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Economic cycles, asymmetric crises and tourism competitiveness: emerging versus mature destinations.

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Abstract

This paper considers the influence of business cycles and economic crises on tourism destinations competitiveness. This competitiveness is measured by its share in world tourism. Analysing a period of forty years, the differential permanent or temporary effects that economic crises has on competitiveness of mature and emerging destinations are observed. Furthermore, it identifies the economic transmission mechanisms operating within this context, analysing them using the framework of the most relevant explanatory models of tourism destination competitiveness. The preliminary results obtained suggest that the effects of these shocks on competitiveness are not neutral. In mature destinations the negative effects are more persistent in highly intensive crises. In emerging destinations with a growing natural trend on tourism demand, the effects of the economic crises are softer and limited, reinforcing the process of convergence between destinations. This effect works through two basic transmission mechanisms: the reduction of internal and external tourism demand and the decrease on investment.

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1. Introduction.

In a recent paper Perles, Ramón, Moreno & Rubia (2012) explores the relationships existing between Spanish tourism competitiveness and business cycle, describing the transmission mechanism linking business cycle and tourism competitiveness and obtaining the conclusion that Spanish tourism competitiveness, measured by its share in the world market, is affected negatively during crisis periods reinforcing a natural declining trend which is explained by the natural emergence of new competing destinations and by the maturity of the Spain's principal tourism product.

This paper extends the analysis carried out by these authors to check the existence of different behaviour among mature and emerging tourism destinations when an economic crisis occurs. This is done by comparing the evolution of Spain's tourism competitiveness (representing the mature destinations) and Turkey's performance representing the emerging destinations and being one of the most principal competitors of Spain in the Mediterranean area.

The paper is structured as follows. Section 2 deals with economic crises and tourism performance, reviewing the evolution of the world market share of Spain's and Turkey's tourism. Section 3 provides an overview of the transmission mechanisms that relates economic crises and tourism competitiveness. In section 4 the econometric analysis based on vector autoregression (VAR) is performed. Finally, section 5 presents the conclusions and the limitations of the study.

2. Economic crises and tourism evolution: Spain and Turkey.

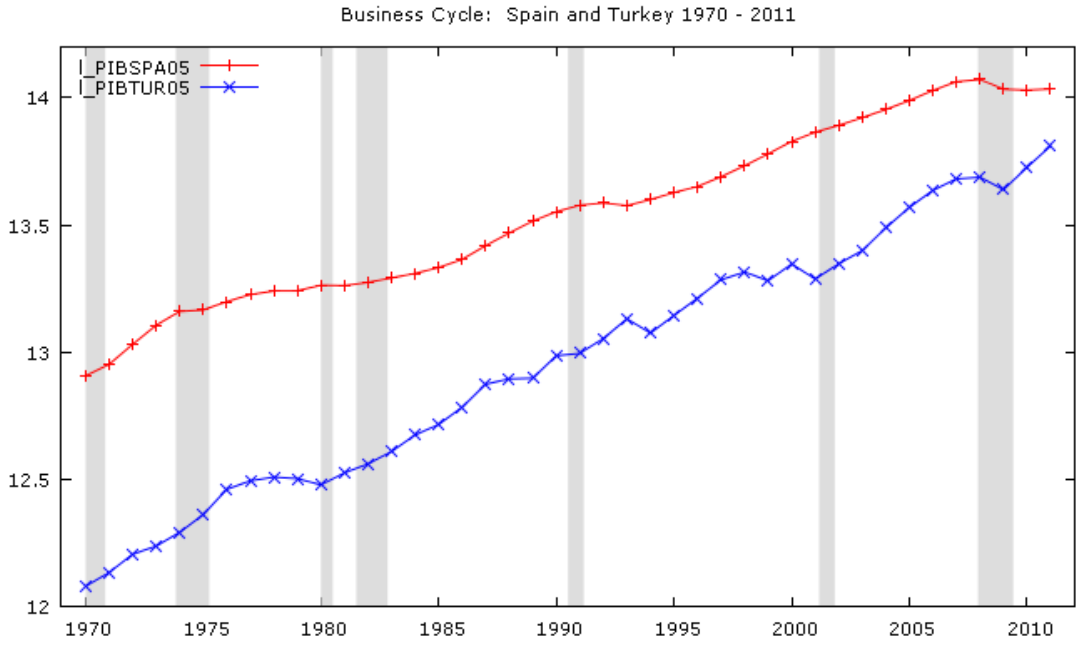
Spain is one of the world's most popular tourism destinations. Spain's 52.7 million international tourists placed it in fourth position in the 2010 world ranking in terms of tourist arrivals and second position in terms of tourism receipts. Spain also ranks fourth in the 2013 Travel and Tourism Competitiveness Index, advancing four positions since 2011 (World Economic Forum, 2013). In the Mediterranean area, Turkey with 27.0 million international tourists in 2010 is one of the principal Spain tourism competitors, ranking 46th in the 2013 Travel and Tourism competitiveness index and also advancing four positions since 2011.

Graphs 1 and 2 outline the business cycle and tourism competitiveness of both, Spain and Turkey, during the period 1970-2011. In grey are highlighted the official economic crises periods recorded by the National Bureau Economic Research (NBER) for the United States economy. Both graphics indicate a convergence process between the two destinations both economically and from tourism competitiveness terms and it can be observed that the negative variations, both in absolute and relative terms, in periods of crisis are higher than the positive values recorded during economic growth periods.

The Graph 2 shows that the evolution of tourism competitiveness in Spain measured by its share in the global market is characterised by an underlying declining trend which is explained by the natural emergence of new competing destinations within a context of an accelerated globalisation of the tourism sector and by the maturity of its main tourism product (sun and beach), in accordance with the destination lifecycle model (Butler, 1980). This graph also shows that the evolution of tourism competitiveness in

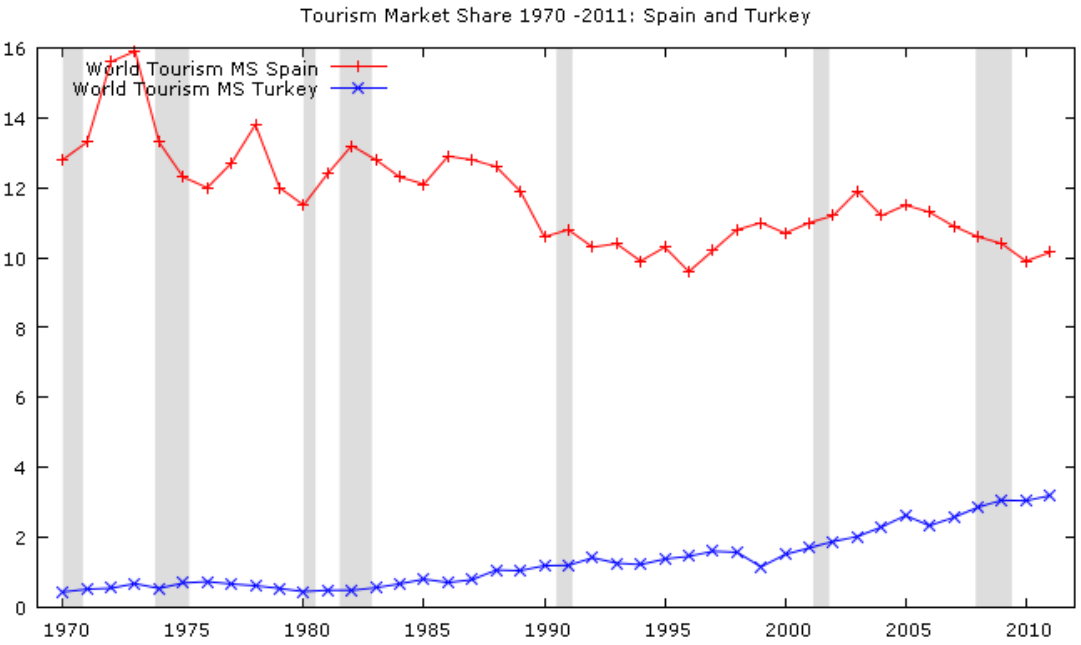
Turkey measured by its share in the global market is characterised by an underlying growing trend as corresponds to its role as emerging destination.

Graph 1: Business Cycle: GDP constant prices constant PPS. Spain vs Turkey 1970-2011.



Author's own elaboration. Source OECD

Graph 2: International Tourism Competitiveness Spain vs Turkey Market Share 1970-2011.



Author's own elaboration. Source Tena (2005), Turkish MCT and WTO (2011)

A stationarity analysis of Spain's and Turkey's market shares allows us to determine that according to classic linear tests this trend could be characterised as stationary for the Spanish case and for Turkish case when is taken in log-levels. But, when tests that allows for structural changes in the time series are performed, clearer results are obtained pointing to the trend-stationarity of the two series with different breakpoints for both countries. The stationarity of the series could be interpreted in the sense of temporary effects of the economic crises, but also implies the failure of policies to promote competitiveness.

3. Crises and tourism competitiveness: structural transmission mechanisms.

This section explains the causes and mechanisms that relate economic cycles to the competitiveness can be distinguished between transmission mechanisms which operate on the demand side and those which operate on the supply side. The former affect the destination's competitiveness immediately and translate into a rapid reduction in the market share of the destination if the deviation of tourists between competing destinations occurs during the crisis. The latter have a delayed effect on competitiveness in the medium and long term, reinforcing natural trends of losses or gains in competitiveness depending on whether the destination is an emerging market or a mature market such as Spain.

On the demand side, the main effects constitute the reduced disposable income of tourists and the increase in the prices of tourism products associated with many crises. Both of these aspects directly reduce levels of demand, affecting different destinations in different ways. The competitiveness of some destinations is reduced, benefitting other destinations which increase their competitiveness. The reduction in demand can also indirectly affect competitiveness through the potential impacts on the profitability of tourism companies, associated and auxiliary sectors. A decrease in profitability will lower their capacity to create advanced factors and may reduce levels of rivalry due to the likely disappearance of less viable companies. Finally, these consequences also have negative effects on the government which will collect less tax associated to tourism consumption and profits, lowering its capacity to invest in generic and specific advanced factors for the sector.

On the supply side, the direct effects of crises are manifested in a fall in the level of investment of tourism companies due to the reduction in available credit (and their lower credit capacity caused by a devaluation of their assets), and a fall in the level of business confidence causing more ambitious projects to be postponed. The impact of reducing investment in the domestic market may be aggravated by two additional phenomena. Firstly, domestic companies search for business opportunities abroad which they cannot find in their own country, initiating investment processes in new destinations, improving their competitiveness compared to that of the original destinations. Secondly, given the regional nature of most shocks, which do not usually affect all destinations throughout the world, some competing destinations may benefit from the increased and sustained investment made by places that are not affected by the crisis. The most likely result of both of these phenomena is the relative reduction in the capacity to create advanced factors in crisis-hit destinations which will have a lower

competitive position in the medium and long term in comparison to other destinations unaffected by the crisis.

Demand and supply are not independent; there is important interaction between them with expectations being the main element connecting the two mechanisms. These expectations either aggravate or moderate the above-mentioned effects and will be examined in more detail below.

4. Econometric estimation of Spain and Turkey Tourism Competitiveness: A Vector Autoregression Approach.

This section will carry out an empirical analysis of the afore-mentioned effects, using the time framework of 1970-2011, a period in which the country reached its tourism maturity and when the decreasing trend in Spain's market share in international tourism began. There are forty two annual observations available, constituting a small sample size. Table 1 lists the variables considered, the source used and the observations pertaining to each case.

Table 1: Empirical analyses, variables used and sources.

Mechanism / Variable	Variable	Source	Observations
Dependent variables	Spain's international tourism market share (Ln)	Tena (2005) based on several records and updated with IET (Institute of Tourism Studies) data	Estimated visitors for Spain / global tourists estimated by the WTO
	Turkey's international tourism market share (Ln)	Tourism Ministry of Culture and Tourism	Estimated visitors for Turkey / global tourists estimated by the WTO
Independent variables			
Domestic economic cycle (ld_PIBSPA05 and ld_PIBTUR05)	Real GDP of Spain or Turkey (logarithmic difference)	OECD	Base year 2005
Economic cycle of outbound markets (ld_Germany)	Real GDP of the Germany (logarithmic difference)	OECD	Base year 2005 is taken to represent outbound tourist markets
Trend (time)	Linear trend		
Quadratic trend (timesq)	Quadratic trend		
Crises dummies	Dummy 1 if t=1973,1974,1975 and 0 otherwise and the same for other crises		

Demand Mechanism			
Spanish Real Tourism Receipts (ITRESP)		Bank of Spain	
Turkish Real Tourism Receipts (TRTUR)		TURSAB	
Spain's competitiveness index	Real effective exchange rate	OECD	
Supply Mechanism			
Hotel beds in Spain (Ld_Camasespana)	Hotel beds in Spain (logarithmic difference)	General Secretariat of Tourism and the Spanish National Statistics Institute (INE)	Break in the series in 1999 indicated with a dummy (dummyseriehotel)
Hotel beds in Turkey (Ld _camasturquía)	Hotel beds in Turkey (logarithmic difference)	Ministry of Culture, Turkey	
Inflow of FDI into Spain (Ld_FDIinesp)	Inflows of FDI in nominal US dollars	UNCTAD	
Outflow of FDI from Spain (Ld_FDIoutesp)	Outflows of FDI from Spain in nominal US dollars	UNCTAD	
Inflow of FDI into competing markets (Ld_FDIintur)	Inflows of FDI in nominal US dollars	UNCTAD	
Outflow of FDI from competing markets (Ld_FDIoutesp)	Outflows of FDI in nominal US dollars	UNCTAD	

Author's own elaboration

A vector autoregressive (VAR) model for each country has been conducted. Because VAR models describe the joint generation process of a number of variables, they can be used for investigating relations between variables (Luetkepöhl, 2011). A specific type of relation was pointed out by Granger (1969) and is known as Granger-causality. Because Granger non-causality is characterized by zero restrictions on the levels VAR representation of the data generation process, testing for it becomes straightforward (Luetkepöhl, 2011). In this paper, the Toda and Yamamoto (1995) procedure is used to test for Granger causality. Summarizing, the Toda and Yamamoto (1995) procedure implies set up a VAR model in the levels of the data, adding in some extra lags into each of the equations considered to fix up the asymptotic and perform a standard Wald tests over the first p lags (not the extra lags) of the model to do the inference. The Wald test statistics will be asymptotically chi-square distributed with p degrees of freedom, under the null. So, rejection of the null will imply a rejection of Granger non-causality. That is, a rejection supports the presence of Granger causality.

A simple pairwise Granger causality among Spain's visitors market share and the variation of GDP including orders from 1 to 3 shows reasonable evidence of Granger

causality from the variation of GDP to the Spain's tourism market share, but not vice versa. The same is true for Turkey, but only considering 1 lag order. With more lags included in the tests, there is no evidence of Granger causality among the variables.

In order to improve these tests, Table 2 presents a bivariate VAR(3) model for Spain's visitors market share with a constant, a time trend and a dummy variable representing euro shift included as exogenous variables as well as an additional lag for each variable to test for Granger causality. Diagnosis of the model indicates that VAR satisfies stability conditions (no root lies outside the unit circle), residual correlation is not detected. Residuals normality is not satisfied, but that condition is not necessary for Granger causality purposes. Table 3 presents the Granger causality analysis performed confirming that there is reasonable evidence of Granger causality from the variation of GDP to the Spain's tourism market share, but not vice versa. It is observed that time trend coefficient is significant only in second equation for Spain's case and in the two equations for Turkish case.

Table 4 presents a bivariate VAR(2) model for Turkey's visitors market share with a constant, a time trend. Diagnosis of the model indicates that VAR satisfies stability conditions (no root lies outside the unit circle), residual correlation is not detected and residuals normality is satisfied for joint Jarque-Bera tests in this case. Table 5 presents the Granger causality analysis performed indicating that there is not reasonable evidence of Granger causality between the two variables for the Turkish case in line with the pairwise test performed above. Therefore, a different behaviour can be observed again between both destinations, pointing to a great awareness among tourism competitiveness and economic evolution in mature destinations than observed in the case of emerging ones.

Granger causality is influenced by the subset of variables considered in the analysis. Thus, in the Appendix 1 two additional models with covariates representing the transmission mechanisms included are presented for Spain's and Turkey's with its corresponding Granger causality analysis.

It should be noted that in Turkey's model the dummies representing economic crises have been eliminate by singularity matrix problems in the model estimation. It is also noted that the VAR order is lesser in the case of Turkey than in case of Spain.

Regarding the conclusions, it is clearly seen that the direction of the causality between business cycle and tourism competitiveness is different for both countries. In the Spanish case reasonable evidence of Granger causality from the variation of GDP to the tourism market share remains, but not vice versa. But now, in the Turkish case reasonable evidence of Granger causality from the tourism market share to economic growth appears, a conclusion that is in line with the literature supporting the led-growth tourism hypothesis for emerging destinations. It therefore appears that the relationship between the business cycle and tourism competitiveness is different in mature and emerging destinations and thus it may be concluded that the influence of the economic crises on tourism competitiveness would be also different for the two types of destinations.

Table 2: VAR(3) in logs-levels for Spain's market share

Vector Autoregression Estimates Sample (adjusted): 1974 2011 Included observations: 38 after adjustments Standard errors in ( ) & t-statistics in [ ]		
	L_CMERLIBTEN	L_PIBSPA05
L_CMERLIBTEN(-1)	0.462297	0.051449
	(0.19641)	(0.06348)
	[2.35376]	[0.81051]
L_CMERLIBTEN(-2)	-0.181420	-0.048181
	(0.20238)	(0.06541)
	[-0.89641]	[-0.73661]
L_CMERLIBTEN(-3)	-0.060722	-0.017196
	(0.19340)	(0.06251)
	[-0.31397]	[-0.27512]
L_PIBSPA05(-1)	0.961436	1.338886
	(0.58445)	(0.18889)
	[1.64503]	[7.08821]
L_PIBSPA05(-2)	-1.524152	-0.567114
	(0.99702)	(0.32223)
	[-1.52871]	[-1.75997]
L_PIBSPA05(-3)	-0.408988	0.171660
	(1.13278)	(0.36611)
	[-0.36105]	[0.46888]
C	5.472333	3.918665
	(5.03348)	(1.62678)
	[1.08719]	[2.40885]
TIME	0.002100	0.007957
	(0.00926)	(0.00299)
	[0.22670]	[2.65841]
EURO	0.109764	0.009107
	(0.05740)	(0.01855)
	[1.91221]	[0.49091]
L_CMERLIBTEN(-4)	0.205981	0.003694
	(0.15341)	(0.04958)
	[1.34267]	[0.07450]
L_PIBSPA05(-4)	0.664822	-0.244279
	(0.68468)	(0.22128)
	[0.97099]	[-1.10391]
R-squared	0.813923	0.998124
Adj. R-squared	0.745005	0.997429
F-statistic	11.81008	1436.260
Log likelihood	67.91337	110.8347
Akaike AIC	-2.995441	-5.254458
Schwarz SC	-2.521403	-4.780420
Mean dependent	2.433910	13.59999
S.D. dependent	0.095178	0.306329
Determinant resid covariance (dof adj.)		5.49E-07
Determinant resid covariance		2.77E-07
Log likelihood		179.0337
Akaike information criterion		-8.264931
Schwarz criterion		-7.316855

Author's own elaboration.

Table 3: Granger (non-)causality tests in logs-levels for Spain's market share

VAR Granger Causality/Block Exogeneity Wald Tests Sample: 1970 2011 Included observations: 38			
Dependent variable: L_CMERLIBTEN			
Excluded	Chi-sq	df	Prob.
L_PIBSPA05	7.505328	3	0.0574
All	7.505328	3	0.0574
Dependent variable: L_PIBSPA05			
Excluded	Chi-sq	df	Prob.
L_CMERLIBTEN	1.546788	3	0.6715
All	1.546788	3	0.6715

Author's own elaboration.

Table 4: VAR(2) in logs-levels for Turkey's market share

Vector Autoregression Estimates
Sample (adjusted): 1973 2011
Included observations: 39 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	L_CUOTUR	L_PIBTUR05
L_CUOTUR(-1)	0.611810	0.012609
	(0.18732)	(0.05125)
	[3.26606]	[0.24601]
L_CUOTUR(-2)	0.144809	0.099305
	(0.21770)	(0.05956)
	[0.66517]	[1.66718]
L_PIBTUR05(-1)	-0.301947	0.404153
	(0.71321)	(0.19514)
	[-0.42336]	[2.07110]
L_PIBTUR05(-2)	-0.419242	-0.127530
	(0.72191)	(0.19752)
	[-0.58074]	[-0.64566]
C	18.99829	12.94960
	(11.2548)	(3.07939)
	[1.68802]	[4.20525]
TIME	0.073471	0.037718
	(0.03398)	(0.00930)
	[2.16238]	[4.05729]
EURO	-0.041489	-0.041989
	(0.09864)	(0.02699)
	[-0.42062]	[-1.55582]
L_CUOTUR(-3)	0.109303	0.020407
	(0.20011)	(0.05475)
	[0.54621]	[0.37273]
L_PIBTUR05(-3)	-0.872176	-0.340078
	(0.70828)	(0.19379)
	[-1.23140]	[-1.75487]
R-squared	0.961226	0.995149
Adj. R-squared	0.950887	0.993856
Sum sq. resids	0.514474	0.038514
S.E. equation	0.130955	0.035830
F-statistic	92.96546	769.3335
Log likelihood	29.06075	79.60723
Akaike AIC	-1.028756	-3.620883
Schwarz SC	-0.644857	-3.236985
Mean dependent	0.164129	13.02452
S.D. dependent	0.590911	0.457103
Determinant resid covariance (dof adj.)		2.11E-05
Determinant resid covariance		1.25E-05
Log likelihood		109.4976
Akaike information criterion		-4.692183
Schwarz criterion		-3.924385

Author's own elaboration.

Table 5: Granger (non-)causality tests in logs-levels for Turkey's market share

VAR Granger Causality/Block Exogeneity Wald Tests Sample: 1970 2011 Included observations: 39			
Dependent variable: L_CUOTUR			
Excluded	Chi-sq	df	Prob.
L_PIBTUR05	0.757969	2	0.6846
All	0.757969	2	0.6846
Dependent variable: L_PIBTUR05			
Excluded	Chi-sq	df	Prob.
L_CUOTUR	2.665452	2	0.2638
All	2.665452	2	0.2638

Author's own elaboration.

5. Conclusions.

Spain is one of the world's leading tourism destinations. Its evolution has experienced peaks and troughs in line with the overall evolution of the economy. Turkey is one of the most important competitors of Spain and constitutes an emerging destination in the Mediterranean area.

The literature on tourism competitiveness supports the decision to use market share as an appropriate indicator of revealed competitiveness which also enables demand and supply transmission mechanisms to be established between the economic situation and competitiveness.

A sufficient historical perspective of the crises in Spain reveals that they usually give rise to structural effects which are reflected in competitiveness with varying degrees of delay. In addition to the intensity or duration of the shocks, a crucial aspect of their effects on destination competitiveness is whether they are symmetrical or asymmetrical. It can be observed that Spanish tourism competitiveness, measured by its share in the world market, is characterised by a declining trend which is explained by the natural emergence of new competing destinations and by the maturity of the Spain's principal tourism product. During crisis periods, the cyclical oscillations of the Spanish economy and those of the main outbound markets have given rise to a loss in Spain's domestic tourism competitiveness, reinforcing the negative structural trend described. This also has a negative effect on reinvestment possibilities during periods of economic growth.

Tourism in Turkey is characterised by a strong upward trend that is also affected by the economic crises. Therefore the comparison between the two cases allows us to establish whether there are asymmetric behaviour between emerging and mature tourism destinations as being affected by economic crises.

The econometrics analyses carried out for the Spanish and Turkish cases do not constitute a simple theoretical divagation but are supported by the limited data available. A different relationship between the business cycle and tourism competitiveness looms in mature and emerging destinations and thus it may be concluded that the influence of the economic crises on tourism competitiveness would be also different for the two types of destinations. In mature destinations economic crises reinforce a natural trend of market share loss of this type of destinations in favour of emerging destinations that increasingly driven by their growing own inertia are, in principle, less affected by the evolution of its own business cycle. Therefore, this study advances the understanding of interactions between economic cycles and competitiveness, and can advise tourism agents of the effects that crises (often of an exogenous nature) may have on destinations and tourism companies.

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Appendix 1: EXPANDED VAR MODELS FOR SPAIN AND TURKEY

Expanded Spain model

Vector Autoregression Estimates
Sample (adjusted): 1974 2011
Included observations: 38 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	L_CMERLIBTEN	L_PIBSPA05
L_CMERLIBTEN(-1)	0.318656	0.064614
	(0.23519)	(0.05193)
	[1.35488]	[1.24419]
L_CMERLIBTEN(-2)	-0.065568	0.028811
	(0.20011)	(0.04419)
	[-0.32766]	[0.65204]
L_CMERLIBTEN(-3)	-0.278909	0.016085
	(0.17821)	(0.03935)
	[-1.56507]	[0.40877]
L_PIBSPA05(-1)	1.894181	0.761031
	(0.93222)	(0.20584)
	[2.03190]	[3.69715]
L_PIBSPA05(-2)	-1.195062	-0.194231
	(0.90632)	(0.20012)
	[-1.31858]	[-0.97056]
L_PIBSPA05(-3)	-0.492730	0.070328
	(1.00961)	(0.22293)
	[-0.48804]	[0.31547]
C	18.89921	-3.290869
	(12.5944)	(2.78095)
	[1.50060]	[-1.18336]
TIME	0.016996	-0.001459
	(0.01927)	(0.00426)
	[0.88197]	[-0.34281]
L_CMERLIBTEN(-4)	0.394643	0.082362
	(0.24246)	(0.05354)
	[1.62765]	[1.53840]
L_PIBSPA05(-4)	0.050259	-0.062655
	(0.69050)	(0.15247)
	[0.07279]	[-0.41093]
EURO	0.099739	0.001009
	(0.07004)	(0.01547)
	[1.42402]	[0.06525]
L_CAMASESPANA	-0.077319	0.006008
	(0.21545)	(0.04757)
	[-0.35887]	[0.12630]
L_FDIINFESPUN	0.015731	-0.008067

	(0.03070)	(0.00678)
	[0.51246]	[-1.19015]
L_FDIOUTESPUN	0.014446	0.011976
	(0.02009)	(0.00444)
	[0.71912]	[2.69976]
L_ITRESPPC	0.004729	-0.006905
	(0.10126)	(0.02236)
	[0.04670]	[-0.30882]
L_PIBUK05	-0.548835	0.280705
	(0.61616)	(0.13605)
	[-0.89073]	[2.06319]
L_PIBGER05	-0.737336	0.321056
	(0.72160)	(0.15933)
	[-1.02181]	[2.01498]
L_TCERCLUES	-0.455831	-0.023783
	(0.29816)	(0.06584)
	[-1.52879]	[-0.36124]
CRISIS	-0.076246	-0.001070
	(0.06543)	(0.01445)
	[-1.16534]	[-0.07405]
CRISIS79	0.072323	0.001856
	(0.05044)	(0.01114)
	[1.43389]	[0.16666]
CRISIS93	-0.020391	-0.008541
	(0.06204)	(0.01370)
	[-0.32869]	[-0.62356]
CRISIS2001	0.042935	-0.002535
	(0.06041)	(0.01334)
	[0.71068]	[-0.19004]
CRISIS2008	-0.024479	-0.003335
	(0.05738)	(0.01267)
	[-0.42661]	[-0.26321]

R-squared	0.931465	0.999677
Adj. R-squared	0.830946	0.999204
Sum sq. resids	0.022972	0.001120
S.E. equation	0.039134	0.008641
F-statistic	9.266591	2112.920
Log likelihood	86.89082	144.2883
Akaike AIC	-3.362675	-6.383596
Schwarz SC	-2.371504	-5.392426
Mean dependent	2.433910	13.59999
S.D. dependent	0.095178	0.306329

Determinant resid covariance (dof adj.)	1.07E-07
Determinant resid covariance	1.67E-08
Log likelihood	232.3815
Akaike information criterion	-9.809553
Schwarz criterion	-7.827211

VAR Granger Causality/Block Exogeneity Wald Tests
Date: 05/09/13 Time: 09:20
Sample: 1970 2011
Included observations: 38

Dependent variable: L_CMERLIBTEN

Excluded	Chi-sq	df	Prob.
L_PIBSPA05	6.119716	3	0.1059
All	6.119716	3	0.1059

Dependent variable: L_PIBSPA05

Excluded	Chi-sq	df	Prob.
L_CMERLIBTEN	2.718691	3	0.4371
All	2.718691	3	0.4371

Expanded Turkey model

Vector Autoregression Estimates
Sample (adjusted): 1983 2011
Included observations: 28 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	L_CUOTUR	L_PIBTUR05
L_CUOTUR(-1)	-0.423010	0.089384
	(0.29887)	(0.12819)
	[-1.41537]	[0.69727]
L_CUOTUR(-2)	-0.243869	0.206273
	(0.27490)	(0.11791)
	[-0.88711]	[1.74938]
L_PIBTUR05(-1)	0.129865	-0.043791
	(0.73727)	(0.31623)
	[0.17614]	[-0.13848]
L_PIBTUR05(-2)	0.031610	-0.134551
	(0.57694)	(0.24746)
	[0.05479]	[-0.54372]
C	44.15195	14.32661
	(22.1184)	(9.48703)
	[1.99617]	[1.51013]
TIME	0.076814	0.038008
	(0.04519)	(0.01938)
	[1.69969]	[1.96078]
L_CUOTUR(-3)	0.088768	0.099642
	(0.31508)	(0.13515)
	[0.28173]	[0.73729]
L_PIBTUR05(-3)	-0.448119	-0.222163
	(0.72452)	(0.31076)
	[-0.61850]	[-0.71490]
EURO	0.271567	-0.038924
	(0.14978)	(0.06424)
	[1.81314]	[-0.60589]
L_CAMASTURQUIA	0.952642	-0.184372
	(0.36383)	(0.15605)
	[2.61837]	[-1.18146]
L_FDIINFTURPUN	0.128639	0.016053
	(0.05957)	(0.02555)
	[2.15953]	[0.62830]
L_FDIOUTURPUN	-0.011011	0.002137
	(0.01575)	(0.00675)
	[-0.69935]	[0.31646]
L_ITRTURPC	0.319155	0.027369
	(0.18089)	(0.07759)
	[1.76439]	[0.35275]
L_PIBUK05	-2.189398	0.082079
	(0.97624)	(0.41873)

	[-2.24268]	[0.19602]
L_PIBGER05	-1.618333	0.289251
	(1.55342)	(0.66629)
	[-1.04179]	[0.43412]
L_TCERCLUTUR	0.049807	-0.046972
	(0.14078)	(0.06038)
	[0.35381]	[-0.77791]
R-squared	0.984837	0.994373
Adj. R-squared	0.965882	0.987339
Sum sq. resids	0.098325	0.018089
S.E. equation	0.090519	0.038826
F-statistic	51.95855	141.3680
Log likelihood	39.39325	63.09476
Akaike AIC	-1.670947	-3.363912
Schwarz SC	-0.909687	-2.602652
Mean dependent	0.411274	13.23389
S.D. dependent	0.490063	0.345051

Determinant resid covariance (dof adj.)	9.17E-06
Determinant resid covariance	1.68E-06
Log likelihood	106.6637
Akaike information criterion	-5.333123
Schwarz criterion	-3.810603

VAR Granger Causality/Block Exogeneity Wald Tests
Sample: 1970 2011
Included observations: 28

Dependent variable: L_CUOTUR

Excluded	Chi-sq	df	Prob.
L_PIBTUR05	0.040732	2	0.9798
All	0.040732	2	0.9798

Dependent variable: L_PIBTUR05

Excluded	Chi-sq	df	Prob.
L_CUOTUR	4.487983	2	0.1060
All	4.487983	2	0.1060