (Bailey and De Propris, 2014; Gray et al., 2013; Kinkel, 2012).

While firms engaged in some reshoring during the 2008–2009 global financial crisis (Canello, 2021; Delis et al., 2019), the geographic relocation of production activities increased its popularity in recent years due to the uncertainties brought about by Brexit, the US–China trade war and the COVID-19 pandemic (EU Policy Department, 2021; Gereffi, 2020; Gereffi et al., 2021). Advocates of reshoring believe that it will reinvigorate the economic growth of mature regions once hit by globalization (Bailey et al., 2018; Stentoft et al., 2016), protect Western firms' intellectual property by making them less vulnerable to China's free-riding behaviour (Lighthizer, 2020; Mao and Görg, 2020) and stabilize and preserve critical domestic productions and supply chains like pharmaceuticals and semiconductors (Ryan et al., 2022; Shih, 2020; White House, 2021). Overall, it is believed that reshoring will enhance the competitiveness and resilience of industrial regions in developed economies (Hätönen and Eriksson, 2009; Martínez-Mora and Merino, 2014; Nujen et al., 2019; Pisano and Shih, 2012).

Evidence of pro-reshoring policies is today visible in most of developed economies (Elia et al., 2021). In the USA, the Obama administration allocated USD 40 million to repatriating firms through the 'Make it in America' initiative (White House, 2012) and the Biden administration has pledged billions of dollars to restore resilience to a series of US supply chains purportedly made vulnerable through extensive offshore production, including semiconductors, pharmaceuticals, advanced batteries and critical minerals (White House, 2021). In the UK, the national government designed a policy tool called *Reshore UK*, aimed at encouraging manufacturing firms to move back production that was previously relocated to foreign countries (Pegoraro et al., 2021). The stimulus package approved by the Japanese government in April 2020 included an incentive of USD 2.1

billion to domestic firms willing to repatriate their production activities from China (EU Policy Department, 2021). The French Ministry of Economics and Finance developed the Colbert 2.0 software tool to help companies self-assess their readiness for reshoring (Eurofound, 2019). In Italy, the Emilia-Romagna region has designed a specific policy tool to encourage reshoring (Eurofound, 2019).

Despite the growing popularity of reshoring, relatively little is known about the economic consequences of this managerial practice. For instance, to what extent is reshoring affecting the efficiency gains that multiple decades of GVCs created for numerous firms worldwide? And what are the specific economic implications for Western production territories that repatriate globally dispersed production activities? Evidence of positive spillover effects associated with the relocation of production is still sparse and often limited to anecdotal findings or relatively small samples (Eurofound, 2019). The recent literature on reshoring gives limited attention to its economic impact, mainly concentrating on the drivers behind repatriation decisions (Ancarani et al., 2019; Dachs et al., 2019b; Di Mauro et al., 2018; Fratocchi et al., 2016; Fratocchi and Di Stefano, 2019a; Gray et al., 2013, 2017; Kinkel, 2012; Martínez-Mora and Merino, 2014; Stentoft et al., 2016) and on how reshoring is performed (Boffelli et al., 2020). This is unfortunate, considering the relevance of local externalities in the discussion on manufacturing reshoring. For instance, Pegoraro et al. (2021) contend that reshoring can be fully understood only if the specific characteristics of the various domestic locations are considered.

Highlighting this research gap, our article focuses on a category of firm that has been substantially neglected by both the extant GVC and reshoring literatures, notably micro and small enterprises (MSEs). While representing the backbone of numerous industries in developed economies, MSEs are generally deemed the weakest actor in complex production systems

like GVCs (Agostino et al., 2015; Blažek, 2016; Canello et al., 2017). From the consolidated and yet expanding GVC domain to the more recent stream of studies on reshoring, MSE strategies remain largely ignored. The existence of this lacuna is critical and quite surprising, especially if we consider the pivotal role that MSEs have played in the formation of industrial districts and clusters, as well as in their recent intersection with GVCs (for example, Buciuni and Pisano, 2018; De Marchi et al., 2018).

Our empirical investigation in this article represents the first attempt at conducting a quantitative analysis of the impact of MSE reshoring strategies on the performances of co-located subcontracting networks and the organization of GVCs. The article focuses on the 2008–2015 period and relies on micro-level data from the Italian Ministry of Economy and Finance Annual Survey (IMEFAS). Using this novel data source, we examine the relationship between reshoring strategies implemented by small final firms in Italy's clothing and footwear GVCs, and the natality, mortality and productivity levels of subcontracting firms operating in the same local context.

Our findings suggest that MSE reshoring decisions do not significantly affect birth and survival rates of the co-located supply network, whereas they are positively associated with the productivity growth of local subcontractors. We argue that the post-reshoring effects presented in the empirical section are the consequence of the dual sourcing strategies implemented by most MSEs during the offshore outsourcing phase. Indeed, the descriptive analysis shows that MSEs tend to preserve their domestic subcontracting links when they first relocated production abroad. By alternating offshore outsourcing and reshoring strategies, MSEs contribute to the geographical reorganization of GVCs, hence highlighting the central role they play in the evolution of GVCs over time and across space.

Our contribution is threefold. First, we advance the recent debate on the impact of MSE reshoring on GVC reconfigurations (Gereffi, 2020; Miroudot, 2020) by offering a unique quantitative perspective on the micro-level dynamics that underpin GVC evolution. Second, we provide a local competitiveness perspective based on a comprehensive sample of firms operating in an entire country, thus avoiding small samples or anecdotal case studies. Third, we connect a GVC perspective on MSEs competitiveness with a more traditional microeconomics perspective focused on reshoring.

Theoretical framework

Causes and consequences of reshoring

The term reshoring indicates the voluntary decision of a firm to partly or fully relocate business operations from previously offshored locations to its home country. Reshoring can occur when the firm disinvests after a foreign direct investment (FDI) or when previously established subcontracting relationships with independent foreign suppliers are displaced (EU Policy Department, 2021). In the last few years, both phenomena have been observed in developed countries, involving large and small businesses (Ancarani et al., 2015; Bailey and De Propris, 2014; Gylling et al., 2015). The vast majority of reshoring strategies are performed by manufacturing firms (Eurofound, 2019). Interest with respect to reshoring has spiked after the global financial crisis of 2008–2009 (Barbieri et al. 2018; De Backer et al., 2016). Evidence of the increasing attention towards reshoring also appears from the publication of special issues in outlets like *Operation Management Research* (Barbieri and Stentoft, 2016), *AIB Insights* (Rottig and Littrell, 2015) and the recent calls for papers *from Journal of World Business* and *Cambridge Journal of Regions, Economy and Society*.

A combination of internal and external factors helps explain the decision to repatriate and the outcomes associated with this strategy (Barbieri et al., 2018; Fratocchi et al., 2014, 2016). At the firm level, repatriation practices result from a strategic shift of the firm

in terms of multiple objectives, such as re-positioning its brand (Boffelli et al., 2020; Di Mauro et al., 2018), increasing synergies between manufacturing activities and R&D (De Backer et al., 2016; Di Mauro et al., 2018), pursuing social and environmental goals (Barbieri et al., 2018; Fratocchi and Di Stefano, 2019a), adopting new production technologies (Ancarani and Di Mauro, 2018; Ancarani et al., 2019; Dachs et al., 2019b) and addressing time and flexibility issues (Moradlou et al., 2017; Tate, 2014). Previous reshoring experiences are also likely to influence a firm's propensity to repatriate production (Dachs et al., 2019a), and reshoring can also occur due to previous managerial mistakes (Gylling et al., 2015; Kinkel and Maloca, 2009; Kinkel, 2014; Martínez-Mora and Merino, 2014). Indeed, production relocation decisions are often supported by simple heuristics based on cost reduction, which may overlook important soft factors that affect the performance of global sourcing in the medium and long term (Gray et al., 2017; Kinkel and Maloca, 2009).

Regarding contextual factors, global, national and regional conditions can also affect the relative attractiveness of home and host locations, triggering repatriation practices (Ellram, 2013; Kinkel, 2012). According to Martínez-Mora and Merino (2014), the advantages of a foreign location can be eroded by exogenous or endogenous factors, including gap reductions in labour costs, higher energy costs and fluctuations in exchange rates. Over the past few years, increased geopolitical tensions and structural or economic shocks such the US–China trade war and Brexit have impacted on the competitive environment of several countries, interfering with trade flows and reducing the attractiveness of several foreign locations (Bryson and Vanchan, 2020; Ivanov and Dolgui, 2020; Moradlou et al., 2020). More recently, the diffusion of the Covid-19 pandemic has disrupted long-established global supply chains and has induced numerous Western firms to reconsider their international sourcing strategy (Gereffi, 2020; Gereffi et al., 2022; Elia et al., 2021; Ryan et al., 2022).

Country-specific policies and competitive dynamics can also influence reshoring dynamics (Baraldi et al., 2018; Wiesmann et al., 2017). As far as the former aspect is concerned, various government incentives like those reported in the introductory section can be significant pull factors for repatriating firms, even if most of these policy measures do not directly support reshoring (Eurofound, 2019). Regarding the latter aspect, automation technologies can boost domestic productivity, increasing the home location's attractiveness (Arlbjørn and Mikkelsen, 2014; Bailey and De Propris, 2014; Rehnberg and Ponte, 2018). Furthermore, the increasing concerns about climate change have triggered a reshoring and nearshoring movement, with consumers, activists and policymakers supporting short supply chains to lessen the impact of global logistics on the environment (De Marchi et al., 2019; Ponte, 2020). Finally, local factors may be critical enablers of the reshoring process (Pegoraro et al., 2021; Wan et al., 2019b). Indeed, the presence of local assets and industrial commons, specialized know-how, industrial organization, formal and informal institutions and the widespread diffusion of skilled suppliers are deemed prerequisites for reshoring (Lund and Steen, 2020; Pegoraro et al., 2021).

Despite this wealth of knowledge on the potential causes of reshoring, limited attention has been devoted to the actual effect of these practices. Existing evidence tends to focus on firm-level outcomes of reshoring, showing that production repatriation is often associated with increased quality, flexibility, delivery and cost performance (Johansson and Olhager, 2018; Moradlou et al., 2017; Robinson and Hsieh, 2016; Stentoft et al., 2015). Stentoft et al. (2018) emphasized the importance of a manufacturing and relocation strategy for reshoring to achieve improvements in cost, quality and flexibility, whereas Johansson and Olhager (2018) state that post-relocation performances tend to be

strongly affected by locational factors. Finally, Brandon-Jones et al. (2017) indicate that reshoring announcements result in higher stock returns.

MSE sourcing strategies and GVC reconfiguration

The recent political and academic calls for repatriating production functions back to their countries of origin do not seem to take into consideration the existence of potential side effects associated with this practice. Decades of globalisation of production have increased the efficiency of numerous Western industries and firms, sustaining the productivity and the competitive advantage of both multinational enterprises (MNEs) and MSEs by drastically reducing their production costs (for example, Buciuni and Finotto, 2016). GVCs also proved vital to the innovation capabilities of firms, as they allowed the circulation of knowledge across borders and organizational boundaries (for example, Buciuni and Pisano, 2021; Cano-Kollmann et al., 2018; Lee and Gereffi, 2021). Finally, the diffusion of GVCs has contributed to the creation of millions of jobs in developing countries, therefore playing a central role in their social and economic development.

Recognizing the important role GVCs have played in the economic upgrading of firms and industries in both developed and developing economies, the impact of reshoring on the functioning and reorganization of GVCs is a high priority. The considerable gap in the extant literature highlights the need to unpack this important matter into sub-themes. For instance, by focusing on the resilience of the medical devices GVC, Ryan et al. (2022) and Gereffi et al. (2022) show how MNEs can enhance the stability and resilience of GVCs in a time of pandemic without downsizing global operations or reshoring production functions. While these studies highlight the impact of MNE reshoring on the reorganization of GVCs, less attention has been dedicated to MSE reshoring and its impact on the evolution of production networks. This represents an important starting point to better understand how MSEs operate in a context of GVCs.

Despite the limited attention devoted to MSE reshoring strategies in GVCs, there are several reasons motivating the need to focus on this type of firm. Production MSEs are generally deemed the weakest actor in complex production chains, and their development is thought to be contingent on the decisions of larger firms, typically global buyers (Blažek, 2016). As a result, MSE sourcing strategies have been only occasionally addressed in the GVC literature, and normally through the discussion of anecdotal evidence or small samples (Ashby, 2016; Boffelli et al., 2020, 2021; Di Mauro et al., 2018; Merino et al., 2021). Lack of empirical studies on MSE sourcing strategies might be motivated by MSEs' inability to engage with complex GVC decisions. Indeed, MSEs competing in GVCs often rely on incomplete and inefficient assessment methods and lack planning and forecasting capabilities (Kinkel et al., 2007; Kinkel, 2014). In addition, the ability to implement direct monitoring and control procedures is limited (Manning, 2014; Nujen et al., 2018), which leads to higher coordination costs and extended delivery times.

While some domestic firms managed to successfully tap into GVCs and increased their competitiveness, others failed (Buciuni and Pisano, 2018). The negative externalities resulting from a failure in one node of the supply chain can easily be passed on to other actors, particularly in Italian industrial districts where subcontractor networks are tightly intertwined (Canello and Pavone, 2016; De Marchi et al., 2018). Within this growing segment, however, surprisingly little is known about the role MSEs play in the current reorganization of GVCs and what impacts their sourcing strategies carry for local production networks. This gap has become even more acute in recent times, as we have started to register the growing attention scholars and policymakers alike are dedicating to reshoring. It is in this space that we position

our study, hoping to contribute to the ongoing debate on the effects of reshoring on mature industries and seeking to shed further light on the micro mechanisms underlying the evolution of GVC.

Data and methods

The IMEFAS database

Empirical research on reshoring has been so far limited by the lack of suitable firm-level data (De Backer et al., 2016). According to Fratocchi et al. (2014), this pattern can be explained by two main factors. First, production repatriation is often perceived as a negative experience and managers are reluctant to share this information with researchers (Hennart et al., 2002). Second, reshoring is often observed at the product or component level, which makes it difficult or impossible to acquire relevant secondary data for these patterns (Gray et al., 2013). Therefore, most empirical contributions on reshoring tend to rely on company case studies and *ad hoc* surveys with small sample sizes (Bettiol et al., 2019; Di Mauro et al., 2018; Gray et al., 2017; Gylling et al., 2015; Martínez-Mora and Merino, 2014; Nujen et al., 2018).

The lack of information on reshoring has been partially addressed with more extensive recent databases. Two notable examples are the European Manufacturing Survey (Dachs et al., 2019a, 2019b; Kinkel, 2012) and the European Reshoring Monitor (EU Policy Department, 2021). The former is a firm-level questionnaire administered every three years with information on international outsourcing and reshoring of production and R&D activities. The latter is a pilot initiative aimed at collecting information on individual reshoring cases from multiple sources (including media and specialized press) since 2015. Despite these recent advances, most newly available data sources are still insufficient to evaluate the impact generated by repatriation initiatives at the local level. The present gap is associated with (i) the impossibility of

identifying the pool of local subcontractors potentially affected by reshoring initiatives; and (ii) the underrepresentation of smaller firms in the reshoring databases (Canello, 2021).

The IMEFAS database provides the opportunity to address these current gaps because it includes information on reshoring initiatives implemented by MSEs at a detailed territorial level. The IMEFAS database is well-suited to our research for three main reasons. First, it contains a significant number of MSEs whose activity is not tracked by most firm-level databases. Second, the IMEFAS survey tracks the intensity and evolution of production relocation over time with firm-level and manufacturing activity information on the costs associated with domestic and foreign subcontracting agreements. Third, the database allows us to classify firms according to their position in the value chain. More specifically, it is possible to discriminate between MSEs that operate as final firms and MSEs operating as subcontractors. Such a distinction is crucial to understand how reshoring activities performed by the former group impact the performances of the latter group of MSEs.

The sample used for our analysis consists of Italian MSEs specialized in clothing and footwear production[1] with an annual turnover lower than 7.5 million euro. The territorial unit used in the empirical analysis to link MSE reshoring to local subcontractor performances is the Local Labour Market Areas (LLMA) identified by the Italian Bureau of Statistics (ISTAT) with 2011 census data.

Sectoral context

Our focus on the clothing and footwear industries in Italy is justified by several considerations. Clothing and footwear production epitomizes the initial wave of economic globalisation from the 1970s through the 1990s and the rise of buyer-driven GVCs (Dicken and Hassler, 2000; Gereffi, 1999). After a first wave of studies focusing on the globalisation

of these and other labour-intensive industries, subsequent work turned to the assessment of the upgrading opportunities for low-cost producers located in developing economies (Gereffi, 2018). It was only in recent years that the analysis of the clothing and footwear GVCs in developed economies was enriched with a complementary perspective from the industrial clusters literature (for example, Buciuni and Pisano, 2018). The intersection of the GVC and industrial cluster approaches sheds light on how the strategies of MNEs and MSEs were intertwined and posed questions about new upgrading strategies and knowledge networks in developed economies (De Marchi et al., 2018).

The footwear and clothing sectors also play a central role in the Italian economy. Both sectors are part of the industrial backbone of Italy and their development has strategically contributed to the industrialisation of the country, starting in the 1960s. Italian clothing and footwear industries are characterized by high degrees of fragmentation (Scott, 2006), but also a strong export orientation and internationalisation that has affected both leading firms and small businesses (Berra et al., 1995). Despite the benefits associated with global fragmentation of production, GVCs in these industries tend to be vulnerable to shocks, given the high degree of geographical concentration that generates potential bottlenecks (EU Policy Department, 2021).

To conclude, footwear and clothing industries seem particularly suitable to assess the dynamics underpinning MSE reshoring strategies and their impact on the organization of production networks (Fratocchi and Di Stefano, 2019b). Specifically, the fashion industry has been recently assessed through a growing number of empirical contributions, mostly thanks to the increasing availability of systematic evidence (for example, Barbieri et al., 2018). Furthermore, after a first period of intense globalization of production (Gereffi, 1999; Frederick and Gereffi, 2010, 2011), the clothing

and footwear production chains have lately undergone a significant reorganization process, mostly triggered by firm-level reshoring strategies. The frequency of reshoring strategies occurring in these industries might be motivated by the widespread adoption of loose forms of GVC governance to regulate the buyer-supplier relationship (Gereffi et al., 2005). Because footwear and clothing GVCs seldom involve FDI and equity forms of coordination, it is relatively straightforward for brand-name and leading MNEs to reconfigure production networks from a geographical perspective.

Methodology

As explained previously, the main goal of this empirical study is to evaluate the impact of MSE reshoring practices on the reorganization of production chains and performance of subcontracting firms in the same local production system. In our database, reshoring is identified with the decision of a micro or small manufacturing firm to disrupt its international subcontracting relationships. The data allow us to track how production is organized after the repatriation; thus, the two following strategies can be identified separately (EU Policy Department, 2021; Gray et al., 2013):

- *reshoring for insourcing*: production is brought back to the domestic country and performed in-house; and
- *reshoring for outsourcing*: production is brought back to the domestic country and outsourced to a domestic subcontractor.

To achieve the main goal of our analysis, we identify the following two subsets of Italian MSEs:

1. *Final firms* that cease offshore outsourcing activities and repatriate production to Italy; and

2. *Subcontractors* potentially affected by the reshoring practices of the final firms.

The former group is identified by client firms reporting any amount of offshore outsourcing costs at time $t–1$ and ceasing to report such costs at time t. The amount of reshoring is proxied by the offshore outsourcing costs reported at $t–1$. Using this clear-cut approach, we focus the investigation on full reshoring and ignore any partial reshoring. Such an approach allows us to avoid possible misinterpretations when lower offshore outsourcing costs are reported. Indeed, it is possible that international subcontracting costs decrease simply because different activities are outsourced to foreign suppliers or because the price of a specific part or component has been affected by a negative shock.

Regarding local subcontractors, this subgroup of firms is identified with all MSEs fulfilling the two following criteria: (i) >50% of revenues from subcontracting activities; and (ii) 100% of revenues from clients located in the same local production system. We assume that this subset of the national subcontracting population is the one more likely to be affected by reshoring decisions implemented by MSEs located in the same LLMA.

The impact of reshoring on local subcontracting populations is evaluated using the following three outcome variables:

1. *Birth rates*, calculated as the share of local subcontractors born in the LLMA at time t over the local subcontracting population at $t–1$;
2. *Survival chances*, calculated with a dummy equal to 1 if the local subcontractor failed at time t and 0 if the subcontractor survives; and
3. *Productivity growth*, identified with the difference between local subcontractor's Total Factor Productivity (TFP) at time t and TFP at time $t–1$. TFP is calculated in a previous stage using the Levinshon and Petrin method (Petrin et al., 2004).

More information on the structure of the three outcome variables is available in Supplementary Tables A1, A2 and A3 in the Appendix, which also includes a more detailed explanation of the empirical approach used to calculate TFP. The empirical model used for (1) and (3) is a Generalized Least Squares (GLS) regression with random effects, whereas (2) is estimated using a logistic regression with random effects. The unit of observation is the LLMA in model 1, whereas the analysis is implemented at the firm level for models 2 and 3.

In all cases, the key independent variable is represented by the reshoring intensity in the same LLMA. The following two proxies are used to measure reshoring intensity:

- Value of MSEs' reshoring: offshore outsourcing costs of reshored production in the jth LLMA by all MSEs located in the jth LLMA at $t–1$;
- Number of reshoring MSEs: reshoring MSEs in the jth LLMA.

All models include a set of control variables, as well as a set of industry, cohort and territorial dummies. The operational definition of these covariates and their expected impact on the outcome variables are reported in Supplementary Tables A1, A2 and A3 in the Appendix.

Results

Descriptive analysis

The descriptive analysis presented in this section provides some preliminary indications on the characteristics of the local subcontracting population in the Italian clothing and footwear industry, highlighting how production relocation decisions have evolved after the global financial crisis of 2008–2009.

The territorial location of local subcontractors and reshoring activities in Italy is depicted in Figures 1 and 2. The geographical distribution of the two phenomena seems to
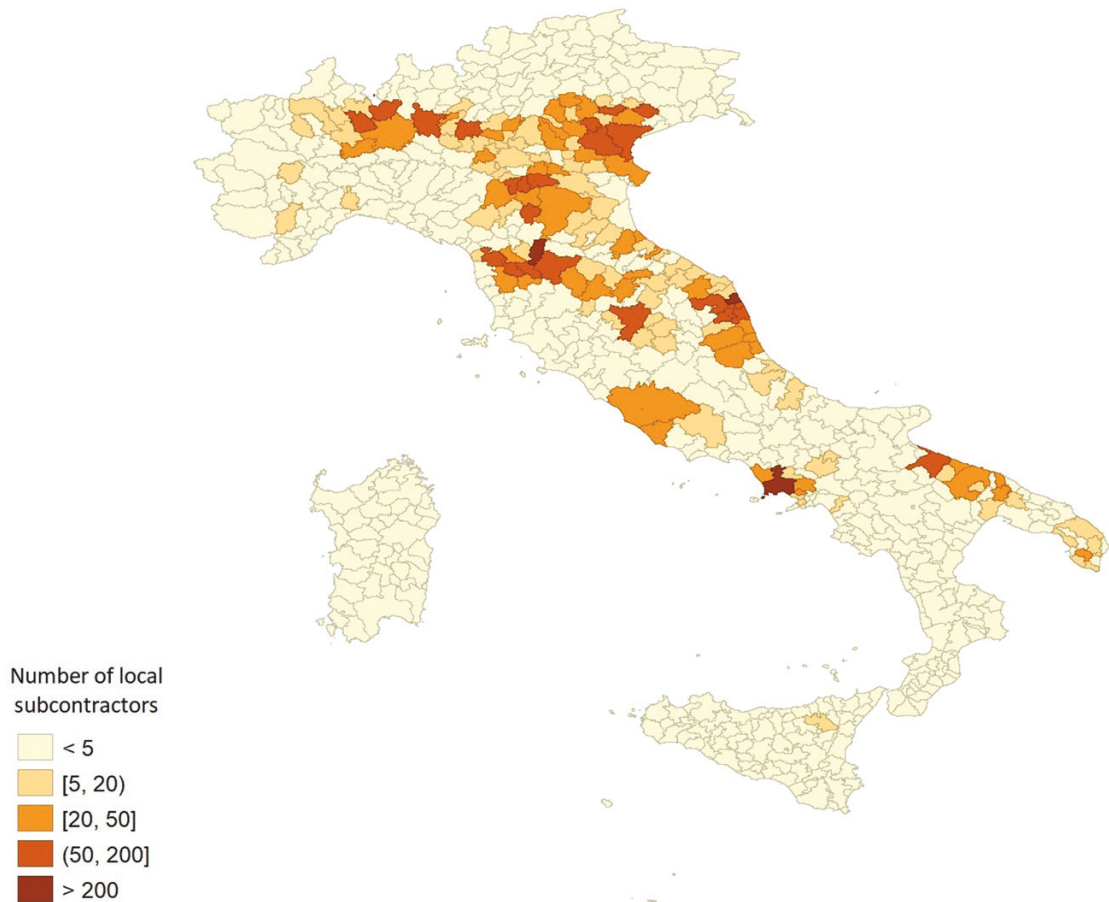
Figure 1. *Distribution of local subcontractors by LLMA, average number over the 2008–2015 period.*

follow a similar pattern and is consistent with previous evidence for these industries, with strong concentrations in the area classified as "Third Italy" and characterized by the widespread diffusion of industrial districts (Canello and Pavone, 2016). Additional descriptive evidence from IMEFAS (not reported in this paper) suggests that local subcontractors represent a relevant share of the total firms operating in these industries (23% of the Italian MSE population and 56% of total subcontractors). Local subcontractors were negatively affected by the global financial crisis, with the number of active firms declining by 25.6% between 2008

and 2015. During the same period, the number of final firms and national/global subcontractors declined by 17.5% and 25.2% respectively.

The dynamics of MSE production relocation decisions between 2008 and 2015 is reported in Figure 3. The average number of firms engaged in offshore outsourcing activities is 916 during the time span considered. Figure 3 indicates a decline in offshore outsourcing among MSEs, with a lower number of persisting and new offshore outsourcing firms in the last years of the analysed time span.

Reshoring decisions are present throughout the entire post-crisis period and are taken on
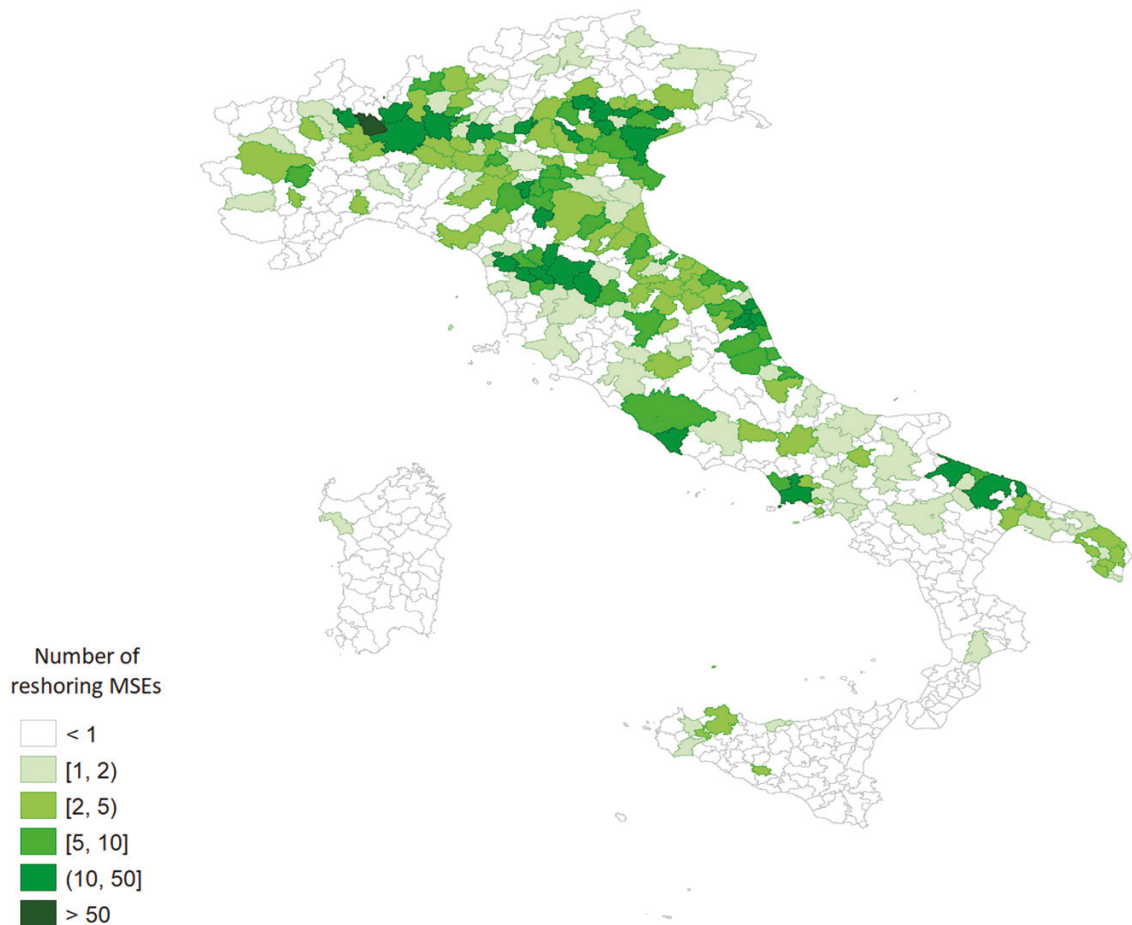
Figure 2. *Distribution of reshoring activities by LLMA, cumulative number of firms over the 2008–2015 period.*

average by 145 firms during the 2008–2015 period. Reshoring firms represent approximately 16% of the offshore outsourcing population. This share is in line with previous studies, such as Dachs et al. (2019b), who show that 19% of the footwear and clothing firms in their sample chose reshoring. The dynamics emerging from Figure 3 seem stable, with a peak of 175 reshoring firms visible for 2012.

Figure 4 shows that the great majority of repatriating firms (83%) reported domestic outsourcing costs both before and after the reshoring decision, whereas only a small share of MSEs started reporting domestic outsourcing costs only after reshoring was performed. This pattern suggests that the domestic subcontracting network is rarely displaced when MSEs decide to opt for offshore outsourcing and that reshoring is rarely motivated by the decision to implement the reshored activities in-house. Indeed, this decision is only taken by 12% of the reshoring firms. Overall, these findings seem consistent with previous evidence by Shaver (2013), who suggests that the reshoring mode is often dependent on previous entry mode (that is, offshore outsourcing vs. FDI).
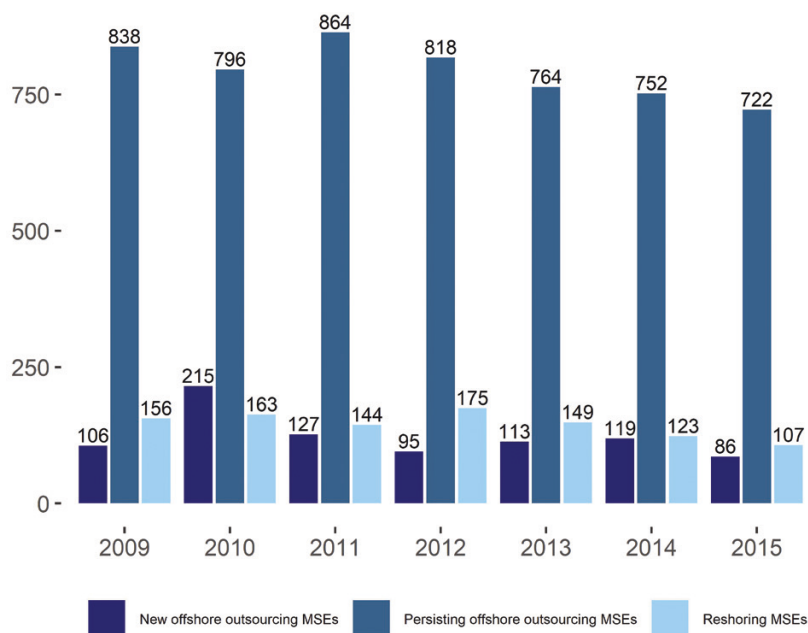
Figure 3. *Evolution of offshore outsourcing and reshoring activities, period 2008–2015.*
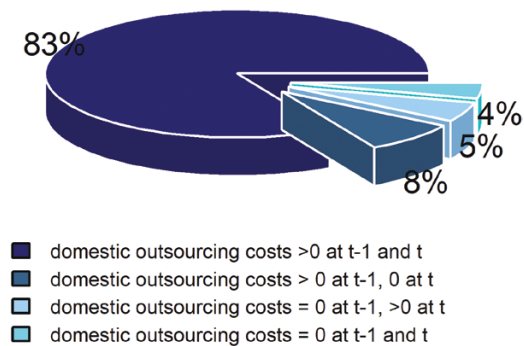

Figure 4. *Organization of production after reshoring, period 2008–2015.*

Empirical model

Birth rates

The results of the estimations for local subcontractor birth rates are reported in Tables 1 and 2. In both tables, the first column ([A]/[D]) refers to the baseline model including only the key independent variables, whereas in the second and the third columns the more extensive specifications with the full set of control variables are considered. In the last column, the set of industry, territorial and cohort dummies, as well as the interaction terms between cohort and industry dummies, is incorporated in the specification.

For the control variables, the sign of most coefficients and their significance are consistent with our expectations. The strategies and performances of final firms located in a specific LLMA represent strong demand factors for the formation of new local subcontractors in the same area. More specifically, higher productivity levels among client firms and greater propensities towards domestic outsourcing are positively correlated with local subcontractors' birth rates according to specifications [B],[C],[E] and [F] (variables *Clients' productivity rates* and *Relative value of domestic outsourcing*). The presence of leading clients is also a triggering factor for the formation of new local subcontractors, as revealed by the positive and significant coefficient of the variable *Dependence on main client*; this variable represents the average share of local

Table 1. *GLS Model with random effects – 1: determinants of local subcontractors' birth rates in LLMA j at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[A]		[B]		[C]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	6.049***	0.404	0.043	0.858	0.224	1.295
Number of reshoring MSEs	1.174***	0.276	0.003	0.332	0.068	0.332
Number of local subcontractors			0.038***	0.011	0.038***	0.011
Local entrepreneurial rate			0.623	1.009	0.965	1.005
Industrial District			2.433**	1.174	2.699**	1.106
Relative value of exports			−0.485**	0.227	−0.503**	0.232
Average MSE size			0.024**	0.011	0.031***	0.010
Unemployment change			−0.271	0.229	−0.608*	0.360
Dependence on main client			0.059***	0.011	0.056***	0.011
Relative value of domestic outsourcing			0.627**	0.276	0.672***	0.254
Clients' productivity rates			0.050***	0.015	0.056***	0.015
Labour force			0.006*	0.003	0.007**	0.003
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	2693		2679		2679	

Table 2. *GLS Model with random effects – 2: determinants of local subcontractors' birth rates in LLMA j at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[D]		[E]		[F]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	6.255***	0.396	0.043	0.896	0.222	1.280
Value of MSEs' reshoring	3.957***	1.339	0.583	1.397	0.674	1.411
Number of local subcontractors			0.037***	0.010	0.038***	0.011
Local entrepreneurial rate			0.609	0.998	0.974	0.995
Industrial District			2.431**	1.176	2.691**	1.109
Relative value of exports			−0.486**	0.226	−0.504**	0.231
Average MSE size			0.024**	0.011	0.031***	0.010
Unemployment change			−0.271	0.229	−0.608*	0.361
Dependence on main client			0.060***	0.011	0.056***	0.011
Relative value of domestic outsourcing			0.628**	0.276	0.672***	0.254
Clients' productivity rates			0.050***	0.015	0.056***	0.015
Labour force			0.006*	0.003	0.007**	0.003
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	2693		2679		2679	

subcontractors' revenues associated with the main client.

Other interesting insights emerge from the analysis of the control variables that are commonly included in the empirical models stemming from the ecological literature (Sorenson, 2017). More specifically, the positive and significant effect of the variable *Labour force* is consistent with previous findings by Armington and Acs (2002), who show that larger local working populations increase the supply of potential entrepreneurs. The insignificant coefficient of *Local entrepreneurial rate*, combined with the positive and significant effect for the *Number of local subcontractors*, shows that local subcontractor birth rates are more affected by the presence of an already established pool of competitors, rather than from local entrepreneurs.

The results of the full specifications are consistent as far as the two main independent variables are concerned. Both the number of reshoring firms and the intensity of reshoring generated by final firms do not have a significant impact on local subcontractors' birth rates in an LLMA. This result indicates that MSE reshoring is not contributing to the expansion of the local segment of their GVC.

Survival

The empirical analysis of local subcontractor survival chances is reported in Tables 3 and 4. The structure of these two tables is consistent with that discussed in the previous subsection for local subcontractor birth rates. In both cases, the last column includes the full specification with the entire set of control variables and should be used as main reference to evaluate the findings of our model.

The data for most control variables are consistent with previous evidence on firm survival provided by the ecological literature. More specifically, the negative coefficient for the variable *No financial constraints* confirms that access to the credit market reduces the likelihood of failure (Musso and Schiavo, 2008), whereas the

negative correlation between size and failure chances is consistent with previous evidence reported by Dunne et al. (1989) and Mata et al. (1995). Not surprisingly, higher failure rates are found among local subcontractors that were established in the previous three years (positive and significant coefficient of *Start-up*) and those reporting losses in the previous year (negative and significant coefficient for *Profit*). Interestingly, a higher dependence on the main client is negatively, rather than positively correlated with the probability that a local subcontractor will exit the market.

The evidence for the two main independent variables is consistent with that reported in the previous subsection. Both the number of reshoring firms and the intensity of reshoring do not have a significant impact on the probability that a local subcontractor will survive in the following period. In the descriptive section, we showed that most MSEs do not cut ties with local subcontractors when they engage with offshore outsourcing in GVCs. This finding might explain why, when production is repatriated, it does not impact significantly on the survival of existing local subcontractors.

Productivity

As a final step of this empirical analysis, we report evidence regarding the determinants of the productivity growth of local subcontractors. The results of the GLS model are reported in Tables 5 and 6 and follow the same structure of the previous tables.

The coefficients of most control variables are significant and in line with previous findings in the literature. The positive coefficient for the variable *Start-up* is consistent with Harris and Moffat (2015), and can be explained by the higher propensity of younger firms to adopt new technology and boost their productivity levels. Regarding *Size*, the positive and significant coefficient is in line with Van Biesebroeck (2005), who showed that larger producers tend to grow and improve their productivity faster than small firms. Local subcontractor

Table 3. *Logit Model with random effects – 1: determinants of local subcontractors' failure at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[A]		[B]		[C]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	−1.205***	0.017	−0.452***	0.070	−0.709***	0.091
Number of reshoring MSEs	0.005	0.005	0.004	0.006	−0.012	0.008
Profit			−0.895***	0.039	−0.942***	0.044
Size			−0.017***	0.004	−0.019***	0.004
No financial constraints			−0.392***	0.034	−0.394***	0.038
Start-up			0.238***	0.037	0.138***	0.042
Domestic outsourcing intensity			−0.052	0.052	−0.107*	0.059
Legal form = sole proprietorship (reference group)						
Legal form = partnership			0.115**	0.056	0.175***	0.065
Legal form = limited corporation			0.418***	0.043	0.427***	0.051
Capital intensity			−0.750	0.470	−0.800	0.519
Dependence on main client			−1.827***	0.410	−1.871***	0.464
Specialization			−0.090***	0.030	−0.064*	0.034
Use of capital-intensive technology			0.087	0.073	0.104	0.084
Number of peers			−0.001**	0.000	−0.001**	0.000
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	36,722		33,313		33,313	

business strategies are also important determinants of their performance improvement. On the one hand, stronger dependence on the main client is associated with lower ability to increase productivity levels. In addition, the ability to outsource part of the production process to lower-tier suppliers is associated with higher productivity growth, in line with Fixler and Siegel (1999). Finally, contrary to our expectations and previous findings (Musso and Schiavo, 2008), access to credit seems to have a negative impact on the ability of local subcontractors to improve their performance.

The results of these models highlight the presence of a persistent positive correlation between the value and number of reshoring MSEs and the productivity growth of local subcontractors. This result improves our understanding of the impact of MSE reshoring on the functioning of GVCs. Growth in subcontractor productivity might indicate that the repatriation of production contributes to full exploitation of their production assets, hence improving their overall efficiency. As the efficiency and productivity of local subcontractors improve, buyers might have an extra incentive to delegate additional production tasks to them; thus, offshore outsourcing might be less appealing for final firms as the comparative advantage of foreign suppliers vis-à-vis domestic producers narrows.

A summary of the main results of our empirical investigation is reported in Table 7.

Discussion and conclusion

This article provides evidence of the effects of MSE reshoring decisions on co-located subcontractors performance and GVC reconfiguration during the 2008–2015 period. Using unique micro data on the Italian clothing and footwear

Table 4. *Logit Model with random effects – 2: determinants of local subcontractors' failure at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[D]		[E]		[F]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	−1.204***	0.015	−0.447***	0.069	−0.701***	0.091
Value of MSEs' reshoring	0.037*	0.020	0.006	0.023	0.009	0.027
Profit			−0.894***	0.039	−0.943***	0.043
Size			−0.017***	0.004	−0.019***	0.004
No financial constraints			−0.392***	0.034	−0.394***	0.038
Start-up			0.237***	0.037	0.141***	0.042
Domestic outsourcing intensity			−0.052	0.052	−0.107	0.059
Legal form = sole proprietorship (reference group)						
Legal form = partnership			0.115**	0.056	0.175***	0.065
Legal form = limited corporation			0.417***	0.044	0.429***	0.051
Capital intensity			−0.750	0.470	−0.797	0.519
Dependence on main client			−1.837***	0.410	−1.839***	0.464
Specialization			−0.090***	0.029	−0.062*	0.034
Use of capital-intensive technology			0.087	0.073	0.104	0.084
Number of peers			−0.001**	0.000	−0.001***	0.000
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	36,722		33,313		33,313	

industry, we investigated how MSE reshoring affects birth and survival rates among subcontractors located in the same local production system. This contribution provides insights on the combination of territorial outcomes arising from the decoupling processes and the GVC reorganization induced by reshoring, hence addressing a key empirical question posed by the economic geography literature (Horner, 2014; MacKinnon, 2012; Yeung, 2015).

The descriptive evidence presented in our study suggests that reshoring decisions are relatively common among small Italian producers and that firms implementing reshoring account for a stable share of the MSEs involved in offshore outsourcing activities. Consistent with previous findings (De Backer et al., 2016), the emergence of reshoring practices does not discourage other MSEs from engaging in global sourcing activities: indeed, initiation of new international subcontracting relationships is visible during the entire time span considered in the analysis. Furthermore, the global sourcing mode chosen by MSEs seems to influence the organization of production after reshoring is performed: most MSEs choose to outsource repatriated production to domestic subcontractors instead of producing in-house.

This result is consistent with recent findings reported by Wan et al. (2019a) and indicates that the GVC governance mode used by small final firms over time tends to remain the same. While the geographical scope of the production task can vary, the way final firms coordinate vendors tends not to change, and internalisation remains limited. In addition, the decision of MSEs to delegate repatriated production to local producers suggests that the local supply base did not deteriorate after final firms relocated part of the production abroad and still

Table 5. *GLS Model with random effects – 1: determinants of local subcontractors' TFP growth at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[A]		[B]		[C]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	−0.125***	0.006	2.702***	0.135	2.662***	0.138
Number of reshoring MSEs	0.009***	0.002	0.009***	0.002	0.004*	0.002
TFP			−0.533***	0.026	−0.531***	0.026
Size			0.007***	0.002	0.007***	0.002
Profit			0.051**	0.018	0.055***	0.018
No financial constraints			−0.031***	0.011	−0.036***	0.011
Start-up			0.110***	0.011	0.112***	0.011
Domestic outsourcing intensity			0.141***	0.025	0.134***	0.025
Legal form = sole proprietorship (reference group)						
Legal form = partnership			0.063***	0.020	0.081***	0.021
Legal form = limited corporation			0.000	0.013	0.007	0.013
Capital intensity			−0.295	0.210	−0.290	0.210
Dependence on main client			−0.487***	0.166	−0.498***	0.165
Specialization			−0.007	0.010	−0.015	0.010
Use of capital-intensive technology			0.056***	0.021	0.059***	0.021
Number of peers			−0.000**	0.000	−0.000	0.000
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	24,086		24,000		24,000	

offers valid supply options. Our findings contrast with previous studies that suggest global sourcing can frequently cause the demise of local production systems and the erosion of territorial know-how (Martinez-Mora and Merino, 2014).

Our empirical investigation suggests that both the number of reshoring MSEs and the reshoring intensity in an LLMA do not have a significant impact on the birth and survival rates of co-located subcontractors. The most plausible interpretation of our findings is embedded in the observation that most MSEs do not displace their subcontractors when they establish links with foreign suppliers. Domestic outsourcing relationships are in fact visible both before and after the reshoring decision. As a result, the presence of a sufficiently dense network of suppliers increases the convenience for MSEs to repatriate production when offshore outsourcing activities do not meet their

expectations, overcoming the hurdles associated with the recoupling process in the same production system (Pegoraro et al., 2021).

Overall, the post-reshoring effects identified in our empirical investigation could be explained by the dual sourcing strategies adopted by most MSEs in the offshoring phase. When production is relocated abroad, MSEs tend to preserve their local supply base. Consistent with findings emerging from the growing literature at the intersection of local clusters and GVCs (for example, Buciuni and Finotto, 2016; Buciuni and Pisano, 2018; De Marchi et al., 2014, 2018), this evidence corroborates and reinforces the argument that local and global production networks are not two alternative paradigms of industrial organization. Rather, they can be complementary and even mutually reinforce each other.

As far as GVC reorganization is concerned, the dual sourcing strategy of MSEs increases

Table 6. *GLS Model with random effects – 2: determinants of local subcontractors' TFP growth at time t, period 2008–2015, industries: clothing and footwear production.*

Variable	[D]		[E]		[F]	
	Coeff.	Std. err.	Coeff.	Std. err.	Coeff.	Std. err.
Constant	−0.111***	0.005	2.715***	0.134	2.663***	0.138
Value of MSEs' reshoring	0.020***	0.006	0.019***	0.006	0.014**	0.006
TFP			−0.534***	0.026	−0.531***	0.026
Size			0.006***	0.002	0.007***	0.002
Profit			0.051**	0.018	0.056***	0.018
No financial constraints			−0.032***	0.011	−0.036***	0.011
Start-up			0.107***	0.011	0.111***	0.011
Domestic outsourcing intensity			0.141***	0.025	0.134***	0.025
Legal form = sole proprietorship (reference group)						
Legal form = partnership			0.064***	0.020	0.081***	0.021
Legal form = limited corporation			0.000	0.013	0.007	0.013
Capital intensity			−0.283	0.210	−0.290	0.210
Dependence on main client			−0.502***	0.164	−0.507***	0.165
Specialization			−0.009	0.010	−0.015	0.010
Use of capital-intensive technology			0.058***	0.021	0.060***	0.021
Number of peers			−0.000	0.000	0.000	0.000
Industry dummies	No		No		Yes	
Territorial dummies	No		No		Yes	
Cohort dummies	No		No		Yes	
Cohort*industry dummies	No		No		Yes	
Observations	24,086		24,000		24,000	

Table 7. *Summary of the main findings of the empirical model.*

MSE typology	Outcome variable	Impact of reshoring by MSEs
Local subcontractors	Birth rates	Number of reshoring MSEs – not significant
		Value of MSEs' reshoring – not significant
	Failure chances	Number of reshoring MSEs – not significant
		Value of MSEs' reshoring – not significant
	Productivity growth	Number of reshoring MSEs – positive
		Value of MSEs' reshoring – positive

the complexity of both the footwear and clothing GVCs. While this can offer important advantages to final firms in terms of supplying options, it also increases the minimum capabilities required to orchestrate complex GVCs. As highlighted by our results, the MSE dual sourcing strategy seldom affects the existing GVC governance structure; on the contrary, it significantly affects its geographical reorganization. Overall, a functioning dual strategy suggests that even smaller firms have the capacity to strategize in GVCs and are not solely dependent on the decisions of larger players.

Despite the lack of positive spillover effects in subcontractor birth and survival rates, reshoring seems to have a positive impact on

the productivity levels of co-located subcontractors. Indeed, productivity growth among local subcontractors is positively and significantly correlated with the amount of reshoring that previously occurred in the local production system. This could be explained by a more efficient use of subcontractors' production assets, which represents a major source of fixed costs for small producers. Reshoring increases the volume of production activities performed by local subcontractors, which in turn can lead to a full exploitation of existing production assets. Overall, our results are consistent with previous contributions (Bailey et al., 2018; Bailey and De Propris, 2014; De Backer et al., 2016) and suggest that reshoring decisions by MSEs have a negligible impact on the creation of new firms and the survival chances of neighbouring subcontractors in the same GVC. However, gains in productivity are significant and offer policymakers important insights into the effect of reshoring policies on the competitiveness of local production systems.

More specifically, the results of our study indicate that the participation of final firms in GVCs does not necessarily imply the downsizing or deterioration of local subcontracting networks. Rather, if a dual sourcing strategy is implemented, buyers have the possibility to internationalise their production while at the same time contributing to the preservation and even upgrading of local networks of subcontractors. Building on this evidence, policymakers should therefore encourage firms to adopt of a dual sourcing strategy. This condition contributes to the preservation of localised production knowledge and can therefore enable the future repatriation of offshore production activities.

However, to promote a dual sourcing strategy, policymakers should first understand the context-specific dynamics that underpin the functioning of distinct industries and supply chains. Indeed, we contend that a dual sourcing strategy should not be implemented equally across all industries and competitive landscapes. Analysing the mechanisms underlying supply-chain evolution should therefore represent a necessary starting point for policymakers. This requires a thorough analysis of the factors motivating the strategic decisions of firms, an aspect that is often more assumed than empirically assessed. We believe that our empirical analysis provides policymakers with useful tools to assess the impact of firm strategies in GVCs.

This article has limitations. First, the IMEFAS database does not allow us to clearly identify partial reshoring, notably those MSEs that repatriate part of their production activities while maintaining some links with foreign subcontractors (Di Mauro et al., 2018; Martínez-Mora and Merino, 2014). Second, the empirical analysis relies on production relocation data on MSEs, while larger firms (turnover higher than 7.5 million euro) engaged in offshore outsourcing activities are not considered in the investigation. To the best of our knowledge, firm-level information on reshoring by larger firms is not retrievable from other secondary data sources. Thus, the local impact of reshoring might be underestimated in the present work. Finally, this study suffers from generalisability issues in that it focuses on labour-intensive industries; different indications might be found in capital-intensive industries where the impact of reshoring is more visible (De Backer et al., 2016).

To the best of our knowledge, our study is the only attempt at investigating the impact of MSE reshoring strategies on the evolution of GVCs using a quantitative analysis. As we argue, despite their size MSEs can design and implement complex GVC strategies. As a result, we encourage future studies to delve into this phenomenon and further assess the determinants of the dual sourcing strategy of MSEs, as well as the managerial capabilities required to govern complex GVCs over time and across a variegated geography.

Supplementary Material

Supplementary material is available at *Cambridge Journal of Regions, Economy and Society* online.

Endnotes

Acknowledgements

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