



RESEARCH NOTE

What goes around, comes around: Effects of offshore outsourcing on the export performance of firms

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Abstract

We examine the effect of offshore outsourcing on the export performance of firms. Building on the theories of international business, the resource-based view and transaction cost economics, we argue that offshore outsourcing helps firms – directly or indirectly – to export more. It may reduce their production costs and enhance their flexibility. It may also provide them with new resources and market knowledge. However, the impact of offshore outsourcing depends on the resources and capabilities of firms to manage a network of foreign suppliers, and to absorb foreign knowledge. Using a database of around 2000 manufacturing MNEs in France in 1999, we find that offshore outsourcing increases export performance, the effects being stronger in the export markets where firms import intermediate goods. We also show that the firm size, the organization of intra-firm imports and the export experience moderate the effects of offshore outsourcing positively. These findings have implications for firms and policymakers.

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INTRODUCTION

Yes, I want to be able to huff and puff about complex issues – like outsourcing of jobs to India – without any reference to reality. Unfortunately, in this life, I’m stuck in the body of a reporter/columnist. So when I came to the 24/7 customer call center in Bangalore ... I was prepared to denounce the whole thing. ... Well, he (the founder of the company) answered patiently, “look around this office.” All the computers are from Compaq. The basic software is from Microsoft ... The air-conditioning is by Carrier, and even the bottled water is by Coke ... This explains why, although the US has lost some service jobs to India, total exports from US companies to India have grown from \$2.5 billion in 1990 to \$4.1 billion in 2002. What goes around comes around, and also benefits Americans. (Friedman, 2004)

In recent years, offshore outsourcing has drawn increasing attention from the popular media, policymakers and academics (Rasheed & Gilley, 2005). It has grown rapidly, thanks to trade liberalization and technological progress. It touches today both manufacturing and service sectors, raising many concerns in developed countries. In developed countries, offshore outsourcing to developing countries in particular is often accused of destroying

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jobs and hurting domestic industries. However, it could bring important benefits to developed countries too. In addition to repatriated earnings and cost savings, Farrell (2005) argues that offshore outsourcing helps developed countries to increase their export sales (and therefore employment), since it stimulates the macroeconomic growth of developing countries and therefore raises their imports also. As suggested by Friedman (2004), what goes around, comes around. Offshore outsourcing is obviously not a challenge only for developed countries. In global markets, offshore outsourcing is frequently recognized as an essential strategy of firms to maintain and develop their competitive advantages (Kotabe & Mudambi, 2009).

Motivated by this issue, our objective is to go beyond both anecdotal evidence and the macroeconomic perspective. For manufacturing industries, we empirically investigate the microeconomic effects of offshore outsourcing on export performance. Building on the theories of international business (IB), the resource-based view (RBV) and transaction cost economics (TCE), we argue that offshore outsourcing enhances – both directly and indirectly – the ability of firms to export. This is done by reducing their production costs, increasing their flexibility, and giving them new resources and market knowledge. However, it could prove to be risky and costly. Firms engaged in outsourcing abroad face different operational and strategic problems. Then we predict that differences in the resources and capabilities of firms to manage a network of foreign suppliers and to absorb foreign knowledge could lead to variance in the effects of offshore outsourcing across firms.

To this aim, we use a unique database of around 2000 French-owned multinational enterprises (MNEs) and foreign-owned subsidiaries established in France in 1999. The data cover small, medium and large MNEs in the manufacturing industries (see the section ‘Data and methods’). They account for around 70% of French manufacturing imports and exports. In addition, we define offshore outsourcing as intermediate goods supplied by independent foreign suppliers (e.g., Kotabe & Murray, 2004; Lei & Hitt, 1995; Mol, Van Tulder, & Beije, 2005).

We find that, *Ceteris paribus*, offshore outsourcing improves the export performance of MNEs. However, the impact is stronger when they import intermediate goods from the export country. The impact is also moderated positively by the size of

the firm, the organization of intra-firm imports and the export experience. We thus confirm that offshore outsourcing could give MNEs global competitive advantages, but also that the extent of the benefits could differ across different firms. Finally, we suggest that protectionist measures against offshore outsourcing could reduce the international competitiveness of domestic industries, and thus be counterproductive.

The contribution of this paper to the management literature is as follows. We lack empirical microeconomic evidence on offshore outsourcing. Furthermore, most empirical papers examine its determinants (e.g., Doh, Bunyaratavej, & Hahn, 2009). To our knowledge, only Mol et al. (2005) and Di Gregorio, Musteen, and Thomas (2009) have investigated the impact of offshore outsourcing. From a sample of 200 Dutch firms, Mol et al. (2005) find non-significant effects on economic and financial performance. More importantly for our study, using a sample of 105 US firms, Di Gregorio et al. (2009) conclude that offshore outsourcing increases the export performance of small and medium-sized enterprises (SMEs). Conducted independently, our work appears to be complementary. Empirically, Di Gregorio et al. (2009) study non-multinational SMEs¹ and emphasize offshore outsourcing of administrative and technical services. We focus on MNEs of different sizes, and examine manufacturing offshore outsourcing. They use primary data on a small sample of firms, whereas our secondary data include a large number of firms, and information at the firm and country levels. It should also be pointed out that our theoretical predictions are different. They suggest – but do not test – that offshore outsourcing could not be beneficial for (large) MNEs. We argue that MNEs are more likely to gain from offshore outsourcing, because of a higher absorptive capacity and resources to coordinate a geographically dispersed network of suppliers (e.g., Levy, 2005). However, we take into account the existence of heterogeneity across MNEs.

In the next section, we present the background, and then the data and methods. Our results are reported in the third section. Conclusions are drawn in the last section.

BACKGROUND

Export Gains from Offshore Outsourcing

IB, TCE and RBV theories identify three main channels through which offshore outsourcing

could increase the competitive advantages of firms and thereby – indirectly – their export sales (e. g., Kotabe & Murray, 2004; Kotabe & Mudambi, 2009). First, offshore outsourcing may enable firms to lower their production costs. Outsourcing firms could buy cheaper inputs from foreign suppliers (Rasheed & Gilley, 2005). Foreign suppliers may pay lower wages in developing countries. In developed countries, they may enjoy superior technology or benefit from larger scale economies. Second, offshore outsourcing gives more flexibility, since the outsourcing firm is less committed to a specific type of technology. It also allows firms to reallocate their resources in those activities that are their core competences. Third, offshore outsourcing helps outsourcing firms to access the resources and knowledge of foreign suppliers (Grant, 1991). It enables them to complement their stock of resources, and tap into new knowledge that would have otherwise been inaccessible in the firm and/or in the home country. In general, research scholars view international trade as an important channel of diffusion not only of technological and organizational knowledge, but also of market information (e.g., Karlsen, Silseth, Benito, & Welch, 2003; Salomon & Jin, 2008). When searching for and negotiating with foreign suppliers, firms develop their contact network abroad and learn about foreign markets. This may in turn increase the transferability of resources that firms use to export. For instance, while technology is seen as highly fungible, marketing resources are not (Salomon & Shaver, 2005). In sum, offshore outsourcing could provide firms with indirect export advantages through cost reduction, higher flexibility, additional resources and/or market knowledge. Therefore we predict:

Hypothesis 1: Offshore outsourcing is positively related to export performance.

We argue that the benefits of offshore outsourcing could be more direct and thus stronger when the import and export markets are identical – as in Friedman’s anecdote in which the USA imports from and exports to India. First, the value of outsourcing-related market knowledge is higher when firms export to the focal importing country. Through interactions with suppliers and other agents in the importing country, firms learn about specific consumer preferences and rival products (see the literature on inward-outward connections: e.g., Karlsen et al., 2003; Welch & Luostarinen,

1993). These firms become more familiar with the unique local environment, reducing location-specific disadvantages (Barkema, Bell, & Pennings, 1996) and export-specific transaction costs (Verwaal & Donkers, 2002). Second, the suppliers’ advantages are by definition more local “in scope” (Anand & Delios, 1997). Exporting firms do not need to tailor imported inputs to the export market condition (e.g., to different technical standard) or to incur customization costs.² Also, suppliers are more responsive to changes in their market. Finally, importing inputs from the export market could be an essential condition to export, as in the case of countertrade (e.g., Choi, Lee, & Kim, 1999) – although the importance of countertrade is difficult to establish. Governments could oblige firms to incorporate into final products inputs produced in the export country. Countertrade may also be adopted voluntarily to enter markets characterized by strong environmental constraints and market imperfections. In sum, outsourcing to the export country may give firms country-specific resources and knowledge. Therefore:

Hypothesis 2: *Ceteris paribus*, the positive effects of offshore outsourcing on export performance are higher in export markets where firms import intermediate goods.

Resources of MNEs to Outsource Abroad and to Absorb External Knowledge

We have just explained why firms decide to outsource abroad in order to increase their competitive advantages, and how offshore outsourcing could therefore contribute to export performance. However, offshore outsourcing could prove to be costly and risky (e.g., Mesquita, Anand, & Brush, 2008). Its costs include not only procurement costs, but also transaction costs, both *ex ante* (searching and negotiating costs) and *ex post* (monitoring and enforcement costs), as highlighted by the TCE literature (Leiblein, Reuer, & Dalsace, 2002). Outsourcing firms could be more dependent on their suppliers, and lose control over the activity that is outsourced. They could be subject to opportunistic behavior. In addition, offshore outsourcing incurs coordination costs. Both transaction and coordination costs are likely to be higher when outsourcing abroad, owing to the “liability of foreignness” and the geographic distance, with foreign suppliers. These costs could be excessive when firms do not have sufficient organizational and technological



resources or capabilities to monitor and coordinate their relationship with far-flung suppliers. Firms also need an absorptive capacity to assimilate, combine and use external resources and knowledge (Zahra & George, 2002).

In this context, we argue that MNEs possess *on average* critical advantages over non-MNEs in offshore outsourcing.³ These critical advantages explain why the net effect of offshore outsourcing could be positive for MNEs. MNEs have higher resources, which lowers both the transaction and the coordination costs of offshore outsourcing. Their absorptive capacity is also likely to be higher. For example, Rangan (2000) explains that MNEs face lower costs of search (i.e., the identification of exchange partners) and deliberation (i.e., the assessment of their capability and reliability). By operating in different countries, MNEs are embedded in well-elaborated social networks, and have extensive business relationships. Levy (2005) stresses that MNEs, over time, have increased their organizational and technological ability to split and coordinate a geographically dispersed network of suppliers.

Nevertheless, resources could differ not only between MNEs and non-MNEs, but also among MNEs, leading to some variance in the net effects of offshore outsourcing across MNEs. While MNEs appear to be larger *on average* than non-MNEs, not all MNEs are giant corporations (e.g., Navaretti & Venables, 2004). MNEs also include SMEs.⁴ Therefore we argue that MNEs may differ in their size, and thereby their managerial and financial resources (e.g., Dhanaraj & Beamish, 2003).⁵ Larger MNEs could benefit more from offshore outsourcing, since they possess a larger stock of managerial and financial resources and capabilities to manage their supply chain. For instance, large MNEs have the expertise and manpower to create sophisticated, technology-based procurement support systems (e.g., Elmaghraby, 2000), reducing coordination costs with foreign suppliers. Moreover, large firms reap economies of scale in the governance structure that is required to assess and monitor transactions with foreign suppliers (Verwaal & Donkers, 2002). Transaction costs could also be lower, because large MNEs have more bargaining power, which limits the opportunistic behavior of foreign suppliers. Therefore we state:

Hypothesis 3: The relationship between offshore outsourcing and export performance is positively moderated by the size of the firm.

Furthermore, MNEs could be different in terms of their absorptive capacity. In our case, the absorptive capacity of a firm determines its ability to recognize the value of external knowledge and resources abroad, and then to assimilate and apply them in export markets. This absorptive capacity is influenced by the various types of knowledge and resources possessed by the firm (e.g., Eriksson & Chetty, 2003). Then, we argue that the absorptive capacity may depend, first, on the internal knowledge and resources that are developed when the MNEs make intermediate products abroad. MNEs that tap resources abroad not only through offshore outsourcing (i.e., “buy”) but also through intra-firm sourcing within their network (i.e., “make”) could have a higher capacity to absorb external knowledge, and therefore have larger net gains from offshore outsourcing. There is indeed significant empirical evidence in the R&D literature that internal resources leverage the benefits of external resources (see, e.g., Cassiman & Veugelers (2006), on complementarities between internal and external R&D), and also in the strategic management literature (Parmigiani, 2007; Rothaermel, Hitt, & Jobe, 2006). Moreover, when firms organize intra-firm trade, parents and affiliates are more integrated and connected. This fosters communication and reporting (Rangan, 2000), and thereby increases the informational advantages of sourcing abroad. Second, we argue that the absorptive capacity may also depend on the internal knowledge and resources that have been developed along with export activity. The export experience may increase the ability of firms to source, interpret and use export information (Cadogan, Diamantopoulos, & Siguaw, 2002; Souchon & Diamantopoulos, 1996). For example, firms with little export experience may pay less attention to new information from foreign suppliers and other agents in import countries, even though this information could be of importance in export markets. They are less able not only to identify the value of information and knowledge, but also to exploit it and incorporate it into their existing export operations. Although the goal of this paper is not to study the antecedents of offshore outsourcing, we do identify two-way interactions between exports (of final goods) and imports (of intermediate goods). We argue that prior exports could moderate the impact of offshore outsourcing positively, which has rarely been studied empirically, even in the literature on

inward–outward connection (e.g., Karlsen et al., 2003). In this paper, we predict:

Hypothesis 4: *Ceteris paribus*, the positive effects of offshore outsourcing on export performance are higher when firms also import intermediate products within the MNE group.

Hypothesis 5: The relationship between offshore outsourcing and export performance is positively moderated by the export experience of the firm.

DATA AND METHODS

Sample

We use two main databases collected by the French Ministry of Industry. The first one is called *Echanges Internationaux Intra Groupe* (EIIG). It provides very detailed information on the trade behavior in 1999 of French-owned MNEs and foreign-owned affiliates in the French manufacturing industry.⁶ It covers around 70% of French manufacturing exports and imports. For each firm the EIIG database describes, at a product level, the breakdown of imports by country of origin, and exports by country of destination. For each transaction that firms undertake, it indicates the value and the type of goods that are traded (intermediate vs final goods) as well as whether the transaction is established with independent suppliers (i.e., offshore outsourcing) or with affiliates abroad (i.e., intra-firm sourcing). Offshore outsourcing is then defined as intermediate goods supplied by independent foreign suppliers (e.g., Kotabe & Murray, 2004; Lei & Hitt, 1995; Mol et al., 2005). Because of the cross-sectional nature of the data, we analyze the outcome of offshore outsourcing at a given point of time, and not its process; we cannot distinguish between substitution-based and abstention-based outsourcing (Holcomb & Hitt, 2007; Rasheed & Gilley, 2005). Firms have either carried out the focal activity internally before outsourcing, or have relied on external suppliers since the very beginning. We will discuss the limitations of our data further in the conclusion.

The EIIG database is then matched with a yearly survey called *Enquête Annuelle d'Entreprise* (EAE). EAE data are available from 1990, and give complementary information on the balance sheets and income statements of firms. The matched sample includes around 2,000 firms. Finally, to control for country-level determinants, we are obliged to reduce the country destination

of exports to around 70 export markets (including major developed and developing countries). For these export countries we have exhaustive data on the GDP (source: World Bank), the geographic (source: Centre d'Etudes Prospectives et d'Informations Internationales (CEPII)) and cultural distance (source: Hofstede website, <http://www.geert-hofstede.com/>) with France. Note that the computation of the variable *Outsourcing* (see the next section) is not affected by this restriction. Firms buy intermediate goods from around 140 importing countries.

Measures

Dependent variable. As very often in the management literature, we measure the export performance by the export sales of final goods (e.g., Ito & Pucik, 1993). We therefore assume that firms create value from exports.⁷ Export sales (denoted by the variable *Export*) are calculated for each firm–country pair. For each firm we compute export sales in each of the 70 export countries of our sample. We have not kept export intensity (i.e., the ratio export sales on total sales), although this measure provides similar findings. We could wrongly interpret a change in the export intensity, since offshore outsourcing is likely to affect both export and domestic sales.

Independent variables. Our main variable is denoted by *Outsourcing* (source: EIIG; see Appendix). To compute it, we sum for each firm the value of inputs supplied by independent foreign suppliers. Less than 10% of firms do not outsource abroad. This measure is then divided by total sales to control for size effects, and to reduce the level of correlation with the variable *Size*. The variable *Size* is measured by the number of employees (source: EAE). Around half of firms have fewer than 250 employees (i.e., are SMEs). Firm size is frequently used as a proxy for firm resources (e.g., Dhanaraj & Beamish, 2003) or scale economies. Note that our results are not sensitive to the measure of offshore outsourcing adopted.⁸

To investigate Hypothesis 2 we include a dummy variable *Bilateral Trade* (Source: EIIG), taking the value 1 when import and export countries are identical. This dummy is constructed for each firm–country pair. This variable is interacted with the variable *Outsourcing* (variable *Outsourcing* × *Bilateral Trade*). For Hypothesis 3 we include the interactive variable between *Outsourcing* and *Size* (variable *Outsourcing* × *Size*). To test Hypothesis 4

we create a dummy variable *Intra-Firm Sourcing* (source: EIIG) and its interactive variable *Outsourcing* \times *Intra-Firm Sourcing*. This variable takes the value 1 if the firm imports inputs within the MNE network, and 0 otherwise. Around 40% of firms organize intra-firm imports. Intra-firm sourcing should improve the firm's performance (Kotabe & Murray, 2004). Finally, to test Hypothesis 5 we measure export experience (variable *Export Experience*; source: EAE) as the number of years for which firms have exported. We interact with the variable *Outsourcing* (variable *Outsourcing* \times *Export Experience*). Firms that are more familiar with export markets are predicted to export more. Note that we also tested alternative measures. For instance, for Hypothesis 3 we did not find evidence of inverted U-shaped effects associated with the variable *Size*. After some threshold, an increase in the firm size could have hurt the resource efficiency of the firm. For Hypothesis 4 we constructed the dummy variable *Intra-Firm Sourcing* for each firm-country pair, without observing major changes.

Control variables. We control for different variables influencing exports. At the firm level, in addition to the variables *Size*, *Intra-Firm Sourcing* and *Export Experience*, we add the variable *Unit Labor Cost* (ratio labor cost on value added; source: EAE). *Ceteris paribus*, a higher unit labor cost reduces cost-based advantages and the ability to export. This cost could vary independently of outsourcing decisions, because of innovation process or new management practices. At the country level we add the size of the export market (i.e., the GDP), the geographic and cultural distance (see Morosini, Shane, & Singh, 1998) between France and export countries, denoted by the variables *GDP*, *Geographic Distance* and *Cultural Distance* respectively. Firms are expected to export more to markets that are bigger and less distant – geographically or culturally. Including more country-level factors does not affect our results. Finally, we introduce fixed sector dummies to control for unobserved differences across industries.

Econometric Model

In this cross-section analysis we take the logarithm of *Export*, as this has been shown in the empirical trade literature to be the best fit to the data (see, e.g., Stein & Daude, 2007). However, the variable *Export* contains a large number of zeros. Therefore computing its logarithm will exclude zero observations, which may lead to serious

estimation bias. One frequent solution is to use the transformation $\log(\text{Export} + 1)$. $\log(\text{Export})$ is approximately equal to $\log(\text{Export} + 1)$ for large values of *Export*, as in our case. Then, in our Model 1, we employ an ordinary least squares (OLS) model with robust standard errors. However, keeping only positive flows of exports or using the Heckman two-step procedure leads to a similar conclusion. In Model 2 we control for endogeneity and simultaneity, since exports could affect offshore outsourcing, as previously mentioned. We use the two-stage least squares (2SLS) approach (e.g., Salomon & Shaver, 2005; Wooldridge, 2002). We take corporate tax rate (source: Word Tax Database, OTPR) and Internet users – per 1000 people – (source: World Bank) in import countries as instruments. These variables, *Tax* and *Internet*, are viewed as proxies for the local business context and country infrastructure respectively. Using variables on labor cost and education level (source: World Bank) as proxies for production costs and human capital respectively does not change our findings, but reduces our sample more.

Note that all explanatory variables refer to the year 1999 – lagging 1-year control variables such as *Size*, *Unit Labor Cost* or *GDP* does not modify our results, however – and are expressed as logarithms (with the exception of the dummy variables).⁹ In these log–log models variable coefficients can therefore be interpreted simply as elasticity, which facilitates comparison between the explanatory variables.

RESULTS

We assess the effects of offshore outsourcing on export sales. Table 1 presents our main findings.¹⁰ In Model 1 (i.e., OLS), columns 1–5 investigate Hypotheses 1–5 respectively. Columns 6–10 replicate these estimations for Model 2 (i.e., 2SLS). In Models 1 and 2 we did not detect severe multicollinearity. In all estimations, the value of the variance inflation factor is lower than the critical threshold of 10. Moreover, we performed an incremental F-test. We checked that inclusion of the interactive variables contributes to a significant increase in the fit to the data.

In Models 1 and 2 the variable *Outsourcing* is positive and significantly different from zero at 1%, supporting our first hypothesis. Its coefficient size (here interpreted as an elasticity) varies across our different estimations from 0.041 to 0.509.¹¹ While it seems to be small in Model 1, the size of the effect is much larger in Model 2 when controlling for

Table 1 Effects of offshore outsourcing on export performance

	Model 1	Model 1	Model 1	Model 1	Model 1	Model 2	Model 2	Model 2	Model 2	Model 2
Size	0.356*** (0.007)	0.315*** (0.006)	0.351*** (0.009)	0.358*** (0.007)	0.356*** (0.007)	0.356*** (0.007)	0.317*** (0.007)	0.325*** (0.006)	0.353*** (0.007)	0.362*** (0.007)
Unit Labor Cost	-0.260*** (0.018)	-0.240*** (0.018)	-0.259*** (0.019)	-0.262*** (0.018)	-0.261*** (0.018)	-0.285*** (0.020)	-0.262*** (0.020)	-0.271*** (0.049)	-0.287*** (0.020)	-0.274*** (0.020)
Export Experience	0.035*** (0.001)	0.034*** (0.001)	0.044*** (0.002)	0.034*** (0.001)	0.046*** (0.002)	0.037*** (0.001)	0.036*** (0.001)	0.050*** (0.002)	0.036*** (0.001)	0.051*** (0.008)
GDP	0.311*** (0.004)	0.253*** (0.003)	0.311*** (0.004)	0.312*** (0.004)	0.311*** (0.005)	0.325*** (0.004)	0.267*** (0.004)	0.326*** (0.004)	0.325*** (0.005)	0.326*** (0.004)
Geographic Distance	-0.400*** (0.007)	-0.316*** (0.007)	-0.400*** (0.007)	-0.399*** (0.008)	-0.400*** (0.007)	-0.424*** (0.008)	-0.337*** (0.008)	-0.423*** (0.007)	-0.423*** (0.008)	-0.424*** (0.007)
Cultural Distance	-0.446*** (0.021)	-0.414*** (0.021)	-0.445*** (0.022)	-0.445*** (0.020)	-0.447*** (0.021)	-0.460*** (0.023)	-0.425*** (0.023)	-0.460*** (0.022)	-0.458*** (0.022)	-0.461*** (0.023)
Intra-Firm Sourcing	0.068*** (0.012)	0.031*** (0.012)	0.041* (0.024)	0.050** (0.020)	0.049*** (0.016)	0.073*** (0.028)	0.066*** (0.025)	0.062** (0.031)	0.065** (0.033)	0.071*** (0.024)
Outsourcing	0.073*** (0.005)	0.041*** (0.004)	0.121*** (0.005)	0.051*** (0.006)	0.053*** (0.004)	0.358*** (0.017)	0.320*** (0.017)	0.509*** (0.026)	0.381*** (0.025)	0.397*** (0.019)
Bilateral Trade		2.239*** (0.113)					1.431*** (0.126)			
Outsourcing × Bilateral Trade		0.168*** (0.044)					0.118** (0.050)			
Outsourcing × Size			0.027*** (0.002)					0.169*** (0.020)		
Outsourcing × Intra-Firm Sourcing				0.089*** (0.004)					0.294*** (0.027)	
Outsourcing × Export Experience					0.015*** (0.001)					0.094*** (0.003)
Constant	-3.723*** (0.098)	-3.210*** (0.095)	-3.717*** (0.103)	-3.741*** (0.098)	-3.737*** (0.098)	-5.861*** (0.243)	-5.215*** (0.248)	-5.325*** (0.314)	-5.660*** (0.245)	-5.754*** (0.244)
Observations	146,365	146,365	146,365	146,365	146,365	135,234	135,234	135,234	135,234	135,234
R ²	0.15	0.17	0.16	0.16	0.16	0.13	0.15	0.14	0.14	0.14

Robust standard errors in parentheses.

Sector fixed effects are included. All explanatory variables (with the exception of dummy variables) are expressed as logarithms.

Dependent and explanatory variables refer to the year 1999.

Model 1, OLS; Model 2, 2SLS.

*Significant at 10%; **significant at 5%; ***significant at 1%.



potential simultaneity and endogeneity. In Model 2 the effect of the variable *Outsourcing* is more important than that of the other firm-level variables *Size* or *Unit Labor Cost*. *Ceteris paribus*, outsourcing abroad helps firms to export more through cost saving, higher flexibility, additional resources and/or market knowledge. Hypotheses 2–5 are also supported empirically in both Models 1 and 2. The variable *Bilateral Trade* and its interactive variable *Outsourcing* × *Bilateral Trade* (Hypothesis 2), as well as the variables *Size* and *Outsourcing* × *Size* (Hypothesis 3), *Intra-Firm Sourcing* and *Outsourcing* × *Intra-Firm Sourcing* (Hypothesis 4), *Export Experience* and *Outsourcing* × *Export Experience* (Hypothesis 5), display a positive and significant sign.

Note finally that our control variables have the predicted signs and are significant, underscoring the good overall fit of our empirical model.¹² At the firm level the unit labor cost displays a negative sign, while the firm size, the export experience or the organization of intra-firm imports tend to increase exports. At the country-level geographic and cultural distance impedes export flows. On the other hand, larger markets stimulate exports.

CONCLUSION AND DISCUSSION

This paper examines the impact of offshore outsourcing on the export performance of firms. It makes an empirical contribution to the management literature. There is a lack of microeconomic studies on offshore outsourcing (as well as on export behavior; see Salomon & Shaver, 2005). Although our article was conducted independently, it complements the article recently published by Di Gregorio et al. (2009). Di Gregorio et al. suggest – but do not test – that offshore outsourcing could not be beneficial for (large) MNEs. In this paper we argue and show that, on average, offshore outsourcing enhances the international competitiveness of MNEs. However, analyzing the gains and costs of offshore outsourcing in more depth, we explain that the effects of offshore outsourcing could be conditional on export country-specific and firm-specific characteristics: such a hypothesis could very likely also be verified for SMEs. Our empirical findings support this hypothesis, highlighting some conditions under which export gains could be larger (or lower). We show that the positive effects associated with offshore outsourcing are more direct, and therefore stronger, in the export market where the firm outsources. Importing intermediate inputs from the export market gives firms local market information, which

reduces location-specific disadvantages and thus strengthens their presence in the export market. Moreover, the impact of offshore outsourcing is likely to be heterogeneous across MNEs. This heterogeneity reflects differences in resources and absorptive capacities among MNEs. The resources and absorptive capacities possessed by the firm are essential for the success of offshore outsourcing. They moderate the costs of transaction and coordination that go along with offshore outsourcing, and determine the ability of the firm to assimilate and exploit external resources and knowledge in export markets. In line – for instance – with empirical works on multinationality and performance (e.g., Bausch & Krist, 2007), we find that a large size may help firms through scale and resources effects to overcome the strategic and operational difficulties that arise with offshore outsourcing. We also point out that the knowledge and resources that are developed when firms source abroad within the MNE network – or export – have positive moderating effects on the performance of the strategy of offshore outsourcing.

This work offers implications for the future research agenda on offshore outsourcing. First, there is a need to explore further the heterogeneity in firm performance – as has been done for instance in the research field on mergers and acquisitions (M&A) in strategy or on multinationality–performance in IB. The set of internal and external factors that could moderate the impact of offshore outsourcing remain under-investigated in the strategic and IB literature. Moreover, we still have very little microeconomic evidence on inward–outward connection in global markets (e.g., Karlsen et al., 2003). This paper contributes to bridging this empirical gap. We not only explore the impact of imports (i.e., offshore outsourcing) on exports, but also consider the opposite – although it is beyond our scope to examine the antecedents of offshore outsourcing. We take into account, theoretically and empirically, that exports may influence imports. In general, this paper calls for more research on the integrated strategy that firms may develop in global markets, on how inward–outward operations are articulated, and whether two-way linkages create synergies across borders and operations. The global strategy that some MNEs have conducted through an exclusive network of affiliates and intra-firm sourcing has been relatively well documented by academic researchers and business practitioners.¹³ With trade liberalization and technological progress, MNEs have, however, moved

away from international vertical integration towards offshore outsourcing, progressively using a global network of independent suppliers. This new organizational architecture, which combines both wholly owned subsidiaries and suppliers (i.e., both intra-firm sourcing and offshore outsourcing) across different countries, has been much less studied. It calls not only for more systematic empirical evidence on global sourcing and its role in the strategy of MNEs, but also for the development of a comprehensive theoretical framework (e.g., Ghemawat, 2007).¹⁴

Our findings also have implications for both policymakers and practitioners. In this recent period of economic and financial turmoil, governments could be tempted to return to protectionism. Our results suggest that this political decision could be costly, because it would undermine not only the international trade of final goods, but also that of intermediate goods. In global markets, where domestic firms have increasingly outsourced to foreign suppliers, offshore outsourcing could be a determinant of international competitiveness. Protectionist measures against offshore outsourcing could then be counterproductive; they would harm the export performance of countries.

Our results also suggest the strategic role of offshore outsourcing in increasing global competitive advantages. In addition to the cost advantages, offshore outsourcing in the international resources market is a way of obtaining highly complementary external resources and knowledge. In fast-moving markets in particular, a single firm cannot hold all the resources that are required to grow and thrive. However, to benefit fully from offshore outsourcing, firms have to facilitate intra-organizational knowledge transfer between their various functions and departments: between the supply and export activity within each affiliate, and between the different supply activities within the MNE network. Sharing knowledge internally could increase not only the international transferability of MNEs' resources, but also their absorptive capacity, which will in turn augment inter-organizational knowledge transfer.

Finally, we discuss the various limitations of our database, which offer avenues for future research. First, our database does not report the identity of foreign suppliers, and therefore does not enable us to explore interaction effects between buyers and suppliers (e.g., resource complementarities). Similarly, we cannot examine cross-country heterogeneity in the performance of outsourcing firms.

This study for France should be replicated for different economic contexts and markets for resources. Second, our database was conducted for the year 1999. It would be interesting to explore the effects of offshore outsourcing several years later. Developments in information technology and communication, as well as outsourcing experience, may augment the positive effects of offshore outsourcing. On the other hand, some negative effects could appear in the long run only (e.g., the risk of dependence and loss of competences). Panel data could also help us to understand the distinction between substitution- and abstention-based offshore outsourcing, and its implications. In the case of abstention-based offshore outsourcing, the absorptive capacity of outsourcing firms could be weaker, since they have not developed internal expertise and knowledge specific to the activity that is outsourced. On the other hand, since the activity has never been done before, abstention-based offshore outsourcing is less likely to disrupt the current organization of the firm (e.g., existing organizational routines) or to affect, for instance, the motivation of employees (see, e.g., Puranam & Srikanth (2007), for disruption costs in the case of M&As).

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NOTES

¹Their sample contains only 13% of small and medium-sized multinational enterprises.

²A final product could be composed of a common component produced at home and a product-specific component adapted to each host country (see, e.g., the commonality literature).

³UNCTAD defines an MNE as an enterprise that controls the assets of at least one entity abroad.

⁴Basically, the distinction between SMEs and large enterprises is based on the employment level. In the EU, a firm of less than 250 employees is defined as an SME.

⁵The small amount of existing empirical evidence confirms that large firms outsource more abroad (Mol et al., 2005).

⁶French-owned firms report having at least one affiliate abroad.



⁷Exports could destroy value in the short run, for strategic reasons (e.g., cross-subsidies between home and export activities), or if exports are driven by the personal motives of managers.

⁸For instance, the effects of offshore outsourcing on developing and developed countries (for foreign-owned affiliates and French-owned MNEs, respectively) are similar.

⁹For variables taking zero values, we use again the transformation $\log(X + a)$ where the positive value of a is very small relative to X .

¹⁰Note that in Table 1 the variable *Bilateral Trade* is included only in columns 2 and 7. Including this variable as a control variable in other specifications does not affect our findings.

¹¹A coefficient of 0.509 is interpreted as follows: the variable Export increases by 0.509% when the variable *Outsourcing* increases by 1%.

¹²In Table 1 the value of R^2 is relatively low. However, a low R^2 is typically observed in cross-sectional data with a large number of observations (see Gujarati (2004), for some discussion, or, e.g., Wooldridge (2009)).

¹³For instance, Anand and Delios (1996) describe Japanese MNEs' behavior in China and India. They show how the global strategy of Japanese MNEs involves multiple linkages within their network of subsidiaries and across markets.

¹⁴Recently, revisiting the concept of global strategy in a new framework called the AAA triangle (adaptation–aggregation–arbitrage), Ghemawat (2007) argues that, to create value, firms have to think how to exploit – and not merely how to adapt and overcome – differences across countries through international vertical specialization (i.e., offshore outsourcing and/or intra-firm sourcing).

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APPENDIX

See Tables A1 and A2.

Table A1 Statistics: Firm-level variables

Variable	Mean	s.d.	1	2	3	4	5
1. Size	459.8307	1140.786	1.0000				
2. Unit Labor Cost	0.6832137	0.2108186	-0.0128	1.0000			
3. Export Experience	4.990239	2.183602	0.1475	0.0163	1.0000		
4. Outsourcing	0.1117467	0.1146129	0.0633	-0.0152	0.0309	1.0000	
5. Intra-Firm Sourcing	0.4143485	0.4926108	0.0591	-0.0107	0.0542	0.0268	1.0000

Source: EAE, EIIG (year 1999).

Table A2 Statistics: Country-level variables

Variable	Mean	s.d.	1	2	3	4	5	6
1. Geographic Distance	5655.493	4177.93	1.0000					
2. GDP	2.37 × 10 ¹²	7.43 × 10 ¹²	0.0041	1.0000				
3. Cultural Distance	2.505933	0.7844219	0.2563	0.0414	1.0000			
4. Bilateral Trade	0.0543533	0.2267142	-0.1885	0.2183	-0.0817	1.0000		
5. Tax	0.323803	0.063713	-0.2334	0.0608	-0.2060	0.0316	1.0000	
6. Internet	96.87533	113.4073	-0.1164	0.2981	0.1584	0.1459	-0.0951	1.0000

GDP is expressed in francs.

Source: CEPIL, World Bank, Hofstede, OTRP, EIIG (year 1999).

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