

**ACCOUNTING FOR THE TIME PATTERN OF REMITTANCES
IN THE SPANISH CONTEXT**

ALFONSO ECHAZARRA

FUNDACIÓN DE LAS CAJAS DE AHORROS
DOCUMENTO DE TRABAJO
Nº 553/2010

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.

ISSN: 1988-8767

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.

ACCOUNTING FOR THE TIME PATTERN OF REMITTANCES IN THE SPANISH CONTEXT

Alfonso Echazarra*

Abstract

It is now well established that the time pattern of migrants' remittances presents an inverted "U" shape, reaching its maximum level after 5 to 10 years of migration experience. From a macro perspective, however, remittances are believed to be a stable source of international revenue for developing countries. Global economic growth, continuous migrant flows, and an inclination to focus on success stories have enabled scholars to elude this obvious paradox; that of remittances fading at the individual level but increasing at the aggregate level. This article will address this paradox specifically by providing evidence of the inverted "U" shape and, more importantly, by investigating the microfoundations of declining remittances in Madrid and the Balearic Islands. Future research will be able to improve predictions on aggregate levels of remittances by combining this type of studies with macro data and adequate micro-macro links.

Keywords: International Migration, Remittances, Spain.

JEL classification: F22, F24, J61.

* Centre for Census and Survey Research -- University of Manchester. Address: Ap. 812 Abito, 85 Greengate, Salford, M3 7NE, United Kingdom. E-mail: aechazarra@ceacs.manch.es

Introduction

It is now broadly accepted that remittances are a stable source of international revenue for developing countries, exhibiting lower volatility rates than capital markets flows, foreign direct investment or even official development assistance (Ratha, 2005). Short-term volatility, however, should not be confounded with long-term stability; remittances inflows might vary slightly from year to year but still dry up after a longer period. Historical evidence seems indeed to support this scenario, regardless of researchers' accounts of remittances' "success" stories such as current Mexico, China, Bangladesh or India. For instance, pecuniary remittances from Spanish emigrants living in Latin America were a vital and stable source of financing for the impoverished Spanish economy for at least 50 years – from 1880 to 1930. From 1930 onwards, however, migrants outflows plummeted and remittances fell accordingly. True, the cutback was gradual but by 1940 the American remittances were trivial compared with the golden age of remittances (García López, 1992). More recently, Turkey has experienced a similar phenomenon. Using data from the IMF and the World Bank, remittances inflows to Turkey have decreased from 4,560 million dollars in 2000 to 851 million dollars hardly six years later (-80%). West Bank and Gaza (-46%), Greece (-30%), or Thailand (-21%) have also shown important cutbacks in the same period, and Italy (-53%) and Portugal (-26%) for the 1990-2006 period. In this regard, it is my belief that developing countries should be concerned with the big picture for some of them may see their incoming remittances shrinking in ten or even five years time, especially if migration outflows are not sustained. This concern should probably start by creating predictive models which would necessarily incorporate the microdynamics of remittances. This is precisely the aim of this work: the investigation of the microfoundations of declining remittances.

Drops in the aggregate level of remittances are actually the logical outcome of another conventional statement in the remittances literature; namely, that remittances fade with migrants' time of residence. This hypothesis is known as the time decay hypothesis and is based on migrants' eroding attachment to their home communities. A related and compatible hypothesis argues that the time pattern of remittances actually displays an inverted "U" shape, which differs only in that it takes into account migrants' inability to send their optimal amount of remittances in their unstable and indebted first years.

In what follows, evidence from two Spanish cross-sectional surveys will be presented in order to test both the time decay hypothesis and the inverted "U" time pattern. More importantly, the data will be used to disentangle the underlying mechanisms, or remittances' necessary conditions, behind these hypotheses: a) the potential remittances, b) the willingness to remit, and c) the potential recipients. If successful, the

results from this study will allow policy-makers to understand why individual remittances fade with time and with an adequate micro-macro link to predict aggregate level of remittances inflows.

1. Remittances' time pattern in the literature

In spite of remittances being a matured academic topic and remittances' flows an important concern for policy-makers, its time pattern has scarcely been studied in depth. To my knowledge, no work has focused exclusively on this issue except for Amuedo-Dorantes and Pozo (2006a) and Poirine (2006), though the latter adopts a theoretical perspective which applies only to microstates affected by extremely high emigration rates. The lack of interest is even more startling, as time of residence may be thought as a blunt but straightforward way of predicting future flows of remittances. Previous work on the microdeterminants of remittances has traditionally included time of residence as a control variable and found unclear and contradictory findings. Some studies have found a positive effect of time on the probability to remit (Agarwal and Horowitz, 2002) or on the level of remittances (Lucas and Stark, 1985; Durand *et al.* 1996). Other studies have rejected any statistically significant effect of time on the probability to remit (Funkhouser, 1995; Durand *et al.*, 1996) or on the amount of remittances (Menjivar *et al.*, 1998; Semyonov and Gorodzeisky, 2005). Finally, a few studies support the hypothesis of the time decay for the probability to remit (Menjivar *et al.*, 1998), for the level of remittances (Funkhouser, 1995), or for both (Marcelli and Lowell, 2005; Amuedo-Dorantes and Pozo, 2006b). All these studies have in common that they were not explicitly interested in finding evidence for the time pattern of remittances. This fact explains why only the study by Brière *et al.* (2002), and the already cited by Amuedo-Dorantes and Pozo (2006a), can claim to have found an inverted "U" time pattern by introducing as an independent variable both the time of residence and its quadratic form.¹ More precisely, Brière *et al.* find that the level of remittances starts to decay after 10 years (*Figure 1*), while Amuedo-Dorantes and Pozo detect a fading of remittances after 5.5 years (*Figure 2*).

As this study is to a degree an extension of Amuedo-Dorantes and Pozo (2006a), an in-depth description of their work and its shortcomings is essential. Their aim is to identify the time profile of migrants' remitting behavior using data from the Mexican Migration Project (MMP107). They find that remittances appear to exhibit a "hump-shaped" pattern, both for migrants who have and who have not left their spouses and partners remaining in Mexico, although the decay rate is higher for the latter. On

¹ It is important to mention that Lucas and Stark (1985) did also find some empirical evidence for the inverse "U" shape, by introducing dummy variables for the duration of migration.

average, remittances start to decay after 5.5 years of U.S. experience. They hypothesize, though don't test, that remittances initially rise as migration costs are recovered and labor conditions improve, and shrink as their attachments to their country of origin become weaker.

The great merit of their analysis is that they have showed clear evidence of the inverted "U" shape pattern, which almost any rational model would predict whether they are based on altruistic or self-interest motivations. However, three noteworthy shortcomings are to be mentioned.

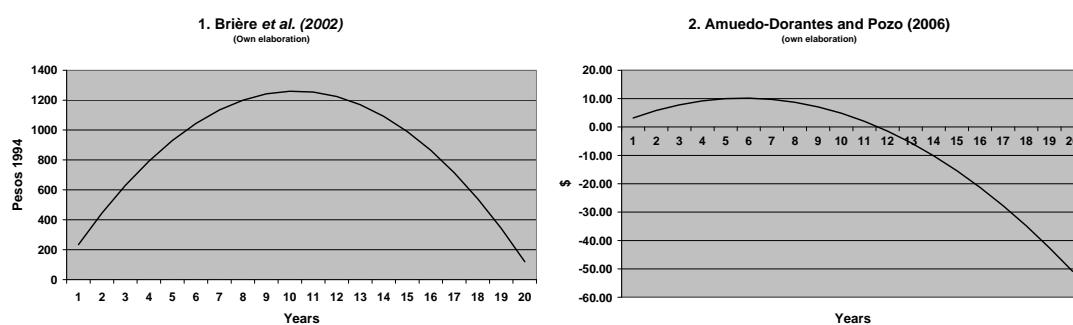
To start with, the authors don't capture the fundamental nature of time. Time rarely exerts an independent effect itself. If results show a misleading time effect, it is usually because time is correlated with other variables, which may have not been included in the model such as the probability of naturalization, the decay of attachment to home communities, the improvement of labor conditions or the probability of family reunification. This explains, together with the inadequacy of the functional form they adopt, why the time pattern detected in their study seems to be so "unrealistic". Strictly speaking, they find a time pattern for the effect of time on remittances but not a time pattern for remittances. The specific nature of time requires time to be included in a regression model either as a control variable - controlling for past values of unobserved variables - as the only independent variable or conjointly with time-invariant covariates. In addition, what turns the time pattern of remittances relevant for policy makers is its predictive power, which may be distorted, when introducing other variables into the model. Following Amuedo-Dorantes and Pozo (2006a), policy-makers might accept a scenario with negative remittances after twelve years of migration experience if they confound the effect of time on remittances with the level of remittances (*Figure 2*).

Furthermore, although the authors suggest several causal mechanisms which could explain the inverted "U" shape, no tests for them is provided. That is, the time pattern's "black box" remains unveiled.

Last, the causal mechanisms suggested seem to affect only the earnings remitted for consumption but not those remitted for savings, investment or real estate. This limitation is unexpected, given that consumption and investment are clearly distinguished elsewhere (Amuedo-Dorantes and Pozo, 2006b).

Here, I intend to overcome these deficiencies. Therefore, the focus will be on establishing a reliable time pattern for remittances, hypothesizing why remittances exhibit a particular time pattern, and searching for empirical evidence supporting these hypotheses.

Figure 1 and 2. The time pattern of remittances



2. Time “effects” and the inverted “U” shape

Whether one believes time is a “container” for events, or a conceptual device capable of describing a sequence of events,² it is difficult to argue that an independent time effect exists. True, remitting behavior changes with time but this is rarely the effect of time itself. More likely, remitting behavior may change following the occurrence of certain events which, in turn, might transform actors’ preferences, beliefs and actions. Such events include naturalization, fading of attachments towards home communities, growing knowledge of host markets, family reunification or the formation of new families. Consequently, by introducing time-varying covariates what is finally identified is a time pattern of the effect of time on remittances which, in fact, should develop into a flat – or not significant - function if the model is correctly specified. This is the case in Merkle and Zimmermann (1991), where time of residence becomes statistically not significant, once planned duration of stay in Germany is introduced.

In short, if the aim is to control for unobserved past events, time may be introduced as a “comprehensive” control variable, taking into consideration that its coefficient has no unequivocal interpretation. This is the case in Amuedo-Dorantes and Pozo (2006a), where the time decay and the inverted “U” hypotheses were unconvincingly proved by introducing as independent variables not only time and time squared in the U.S. but also socio-economic background, family structure and other control variables.

Conversely, if the aim is to find an interpretable time pattern, as is the case here, the best alternative is to introduce time as the only independent variable or, if results are to be exported to other contexts, to introduce, along with time, time-invariant variables or identify time patterns for different groups and contexts. Additionally, when the dependent variable is multifaceted, as is the case with remittances, different time patterns can also be found for each component.

² This distinction follows Newton and Leibniz’s competing views.

In this work we follow the latter alternative and, as a result, remittances' time patterns will be identified for two geographical contexts (Madrid and the Balearic Islands), for two different foreign-born communities (Ecuador and foreign-born) and for six different subsamples (All, Consumption, Savings / Investment / Real Estate, Men, Women and Senders). Confidence is expected to increase as remittances across contexts, nationalities and types of remittances reveal analogous time patterns.

As regards the length of residence variable, a set of dummy variables have been created satisfying the next criteria: maintain the distance among groups while keeping a minimum of 50 cases per group. Due to the unequal distribution of migrants regarding their time of residence, the 50 cases condition has rendered partially ineffective the equal distance criterion. This problem becomes more critical from 10 years of migration experience onwards due to the short Spanish experience with massive immigration (e.g. more than 50% of Ecuadorians entered Spain for the first time in the period 2000-2003). For interpretation clarity purposes, the group with the highest level of remittances is the reference group so that all dummies' coefficients are negative.

Both Tobit and OLS standard regression models have been employed depending on the nature of the dependent variable. Tobit models are strongly recommended whenever the minimum or the maximum values of the dependent variable represent a significant proportion of the whole distribution. Regarding remittances, this is the case when both remitters and non-remitters are included in the sample. Tobit models, left-censored at 0, are supported by the literature in an attempt to deal with the discrete and continuous nature of remittances (Funkhouser, 1995; Brière *et al.*, 2003; Marcelli and Lowell, 2005; Amuedo-Dorantes and Pozo, 2006a). OLS regression models are recommended when the dependent variable follows a continuous distribution, as when senders solely are included in the sample. Finally, and in order to correct for potential heterokedasticity, robust standard errors have been calculated.

In what follows, micro evidence will be presented in an attempt to test the time decay and the inverted "U" hypotheses. If the inverted "U" shape is to be born out, we expect dummies for groups with short and long stays to have lower coefficients than groups with medium length stays while for the time decay hypothesis we expect groups with longer stays to have lower coefficients than groups with shorter ones.

Data originates from two cross-sectional surveys of foreign-born residents conducted in 2007 by *remesas.org* in Madrid and the Balearic Islands and financed by their corresponding regional governments. Madrid's survey consists of 827 foreign-born individuals coming from countries with lower GDP per capita than Spain and the Balearic survey includes 451 foreign-born Ecuadorians.

2.1. Madrid

The reference groups from *Figure 3* show a consistent peak of remittances between the seventh and eighth year of migration experience in Spain. This is the case for five out of six subsamples. Moreover, in five out of six models, the coefficient of the group with the longest migration experience in Spain is statistically different from the “peak” group. The only exception is the *Savings, Investment and Real Estate* subsample which, overall, presents a more erratic time pattern. Moreover, in two models the most recent groups in Spain have coefficients which are statistically different from the reference group, and the other four models present the expected signs according to the inverted “U” shape hypothesis. All in all, it is reasonable to accept the inverted “U” time pattern for all the subsamples, except for one subsample. The results also appear to confirm the time decay hypothesis, which claims that remittances will shrink through time, as remittances are lower for the groups with the longest migration experiences in Spain than for the groups with the shortest migration experiences. Yet, due to the low number of respondents with long “stays”, the time decay hypothesis could not be robustly tested. Interestingly, longer migration experiences have a general negative impact on remittances, but the strength of this effect varies by subsamples. Women and senders reduce their deliveries gradually, while men reduce them at a faster rate. One plausible explanation for the gender differences in remitting behaviour may be linked to a higher incidence – and a stronger impact - of family reunification for men, as the lion’s share of their remittances are sent to members of the nuclear family, whereas women keep additional ties with member of the extended family.

Figure 3. Time pattern of Remittances in Madrid

	TOBIT	OLS	OLS	TOBIT	TOBIT	OLS
Time of residence	I. All	II. Consum.	III. Sav./ Inv./ R. Estate	IV. Men	V. Women	VI. Senders
From 1 to 2 years	-815.8** (-2.28)	-453.1 (-1.18)	-854.7 (-0.68)	-1395.6*** (-2.67)	-319.9 (-0.82)	-485.4 (-1.46)
From 3 to 4 years	-195.9 (-0.52)	-231.3 (-0.58)	-903.0 (-0.69)	-619.3 (-1.14)	-54.3 (-0.12)	-176.3 (-0.51)
From 5 to 6 years	-148.4 (-0.40)	-377.0 (-1.01)	-1592.2 (-1.41)	-569.5 (-1.06)	ref.	-359.5 (-1.06)
From 7 to 8 years	ref.	ref.	ref.	ref.	-146.4 (-0.32)	ref.
From 9 to 11 years	-821.7 (-1.49)	-457.7 (-0.73)	-3215.5*** (-2.93)	-812.3 (-1.00)	-1023.7 (-1.64)	-533.0 (-1.03)
12 or more years	-1667.2*** (-3.08)	-868.2* (-1.86)	-948.0 (-0.81)	-2139.4*** (-2.71)	-1284.3** (-2.05)	-904.3* (-1.71)
N	820	636	113	500	320	657
(Left) Censored Obs.	163	--	--	94	69	--
LR Chi2 (5)	16.51	--	--	12.75	6.70	--
Log Likelihood	-6336.1	--	--	-3939.8	-2370.3	--

In brackets, N for correlations and t-value for regressions models

*Significant at the 0,1 level; **significant at the 0,05 level; ***significant at the 0,01 level

2.2. Balearic Islands

Overall, results for the Balearic Islands (*Figure 4*) don't differ outstandingly from Madrid's, though some differences are to be noted. To start with, the "Savings, Investment, and Real Estate" now joins the inverted "U" shape time pattern. Besides, the "hump-shaped" pattern is unambiguous in all cases with no unexpected downturns or upturns. Remittances rise from the initial group to the reference group, and decrease constantly beyond that point. Furthermore, in four out of six subsamples the peak is reached within 7 years of migration experience, while in two cases the maximum lies between 5 and 7 years of Spanish experience. Startlingly, the peak for women matches in both surveys (5 to 6 years), although the context and the countries of origin included change significantly. Finally, the results do not support the time decay hypothesis, as coefficients are similar for recent and "old" migrant groups. It could be the case that Ecuadorians with especially long migration experiences (*i.e.* more than ten years) send significantly fewer remittances but the fact that a small number of Ecuadorians arrived to Spain before 1999 – and its corresponding impact on the sample - prevent us from verifying this hypothesis robustly.

A summary of the findings is displayed graphically in *Figure 5*. On the whole, it is reasonable to accept the inverted "U" time pattern for all samples and subsamples, except for the *Savings, Investment and Real Estate* subsample in Madrid's survey. The graphics do not show a continuous fading of remittances since migrants' arrival, in accordance with the time decay hypothesis, though further evidence is needed. Interestingly, the peak of remittances is quite stable across the different samples and subsamples: always between 5 and 8 years, and in most cases between 7 and 8 years.



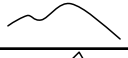




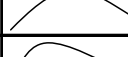


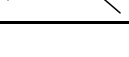
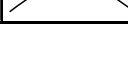
Figure 4. Time pattern of Remittances in the Balearic Islands

	TOBIT	OLS	OLS	TOBIT	TOBIT	OLS
Time of residence	I. All	II. Consum.	III. Sav./ Inv./ R. Estate	IV. Men	V. Women	VI. Senders
From 1 to 4 years	-1043.4** (-2.23)	-470.8 (-1.21)	-4110.8*** (-2.89)	-1862.1*** (-2.54)	-647.7 (-1.21)	-833.5* (-1.85)
5 years	-247.9 (-0.56)	-183.0 (-0.47)	-2265.6 (-1.37)	-893.4 (-1.20)	ref. ref.	-547.4 (-1.31)
6 years	-4.1 (-0.01)	ref.	-2357.3 (-1.46)	-130.8 (-0.19)	-238.5 (-0.48)	-421.6 (-1.03)
7 years	ref.	-253.8 (-0.64)	ref.	ref.	-389.8 (-0.73)	ref.
8 or more years	-786.9 (-1.60)	-469.0 (-1.02)	-5423.3*** (-4.02)	-1256.7* (-1.67)	-702.9 (-1.22)	-837.0* (-1.79)
N	448	345	47	213	235	388
(Left) Censored Obs.	60	--	--	30	30	--
LR Chi2 (4)	8.37	--	--	9.27	2.25	--
Log Likelihood	-3699.2	--	--	-1755.6	-1929.7	--

In brackets, N for correlations and t-value for regressions models

*Significant at the 0,1 level; **significant at the 0,05 level, ***significant at the 0,01 level

Figure 5. Summary of results on the time pattern of remittances

	Madrid		Balearic Islands	
	Functional form	Maximum	Functional form	Maximum
I. All		7 to 8 years		7 years
II. Consumption		7 to 8 years		6 years
III. Sav./ Inv./ R.Estate		7 to 8 years		7 years
V. Men		7 to 8 years		7 years
V. Women		5 to 6 years		5 years
VI. Senders		7 to 8 years		7 years

3. Accounting for the inverted “U” shape

Thus far, results have confirmed the curvilinear time pattern shown in previous studies. We now elaborate upon this time pattern by identifying its underlying mechanisms. Potential mechanisms or variables must satisfy two necessary conditions: a) they must affect in a significant way the level of remittances, and b) they must vary with time of residence. The time pattern of remittances is thus the aggregated effect of time-varying remittances’ determinants. That seems to be the case for the intervening variables in the often claimed hypothesis, as in Amuedo-Dorantes and Pozo (2006a), where remittances are supposed to rise initially with time of residence as migration costs are recovered and better employment secured, and decrease as migrants’ attachments to their home communities weaken. Migration costs, employment status and attachments to home communities all seem to vary with time of residence and are likely to affect the amount of migrants’ remittances.

Although this is a sound hypothesis, it needs some reformulation in order to be tested, disaggregating the so-called migrants’ attachments into two components: social networks (*e.g.* location of migrants’ relatives) and place attachment (migrants’ intention to return net of family attachments). In this sense, I would argue that remittances initially rise as potential remittances increase (*i.e.* net income net of current expenses), and decrease as family reunification takes place, new families are formed in the host society, migrants’ siblings migrate (*i.e.* shifting their status from potential beneficiaries to potential contributors) and emotional attachments to their home communities fade.

In the remainder of the article, this hypothesis will be tested using two connected approaches: an indirect method (*Section 3*) in which variables accounting for the inverted “U” shape ought to i) explain the level of remittances, and ii) vary with the time of residence, and a direct method (*Section 4*) in which candidates are introduced directly in a regression model accounting for the time pattern of remittances.

3.1. The indirect method

i) A model for remittances' determinants

Elsewhere, I have claimed that remittances' determinants are encompassed in five necessary elements or steps of the remitting process: a) a stock of migrants, b) potential remittances (net income net of current expenses), c) willingness to remit,³ d) transfer channels, and e) potential recipients. With this theoretical framework in mind, and ignoring the first (a) and fourth (d) steps,⁴ the following potential explanatory variables are to be included in the analyses.

Regarding the potential remittances (b), two variables have been included in the analysis: *annual income*, which can also perform as a proxy for wealth, and the *number of dependent relatives in Spain*, which shapes migrants' current expenses in the host economy. *Annual income* is expected to present a positive effect on total remittances and rise with time of residence, whilst the *number of dependent relatives in Spain* is expected to have a negative effect on remittances and increase with time spend in Spain through family reunification or formation.

Concerning the willingness to remit (c) - which can be thought as the proportion of potential remittances that migrants are willing to donate - two variables have been incorporated, both measuring the psychological attachment to their home communities: the *frequency of contact with relatives* and the *intention to return*. Increasing values in both variables should be positively related to the level of remittances and both variables are expected to fade with time of residence. For theoretical and empirical reasons, *migrants' intention to return* appears as a more adequate proxy for the willingness to remit. Unfortunately, the response rate was low and a disproportionate number of cases were missed. Therefore, the preferred proxy for the willingness to remit is the *frequency of contact with relatives* though the *intention of return* has been included for comparability reasons in the Balearic Islands' models.

Finally, as regards potential recipients (e), the *number of dependent children*, the *number of parents and other dependent relatives* residing in the country of origin, *partners' country of residence*, and the *number of siblings who are international migrants* have been examined. Dependent relatives residing in the country of origin

³ The debate about the motivations of remitting (*i.e.* altruism, self-interest, insurance, investment portfolio) may be incorporated into this element.

⁴ The stock of migrants (a) is disregarded as our sample only includes actual migrants. Transfer channels (d) are also overlooked by assuming individuals face a similar transfer business environment. However, even though the money transfer business has evolved primarily through time, significant differences remain across different countries of origin. For instance, money transfers to Africa are known to be exceptionally expensive, while the US-Mexico market is highly competitive. In this article, ignoring (d) may cause problems for Madrid's survey, as all foreign-born groups are included, but for the Balearic Islands' context, where the sample is composed exclusively by Ecuadorians, it is reasonable to assume (d) is controlled for.

should have a positive effect on remittances, whereas the number of siblings who are international migrants should present a negative effect, as they are expected to share the burden of supporting common dependent relatives. As for their variation with migrants' time of residence, nuclear family members living in the country of origin are expected to decrease due to family reunification processes. Other dependent relatives belonging to the migrant's extended family, including parents, are expected to be uncorrelated with time of residence. Finally, siblings who are international migrants are expected to increase with migrants' migration experience as the likelihood of migrating is expected to increase with the number of relatives abroad (*i.e.* "siblings follow siblings effect").

Additionally, gender and age are included as control variables.

Five regression models have been carried out to identify potential candidates accounting for the time pattern of remittances. The first two models are identical, though for different contexts (Madrid and Balearic Islands). The third, fourth and fifth models incorporate a greater array of variables but could only be applied to the Balearic survey, due to insufficient data for Madrid. The dependent variable is for every model the annual amount of remittances which includes remitters and non-remitters and. It is thus measuring both the probability to remit and the level of remittances. Since the dependent variable is simultaneously discrete and continuous, with high incidence of "0" values, Tobit models have been employed.

Figure 6. Remittances' determinants

Tobit Models. Dependent Variable is the Annual Amount of Euros Sent by Migrant > 16 years		
	Madrid	Balearic Islands
	I	II
Partner lives in country of origin	20.37 (-0.07)	393.95 (-1.00)
Number of dependent children living in country of origin	711.18** (-8.05)	531.09** (-4.76)
Number of other dependent relatives living in country of origin	399.72** (-5.69)	394.56** (-4.37)
Number of siblings who are international migrants	-73.86 (-1.30)	-83.24 (-1.06)
Annual Income (1000€)	221.06** (-12.71)	85.93** (-4.67)
Number of dependent relatives in Spain	-91.62 (-0.95)	-301.41* (-2.39)
Frequency of contact with relatives (1=Never, 5=Everyday)	521.41** (-4.22)	843.26** (-5.36)
Gender (1=Female, 2=Male)	-126.19 (-0.61)	48.92 (-0.17)
N	739	435
(Left) Censored Observations	137	59
LR Chi2 (8)	285.88	147.02
Log Likelihood	-5657.1	-3518.5

In brackets, t-value
 *Significant at the 0,05 level; **significant at the 0,01 level
 Models include a constant

In *Figure 6* we can observe that all variables have the expected signs, though some coefficients exhibit unanticipated values. For instance, leaving the partner back home has a positive effect but this is statistically not significant. Theoretically, this outcome is not unsound as partners staying back home often participate in the local labour market and, consequently, may be in no need of additional income. This is not the case for dependent children and other dependent relatives who, by definition, rely on migrants' remittances and other external sources of income. In this regard, it is not surprising that their coefficients are statistically significant in both models.

Potential remittances, represented by *annual income* and the *number of dependent relatives in Spain*, have a positive impact on the amount remitted. Every additional thousand Euros increase annual remittances by about two hundred Euros in Madrid and by about one hundred Euros in the Balearic Islands. Moreover, every additional dependent relative in Spain reduces annual remittances, and potential remittances, roughly by one hundred Euros in the first model, and approximately by three hundred Euros in the second model, presenting a significant effect only in the latter case.

Finally, contacting family members back home has a very strong influence on the level of remittances. For instance, migrants who declare daily contacts with their relatives are expected to send a thousand more Euros annually than those declaring weekly contacts in Madrid's survey, and around one thousand six hundred Euros more in the Balearic survey. This variable aims at measuring the willingness or the propensity of migrants to donate part of their savings.

Three additional models are presented for the Balearic context in *Figure 7*, pursuing two objectives. First of all, give a better account of the influence of the structure and location of migrants' families, separating parents from other relatives such as nephews, siblings and grandparents and introducing a quadratic form for the children's effect. The results confirm the quadratic effect for children, probably accounting for household economies of scale in consumption, and the stronger effect for dependent parents compared with that for other dependent relatives.

Secondly, test if the influence on remittances of contacting relatives back home differs from that of intending to return to the country of origin. The results show a similar effect for both variables, based on its *t* value, more akin if we bear in mind the differences in sample sizes. However, the correlation between both variables is moderate and, hence, they seem to be tapping different aspects of the willingness to remit. A further proof of this difference is the fact that the decrease in the Log Likelihood is greater when the *intention of return* is included in the regression model. Actually, following the correlations between these and other independent variables, the *Frequency of contact* seems to be associated with a social networks component of attachment, whereas the

intention of return, which is scarcely correlated with the number of relatives back home, seems to measure a more psychological aspect of migrants' attachment towards their home communities (*i.e.* place attachment). All in all, the *Intention of Return* seems as a more appropriate proxy for the willingness to remit.

Figure 7. Remittances' determinants

Tobit Model.			
Dependent Variable is the Annual Amount of Euros Sent by Migrant > 16 years.			
	Balearic Islands III	Balearic Islands IV	Balearic Islands V
Partner lives in country of origin	366.40 (-0.92)	340.06 (-0.81)	142.14 (-0.34)
Number of dependent children living in country of origin	962.33** (-3.51)	1013.42** (-3.48)	907.44** (-3.16)
Number of dependent children living abroad squared	-133.21* (-1.98)	-165.94* (-2.37)	-138.63* (-2.01)
Number of dependent parents living in country of origin	530.72** (-3.25)	718.21** (-4.03)	632.08** (-3.58)
Number of other dependent relatives living in country of origin (exc.parents)	345.67** (-3.11)	535.65** (-4.41)	480.61** (-4.00)
Number of siblings who are international migrants	-87.78 (-1.13)	-203.22* (-2.37)	-137.07 (-1.60)
Annual Income (1000€)	76.09** (-4.12)	128.57** (-5.44)	121.14** (-5.22)
Number of dependent relatives in Spain	-316.97* (-2.48)	-419.65** (-2.95)	-399.96** (-2.85)
Frequency of contact with relatives (1=Never, 5=Everyday)	792.38** (-5.03)	--	627.66** (-3.70)
Intention of return (0=No, 1=Yes)	--	1144.12** (-3.91)	1030.41** (-3.56)
Gender (1=Female, 2=Male)	222.24 (-0.76)	-315.36 (-0.98)	-146.98 (-0.46)
Age	42.18** (-2.97)	50.46** (-3.17)	45.21** (-2.88)
N	434	369	369
(Left) Censored Observations	59	54	54
LR Chi2 (10)	159.89	144.71	158.29
Log Likelihood	-3502.82	-2945.09	-2938.30

In brackets, t-value
*Significant at the 0,05 level; **significant at the 0,01 level
Model includes a constant

ii) Time variance

In order to explain the time pattern of remittances, candidates must not only have an impact on remittances but also vary with time of residence. It is therefore necessary to identify the time pattern of remittances' determinants. To do so, in *Figure 8* a set of correlations between time of residence and the aforementioned variables are presented. It is important to note, however, that correlations may disguise complex time patterns - such as curvilinear relationships – from which we could draw false conclusions. To avoid such a risk, I end this section with a set of graphics representing the time pattern of all the potential explanatory variables. It can be observed (*Figure 9*) that, on the whole, time patterns are linear and, therefore, correlations shown in *Figure 8* offer an acceptable picture of real time patterns. Correlations between time of

residence and covariates of the level of remittances portray the expected signs though only four are statistically significant in both Madrid and the Balearic Islands contexts. This is the case for the *number of dependent children living abroad*, the *number of relatives in Spain*, the *intention to return* to the country of origin and the *annual income*. In sum, what the data is telling us is that the nuclear family, whether through reunification or new formation, the annual income and the intention of return may possibly have a significant effect on the time pattern of remittances.

Figure 8. The time pattern of remittances' determinants



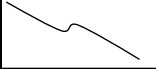
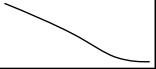
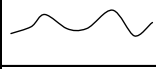

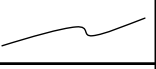
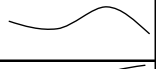

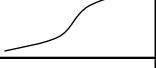
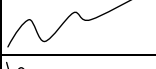
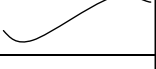
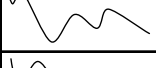
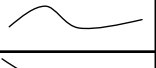

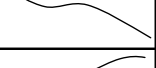
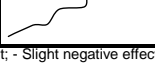
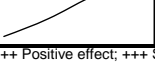
Pearson Correlations		
	Madrid (N=827)	Balearic Islands (N=451)
	Time of residence	
Partner lives abroad	-0.125**	-0.047
Number of dependent children living abroad	-0.183**	-0.125**
Number of other dependent relatives living abroad (incl.parents)	0.046	-0.031
Number of parents living abroad	-	0.045
Number of other dependent relatives living abroad (excl.parents)	-	-0.003
Number of dependent relatives in Spain	0.211**	0.203**
Siblings who are international migrants	0.165**	0.081
Frequency of contacts with relatives	-0.057	-0.015
Intention of return	-0.129**	-0.131**
Annual income	0.218**	0.193**

*Significant at the 0,05 level; **significant at the 0,01 level

iii) The joint effect: Identifying remittances' determinants varying with time of residence

As stated previously, the time pattern of remittances is produced by the aggregated effect of remittances' determinants that vary with time of residence. That is, to find out whether a variable has any effect on the time pattern it is necessary that both conditions are met. Following the previous analyses, this is clearly the case for four variables: *number of dependent children living abroad*, *number of dependent relatives in Spain*, *the intention of return* to the country of origin and the *annual income*. A summary of the results can be found in *Figure 9*.

Figure 9. A summary of the time-varying remittances' determinants (indirect method)

	Madrid		Effect on remittances' time pattern?	Balearic Islands		Effect on remittances' time pattern?
	Time pattern	Effect on remittances		Time pattern	Effect on remittances	
Partner lives abroad		+-	NO EFFECT		+	WEAK
Number of dependent children living abroad		+++	VERY STRONG		++	STRONG
Number of other dependent relatives living abroad (incl.parents)		++	NO EFFECT		++	NO EFFECT
Number of parents living abroad	-----	X	X		++	NO EFFECT
Number of other dependent relatives living abroad (excl.parents)	-----	X	X		++	NO EFFECT
Number of dependent relatives in Spain		-	WEAK		--	STRONG
Siblings who are international migrants		-	WEAK		-	WEAK
How often interviewee contacts family members living in country of origin		++	WEAK		++	NO EFFECT
Intention of return		X	X		++	STRONG
Annual Income		+++	VERY STRONG		++	STRONG

--- Strong negative effect; -- Negative effect; - Slight negative effect; +- No effect; + Slight positive effect; ++ Positive effect; +++ Strong positive effect; X No data

3.2. The direct method: Specifying variables' effect on remittances' time pattern

Four variables have been shown to affect considerably the time pattern of remittances. Nonetheless, it is necessary to go one step further and specify how these variables shape precisely the time pattern. That is, find out which variables are responsible for the upward and the downward slopes of the inverted "U".

To my knowledge, unfortunately, I don't know of any conventional methodology to carry out this task. An attractive method consists of incorporating into a regression model, with remittances as the dependent variable and time of residence dummies as independent variables, the potential variables - or mechanisms - that are believed to shape the time pattern of remittances. Observing the changes in the coefficients of the dummy variables can provide us with useful information. As additional variables are introduced into the regression models, I expect the correlation between time of residence and remittances to weaken and, at the same time, the inverted "U" shape to become flatter.

To ease the interpretation, three steps had to be taken. First of all, simplify the analysis by taking as the dependent variable just the remittances sent for consumption, leaving to one side remittances dedicated to savings, investment and real estate, which are more complicated to account for. Moreover, match the sample sizes of all regression

models by dropping a number of cases. Madrid's sample had to be reduced to 589 cases and the Balearic survey to 280 cases. Finally, turn the group with the peak of remittances into the reference group (7-8 years for Madrid and 5 years for the Balearic Islands). It has to be noted that these necessary steps, especially the dropping of cases, have altered considerably some results, the most important one being the transformation of the inverted "U" into a sort of "M". Still, the essential features are maintained: the "M" form still rises in $t - 1$ and decreases in $t + 1$.

Results in *Figure 10* and *12* are interpreted as following. The upper numbers represent the OLS coefficients of the time of residence dummies, when no additional variables are included (for the base model) or when one additional variable is included (for the rest). The lower numbers, in italics, are the differences in OLS coefficients between the base model and the rest of the models. They represent the difference in the amount of remittances that would be sent - in comparison with the reference group - if a specific variable was controlled for. For instance, in *Figure 10*, migrants with the shortest migration experience would send 219 less Euros if the number of children living abroad was the same for everyone in the sample. This difference is largely explained by the fact that migrants with shorter migration experiences have more children back home. The same effect for *annual income* is a staggering 761€. That is, recent migrants would send 700€ more yearly if they had the sample mean income. Besides, the number in italics can also be thought as their contribution to the curvilinearity of the remittances' time pattern. When positive, they contribute to the steepness of the slopes, both in $t - 1$ and $t + 1$; when negative, to its flatness. In the bottom part of the tables, the aggregated effect of all additional variables is shown, when introduced separately and simultaneously,⁵ together with the percentage of the inverted "U" shape explained.

It is important to note, however, that a set of variables which would likely have an effect on the time pattern could not be included due to data limitations, such as migrants' current expenses in the host society. As a result, the time pattern could not be flattened entirely.

3.2.1. Madrid

Only two variables seem to affect considerably the time pattern of remittances in Madrid's context: *annual income* and the *number of dependent children in the country of origin*. Results show that income alone explains the difference between remittances in $t-1$ and t (t being the reference group), offsetting the positive effect that migrants'

⁵ The correspondence between these results determines the reliability of the individual results. The equivalence of both outcomes would imply that the effects of the individual variables on the time pattern are independent among them. Results show that independence between variables is significant, though not complete.

relatives' location have on remittances during this migration period. Low earnings reduce drastically the potential remittances that migrants can send back home, frustrating to some extent their willingness to support their relatives. In fact, controlling for income, the time pattern of remittances would not be curvilinear but linear and negative. In other words, if income did not change with time of residence, remittances would decrease since the initial migration experience, even accounting for the effect of migration costs, bearing out the time decay hypothesis.

Figure 10. Time-varying remittances' determinants in Madrid (Direct method)

Madrid. Variations in OLS coefficients.							
Dependent variable is the amount of remittances sent yearly.							
	Time of residence						
	0-2 years	t - 1		t	t + 1		
		3-4 years	5-6 years	7-8 years	9-11 years	12+ years	
No additional variables (Base Model)	-310.30	-107.96	-234.44	ref.	-370.51	-705.92	
	-	-	-		-	-	
I. Number of dependent children living abroad	-529.07	-241.02	-282.77	ref.	-240.33	-566.05	
	-218.77	-133.06	-48.33		130.18	139.87	
II. Partner lives abroad	-391.48	-169.84	-237.86	ref.	-417.19	-642.23	
	-81.18	-61.88	-3.42		-46.68	63.69	
III. Other dependent people living abroad (including parents)	-320.31	-108.37	-225.45	ref.	-404.83	-764.8	
	-10.01	-0.41	8.99		-34.32	-58.88	
IV. Number of dependent relatives in Spain	-406.78	-172.81	-282.71	ref.	-348.72	-728.57	
	-96.48	-64.85	-48.27		21.79	-22.65	
V. Siblings who are international migrants	-331.36	-117.42	-246.94	ref.	-355.23	-684.73	
	-21.06	-9.46	-12.50		15.28	21.19	
VI. Annual income	450.71	299.42	218.05	ref.	-549.88	-562.02	
	761.01	407.38	452.49		-179.37	143.90	
Aggregated effect of additional variables introduced:	<i>separately</i>	333.51	137.72	348.96	ref.	-93.12	287.12
	<i>concurrently</i>	426.19	208.74	-363.65		-48.00	258.46
Slope explained		137.35%	193.35%	155.11%		12.96%	36.61%

N = 589 for all models

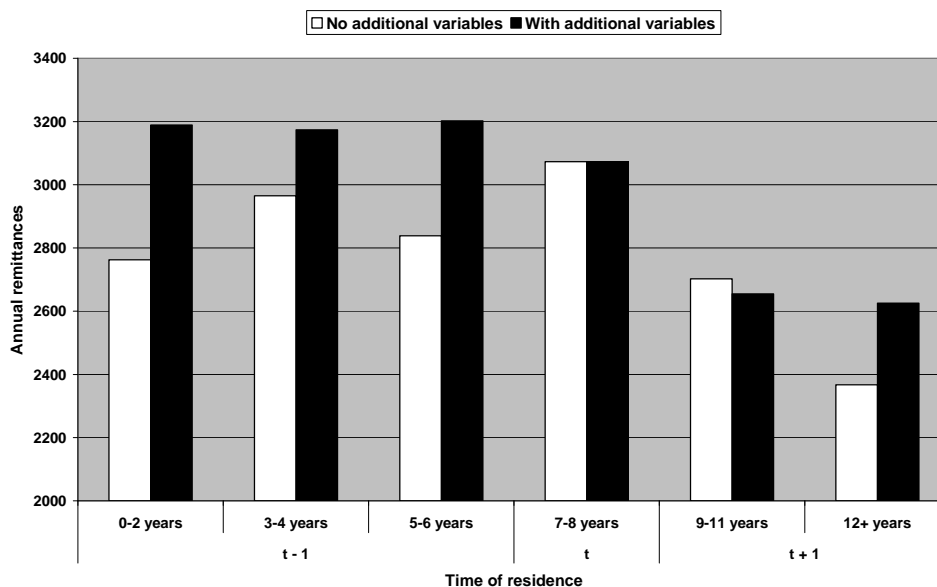
Regarding the downward part of the time pattern in $t+1$, it is only partially explained by the additional variables introduced in the regression model. About a quarter of the slope is explained, mainly by the *number of dependent children living abroad*. The effect of this variable is due primarily to family reunification and is especially important in the first years of migration experience. For instance, migrants' children location account for a difference of 350€ of remittances yearly between the "0-2 years" group, where scant children reunification has taken place, and the "9-11 years" group, where looked-for children reunifications have been by and large undertaken.

The remaining variables either do not have a significant impact, as was predicted in the previous section, or their impact is unclear.

In *Figure 11*, the level of remittances is shown for both the base model and the "controlled" model (*i.e.* all variables are introduced concurrently). It can be clearly

observed how the inverted “U” time pattern becomes a linear and negative functional form.

Figure 11. Time pattern with and without additional variables (Madrid)



3.2.2. Balearic Islands

Three differences are to be noted between Madrid and the Balearics Islands, as regards the individual variables. To begin with, the effect of income is moderate, instead of strong, in the latter which explains why the effect of potential recipients' location cannot be cancelled out entirely. Besides, in the Balearic Islands the *number of dependent relatives in Spain* has a significant effect, negative in $t - 1$ and positive in $t + 1$. Finally, the *number of dependent children abroad* has a stronger effect in Madrid. In spite of these differences in coefficients' significance, the signs are as expected in both Madrid and the Balearic Islands, confirming the results from Figure 9.

As for the aggregated effect, the results seem unconvincing for period $t - 1$. Actually, the introduction of variables - separately or simultaneously - has a sharpening effect on the curvilinear shape instead of a flattening expected one. Non-included variables such as current expenses faced by migrants in Spain, expected to be higher in the initial migration period, may account for the unanticipated aggregated outcome.

Results show a clearer picture for the $t + 1$ period, where not only individual variables, but also the aggregated effect portray anticipated results. In addition to the number of dependent children abroad, the number of dependent relatives in Spain has also a significant and negative impact on period $t + 1$. The former is related with family reunification, while the latter is related with family reunification and family formation in the Spanish context. Hence, for Ecuadorians who have resided in the Balearic Islands

for more than five years, the formation of new families in the host society - whether it means finding a partner and giving birth or just giving birth - reduces significantly their level of remittances. Both variables compensate the positive effect that income presents in $t + 1$, which rises in this period though at a decreasing rate.

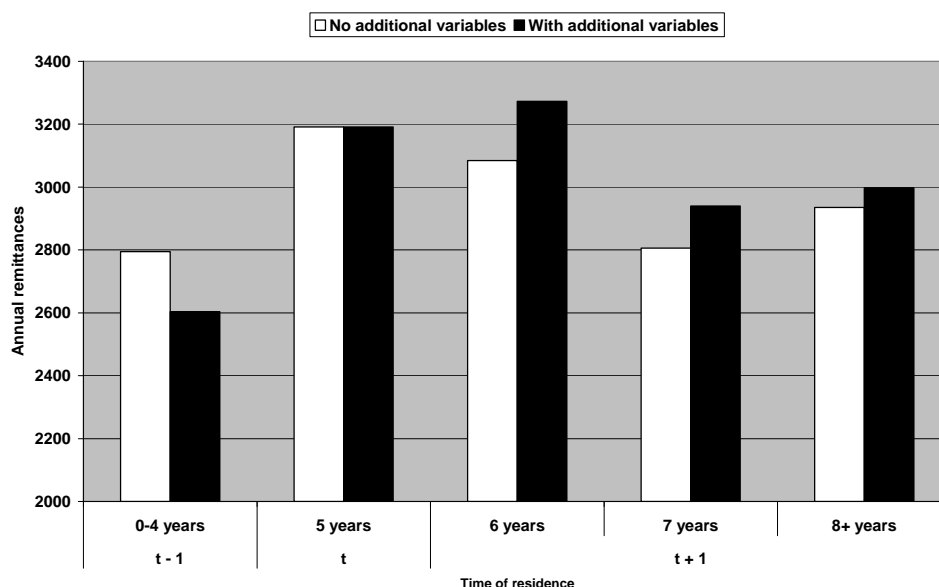
Figure 12. Time-varying remittances' determinants in the Balearic Islands (Direct method)

Balearic Islands. Variations in OLS coefficients
Dependent variable is the amount of remittances sent yearly.

	Time of residence				
	t - 1	t	t + 1		
	0-4 years	5 years	6 years	7 years	8+ years
No additional variables (Base model)	-396.57 -	ref.	-106.59 -	-385.30 -	-255.82 -
I. Number of dependent children living abroad	-547.90 -151.33	ref.	-9.86 96.73	-139.45 245.85	-159.09 96.73
II. Number of dependent relatives in Spain	-510.45 -113.88	ref.	79.67 186.26	-125.95 259.35	-70.40 185.42
III. Partner lives abroad	-429.74 -33.17	ref.	-135.09 -28.50	-489.95 -104.65	-286.74 -30.92
IV. Number of parents living abroad	-372.15 24.42	ref.	-132.73 -26.14	-407.96 -22.66	-279.64 -23.82
V. Number of other dependent relatives living abroad	-444.09 -47.52	ref.	-143.92 -37.33	-360.17 25.13	-194.38 61.44
VI. Siblings who are international migrants	-399.69 -3.12	ref.	-112.09 -5.50	-339.57 45.73	-176.65 79.17
VII. Annual income	-359.86 36.71	ref.	-142.91 -36.32	-601.10 -215.80	-464.84 -209.02
VIII. Intention to return	-447.15 -50.58	ref.	-113.01 -6.42	-339.63 45.67	-245.54 10.28
Aggregated effect of additional variables introduced:	<i>separately</i> -338.47	ref.	142.78	278.62	169.28
	<i>concurrently</i> -190.67		187.83	134.46	62.74
Slope explained	48.08%		176.22%	34.90%	24.53%

N = 280 for all models

Figure 13. Time pattern with and without additional variables (Madrid)



The Balearic Islands' results, however, need to be cautiously analyzed due to Ecuadorians high concentration in the five to eight years time of residence range. More than half of Ecuadorians residing in Spain arrived between 1999 and 2001 and more than 90% after 1998, which complicates inference amid those Ecuadorians with extreme values in their migration experience.

4. Conclusion

Although the time decay hypothesis and the inverted "U" time pattern are widely accepted in the remittances' *microworld*, to date empirical support for any of them is rare, especially within the academic literature. The reason for it relates with a startling lack of interest for the time pattern of remittances, as time of residence is either included as a control variable, or together with time-varying covariates, blurring – indeed flattening – remittances' time pattern. An exception to this indifference includes Amuedo-Dorantes and Pozo's (2006a) and Poirine (2006). Following these studies, empirical evidence has been presented which bears out the inverted "U" time pattern in Madrid and the Balearic Islands, and for six different subsamples (i.e. foreign-born, consumption, investment, men, women and senders), the only exception being *investment, savings and real estate* in Madrid's context. Conversely, the time decay hypothesis could only be partially confirmed in Madrid's context but this is likely the result of highly skewed samples where few migrants have long migration experiences (in accordance with Spanish foreign-born population).

The next step in the research has been to establish a mechanism for the observed inverted "U" time pattern. Amuedo-Dorantes and Pozo (2006a) argue that remittances initially rise as migration costs are recovered and labor conditions improve, and shrink as their attachments to their country of origin become weaker. An extension of their hypothesis – following three of the five necessary conditions of remitting (i.e. potential remittances, willingness to remit and potential recipients) - was tested by the use of a direct and an indirect method. Results show that four variables affect the time pattern of remittances in a significant way: *number of dependent children living abroad, number of dependent relatives in Spain, the intention of return to the country of origin* and the *annual income*. More importantly, these variables seem to affect differently different parts of the time pattern:

- The *annual income* has a negative impact on the level of remittances in the initial years of migration and a positive one in the later years.
- The *number of dependent children living abroad, the number of dependent relatives in Spain, and the intention of return* exert a positive effect first and a negative effect after the peak of remittances is reached.

Although the results from this study are satisfactory and policy implications may be derived straightforward it is important to note several shortcomings. Foremost, a significant part of the time pattern of remittances remains unexplained, as can be observed in Figures 11 and 13 where $t - 1$ seems better explained in Madrid and $t + 1$ in the Balearic context. If we had been successful, the graphs should portray a gentle slope. Unobserved variables and the cross-sectional and skewed character of the sample (*i.e.* high concentration of recent migrants, especially in the Balearic Islands) might be potential candidates for this weakness. Last but not least, analysing a time pattern with cross-sectional surveys is all but a promising way of tackling the problem. Migration waves might be easily confounded with time of residence effects, which could lead the researcher to false conclusions. Nonetheless, with such a short migration experience, this may not yet be a relevant problem in the Spanish context save for a few foreign-groups with successive and distinctive migration waves (*e.g.* Argentines, Peruvians). Further research on this topic will necessarily adopt a longitudinal perspective.

5. Bibliography

- Agarwal, R., Horowitz, A. (2002) "Are International Remittances Altruism or Insurance: Evidence from Guyana Using Multiple-Migrant Households" *World Development*, 30(11): 2033-2044.
- Amuedo-Dorantes, C., Pozo, S. (2006a) "The Time Pattern of Remittances: Evidence from Mexican Migrants" *Well-Being and Social Policy*, 2(2): 49-66.
- Amuedo-Dorantes, C., Pozo, S. (2006b) "Remittances as Insurance: Evidence from Mexican Immigrants" *Journal of Population Economics*, 19(2): 227-254.
- Briere, B., Sadoulet, E., Janvry, A., Lambert, S. (2002) "The Roles of Destination, Gender, and Household Composition in Expanding Remittances: an Analysis of the Dominican Sierra" *Journal of Development Economics*, 68: 309-328.
- Durand, J., Kandel, W., Parrado, A., Massey, D. (1996) "International Migration and Development in Mexican Communities" *Demography*, 33(2): 249-264.
- Funkhouser, E. (1995) "Remittances from International Migration: A Comparison of El Salvador and Nicaragua" *The Review of Economics & Statistics*, 77(1): 137-146.
- García López, JR. (1992) "Las remesas de los emigrantes españoles en América, siglos XIX y XX" Oviedo: Ediciones Júcar.
- Lucas, R.E., Stark, (1985) "Motivations to Remit: Evidence from Botswana" *Journal of Political Economy*, 93: 901-918.
- Marcelli, E., Lowell, L. (2005) "Transnational Twist: Pecuniary Remittances and the Socioeconomic Integration of Authorized and Unauthorized Mexican Immigrants in Los Angeles County" *International Migration Review*, 39(1): 69-102.
- Menjivar, C., Davanzo, J., Greenwell, L., Valdez, B. (1998) "Remittances Behavior among Salvadoran and Filipino Immigrants in Los Angeles" *International Migration Review*, 32(121): 97-126.
- Merkle, L., Zimmermann, K. (1991) "Savings, Remittances, and Return Migration" *Economics Letters*, 38(1): 77-81.
- Poirine, B. (2006) "Remittances Sent by a Growing Altruistic Diaspora: How Do they Grow Overtime?" *Asia Pacific Viewpoint*.
- Ratha, D. (2005) "Workers' Remittances: An Important and Stable Source of External Development Finance" in *Remittances*, 19-53, Ed. Ratha, D. and Maimbo, S., Washington, D.C: The World Bank.
- Semyonov, M., Gorodzeisky, A. (2006) "Labor Migration, Remittances and Household Income: A Comparison between Filipino and Filipina Overseas Workers" *International Migration Review*, 39(1): 45-68.

Appendix

A. Descriptive Statistics

Variables (All refer to the last 12 months)	Madrid	Balearic Islands	Values
<i>Propensity to Remit</i>	78.4	86.3	<i>In % (Yes)</i>
<i>Number of Remittances</i>	9.22	10.64	<i>No.</i>
<i>Ammount per Remittance</i>	314.5	347.8	<i>Euros</i>
<i>Number of Recipients</i>	3.40	3.45	<i>No.</i>
<i>Use:</i>			
<i>For Food</i>	88.2	89.0	<i>In %</i>
<i>For Education</i>	42.9	54.9	
<i>For Health</i>	47.3	55.4	
<i>For Transport</i>	22.8	20.5	
<i>For House Rent / Upkeep</i>	18.9	38.3	
<i>For Real Estate</i>	11.1	10.3	
<i>For Investment / Savings</i>	6.6	3.4	
<i>For Debt Payment</i>	7.0	2.8	
<i>Recipients:</i>			
<i>Partner</i>	16.8	9.4	<i>In %</i>
<i>Children</i>	36.7	44.6	
<i>Parents</i>	59.4	62.8	
<i>Siblings</i>	31.3	32.0	
<i>Other relatives</i>	12.6	31.0	
<i>Interviewee</i>	10.2	9.3	
<i>Other</i>	0.9	1.0	
<i>Net Income (Monthly)</i>	893.7	1001.7	<i>Euros</i>
<i>Spanish Nationality</i>	12.1	9.1	<i>In % (Yes)</i>
<i>Returned to Country of Origin</i>	38.7	35.1	<i>In % (Yes)</i>
<i>Time of Residence</i>	5.2	5.9	<i>Years</i>
<i>Married or Stable Partner?</i>	54.4	61.6	<i>In % (Yes)</i>
<i>Have Children?</i>	60.8	77.1	<i>In % (Yes)</i>
<i>Number of Children</i>	2.16	1.89	<i>No.</i>
<i>Siblings</i>	4.53	5.04	<i>No.</i>
<i>Age</i>	34.0	33.42	<i>Years</i>
<i>Sex</i>	0.49	0.49	<i>0 = Female 1 = Male</i>
<i>Included in the Municipal Register?</i>	93.7	96.8	<i>In % (Yes)</i>
<i>N</i>	827	451	

FUNDACIÓN DE LAS CAJAS DE AHORROS

DOCUMENTOS DE TRABAJO

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 spanish 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 Rodríguez Barrera, Carlos Vidal Meliá
- 172/2002 La encuesta continua de presupuestos familiares (1985-1996): descripción, representatividad
y propuestas de metodología para la explotación de la información de los ingresos y el gasto.
Llorenç Pou, Joaquín Alegre
- 173/2002 Modelos paramétricos y no paramétricos en problemas de concesión de tarjetas de crédito.
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
- 176/2003 The Falling Share of Cash Payments in Spain.
Santiago Carbó Valverde, Rafael López del Paso, David B. Humphrey
Publicado en "Moneda y Crédito" nº 217, pags. 167-189.
- 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
- 180/2003 Ownership and Performance in Europe and US Banking – A comparison of Commercial, Co-operative & Savings Banks.
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.
M^a Ángeles García Valiñas
- 184/2004 Estimación de la economía sumergida en España: un modelo estructural de variables latentes.
Ángel Alañón 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
- 187/2004 El modelo de Black, Derman y Toy en la práctica. Aplicación al mercado español.
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 notional 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 Fe 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
- 204/2005 Nonlinear Forecasting in Economics: a comparison between Comprehension Approach versus Learning Approach. An Application to Spanish Time Series
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
- 208/2005 Explaining Bank Cost Efficiency in Europe: Environmental and Productivity Influences.
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 distance functions
Sergio Perelman and Daniel Santin
- 218/2005 La gobernanza de los procesos parlamentarios: la organización industrial del congreso de los diputados 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 medidas 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 Faiña y Jose Lopez Rodríguez
- 223/2005 Auditors' Forecasting in Going Concern Decisions: Framing, Confidence and Information Processing
Waymond Rodgers and Andrés Guiral
- 224/2005 The effect of Structural Fund spending on the Galician region: an assessment of the 1994-1999 and 2000-2006 Galician CSFs
José Ramón Cancelo de la Torre, J. Andrés Faiña 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
- 227/2005 Incumplimiento fiscal en el irpf (1993-2000): un análisis de sus factores determinantes
Alejandro Estellér Moré
- 228/2005 Region versus Industry effects: volatility transmission
Pilar Soriano Felipe and Francisco J. Climent Diranzo
- 229/2005 Concurrent Engineering: The Moderating Effect Of Uncertainty On New Product Development Success
Daniel Vázquez-Bustelo and Sandra Valle
- 230/2005 On zero lower bound traps: a framework for the analysis of monetary policy in the 'age' of central banks
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
- 233/2005 Inheritance Taxes In The Eu Fiscal Systems: The Present Situation And Future Perspectives.
Miguel Angel Barberán Lahuerta
- 234/2006 Bank Ownership And Informativeness Of Earnings.
Víctor M. González
- 235/2006 Developing A Predictive Method: A Comparative Study Of The Partial Least Squares Vs Maximum Likelihood Techniques.
Waymond Rodgers, Paul Pavlou and Andres Guiral.
- 236/2006 Using Compromise Programming for Macroeconomic Policy Making in a General Equilibrium Framework: Theory and Application to the Spanish Economy.
Francisco J. André, M. Alejandro Cardenete y Carlos Romero.

- 237/2006 Bank Market Power And Sme Financing Constraints.
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.
- 239/2006 The Quality Of Institutions: A Genetic Programming Approach.
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.
- 242/2006 Consumption And Leisure Externalities, Economic Growth And Equilibrium Efficiency.
Manuel A. Gómez.
- 243/2006 Measuring efficiency in education: an analysis of different approaches for incorporating non-discretionary inputs.
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
- 245/2006 Intergenerational Health Mobility: An Empirical Approach Based On The Echp.
Marta Pascual and David Cantarero
- 246/2006 Measurement and analysis of the Spanish Stock Exchange using the Lyapunov exponent with digital technology.
Salvador Rojí Ferrari and Ana Gonzalez Marcos
- 247/2006 Testing For Structural Breaks In Variance With additive Outliers And Measurement Errors.
Paulo M.M. Rodrigues and Antonio Rubia
- 248/2006 The Cost Of Market Power In Banking: Social Welfare Loss Vs. Cost Inefficiency.
Joaquín Maudos and Juan Fernández de Guevara
- 249/2006 Elasticidades de largo plazo de la demanda de vivienda: evidencia para España (1885-2000).
Desiderio Romero Jordán, José Félix Sanz Sanz y César Pérez López
- 250/2006 Regional Income Disparities in Europe: What role for location?.
Jesús López-Rodríguez and J. Andrés Faña
- 251/2006 Funciones abreviadas de bienestar social: Una forma sencilla de simultanear la medición de la eficiencia y la equidad de las políticas de gasto público.
Nuria Badenes Plá y Daniel Santín González
- 252/2006 "The momentum effect in the Spanish stock market: Omitted risk factors or investor behaviour?".
Luis Muga and Rafael Santamaría
- 253/2006 Dinámica de precios en el mercado español de gasolina: un equilibrio de colusión tácita.
Jordi Perdiguero García

- 254/2006 Desigualdad regional en España: renta permanente versus renta corriente.
José M. Pastor, Empar Pons y Lorenzo Serrano
- 255/2006 Environmental implications of organic food preferences: an application of the impure public goods model.
Ana Maria Aldanondo-Ochoa y Carmen Almansa-Sáez
- 256/2006 Family tax credits versus family allowances when labour supply matters: Evidence for Spain.
José Felix Sanz-Sanz, Desiderio Romero-Jordán y Santiago Álvarez-García
- 257/2006 La internacionalización de la empresa manufacturera española: efectos del capital humano genérico y específico.
José López Rodríguez
- 258/2006 Evaluación de las migraciones interregionales en España, 1996-2004.
María Martínez Torres
- 259/2006 Efficiency and market power in Spanish banking.
Rolf Färe, Shawna Grosskopf y Emili Tortosa-Ausina.
- 260/2006 Asimetrías en volatilidad, beta y contagios entre las empresas grandes y pequeñas cotizadas en la bolsa española.
Helena Chuliá y Hipòlit Torró.
- 261/2006 Birth Replacement Ratios: New Measures of Period Population Replacement.
José Antonio Ortega.
- 262/2006 Accidentes de tráfico, víctimas mortales y consumo de alcohol.
José M^a Arranz y Ana I. Gil.
- 263/2006 Análisis de la Presencia de la Mujer en los Consejos de Administración de las Mil Mayores Empresas Españolas.
Ruth Mateos de Cabo, Lorenzo Escot Mangas y Ricardo Gimeno Nogués.
- 264/2006 Crisis y Reforma del Pacto de Estabilidad y Crecimiento. Las Limitaciones de la Política Económica en Europa.
Ignacio Álvarez Peralta.
- 265/2006 Have Child Tax Allowances Affected Family Size? A Microdata Study For Spain (1996-2000).
Jaime Vallés-Giménez y Anabel Zárate-Marco.
- 266/2006 Health Human Capital And The Shift From Foraging To Farming.
Paolo Rungo.
- 267/2006 Financiación Autonómica y Política de la Competencia: El Mercado de Gasolina en Canarias.
Juan Luis Jiménez y Jordi Perdiguero.
- 268/2006 El cumplimiento del Protocolo de Kyoto para los hogares españoles: el papel de la imposición sobre la energía.
Desiderio Romero-Jordán y José Félix Sanz-Sanz.
- 269/2006 Banking competition, financial dependence and economic growth
Joaquín Maudos y Juan Fernández de Guevara
- 270/2006 Efficiency, subsidies and environmental adaptation of animal farming under CAP
Werner Kleinhanß, Carmen Murillo, Carlos San Juan y Stefan Sperlich

- 271/2006 Interest Groups, Incentives to Cooperation and Decision-Making Process in the European Union
A. Garcia-Lorenzo y Jesús López-Rodríguez
- 272/2006 Riesgo asimétrico y estrategias de momentum en el mercado de valores español
Luis Muga y Rafael Santamaría
- 273/2006 Valoración de capital-riesgo en proyectos de base tecnológica e innovadora a través de la teoría de opciones reales
Gracia Rubio Martín
- 274/2006 Capital stock and unemployment: searching for the missing link
Ana Rosa Martínez-Cañete, Elena Márquez de la Cruz, Alfonso Palacio-Vera and Inés Pérez-Soba Aguilar
- 275/2006 Study of the influence of the voters' political culture on vote decision through the simulation of a political competition problem in Spain
Sagrario Lantarón, Isabel Lillo, M^a Dolores López and Javier Rodrigo
- 276/2006 Investment and growth in Europe during the Golden Age
Antonio Cubel and M^a Teresa Sanchis
- 277/2006 Efectos de vincular la pensión pública a la inversión en cantidad y calidad de hijos en un modelo de equilibrio general
Robert Meneu Gaya
- 278/2006 El consumo y la valoración de activos
Elena Márquez y Belén Nieto
- 279/2006 Economic growth and currency crisis: A real exchange rate entropic approach
David Matesanz Gómez y Guillermo J. Ortega
- 280/2006 Three measures of returns to education: An illustration for the case of Spain
María Arrazola y José de Hevia
- 281/2006 Composition of Firms versus Composition of Jobs
Antoni Cunyat
- 282/2006 La vocación internacional de un holding tranviario belga: la Compagnie Mutuelle de Tramways, 1895-1918
Alberte Martínez López
- 283/2006 Una visión panorámica de las entidades de crédito en España en la última década.
Constantino García Ramos
- 284/2006 Foreign Capital and Business Strategies: a comparative analysis of urban transport in Madrid and Barcelona, 1871-1925
Alberte Martínez López
- 285/2006 Los intereses belgas en la red ferroviaria catalana, 1890-1936
Alberte Martínez López
- 286/2006 The Governance of Quality: The Case of the Agrifood Brand Names
Marta Fernández Barcala, Manuel González-Díaz y Emmanuel Raynaud
- 287/2006 Modelling the role of health status in the transition out of malthusian equilibrium
Paolo Rungo, Luis Currais and Berta Rivera
- 288/2006 Industrial Effects of Climate Change Policies through the EU Emissions Trading Scheme
Xavier Labandeira and Miguel Rodríguez

- 289/2006 Globalisation and the Composition of Government Spending: An analysis for OECD countries
Norman Gemmell, Richard Kneller and Ismael Sanz
- 290/2006 La producción de energía eléctrica en España: Análisis económico de la actividad tras la liberalización del Sector Eléctrico
Fernando Hernández Martínez
- 291/2006 Further considerations on the link between adjustment costs and the productivity of R&D investment: evidence for Spain
Desiderio Romero-Jordán, José Félix Sanz-Sanz and Inmaculada Álvarez-Ayuso
- 292/2006 Una teoría sobre la contribución de la función de compras al rendimiento empresarial
Javier González Benito
- 293/2006 Agility drivers, enablers and outcomes: empirical test of an integrated agile manufacturing model
Daniel Vázquez-Bustelo, Lucía Avella and Esteban Fernández
- 294/2006 Testing the parametric vs the semiparametric generalized mixed effects models
María José Lombardía and Stefan Sperlich
- 295/2006 Nonlinear dynamics in energy futures
Mariano Matilla-García
- 296/2006 Estimating Spatial Models By Generalized Maximum Entropy Or How To Get Rid Of W
Esteban Fernández Vázquez, Matías Mayor Fernández and Jorge Rodríguez-Valez
- 297/2006 Optimización fiscal en las transmisiones lucrativas: análisis metodológico
Félix Domínguez Barrero
- 298/2006 La situación actual de la banca online en España
Francisco José Climent Diranzo y Alexandre Momparler Pechuán
- 299/2006 Estrategia competitiva y rendimiento del negocio: el papel mediador de la estrategia y las capacidades productivas
Javier González Benito y Isabel Suárez González
- 300/2006 A Parametric Model to Estimate Risk in a Fixed Income Portfolio
Pilar Abad and Sonia Benito
- 301/2007 Análisis Empírico de las Preferencias Sociales Respecto del Gasto en Obra Social de las Cajas de Ahorros
Alejandro Esteller-Moré, Jonathan Jorba Jiménez y Albert Solé-Ollé
- 302/2007 Assessing the enlargement and deepening of regional trading blocs: The European Union case
Salvador Gil-Pareja, Rafael Llorca-Vivero y José Antonio Martínez-Serrano
- 303/2007 ¿Es la Franquicia un Medio de Financiación?: Evidencia para el Caso Español
Vanessa Solís Rodríguez y Manuel González Díaz
- 304/2007 On the Finite-Sample Biases in Nonparametric Testing for Variance Constancy
Paulo M.M. Rodrigues and Antonio Rubia
- 305/2007 Spain is Different: Relative Wages 1989-98
José Antonio Carrasco Gallego

- 306/2007 Poverty reduction and SAM multipliers: An evaluation of public policies in a regional framework
Francisco Javier De Miguel-Vélez y Jesús Pérez-Mayo
- 307/2007 La Eficiencia en la Gestión del Riesgo de Crédito en las Cajas de Ahorro
Marcelino Martínez Cabrera
- 308/2007 Optimal environmental policy in transport: unintended effects on consumers' generalized price
M. Pilar Socorro and Ofelia Betancor
- 309/2007 Agricultural Productivity in the European Regions: Trends and Explanatory Factors
Roberto Ezcurra, Belen Iraizoz, Pedro Pascual and Manuel Rapún
- 310/2007 Long-run Regional Population Divergence and Modern Economic Growth in Europe: a Case Study of Spain
María Isabel Ayuda, Fernando Collantes and Vicente Pinilla
- 311/2007 Financial Information effects on the measurement of Commercial Banks' Efficiency
Borja Amor, María T. Tascón and José L. Fanjul
- 312/2007 Neutralidad e incentivos de las inversiones financieras en el nuevo IRPF
Félix Domínguez Barrero
- 313/2007 The Effects of Corporate Social Responsibility Perceptions on The Valuation of Common Stock
Waymond Rodgers , Helen Choy and Andres Guiral-Contreras
- 314/2007 Country Creditor Rights, Information Sharing and Commercial Banks' Profitability Persistence across the world
Borja Amor, María T. Tascón and José L. Fanjul
- 315/2007 ¿Es Relevante el Déficit Corriente en una Unión Monetaria? El Caso Español
Javier Blanco González y Ignacio del Rosal Fernández
- 316/2007 The Impact of Credit Rating Announcements on Spanish Corporate Fixed Income Performance: Returns, Yields and Liquidity
Pilar Abad, Antonio Díaz and M. Dolores Robles
- 317/2007 Indicadores de Lealtad al Establecimiento y Formato Comercial Basados en la Distribución del Presupuesto
Cesar Augusto Bustos Reyes y Óscar González Benito
- 318/2007 Migrants and Market Potential in Spain over The XXth Century: A Test Of The New Economic Geography
Daniel A. Tirado, Jordi Pons, Elisenda Paluzie and Javier Silvestre
- 319/2007 El Impacto del Coste de Oportunidad de la Actividad Emprendedora en la Intención de los Ciudadanos Europeos de Crear Empresas
Luis Miguel Zapico Aldeano
- 320/2007 Los belgas y los ferrocarriles de vía estrecha en España, 1887-1936
Alberte Martínez López
- 321/2007 Competición política bipartidista. Estudio geométrico del equilibrio en un caso ponderado
Isabel Lillo, M^a Dolores López y Javier Rodrigo
- 322/2007 Human resource management and environment management systems: an empirical study
M^a Concepción López Fernández, Ana M^a Serrano Bedía and Gema García Piqueres

- 323/2007 Wood and industrialization. evidence and hypotheses from the case of Spain, 1860-1935.
Iñaki Iriarte-Goñi and María Isabel Ayuda Bosque
- 324/2007 New evidence on long-run monetary neutrality.
J. Cunado, L.A. Gil-Alana and F. Perez de Gracia
- 325/2007 Monetary policy and structural changes in the volatility of us interest rates.
Juncal Cuñado, Javier Gomez Biscarri and Fernando Perez de Gracia
- 326/2007 The productivity effects of intrafirm diffusion.
Lucio Fuentelsaz, Jaime Gómez and Sergio Palomas
- 327/2007 Unemployment duration, layoffs and competing risks.
J.M. Arranz, C. García-Serrano and L. Toharia
- 328/2007 El grado de cobertura del gasto público en España respecto a la UE-15
Nuria Rueda, Begoña Barruso, Carmen Calderón y M^a del Mar Herrador
- 329/2007 The Impact of Direct Subsidies in Spain before and after the CAP'92 Reform
Carmen Murillo, Carlos San Juan and Stefan Sperlich
- 330/2007 Determinants of post-privatisation performance of Spanish divested firms
Laura Cabeza García and Silvia Gómez Ansón
- 331/2007 ¿Por qué deciden diversificar las empresas españolas? Razones oportunistas versus razones económicas
Almudena Martínez Campillo
- 332/2007 Dynamical Hierarchical Tree in Currency Markets
Juan Gabriel Brida, David Matesanz Gómez and Wiston Adrián Risso
- 333/2007 Los determinantes sociodemográficos del gasto sanitario. Análisis con microdatos individuales
Ana María Angulo, Ramón Barberán, Pilar Egea y Jesús Mur
- 334/2007 Why do companies go private? The Spanish case
Inés Pérez-Soba Aguilar
- 335/2007 The use of gis to study transport for disabled people
Verónica Cañal Fernández
- 336/2007 The long run consequences of M&A: An empirical application
Cristina Bernad, Lucio Fuentelsaz and Jaime Gómez
- 337/2007 Las clasificaciones de materias en economía: principios para el desarrollo de una nueva clasificación
Valentín Edo Hernández
- 338/2007 Reforming Taxes and Improving Health: A Revenue-Neutral Tax Reform to Eliminate Medical and Pharmaceutical VAT
Santiago Álvarez-García, Carlos Pestana Barros y Juan Prieto-Rodríguez
- 339/2007 Impacts of an iron and steel plant on residential property values
Celia Bilbao-Terol
- 340/2007 Firm size and capital structure: Evidence using dynamic panel data
Victor M. González and Francisco González

- 341/2007 ¿Cómo organizar una cadena hotelera? La elección de la forma de gobierno
Marta Fernández Barcala y Manuel González Díaz
- 342/2007 Análisis de los efectos de la decisión de diversificar: un contraste del marco teórico “Agencia-
Stewardship”
Almudena Martínez Campillo y Roberto Fernández Gago
- 343/2007 Selecting portfolios given multiple eurostoxx-based uncertainty scenarios: a stochastic goal pro-
gramming approach from fuzzy betas
Enrique Ballester, Blanca Pérez-Gladish, Mar Arenas-Parra and Amelia Bilbao-Terol
- 344/2007 “El bienestar de los inmigrantes y los factores implicados en la decisión de emigrar”
Anastasia Hernández Alemán y Carmelo J. León
- 345/2007 Governance Decisions in the R&D Process: An Integrative Framework Based on TCT and Know-
ledge View of The Firm.
Andrea Martínez-Noya and Esteban García-Canal
- 346/2007 Diferencias salariales entre empresas públicas y privadas. El caso español
Begoña Cueto y Nuria Sánchez- Sánchez
- 347/2007 Effects of Fiscal Treatments of Second Home Ownership on Renting Supply
Celia Bilbao Terol and Juan Prieto Rodríguez
- 348/2007 Auditors’ ethical dilemmas in the going concern evaluation
Andres Guiral, Waymond Rodgers, Emiliano Ruiz and Jose A. Gonzalo
- 349/2007 Convergencia en capital humano en España. Un análisis regional para el periodo 1970-2004
Susana Morales Sequera y Carmen Pérez Esparrells
- 350/2007 Socially responsible investment: mutual funds portfolio selection using fuzzy multiobjective pro-
gramming
Blanca M^a Pérez-Gladish, Mar Arenas-Parra , Amelia Bilbao-Terol and M^a Victoria Rodríguez-
Uría
- 351/2007 Persistencia del resultado contable y sus componentes: implicaciones de la medida de ajustes por
devengo
Raúl Iñiguez Sánchez y Francisco Poveda Fuentes
- 352/2007 Wage Inequality and Globalisation: What can we Learn from the Past? A General Equilibrium
Approach
Concha Betrán, Javier Ferri and Maria A. Pons
- 353/2007 Eficacia de los incentivos fiscales a la inversión en I+D en España en los años noventa
Desiderio Romero Jordán y José Félix Sanz Sanz
- 354/2007 Convergencia regional en renta y bienestar en España
Robert Meneu Gaya
- 355/2007 Tributación ambiental: Estado de la Cuestión y Experiencia en España
Ana Carrera Poncela
- 356/2007 Salient features of dependence in daily us stock market indices
Luis A. Gil-Alana, Juncal Cuñado and Fernando Pérez de Gracia
- 357/2007 La educación superior: ¿un gasto o una inversión rentable para el sector público?
Inés P. Murillo y Francisco Pedraja

- 358/2007 Effects of a reduction of working hours on a model with job creation and job destruction
Emilio Domínguez, Miren Ullibarri y Idoya Zabaleta
- 359/2007 Stock split size, signaling and earnings management: Evidence from the Spanish market
José Yagüe, J. Carlos Gómez-Sala and Francisco Poveda-Fuentes
- 360/2007 Modelización de las expectativas y estrategias de inversión en mercados de derivados
Begoña Font-Belaire
- 361/2008 Trade in capital goods during the golden age, 1953-1973
M^a Teresa Sanchis and Antonio Cubel
- 362/2008 El capital económico por riesgo operacional: una aplicación del modelo de distribución de pérdidas
Enrique José Jiménez Rodríguez y José Manuel Fera Domínguez
- 363/2008 The drivers of effectiveness in competition policy
Joan-Ramon Borrell and Juan-Luis Jiménez
- 364/2008 Corporate governance structure and board of directors remuneration policies: evidence from Spain
Carlos Fernández Méndez, Rubén Arrondo García and Enrique Fernández Rodríguez
- 365/2008 Beyond the disciplinary role of governance: how boards and donors add value to Spanish foundations
Pablo De Andrés Alonso, Valentín Azofra Palenzuela y M. Elena Romero Merino
- 366/2008 Complejidad y perfeccionamiento contractual para la contención del oportunismo en los acuerdos de franquicia
Vanessa Solís Rodríguez y Manuel González Díaz
- 367/2008 Inestabilidad y convergencia entre las regiones europeas
Jesús Mur, Fernando López y Ana Angulo
- 368/2008 Análisis espacial del cierre de explotaciones agrarias
Ana Aldanondo Ochoa, Carmen Almansa Sáez y Valero Casanovas Oliva
- 369/2008 Cross-Country Efficiency Comparison between Italian and Spanish Public Universities in the period 2000-2005
Tommaso Agasisti and Carmen Pérez Esparrells
- 370/2008 El desarrollo de la sociedad de la información en España: un análisis por comunidades autónomas
María Concepción García Jiménez y José Luis Gómez Barroso
- 371/2008 El medioambiente y los objetivos de fabricación: un análisis de los modelos estratégicos para su consecución
Lucía Avella Camarero, Esteban Fernández Sánchez y Daniel Vázquez-Bustelo
- 372/2008 Influence of bank concentration and institutions on capital structure: New international evidence
Víctor M. González and Francisco González
- 373/2008 Generalización del concepto de equilibrio en juegos de competición política
M^a Dolores López González y Javier Rodrigo Hitos
- 374/2008 Smooth Transition from Fixed Effects to Mixed Effects Models in Multi-level regression Models
María José Lombardía and Stefan Sperlich

- 375/2008 A Revenue-Neutral Tax Reform to Increase Demand for Public Transport Services
Carlos Pestana Barros and Juan Prieto-Rodríguez
- 376/2008 Measurement of intra-distribution dynamics: An application of different approaches to the European regions
Adolfo Maza, María Hierro and José Villaverde
- 377/2008 Migración interna de extranjeros y ¿nueva fase en la convergencia?
María Hierro y Adolfo Maza
- 378/2008 Efectos de la Reforma del Sector Eléctrico: Modelización Teórica y Experiencia Internacional
Ciro Eduardo Bazán Navarro
- 379/2008 A Non-Parametric Independence Test Using Permutation Entropy
Mariano Matilla-García and Manuel Ruiz Marín
- 380/2008 Testing for the General Fractional Unit Root Hypothesis in the Time Domain
Uwe Hassler, Paulo M.M. Rodrigues and Antonio Rubia
- 381/2008 Multivariate gram-charlier densities
Esther B. Del Brio, Trino-Manuel Níguez and Javier Perote
- 382/2008 Analyzing Semiparametrically the Trends in the Gender Pay Gap - The Example of Spain
Ignacio Moral-Arce, Stefan Sperlich, Ana I. Fernández-Saínz and Maria J. Roca
- 383/2008 A Cost-Benefit Analysis of a Two-Sided Card Market
Santiago Carbó Valverde, David B. Humphrey, José Manuel Liñares Zegarra and Francisco Rodríguez Fernández
- 384/2008 A Fuzzy Bicriteria Approach for Journal Deselection in a Hospital Library
M. L. López-Avello, M. V. Rodríguez-Uría, B. Pérez-Gladish, A. Bilbao-Terol, M. Arenas-Parra
- 385/2008 Valoración de las grandes corporaciones farmacéuticas, a través del análisis de sus principales intangibles, con el método de opciones reales
Gracia Rubio Martín y Prosper Lamothe Fernández
- 386/2008 El marketing interno como impulsor de las habilidades comerciales de las pyme españolas: efectos en los resultados empresariales
M^a Leticia Santos Vijande, M^a José Sanzo Pérez, Nuria García Rodríguez y Juan A. Trespalacios Gutiérrez
- 387/2008 Understanding Warrants Pricing: A case study of the financial market in Spain
David Abad y Belén Nieto
- 388/2008 Aglomeración espacial, Potencial de Mercado y Geografía Económica: Una revisión de la literatura
Jesús López-Rodríguez y J. Andrés Faíña
- 389/2008 An empirical assessment of the impact of switching costs and first mover advantages on firm performance
Jaime Gómez, Juan Pablo Maícas
- 390/2008 Tender offers in Spain: testing the wave
Ana R. Martínez-Cañete y Inés Pérez-Soba Aguilar

- 391/2008 La integración del mercado español a finales del siglo XIX: los precios del trigo entre 1891 y 1905
Mariano Matilla García, Pedro Pérez Pascual y Basilio Sanz Carnero
- 392/2008 Cuando el tamaño importa: estudio sobre la influencia de los sujetos políticos en la balanza de bienes y servicios
Alfonso Echazarra de Gregorio
- 393/2008 Una visión cooperativa de las medidas ante el posible daño ambiental de la desalación
Borja Montaña Sanz
- 394/2008 Efectos externos del endeudamiento sobre la calificación crediticia de las Comunidades Autónomas
Andrés Leal Marcos y Julio López Laborda
- 395/2008 Technical efficiency and productivity changes in Spanish airports: A parametric distance functions approach
Beatriz Tovar & Roberto Rendeiro Martín-Cejas
- 396/2008 Network analysis of exchange data: Interdependence drives crisis contagion
David Matesanz Gómez & Guillermo J. Ortega
- 397/2008 Explaining the performance of Spanish privatised firms: a panel data approach
Laura Cabeza Garcia and Silvia Gomez Anson
- 398/2008 Technological capabilities and the decision to outsource R&D services
Andrea Martínez-Noya and Esteban García-Canal
- 399/2008 Hybrid Risk Adjustment for Pharmaceutical Benefits
Manuel García-Goñi, Pere Ibern & José María Inoriza
- 400/2008 The Team Consensus–Performance Relationship and the Moderating Role of Team Diversity
José Henrique Dieguez, Javier González-Benito and Jesús Galende
- 401/2008 The institutional determinants of CO₂ emissions: A computational modelling approach using Artificial Neural Networks and Genetic Programming
Marcos Álvarez-Díaz , Gonzalo Caballero Miguez and Mario Soliño
- 402/2008 Alternative Approaches to Include Exogenous Variables in DEA Measures: A Comparison Using Monte Carlo
José Manuel Cordero-Ferrera, Francisco Pedraja-Chaparro and Daniel Santín-González
- 403/2008 Efecto diferencial del capital humano en el crecimiento económico andaluz entre 1985 y 2004: comparación con el resto de España
M^a del Pópulo Pablo-Romero Gil-Delgado y M^a de la Palma Gómez-Calero Valdés
- 404/2008 Análisis de fusiones, variaciones conjeturales y la falacia del estimador en diferencias
Juan Luis Jiménez y Jordi Perdiguero
- 405/2008 Política fiscal en la ue: ¿basta con los estabilizadores automáticos?
Jorge Uxó González y M^a Jesús Arroyo Fernández
- 406/2008 Papel de la orientación emprendedora y la orientación al mercado en el éxito de las empresas
Óscar González-Benito, Javier González-Benito y Pablo A. Muñoz-Gallego
- 407/2008 La presión fiscal por impuesto sobre sociedades en la unión europea
Elena Fernández Rodríguez, Antonio Martínez Arias y Santiago Álvarez García

- 408/2008 The environment as a determinant factor of the purchasing and supply strategy: an empirical analysis
Dr. Javier González-Benito y MS Duilio Reis da Rocha
- 409/2008 Cooperation for innovation: the impact on innovatory effort
Gloria Sánchez González and Liliana Herrera
- 410/2008 Spanish post-earnings announcement drift and behavioral finance models
Carlos Forner and Sonia Sanabria
- 411/2008 Decision taking with external pressure: evidence on football manager dismissals in argentina and their consequences
Ramón Flores, David Forrest and Juan de Dios Tena
- 412/2008 Comercio agrario latinoamericano, 1963-2000: aplicación de la ecuación gravitacional para flujos desagregados de comercio
Raúl Serrano y Vicente Pinilla
- 413/2008 Voter heuristics in Spain: a descriptive approach elector decision
José Luís Sáez Lozano and Antonio M. Jaime Castillo
- 414/2008 Análisis del efecto área de salud de residencia sobre la utilización y acceso a los servicios sanitarios en la Comunidad Autónoma Canaria
Ignacio Abásolo Alessón, Lidia García Pérez, Raquel Aguiar Ibáñez y Asier Amador Robayna
- 415/2008 Impact on competitive balance from allowing foreign players in a sports league: an analytical model and an empirical test
Ramón Flores, David Forrest & Juan de Dios Tena
- 416/2008 Organizational innovation and productivity growth: Assessing the impact of outsourcing on firm performance
Alberto López
- 417/2008 Value Efficiency Analysis of Health Systems
Eduardo González, Ana Cárcaba & Juan Ventura
- 418/2008 Equidad en la utilización de servicios sanitarios públicos por comunidades autónomas en España: un análisis multinivel
Ignacio Abásolo, Jaime Pinilla, Miguel Negrín, Raquel Aguiar y Lidia García
- 419/2008 Piedras en el camino hacia Bolonia: efectos de la implantación del EEES sobre los resultados académicos
Carmen Florido, Juan Luis Jiménez e Isabel Santana
- 420/2008 The welfare effects of the allocation of airlines to different terminals
M. Pilar Socorro and Ofelia Betancor
- 421/2008 How bank capital buffers vary across countries. The influence of cost of deposits, market power and bank regulation
Ana Rosa Fonseca and Francisco González
- 422/2008 Analysing health limitations in Spain: an empirical approach based on the European Community household panel
Marta Pascual and David Cantarero

- 423/2008 Regional productivity variation and the impact of public capital stock: an analysis with spatial interaction, with reference to Spain
Miguel Gómez-Antonio and Bernard Fingleton
- 424/2008 Average effect of training programs on the time needed to find a job. The case of the training schools program in the south of Spain (Seville, 1997-1999).
José Manuel Cansino Muñoz-Repiso and Antonio Sánchez Braza
- 425/2008 Medición de la eficiencia y cambio en la productividad de las empresas distribuidoras de electricidad en Perú después de las reformas
Raúl Pérez-Reyes y Beatriz Tovar
- 426/2008 Acercando posturas sobre el descuento ambiental: sondeo Delphi a expertos en el ámbito internacional
Carmen Almansa Sáez y José Miguel Martínez Paz
- 427/2008 Determinants of abnormal liquidity after rating actions in the Corporate Debt Market
Pilar Abad, Antonio Díaz and M. Dolores Robles
- 428/2008 Export led-growth and balance of payments constrained. New formalization applied to Cuban commercial regimes since 1960
David Matesanz Gómez, Guadalupe Fugarolas Álvarez-Ude and Isis Mañalich Gálvez
- 429/2008 La deuda implícita y el desequilibrio financiero-actuarial de un sistema de pensiones. El caso del régimen general de la seguridad social en España
José Enrique Devesa Carpio y Mar Devesa Carpio
- 430/2008 Efectos de la descentralización fiscal sobre el precio de los carburantes en España
Desiderio Romero Jordán, Marta Jorge García-Inés y Santiago Álvarez García
- 431/2008 Euro, firm size and export behavior
Silviano Esteve-Pérez, Salvador Gil-Pareja, Rafael Llorca-Vivero and José Antonio Martínez-Serrano
- 432/2008 Does social spending increase support for free trade in advanced democracies?
Ismael Sanz, Ferran Martínez i Coma and Federico Steinberg
- 433/2008 Potencial de Mercado y Estructura Espacial de Salarios: El Caso de Colombia
Jesús López-Rodríguez y Maria Cecilia Acevedo
- 434/2008 Persistence in Some Energy Futures Markets
Juncal Cunado, Luis A. Gil-Alana and Fernando Pérez de Gracia
- 435/2008 La inserción financiera externa de la economía francesa: inversores institucionales y nueva gestión empresarial
Ignacio Álvarez Peralta
- 436/2008 ¿Flexibilidad o rigidez salarial en España?: un análisis a escala regional
Ignacio Moral Arce y Adolfo Maza Fernández
- 437/2009 Intangible relationship-specific investments and the performance of r&d outsourcing agreements
Andrea Martínez-Noya, Esteban García-Canal & Mauro F. Guillén
- 438/2009 Friendly or Controlling Boards?
Pablo de Andrés Alonso & Juan Antonio Rodríguez Sanz

- 439/2009 La sociedad Trenor y Cía. (1838-1926): un modelo de negocio industrial en la España del siglo XIX
Amparo Ruiz Llopis
- 440/2009 Continental bias in trade
Salvador Gil-Pareja, Rafael Llorca-Vivero & José Antonio Martínez Serrano
- 441/2009 Determining operational capital at risk: an empirical application to the retail banking
Enrique José Jiménez-Rodríguez, José Manuel Fera-Domínguez & José Luis Martín-Marín
- 442/2009 Costes de mitigación y escenarios post-kyoto en España: un análisis de equilibrio general para España
Mikel González Ruiz de Eguino
- 443/2009 Las revistas españolas de economía en las bibliotecas universitarias: ranking, valoración del indicador y del sistema
Valentín Edo Hernández
- 444/2009 Convergencia económica en España y coordinación de políticas económicas. un estudio basado en la estructura productiva de las CC.AA.
Ana Cristina Mingorance Arnáiz
- 445/2009 Instrumentos de mercado para reducir emisiones de co2: un análisis de equilibrio general para España
Mikel González Ruiz de Eguino
- 446/2009 El comercio intra e inter-regional del sector Turismo en España
Carlos Llano y Tamara de la Mata
- 447/2009 Efectos del incremento del precio del petróleo en la economía española: Análisis de cointegración y de la política monetaria mediante reglas de Taylor
Fernando Hernández Martínez
- 448/2009 Bologna Process and Expenditure on Higher Education: A Convergence Analysis of the EU-15
T. Agasisti, C. Pérez Esparrells, G. Catalano & S. Morales
- 449/2009 Global Economy Dynamics? Panel Data Approach to Spillover Effects
Gregory Daco, Fernando Hernández Martínez & Li-Wu Hsu
- 450/2009 Pricing levered warrants with dilution using observable variables
Isabel Abinzano & Javier F. Navas
- 451/2009 Information technologies and financial performance: The effect of technology diffusion among competitors
Lucio Fuentelsaz, Jaime Gómez & Sergio Palomas
- 452/2009 A Detailed Comparison of Value at Risk in International Stock Exchanges
Pilar Abad & Sonia Benito
- 453/2009 Understanding offshoring: has Spain been an offshoring location in the nineties?
Belén González-Díaz & Rosario Gandoy
- 454/2009 Outsourcing decision, product innovation and the spatial dimension: Evidence from the Spanish footwear industry
José Antonio Belso-Martínez

- 455/2009 Does playing several competitions influence a team's league performance? Evidence from Spanish professional football
Andrés J. Picazo-Tadeo & Francisco González-Gómez
- 456/2009 Does accessibility affect retail prices and competition? An empirical application
Juan Luis Jiménez and Jordi Perdiguero
- 457/2009 Cash conversion cycle in smes
Sonia Baños-Caballero, Pedro J. García-Teruel and Pedro Martínez-Solano
- 458/2009 Un estudio sobre el perfil de hogares endeudados y sobreendeudados: el caso de los hogares vascos
Alazne Mujika Alberdi, Iñaki García Arrizabalaga y Juan José Gibaja Martíns
- 459/2009 Imposing monotonicity on outputs in parametric distance function estimations: with an application to the spanish educational production
Sergio Perelman and Daniel Santin
- 460/2009 Key issues when using tax data for concentration analysis: an application to the Spanish wealth tax
José M^a Durán-Cabré and Alejandro Esteller-Moré
- 461/2009 ¿Se está rompiendo el mercado español? Una aplicación del enfoque de feldstein –horioka
Saúl De Vicente Queijeiro, José Luis Pérez Rivero y María Rosalía Vicente Cuervo
- 462/2009 Financial condition, cost efficiency and the quality of local public services
Manuel A. Muñiz & José L. Zafra
- 463/2009 Including non-cognitive outputs in a multidimensional evaluation of education production: an international comparison
Marián García Valiñas & Manuel Antonio Muñiz Pérez
- 464/2009 A political look into budget deficits. The role of minority governments and oppositions
Albert Falcó-Gimeno & Ignacio Jurado
- 465/2009 La simulación del cuadro de mando integral. Una herramienta de aprendizaje en la materia de contabilidad de gestión
Elena Urquía Grande, Clara Isabel Muñoz Colomina y Elisa Isabel Cano Montero
- 466/2009 Análisis histórico de la importancia de la industria de la desalinización en España
Borja Montaña Sanz
- 467/2009 The dynamics of trade and innovation: a joint approach
Silviano Esteve-Pérez & Diego Rodríguez
- 468/2009 Measuring international reference-cycles
Sonia de Lucas Santos, Inmaculada Álvarez Ayuso & M^a Jesús Delgado Rodríguez
- 469/2009 Measuring quality of life in Spanish municipalities
Eduardo González Fidalgo, Ana Cárcaba García, Juan Ventura Victoria & Jesús García García
- 470/2009 ¿Cómo se valoran las acciones españolas: en el mercado de capitales doméstico o en el europeo?
Begoña Font Belaire y Alfredo Juan Grau Grau
- 471/2009 Patterns of e-commerce adoption and intensity. evidence for the european union-27
María Rosalía Vicente & Ana Jesús López

- 472/2009 On measuring the effect of demand uncertainty on costs: an application to port terminals
Ana Rodríguez-Álvarez, Beatriz Tovar & Alan Wall
- 473/2009 Order of market entry, market and technological evolution and firm competitive performance
Jaime Gomez, Gianvito Lanzolla & Juan Pablo Maicas
- 474/2009 La Unión Económica y Monetaria Europea en el proceso exportador de Castilla y León (1993-2007): un análisis de datos de panel
Almudena Martínez Campillo y M^a del Pilar Sierra Fernández
- 475/2009 Do process innovations boost SMEs productivity growth?
Juan A. Mañez, María E. Rochina Barrachina, Amparo Sanchis Llopis & Juan A. Sanchis Llopis
- 476/2009 Incertidumbre externa y elección del modo de entrada en el marco de la inversión directa en el exterior
Cristina López Duarte y Marta M^a Vidal Suárez
- 477/2009 Testing for structural breaks in factor loadings: an application to international business cycle
José Luis Cendejas Bueno, Sonia de Lucas Santos, Inmaculada Álvarez Ayuso & M^a Jesús Delgado Rodríguez
- 478/2009 ¿Esconde la rigidez de precios la existencia de colusión? El caso del mercado de carburantes en las Islas Canarias
Juan Luis Jiménez y Jordi Perdiguero
- 479/2009 The poni test with structural breaks
Antonio Aznar & María-Isabel Ayuda
- 480/2009 Accuracy and reliability of Spanish regional accounts (CRE-95)
Verónica Cañal Fernández
- 481/2009 Estimating regional variations of R&D effects on productivity growth by entropy econometrics
Esteban Fernández-Vázquez y Fernando Rubiera-Morollón
- 482/2009 Why do local governments privatize the provision of water services? Empirical evidence from Spain
Francisco González-Gómez, Andrés J. Picazo-Tadeo & Jorge Guardiola
- 483/2009 Assessing the regional digital divide across the European Union-27
María Rosalía Vicente & Ana Jesús López
- 484/2009 Measuring educational efficiency and its determinants in Spain with parametric distance functions
José Manuel Cordero Ferrera, Eva Crespo Cebada & Daniel Santín González
- 485/2009 Spatial analysis of public employment services in the Spanish provinces
Patricia Suárez Cano & Matías Mayor Fernández
- 486/2009 Trade effects of continental and intercontinental preferential trade agreements
Salvador Gil-Pareja, Rafael Llorca-Vivero & José Antonio Martínez-Serrano
- 487/2009 Testing the accuracy of DEA for measuring efficiency in education under endogeneity
Salvador Gil-Pareja, Rafael Llorca-Vivero & José Antonio Martínez-Serrano
- 488/2009 Measuring efficiency in primary health care: the effect of exogenous variables on results
José Manuel Cordero Ferrera, Eva Crespo Cebada & Luis R. Murillo Zamorano

- 489/2009 Capital structure determinants in growth firms accessing venture funding
Marina Balboa, José Martí & Álvaro Tresierra
- 490/2009 Determinants of debt maturity structure across firm size
Victor M. González
- 491/2009 Análisis del efecto de la aplicación de las NIIF en la valoración de las salidas a bolsa
Susana Álvarez Otero y Eduardo Rodríguez Enríquez
- 492/2009 An analysis of urban size and territorial location effects on employment probabilities: the spanish case
Ana Viñuela-Jiménez, Fernando Rubiera-Morollón & Begoña Cueto
- 493/2010 Determinantes de la estructura de los consejos de administración en España
Isabel Acero Fraile y Nuria Alcalde Fradejas
- 494/2010 Performance and completeness in repeated inter-firm relationships: the case of franchising
Vanessa Solis-Rodriguez & Manuel Gonzalez-Diaz
- 495/2010 A Revenue-Based Frontier Measure of Banking Competition
Santiago Carbó, David Humphrey & Francisco Rodríguez
- 496/2010 Categorical segregation in social networks
Antoni Rubí-Barceló
- 497/2010 Beneficios ambientales no comerciales de la directiva marco del agua en condiciones de escasez: análisis económico para el Guadalquivir
Julia Martin-Ortega, Giacomo Giannoccaro y Julio Berbel Vecino
- 498/2010 Monetary integration and risk diversification in eu-15 sovereign debt markets
Juncal Cuñado & Marta Gómez-Puig
- 499/2010 The Marshall Plan and the Spanish autarky: A welfare loss analysis
José Antonio Carrasco Gallego
- 500/2010 The role of learning in firm R&D persistence
Juan A. Mañez, María E. Rochina-Barrachina, Amparo Sanchis-Llopis & Juan A. Sanchis-Llopis
- 501/2010 Is venture capital more than just money?
Marina Balboa, José Martí & Nina Zieling
- 502/2010 On the effects of supply strategy on business performance: do the relationships among generic competitive objectives matter?
Javier González-Benito
- 503/2010 Corporate cash holding and firm value
Cristina Martínez-Sola, Pedro J. García-Teruel & Pedro Martínez-Solano
- 504/2010 El impuesto de flujos de caja de sociedades: una propuesta de base imponible y su aproximación contable en España
Lourdes Jerez Barroso y Joaquín Teixeira Quirós
- 505/2010 The effect of technological, commercial and human resources on the use of new technology
Jaime Gómez & Pilar Vargas

- 506/2010 ¿Cómo ha afectado la fiscalidad a la rentabilidad de la inversión en vivienda en España?
Un análisis para el periodo 1996 y 2007
Jorge Onrubia Fernández y María del Carmen Rodado Ruiz
- 507/2010 Modelización de flujos en el análisis input-output a partir de la teoría de redes
Ana Salomé García Muñiz
- 508/2010 Export-led-growth hypothesis revisited. a balance of payments approach for Argentina, Brazil,
Chile and Mexico
David Matesanz Gómez & Guadalupe Fugarolas Álvarez-Ude
- 509/2010 Realised hedge ratio properties, performance and implications for risk management: evidence
from the spanish ibex 35 spot and futures markets
David G McMillan & Raquel Quiroga García
- 510/2010 Do we sack the manager... or is it better not to? Evidence from Spanish professional football
Francisco González-Gómez, Andrés J. Picazo-Tadeo & Miguel A. García-Rubio
- 511/2010 Have Spanish port sector reforms during the last two decades been successful? A cost frontier
approach
Ana Rodríguez-Álvarez & Beatriz Tovar
- 512/2010 Size & Regional Distribution of Financial Behavior Patterns in Spain
Juan Antonio Maroto Acín, Pablo García Estévez & Salvador Roji Ferrari
- 513/2010 The impact of public reforms on the productivity of the Spanish ports: a parametric distance
function approach
Ramón Núñez-Sánchez & Pablo Coto-Millán
- 514/2010 Trade policy versus institutional trade barriers: an application using “good old” ols
Laura Márquez-Ramos, Inmaculada Martínez-Zarzoso & Celestino Suárez-Burguet
- 515/2010 The “Double Market” approach in venture capital and private equity activity: the case of Europe
Marina Balboa & José Martí
- 516/2010 International accounting differences and earnings smoothing in the banking industry
Marina Balboa, Germán López-Espinosa & Antonio Rubia
- 517/2010 Convergence in car prices among European countries
Simón Sosvilla-Rivero & Salvador Gil-Pareja
- 518/2010 Effects of process and product-oriented innovations on employee downsizing
José David Vicente-Lorente & José Ángel Zúñiga-Vicente
- 519/2010 Inequality, the politics of redistribution and the tax-mix
Jenny De Freitas
- 520/2010 Efectos del desajuste educativo sobre el rendimiento privado de la educación: un análisis para el
caso español (1995-2006)
Inés P. Murillo, Marta Rahona y M^a del Mar Salinas
- 521/2010 Structural breaks and real convergence in opec countries
Juncal Cuñado
- 522/2010 Human Capital, Geographical location and Policy Implications: The case of Romania
Jesús López-Rodríguez, Andres Faiña y Bolea Cosmin-Gabriel

- 523/2010 Organizational unlearning context fostering learning for customer capital through time: lessons from SMEs in the telecommunications industry
Anthony K. P. Wensley, Antonio Leal-Millán, Gabriel Cepeda-Carrión & Juan Gabriel Cegarra-Navarro
- 524/2010 The governance threshold in international trade flows
Marta Felis-Rota
- 525/2010 The intensive and extensive margins of trade decomposing exports growth differences across Spanish regions
Asier Minondo Uribe-Etxebarria & Francisco Requena Silvente
- 526/2010 Why do firms locate r&d outsourcing agreements offshore? the role of ownership, location, and externalization advantages
Andrea Martínez-Noya, Esteban García-Canal & Mauro f. Guillén
- 527/2010 Corporate Taxation and the Productivity and Investment Performance of Heterogeneous Firms: Evidence from OECD Firm-Level Data
Norman Gemmell, Richard Kneller, Ismael Sanz & José Félix Sanz-Sanz
- 528/2010 Modelling Personal Income Taxation in Spain: Revenue Elasticities and Regional Comparisons
John Creedy & José Félix Sanz-Sanz
- 529/2010 Mind the Remoteness!. Income disparities across Japanese Prefectures
Jesús López-Rodríguez, Daisuke Nakamura
- 530/2010 El nuevo sistema de financiación autonómica: descripción, estimación empírica y evaluación
Antoni Zabalza y Julio López Laborda
- 531/2010 Markups, bargaining power and offshoring: an empirical assessment
Lourdes Moreno & Diego Rodríguez
- 532/2010 The snp-dcc model: a new methodology for risk management and forecasting
Esther B. Del Brio, Trino-Manuel Níguez & Javier Perote
- 533/2010 El uso del cuadro de mando integral y del presupuesto en la gestión estratégica de los hospitales públicos
David Naranjo Gil
- 534/2010 Análisis de la efectividad de las prácticas de trabajo de alta implicación en las fábricas españolas
Daniel Vázquez-Bustelo y Lucía Avella Camarero
- 535/2010 Energía, innovación y transporte: la electrificación de los tranvías en España, 1896-1935
Alberte Martínez López
- 536/2010 La ciudad como negocio: gas y empresa en una región española, Galicia 1850-1936
Alberte Martínez López y Jesús Mirás Araujo
- 537/2010 To anticipate or not to anticipate? A comparative analysis of opportunistic early elections and incumbents' economic performance
Pedro Riera Sagrera
- 538/2010 The impact of oil shocks on the Spanish economy
Ana Gómez-Loscos, Antonio Montañés & María Dolores Gadea

- 539/2010 The efficiency of public and publicly-subsidized high schools in Spain. evidence from pisa-2006
María Jesús Mancebón, Jorge Calero, Álvaro Choi & Domingo P. Ximénez-de-Embún
- 540/2010 Regulation as a way to force innovation: the biodiesel case
Jordi Perdigueró & Juan Luis Jiménez
- 541/2010 Pricing strategies of Spanish network carrier
Xavier Fageda, Juan Luis Jiménez & Jordi Perdigueró
- 542/2010 Papel del posicionamiento del distribuidor en la relación entre la marca de distribuidor y lealtad al establecimiento comercial
Oscar González-Benito y Mercedes Martos-Partal
- 543/2010 How Bank Market Concentration, Regulation, and Institutions Shape the Real Effects of Banking Crises
Ana I. Fernández, Francisco González & Nuria Suárez
- 544/2010 Una estimación del comercio interregional trimestral de bienes en España mediante técnicas de interpolación temporal
Nuria Gallego López, Carlos Llano Verduras y Julián Pérez García
- 545/2010 Puerto, empresas y ciudad: una aproximación histórica al caso de Las Palmas de Gran Canaria
Miguel Suárez, Juan Luis Jiménez y Daniel Castillo
- 546/2010 Multinationals in the motor vehicles industry: a general equilibrium analysis for a transition economy
Concepción Latorre & Antonio G. Gómez-Plana
- 547/2010 Core/periphery scientific collaboration networks among very similar researchers
Antoni Rubí-Barceló
- 548/2010 Basic R&D in vertical markets
Miguel González-Maestre & Luis M. Granero
- 549/2010 Factores condicionantes de la presión fiscal de las entidades de crédito españolas, ¿existen diferencias entre bancos y cajas de ahorros?
Ana Rosa Fonseca Díaz, Elena Fernández Rodríguez y Antonio Martínez Arias
- 550/2010 Analyzing an absorptive capacity: Unlearning context and Information System Capabilities as catalysts for innovativeness
Gabriel Cepeda-Carrión, Juan Gabriel Cegarra-Navarro & Daniel Jimenez-Jimenez
- 551/2010 The resolution of banking crises and market discipline: international evidence
Elena Cubillas, Ana Rosa Fonseca & Francisco González
- 552/2010 A strategic approach to network value in information markets
Lucio Fuentelsaz, Elisabet Garrido & Juan Pablo Maicas
- 553/2010 Accounting for the time pattern of remittances in the Spanish context
Alfonso Echazarra