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On the employment effects of outward FDI: The case of Spain, 1995-2011

Oscar Bajo-Rubio
UNIVERSITY OF CASTILLA-LA MANCHA (Spain)
Department of Economics
Faculty of Law and Social Sciences
13071 Ciudad Real (Spain)

Carmen Díaz-Mora*
UNIVERSITY OF CASTILLA-LA MANCHA (Spain)
Department of Spanish and International Economics
Faculty of Juridical and Social Sciences
45071 Toledo (Spain)

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Abstract

In this paper, we analyse the impact on domestic employment resulting from outward FDI performed by Spanish firms, using industry data for the period 1995-2011. Together with the effects on total employment, we differentiate the effects according to the particular groups of countries and activities to which those FDI outflows are addressed. In addition, the impact of outward FDI on the demand for labour is also analysed separately for high and low skill levels of the labour force.

Keywords: Foreign direct investment, Employment, Skill composition, Spanish economy.

JEL classification: F21, F23, J40.

* Corresponding author: Carmen.DiazMora@uclm.es, Phone/Fax +34925268878.

1. Introduction

Over the last 50 years, foreign direct investment (FDI) has played an outstanding role as a mode of internationalization of economic activities. Moreover, FDI has shown higher growth rates than both world trade and output, a trend that seems to have slowed down since the beginning of the current economic and financial crisis. So, according to the figures in UNCTAD (several years), in the five years previous to the crisis (2003-2007), FDI inflows and outflows increased at cumulative growth rates of 33.0% and 36.6%, respectively, compared to 11.0% and 17.1% in the cases of world GDP and exports of goods and services, respectively; for the years 2008-2012, however, cumulative growth rates were −6.2% and −7.6% for FDI inflows and outflows, and 4.1% and 3.2% for world GDP and exports of goods and services. It is also remarkable that, for the first time ever, developing economies absorbed in 2012 more FDI than developed countries, accounting for 52 per cent of global FDI flows; see UNCTAD (2013).

Although FDI is a two-way phenomenon, academic literature has been much more concerned with the study of FDI inflows than FDI outflows. The analysis of the latter, however, is crucial in the context of the relocation of productive activities of firms. In particular, outward FDI entails a process of shifting economic activities towards foreign locations in order to reduce costs, improve market access, or simply due to strategic considerations (Copenhagen Economics, 2010).

One of the features related to outward FDI that has required more public attention, refers to its effects on employment in the source economy. In particular, the perception among citizens and the public opinion is that rising levels of outward FDI are associated with employment losses in the country of origin of those FDI outflows. This discussion, on the other hand, relates to the distinction between “vertical” FDI, i.e., when firms separate geographically each stage of the production process according to relative cost advantages; and “horizontal” FDI, i.e., when firms replicate the same activities in different locations in

order to gain an easier access to the host-country market. Then, according to this classification of FDI, employment in the destination country and in the source country of outward FDI should be complements in the case of vertical FDI, and substitutes in the case of horizontal FDI. The ultimate reason would be that FDI outflows would be addressed, respectively, to relatively cheap-labour countries, and to countries with similar factor costs as compared to the country of origin of FDI.

On the other hand, FDI has been a key factor in the evolution of the Spanish economy since the first 1960s, and especially following integration with the now European Union (EU) in 1986. There is now an abundant literature analysing the main features of inward FDI, and their economic implications. A general survey can be found in Fernández-Otheo (2003); some examples of this literature include, e.g., Bajo-Rubio and López-Pueyo (2002) and Bajo-Rubio, Díaz-Mora and Díaz-Roldán (2010), who analysed, respectively, the main features of FDI directed to manufacturing and the growth effects of FDI. On the contrary, the study of outward FDI has received less attention, perhaps on the grounds that this is a relatively recent phenomenon for the Spanish economy, its surge dating back to the mid-1990s. A review of the main trends is provided again in Fernández-Otheo (2003), but the analysis of its economic effects is far less common than in the case of inward FDI. We can mention Bajo-Rubio and Montero-Muñoz (2001) and Alguacil and Orts (2002), who examined the relationship between outward FDI and exports, or Fernández-Otheo and Myro (2008), on the profitability of the stocks of Spanish FDI. Also, the factors affecting the location decisions of Spanish firms abroad have been analysed, e.g., in Ramírez, Delgado and Espitia (2006), or more recently in Martí, Alguacil and Orts (2013). However, the employment effects of outward FDI (the objective of this paper: see below) have not been the subject of academic research, beyond informal discussions.

The evolution over time of Spanish outward net FDI is shown in Table 1 and Figure 1. Mostly negligible until the 1980s, foreign involvement by Spanish firms began to climb after the mid-1990s, reaching a maximum, in terms of GDP, in 2007. After several years of ups and downs, the figures have been substantially reduced with the current crisis, following a worldwide trend. In any case, over the last decade Spanish outward FDI has represented, on average, around 9% of the European Union (EU) outward FDI (UNCTAD, several years).

[Table 1 here]

[Figure 1 here]

The distribution across sectors and across countries of Spanish net FDI outflows for the period 1993-2012, appears in Tables 2 and 3, respectively. Almost 70% of FDI outflows have been addressed to services, mostly to Financial and insurance activities (37%) and, to a lower extent, Information and communication (21%) and Wholesale and retail trade (3.7%); amongst the rest of sectors, Manufacturing stands for 13%, and Electricity and gas for almost 9.5%. Regarding geographical distribution, 59% has been addressed to advanced economies, and 41% to developing countries[1]. On the other hand, one half of total FDI outflows have as destination other EU countries: 46% to the 15 member states before the large enlargement of 2004 (EU-15, especially the United Kingdom and the Netherlands; but also Germany, France and Portugal) and 4% to the new member states (NMS-12). Another important destination is Latin America, with one third of total (mostly to Brazil, Argentina and Mexico). FDI outflows have been also sizeable in the case of the United States (11%), with the figures for China gaining significance in recent years.

[Table 2 here]

[1] We define "advanced countries" as those with a "very high" United Nations' Human Development Index, and that jointly satisfy the criteria of "advanced economies" of the International Monetary Fund and "high income" of the World Bank. These countries are Australia, Austria, Belgium, Canada, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Iceland, Ireland, Israel, Italy, Japan, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Singapore, Slovakia, Slovenia, South Korea, Sweden, Switzerland, United Kingdom, and United States.

[Table 3 here]

The aim of this paper will be to analyse the impact on domestic employment resulting from outward FDI performed by Spanish firms, using industry data for the period 1995-2011. Together with the effects on total employment, we will differentiate the effects according to the particular groups of countries and activities to which those FDI outflows are addressed. In addition, the impact on the demand for labour according to skill levels will be also examined. The rest of the paper is organized as follows: the available literature and the underlying theoretical framework are discussed in section 2, the empirical methodology and results are presented in section 3, and section 4 concludes.

2. Theoretical framework

Since the 1960s, the analysis of the role played by multinational enterprises (MNEs) and FDI on the world economy has been a fertile research topic. There is a large amount of reviews of the literature; some recent examples include Helpman (2006), Caves (2007) or Latorre (2009), to name a few. The available studies of the effects of MNEs, however, are mostly focused on host countries, on analysing the behaviour of the foreign subsidiaries of MNEs in the countries where they locate; the analyses of the effects of MNEs on their source country are much less abundant (Barba Navaretti and Venables, 2004).

Regarding the topic of this paper, i.e., the source-country employment effects of outward FDI, there is a number of published studies on the effect on domestic labour markets of offshoring, i.e., the relocation by a firm of some stages of production abroad, to either an affiliate or an unaffiliated firm; see Crinò (2009) for a survey of this literature. However, since offshoring and outward FDI are different concepts, in the next paragraphs we will concentrate into the relationships between outward FDI and domestic employment.

The impact of outward FDI on domestic employment is usually related to the nature of that FDI, namely, whether this is vertical or horizontal. Accordingly, it has been claimed in the literature that a substitution effect between employment in a foreign subsidiary and

in the parent company occurs when the MNE operates in countries with similar factor endowments (i.e., the case of horizontal FDI). Conversely, when the MNE invests in a low-cost host country (i.e., the case of vertical FDI) its competitiveness could increase by taking advantage of scale economies, which may lead to an increase in home-country employment. In other terms, the scale effect would dominate over the substitution effect for the parent firm, so employment in the home country might increase.

On the other hand, this classification of FDI keeps similitude with the distinction among resource-seeking, market-seeking, and efficiency-seeking investments. Specifically, resource-seeking investments would be aimed to acquire abroad some particular resources, both natural and human, of a better quality or at a lower cost than in the home country of the firm, whereas the aim of market-seeking investments would be entering a market that is new for the firm; finally, efficiency-seeking investments would be those looking for relatively cheaper labour. The net effect on employment of these different types of FDI is not clear cut, however (Agarwal, 1997).

According to this author, FDI aimed at natural resources and host markets can be expected to create net employment in host countries through new exports to foreign affiliates of both inputs and final products, as well as the expansion of management-related activities in the home country; where these favourable effects on employment should exceed unemployment resulting from export substitution and re-imports of goods produced by foreign affiliates. In contrast, efficiency-seeking FDI would be more likely to destroy more jobs through export substitution and re-imports than those created through new exports of inputs and final products. Overall, the net favourable impact on domestic employment following from resource- and market-seeking FDI should prevail over the net unemployment caused by efficiency-seeking FDI, since the latter usually accounts for a smaller share of total FDI; see Agarwal (1997).

In an influential paper analysing the case of the FDI activities of US MNEs, Brainard and Riker (2001) found that foreign-affiliate employment substituted domestic employment in the case of low-wage foreign locations, unlike foreign locations with similar factor endowments as regards the home economy, where foreign-affiliate employment and domestic employment appeared to be complements. Similar conclusions on these lines were obtained by Braconier and Ekholm (2000) for Swedish MNEs; and by Cuyvers *et al.* (2005) and Konings and Murphy (2006) for European MNEs. Bruno and Falzoni (2003) investigated the role of labour adjustment costs for the case of US MNEs, and found that labour substitution prevailed for FDI located in Canada and Europe, both in the short run and the long run; however, for FDI located in Latin America, although substitution prevailed in the short run, in the long run a complementarity relationship emerged between employment in the subsidiary and in the parent company. Likewise, Barba Navaretti, Castellani and Disdier (2010) examined outward FDI to developing and less developed countries by French and Italian firms, finding a positive effect on the size of domestic output and employment. Somewhat different results are those obtained by Hijzen, Jean and Mayer (2011), who found that French manufacturing firms that opened foreign affiliates in developed countries during 1988-1998 experienced on average 25 percent higher employment after 3 years compared to similar firms not investing abroad; as well as no significant difference between employment in manufacturing firms that established in less developed countries and those firms not investing.

Unlike the previous papers, which deal with the case of MNEs based on developed countries, Masso, Varblane and Vahter (2008) analysed the home-country employment effect of outward FDI by Estonian firms. Since Estonia is a low-cost, medium-income transition economy, the main reasons for Estonian firms to establish foreign affiliates are host market-related factors, i.e., those related to horizontal FDI. The authors obtained a positive home-country employment effect, which proved to be stronger for services firms

than for manufacturing firms. This is justified due to the non-tradable nature of services, so that production in foreign affiliates cannot substitute for either home-country production or exports.

Summarizing, it can be concluded as a general rule that for those MNEs performing the same tasks in the foreign affiliates and in the parent company, foreign and domestic employment would be substitutes; whereas for those MNEs performing significantly different tasks at home and abroad, foreign and domestic employment would be complements (Harrison and McMillan, 2011).

All the above mentioned papers used data on firms. When turning to the industry level, the impact of outward FDI on home employment is less clear cut. The results at the industry and firm-level might differ since substitution among types of activities can occur not only between home and foreign operations of the MNE, but also between MNEs and non-MNEs in the same industry at home (Lipsey, 2002). In particular, workers performing those tasks that are being sourced internationally may lose their jobs, but outward FDI might create additional jobs in other business activities. Using data for Italian manufacturing industries, Federico and Minerva (2008) found that outward FDI was associated with faster local employment growth, relatively to the national industry average; also, employment in small plants was not negatively influenced by higher FDI levels.

Another aspect that has drawn the attention of researchers is the possible impact of outward FDI on the domestic demand for skilled and unskilled labour. In particular, unskilled workers might lose when the MNEs move part of the value chain to low-wage countries in order to save labour costs (i.e., the case of vertical FDI), whereas skilled workers are likely to lose when MNEs move some skill-intensive tasks abroad (i.e., the case of horizontal FDI). In a study using data for Japanese MNEs over the period 1965-1990, Head and Ries (2002) found that FDI in low-income countries appeared to raise skill intensity at home, with such effect falling as FDI shifted towards high-income countries.

Similar results were obtained by Hansson (2005), for the case of Swedish MNEs in the 1990s, and by Cuyvers, Dhyne and Soeng (2010), who analysed FDI by Belgian firms along 1997-2007. On the other hand, Driffield, Love and Taylor (2009) found a negative impact of outward FDI on both skilled and unskilled labour demand in the UK over the period 1987-1996; the impact went stronger over time, and especially for unskilled workers, since investment into low-cost locations predominated within UK's outward FDI. In the same line, Elia, Mariotti and Piscitello (2009) showed that foreign involvement by Italian firms over the years 1996-2002 had a negative impact upon the demand for low skilled workers in the parent company's "industrial region", but also on the demand for high skilled workers when FDI outflows were addressed to high income countries.

As regards the Spanish case, most of outward FDI has as destination other advanced countries, with a dominating position of that FDI addressed to services (especially, telecommunications and financial services). Hence, one could guess that this outward FDI would be mainly looking for enlarged markets, with a positive impact on domestic employment following higher exports to the foreign affiliate, and as long as employment might increase in the parent company in order to manage these higher sales abroad. On the other hand, the complementarity relationship between exports and outward FDI found in some previous studies (Bajo-Rubio and Montero-Muñoz, 2001; Alguacil and Orts, 2002), would make difficult to expect any negative impacts of outward FDI on domestic employment and output.

3. Econometric results

In the empirical application, we use a dynamic panel approach where the lagged dependent variable is also included to allow for a dynamic structure of the model. Specifically, we will estimate a dynamic labour demand equation (see Nickell, 1986, for a survey) such as:

$$n_{it} = \beta_0 + \beta_1 n_{i,t-1} + \beta_2 y_{i,t-1} + \beta_3 w_{i,t-1} + \beta_4 k_{i,t-1} + \beta_5 fdi_{i,t-1} + \varepsilon_i + \nu_{it}$$

where, for each sector *i* and year *t*:

- n = employment level
- y = output level
- w = wages
- k = capital intensity
- fdi = net FDI outflows

(all of them transformed into logs), and ε_i and ν_{it} denote, respectively, the time-invariant sector specific effects, and a random disturbance. The exact definitions and data sources are as follows:

- Net FDI outflows (i.e., gross outflows minus disinvestments), across sector and country of destination. The sectoral disaggregation corresponds to the 2-digit 2009 Spanish National Classification of Economic Activities, built on the EU's NACE Rev. 2. Source: *Foreign Investment Registry*, Ministry of Economy and Competitiveness.
- Total sectoral employment levels. Source: *Economically Active Population Survey*, National Statistics Institute.
- Sectoral output levels. Source: *National Accounts*, National Statistics Institute.
- Sectoral wages, computed as compensation of employees divided by salaried employment. Source: *National Accounts*, National Statistics Institute.
- Sectoral capital intensity, computed as productive capital stock divided by output level. Source: Fundación BBVA-Ivie (Mas *et al.*, 2013) and *National Accounts*, National Statistics Institute.

The data on FDI are available for the period 1993-2012. However, due to compatibility problems across the different data sources (in particular, the dataset for the capital stock), we have been obliged to use a more restricted sectoral classification of 32 sectors, and confine the analysis to the period 1995-2011. The definition of sectors is shown in Table 4.

[Table 4 here]

Notice that outward FDI can take zero values in a particular year and sector when there has been no outflows, or even negative values if disinvestments have exceeded investments in that year (since net flows are obtained as the difference between gross investment and the liquidation of previously made investments). The presence of zero and negative values is more frequent when working with a panel data structure including years and sectors, and means a problem when the variables transformed in logs are introduced in the model. Since the logs of zero and negative values do not exist, only positive values of net FDI outflows would be incorporated into the model, and the rest of observations would be lost. Following Kerner (2009), net FDI outflows would represent the balance between that capital sent to a foreign country and the received earnings, and other kind of capital that returns from that country to the country of origin. Accordingly, a negative value would imply that this year more capital has been repatriated from a particular foreign country than the capital that has been sent to the latter, so that such observations should not be excluded from the analysis.

Previous empirical literature has proposed several alternatives to this problem. The most frequent involves replacing the zero values for values equal to one, so that when taking logs appears a zero value; and for negative values, computing the log on its absolute value and then introducing this value with a negative sign (Blonigen and Davies, 2004; Kerner, 2009; Mina, 2011). Another alternative consists of replacing the negative values by other equal to one (Neumayer and Spess, 2005), equal to 0.1 (Blonigen and Wang, 2005), or very close to zero (Blanco, 2011). Also, a constant value high enough to avoid negative values can be added to all the observations on FDI and then taking logs (Yackee, 2009).

The higher the incidence in the sample of these zero and negative values, more sensible might be the results from the model estimates to take them in the account, and how to do it. In our dataset, the incidence of the non-positive values ranges between 6% (for the aggregate outward FDI) and 45% (for the FDI addressed to the Central and Eastern

European countries that joined the EU since 2004). Given the remarkable incidence of these non-positive values, we have estimated the model using the different possible alternatives mentioned above, but the results do not seem to be much affected regarding the sign and significance of the coefficients. We present in the tables the estimation results when adopting the most frequent solution proposed in the literature, namely, replacing the zero values by one and then taking logs, and applying the negative value of the log of the absolute value of the negative net FDI.

The equation to estimate makes up a dynamic panel data model, where the dependent variable is partly explained by its past value. This model involves two econometric problems, namely, correlation between the error term and the explanatory variables, and the potential endogeneity of the explanatory variables. In order to overcome these problems, the model will be estimated using the generalised method of moments (GMM), which allows to control for the unobservable sectoral heterogeneity (i.e., fixed sectoral effects), as well as to correct the endogeneity problems related to the lagged dependent variable and any other explanatory variable that were not fully exogenous using "internal" instruments. More specifically, we will make use of the system GMM of Arellano and Bover (1995) and Blundell and Bond (1998), which combines the estimation in differences, where the instruments are the own lags of the endogenous or predetermined variables, and the estimation in levels, where the instruments are the variables in first differences; hence, this two-equation system allows to obtain more efficient estimators.

Results for total employment

The econometric results from the estimation of our employment equation are shown in Tables 5 and 6. In the bottom lines of the tables we present two validation tests on the adequacy of the instruments used in the regressions: (i) a test on second-order serial correlation that allows checking for the lack of correlation of the instruments with the error term, which would lead to the residuals being serially correlated; and (ii) the Hansen-Sargan

test of over-identifying restrictions that allows checking whether the instruments are exogenous and not correlated with the residuals. In all cases, the null hypothesis of no second-order serial correlation cannot be rejected, and the validity of the instruments is also not rejected.

[Table 5 here]

[Table 6 here]

As can be seen in the tables, lagged employment shows a positive, very high and statistically significant coefficient, which reveals the high degree of persistence of sectoral employment. Also, output appears with the expected positive and significant effect, whereas the coefficients on wages and capital intensity have a negative sign and are always significant.

Turning to the variable outward FDI, its aggregate value appears with a positive and significant coefficient in the first column of Table 5. Accordingly, outward FDI would have favour domestic employment; however, the effect would have been small given the size of the coefficient. In the next columns, FDI outflows have been disaggregated according to their different geographic destinations, in order to try to assess whether the impact might be different depending on where FDI goes[2]. In particular, in column (2) we distinguish between outflows sent to advanced countries and to developing countries; the low correlation between FDI outflows addressed to these two markets allows including them together into the same equation. In both cases, the coefficient is positive and significant, implying a favourable effect on employment, which proves to be greater for FDI outflows to advanced countries. Moreover, in column (3) we have disaggregated FDI outflows into the following destinations: advanced countries not belonging to the EU, EU-15, NMS-12, and Latin America; again, the low correlation among FDI outflows to these destinations makes

[2] Notice that the higher the level of disaggregation, according to either geographic areas or activities (see below), the higher the sensitivity of the results to the particular transformation chosen to allow for the non-positive values of the net FDI outflows, because such values will mean a larger amount of the observations within the sample.

possible their joint estimation. The impact is positive and significant in all cases, with the only exception of the advanced economies outside the EU where the coefficient turns to be negative, although not statistically significant. The largest positive effects are for FDI outflows to EU-15 and Latin America. Finally, in column (4) FDI outflows to EU-15 have been further disaggregated by considering separately those addressed to Portugal. The lower labour costs in Portugal and the vicinity to Spain might lead to expect that this could be an FDI of a more vertical nature resulting in a negative effect on domestic employment. However, when introducing this distinction, the coefficient on FDI outflows addressed to Portugal is also positive and statistically significant.

In addition, we can try to assess whether the impact of FDI outflows on domestic employment varies across different activities. To this end, we have introduced in Table 6 several interactive variables between outward FDI and a dummy variable corresponding to the two main branches of activity where Spanish outward FDI is addressed to, namely, manufacturing and services. In columns (5) and (6), we introduce the interaction of outward FDI with a dummy for manufacturing and services, respectively. When the differential impact on manufacturing is examined, the variable outward FDI is positive and significant, stressing the favourable impact on sectoral employment for the other sectors; the negative and significant coefficient of the interaction indicates that the positive effect of outward FDI on employment is lower for the outflows addressed to manufacturing. The opposite happens for services, where outward FDI is not significant for the other sectors but the positive impact on employment is significantly higher and positive for services.

Skilled and unskilled employment

Next, we will analyse the impact of outward FDI on the demand for labour, differentiating between high and low skill levels of the labour force. This issue has been approached in the available literature in various ways, taking as dependent variable the share of the wage costs of skilled labour over total wage costs (e.g., Head and Ries, 2002, Hansson, 2005, or

Cuyvers *et al.*, 2010), the weight of skilled labour on total employment (e.g., Hijzen *et al.*, 2005, or Ekholm and Hakkala, 2008), or estimating alternatively separate equations for skilled and unskilled employment in order to detect the impact of outward FDI on each of these groups rather than on skill composition of employment (e.g., Elia *et al.*, 2009 and Driffield *et al.*, 2009). We have tested all these approaches but, in order to provide a better comparison with our previous results, we will show the results from the latter, i.e., estimating separate equations for skilled and unskilled employment; the alternative results are available from the authors upon request.

Total employment has been separated into skilled and unskilled following the National Classification of Occupations (CNO-11) from the National Statistics Institute, which distinguishes 9 major groups according to qualifications, training, skills, and experience. Specifically, skilled employment includes groups 1 to 4 (Directors and managers; Scientific and intellectual technicians and professionals; Technicians and support professionals; Accountancy, administrative and other office employees), and unskilled employment groups 5 to 9 (Workers in catering, personal, and protection services and salespersons; Skilled agricultural, livestock, forestry and fishing sector workers; Craftspersons and skilled workers in manufacturing and construction; Installation and machinery operators and assemblers; Elementary occupations). Also, the estimated equations include differentiated wage levels for skilled and unskilled workers, built from the *Wage Structure Survey* elaborated at the National Statistics Institute. Notice that, since this survey does not provide data for agriculture and non-market services, incorporating this variable means reducing the number of sectors and, hence, the size of the sample; specifically, the number of sectors is reduced from 32 to 26. Finally, given the importance of lagged employment as explanatory variable in Tables 5 and 6, the equations for skilled and unskilled employment have been estimated as dynamic models using GMM, which also allows controlling for unobservable sectoral heterogeneity.

The econometric results when the employment equation is estimated differentiating between skilled and unskilled employment are shown in Tables 7 and 8, which are analogous to Tables 5 and 6 above. First, regarding its geographical destination (Table 7), outward FDI has a positive and significant impact on skilled employment in the case of the EU, both for EU-15 and, especially, NMS-12; and a negative and (weakly) significant impact in the case of developing countries as a whole. In turn, outward FDI would be associated with higher unskilled employment for advanced countries as a whole, but due to outflows directed to the EU-15 (including the case of Portugal when this country is estimated separately), despite the negative effect estimated for non-EU advanced countries; as before, the effect is negative and significant in the case of the group of developing countries. On the other hand, when the differential impact of FDI outflows on domestic employment in manufacturing and services is analysed (Table 8), we obtain for skilled employment the same result than before for total employment, namely, a lower and a greater positive impact, respectively, in the case of FDI outflows that are addressed to manufacturing and services; whereas the effect on unskilled employment is not significantly different according to the branch of activity where outward FDI is directed.

[Table 7 here]

[Table 8 here]

Robustness analysis

In the rest of this section, we will discuss the results of several alternative specifications to those presented above, which will serve us as a robustness check of our previous results. Starting with the estimations for total employment, in the first three columns of Table 9 a second lag of the dependent variable is introduced, which can be justified in terms of the existence of adjustment costs in the side of employment (Van Reenen, 1997). As usual, the second lag of employment enters with a negative and significant effect, although the sum of the two lags coefficients is below unity, which implies that the model is dynamically

stable. The basic results of Table 5 remain unaltered, however, only slightly diminishing the size of the coefficients on the FDI variables.

[Table 9 here]

On the other hand, since our sample period embraces the first years of the current economic and financial crisis, in which employment has experienced a substantial fall, one could guess that the impact of outward FDI on employment might have been even higher if these years are dropped from the analysis. Accordingly, in the last three columns of Table 9 the model has been estimated for the period 1995-2008. Again, the results are not markedly different from those in Table 5, even though the coefficient on the capital intensity variable loses its significance. Notice that the small size of the sample (i.e., just 96 observations) advises against estimating the model for the crisis period 2009-2011.

Turning to the estimations for skilled and unskilled employment, in Table 10 we have included a variable that proxies technological change. The introduction of this variable can be justified on the grounds that technological change might have a different impact on employment depending on skill levels (Helg and Tajoli, 2005; Elia *et al.*, 2009). Our technological change variable, denoted by *A* in Table 10, has been computed as the share of innovating firms in each sector, from the *Innovation in Companies Survey* elaborated at the National Statistics Institute. According to the results in Table 10, the coefficient on the technological change variable is only significant, with a positive sign, for unskilled employment. If we look now at the impact of outward FDI, it is not significant for skilled employment in the case of developing countries, and the degree of significance is lowered in the case of the EU; whereas, for unskilled employment, the negative impact of outward FDI to NMS-12 is now significant.

[Table 10 here]

Finally, the equations for skilled and unskilled employment have been estimated simultaneously by means of the seemingly unrelated regression (SUR) method. This method

allows estimating the parameters of the system, accounting for heteroscedasticity and contemporaneous correlation in the errors across equations, and has been used, e.g., in Hijzen *et al.* (2005), Ekholm and Hakkala (2008), or Elia *et al.* (2009). This technique, however, prevents taking into account the dynamic character of the model, as well as correcting the problem of endogeneity related to the wage variable. The results, shown in Table 11, are not comparable with those in Table 7, as long as the explanatory variables are not exactly the same. As can be seen from Table 11, the only significant impact on skilled employment (at the 10% level), with a positive sign, would come from total outward FDI, and from that directed to non-EU advanced countries and the EU (in the latter case, at the 5% level). In turn, for unskilled employment, the only significant effect, in this case with a negative sign, appears for that FDI addressed to non-EU advanced countries.

[Table 11 here]

4. Conclusions

Academic literature has been traditionally much more concerned with the study of FDI inflows than of FDI outflows, despite the crucial role of the latter concerning the relocation of productive activities of firms. One of the features related to outward FDI that has required more public attention, refers to its effects on employment in the source economy, which has raised some concerns about the possible domestic employment losses associated with outward FDI. This discussion, on the other hand, relates to the way of internalisation of the firm, i.e., the type of FDI carried out by an MNE.

A classification of FDI useful in this regard is that distinguishing among resource-seeking, market-seeking, and efficiency-seeking investments. Specifically, while the first two can be expected to create net employment in host countries through new exports to foreign affiliates of both inputs and final products, as well as the expansion of management-related activities in the home country, the latter would be more likely to destroy net employment through export substitution and re-imports. Overall, the net

favourable impact on domestic employment following from resource- and market-seeking FDI should prevail over the net unemployment caused by efficiency-seeking FDI, since the latter usually accounts for a smaller share of total FDI (Agarwal, 1997). In short, for those MNEs performing the same tasks in the foreign affiliates and in the parent company, foreign and domestic employment should be substitutes; whereas for those MNEs performing significantly different tasks at home and abroad, foreign and domestic employment should be complements (Harrison and McMillan, 2011).

In this paper, we have analysed the impact on domestic employment resulting from outward FDI performed by Spanish firms, using industry data for the period 1995-2011. Notice that the results at the industry level might differ from those at the firm-level, on incorporating the substitution effects between MNEs and non-MNEs in the same industry at home, in addition to those between home and foreign operations of the MNE (Lipsey, 2002). On the other hand, the Spanish case can be of interest since, despite starting from almost negligible FDI outflows until the mid-1990s, outward FDI by Spanish firms has reached significant levels in the EU context, which has led to an important presence in some markets, such as Portugal or Latin America. Together with the effects on total employment, we differentiated in our analysis the effects according to the particular groups of countries and activities to which those FDI outflows are addressed. In addition, the impact of outward FDI on the demand for labour was also analysed separately for high and low skill levels of the labour force.

In general, the results showed a positive, though quantitatively small, impact of outward FDI on domestic employment, which points to an increased competitiveness of those Spanish firms investing abroad, enabling them to increase their labour demand domestically. From a geographical perspective, the strongest positive effects were found for those FDI outflows addressed to the EU (in particular the EU-15) and Latin America; a negative effect was detected only for outward FDI addressed to non-EU advanced

economies. On the other hand, from a sectoral perspective, the positive effect of outward FDI on employment was lower for FDI outflows addressed to manufacturing and higher for those addressed to services.

When the employment equation was estimated separately for skilled and unskilled employment, outward FDI showed a positive impact on skilled employment in the case of the EU (both EU-15 and, especially, NMS-12), and a negative one in the case of developing countries as a whole; and, as with total employment, a lower positive impact on skilled employment was found for FDI outflows to manufacturing, and a greater positive impact for FDI outflows to services. In turn, outward FDI was associated with higher unskilled employment in the case of outflows directed to the EU-15 (also in the case of Portugal when this country is estimated separately), together with a negative effect estimated in the case of non-EU advanced countries, and for the group of developing countries; and no significantly different impact on unskilled employment was found for FDI outflows to either manufacturing or services.

Finally, these main results were subject to several robustness checks, and our main conclusions are not substantially altered.

To conclude, recall that most of the outward FDI issued by the Spanish economy has as main destination other advanced countries and services activities (in particular, financial services and telecommunications). Hence, given our results, the main objective of Spanish outward FDI would seem to look for enlarged markets, with a positive impact on domestic employment; at the same time that employment in the parent firm would likely increase in order to manage that greater level of sales. Such reasoning, on the other hand, could be confirmed given the complementarity relationship between outward FDI and exports found in previous studies. Accordingly, Spanish outward FDI would be more of the resource-seeking or market-seeking type, with firms performing different tasks at home and abroad; in particular, Spanish MNEs would not be searching for cheaper labour abroad.

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Figure 1
Spanish outward net FDI, 1993-2012
(% of GDP)

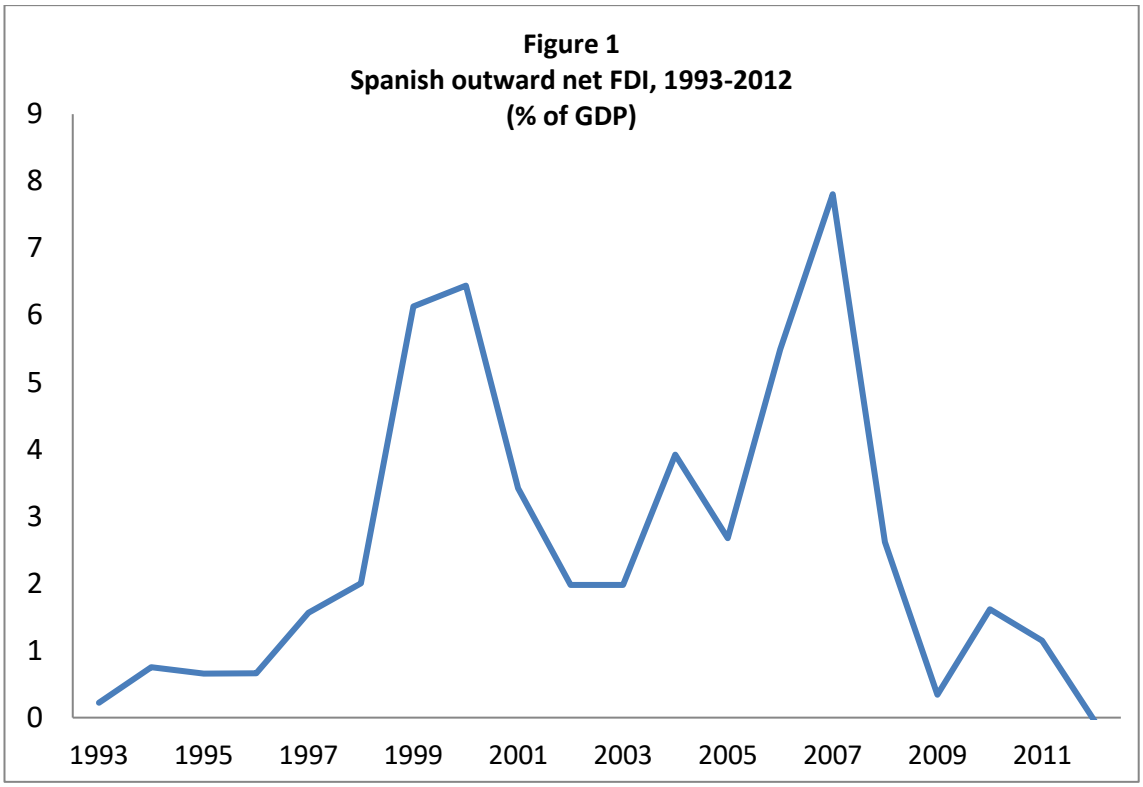

Table 1
Spanish outward net FDI, 1993-2012

	million €	% of GDP
1993	875	0.22
1994	3130	0.75
1995	2944	0.66
1996	3134	0.66
1997	7869	1.56
1998	10813	2.00
1999	35552	6.13
2000	40593	6.44
2001	23281	3.42
2002	14429	1.98
2003	15497	1.98
2004	32992	3.92
2005	24316	2.67
2006	54131	5.49
2007	82209	7.81
2008	28497	2.62
2009	3570	0.34
2010	16904	1.62
2011	12015	1.15
2012	−525	−0.05

Source: *Foreign Investment Registry*, Ministry of Economy and Competitiveness; and *National Accounts*, National Statistics Institute.

Table 2

Spanish net FDI outflows: distribution across sectors, 1993-2012 (% of total)

NACE	Sectors	%
01 to 03	Agriculture, forestry and fishing	0.18
05 to 09	Mining and quarrying	6.82
10 to 33	Manufacturing	12.69
35	Electricity, gas, steam and air conditioning supply	9.37
36 to 39	Water supply; sewerage, waste management and remediation activities	0.99
41 to 43	Construction	3.16
45 to 47	Wholesale and retail trade; repair of motor vehicles and motorcycles	3.69
49 to 53	Transportation and storage	1.21
55 to 56	Accommodation and food service activities	1.07
58 to 63	Information and communication	21.01
64 to 66	Financial and insurance activities	37.08
68	Real estate activities	0.61
69 to 75	Professional, scientific and technical activities	1.04
77 to 82	Administrative and support service activities	0.57
85	Education	0.00
86 to 88	Human health and social work activities	0.11
90 to 93	Arts, entertainment and recreation	0.12
84, 94 to 96, 97 to 98, 99	Rest of services	0.29
	TOTAL	100.00

Source: *Foreign Investment Registry*, Ministry of Economy and Competitiveness.

Table 3

Spanish net FDI outflows: distribution across countries, 1993-2012 (% of total)

Countries	%
United Kingdom	17.26
United States	11.09
Netherlands	10.02
Brazil	9.99
Argentina	8.34
Mexico	6.42
Germany	5.08
France	4.25
Chile	3.49
Portugal	3.21
Advanced countries	59.20
Developing countries	40.80
European Union	49.68
EU-15	45.89
NMS-12	3.79
Latin America	32.54

Source: *Foreign Investment Registry*, Ministry of Economy and Competitiveness.

Table 4

Definition of sectors

1. Agriculture and forestry
2. Fishing
3. Mining and quarrying
4. Coke, refinement and nuclear combustible
5. Electricity, gas and water
6. Food, beverages and tobacco
7. Textiles, wearing apparel, leather and footwear
8. Wood and cork
9. Paper and printing
10. Chemicals
11. Rubber and plastics
12. Other non-metallic mineral products
13. Basic metals and metal products
14. Machinery and equipment
15. Electrical, electronic and optical products
16. Transport equipment
17. Other manufacturing
18. Construction
19. Wholesale and retail trade; repairs
20. Accommodation and food service activities
21. Land transport
22. Transportation: Airports
23. Transportation: State ports
24. Transportation: Rest of transportation
25. Post and telecommunications
26. Financial activities
27. Real estate activities
28. Business activities
29. Public administration
30. Education
31. Human health and social work activities
32. Other social and service activities

Source: Own elaboration, from the Spanish National Statistics Institute and Mas *et al.* (2013).

Table 5

Impact of outward FDI on total employment (I): disaggregation across destinations

	(1)	(2)	(3)	(4)
$n_{i,t-1}$	0.9478***	0.9493***	0.9507***	0.9604***
	(0.0148)	(0.0152)	(0.0172)	(0.0198)
$y_{i,t-1}$	0.0761***	0.0728***	0.0712***	0.0656***
	(0.0079)	(0.0117)	(0.0100)	(0.0085)
$w_{i,t-1}$	−0.1637***	−0.1568***	−0.1461***	−0.1433***
	(0.0098)	(0.0172)	(0.0138)	(0.0155)
$k_{i,t-1}$	−0.0427***	−0.0381***	−0.0506***	−0.0504***
	(0.0115)	(0.0109)	(0.0130)	(0.0164)
$fdi_{i,t-1}$				
total	0.0017***			
	(0.0002)			
to advanced countries		0.0016***		
		(0.0002)		
to developing countries		0.0015***		
		(0.0003)		
to non-EU advanced countries			−0.0002	−0.0004
			(0.0004)	(0.0004)
to EU-15			0.0018***	
			(0.0002)	
to NMS-12			0.0009***	0.0008***
			(0.0003)	(0.0004)
to Latin America			0.0022***	0.0021***
			(0.0002)	(0.0002)
to EU-15 without Portugal				0.0018***
				(0.0002)
to Portugal				0.0009***
				(0.0003)
constant	0.6971***	0.6527***	0.6856***	0.6076***
	(0.1153)	(0.1341)	(0.1478)	(0.1683)
No. of observations	512	512	512	512
Test *p*-values:				
AR(1)	0.0012	0.0015	0.0011	0.0011
AR(2)	0.1064	0.1178	0.1083	0.1101
Sargan-Hansen	0.9972	0.9989	0.9991	0.9993

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 6

Impact of outward FDI on total employment (II): disaggregation across sectors

	(5)	(6)
$n_{i,t-1}$	0.9731***	0.9784***
	(0.0274)	(0.0179)
$y_{i,t-1}$	0.0657***	0.0540***
	(0.0135)	(0.0093)
$w_{i,t-1}$	−0.1703***	−0.1501***
	(0.0129)	(0.0145)
$k_{i,t-1}$	−0.0499***	−0.0640***
	(0.0146)	(0.0163)
$fdi_{i,t-1}$		
total	0.0028***	0.0002
	(0.0003)	(0.0005)
total * manufacturing	−0.0030***	
	(0.0007)	
total * services		0.0032***
		(0.0006)
dummy manufacturing	0.0003	
	(0.0399)	
dummy services		0.0372
		(0.0303)
constant	0.5587***	0.6264***
	(0.1661)	(0.1098)
No. of observations	512	512
Test *p*-values:		
AR(1)	0.0012	0.0015
AR(2)	0.1072	0.1201
Sargan-Hansen	0.9973	0.9985

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 7

Impact of outward FDI on skilled and unskilled employment (I): disaggregation across destinations

	skilled	unskilled	skilled	unskilled	skilled	unskilled	skilled	unskilled
$n_{i,t-1}$	0.9267***	0.9921***	0.9138***	0.9949***	0.8978***	1.0034***	0.8967***	1.0021***
	(0.0171)	(0.0113)	(0.0430)	(0.0175)	(0.0329)	(0.0327)	(0.0386)	(0.0375)
$y_{i,t-1}$	0.0417*	−0.0542***	0.0531*	−0.0531***	0.0400	−0.0526***	0.0350	−0.0532***
	(0.0224)	(0.0109)	(0.0303)	(0.0127)	(0.0391)	(0.0159)	(0.0377)	(0.0161)
$w_{i,t-1}$	−0.1526***	−0.1066***	−0.1511***	−0.1295***	−0.1557**	−0.1311***	−0.1529***	−0.1197***
	(0.0362)	(0.0181)	(0.0552)	(0.0234)	(0.0666)	(0.0344)	(0.0544)	(0.0326)
$k_{i,t-1}$	−0.0379**	−0.0120	−0.0594	−0.0092	−0.0480	0.0108	−0.0506	0.0094
	(0.0191)	(0.0412)	(0.0372)	(0.0395)	(0.0307)	(0.0567)	(0.0444)	(0.0554)
$fdi_{i,t-1}$								
total	0.0015**	0.0011***						
	(0.0006)	(0.0004)						
to advanced countries			0.0007	0.0007***				
			(0.0008)	(0.0003)				
to developing countries			−0.0008*	−0.0007**				
			(0.0005)	(0.0003)				
to non-EU advanced countries					0.0011	−0.0016***	0.0011	−0.0017***
					(0.0009)	(0.0005)	(0.0009)	(0.0005)
to EU-15					0.0011**	0.0006*		
					(0.0005)	(0.0003)		
to NMS-12					0.0041***	−0.0008	0.0041***	−0.0008
					(0.0010)	(0.0006)	(0.0010)	(0.0007)
to Latin America					−0.0005	−0.0003	−0.0005	−0.0004
					(0.0006)	(0.0004)	(0.0007)	(0.0005)
to EU-15 without Portugal							0.0009	0.0008**
							(0.0006)	(0.0004)
to Portugal							−0.0006	0.0007**
							(0.0004)	(0.0004)
constant	1.2204***	1.0447***	1.4009***	1.0619***	1.6186***	0.8423*	1.6926***	0.8343
	(0.1992)	(0.2980)	(0.3732)	(0.2929)	(0.3396)	(0.5103)	(0.3852)	(0.5641)
No. of observations	416	416	416	416	416	416	416	416
Test *p*-values:								
AR(1)	0.0008	0.0460	0.0009	0.0459	0.0009	0.0473	0.0009	0.0437
AR(2)	0.7644	0.9460	0.7690	0.9760	0.7372	0.9805	0.7768	0.9775
Sargan-Hansen	0.9860	0.9964	0.9905	0.9953	0.9940	0.9951	0.9941	0.9960

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 8

Impact of outward FDI on skilled and unskilled employment (II): disaggregation across sectors

	skilled	unskilled	skilled	unskilled
$n_{i,t-1}$	0.9137***	1.0004***	0.8987***	1.0093***
	(0.0401)	(0.0200)	(0.0432)	(0.0266)
$y_{i,t-1}$	0.0543*	−0.0602***	0.0713*	−0.0664***
	(0.0316)	(0.0145)	(0.0395)	(0.0146)
$w_{i,t-1}$	−0.1554***	−0.1024***	−0.1712***	−0.0895***
	(0.0462)	(0.0242)	(0.0289)	(0.0160)
$k_{i,t-1}$	−0.0278	0.0042	−0.0572	−0.0167
	(0.0385)	(0.0397)	(0.0352)	(0.0338)
$fdi_{i,t-1}$				
total	0.0022***	−0.0007	−0.0004	0.0015**
	(0.0007)	(0.0005)	(0.0006)	(0.0007)
total * manufacturing	−0.0030***	0.0042		
	(0.0012)	(0.0030)		
total * services			0.0031***	−0.0010
			(0.0011)	(0.0006)
dummy manufacturing	0.0218	−0.0196		
	(0.1161)	(0.0914)		
dummy services			−0.0683	−0.0113
			(0.0712)	(0.1723)
constant	1.1774***	0.8941***	1.4596***	0.9516***
	(0.1936)	(0.2778)	(0.4087)	(0.2122)
No. of observations	416	416	416	416
Test *p*-values:				
AR(1)	0.0011	0.0402	0.0012	0.0504
AR(2)	0.7674	0.9454	0.7206	0.9542
Sargan-Hansen	0.9888	0.9962	0.9913	0.9954

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 9

Robustness analysis, total employment: two-lagged dependent variable and estimations until 2008

	(1)	(2)	(3)	(4)	(5)	(6)
$n_{i,t-1}$	1.1769***	1.1714***	1.1453***	0.9475***	0.9452***	0.9375***
	(0.0320)	(0.0256)	(0.0240)	(0.0066)	(0.0122)	(0.0106)
$n_{i,t-2}$	−0.1991***	−0.1815***	−0.1891***			
	(0.0261)	(0.0219)	(0.0398)			
$y_{i,t-1}$	0.0400***	0.0375***	0.0456***	0.0803***	0.0772***	0.0790***
	(0.0055)	(0.0074)	(0.0151)	(0.0075)	(0.0075)	(0.0099)
$w_{i,t-1}$	−0.1708***	−0.1659***	−0.1557***	−0.1071***	−0.0958***	−0.0990***
	(0.0098)	(0.0178)	(0.0174)	(0.0133)	(0.0130)	(0.0159)
$k_{i,t-1}$	−0.0286***	−0.0376***	−0.0322**	0.0055	0.0007	−0.0015
	(0.0096)	(0.0084)	(0.0130)	(0.0041)	(0.0051)	(0.0073)
$fdi_{i,t-1}$						
total	0.0012***			0.0023***		
	(0.0001)			(0.0003)		
to advanced countries		0.0013***			0.0011***	
		(0.0002)			(0.0002)	
to developing countries		0.0011***			0.0020***	
		(0.0003)			(0.0003)	
to non-EU advanced countries			−0.0001			−0.0002
			(0.0003)			(0.0002)
to EU-15			0.0010***			0.0013***
			(0.0002)			(0.0002)
to NMS-12			0.0013***			0.0008**
			(0.0004)			(0.0004)
to Latin America			0.0015***			0.0017***
			(0.0003)			(0.0003)
constant	0.6262***	0.5374***	0.7967***	0.1521***	0.2051***	0.3092***
	(0.0950)	(0.124)	(0.255)	(0.0202)	(0.0776)	(0.0899)
No. of observations	480	480	480	416	416	416
Test *p*-values:						
AR(1)	0.0002	0.0001	0.0002	0.0093	0.0094	0.0083
AR(2)	0.1396	0.1950	0.1445	0.1134	0.1116	0.1146
Sargan-Hansen	0.9102	0.9419	0.9341	0.6863	0.6718	0.7265

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 10

Robustness analysis, skilled and unskilled employment (I): estimations with technological change

	skilled	unskilled	skilled	unskilled	skilled	unskilled
$n_{i,t-1}$	0.8992***	1.0174***	0.8915***	1.0119***	0.8773***	1.0043***
	(0.0207)	(0.0221)	(0.0368)	(0.0274)	(0.0346)	(0.0281)
$y_{i,t-1}$	0.0501***	−0.0825***	0.0529**	−0.0796***	0.0244	−0.0643***
	(0.0184)	(0.0150)	(0.0243)	(0.0252)	(0.0426)	(0.0120)
$w_{i,t-1}$	−0.1576***	−0.1759***	−0.1551***	−0.1834***	−0.1029*	−0.1921***
	(0.0196)	(0.0230)	(0.0529)	(0.0194)	(0.0612)	(0.0507)
$k_{i,t-1}$	−0.0852*	0.00551	−0.0833	−0.00423	−0.1326*	0.0303
	(0.0476)	(0.0509)	(0.0610)	(0.0354)	(0.0739)	(0.0685)
$A_{i,t-1}$	0.0242	0.0541***	0.0224	0.0582***	0.0297	0.0520***
	(0.0165)	(0.0119)	(0.0219)	(0.0147)	(0.0291)	(0.0120)
$fdi_{i,t-1}$						
total	0.0010*	0.0011***				
	(0.0006)	(0.0004)				
to advanced countries			0.0006	0.0008***		
			(0.0008)	(0.0003)		
to developing countries			−0.0006	−0.0008**		
			(0.0005)	(0.0003)		
to non-EU advanced countries					0.0005	−0.0016***
					(0.0011)	(0.0005)
to EU-15					0.0012*	0.0006
					(0.0007)	(0.0004)
to NMS-12					0.0024*	−0.0012**
					(0.0014)	(0.0006)
to Latin America					−0.0003	0.0001
					(0.0006)	(0.0004)
constant	1.7027***	0.9689**	1.7548***	1.0907***	2.2977***	0.8463
	(0.3726)	(0.472)	(0.6264)	(0.351)	(0.598)	(0.671)
No. of observations	416	416	416	416	416	416
Test *p*-values:						
AR(1)	0.0017	0.0409	0.0012	0.0470	0.0014	0.0537
AR(2)	0.7881	0.9812	0.7860	0.9920	0.7133	0.9473
Sargan-Hansen	0.9957	0.9975	0.9947	0.9961	0.9964	0.9920

Notes:

(i) System GMM estimations.

(ii) Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.

(iii) AR(1) and AR(2) are first- and second-order tests of serial correlation, and Sargan-Hansen is a test of over-identification of restrictions; *p*-values below 0.05 means rejecting the validity of the instruments used in the estimation. Due to the possible problem of too many instruments, the number of lags used as instruments is restricted to 3.

Table 11

Robustness analysis, skilled and unskilled employment (II): SUR estimations

	skilled	unskilled	skilled	unskilled	skilled	unskilled
$y_{i,t-1}$	0.5338***	0.4793***	0.5402***	0.4781***	0.5237***	0.4685***
	(0.0348)	(0.0340)	(0.0350)	(0.0340)	(0.0353)	(0.0343)
$w_{i,t-1}$	−0.0010	−0.5526***	−0.0191	−0.5481***	−0.0147	−0.5319***
	(0.0611)	(0.0660)	(0.0611)	(0.0653)	(0.0605)	(0.0652)
$k_{i,t-1}$	0.0310	−0.0614	0.0301	−0.0607	0.0423	−0.0523
	(0.0423)	(0.0507)	(0.0425)	(0.0507)	(0.0421)	(0.0502)
$fdi_{i,t-1}$						
total	0.0020*	−0.0004				
	(0.0010)	(0.0013)				
to advanced countries			0.0007	0.0010		
			(0.0010)	(0.0012)		
to developing countries			0.0002	−0.0012		
			(0.0010)	(0.0012)		
to non-EU advanced countries					0.0022*	−0.0042***
					(0.0011)	(0.0014)
to EU−15					0.0018**	0.0015
					(0.0009)	(0.0011)
to NMS−12					0.0019	−0.0031
					(0.0016)	(0.0019)
to Latin America					0.0001	0.0013
					(0.0010)	(0.0013)
constant	4.6343***	8.9144***	4.6682***	8.9054***	4.6904***	8.8724***
	(0.3479)	(0.4152)	(0.3494)	(0.414)	(0.3491)	(0.4133)
No. of observations	416	416	416	416	416	416
R-squared	0.9882	0.9883	0.9881	0.9883	0.9884	0.9896

Note: Robust standard errors in parentheses; *, **, and *** denote $p<0.10$, $p<0.05$, and $p<0.01$, respectively.