DID THE EUROPEAN EXCHANGE-RATE MECHANISM CONTRIBUTE TO THE INTEGRATION OF PERIPHERAL COUNTRIES?

Salvador Gil-Pareja
Rafael Llorca-Vivero
José Antonio Martínez-Serrano
De conformidad con la base quinta de la convocatoria del Programa de Estímulo a la Investigación, este trabajo ha sido sometido a evaluación externa anónima de especialistas cualificados a fin de contrastar su nivel técnico.

La serie DOCUMENTOS DE TRABAJO incluye avances y resultados de investigaciones dentro de los programas de la Fundación de las Cajas de Ahorros.
Las opiniones son responsabilidad de los autores.
Abstract

This paper analyses the effect on trade of the exchange-rate mechanism I by member country. We find that it has contributed to a deeper integration of those peripheral countries that participated in the mechanism for at least several years, providing a lesson for the ten new European Union members.

Key words: EMS; ERM; trade; peripheral countries.

JEL Classification numbers: F13, F15.
1. Introduction

The ten new members of the European Union (EU) are expected to join the Economic and Monetary Union (EMU) at some time in the next years. Since the adoption of the euro is compulsory for these countries, the eastern enlargement of the European Union has triggered a broad discussion about the achievability of the Maastricht criteria for the EMU accession candidates. One of these criteria is two years of participation in the Exchange Rate Mechanism II (ERM2) without major tensions in the foreign exchange market.

The ERM, a system of jointly managed fixed and adjustable exchange rates, is seen as having a main potential benefit: providing a nominal anchor for monetary convergence and macroeconomic stability. But, the ERM can also help the path of transition to the euro by fostering trade integration. Despite the relevance of trade integration for the success of a currency union, the impact of the ERM on intra-EU trade has been left out of the discussion in academic literature.¹ To our knowledge, only Fountas and Kyriacos (1999) have investigated whether the ERM1 coincided with an increase in intra-EU exports. Using data for the four largest EU member countries, they conclude that it has not been the case.

This paper empirically investigates the effect on trade of the ERM1 by member country, trying to determine to what extent the fact of participating in this mechanism has contributed to integration of peripheral countries. To deal with this issue, we have estimated a conventional gravity model of international trade on a sample of 24 OECD countries over the period 1960-2004. Our results show that the ERM1 was a successful instrument to strengthen trade integration of its members and, specially, in the case of

¹ As theory predicts, the greater the degree of integration among countries the higher the probability is of forming an optimum currency area (McKinnon, 1963).
peripheral countries. It provides a lesson for those countries that have joined the EU in the last enlargement. The monetary discipline of the ERM2 will probably be an effective instrument to pave the road to the EMU not only through macroeconomic stability but also through trade integration.

The plan of this paper is as follows. Section 2 presents the methodology. Section 3 describes the data. Section 4 discusses the results. Finally, section 5 concludes the paper.

2. Methodology

We are interested in estimating the effect of the ERM1 on trade flows by participating countries in this mechanism. To this end, we estimate a conventional augmented gravity model of international trade:

\[
\text{Ln}(X_{ijt}) = \beta_0 + \beta_1 \text{LnGDP}_{it} + \beta_2 \text{LnGDP}_{jt} + \beta_3 \text{LnDist}_{ij} + \\
\beta_4 \text{Landlocked}_{ij} + \beta_5 \text{Contiguity}_{ij} + \beta_6 \text{Language}_{ij} + \\
\beta_7 \text{Island}_{ij} + \beta_8 \text{LNERvol}_{ij} + \beta_9 \text{RTAone}_{ij} + \beta_{10} \text{RTAboth}_{ij} + \\
\beta_{11} \text{Snakeone}_{ij} + \beta_{12} \text{Snakeboth}_{ij} + \beta_{13} \text{EMUone}_{ij} + \\
\beta_{14} \text{EMUboth}_{ij} + \beta_{15} \text{ERMone}_{ij} + \beta_{16} \text{ERMboth}_{ij} + u_{ijt}
\]  

(1)

where \(i\) and \(j\) denotes trading partners, \(t\) is time, the suffix “both” denotes that \(i\) and \(j\) belong to the same agreement, the suffix “one” denotes that either \(i\) or \(j\) is a member of a particular agreement, and the variables are defined as:

- \(X_{ij}\) are the bilateral trade flows from \(i\) to \(j\),
- \(GDP\) denotes the Gross Domestic Product,
- \(Dist\) denotes the great circle distance between \(i\) and \(j\),
- \(Landlocked\) is the number of landlocked areas in the country-pair (0, 1, or 2),
- \(Contiguity\) is a dummy variable equal to one when \(i\) and \(j\) share a land border,
- \(Language\) is a dummy variable which is unity if \(i\) and \(j\) have a common language,
Island is the number of islands nations in the pair (0, 1, or 2),

ERvol is the monthly exchange rate volatility between the currencies of countries i and j in year t, defined as 1 plus the variance of the first difference on the monthly natural logarithm of the bilateral nominal exchange rate,

RTA denotes dummy variables for Regional Trade Agreements,\(^2\)

Snake denote dummy variables for the European Monetary Snake,

EMU denote dummy variables for the European Monetary Union,

ERMI denote dummy variables for the exchange-rate mechanism I,

\(u_{ijt}\) is the standard classical error term.

The parameter of interest to us is \(\beta_{16}\). If trade is created when both countries are members of the ERM1 the coefficient \(\beta_{16}\) should be positive and statistically significant.\(^3\)

3. Data

The trade data (exports and imports) in current US dollars come from the “Direction of Trade” (DoT) data set developed by the International Monetary Found (IMF). The sample covers bilateral merchandise trade between 24 OECD countries (Belgium and Luxembourg considered jointly) during the period 1960-2004. In particular, the countries considered in this study are: Australia, Austria, Belgium-Luxembourg, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. We deflate trade by the

\(^2\) The regional trade agreements considered are CEE/CE/EU (EU in tables), EFTA and NAFTA.

\(^3\) The coefficients \(\beta_9, \beta_{11}, \beta_{13} \) and \(\beta_{15}\) capture the potential trade diversion effects of each particular integration agreement.
American GDP deflator taken from the Bureau of Economic Analysis (US Department of Commerce).

The independent variables come from different sources. The GDPs in constant US dollars are taken from the World Development Indicators (World Bank). The distances as well as the dummy variables for language, island and landlocked status, and physically contiguous neighbours are taken from the Andrew Rose web site (www.haas.berkeley.edu/arose). Data on monthly exchange rates are taken from International Financial Statistics (IMF). We use data from the World Trade Organization in order to create the indicators of regional trade agreements, and from Gros and Thygesen (1992), Baldwin and Wyplosz (2004) and IMF web site to elaborate the indicators of monetary agreements.

4. Empirical results

We begin by estimating equation (1) using panel data techniques with a full set of year-specific intercepts added. It allows us to control for unobservable country-pair individual effects. The results are presented in column 1 and 2 of Table 1. The Hausman tests reject the null hypothesis of no correlation of the individual effects with the explanatory variables (at the 1 per cent level). Hence, the random-effect coefficients could be biased, and one should rely on the fixed-effect estimators. Nonetheless, it is worth noting that the results for the parameters of interest are very similar for fixed-effect and random-effect estimations.

4 We gratefully acknowledge to Andrew Rose for making his data public.

5 In all the estimations we have included a dummy variable that takes the value of one for trade flows between Mexico and the rest of the countries in the sample from 1986 onwards in order to capture the Mexico unilateral trade liberalization that began in that year.
The gravity model works well. The traditional gravity variables are economically and statistically significant with sensible interpretations: larger countries trade more and more distant countries trade less. Membership in a regional integration agreement encourages trade, as do the fact of sharing a language. Moreover, we find that a reduction in exchange rate volatility is associated with a small increase in trade in accordance with the empirical evidence (Clark, Tamirisa and Wei, 2004). Only the Island coefficient is not intuitively signed.

Focusing attention on the parameter of interest, the coefficient of the ERM1 variable is positive and statistically significant which suggests that this mechanism boosted trade flows among participant countries. The results show that the ERM1’s effect on intra-bloc trade amounts to 55%. It is worth noting that ERM1 has also increased extra-bloc trade by 24%. This effect is economically important, but it hides differences across member countries that are interesting to know in order to evaluate the effectiveness of this system to integrate peripheral markets. To this end, we have estimated the effect of the ERM1 by country using interactive dummy variables. The results are reported in columns (3) and (4). As can be observed, there are clear differences across countries. At one end of the spectrum, the largest impact of the ERM1 on trade flows is found for Spain (86%), Ireland (63%), and Portugal (50%), countries that belonged to the less developed group of EU15 and were members of the ERM1 for a long time (at least 7 years). At the other end of the spectrum, we find the members of the ERM1 that do not show any significant impact on trade flows (the United Kingdom, Finland and Greece). This last result is not surprising since these countries participated in the ERM1 only for one or two years before the beginning of the EMU in 1999. The estimated coefficients for the remaining countries show a
positive effect of membership in the ERM1 on trade that ranges between 10% (Denmark) and 29% (France).\(^7\)

Our results show that the ERM1 of the EMS was a useful instrument to enhance the economic integration of the European economies. Being member of the ERM1 has had an effect on trade that goes beyond the reduction of exchange rate volatility. Moreover, the large impact for Spain, Ireland and Portugal reveal that the ERM1 had an important contribution to the trade integration of peripheral countries of the EU15.

5. Conclusion

In this paper, we have analysed the effect of the ERM1 of the European Monetary System on trade flows by member states using a sample of 24 OECD countries over the period 1960-2004. The results suggest that the impact on trade of the ERM1 did not come from the reduction of the exchange rate volatility. After controlling for this variable, we find that the ERM1 has promoted trade among the participant countries, except for those members that joined the mechanism for a short time period (two years or less) before the beginning of the EMU. The greatest impact is found for the peripheral countries (Spain, Ireland and Portugal). Therefore, the ERM can be regarded as a successful instrument to strength economic integration of its members.

Since the new EU members have expressed their strong intention to join the EMU as soon as possible and as far as the ERM1 has enhanced trade integration, our results suggest that early ERM2 accession is a rational choice.

\(^7\) The corresponding Wald statistics for equality of the coefficients of interest indicate that the estimated parameters for Spain, Ireland and Portugal differ from the rest in a statistically significant way.
References


<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ln GDP_{it}</td>
<td>0.922 (59.70)</td>
<td>0.964 (38.69)</td>
<td>0.914 (64.30)</td>
<td>0.947 (37.52)</td>
</tr>
<tr>
<td>Ln GDP_{jt}</td>
<td>0.892 (57.81)</td>
<td>0.934 (37.53)</td>
<td>0.885 (62.23)</td>
<td>0.917 (36.37)</td>
</tr>
<tr>
<td>Ln Dist_{ij}</td>
<td>-0.837 (-21.35)</td>
<td>-0.836 (-24.29)</td>
<td>-0.836 (-24.29)</td>
<td>-0.836 (-24.29)</td>
</tr>
<tr>
<td>Landlocked_{ij}</td>
<td>-0.082 (-0.88)</td>
<td>-0.095 (-1.16)</td>
<td>-0.095 (-1.16)</td>
<td>-0.095 (-1.16)</td>
</tr>
<tr>
<td>Contiguity_{ij}</td>
<td>0.202 (1.33)</td>
<td>0.220 (1.65)</td>
<td>0.220 (1.65)</td>
<td>0.220 (1.65)</td>
</tr>
<tr>
<td>Language_{ij}</td>
<td>0.709 (5.59)</td>
<td>0.705 (6.38)</td>
<td>0.705 (6.38)</td>
<td>0.705 (6.38)</td>
</tr>
<tr>
<td>Island_{ij}</td>
<td>0.214 (3.27)</td>
<td>0.187 (3.25)</td>
<td>0.187 (3.25)</td>
<td>0.187 (3.25)</td>
</tr>
<tr>
<td>Volatility_{ij}</td>
<td>-2.069 (-1.94)</td>
<td>-1.888 (-1.78)</td>
<td>-2.421 (-2.26)</td>
<td>-2.195 (-2.07)</td>
</tr>
<tr>
<td>RTAone_{ij}</td>
<td>-0.001 (-0.10)</td>
<td>-0.011 (-0.82)</td>
<td>-0.029 (-2.00)</td>
<td>-0.046 (-3.17)</td>
</tr>
<tr>
<td>RTAboth_{ij}</td>
<td>0.294 (10.38)</td>
<td>0.274 (9.60)</td>
<td>0.224 (7.36)</td>
<td>0.184 (5.98)</td>
</tr>
<tr>
<td>SNAKEone_{ij}</td>
<td>0.127 (5.14)</td>
<td>0.119 (4.85)</td>
<td>0.115 (4.59)</td>
<td>0.098 (3.94)</td>
</tr>
<tr>
<td>SNAKEboth_{ij}</td>
<td>0.299 (9.59)</td>
<td>0.286 (5.73)</td>
<td>0.140 (1.54)</td>
<td>0.219 (4.32)</td>
</tr>
<tr>
<td>EMUone_{ij}</td>
<td>0.294 (9.98)</td>
<td>0.293 (9.97)</td>
<td>0.268 (9.15)</td>
<td>0.268 (9.24)</td>
</tr>
<tr>
<td>EMUboth_{ij}</td>
<td>0.638 (16.06)</td>
<td>0.638 (16.13)</td>
<td>0.691 (17.02)</td>
<td>0.700 (17.39)</td>
</tr>
<tr>
<td>ERM1one_{ij}</td>
<td>0.214 (13.02)</td>
<td>0.213 (13.02)</td>
<td>0.213 (13.02)</td>
<td>0.213 (13.02)</td>
</tr>
<tr>
<td>ERM1both_{ij}</td>
<td>0.440 (15.14)</td>
<td>0.444 (15.33)</td>
<td>0.444 (15.33)</td>
<td>0.444 (15.33)</td>
</tr>
<tr>
<td>ERM1AUSTRIAOne_{ij}</td>
<td>0.256 (5.92)</td>
<td>0.268 (6.27)</td>
<td>0.268 (6.27)</td>
<td>0.268 (6.27)</td>
</tr>
<tr>
<td>ERM1AUSTRIABoth_{ij}</td>
<td>0.140 (1.54)</td>
<td>0.147 (1.64)</td>
<td>0.147 (1.64)</td>
<td>0.147 (1.64)</td>
</tr>
<tr>
<td>ERM1BELGIUMOne_{ij}</td>
<td>0.118 (3.27)</td>
<td>0.095 (2.65)</td>
<td>0.095 (2.65)</td>
<td>0.095 (2.65)</td>
</tr>
<tr>
<td>ERM1BELGIUMBoth_{ij}</td>
<td>0.129 (2.53)</td>
<td>0.114 (2.26)</td>
<td>0.114 (2.26)</td>
<td>0.114 (2.26)</td>
</tr>
<tr>
<td>ERM1DENMARKOne_{ij}</td>
<td>0.174 (5.12)</td>
<td>0.154 (4.52)</td>
<td>0.154 (4.52)</td>
<td>0.154 (4.52)</td>
</tr>
<tr>
<td>ERM1DENMARKBoth_{ij}</td>
<td>0.100 (1.92)</td>
<td>0.096 (1.84)</td>
<td>0.096 (1.84)</td>
<td>0.096 (1.84)</td>
</tr>
<tr>
<td>ERM1FINLANDOne_{ij}</td>
<td>0.166 (3.75)</td>
<td>0.160 (3.64)</td>
<td>0.160 (3.64)</td>
<td>0.160 (3.64)</td>
</tr>
<tr>
<td>ERM1FINLANDBoth_{ij}</td>
<td>0.105 (1.00)</td>
<td>0.101 (0.97)</td>
<td>0.101 (0.97)</td>
<td>0.101 (0.97)</td>
</tr>
<tr>
<td>ERM1FRANCEOne_{ij}</td>
<td>0.210 (5.90)</td>
<td>0.212 (5.97)</td>
<td>0.212 (5.97)</td>
<td>0.212 (5.97)</td>
</tr>
<tr>
<td>ERM1FRANCEBoth_{ij}</td>
<td>0.243 (4.77)</td>
<td>0.252 (4.98)</td>
<td>0.252 (4.98)</td>
<td>0.252 (4.98)</td>
</tr>
<tr>
<td>ERM1GERMANYOne_{ij}</td>
<td>0.144 (4.00)</td>
<td>0.123 (3.44)</td>
<td>0.123 (3.44)</td>
<td>0.123 (3.44)</td>
</tr>
<tr>
<td>ERM1GERMANYBoth_{ij}</td>
<td>0.160 (3.12)</td>
<td>0.152 (2.99)</td>
<td>0.152 (2.99)</td>
<td>0.152 (2.99)</td>
</tr>
<tr>
<td>ERM1GREECEOne_{ij}</td>
<td>0.046 (1.07)</td>
<td>0.081 (1.92)</td>
<td>0.081 (1.92)</td>
<td>0.081 (1.92)</td>
</tr>
<tr>
<td>ERM1GREECEBoth_{ij}</td>
<td>0.031 (0.25)</td>
<td>0.064 (0.52)</td>
<td>0.064 (0.52)</td>
<td>0.064 (0.52)</td>
</tr>
<tr>
<td>ERM1IRELANDOne_{ij}</td>
<td>0.454 (12.58)</td>
<td>0.476 (13.26)</td>
<td>0.476 (13.26)</td>
<td>0.476 (13.26)</td>
</tr>
<tr>
<td>ERM1IRELANDBoth_{ij}</td>
<td>0.470 (9.09)</td>
<td>0.490 (9.55)</td>
<td>0.490 (9.55)</td>
<td>0.490 (9.55)</td>
</tr>
<tr>
<td>ERM1ITALYOne_{ij}</td>
<td>0.135 (3.90)</td>
<td>0.140 (4.05)</td>
<td>0.140 (4.05)</td>
<td>0.140 (4.05)</td>
</tr>
<tr>
<td>ERM1ITALYBoth_{ij}</td>
<td>0.208 (3.82)</td>
<td>0.219 (4.04)</td>
<td>0.219 (4.04)</td>
<td>0.219 (4.04)</td>
</tr>
<tr>
<td>ERM1NETHERLANDSOne_{ij}</td>
<td>0.148 (4.11)</td>
<td>0.125 (3.47)</td>
<td>0.125 (3.47)</td>
<td>0.125 (3.47)</td>
</tr>
<tr>
<td>ERM1NETHERLANDSBoth_{ij}</td>
<td>0.195 (3.80)</td>
<td>0.183 (3.59)</td>
<td>0.183 (3.59)</td>
<td>0.183 (3.59)</td>
</tr>
<tr>
<td>ERM1PORTUGALOne_{ij}</td>
<td>0.104 (2.70)</td>
<td>0.110 (2.88)</td>
<td>0.110 (2.88)</td>
<td>0.110 (2.88)</td>
</tr>
<tr>
<td>ERM1PORTUGALBoth_{ij}</td>
<td>0.405 (5.99)</td>
<td>0.406 (6.05)</td>
<td>0.406 (6.05)</td>
<td>0.406 (6.05)</td>
</tr>
<tr>
<td>ERM1SPAINOne_{ij}</td>
<td>0.268 (7.22)</td>
<td>0.301 (8.18)</td>
<td>0.301 (8.18)</td>
<td>0.301 (8.18)</td>
</tr>
<tr>
<td>ERM1SPAINBoth_{ij}</td>
<td>0.583 (9.63)</td>
<td>0.620 (10.33)</td>
<td>0.620 (10.33)</td>
<td>0.620 (10.33)</td>
</tr>
<tr>
<td>ERM1UKOne_{ij}</td>
<td>-0.025 (-0.58)</td>
<td>-0.015 (-0.35)</td>
<td>-0.015 (-0.35)</td>
<td>-0.015 (-0.35)</td>
</tr>
<tr>
<td>ERM1UKBoth_{ij}</td>
<td>0.005 (0.04)</td>
<td>0.009 (0.08)</td>
<td>0.009 (0.08)</td>
<td>0.009 (0.08)</td>
</tr>
<tr>
<td>Adj-R^2</td>
<td>0.80</td>
<td>0.62</td>
<td>0.82</td>
<td>0.62</td>
</tr>
<tr>
<td>Hausman test</td>
<td>143.99</td>
<td>0.00</td>
<td>323.88</td>
<td>0.00</td>
</tr>
<tr>
<td>No obs.</td>
<td>22903</td>
<td>22903</td>
<td>22903</td>
<td>22903</td>
</tr>
<tr>
<td>Estimation Method</td>
<td>R.E.</td>
<td>F.E.</td>
<td>R.E.</td>
<td>F.E.</td>
</tr>
</tbody>
</table>

Note: t-statistics in parentheses are robust to heteroscedasticity and autocorrelation.
Últimos números publicados

159/2000 Participación privada en la construcción y explotación de carreteras de peaje
Ginés de Rus, Manuel Romero y Lourdes Trujillo

160/2000 Errores y posibles soluciones en la aplicación del Value at Risk
Mariano González Sánchez

161/2000 Tax neutrality on saving assets. The spahish case before and after the tax reform
Cristina Ruza y de Paz-Curbera

162/2000 Private rates of return to human capital in Spain: new evidence
F. Barceinas, J. Oliver-Alonso, J.L. Raymond y J.L. Roig-Sabaté

163/2000 El control interno del riesgo. Una propuesta de sistema de límites
riesgo neutral
Mariano González Sánchez

164/2001 La evolución de las políticas de gasto de las Administraciones Públicas en los años 90
Alfonso Utrilla de la Hoz y Carmen Pérez Esparrells

165/2001 Bank cost efficiency and output specification
Emili Tortosa-Ausina

166/2001 Recent trends in Spanish income distribution: A robust picture of falling income inequality
Josep Oliver-Alonso, Xavier Ramos y José Luis Raymond-Bara

167/2001 Efectos redistributivos y sobre el bienestar social del tratamiento de las cargas familiares en
el nuevo IRPF
Nuria Badenes Plá, Julio López Laborda, Jorge Onrubia Fernández

168/2001 The Effects of Bank Debt on Financial Structure of Small and Medium Firms in some Euro-
pean Countries
Mónica Melle-Hernández

169/2001 La política de cohesión de la UE ampliada: la perspectiva de España
Ismael Sanz Labrador

170/2002 Riesgo de liquidez de Mercado
Mariano González Sánchez

171/2002 Los costes de administración para el afiliado en los sistemas de pensiones basados en cuentas
de capitalización individual: medida y comparación internacional.
José Enrique Devesa Carpio, Rosa Rodriguez Barrera, Carlos Vidal Meliá

y propuestas de metodología para la explotación de la información de los ingresos y el gasto.
Llorecn Pou, Joaquín Alegre

173/2002 Modelos paramétricos y no paramétricos en problemas de concesión de tarjetas de credito.
Rosa Puertas, María Bonilla, Ignacio Olmeda
174/2002 Mercado único, comercio intra-industrial y costes de ajuste en las manufacturas españolas.
José Vicente Blanes Cristóbal

175/2003 La Administración tributaria en España. Un análisis de la gestión a través de los ingresos y de los gastos.
Juan de Dios Jiménez Aguilera, Pedro Enrique Barrilao González

Santiago Carbó Valverde, Rafael López del Paso, David B. Humphrey

177/2003 Effects of ATMs and Electronic Payments on Banking Costs: The Spanish Case.
Santiago Carbó Valverde, Rafael López del Paso, David B. Humphrey

178/2003 Factors explaining the interest margin in the banking sectors of the European Union.
Joaquín Maudos y Juan Fernández Guevara

179/2003 Los planes de stock options para directivos y consejeros y su valoración por el mercado de valores en España.
Mónica Melle Hernández

Yener Altunbas, Santiago Carbó y Phil Molyneux

181/2003 The Euro effect on the integration of the European stock markets.
Mónica Melle Hernández

182/2004 In search of complementarity in the innovation strategy: international R&D and external knowledge acquisition.
Bruno Cassiman, Reinhilde Veugelers

183/2004 Fijación de precios en el sector público: una aplicación para el servicio municipal de suministro de agua.
Mª Ángeles García Valiñas

184/2004 Estimación de la economía sumergida en España: un modelo estructural de variables latentes.
Ángel Alaño Pardo, Miguel Gómez de Antonio

185/2004 Causas políticas y consecuencias sociales de la corrupción.
Joan Oriol Prats Cabrera

186/2004 Loan bankers’ decisions and sensitivity to the audit report using the belief revision model.
Andrés Guiral Contreras and José A. Gonzalo Angulo

Marta Tolentino García-Abadillo y Antonio Díaz Pérez

188/2004 Does market competition make banks perform well?.
Mónica Melle

189/2004 Efficiency differences among banks: external, technical, internal, and managerial
Santiago Carbó Valverde, David B. Humphrey y Rafael López del Paso
190/2004 Una aproximación al análisis de los costes de la esquizofrenia en España: los modelos jerárquicos bayesianos
F. J. Vázquez-Polo, M. A. Negrín, J. M. Cavasés, E. Sánchez y grupo RIRAG

191/2004 Environmental proactivity and business performance: an empirical analysis
Javier González-Benito y Óscar González-Benito

192/2004 Economic risk to beneficiaries in national defined contribution accounts (NDCs)
Carlos Vidal-Meliá, Inmaculada Domínguez-Fabian y José Enrique Devesa-Carpio

193/2004 Sources of efficiency gains in port reform: non parametric malmquist decomposition tfp index for Mexico
Antonio Estache, Beatriz Tovar de la Fé y Lourdes Trujillo

194/2004 Persistencia de resultados en los fondos de inversión españoles
Alfredo Ciriaco Fernández y Rafael Santamaría Aquilué

195/2005 El modelo de revisión de creencias como aproximación psicológica a la formación del juicio del auditor sobre la gestión continuada
Andrés Guiral Contreras y Francisco Esteso Sánchez

196/2005 La nueva financiación sanitaria en España: descentralización y prospectiva
David Cantarero Prieto

197/2005 A cointegration analysis of the Long-Run supply response of Spanish agriculture to the common agricultural policy
José A. Mendez, Ricardo Mora y Carlos San Juan

198/2005 ¿Refleja la estructura temporal de los tipos de interés del mercado español preferencia por la liquidez?
Magdalena Massot Perelló y Juan M. Nave

199/2005 Análisis de impacto de los Fondos Estructurales Europeos recibidos por una economía regional: Un enfoque a través de Matrices de Contabilidad Social
M. Carmen Lima y M. Alejandro Cardenete

200/2005 Does the development of non-cash payments affect monetary policy transmission?
Santiago Carbó Valverde y Rafael López del Paso

201/2005 Firm and time varying technical and allocative efficiency: an application for port cargo handling firms
Ana Rodríguez-Álvarez, Beatriz Tovar de la Fé y Lourdes Trujillo

202/2005 Contractual complexity in strategic alliances
Jeffrey J. Reuer y Africa Ariño

203/2005 Factores determinantes de la evolución del empleo en las empresas adquiridas por opa
Nuria Alcalde Fradejas y Inés Pérez-Soba Aguilar

Elena Olmedo, Juan M. Valderas, Ricardo Gimeno and Lorenzo Escot
205/2005 Precio de la tierra con presión urbana: un modelo para España
Esther Decimavilla, Carlos San Juan y Stefan Sperlich

206/2005 Interregional migration in Spain: a semiparametric analysis
Adolfo Maza y José Villaverde

207/2005 Productivity growth in European banking
Carmen Murillo-Melchor, José Manuel Pastor y Emili Tortosa-Ausina

Santiago Carbó Valverde, David B. Humphrey y Rafael López del Paso

209/2005 La elasticidad de sustitución intertemporal con preferencias no separables intratemporalmente: los casos de Alemania, España y Francia.
Elena Márquez de la Cruz, Ana R. Martínez Cañete y Inés Pérez-Soba Aguilar

210/2005 Contribución de los efectos tamaño, book-to-market y momentum a la valoración de activos: el caso español.
Begoña Font-Belaire y Alfredo Juan Grau-Grau

211/2005 Permanent income, convergence and inequality among countries
José M. Pastor and Lorenzo Serrano

212/2005 The Latin Model of Welfare: Do 'Insertion Contracts' Reduce Long-Term Dependence?
Luis Ayala and Magdalena Rodríguez

213/2005 The effect of geographic expansion on the productivity of Spanish savings banks
Manuel Illueca, José M. Pastor and Emili Tortosa-Ausina

214/2005 Dynamic network interconnection under consumer switching costs
Ángel Luis López Rodríguez

215/2005 La influencia del entorno socioeconómico en la realización de estudios universitarios: una aproximación al caso español en la década de los noventa
Marta Rahona López

216/2005 The valuation of spanish ipos: efficiency analysis
Susana Álvarez Otero

217/2005 On the generation of a regular multi-input multi-output technology using parametric output dis-
tance functions
Sergio Perelman and Daniel Santín

218/2005 La gobernanza de los procesos parlamentarios: la organización industrial del congreso de los di-
putados en España
Gonzalo Caballero Miguez

219/2005 Determinants of bank market structure: Efficiency and political economy variables
Francisco González

220/2005 Agresividad de las órdenes introducidas en el mercado español: estrategias, determinantes y me-
didas de performance
David Abad Díaz
221/2005 Tendencia post-anuncio de resultados contables: evidencia para el mercado español
Carlos Forner Rodríguez, Joaquín Marhuenda Fructuoso y Sonia Sanabria García

222/2005 Human capital accumulation and geography: empirical evidence in the European Union
Jesús López-Rodríguez, J. Andrés Faíña y José Lopez Rodriguez

223/2005 Auditors' Forecasting in Going Concern Decisions: Framing, Confidence and Information Processing
Waymond Rodgers and Andrés Guiral

José Ramón Cancelo de la Torre, J. Andrés Faíña and Jesús López-Rodríguez

225/2005 The effects of ownership structure and board composition on the audit committee activity: Spanish evidence
Carlos Fernández Méndez and Rubén Arrondo García

226/2005 Cross-country determinants of bank income smoothing by managing loan loss provisions
Ana Rosa Fonseca and Francisco González

Alejandro Estellé Moré

228/2005 Region versus Industry effects: volatility transmission
Pilar Soriano Felipe and Francisco J. Climent Diranzo

Daniel Vázquez-Bustelo and Sandra Valle

Alfonso Palacio-Vera

231/2005 Reconciling Sustainability and Discounting in Cost Benefit Analysis: a methodological proposal
M. Carmen Almansa Sáez and Javier Calatrava Requena

232/2005 Can The Excess Of Liquidity Affect The Effectiveness Of The European Monetary Policy?
Santiago Carbó Valverde and Rafael López del Paso

Miguel Angel Barberán Lahuerta

Víctor M. González

Waymond Rodgers, Paul Pavlou and Andres Guiral.

Francisco J. André, M. Alejandro Cardenete y Carlos Romero.
Santiago Carbó-Valverde, Francisco Rodríguez-Fernández y Gregory F. Udell.

238/2006  Trade Effects Of Monetary Agreements: Evidence For Oecd Countries. 
Salvador Gil-Pareja, Rafael Llorca-Vivero y José Antonio Martínez-Serrano.

Marcos Álvarez-Díaz y Gonzalo Caballero Miguez.

240/2006  La interacción entre el éxito competitivo y las condiciones del mercado doméstico como determinantes de la decisión de exportación en las Pymes. 
Francisco García Pérez.

241/2006  Una estimación de la depreciación del capital humano por sectores, por ocupación y en el tiempo. 
Inés P. Murillo.

Manuel A. Gómez.

Jose Manuel Cordero-Ferrera, Francisco Pedraja-Chaparro y Javier Salinas-Jiménez

244/2006  Did The European Exchange-Rate Mechanism Contribute To The Integration Of Peripheral Countries?. 
Salvador Gil-Pareja, Rafael Llorca-Vivero y José Antonio Martínez-Serrano.