



**Technological Attraction of FDI flows in
Knowledge-Intensive Services: a Regional
Innovation System Perspective for Spain**

Celia Torrecillas

Bruno B. Fischer

WP09/11

ICEI Workingpapers

Resumen

En la actualidad, una parte importante de la literatura está analizando el papel que juegan los servicios en el Sistema de Innovación, en el cual, se está prestando especial atención a los servicios intensivos en conocimiento y a los servicios a empresas. No sólo en países desarrollados, sino también en países en desarrollo, la estructura económica está basada, principalmente, en el sector servicios, por lo que se considera necesario analizar y entender mejor las características propias de la innovación en servicios y la relación que tiene con el Sistema Nacional, Sectorial y Regional de Innovación. El presente artículo analiza la relación entre la Inversión Directa Extranjera (IDE) y el entorno innovador, en términos de flujos de entrada y de salida de Servicios Intensivos en Conocimiento en España y a nivel regional (Madrid y Andalucía), mediante la construcción de un modelo basado en variables tecnológicas y variables del sistema de innovación. La novedad de nuestro enfoque es la propuesta de un modelo en el que la innovación se considera determinante en la atracción de IDE, donde; a) el tamaño del Sistema de Innovación está aproximado por el gasto en I+D controlado por el PIB, y los Recursos Humanos (Investigadores en I+D); y b) la heterogeneidad tecnológica está medida mediante la distancia tecnológica entre países /regiones (usando las patentes como indicador). Este enfoque, aunque nuevo para nuestro conocimiento, está basado en un conjunto de referencias de IDE (Senda del Desarrollo de inversión, Estrategias de Aumento de Activos), Internacionalización y Sistema de Innovación (Generación de Conocimiento y Capacidad de Absorción). Los resultados preliminares no indican que el Sistema de Innovación afecte de manera relevante a los flujos de IDE en el análisis de regiones / países, sugiriendo que la IDE busca mercado en vez de activos (activos tecnológicos). Mejoras econométricas se sugieren.

Palabras clave: Sistema regional de Innovación; España; Servicios intensivos en conocimiento; Inversión directa extranjera.

Abstract

An increasing body of literature has been generated regarding the role that services play in innovation systems, in which special attention has been paid recently to Knowledge-Intensive (Business) Services – KIS & KIBS. As not only developed nations but also emerging economies and regions embedded in this country-level unit of analysis show an economic structure strongly based in the tertiary sector, it is mandatory for policymaking processes to better evaluate and understand the idiosyncrasies of these innovation-generating services and its relationships with National, Sectoral and Regional Innovation Systems. Thus, this article aims at approaching the dynamics of Foreign Direct Investment (Inward and Outward flows) in KIS in Spain considering the Regional (NUTS 2) level of analysis and taking into account their interactions with the innovative environment of two specific regions (Madrid and Andalusia) by testing a regressive model built upon technological and innovation systems' variables. The novelty of our approach is to propose a model based on innovation-driven determinants of FDI attraction where: a) the size of innovation systems is approximated by GERD (controlled by GDP) and by a Human Resources variable (Researchers in R&D); and b) technological heterogeneity is measured according to the technological gap between region/country (using a Patent Index proxy). This approach, although novel to our understanding is based on a broad set of references on FDI (Investment Development Path, Asset Augmenting Strategies), internationalization and Innovation Systems (Knowledge Generation, Absorptive Capacity). Preliminary results do not indicate that Innovation Systems affect relevantly the FDI flows for the analyzed regions/countries, suggesting that FDI behaves generally according to a market seeking logic, rather than asset seeking. Improvements for econometric estimations are suggested.

Key words: Regional Innovation Systems; Spain; Knowledge-Intensive Services; Foreign Direct Investment.

Celia Torrecillas

Instituto Complutense de Estudios Internacionales, Universidad Complutense de Madrid/Grupo de Investigación en Economía y Política de la Innovación (GRINEI) – celiatorrecillas@pdi.ucm.es

Bruno B Fischer

Instituto Complutense de Estudios Internacionales, Universidad Complutense de Madrid/Grupo de Investigación en Economía y Política de la Innovación (GRINEI) – bbfisher@pdi.ucm.es

© Celia Torrecillas y Bruno B. Fischer

El ICEI no comparte necesariamente las opiniones expresadas en este trabajo, que son de exclusiva responsabilidad de sus autores/as.

Index

- 1. Introduction.....7
- 2. Internationalization of Services and the role of KIS.....7
- 3. Regional Innovation Systems and the Services Sector in Spain – Madrid and Andalusia.....9
- 4. Methodological Outline.....11
- 5. Results.....12
- 6. Discussions.....13
- Bibliographical references.....14

1. Introduction

Innovation systems are often approached according to a “national” view of the phenomena related to it. Nonetheless, even though this framework of analysis provides researchers in fields of innovation economics with important insights, it is not likely that countries perform as homogeneous unities (Krugman, 1992; Porter, 1990). Therefore, in order to better accomplish with geographical characteristics of regions within nations, analysing Regional Innovation Systems may allow a better representation of economic events and their evolution, especially since innovation is heterogeneously distributed among territories (Meliciani, 2002; Malerba, 2004; Asheim & Gertler, 2004).

On the other hand, Foreign Direct Investment can be seen as an important agent of interaction and integration between innovation systems. Multinational companies act not only as generators, but also as recipients of many kinds of spillovers, especially technological. As a matter of fact, efficiency and knowledge seeking can be seen – together with market seeking – as the main motives for the FDI phenomena (Dunning, 2006), and their relative importance interacts with the stage of economic development of countries (Narula & Dunning, 2000; Dunning & Narula, 1996).

This poses the hypothesis that there might be a complementary or competing – depending on the host market characteristics – interest in the internationalization process, which we might define in two broad dimensions: asset seeking (comprehending knowledge and efficiency seeking strategies) and market seeking (or asset exploitation). From this theoretical point of view we have drawn the framework of this analysis: market seeking strategies have been widely analyzed – for both trade and FDI – via the well-known gravity models and other market-oriented approaches. These models basically frame a markets’ attraction power based on its economic size (GDP and Population) and the distance between markets (measured in kilometers between capitals usually).

However, this leaves us uncomfortable with the non-consideration of an asset seeking motivation for the internationalization process. We believe that a competing model

based on innovation systems’ analogous variables of “attraction power” can be developed and tested, thus gathering complementary information on FDI flows. Furthermore, following our initial proposition, we will proceed to an analysis based on a regional context within Spain – for this we shall work with a core region (Madrid) and a peripheral one (Andalusia), allowing for a more representative picture of the analyzed framework.

This proposition will be applied to the Services Sector and the Knowledge-Intensive Sector – KIS. This is due to the growing interest and importance of this sector in developed nations’ FDI in recent years (Van Welsum, 2007; Kolstad & Villanger, 2008; Ramasamy & Yeung, 2010; Roy, 2009; Head, Mayer & Ries, 2009), as well as the role KIS may play as we expect that this services’ subsector will have an investment oriented to innovation systems.

Thus, this article is structured in the following way: chapter 2 develops on the literature regarding services internationalization and specific role of KIS. Chapter 3 draws some comments and descriptions on the Regional Innovation Systems of Madrid and Andalusia, as well as some FDI time trends. Chapter 4 brings the methodological approach of this article, setting the basis for the technological determinants of FDI approach. Chapter 5 points out the main results achieved in this draft version and chapter 6 brings some implications and limitations of our analysis.

2. Internationalization of Services and the role of KIS

The services sector is an active generator of productivity improvements in many developed nations (Metcalf & Potts, 2007), affecting also international economic relations, and thus becoming of interest in the field of international trade and investment (Kyjota, 2005; Jenicek, 2007). It must be highlighted that the services sector expansion in developed economies already responds for 70% of the aggregated output and employment in OECD countries – and its growth keeps a faster pace than manufactures, especially in the case of business services (Jennequin, 2008; Wölfl, 2005; Metcalfe & Potts, 2007). A plausible

hypothesis to explain this growth points to the externalization of business activities (Guerrieri & Meliciani, 2007) due to a process of industrial concentration in companies' core businesses (Koch & Strotmann, 2005).

Nonetheless, it can be noticed that the importance of services is not yet reflected in internationalization indicators – at least not in the same amount as it is in GDP data (Barcenilla-Visús, 2007) – which can be explained by the fact that historically, services are less prone to explore foreign markets than manufactures (Vence-Deza, 2007).

Also, data for internationalization analysis of services is rarely available with the same quality as for tangible products, making it a difficult task to proceed to consistent quantitative analyses (Muñoz-Guarasa, 2007; Barcenilla-Visús, 2005; Rubalcaba-Bermejo, Gago-Saldaña & Maroto-Sánchez, 2005). It is also important to remind that gathering internationalization data for the case of services can pose some challenges, since it is often hard to identify when services are actually taking place in an “international” context (Pla-Barber & Sánchez-Peinado, 2007).

However, the growth in developed nations' FDI in services is noticeable in recent years (Van Welsum, 2007; Kolstad & Villanger, 2008; Ramasamy & Yeung, 2010; Roy, 2009; Head, Mayer & Ries, 2009)¹ and this can be ascribed to three main drivers (Metcalf & Potts, 2007):

- a) Lower transaction costs in global markets, higher levels of standardization and better conditions for global companies;
- b) Improvement in general levels of education, wealth and market conditions;
- c) Innovation and growth of services in general.

Following this logic, the internationalization of services is affected by not only the institutional context of markets, but also by the behavior of manufacturing companies in

foreign markets, suggesting that these sectors may work in a complementary way (Kolstad & Villanger, 2008; Guerrieri & Meliciani, 2005; Ramasamy & Yeung, 2010; Kimura & Lee, 2006)². This can be coupled with the idea of externalization of services, implying that these two sectors might follow each other in the regionalization or internationalization processes.

Also, many services require local provision of production inputs and physical proximity between supplier and consumer – this results in the need of approaching foreign markets through FDI or licenses in order to establish a local presence (Barcenilla-Visús, 2007; Guerrieri & Meliciani, 2007; De Bruijn, Kox & Arjan, 2008). In the specific case of KIS, the entry mode is also affected by IPR matters and strategic aspects (Sanchez-Peinado, Pla-Barber & Hébert, 2007).

Another relevant issue related to the analysis of internationalization in services is the so-called *offshoring* process, which drives investments out of their geographical origin towards locations which can provide cost and/or productivity gains for a given company – developments in the ICT field are accelerating this phenomenon, especially in the case of business services and KIS between developed nations (Muñoz-Guarasa, 2007; Amiti & Wei, 2009).

Turning our attention to the innovative side of services, it is already widely recognized that services play a central role when dealing with innovation processes (European Commission, 2007; 2009; Corrocher, Cusmano y Morrison, 2009; Guerrieri & Meliciani, 2007; Camacho & Rodríguez, 2005). In this context, the contribution of Knowledge-Intensive Services – KIS must be pointed out, even though often their contribution is of an intangible character (Amara, Landry & Traoré, 2008). The origin of the KIS is in labor division and in the generation of knowledge *per se*, and its recent growth in developed economies has drawn attention to it as a focus of research (OECD, 2006; Vence-Deza, 2007; Muller & Zenker, 2001; Molero-Zayas & Valadez-Sánchez, 2005; Koch & Strotmann, 2005; Muller & Doloreux, 2007).

¹ However, it must be highlighted that services' FDI still plays a small role compared to its participation in national GDPs (Golub, 2009).

² Ramasamy & Yeung (2010) even conclude that manufacturing FDI is the most important determinant in OECD countries' investment in services.

KIS are able to influence their clients' innovative capabilities, as well as they are influenced by them, creating a strong feedback loop in innovation flows (Muller & Doloreux, 2007; Wang, Peng, Tao & Shengrong, 2008; Muller & Zenker, 2001). This suggests that frontiers between services and manufactures are becoming blurry, since they can be seen as remarkably interdependent (European Commission, 2007).

It is of fundamental importance in the context of this article also to signal that services constitute the most dynamic component of Spanish economy (Gordo, Jareño y Urtasun, 2006). In terms of innovative capacity, Spain's services can be distinguished according to three groups (Camacho & Rodríguez, 2005):

- a) Highly innovative: R&D, software and other computer activities;
- b) Moderately innovative: Telecommunications, financial intermediation and other business services;
- c) Low innovative potential: Wholesalers, transports and public services.

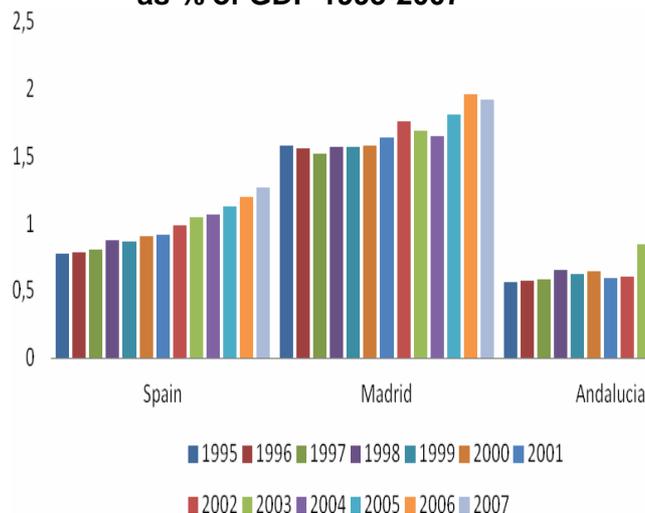
3. Regional Innovation Systems and the Services Sector in Spain – Madrid and Andalusia

In this section we will present some structural aspects based on descriptive statistics of the targets of our analysis, namely the regions of Madrid and Andalusia. The choice of this two regions represent a first attempt in the application of our methodology and is supported by the idea of a direct comparison between a central (Madrid) and a peripheral (Andalusia) region. Firstly, it is important noticing that there is an asymmetric situation between regions in Spain regarding the development of KIS firms, which may cause some geographical concentration issues, together with inequalities in the economic system (Vence-Deza & González-López, 2005).

Furthermore, the innovative tradition in peripheral regions like Andalusia is generally low, which is due to both undeveloped institutional environment and small markets with low absorptive capacity of innovative products and services (Coronado, Acosta & Fernández, 2008). Graph 1 presents a

comparison of Gross Expenditure in R&D as a percentage of GDP for both regions under analysis and also for the case of the country in which they are embedded, Spain. As expected, Madrid, as the central locus of Spain presents investments in innovation above the national average in every period, while Andalusia lags behind not only Madrid, but also in the national context.

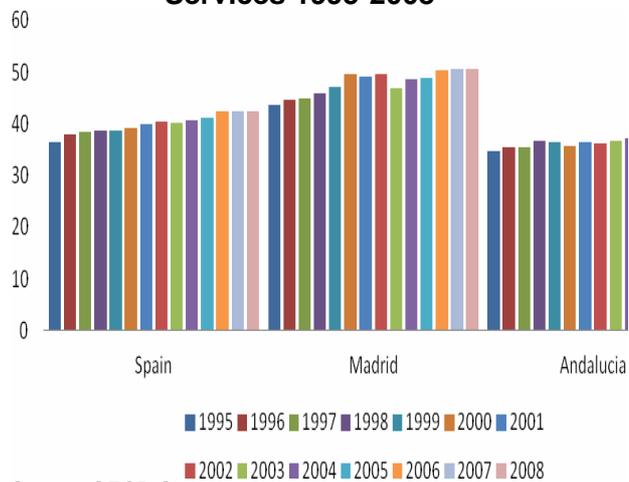
Graph 1. Gross Expenditure on R&D as % of GDP 1995-2007



Source: OECD Stat

Turning our analysis to the specific case of Knowledge-Intensive Services (graph 2.), and using these as a measure of the innovative capacity of the analyzed economies, we have a similar situation to that of GERD, i.e., Madrid shows a higher KIS participation in total services than Andalusia and even the national average, and again the peripheral region lags behind in this scenario.

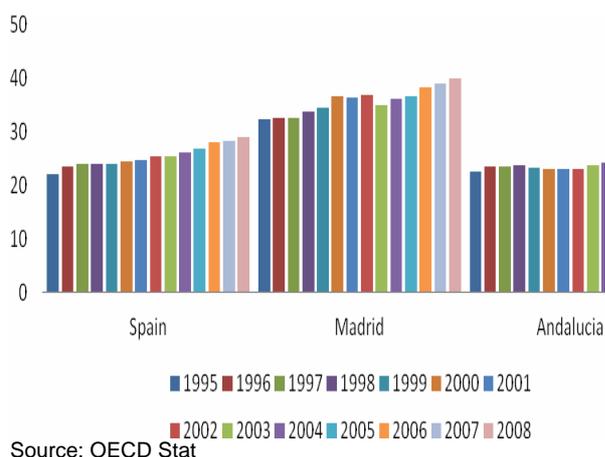
Graph 2. KIS as % of total Services 1995-2008



Source: OECD Stat

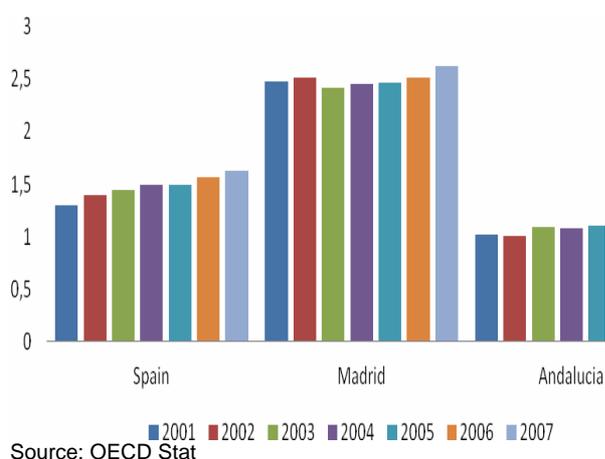
Verifying employment in KIS as a percentage of total employment (Graph 3) also provides us with the same picture as before. We can start establishing that Andalusia represents precisely our “ideal” peripheral unit of analysis while Madrid stands for the “ideal” central part of the economic landscape in Spain.

Graph 3. Employment in KIS as % of total employment 1995-2008



The situation again repeats itself for the case of R&D personnel as a percentage of total employment (graph 4). Even though numbers are rather low for all of the regions, Madrid shows a clear lead in this aspect compared to Andalusia and Spain – and Andalusia lags behind the national average.

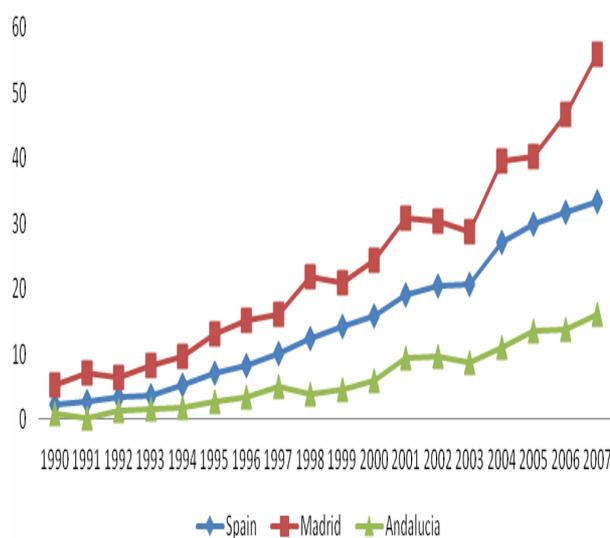
Graph 4. R&D Personnel as % of total employment



Checking the data for PCT patent applications per million people (graph 5) should not at this point be surprising at all: even though rates are increasing for all of the components of our analysis, Madrid performs consistently above

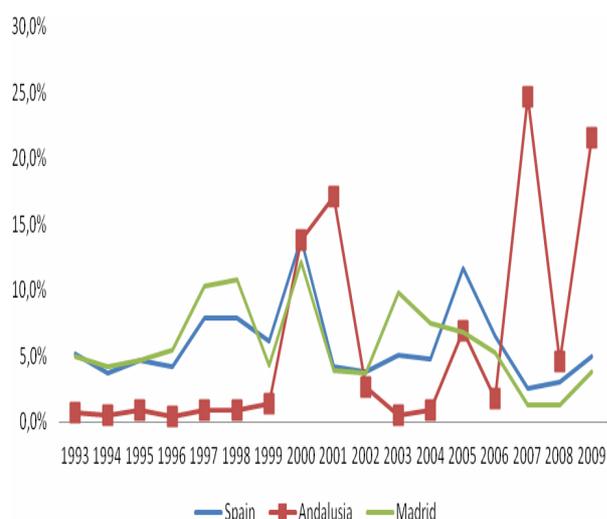
the national average while Andalusia has poorer results in this regard. The descriptive innovation statistics shown in this section allow for the construction of a clear picture of our units of analysis and support the regional choice made in this article for the comparisons to be made. We are talking about two regions that represent well the idea of a geographical context divided in core and periphery – at least when dealing with innovation related variables.

Graph 5. PCT patent applications per million inhabitants



We turn now to an analysis of the specific participation of KIS in total FDI of the regions we are dealing with, as well as the Spanish case as a whole (graph 6). A different picture from the one gathered from innovation indicators shows up. Variations along periods are now a little bit more complex: Madrid seems to receive a percentage of KIS usually similar to that of Spain while Andalusia shows a more erratic behavior, even though recently it has been performing better in attracting KIS FDI (in relative terms, this is important).

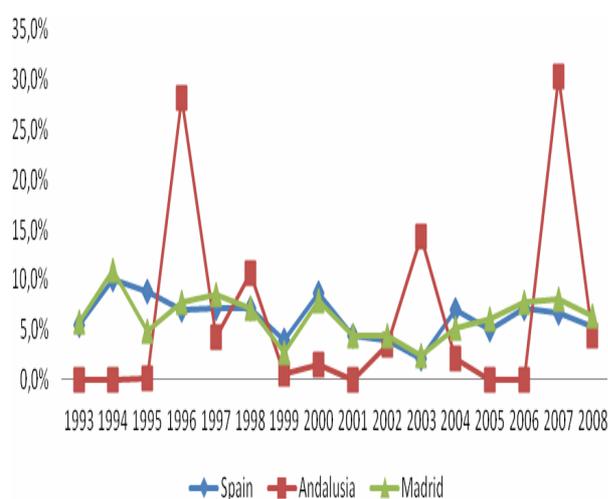
Graph 6. Participation (%) of KIS in total FDI Inward 1993-2009



Source: Datainvox

For the case of Outward KIS FDI a very similar situation happens, and in this case the lines for Madrid and Spain are even alike, almost perfectly correlated along the period. The case of Andalusia again shows a more unstable pattern and in some periods we can even see that the region has not invested abroad in KIS. However, one has to be very careful when analyzing graphs 6 and 7 – the amount of FDI in the case of Andalusia is substantially lower (for Inward and Outward) than for the case of Madrid – as a matter of fact, Madrid represents the biggest share in Spanish FDI and that explains why its lines run so close to those of Spain.

Graph 7. Participation of KIS in total FDI Outward 1993-2008



Source: Datainvox

4. Methodological Outline

The methodological approach of this research aims at generating some empirical insights on the relevance of Regional Innovation Systems on the internationalization pattern of firms measured by FDI flows (both Inward and Outward). To achieve this we try approach FDI flows through some Regional Innovation System variables. The theoretical assumption points to the idea of *asset seeking* behaviour in the internationalization process of firms via FDI.

Thus, we use some technological proxies for RIS in this model, trying to verify the attraction potential of the innovative environment of markets. The variables (see Appendix B for a description) used are: GDPxGERD, Researchers, Technological Distance. We believe this represents a logical and valid attempt to achieve quantitative basis to move forward in more complex models in order to better analyze the “attraction” power of Regional Innovation Systems. Therefore, the model can be described as follows:

$$FDI_{ij} = GDPGERD_j + HR_j + TECHDIST_{ij}$$

Where:

FDI_{ij} : idem above;

$GDPGERD_j$: is the GDP of country “j” multiplied by its Gross Expenditure in R&D as a percentage of the GDP;

HR_j : is a measure of highly qualified workforce of country “j” measured by researchers in R&D per million people; and

$TECHDIST_{ij}$: refers to a measure of technological heterogeneity between nations/regions measured by the absolute (no negative values) of countries/regions’ patent index gathered from PCT patent applications (for a better description of this variable, please see Appendix B.)³.

³ For example, Fu & Yang (2007) analyze innovative distance between countries using patents as a proxy. Furthermore, the use of this variable relies on the strong relationship between FDI in Manufacturing and in Services, suggesting that while if patents can be used for the former, it should not provide distorted results for the latter. Also, since the focus of this paper lies on KIS, it must be pointed out that this specific subsector is strongly related to *productive services*, meaning that our analysis will be dealing mainly with services that seek industrial areas to perform their activity. Nonetheless, we recognize the

Furthermore, our analysis is based on a transformation of data according to their respective natural logarithms. Also, for a better analysis, data was gathered and models were performed according to the mean of the period 2003-2008 (some variables had a slightly different period – see Appendix B) – this allowed for the analysis of more FDI flows between pairs of countries/regions.

Empirical tests of this proposition took place considering two regions of Spain: Madrid and Andalusia (the Spanish results will also be analyzed as a whole in order to provide us with some benchmark). Furthermore, we will be analyzing FDI flows in the Services Sector as a whole and also results for the specific case of Knowledge-Intensive Services –KIS (see Appendix C. for the list of NACE 2009 sectors included). This allows for an analysis of a sector of strong relevance in developed countries (Services as a whole) and for its comparison with a specific subset (KIS) that supposedly will have a “better” interaction with innovation systems. At the same time, we will be able to control results for two very distinct regions in structural terms that belong to the same nation, thus contributing for discussions of regional heterogeneity within countries.

5. Results

In this section we proceed to some preliminary analysis of results obtained in this ongoing research. Table 3 makes a summary of the models we have tested for regional levels (Madrid and Andalusia) and national level.

In the general case of Spain it is interesting to see that for the services sector as a whole, FDI

flows are not highly dependent on Innovation System variables. Nonetheless, the technological distance between pairs of countries – the technological heterogeneity measure – is significant and positive, suggesting a predominance of FDI flows between Spain and more heterogeneous nations in terms of technological frontier. This holds for both Services as a whole and for the case of KIS, even though the coefficient in the latter case is slightly higher. The variable LnHR shows a negative sign and it is somewhat significant in the case of KIS, even though it is negative, suggesting that FDI flows shall not be directed towards markets with higher ratios of scientific personnel across the population. R² results do not show a relevant difference between the cases of Services and KIS, but for the latter we have a better fit of information according to the estimated model.

For the case of Madrid, the technological size of innovation systems is significant as a determinant of FDI flows in both services and in KIS – but its effect is stronger for former. The human resources contained in the innovation systems that exchange FDI with Madrid seem to be relevant but in a way that contradicts our expectations, pointing towards the conclusion that a higher number of R&D personnel does not perform as a FDI attractor – on the contrary. Technological heterogeneity seems to be present only for the case of KIS, showing that in this case we can expect a higher flow of FDI across markets with relevantly different technological capabilities. The explanatory power of the KIS model is again higher than the model for Services, supporting our hypothesis that services with higher knowledge content will better couple with IS variables.

Table 1. Model Results

	SPAIN		MADRID		ANDALUSIA	
	Services	KIS	Services	KIS	Services	KIS
LnGDPGERD	.034	.021	.342***	.262**	.034	.070
LnHR	-.112	-.237*	-.380***	-.449***	-.112	-.118
LnTECHDIST	.311***	.394***	.143	.212**	.311***	.296
Rsqr	.124**	.130**	.239***	.266***	.124**	.091

***sig. at 1%

**sig. at 5%

*sig. at 10%

limitation of this indicator, but insist that it can be useful given the lack of equivalent measures for innovation in services.

Moving to the analysis of Andalusia, results are somewhat blurry. Especially in the model for KIS, the number of observations was rather low, making it difficult to analyze its results – which in this case (R^2 analysis) differ from the previous approaches. Nonetheless, this is another indicator that this region is less engaged with higher added-value services. For the Services model we see that technological heterogeneity is the only significant variable, which probably represents the backwardness of this region's innovation system.

As a final comparison it should be highlighted that results point towards theory and Andalusia together with the Spanish overall scenario do not have a fit as good as the case of Madrid, which clearly represents the leading position of this core region within the country. Nonetheless, we believe that there is a whole set of economic and political variables influencing FDI flows regarding the Spanish context and at least a representative group of these should be included in our analysis in order to achieve more robust outcomes from our research.

6. Discussions

It cannot be denied that the development of a strong innovative environment acts in favor of a given region's development and growth. In this sense, our analysis in this article aimed at approaching the influence of some technological constructs in the process of regional internationalization of core and peripheral regions via FDI for the specific case of services and knowledge-intensive services. Results suggest that these technological variables might indeed play a role in the process of FDI flows, but we believe they would be more consistent with an indirect view of their influence. This is gathered by the fact that our model performs a moderate fit to FDI flows, but its results indicate that the technological dimensions *per se* are not main drivers of these investment relationships – which can mainly be concluded by the consistent negative influence of the variable LnHR. Also, it is interesting noticing that the technological heterogeneity between regions/countries is less relevant for the case of the core region, signaling its relative “equality” with partners – both in inward and outward flows. Thus, we believe that what our research shows is that the asset seeking behavior might be strategic for some companies in specific,

but it hardly represents the trend of the services sector as a whole (as well as KIS), where market seeking still seems to be the main motive for FDI.

A theoretical view we must take into account in the scenario we have presented is that National Innovation Systems, by strengthening technological advantages of local firms, will enable them to successfully locate a part of their R&D activities abroad, thus implying implications for national and regional policies (Le Bas & Sierra, 2001; Barrel & Pain, 1999). This proposition enhances the idea that developed innovation systems foster local firms to act as “market seekers”, but one can also expect that the resulting growth of this market will interfere in its attraction capacity – but again, the innovation systems will have an indirect effect on FDI flows. This might result in a situation in which internationalization processes in RTD generate the concentration of innovation activities on worldwide centers of excellence (Meyer-Krahmer & Reger, 1999).

Nonetheless, this is a very initial stage of the performed research and a wide range of corrections must be made as well as remarks on this approach's limitation. We shall proceed with these further analyses before providing policy implications. Firstly, we had to work with very strict models because of the number of gathered observations, not allowing for the incorporation of more control variables. Further tests with composite indicators that better represent the many dimensions of a Regional Innovation System must be taken into account. Also, better proxies for the case of technological distance in services must be found, since our approach deals only with patents and it is known that this does not necessarily represent the innovative capacity of the analyzed sectors.

Furthermore, the aggregation of manufacturing data might provide us with some additional and valuable term of comparison. The development of the model for other regions in Spain, both core (like Catalunya, Valencia) and peripheral (Extremadura, Castilla-La-Mancha) will allow for more robust results and also an analysis of Inward and Outward flows analyzed separately and not jointly as we did – this approach might suppress some relevant policy implications for the internationalization of innovation systems through FDI.

Bibliographical references

- Amara, Nabil; Landry, Réjean y Traoré, Namatié (2008). "Managing the protection of innovations in knowledge-intensive business services". *Research Policy*, v. 37, pp. 1530-1547.
- Amiti, Mary y Wei, Shang-Jin (2009). "Service Offshoring and Productivity: Evidence from the US". *The World Economy*, pp. 203-220.
- Asheim, Bjorn y Gertler, Meric S. (2004). "The Geography of Innovation: Regional Innovation Systems". In: Fagerberg, J.; Mowery, D. y Nelson, R. (eds). *The Oxford Handbook of Innovation*. Oxford University Press, New York.
- Barcenilla-Visús, Sara (2007). "El comercio de servicios en los países desarrollados: una panorámica". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.
- Barcenilla-Visús, Sara (2005). "Exportaciones de servicios: evidencia empírica para los países de la unión europea". *Información Comercial Española*, n. 824, pp. 39-48.
- Barrel, R. and Pain, N. (1999). "Domestic institutions, agglomerations and foreign direct investment in Europe". *European Economic Review*, v. 43, pp. 925-934
- Camacho, José A. y Rodríguez, Mercedes (2005). "How Innovative are Services? An Empirical Analysis for Spain". *The Services Industries Journal*, v. 25, n. 2, pp. 253-271.
- Coronado, Daniel; Acosta, Manuel y Fernández, Ana (2008). "Attitudes to innovation in peripheral economic regions". *Research Policy*, v. 37, pp. 1009-1021.
- Corrocher, Nicoletta; Cusmano, Lucia y Morrison, Andrea (2009). "Modes of innovation in knowledge-intensive business services evidence from Lombardy". *Journal of Evolutionary Economics*, v. 19, pp. 173-196.
- De Bruijn, Roland; Kox, Henk y Lejour, Arjan (2008). "Economic benefits of an Integrated European Market for Services". *Journal of Policy Modeling*, v. 30, pp. 301-319.
- Dunning, J.H., (2006). "Towards a paradigm of development: implications for the determinants of international business activity", *Transnational Corporations*, n. 15, v.1, pp. 173-227.
- Dunning, J.H., Narula, R. (1996). *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*, Routledge, Londres.
- European Commission (2007). "Towards a European strategy in support of innovation in services Challenges and key issues for future actions". *Europe Innova Paper n. 4*.
- Fu, X., Yang, Q., (2007). "Exploring the cross-country gap in patenting: A stochastic Frontier Approach". *Research Policy*, v.38, pp. 1203-1213.
- Golub, Stephen S. (2009). "Openness to Foreign Direct Investment in Services: An International Comparative Analysis". *The World Economy*, pp. 1245-1268.
- Gordo, Esther; Jareño, Javier y Urtasun, Alberto (2006). "Radiografía del sector de servicios en España". *Banco de España – Documentos Ocasionales n. 0607*.
- Guerrieri, Paolo y Meliciani, Valentina (2007). "La producción e internacionalización de los servicios: Determinantes e implicaciones para la innovación y el crecimiento en Europa". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.
- Guerrieri, Paolo y Meliciani, Valentina (2005). "Tecnología y competitividad internacional: la interdependencia entre manufacturas y servicios a la producción". *Información Comercial Española*, n. 824, pp. 25-38.
- Head, Keith; Mayer, Thierry y Ries, John (2009). "How remote is the offshoring threat?" *European Economic Review*, v. 53, pp. 429-444.

- Jeníček, V. (2007). "World trade with services in globalisation processes". *Agric. Econ.*, v. 53, pp. 55-64.
- Jennequin, Hugues (2008). "The evolution of the geographical concentration of tertiary sector activities in Europe". *Service Industries Journal*, v. 28, n. 3, pp. 291-306.
- Koch, Andreas y Strotmann, Harald (2005). "The Impact of Functional Integration and Spatial Proximity on the Post-entry Performance of Knowledge Intensive Business Service Firms". *IAW Discussion Paper n. 18*.
- Kolstad, Ivar y Villanger, Espen (2008). "Determinants of foreign direct investment in services". *European Journal of Political Economy*, v. 24, pp. 518-533.
- Krugman, Paul (1992). *Geografía y Comercio*. Antoni Bosch. Barcelona.
- Le Bas, C., Sierra, C. (2001). "Location versus home country advantages in R&D activities: Some further results on multinationals locational strategies". *Research Policy*, v. 31, pp. 589-609.
- Malerba, Franco (2004). Sectoral Systems: "How and why innovation differs across sectors". In: Fagerberg, J.; Mowery, D. y Nelson, R. (eds). *The Oxford Handbook of Innovation*. Oxford University Press, New York.
- Meliciani, Valentina (2002). "The impact of technological specialisation on national performance in a balance-of-payments-constrained growth model". *Structural Change and Economic Dynamics*. V. 13, pp. 101-118.
- Metcalfe, J. Stanley y Potts, Jason (2007). "La internacionalización de los servicios: La perspectiva evolutiva". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.
- Meyer-Krahmer, F. and Reger, G. (1999). "New perspectives on the innovation strategies of multinational enterprises: Lesson for technology policy in Europe". *Research Policy*, v. 28, pp. 751-776.
- Molero-Zayas, José y Valadez-Sánchez, Patricia (2005). "Factores determinantes de la competitividad de los servicios: la importancia de la innovación". *Información Comercial Española*, n. 824, pp. 71-91.
- Muller, Emmanuel y Doloreux, David (2007). "The key dimensions of knowledge-intensive business services (KIBS) analysis: a decade of evolution. *Fraunhofer Institute – Working Papers Firms and Region n. U1/2007*.
- Muller, Emmanuel y Zenker, Andrea (2001). "Business services as actors of knowledge transformation: the role of KIBS in regional and national innovation systems". *Research Policy*, v. 30, pp. 1501-1516.
- Muñoz-Guarasa, Marta (2007). "La deslocalización de los servicios: ¿Mito o realidad?" *Revista de Economía Mundial*, v. 16, pp. 57-78.
- Narula, R. and Dunning, J.H. (2000). "Industrial development, globalisation and multinational enterprises: new realities for developing countries", *Oxford Development Studies*, 28, 2.
- OECD (2006). *Innovation and Knowledge-Intensive Service Activities*, OECD Publishing, Paris.
- Pla-Barber, José y Sánchez-Peinado (2007). "Características del sector servicios e implicaciones en la estrategia internacional". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.
- Porter, Michael E. (1990). "The Competitive Advantage of Nations". The MacMillan Press, London.
- Ramasamy, Bala y Yeung, Matthew (2010). "The Determinants of Foreign Direct Investment in Services". *The World Economy*, pp. 573-596.
- Rubalcaba-Bermejo, Luis; Gago-Saldaña, David y Maroto-Sánchez, Andrés (2005). "Relaciones entre globalización y servicios: ventajas competitivas de los servicios europeos y españoles en el comercio internacional". *Información Comercial Española*, n. 824, pp. 93-115.
- Roy, Martin (2009). "Endowments, Power, and Democracy: Political Economy of Multilateral Commitments on Trade in Services". *WTO Staff Working Paper ERSD-2009-07*.
- Sanchez-Peinado, Esther; Pla-Barber, Jose y Hébert, Louis (2007). "Strategic Variables That Influence Entry Mode Choice in Service Firms". *Journal of International Marketing*, v. 15, n. 1, pp. 67-91.

Szakálné Kanó, I. and Vas, Z. (2010). "Do knowledge enterprises flock together? Evidence from Hungary at sub-regional level". *Regional Studies Association Annual International Conference 2010*. May 24th – 26th, Pécs.

Van Welsum, Desirée (2007). "Externalización y deslocalización de los servicios: frente al reto global". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.

Vence-Deza, Xavier (2007). "La terciarización de la economía mundial y los patrones de especialización en la Unión Europea". In: ICEX (2007). *Claves de la Economía Mundial*, Madrid.

Vence-Deza, Xavier y González-López, Manuel (2005). "Los servicios intensivos en conocimiento, especialización y crecimiento en Europa". *Información Comercial Española*, n. 824, pp. 117-137.

Wang, Lin; Peng, Xinmin; Tao, Yan y Shengrong, Hu (2008). "The Typology of Service Innovation: Evidence from Chinese KIBS Sector". *Proceedings of the 2008 IEEE ICMIT*, pp. 912-916.

Wölfl, A. (2005). "The Service Economy in OECD Countries. *OECD Science*", *Technology and Industry Working Papers*, 2005/3.

Appendix A. List of Countries

HOST COUNTRIES	HOME COUTRIES
GERMANY	GERMANY
AUSTRALIA	AUSTRALIA
AUSTRIA	AUSTRIA
BRAZIL	BRAZIL
BULGARIA	BULGARIA
CANADA	CANADA
CHILE	CHILE
CHINA	CHINA
SOUTH KOREA	SOUTH KOREA
CROATIA	CROATIA
DENMARK	DENMARK
SLOVENIA	SLOVENIA
UNITED STATES	UNITED STATES
CYPRUS	FINLAND
ESTONIA	FRANCE
FINLAND	GREECE
FRANCE	HUNGARY
GREECE	INDIA
HUNGARY	IRELAND
INDIA	ICELAND
IRELAND	ISRAEL
ICELAND	ITALY
ISRAEL	JAPAN
ITALY	LATVIA
JAPAN	LITHUANIA
LATVIA	LUXEMBOURG
LITHUANIA	MEXICO
LUXEMBOURG	NORWAY
MEXICO	NEW ZEALAND
NORWAY	NETHERLANDS
NEW ZEALAND	POLAND
NETHERLANDS	PORTUGAL
POLAND	UNITED KINGDOM
PORTUGAL	CZECH REPUBLIC
UNITED KINGDOM	MALTA
CZECH REPUBLIC	ROMANIA
MALTA	RUSSIAN FEDERATION
ROMANIA	SOUTH AFRICA
RUSSIAN FEDERATION	SWEDEN
SOUTH AFRICA	SWITZERLAND
SWEDEN	TURKEY
SWITZERLAND	
TURKEY	

Appendix B. Variables

VARIABLE	DESCRIPTION	PERIOD	SOURCE
LnFDIFLW	FDI inward and outward in million euros for Spain, Madrid and Andalusia.	Mean for the period 2003-2008	DATAINVEX
LnGDP*GERD	GDP multiplied by the Gross expenditures in R&D	Mean for the period 2003-2008	WDI/OECD
LnHR	Researchers in R&D per million of people	Mean for the period 2003-2007	WDI/OECD
LnTECHDIST	Difference between pair of countries' patent index ⁴	Mean of patents and population for the period 2003-2008	WDI/OECD

Appendix C. NACE 2009's Knowledge Intensive Services

Based on Szakálné Kanó & Vas, 2010.

50 Water transport

51 Air transport

59 Motion picture, video and television programme production, sound recording and music publishing activities

60 Programming and broadcasting activities

61 Telecommunications

62 Computer programming, consultancy and related activities

63 Information service activities

64 Financial service activities, except insurance and pension funding

65 Insurance, reinsurance and pension funding, except compulsory social security

66 Activities auxiliary to financial services and insurance activities

69 Legal and accounting activities

70 Activities of head offices; management consultancy activities

71 Architectural and engineering activities; technical testing and analysis

72 Scientific research and development

73 Advertising and market research

74 Other professional, scientific and technical activities

78 Employment activities

80 Security and investigation activities

⁴ The LnTECHDIST was built by the Patent index. The methodology has been used is the TAI based on the following formula: (Observed value – Minimum observed)/(Maximum observed – Minimum observed)

Últimos títulos publicados

DOCUMENTOS DE TRABAJO “EL VALOR ECONÓMICO DEL ESPAÑOL”

- DT 16/11 Fernández Vitores, David: *El papel del español en las relaciones y foros internacionales: Los casos de la Unión Europea y las Naciones Unidas*
- DT 15/11 Rupérez Javier: *El Español en las Relaciones Internacionales.*
- DT 14/10 Antonio Alonso, José; Gutiérrez, Rodolfo: *Lengua y emigración: España y el español en las migraciones internacionales.*
- DT 13/08 de Diego Álvarez, Dorotea; Rodrigues-Silveira, Rodrigo; Carrera Troyano Miguel: *Estrategias para el Desarrollo del Cluster de Enseñanza de Español en Salamanca*
- DT 12/08 Quirós Romero, Cipriano: *Lengua e internacionalización: El papel de la lengua en la internacionalización de las operadoras de telecomunicaciones.*
- DT 11/08 Girón, Francisco Javier; Cañada, Agustín: *La contribución de la lengua española al PIB y al empleo: una aproximación macroeconómica.*
- DT 10/08 Jiménez, Juan Carlos; Narbona, Aranzazu: *El español en el comercio internacional.*
- DT 09/07 Carrera, Miguel; Ogonowski, Michał: *El valor económico del español: España ante el espejo de Polonia.*
- DT 08/07 Rojo, Guillermo: *El español en la red.*
- DT 07/07 Carrera, Miguel; Bonete, Rafael; Muñoz de Bustillo, Rafael: *El programa ERASMUS en el marco del valor económico de la Enseñanza del Español como Lengua Extranjera.*
- DT 06/07 Criado, María Jesús: *Inmigración y población latina en los Estados Unidos: un perfil socio-demográfico.*
- DT 05/07 Gutiérrez, Rodolfo: *Lengua, migraciones y mercado de trabajo.*
- DT 04/07 Quirós Romero, Cipriano; Crespo Galán, Jorge: *Sociedad de la Información y presencia del español en Internet.*
- DT 03/06 Moreno Fernández, Francisco; Otero Roth, Jaime: *Demografía de la lengua española.*
- DT 02/06 Alonso, José Antonio: *Naturaleza económica de la lengua.*
- DT 01/06 Jiménez, Juan Carlos: *La Economía de la lengua: una visión de conjunto.*

WORKING PAPERS

- WP 09/11 Torrecillas, Celia; Fischer, Bruno B.: *Technological Attraction of FDI flows in Knowledge-Intensive Services: a Regional Innovation System Perspective for Spain*
- WP 08/11 Gómez-Puig, Marta; Sosvilla-Rivero, Simón: *Causality and contagion in peripheral emu public debt markets: a dynamic approach.*
- WP 07/11 Sosvilla-Rivero, Simón; Ramos-Herrera, María del Carmen: *The US Dollar-Euro exchange rate and US-EMU bond yield differentials: A Causality Analysis.*
- WP 06/11 Sosvilla-Rivero, Simón; Morales-Zumaquero, Amalia: *Volatility in EMU sovereign bond yields: Permanent and transitory components*

- WP 05/11 Castellacci, Fulvio; Natera, José Miguel: *A new panel dataset for cross-country analyses of national systems, growth and development (CANAs)*.
- WP 04/11 Álvarez, Isabel; Marín, Raquel; Santos-Arteaga, Francisco J.: *FDI entry modes, development and technological spillovers*.
- WP 03/11 Luengo Escalonilla, Fernando: *Industria de bienes de equipo: Inserción comercial y cambio estructural*.
- WP 02/11 Álvarez Peralta, Ignacio; Luengo Escalonilla, Fernando: *Competitividad y costes laborales en la UE: más allá de las apariencias*.
- WP 01/11 Fischer, Bruno B; Molero, José: *Towards a Taxonomy of Firms Engaged in International R&D Cooperation Programs: The Case of Spain in Eureka*.
- WP 09/10 Éltető, Andrea: *Foreign direct investment in Central and East European Countries and Spain – a short overview*.
- WP 08/10 Alonso, José Antonio; Garcimartín, Carlos: *El impacto de la ayuda internacional en la calidad de las instituciones*.
- WP 07/10 Vázquez, Guillermo: *Convergencia real en Centroamérica: evidencia empírica para el periodo 1990-2005*.
- WP 06/10 P. Jože; Kostevc, Damijan, Črt; Rojec, Matija: *Does a foreign subsidiary's network status affect its innovation activity? Evidence from post-socialist economies*.
- WP 05/10 Garcimartín, Carlos; Rivas Luis; García Martínez, Pilar: *On the role of relative prices and capital flows in balance-of-payments constrained growth: the experiences of Portugal and Spain in the euro area*.
- WP 04/10 Álvarez, Ignacio; Luengo, Fernando: *Financiarización, empleo y salario en la UE: el impacto de las nuevas estrategias empresariales*.
- WP 03/10 Sass, Magdolna: *Foreign direct investments and relocations in business services – what are the locational factors? The case of Hungary*.
- WP 02/10 Santos-Arteaga, Francisco J.: *Bank Runs Without Sunspots*.
- WP 01/10 Donoso, Vicente; Martín, Víctor: *La sostenibilidad del déficit exterior de España*.
- WP 14/09 Dobado, Rafael; García, Héctor: *Neither so low nor so short! Wages and heights in eighteenth and early nineteenth centuries colonial Hispanic America*.
- WP 13/09 Alonso, José Antonio: *Colonisation, formal and informal institutions, and development*.
- WP 12/09 Álvarez, Francisco: *Opportunity cost of CO2 emission reductions: developing vs. developed economies*.
- WP 11/09 J. André, Francisco: *Los Biocombustibles. El Estado de la cuestión*.
- WP 10/09 Luengo, Fernando: *Las deslocalizaciones internacionales. Una visión desde la economía crítica*.
- WP 09/09 Dobado, Rafael; Guerrero, David: *The Integration of Western Hemisphere Grain Markets in the Eighteenth Century: Early Progress and Decline of Globalization*.
- WP 08/09 Álvarez, Isabel; Marín, Raquel; Maldonado, Georgina: *Internal and external factors of competitiveness in the middle-income countries*.
- WP 07/09 Minondo, Asier: *Especialización productiva y crecimiento en los países de renta media*.
- WP 06/09 Martín, Víctor; Donoso, Vicente: *Selección de mercados prioritarios para los Países de Renta*

Media.

- WP 05/09 Donoso, Vicente; Martín, Víctor: *Exportaciones y crecimiento económico: estudios empíricos.*
- WP 04/09 Minondo, Asier; Requena, Francisco: *¿Qué explica las diferencias en el crecimiento de las exportaciones entre los países de renta media?*
- WP 03/09 Alonso, José Antonio; Garcimartín, Carlos: *The Determinants of Institutional Quality. More on the Debate.*
- WP 02/09 Granda, Inés; Fonfría, Antonio: *Technology and economic inequality effects on international trade.*
- WP 01/09 Molero, José; Portela, Javier y Álvarez Isabel: *Innovative MNEs' Subsidiaries in different domestic environments.*
- WP 08/08 Boege, Volker; Brown, Anne; Clements, Kevin y Nolan Anna: *¿Qué es lo "fallido"? ¿Los Estados del Sur, o la investigación y las políticas de Occidente? Un estudio sobre órdenes políticos híbridos y los Estados emergentes.*
- WP 07/08 Medialdea García, Bibiana; Álvarez Peralta, Nacho: *Liberalización financiera internacional, inversores institucionales y gobierno corporativo de la empresa*
- WP 06/08 Álvarez, Isabel; Marín, Raquel: *FDI and world heterogeneities: The role of absorptive capacities*
- WP 05/08 Molero, José; García, Antonio: *Factors affecting innovation revisited*
- WP 04/08 Tezanos Vázquez, Sergio: *The Spanish pattern of aid giving*
- WP 03/08 Fernández, Esther; Pérez, Rafaela; Ruiz, Jesús: *Double Dividend in an Endogenous Growth Model with Pollution and Abatement*
- WP 02/08 Álvarez, Francisco; Camiña, Ester: *Moral hazard and tradeable pollution emission permits.*
- WP 01/08 Cerdá Tena, Emilio; Quiroga Gómez, Sonia: *Cost-loss decision models with risk aversion.*
- WP 05/07 Palazuelos, Enrique; García, Clara: *La transición energética en China.*
- WP 04/07 Palazuelos, Enrique: *Dinámica macroeconómica de Estados Unidos: ¿Transición entre dos recesiones?*
- WP 03/07 Angulo, Gloria: *Opinión pública, participación ciudadana y política de cooperación en España.*
- WP 02/07 Luengo, Fernando; Álvarez, Ignacio: *Integración comercial y dinámica económica: España ante el reto de la ampliación.*
- WP 01/07 Álvarez, Isabel; Magaña, Gerardo: *ICT and Cross-Country Comparisons: A proposal of a new composite index.*
- WP 05/06 Schünemann, Julia: *Cooperación interregional e interregionalismo: una aproximación social-constructivista.*
- WP 04/06 Kruijt, Dirk: *América Latina. Democracia, pobreza y violencia: Viejos y nuevos actores.*
- WP 03/06 Donoso, Vicente; Martín, Víctor: *Exportaciones y crecimiento en España (1980-2004): Cointegración y simulación de Montecarlo.*
- WP 02/06 García Sánchez, Antonio; Molero, José: *Innovación en servicios en la UE: Una aproximación a la densidad de innovación y la importancia económica de los innovadores a partir de los datos agregados de la CIS3.*

- WP 01/06 Briscoe, Ivan: *Debt crises, political change and the state in the developing world.*
- WP 06/05 Palazuelos, Enrique: *Fases del crecimiento económico de los países de la Unión Europea-15.*
- WP 05/05 Leyra, Begoña: *Trabajo infantil femenino: Las niñas en las calles de la Ciudad de México.*
- WP 04/05 Álvarez, Isabel; Fonfría, Antonio; Marín Raquel: *The role of networking in the competitiveness profile of Spanish firms.*
- WP 03/05 Kausch, Kristina; Barreñada, Isaías: *Alliance of Civilizations. International Security and Cosmopolitan Democracy.*
- WP 02/05 Sastre, Luis: *An alternative model for the trade balance of countries with open economies: the Spanish case.*
- WP 01/05 Díaz de la Guardia, Carlos; Molero, José; Valadez, Patricia: *International competitiveness in services in some European countries: Basic facts and a preliminary attempt of interpretation.*
- WP 03/04 Angulo, Gloria: *La opinión pública española y la ayuda al desarrollo.*
- WP 02/04 Freres, Christian; Mold, Andrew: *European Union trade policy and the poor. Towards improving the poverty impact of the GSP in Latin America.*
- WP 01/04 Álvarez, Isabel; Molero, José: *Technology and the generation of international knowledge spillovers. An application to Spanish manufacturing firms.*

POLICY PAPERS

- PP 0210 Alonso, José Antonio; Garcimartín, Carlos; Ruiz Huerta, Jesús; Díaz Sarralde, Santiago: *Strengthening the fiscal capacity of developing countries and supporting the international fight against tax evasion.*
- PP 02/10 Alonso, José Antonio; Garcimartín, Carlos; Ruiz Huerta, Jesús; Díaz Sarralde, Santiago: *Fortalecimiento de la capacidad fiscal de los países en desarrollo y apoyo a la lucha internacional contra la evasión fiscal.*
- PP 01/10 Molero, José: *Factores críticos de la innovación tecnológica en la economía española.*
- PP 03/09 Ferguson, Lucy: *Analysing the Gender Dimensions of Tourism as a Development Strategy.*
- PP 02/09 Carrasco Gallego, José Antonio: *La Ronda de Doha y los países de renta media.*
- PP 01/09 Rodríguez Blanco, Eugenia: *Género, Cultura y Desarrollo: Límites y oportunidades para el cambio cultural pro-igualdad de género en Mozambique.*
- PP 04/08 Tezanos, Sergio: *Políticas públicas de apoyo a la investigación para el desarrollo. Los casos de Canadá, Holanda y Reino Unido*
- PP 03/08 Mattioli, Natalia *Including Disability into Development Cooperation. Analysis of Initiatives by National and International Donors*
- PP 02/08 Elizondo, Luis: *Espacio para Respirar: El humanitarismo en Afganistán (2001-2008).*
- PP 01/08 Caramés Boada, Albert: *Desarme como vínculo entre seguridad y desarrollo. La reintegración comunitaria en los programas de Desarme, desmovilización y reintegración (DDR) de combatientes en Haití.*
- PP 03/07 Guimón, José: *Government strategies to attract R&D-intensive FDI.*
- PP 02/07 Czaplińska, Agata: *Building public support for development cooperation.*

- PP 01/07 Martínez, Ignacio: *La cooperación de las ONGD españolas en Perú: hacia una acción más estratégica.*
- PP 02/06 Ruiz Sandoval, Erika: *Latinoamericanos con destino a Europa: Migración, remesas y codesarrollo como temas emergentes en la relación UE-AL.*
- PP 01/06 Freres, Christian; Sanahuja, José Antonio: *Hacia una nueva estrategia en las relaciones Unión Europea – América Latina.*
- PP 04/05 Manalo, Rosario; Reyes, Melanie: *The MDGs: Boon or bane for gender equality and women's rights?*
- PP 03/05 Fernández, Rafael: *Irlanda y Finlandia: dos modelos de especialización en tecnologías avanzadas.*
- PP 02/05 Alonso, José Antonio; Garcimartín, Carlos: *Apertura comercial y estrategia de desarrollo.*
- PP 01/05 Lorente, Maite: *Diálogos entre culturas: una reflexión sobre feminismo, género, desarrollo y mujeres indígenas kichwuas.*
- PP 02/04 Álvarez, Isabel: *La política europea de I+D: Situación actual y perspectivas.*
- PP 01/04 Alonso, José Antonio; Lozano, Liliana; Prialé, María Ángela: *La cooperación cultural española: Más allá de la promoción exterior.*