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POLITICAL BUDGET CYCLE AND THE
SPEND-REVENUE NEXUS

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Abstract

This paper examines whether opportunistic and partisan motives affect the causal link between government spending and government revenues in 14 EU countries. Our results show that this causal relationship is largely determined by ideological and opportunistic motives. Government spending show an upward drift during election times and "partisan" motives behind government spending are clearly revealed. Left-wing cabinets attach greater importance to spending than right-wing cabinets and right-wing cabinet's value revenue more that left-wing parties. Maastricht Treaty restricted policy makers of the EU member countries from pursuing expansionary fiscal policies on political grounds.

JEL Classification: E60, H50

Keywords: government, expenditures, revenues, budget, policy, EU countries, political considerations

1. Introduction

In the course of the last decades, the causal relationship between government expenditure and government revenues has motivated a vast literature both at the theoretical and empirical level. This literature has set forth various hypotheses concerning the inter-temporal relationship between the government expenditures and revenues. (For an extensive review see, among others, Payne (2003)). Central to the debate is whether governments should rely on spending or instead on taxes or on both to correct fiscal imbalance. Knowledge of the relationship between revenue and expenditure is of vital importance if appropriate policy measures are to be taken in order to reduce deficits. For instance, if there is a bi-directional causality running between revenue and expenditure, the implication is that to attack the problem of continuously increasing budget deficits, the government should be cautious, as simply raising revenue, cutting expenditure, or simply changing both sides without taking into account the interdependence between the two may be ambiguous in their impacts on fiscal situations.

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Despite the lively discussion about the causation between public spending and revenues in shaping budget deficits, the empirical analysis of the role of electoral and partisan motives in determining this relationship has yet to develop. On the one hand, the various hypotheses of the inter-temporal relationship between government expenditures and revenues completely ignore the role of electoral and partisan motives. On the other hand, political budget cycles (PBC) theory while it highlights the distortions in fiscal policy induced by incumbent politicians in response to impending elections, it ignores to predict how the causal relationship between government spending and revenue could be modified by electoral and/or partisan motives. We regard this as a lacuna in the literature because recent theoretical studies on political budget cycles emphasize the influence of elections on fiscal policy decisions. Drazen (2001), Franzese (2002), Shi and Svensson (2004) and Drazen and Eslava (2005) and Vamvoukas (2012) review some recent developments in the theory. In a similar vein, political economists have argued that parties of the Right and Left differ in their fiscal policy priorities. Specifically, left-wing governments favour larger public economies, and run greater expenditure and lower revenue than right-wing governments (see Franzese, 2002 for a discussion).

Thus, the central theme of this paper revolves around the question whether the causation between public spending and revenues is motivated by electoral (opportunistic and/or ideological) motives. To our knowledge this study is the first to look empirically at the role of electoral and partisan motives in determining the causal link between government expenditure and government revenues. In this vein, the paper examines whether opportunistic and/or partisan motives affect the causal link between government expenditure and government revenues in 14 EU member states. The model is also estimated separately for the periods 1970-1992 and 1970-2008, in order to test for the impact of fiscal consolidation associated with the Maastricht criteria for EMU membership.

The rest of the paper is organized as follows. The following section provides a brief review of the literature on the causal link between government expenditures and revenues, and on the electoral and partisan motives issue. Section III examines data, panel unit root and cointegration tests. Panel estimation background and results are examined on Section IV. Section V examines the causality and the robustness of our model and Section VI summarizes and concludes.

2. Review of Literature

In the literature, the discussion of the causal link between government revenues and expenditures has resulted in several hypotheses. Four main

hypotheses have been advanced. The first one is known as the tax-and spend hypothesis. This hypothesis was initially formulated almost simultaneously by Friedman (1978) and Buchanan and Wagner (1978), but these authors differed in their perspectives. While Friedman (1978) argues that the causal relationship is working in a positive direction, Buchanan and Wagner (1978) postulate that the causal relationship is negative. According to Friedman raising taxes will lead to more government spending and hence to fiscal imbalances. Cutting taxes is, therefore, the appropriate remedy to budget deficits. On the contrary, Buchanan and Wagner (1978) believe that tax increases may make *electorate* hostile toward government spending as they are forced to directly reckon with its costs. Likewise, with a cut in taxes *voters* will perceive that the cost of government programs has fallen. As a result they will demand more programs from the government which if undertaken will result in an increase in government spending. Higher budget deficits will then be realized since tax revenue will decline and government spending will increase.

The causal relationship between government expenditure and government revenues has also been explained by the spend-and-tax hypothesis. This hypothesis advocates the antithesis of the tax-and spend hypothesis; is built on the tenet that expenditures causes revenues. According to Peacock and Wiseman (1979) once a relatively high level of taxation and expenditure is created during major upheavals, often called the 'displacement effect', neither the level of taxation not the level of spending will revert back to the pre-crisis levels so that the public sector is permanently enlarged. Thus, this hypothesis suggests that, a spending restraint is required to reduce public deficits and reducing expenditure should be the optimal solution to the current budget deficits. This hypothesis is also consistent with Barro's (1979) view that today's deficit-financed spending means increased taxes liabilities in the future in the context of the Ricardian equivalence proposition.

The third hypothesis, known as fiscal synchronization, initially formulated by Musgrave (1966) as well as by Meltzer and Richard (1981) suggest that *voters* compare the marginal benefits and marginal costs of government services when formulating a decision in terms of the appropriate levels of government revenues and government expenditures. Thus revenue and expenditure decisions are jointly determined under this fiscal synchronization hypothesis. (Empirically, this hypothesis is characterized by contemporaneous feedback or bi-directional causality between government revenues and government expenditures.

In contrast to the above hypothesis, advocates of the institutional separation hypothesis suggest that there is no inter-temporal causality between

public expenditure and public revenue. This lack of causal link is due to 'many important actors with divergent interests and agendas' and that the disagreement between parties or groups in the decision making process is a cause for the growing pattern of public debt. The greater this conflict is among these interest groups, the more difficult it is to enact deficit-reducing measures. Wildavsky (1975) and Cameron (1978), supporting the institutional separation hypothesis, argue that in the long run government decisions to spend are independent from decisions to tax. Increased public purchases do not necessarily explain why people are willing to pay higher taxes. Thus, the public economy expands in conditions under which government expenditures do not go along with tax revenues.

It is clear from the above short sketch of the four hypotheses of the causal relationship between government spending and tax revenues that the role of electoral and partisan motives as possible determinants of this relationship has been omitted. On the other hand, political budget cycles theory provides a useful analytical framework that highlights the distortions in fiscal policy induced by incumbent politicians in response to impending elections; cut taxes and increase spending just prior to elections, in order to curry favour with voters or to enhance service levels by providing new services immediately prior to an election to attract more votes.

Two main approaches explore economic fluctuations around elections: the electoral and partisan cycle explanation. The former originated by Kalecki (1943) developed by Nordhaus's (1975) political business cycle model stems from the policy makers incentives to create booms in election years in order to increase their chances of re-election. It is assumed that the electorate is backward looking and evaluates the government on the base of its past track record. Consequently, it is believed that governments regardless of ideological orientation increase (decrease) public expenditure (revenue) just before an election and decrease (increase) afterwards. The other explanation, the partisan cycle approach initially developed by Hibbs (1977), argues that governments' ideology shapes policies and outcomes. It is commonly assumed that left-wing parties favor public spending increases which right-wing parties' aim at budget reductions. Consequently, alternation in power between various political parties, leads to political cycles.

Other models (see, among others, Rogoff and Sibert (1988) and Rogoff (1990)) emphasize the role of temporary asymmetries regarding the politicians' competence level-meaning his ability to provide more public goods for a given tax revenue- in explaining electoral cycles in fiscal policy. These authors suggest that observed pre-election fiscal policy may serve as a signal

of post-electoral competence. In an alternative model, Persson and Tabellini (1990) and Shi and Svensson (2006) suggested a moral hazard of the competence approach. They assume that the incumbent government can use a policy instrument unobservable to the public that is a substitute for competence: the hidden effort can be interpreted as the government's short term borrowing. The result is an incentive for incumbents to generate a fiscal expansion before the election.

Finally, public choice literature points to the political importance of organized interest groups with the power to lobby politicians for policies favorable to them. Drazen and Eslava (2004; 2005) propose a formal model that integrates special interest groups into an inter-temporal model of political cycle with rational voters. This model differs from other models of political budget cycles as voters care about the preferences of incumbent over different interest groups rather than about incumbents' competence. Such an incumbent may find it useful to target voters with the programs they prefer, and to initiate those programs before an election, but to complete them only after the election. Our study finds evidence consistent with this model. Voters will prefer a candidate who assigns higher value to goods they prefer, but only have imperfect information about the politicians' preferences over different voters groups. They therefore need to extract such information about an incumbent's preferences, from her fiscal actions. Since politicians' preferences over types of expenditures are regarded as displaying some persistence through time, high pre-election spending on one good is positively correlated with its provision after the election. We may consider an incumbent wanting to influence voters by credibly promising groups their favorite kind of expenditures after an election.

While PBC theory has motivated numerous empirical tests, there is, at our knowledge, no empirical study which predicts how the causal relationship between government spending and revenues could be modified by electoral and/or partisan motives. Some studies present evidence for the existence of PBC in a large cross-section of both developed and less developed economies. For instance, Shi and Svensson (2002) find for a panel of 91 developing and developed countries over the period 1975-95 significant pre-electoral increases in the government budget deficit. Similarly Shi and Svensson (2006) examine the relationship between election and fiscal policy within a large sample of countries. They found a significant deterioration of fiscal balances in election years mainly in developing economies than in developed ones. Moreover, Persson and Tabellini (2002) report statistically significant tax decreases before elections in a sample of 60 democracies over the period 1975-95. Block (2002) confirms the presence of political business cycles in a sample of Sub-Saharan

African countries, both in the fiscal balance and in public expenditures but found no significant electoral manipulation of global tax revenues.

3. Data, Panel Unit Root and Cointegration Tests

In this Section, our methodology proceeds in two main steps. First, we conduct panel unit root tests to investigate the order of integration of each variable under study. Second, conditional on the result that each variable is integrated of order one, that is, I(1), we test for panel cointegration employing Pedroni's (1999; 2004) technique. However, before performing panel unit root and cointegration tests, it is important to discuss the data set[1]. The empirical analysis uses a balanced panel over 1970-2008 for 14 EU countries (group A), including Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Portugal, Spain, Sweden and the United Kingdom (UK)[2].

Given the structure of our dummy variables, we check the robustness of the results considering the group B which includes Denmark, France, Germany, Greece, Ireland, Portugal, Spain, Sweden and the UK. All the data are annual and come from the Eurostat databases. Our purpose is to use comparable variables for each country, so that similar sources are employed. The choice of the entire period 1970-2008 was dictated by the fact the data set for general government is available on a comparable basis for all the EU member states included in the empirical analysis. Seeking the robustness of the results, the time frame 1992-2008 aim at evaluating the spend-tax debate after 1992 when the Maastricht Treaty was established. Based on the relevant literature of the subject matter, we employ data on total expenditure of general government (G) and total revenue of general government. The variables G and R are transformed to real terms deflating the nominal data by the GDP at current prices. All fiscal variables are measured as a fraction of GDP at 2000 market prices. In order to take account of the potential electoral and partisan effects we distinguish between two major ideological stances, the right and the left, when partisanship is measured.

According to the national elections in each EU member state during the period 1970-2008 the following information is revealed: (1) Five countries, namely Austria, Belgium, Finland, Italy and the Netherlands, have proportional-type political systems, which have given rise to coalition governments. (2) The remaining countries have a majoritarian system that interchanges two parties in power. (3) in two countries, Ireland and Portugal, the two major parties have been non-socialist (Fianna Fail and Fine Gael-Labour party) and

non-conservative (Socialist and Social Democratic) respectively. (4) In Sweden, there has been an interchange in power of Social Democrats and coalitions of non-socialist parties. (5) In France, the control of the presidency and the government has not always been in the hands of the same party (cohabitation). (6) In three countries, notably Greece, Portugal and Spain, the parliamentary system was suspended for a number of years (Greece, 1967-1974) or was revived in the mid-1970s (Portugal, 1975; Spain, 1977). Finally, Germany was reunified in 1989.

On the basis of the outcomes of the national elections, we constructed the pre and post-election year dummy variables. (in order to save space we do not report this data). However, they are available upon request). In so doing, we divided particular calendar years according to the proportions of total months in a year that each party spent in power. The calculations were based on the definition of the election year as the 12-month period ending at the end of the month of the election. Thus DEC and DES are the election year dummies associated with the incumbent government- conservative (liberal) and socialist, respectively-administering the election; DNC and DNS are the respective post-election year dummies. These political dummy variables were used in regression equations designed to test for partisan cycles in the 14-EU countries. For the respective regressions intended to test for electoral cycles, we collapsed the above pre-election year dummies DEC and DES, and the post-election year ones, i.e. DNC and DNS, into two dummy variables, notably DE and DN, respectively. Variables DM_t and DEM_t are two dummies intended to capture the impact of the Treaty of Maastricht (1992) on the dependent variable. In particular, DM_t measures the possible change in fiscal policies due to the Maastricht criteria; it takes a zero value before 1992 and a value of one otherwise. Variable DEM_t is an interaction dummy intended to capture whether the political effects on the dependent variable have been neutralized or weakened in pre-election periods in the aftermath of the Treaty. The interaction dummy is defined as the product $DEM_t = (DM_t*DE)$, where DE is a pre-election year dummy variable.

Before proceeding to the panel cointegration analysis, it is necessary to test each variable under study for a unit root. Table 1 presents the results derived from LLC and IPS panel unit root tests over 1970-2008 and 1992-2008 time periods. Given that LLC and IPS tests require the specification of lag length for each cross section ADF equation, we use the MSIC (Modified Schwarz Information Criterion) introduced by Ng and Perron (2001). MSIC lag length selection criterion advances the method of SIC (Schwarz Information Criterion) mainly when there are negative moving average errors. Lags between 1 and

9 are tried. The lag length minimizing the MSIC is chosen. In addition LLC and IPS tests require determining whether individual constant and time trend will be included in the test equations. The existence of a unit root is tested in all variables with individual constant and time trend in the regressions. Panel unit root tests both for Group A and B indicate that all variables are found to be nonstationary in the entire period 1970-2008 and in the sub-period 1992-2008. The null hypothesis of a unit root is not rejected even at the 10% significance level. The test results show that the individual variables are characterized as an integrated process of order one I(1).

Once the existence of a panel unit root has been established, the next stage of our methodology is to test whether a long-run equilibrium relationship between R and G. That all variables are integrated of order one is a fundamental prerequisite for cointegration tests. Engle and Granger (1987) formulated a cointegration test, based on examining the disturbances of a spurious regression, and performed employing I(1) variable. Given that the variables are cointegrated then the residuals should be integrated of order zero I(0). Pedroni (1999; 2004) proposed a panel cointegration test builds on Engle and Granger (1987) two-step cointegration procedure. Pedroni's cointegration technique overcomes the problem of small samples, allows for heterogeneity in the intercepts and slopes of the cointegrating equation and permits for trend coefficients across sections. Wagner and Hlouskova (2010) evaluating the performance of panel cointegration tests explore their properties by means of a large scale simulation analysis. Their investigation includes both single and system cointegration tests. They consider the single equation tests of Pedroni (1999; 2004) and of Westerlund (2005) and the system tests developed in Larsson et al. (2001) and Breitung (2005). Wagner and Hlouskova (2010) examine the performance of the cointegration tests assuming the values $T\varepsilon\{10,25,50,100\}$ and $N\varepsilon\{5,10,25,50,100\}$ and considering that $T \geq N$. Their computations have been executed using 5,000 replications for each DGP (data generating process) and panel size. The strongest finding of their simulation analysis is that Pedroni's cointegration tests applying the ADF principle have the highest power throughout, which is substantially larger than the power of other single equation and system panel cointegration tests. In particular, Westrlund's tests appear to be severely undersized in the presence of cross-sectional correlation and cross-unit cointegration. The system tests present very bad performance for the small values of T and seem to suffer to a certain extent from too large cross-section dimension. In checking the null hypothesis of no cointegration, Wagner and Hlouskova (2010) conclude that Pedroni's panel ADF-and group ADF- tests are the first choice.Table 1 presents the results derived from LLC and IPS panel

unit root tests over 1970-2008 and 1992-2008 time periods. Given that LLC and IPS tests require the specification of lag length for each cross section ADF equation, we use the MSIC (Modified Schwarz Information Criterion) introduced by Ng and Perron (2001). MSIC after examining the variables R_{it} and G_{it} for a unit root and having established that the model (R_{it}, G_{it}) is cointegrated, the next stage of our econometric methodology is to estimate the model using GTSLS (generalized two stage least squares) technique. Panel models that can be established by employing GTSLS method may be specified as follows:

$$Y_{it} = \alpha + x_{it}'b_{it} + \delta_i + \gamma_t + \varepsilon_{it} \tag{5}$$

where $i=1,2,...N$ denotes cross-sectional units and $t=1,2,...,T$ dated periods; Y_{it} is the dependent variable; x_{it} is k-vector of explanatory variables; b is the vector of coefficient to be estimated; α is the overall constant in the model; δ_i and γ_t denote cross-section or period specific effects which can be fixed or random; ε_{it} are the error terms. The structure of vector b permits for b coefficients to differ across periods or cross-section countries. Specification (5) may be estimated applying GTSLS. The GTSLS estimator is a straightforward extension of the OLS estimator. Given panel model (5), the OLS estimator is specified as follows:

$$\hat{b}_{OLS} = (\sum_i x_i'x_i)^{-1}(\sum_i x_i'y_i) \tag{6}$$

If F is the fixed effects transformation operator, the GTSLS estimator is determined as:

$$\hat{b}_{GTSLS} = (\sum_i x_i'FP_{\tilde{M}_i}Fx_i)^{-1}(\sum_i x_i'FP_{\tilde{M}_i}Fy_i) \tag{7}$$

where $\tilde{M} = FM_i$ and $P_{\tilde{M}_i}$ is the orthogonal matrix for the instruments M_i. Similarly, using cross-sectional GLS and employing the random effects method, the GTSLS estimator is written as follows:

$$\hat{b}_{GTSLS} = (\sum_i x_i'\hat{\Omega}^{-1/2}P_{M_i^*}\hat{\Omega}^{-1/2}x_i)^{-1}(\sum_i x_i'\hat{\Omega}^{-1/2}P_{M_i^*}\hat{\Omega}^{-1/2}y_i) \tag{8}$$

where $M_i^* = \hat{\Omega}^{-1/2}M_i$ and $\hat{\Omega}$ is an estimator of the contemporaneous variance-covariance matrix of ε_{it}. In the random effects models the matrix Ω can be computed by various techniques such as the Swamy-Arora method which is used in our empirical analysis. Note that in large samples the Wallace-Hussain and Wansbeck-Kapteyn estimators generate similar results compared with

the Swamy-Arrora estimator. Applied econometrics indicate that these random effects approaches lead to the derivation of unbiased variance components in the case of GTSLS approach, because data and the instruments are both effectively transformed using the estimated covariances. In point of view, GTSLS methodology allows for various structures of correlation between the residuals[3].

Tables 3, 4 and 5 present panel estimates using G_{it} or R_{it} as the dependent variable. Taking into account that our empirical analysis aims at checking the robustness of the results, we apply the GTSLS method estimating fixed and random effects models. It should be noted that various panel techniques such as GTSLS are based on the assumption that the variables G_{it} and R_{it} follow a random walk process. Panel estimation procedures may produce spurious results as the variables may not be stationary in levels. It is important to point out that over identifying restrictions tests developed by Sargan (1958) and Hansen (1982) among others, assume that the regressors and instruments are nonstationary characterized as I(1) processes[4]. It is clear from Table I that in the case of groups A and B the variables G_{it} and R_{it} is found to be nonstationary. Applying GTSLS the instrument list includes lags of G_{it} and R_{it} as well as a constant term. R^2 and *F-statistics* are computed to test the explanatory power of the estimated models. In both fixed and random effects specifications, we adopt settings for While cross-section to permit for general contemporaneous correlation between the country residuals. While cross-section allows for GTSLS estimators, b_{GTSLS}, to correct for both contemporaneous correlation and cross-section heteroscedasticity. In the random effects specifications, the Swemy-Arora (1972) estimator is used in order to compute the random component variances. In panel methods employing the random effects model, it is assumed that the random effects are not correlated with the explanatory variables. The null hypothesis that the random effects are uncorrelated with the explanatory variables is tested by using a Hausman (1978) test. The Hausman statistic follows asymptotically the Chi-square with k degrees of freedom, where k is the number of estimated coefficients. The Hausman test denotes that in the random effects estimates the null hypothesis is not rejected implying that there is no misspecification in the model.

GTSLS fixed and random effects results are presented in Tables 3, 4 and 5. Table 3 presents benchmark regressions. The key conclusion from this table is that there is interplay between G_{it} and R_{it} in both groups. All estimates for G_{it} and R_{it} are highly significant carrying positive coefficients, indicating the validity of fiscal synchronization hypothesis. Our estimates for groups A and B show that in all regressions the explanatory variables G_{it} and R_{it} are statistically significant at better than the 5% level. The estimated coefficient associated to

the variable R_{it} indicates a positive relationship between government revenue and expenditure. These results suggest that any discrepancy between revenues and expenditures is eventually eliminated through adjustment in both. For example, when expenditures exceed revenues, forces are generated that move expenditures back towards revenue levels. Similarly, when revenues are larger than expenditures, revenues adjust towards the expenditure levels that exist. It is interesting to note that the impact of a change in revenue is almost totally transmitted to expenditures: a one percentage-point increase in real revenue increases public spending by more than 0.80 of a point. These findings are to be expected given the importance that member countries of the EU in this period assigned to maintaining a balanced budget due to pre and post Maastricht Treaty restrictions.

Focusing on the robustness of GTSLS results, the estimates appear to be highly significant in both groups either using the fixed or the random effects model. The high values of R^2 and *F–statistics* show that the estimated fixed and random effects models have satisfactory goodness of fit. In the random effects estimates the *H–statistics* suggest that the null hypothesis cannot be rejected, implying that in none of our baseline regressions did we find any evidence of misspecification bias. In sum, our GTSLS results for the 14 EU and 9 EU countries, based on fixed and random effects models, corroborate the theoretical background of the fiscal synchronization.

Table 4 reports the basic results that are obtained when pre-election year dummy, DE, and post-election year dummy, DN, are included. The key result is that there is a systematic change in government spending and revenues in the pre and post-election years. These changes in spending and revenue shares are not only statistically significant but significant in magnitude as well. The estimated coefficients of DE and DN on both equations of government spending and government revenues is significantly greater than one in FE and RE estimations. That is, on average government spending and revenues expanded by more than one percentage point in election and post election times. For instance, in the case of random effect estimation government spending in the pre-election period increased by 4.4% of GDP and 3.5% of GDP in the post-election year period. A similar pattern is revealed by the government revenue equation. The novel result of this paper, however, is that government spending and revenues continues to rise after the election period. These findings seem to be consistent with Drazen and Eslava's model of political cycle with rational voters that integrates special interest groups. To wit, we may consider an incumbent wanting to influence voters by credibly promising groups their favorite kind of expenditures after an election. Such an incumbent may

find it useful to target voters with the programs they prefer, and to initiate those programs before an election, but to complete them only after the election. However, due to balanced-budget restrictions imposed by the Maastricht Treaty EU countries increase revenues both before and after election times.

Although our analysis do not distinguish between targeted and non-targeted types of public expenditures and revenues EU incumbents seem to find it useful to target voters with the programs they prefer, and to initiate those programs before an election, but to complete them only after the election. It has been widely argued in the literature that the category of spending that is particularly targeted is that of spending for investment projects. Schuknecht (2000), Khemani (2004) and Drazen and Eslava (2010) argued that infrastructure expenditures appear as a more convenient tool for political patronage of specific groups, since new construction contracts may be given selectively. Furthermore, public investment projects usually run over several years. Other researchers, however, (see among others Rogoff (1990) Block (2002) and Vergne (2009) provide evidence that governments tend to increase public spending on more visible, perhaps at the expense of expenditures on less visible goods.

The impact of the Treaty of Maastricht as measured by the statistically significant coefficients of the dummy variables DM and DEM reported in Table 4. DM dummy indicates that Maastricht criteria restricted European policy from pursuing expansionary fiscal policies. Driven by the desire to fulfill the Maastricht fiscal criteria and pressed by mounting debt burdens that have accumulated over the past 30 years, a majority of EU countries attempted to reduce their budget deficits. Similarly, the estimated coefficient of the interaction term $DEM_t = (DM_t*DE)$ on government spending is negative and statistically significant which confirmed that EU countries did not take policy actions leading to the creation of electoral cycles in fiscal instruments. Our findings seem to be consistent with Drazen and Eslava's model of political cycle with rational voters that integrates special interest groups.

Turning to the partisan model equations we also find that ideological motives appear to be significant in explaining government spending and revenues. The coefficient of the partisan variables (DEC and DES) in the government spending equation is significantly positive, reflecting the fact that left-wing governments tend to be more spending-prone that right wing administrations. Our findings reveal that left-wing governments increase public expenditures more than twice as much as centrist and right-wing governments do. It is noteworthy that government revenues as a share of GDP is not statistically related to the pre elections years under the left-wing cabinets (administrations). That fact

that the coefficient of government revenues is only marginally significant at the 10% level, however, suggests that there is considerable variation in the revenue policies of the sample countries. Some countries may also have used revenue policies at times, but the coefficient of election variable in the estimation of total revenue is smaller than in the expenditure estimation and it is only marginally significant at the 10% level. It is also interesting that the post election results indicate no major differences in budgetary behaviour between the right-wing governments and left-wing governments. This finding is not necessarily contradictory to predictions, since member countries of the EU are restricted in their fiscal policies by the Maastricht Treaty.

We find strong evidence that the Maastricht criteria have restricted policy makers of the member states from pursuing expansionary fiscal policies. The results also indicate that the implementation of the Maastricht criteria, in the run-up to EMU have reduced the ability of incumbents to engage into deficit spending on political grounds.

5. Causality Analysis and Robustness Checking

In Tables 3, 4 and 5, a comparison of the point estimates shows that the explanatory variables ΔG_{it} and ΔR_{it} carry positive and statistically coefficients, suggesting a feedback effect between government spending and revenue which is consistent with the fiscal synchronization hypothesis. However, the results in Table 3, 4 and 5 do not indicate the sources of long-and short-run causality between ΔG_{it} and ΔR_{it}. According to Engle and Granger (1987), given that between two nonstationary variables integrated of the same order there is a cointegrating relationship, and then there must be a pattern of causality in at least one direction. It should be noted that although regression analysis examines the dependence of one variable on other variables, it does not prove the direction of causality. Therefore, the existence of a relationship between the dependent variable and the explanatory variables does not imply causality or the pattern of causation.

Having established in Tables 1 and 2 that the variables R_{it} and G_{it} have the same degree of integration and are cointegrated, the next step of our methodology is to investigate for panel Granger-causality. The empirical analysis employs Holtz-Eakin et al. (1989) approach uses a panel-based vector error correction model (VECM). This indicates that the traditional panel VAR model is expanded with a one period lagged error correction term, which is derived from the cointegrated system. Testing for both short-run and log-run Granger causality, we use the ECM (error correction model) of the following type:

$$\Delta R_{it} = \theta_{1j} + \sum_{k}^{q} \theta_{11ik} \Delta R_{it-k} + \sum_{k}^{q} \theta_{12ik} \Delta G_{it-k} + \lambda_{1i} EC_{it-1} + u_{1it} \tag{9}$$

$$\Delta G_{it} = \theta_{2j} + \sum_{k}^{q} \theta_{21ik} \Delta G_{it-k} + \sum_{k}^{q} \theta_{22ik} \Delta R_{it-k} + \lambda_{2i} EC_{it-1} + u_{2it} \tag{10}$$

where EC_{it-1} is the error correction term which is obtained from the following cointegrating equation

$$R_{it} = \alpha_i + \delta_{it} + \beta_i G_{it} + \varepsilon_{it} \tag{11}$$

Here t=1,2,...,T and i=1,2,...N, where T is the number of observations and N denotes the number of individual countries in the panel. Thus, $\lambda_{1i} EC_{it-1}$ and $\lambda_{2i} EC_{it-1}$ suggest the long-run equilibrium relationship, where the parameters λ_{1i} and λ_{2i} reflect the speed of adjustment. In particular, λ_{1i} and λ_{2i} represent how fast deviations from the long-run equilibrium are estimated following movements in each variable. Δ is the first-difference operator, q is the number of lags, and u is the serially uncorrelated error term. Conducting the Granger causality tests, the lag order is specified using the MSIC. The direction of panel Granger short-run causality is identified by testing H$_0$:θ_{12ik} = 0 and H$_0$:θ_{22ik}=0 for all i and k in equations (9) and (10), respectively. For panel Granger long-run causality, we look at the significance of λ_{1i} and λ_{2i} coefficients based on H$_0$:λ_{1i}=0 and H_0:λ_{2i}= 0 for all i equations (9) and (10), respectively. Panel Granger short-run causality is tested using a standard *Wald F - statistics*, while the direction of Granger long-run causality is detected employing a *t-test*.

Table 6 reports the findings derived from the panel short-run and long-run Granger causality. Two points deserve attention. First, in regard to the bivariate model (ΔR, ΔG), the causal linkages denote a both way long-run Granger causality between expenditures and revenues, because the coefficients λ_{1i} and λ_{2i} are statistically significant in Groups A and B. The ECM terms appear to be significant at the 1% and 5% levels and are invariably of right sign. Note, however, that no significant causality is observed in the short rum movements of expenditures and revenues. Second, with respect to models including the electoral dummies, the results confirm that there exists bidirectional causality, or feedback, between government spending and revenues in both the short-run and long-run. Looking at Groups A and B, the direction of the causal relationship remains stable either in the short-run or in the long-run, meaning that bidirectional causal linkages exist between expenditures and revenues. Moreover, the both way causality between ΔR and ΔG indicates that both R and G are

endogenous variables, denoting that the two variable mutually affect each other. Overall, our results are consistent with the fiscal synchronization hypothesis, leading to the main conclusion that the goal of fiscal discipline must be rooted in realistic short- and long-term changes of public outlays and tax receipts.

Conducting our panel estimates and Granger causality tests, we have evaluated the effects of regular and early elections on the links between public expenditures and revenues. Regular elections are those held at the end of a full term. Regular elections are predetermined, and thus, the election date is exogenously fixed. On the other hand, early elections are determined by exceptional circumstances and in this sense these elections are considered to be endogenous. However, the cyclical context of the election dates is possible to affect the direction of causality between G and R, so creating doubts about the validity of the four hypotheses. Following a considerable part of the empirical literature such as Khemani (2004), Brender and Drazen (2005), Golinelli and Momigliano (2006), and Vergne (2009), we include in the causality analysis two alternative dummies indicating regular elections (DR) and early elections (DO), respectively.

If the election took place in the scheduled year, the dummy appears to capture primarily the period before the election. Otherwise, if the elections are potentially endogenous, then the dummy may be reflecting mainly post-electoral effects. Hence, we split the election dummy into two, one for elections held at the end of a full term, the other for elections took place in early years. This is the reason that we include in the empirical analysis the regular election dummy DR denoting that elections held in the scheduled year, as well as the early elections dummy DO showing that no matter when elections took place. DR takes the value of 1 in an election year if the timing of election is in its predetermined date, and 0 otherwise. DO equals to 1 in an election year if the timing of election is not in its predetermined date, and 0 otherwise.

If the timing of elections affects the path of both public revenues and government purchases, it is very possible the setting election dates to exert influence on the pattern of causality between G and R. Consequently, we need to introduce the dummies DR and DO in conducting Granger causality tests, in order to properly identify the direction of causality between G and R. Granger test results, reported in Table 6, remain consistent with the fiscal synchronization view, showing that the presence of dummy elections DR and DO does not affect the causal link between G and R. In this way, the contrast between the impact of predetermined and endogenous elections does not affect the both way causality of G and R, confirming that the fiscal synchronization hypothesis is highly powerful in the case of 14 EE countries.

6. Conclusions

This study has presented empirical evidence in support of the new advanced in this paper that political considerations play an important role in the determination of the causal relationship between government spending and revenues in 14 countries of the European Union. In particular, we found that during the period 1970-2008, government spending and government revenue, in a sample of fourteen EU countries, were influenced by opportunistic and partisan motives.

These findings strongly confirm the predictions of Drazen and Eslava's public expenditure targeting model. European incumbent politician may find it useful to target voters with the programs they prefer, and to initiate these programs before an election, and to complete them only after the election. The political colour of the European incumbents affects fiscal policy outcomes. Left-wing governments increase public spending more than twice as much as right-wing governments do. However, this influence is rather insignificant in the case of government revenues. This result clearly shows that there is a considerable variation in the revenue policies of the sample countries.

Maastricht Treaty, contrary to some belief, seems to eliminate the discretion of national governments over their budgetary policies. The results also indicate that the implementation of the Maastricht criteria in the run up to EMU have reduced the ability of governments to engage into deficit spending on political grounds. An observation in support of this finding is that the EU national governments were in a process of narrowing down differences in their economic policies, long before the initiation of the Treaty, with the ultimate objective of forming the EMU in the future. Our results also show that Maastricht Treaty reduces electoral effects on public policy.

Table 1: Panel Unit Root Tests, 1970-2008

Variable	Group A	Group B
LLC		
G_{it}	1.051(0.853)	-0.785(0.216)
R_{it}	-1.209(0.113)	-0.198(0.421)
Y_{it}	-1.177(0.120)	-0.008(0.497)
ΔG_{it}	-5.218(0.000)*	-4.267(0.000)*
ΔR_{it}	-4.622(0.000)*	-8.477(0.000)*
IPS		
G_{it}	-0.380(0.352)	0.809(0.791)
R_{it}	0.887(0.812)	0.953(0.830)
Y_{it}	-1.746(0.040)	-0.963(0.168)
ΔG_{it}	-4.356(0.000)*	-6.408(0.000)*
ΔR_{it}	-7.416(0.000)*	-8.442(0.000)*

* Significant at the 1% level
** significant at the 5% level
Notes: LLC and IPS unit root tests are conducted using the t^{*}_{e} and W_{tbar} tests statistics for the null hypothesis of a unit root. P-values are in parentheses. The critical values of LLC and IPS panel unit root rests are taken from Levin et al. (2002) and Im et al. (2003). The lag length for the IPS regressions is specified employing the MSIC (Modified Schwarz Information Criterion). Δ is the difference operator. Group A includes14 EU member states, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain, Sweden and the U.K. Group B includes member states with a partisan system, Denmark, France, Germany, Greece, Ireland, Portugal, Spain, Sweden and the U.K.

Table 2: Panel Cointegration Tests, 1970-2008

	Group A	**Group B**
Model (R_{it}, G_{it})		
Panel variance-stat	3.432(0.000)*	2.549(0.005)*
Panel rho-stat	-2.973(0.001)*	-1.894(0.029)*
Panel PP-stat	-3.464(0.000)*	-2.083(0.019)*
Panel ADF-stat	-3.629().000)*	-2.345(0.009)*
Group rho-stat	-1.866(0.031)*	-1.283(0.100)
Group PP-stat	-3.276(0.000)*	-2.103(0.018)*
Group ADF-stat	-3.533(0.000)*	-2.571(0.005)

* rejects the null of no cointegration at the 5% level

Notes: p-values are in parentheses. Statistics are asymptotically distributed as normal. The variance ratio test is right-sided while the others are left-sided. The trend assumption considers deterministic intercept and trend in the estimation procedure. Lag length selection is based on MSIC with a maximum lag of 9. For Group A and Group B countries see notes of Table 1.

Table 3: Panel GTSLS results, 1970-2008

Explanatory variable	Group A G_{it}	Group A R_{it}	Group B G_{it}	Group B R_{it}
Fixed Effects				
Constant	10.905(13.453)	-2.125(4.125)	9.352(11.893)	13.609(12.473)
R_{it}	0.821(44.474)	-	0.848(45.352)	-
G_{it}	-	0.978(91.709)	-	0.632(25.061)
R^2	0.847	0.861	0.903	0.930
F	71.92	80.23	74.22	48.87
obs	546	546	351	351
Random Effects				
Constant	10.242(11.618)	-1.906(2.665)	8.775(9.949)	-2.941(3.241)
R_{it}	0.837(46.008)	-	0.865(45.750)	-
G_{it}	-	0.975(60.468)	-	0.997(51.640)
R^2	0.793	0.788	0.862	0.856
F	196.58	213.01	230.11	196.10
H	5.72	7.11	3.26	9.17
obs	546	546	351	351

Notes: Absolute values of t-ratios are in parentheses. For Group A and Group B see notes of Table 1. Absolute values of t-statistics are in parentheses. R^2 is the within –R^2 for fixed effects and overall-R^2 for random effects. The F tests evaluate the joint significance of the fixed or random effects estimates in GTSLS specifications. H is the Hausman statistic which evaluates the null hypothesis that there is no misspecification in the random effects estimation. Obs is the number of observations overall.

Table 4: Panel GTSLS results, 1970-2008

Explanatory Variables	Group A G_{it} R_{it}		Group B G_{it} R_{it}	
Fixed Effects				
Constant	0.164(0.080)	13.106(6.222)	-1.834(-0.857)	14.364(7.121)
R_{it}	1.015(16.345)	-	1.076(15.637)	-
G_{it}	-	0.593(9.537)	-	0.533(8.514)
DE	3.701(4.895)	1.764(1.850)	3.133(3.573)	2.456(2.303)
DN	2.911(4.386)	2.417(2.746)	2.248(3.223)	3.229(3.448)
M	-1.051(2.136)	1.533(3.126)	-0.990(-1.664)	1.655(3.131)
DEM	-0.819(2.134)	0.844(2.490)	-0.833(1.813)	0.970(2.031)
R^2	0.879	0.929	0.890	0.939
F	177.9	414.4	226.7	333.2
obs	546	546	351	351
Random effects				
Constant	0.899(0.468)	12.486(8.420)	-2.099(0.882)	14.850(4.462)
R_{it}	0.992(18.991)	-	1.088(13.937)	-
G_{it}	-	0.606(17.044)	-	0.518(7.520)
DE	4.372(7.059)	1.328(2.079)	3.408(6.311)	2.212(1.844)
DN	3.577(4.822)	2.027(3.396)	2.423(4.013)	3.17192.726)
M	-1.707(1.787)	2.215(5.222)	-1.795(1.526)	2.191(2.809)
DEM	-0.891(1.809)	1.060(1.731)	-1.061(2.878)	1.397(4.121)
R^2	0.726	0.687	0.759	0.656
F	128.9	241.5	97.4	107.1
H	8.78	4.43	10.71	2.69
obs	546	546	351	351

Notes: See Table 3 for a detailed discussion of the various test statistics.

Table 5: Panel GTSLS results, 1970-2008

Explanatory Variable	Fixed effects G_{it}	R_{it}	Random effects G_{it}	R_{it}
Constant	-2.215(1.239)	14.753(6.291)	-0.161(0.101	4.195(4.632)
R_{it}	1.082(18.703)	-	0.987(21.508)	-
G_{it}	-	0.537(8.695)	-	0.540(9.079)
DEC	2.710(2.420)	2.088(1.987)	4.987(2.400)	1.965(1.797)
DES	4.145(7.324)	1.354(1.363)	6.305(4.647)	1.510(1.309)
DNC	2.454(3.346)	2.528(3.008)	4.435(2.582)	2.688(2.862)
DNS	2.265(3.477)	2.987(3.658)	4.827(3.132)	2.787(3.117)
M	-0.957(1.621)	1.554(2.986)	-1.459(1.207)	2.249(2.854)
DEM	-0.998(1.852)	1.212(2.259)	-0.977(2.388)	1.387(3.628)
R^2	0.857	0.940	0.812	0.715
F	198.8	293.9	73.2	110.0
H	-	-	3.08	4.56
Obs	351	351	351	351

Notes: See Table 3 for a detailed discussion of the various test statistics. 9 EU countries are included in the empirical analysis, namely, Denmark, France, Germany, Greece, Ireland, Portugal, Spain Sweden and the UK.

Table 6: Panel Granger causality tests. 1970-2008

Dependent Variable	Short-run causality		Long-run causality	
	ΔG	ΔR	λ_{1i}	λ_{2i}
Model $(\Delta R,\Delta G)$				
ΔR	0.415(0.743)	-	-0.112(2.926)*	-
ΔG	-	0.308(0.872)	-	-0.094(3.112)*
Model $(\Delta R,\Delta G, DE, DN, M, DEM)$				
ΔR	3.612(0.006)*	-	-0.119(3.464)*	-
ΔG	-	2.624(0.050)**	-	-0.100(3.592)*
Model $(\Delta R,\Delta G, DE, DN, M, DEM, DR, DO)$				
ΔR	4.147(0.004)*	-	0.145(3.751)*	-
ΔG	-	2.461(0.024)**	-	-0.168(3.948)*

*, ** indicates significance at the 1%, 5% levels, respectively.

 Notes: Asymptotic t-statistics are in brackets and p-values in parentheses. The null hypothesis of no short-run Granger causality is tested using the Wald F-statistics. The evaluation of the long-run Granger causality is based on the significance at t-statistics. 14 EU countries are included in the panel Granger causality tests, namely, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Portugal, Spain Sweden and the UK.

Appendix

Panel Unit Root Tests

Recent developments in the panel unit root tests include Levin et al. (2002), and Im et al. (2003). The basic autoregressive model can be specified as follows:

$$y_{it} = \alpha_i y_{it-1} + x_{it} b_i + \varepsilon_{it} \quad (1)$$

where i=1,….., N depict countries observed over periods t=1,….T. The x_{it} are exogenous variables in the model containing any fixed effects or individual trend, α_i are the autoregressive coefficients, and ε_{it} is a stationary process supposed to be iid $iid \ (0, \sigma_\varepsilon^2)$. If $|\alpha_i| < 1, y_{it}$ is said to be weakly trend stationary and if $|\alpha_i| = 1$, then y_{it} contains a unit root. LLC (Levin-Lin-Chu) unit root test assumes $\alpha_i = \alpha$ for all *i*, implying that the persistence parameters are common across cross section countries. Consequently, the coefficient of y_{it-1} is homogenous across all cross section countries and individual processes are cross-sectional independent. On the other hand, the IPS (Im-Pesaran-Shin) test allows for a heterogeneous coefficient of y_{it-1}, so that α_i varies freely across cross section units. Given that the IPS test proposes averaging the augmented Dickey-Fuller (ADF) tests, it allows for different orders of autocorrelation. The LLC and IPS panel unit root tests start by considering the ADF specification:

$$\Delta y_{it} = \rho y_{it-1} + \sum_{j=1}^{P_i} \gamma_{ij} \Delta y_{it-1} + x'_{it} \delta + \varepsilon_{it} \quad (2)$$

where $\rho = \alpha - 1$; P_i is the number of lags in the ADF regression; and ε_{it} are the error terms which are assumed to be normally and independently distributed with zero means and finite heterogeneous variances σ^2_i. The lag order P_i is allowed to vary among cross-sections. In the case of LLC test, the null and alternative hypotheses, H_0 and H_1, are

$$H_0: \rho = 0 \quad (3)$$

$$H_0: \rho < 0 \quad (4)$$

The null hypothesis states that each variable in the panel has a unit root, against the alternative that there is a no unit root suggesting that the variable is stationary. LLC proposed a modified t-statistic for the estimated coefficient $\hat{\rho}$, t_e^* which is asymptotically normally distributed. LLC panel unit root test

permits for time trends and individual-specific intercepts. LLC argue that their test is more relevant for panels of moderate size, having between 10 and 250 individuals as well as 25-250 time series observations per individual.

Im et al. (2003) employing the likelihood framework, formulated a testing procedure based on averaging individual unit root test statistics for panels. The null and alternative hypotheses of IPS test are:

$$H_0:\rho_i=0 \text{ for all } i \tag{5}$$

$$H_1 : \begin{cases} \rho_i=0 \, for\, i=N_1+1, N_2+2,....,N \\ \rho_i<0 \, for\, i=1,2,...,N_1 \end{cases} \tag{6}$$

The alternative hypothesis allows for the coefficients ρ_i to differ across cross section countries. In this way, IPS test permits for some of the individual variables to contain unit roots under the alternative hypothesis. IPS proposed the *t-bar* and w_{tbar} statistics which converge in probability to an asymptotic standard normal distribution. In the case where the error terms are serially correlated, the *t-bar* tests require that both N and T should be sufficiently large. In models with autocorrelated errors, IPS proved that the w_{tbar} test seems to perform very well even for relatively small samples[5].

Notes

1. For a complete discussion on the specific definitions of G and R, see Statistical Annex of European Economy, European Commission, autumn 2010.

2. Luxembourg has been and throughout will be omitted, for it is the only EU Country that has almost no government debt, high fiscal surpluses the period under consideration. Therefore it is an extreme outlier that does not add to the analysis.

3. For more details on this issue, see Arellano (1987) and While (1980).

4. For a comprehensive analysis of the various random effects methods, see Baltagi (2005).

5. See the original papers of Levin et al. (2002) and Im et al. (2003) on the computation of t_e^*, *t-bar* and w_{tbar} statistics.

References

Alesina, A., Roubini, N., and Cohen, G. (1997). *Political Cycles and the Macroeconomy*. Cambridge, MA: MIT Press.

Andrikopoulos, A., Loizides, I., and Prodromidis, K. (2004). Fiscal Policy

and Political Business Cycles in the EU, *European Journal of Political Economy, 20*, 125–52.

Arellano, M. (1987). Computing robust standard errors for within-groups estimators, *Oxford Bulletin of Economics and Statistics*, 49, 431-434.

Baltagi, B.H. (2005). *Econometric Analysis of Panel Data,* New York: John Wiley & Sons.

Barro, R. (1979). On the determination of the public debt, *Journal of Political Economy*, 87, 240-271.

Block, S. (2002). Elections, electoral competitiveness, and political budget cycles in Africa, *Journal of African Economies*, 12, 444-468.

Breitung, J. (2005). A parametric approach to the estimation of cointegration vectors in panel data, *Econometric Reviews*, 24, 151-173.

Brender, A., and Drazen, A. (2005). Political budgets cycles in new versus established democracies, *Journal of Monetary Economics*, 52, 1271-1295.

Buchanan, J., and Wagner, R. (1978). 'Dialogues concerning fiscal religion' *Journal of Monetary Economics*, 4, 627-36.

Cameron, D.R. (1978). The expansion of the public economy: A comparative analysis, *The American Political Science Review,* 72, 1250-1260.

Drazen, A. (2001). *The political business cycle after 25 years*, in B.S. Bernanke and K.S. Rogoff (eds), *NBER Marcoeconomic Annual*, Cambridge, MA: MIT Press.

Drazen, A., and Marcella, E. (2010) Electoral manipulation via voter-friendly spending: Theory and evidence, *Journal of Development Economics,* 92, 39-52.

Engle, R. F. and Granger, C.W.J. (1987). Co-integration and error correction: Representation, estimation, testing, *Econometrica*, 55, 251-276.

Franzese, R. J. (2002). Electoral and Partisan Cycles in Economic Policies and Outcomes, *Annual Review of Political Science*, 5, 369-421.

Friedman, M. (1978). The limitations of tax limitation, *Policy Review*, 3, 7-14.

Golinelli, R., and Momigliano, S. (2006). Real-time determinants of fiscal policies in the euro area, *Journal of Policy Modeling,* 28, 943-964.

Hansen, L.P. (1982). Large sample properties of generalized method of moments estimators, *Econometrica, 50*, 1029-1054.

Hausman, (1978). Specification tests in econometrics, *Econometrica*, 46, 1251-1271.

Hibbs, D. (1977). Political Parties and Macroeconomic Policy, *American Political Science Review,* 71, 1467–1487.

Holtz-Eakin, D., Newey, W., and Rosen, H. (1989). The revenue-expenditure

nexus: evidence from local government data, *International Economic Review,* 30, 415-429.

Im, K.S., Pesaran, M.H. and Shin, Y. (2003). Testing for unit roots in heterogeneous panels, *Journal of Econometrics*, 115, 53-74.

Kalecki, M. (1943). Political aspects of full employment. *Political Quarterly*, 14, 322-331.

Khemani, S. (2004) 'Political cycles in a developing economy: effect of elections in the Indian sates, *Journal of Development Economics* 73, 125-154.

Larsson, R., Lyhagen, J., and Lothgren, M. (2001). Likelihood-based cointegration tests in heterogeneous panels, *Econometrics Journal*, 4, 109-142.

Levin, A., Lin, C.F. and Chu, C. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties, *Journal of Econometrics,* 108, 1-24.

Meltzer, A., and Richard. S. (1981). A rational theory of the size of government, *Journal of Political Economy,* 89, 914-27.

Mink, M., and De Haan, J. (2006) Are there Political Budget Cycles in the Euro Area? *European Union Politics*, 7, 191-211.

Musgrave R. (1966). *Principles of Budget Determination* in H. Cameron and W. Henderson (eds) *Public Finance: Selected Readings,* New York: Random House.

Ng, S. and Perron, P. (2001). Lag length selection and the construction of unit root tests with good size and power, *Econometrica,* 69, 1519-1554.

Nordhaus, W. (1975). 'The Political Business Cycle', *Review of Economic Studies,* 42, 169-90.

Payne, J. E. (2003). A survey of the international empirical evidence of the tax-spend debate, *Public Finance Review*, 31, 302-324.

Peacock, A., and Wiseman, J. (1979). Approaches to the analysis of government expenditure growth, *Public Finance Quarterly*, 7, 3-23.

Pedroni P. (1999). Critical Values for Cointegration Tests in Heterogeneous Panels with Multiple Regressors*, Oxford Bulletin of Economics and Statistics,* 61, 653-670.

Pedroni P. (2004), Panel Cointegration; Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application to PPP Hypothesis, *Econometric Theory*, 20, 597-625.

Persson, T., and Tabellini, G. (1990). *Macroeconomic Policy, Credibility and Politics*, New York: Harwood Academic Publishers.

Rogoff, K.S., and Sibert, A. (1988). Elections and Macroeconomic Policy Cycles, *Review of Economic Studies, 55*, 1-16.

Rogoff, K.S. (1990). Equilibrium Political Budget Cycles, *American Economic Review, 80*, 21-36.

Sargan, J.D. (1958). The estimation of economic relationships using instru-mental variables, *Econometrica*, 26, 393-415.

Schuknecht, L.S. (2000). Fiscal Policy Cycles and Public Expenditures in Developing Countries, *Public Choice,* 102, 115-30.

Shi, M., and Svensson, J. (2003). Political Budget Cycles: a review of recent developments, *Nordic Journal of Political Economy*, 29, 67-76.

Shi, M., and Svensson, J. (2006). Political Budget Cycles: do they differ across countries and why? *Journal of Public Economics*, 90, 1367-1389.

Swamy, P.A., and Arora, S.S. (1972). The exact finite sample properties of the Estimators of coefficients in the error components regression models, *Econometrica,* 40, 262-275.

Vamvoukas, G.A. (2012). Panel data modeling and the tax-spend controversy in the euro zone, *Applied Economics*, 44, 4073-4085.

Vergne, C. (2009). Democracy, elections and allocation of public expendi-tures in developing countries, *European Journal of Political Economy*, 25, 63-77.

Wagner, M., and Hlouskova, J. (2010). The performance of panel cointegra-tion methods: results from a large scale simulation study, *Econometric Reviews*, 29, 182-223.

Westerlund, J. (2005). New simple tests for panel cointegration, *Econometric Reviews*, 24, 297-316.

White, H. (1980). A heteroskedasticity-consistent covariance matrix and a direct test for heteroskedasticity, *Econometrica*, 48, 817-838.

Wildavsky, A. (1975). *The Politics of the Budgetary Process,* Boston: Little, Brown & Company.

APPLICATION OF MODERN METHODS OF COSTING (ABC) IN GREECE: THE CASE OF CONSTRUCTION COMPANIES

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Abstract

Activity Based Costing (ABC) is considered to be a modern sophisticated costing system that performs accurate cost estimations, especially to businesses with lots of overhead expenses and complexity in production. Construction companies have to deal with overhead expenses daily. Thus, ABC is considered to be an ideal costing system for the construction industry, and many construction companies overseas have already implemented it. In this paper, the implementation of the ABC in Greek construction companies is being investigated. The data collected for this research are statistically analyzed by SPSS and the results are presented and discussed.

JEL Classification: L74, M40

Keywords: Activity Based Costing, construction companies, sophisticated costing system, overheads, cost estimation, cost overruns

1. Introduction

It is a fact that construction flourishes in times of economic prosperity and ebbs in times of economic crisis. Warszawski in 1994 observed a continuous growth in construction projects. However, this growth declined as the world economy started to collapse. Running a business in an era of global economic crisis is a daily challenge, especially in Greek reality which experiences nowadays the worst recession, since the 1929's great crash. Greek construction industry was one of the first to experience the side effects of that global crisis. Some companies were forced to make cuts in budget and as a result many employees, engineers, construction workers etc. lost their jobs. Therefore the integrity of the Greek construction companies in now on the line, as the smallest mistake in cost estimation calculations may fire up a chain reaction of erroneous results and data that will lead to wrong and some times catastrophic decisions for the management of those companies. Warszawski (1994) points in his research that "In order to survive, construction companies must develop

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long-range strategies with respect to their markets and the development of their own resources". Consequently, the use of an accurate cost estimation system that goes beyond accounting calculations to quality management and decision making is essential. Overseas construction companies started implementing sophisticated systems that would provide them with accurate cost estimations and helpful decision making information since 1990, the Activity Based Costing (ABC) systems.

2. Literature Review

2.1 Costing Systems

According to I. Dimopoulou-Dimaki (2006) and G.Venieris et al (2005) all systematic activities designed to collect, classify, record and appropriately allocate the costs to determine the cost of producing a product, called costing. Costing systems are information systems that perform the costing processes for a business. It is a highly important managerial tool and it may be customized for each business according to management needs. However, costing systems do not replace the accounting information systems of the business. On the contrary, they supplement them (Venieris et al., 2005). There are two costing methods widely known and used by businesses world wide, the direct costing method and the traditional or standard costing method. From 1980 onwards activity based cost (ABC) method is gaining ground, as great enthusiasm over the application of this method took place in the early 90's. (Partovi, 1991).

Direct costing is the method in which the cost of a product derives from the variable costs (direct and indirect) while the fixed costs are considered as period costs and they are not added to the cost of the final product. It is considered the most simplistic system used by businesses with non complicated production processes and no product diversities (Al-Omiri and Drury, 2007; Vazakidis et al., 2010).

In Traditional costing (or standard costing) raw materials, direct labor and both variable and fixed costs are used to calculate the cost of the final product. As a result, in order to determine the gross profit of the business, the production cost must be subtracted from the sales (Vazakidis et al., 2010). It is an ideal costing system for standardized products or services with repetitive procedures but prohibitive when there is product differentiation and complexity on procedures as it may produce inaccurate calculations (Venieris et al., 2005).

2.2 Activity Based Cost Method (ABC)

Activity based costing (ABC) is considered as a more modern and accurate product costing method because of a more successful way of overhead allocation (Miller in Cobb et al., 1992). It was developed in the late 1980s in the United States as an alternative method of costing. The primary goal was to attain maximum cost-effectiveness without decreasing the quality of the product or the service (Cooper in Yereli, 2009). According to Staubus (1990) Professors Robert S. Kaplan and Robin Cooper of the Harvard Business School were the leaders of the ABC movement. Staubus also points George Foster at Stanford and Hewlett-Packard as close followers of ABC (Staubus G.J., 1990).

In order to understand the concept of activity based costing there is a need to define the terms most commonly used in ABC literature:

Activity pool: a place where similar activities are accumulated (Yereli, 2009).

Cost pool: determination of the resources used by activities (Yereli, 2009).

Cost object: the basis of an activity (Yereli, 2009).

Cost driver: items that transfer activity costs into services or products such as number of units produced, labor hours, hours of time, or number of orders received (Yereli, 2009; Ben-Arieh and Qian, 2003).

To design an activity based system some important steps must be followed. The first step is to define the indirect costs and the cost pools. Then the indirect cost must be allocated to cost pools through the cost drivers. The second step is to allocate the costs from the cost pools into activities and the last step is to allocate the cost from the activities to the cost object (Yereli, 2009).

It is ideal to use activity based costing as a total cost management tool. Traditional costing systems allocate the overheads in such a way that it is possible to distort the cost information. Activity-based costing (ABC) method, on the other hand, divides the production process into activities assigning first costs to the activities and then through these activities the costs are being allocated to the products or services giving more accurate and traceable cost information that can be used from the management as crucial decision making material (Ben-Arieh, Qian, 2003). Activity based costing may be widely accepted and used worldwide since 1990, but there are still businesses that hesitate to implement it. Pike et al (2011) refers to Cooper, Kaplan, Maisel, Morrissey, and Oehm (1992), who observed that the technical difficulties associated with the installation of such a sophisticated system, is an inhibitory factor for those who are considering applying ABC systems. They also suggested that the primary users of ABC information should be non-accountants, supervised by a member of top management and introducing a training programme emphasising the

logic, design, implementation and use of ABC. (Pike et al., 2011). The ability of activity based costing systems to bring forward information that can be used by the management in a decision making level, inevitably links ABC success with the company success. Thus, the importance of training in the use of ABC is observed. Kallunki and Silvola (2008), in their research, came to the conclusion that the life cycle stage of the company rather than the size or age of the firm is decisive in explaining the implementation of the activity-based costing systems among firms. They point out that the need for a more sophisticated decision-making approach utilizing sophisticated management accounting systems such as activity-based costing is greater to firms in a mature stage than firms in a growing stage.

2.3 ABC in Construction business

Construction consists of a series of complex processes and procedures and is the epitome of product diversity as each product/project is one of a kind. Therefore the adjustment of project activity and resources is essential (Staub-French et al., 2003).

A construction project consists of a series of activities, interacting with each other in complex ways. Al-Omiri and Drury (2007), refer to the interaction study by Cagwin and Bouwman (2002) that reported a positive association between the interactions of ABC with business complexity and improvements in return on investment (Al-Omiri and Drury, 2007). In addition, Kaplan and Cooper (1998) advocate that firms with high indirect costs should assign these costs using sophisticated systems such as activity based costing, since unsophisticated systems are likely to report distorted costs. Other authors go further into dividing the activities into tasks as an essential action in order to automate processes in construction (Guo and Tucker, 1996).

Overhead costs are extremely important to the construction estimation. However, they can be easily overlooked. Wrong allocation or neglect of the overheads leads construction companies out of business, because these costs constitute a significant percentage of the total construction costs (Assaf et al., 2001). Assaf et al (2001), clearly states that "total overhead costs may vary from 8 to 30% of the sum of materials, labor and equipment costs or 12 to 50% of labor costs, depending on the project characteristics" (Assaf et al., 2001). Nowadays, under these economic conditions, contractors are forced to reduce overhead expenses. The concluding results of the research of Assaf et al (2001) in construction companies overheads in Saudi Arabia point that "applying a proper accounting system, helps in allocating company overhead costs in a balanced manner" (Assaf et al., 2001).

3. Aim and Methodology

The objective of this research is to identify the "popularity" of activity based costing systems in Greek construction companies, especially nowadays when the economic crisis and the intense competition make a necessity for a solvent accurate costing system that may interact with management decision making system, in order to achieve a successful planning in management strategies. Moreover, this research tries to discover the reasons for not implementing ABC systems in Greek construction companies and tries to compare the effectiveness of the systems used according to user satisfaction rates. In addition, the investigation of the application of activity based costing systems will give information for discussion, and the results may fire up the need for further future researches.

The research was initially started with the design of a questionnaire. The questionnaire should be easy to understand, with few and short questions but targeted and to the point so as to get accurate results without tiring the respondents. Therefore, eleven questions were carefully designed, in order to distract useful data from the responders. The type of questions used was likert scale, Yes and No and leading questions. In addition, ambiguous and open questions where avoided as they may confuse the respondents and will not provide useful and accurate results. The sample was taken from 91 construction companies from Greece that are involved in both private and public projects and are disclosed in the register of contractors for public works (ΜΕΕΠ).

4. Research

4.1 Data Collection

Questionnaires were sent to 91 companies via e-mails and the amount of non respondents in a ten day period reached surprisingly 100%! Then visits were made to some companies in Athens in order to get some immediate responses to the questionnaires. Then, one more attempt was made via telephone, so as to remind them about the questionnaires sent. Some companies, though at the beginning seemed friendly and pledged to answer the questionnaire at the end they never did, for unknown reasons. After a methodical "marathon" of contacts, twenty-seven companies responded to the questionnaire out of initial approach of ninety-one companies, that means about 70% non respondents. As Van der Stede et al (2005) suggests, non-response bias tests are needed to ensure the representativeness of the sample. (Van der Stede et al. in Kallunki, Silvola, 2008).

4.2 Data Analysis

The statistic analysis of the questionnaires for this research was accomplished using SPSS program.

As it is clearly identified, first class companies, were more keen on responding. That is probably because there are small practices and the owner is also the manager and an engineer as well, therefore they have better knowledge and understanding of the company's performance as a whole.

In question three, companies are being asked to specify the costing system they use. It was found that only 42.9% of the sample is using activity based costing systems while the majority of the construction companies in Greece is using direct costing systems, with a 47.6% rate. It was also found that the majority of the Greek companies are using Excel as a tool for the costing system they use. A suprising factor was that the 11.5 % of ERP uses do not use activity based costing, despite the fact that in ABC literature ABC implementation is most likely to manifest in companies using ERP systems. Instead they chose to use the direct costing system.

Five hypothesis where presented to the respontents in question five, in a form of likert scale question, in order to find out if they are aware of the activity based costing systems capabilities. Almost 73% of the respondants claim that "agree" or "strongly agree" with the hypothesis that the costing system they use provides them estimated costs close to the actual costs. Only 48% approximately of the respondents "agreed" or "strongly agreed" at the hypothesis whether they are familiar with ABC systems, while the rest 52% was not familiar or have not heard about ABC before. This assumption came up after interviewing those who responded "disagree", "strongly disagree" or "neither agree or disagree". Consequently, 40.7% of the respondents answered positive to the hypothesis that ABC is suitable for the construction industry, as the rest could not have a solid opinion due to the fact that where not familiar with activity based costing. Surprisingly in hypothesis that the ABC method could provide more accurate results, 59,3% responded "neither agree or disagree", while only 29% of the respondents "agreed" or "strongly agreed" to this hypothesis. That means that even ABC users are either not quite aware of activity based cost capabilities or they do not make proper use of their ABC system. In the hypothesis that ABC is expensive in operation, 7.4% agreed to that statement while almost 30% of the respondents disagreed with that statement, mainly the users of ABC systems that knows that implementing that system will lead to revenues in a long term perspective. The majority of 63% are neutral mainly because they are not familiar with ABC systems.

It was found that companies that use ABC have a significantly lower average class than companies that do not use ABC (p=0.008).

Table 1: ABC implementation

Test Statistics	Class
Mann-Whitney U	17,500
Asymp. Sig. (2-tailed)	0,008
Exact Sig. [2*(1-tailed Sig.)]	0,007

It was expected that larger companies will have greater rates using ABC, but as identified in literature review, smaller companies also use activity based costing, because the implementation of advanced sophisticated systems is not associated with the size of the company, but on their life cycle status.

In order to specify the potential association between use of activity base costing and training of employees, the author used Fisher's exact test. There was a significant association between the use of activity base costing and training of employees (p=0.039). In specific, it was observed that the 61.9% of the companies that use ABC provides training to the employees, while the 38.1% does not proved training. Obviously, none of the companies that do not use ABC provides any training to the employees regarding costing systems.

The hypothesis whether companies that provide to their employees training regarding operating costing systems have a different class compared to companies that do not provide training will be tested by using non-parametric Mann-Whitney test.

Table 2: Employees Training regarding operating costing systems

Test Statistics	Class
Mann-Whitney U	65,000
Asymp. Sig. (2-tailed)	0,195
Exact Sig. [2*(1-tailed Sig.)]	0,220

The class of the company does not relate significantly with the provided training of the employees on costing systems (p=0.195). Therefore, the use of activity based cost systems is the main crucial factor that affects company culture in terms of stuff training, as concluded in the previous hypothesis, and not company's size.

In order to determine the association between the information given by the costing systems used with the type of those systems, crosstabs and Fisher's exact test will be used

Table 3: Crosstab

Count		Activity costs		Total
		No	Yes	
Activity based costing	No	8	4	12
	Yes	0	9	9
Total		8	13	21

Table 4: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9,692[a]	1	0,002		
Fisher's Exact Test				0,005	0,002
N of Valid Cases	21				

a. 2 cells (50,0%) have expected count less than 5. The minimum expected count is 3,43.

A significant relation between "Activity based costing" and "Activity costs" (0.005) was observed.

5. Discussion on results

The most challenging factor in the process of costing a project, concentrating 92,6% of the respondent companies are cost overruns. However, only 47%

of the respondents agree to the hypothesis that activity based costing systems are suitable for the construction industry. The rest 53% is not familiar with ABC systems. Therefore, luck of knowledge about what activity based costing is and how it benefits a company's performance is a major factor for the non implementation of sophisticated systems, such as ABC, in Greek construction companies.

Looking at the satisfaction rates, ABC non users seem to be overall satisfied with their costing systems although they admit experiencing cost overruns often in their projects. Satisfaction rates from ABC users on the other hand is greater, and is correlated with the knowledge of what activity based costing is and its benefits by its users, as is clearly shown in the statistical analysis of this study. Moreover, the study showed that the companies that have already implemented ABC systems have better information about cost of activities than those who use other costing systems. However, only a 7,4% uses their costing system to get information about sources that generate costs, and decision making in terms of reorganizing activities.

In activity based costing literature some authors share the opinion that companies with shared databases that track the detailed operational data needed for resource and activity analysis have an easier time implementing and maintaining ABC (Reeve, 1995; Anderson, 1995 in Al-Omiri and Drury, 2007). Therefore it was expected that the majority of the ABC users would be the larger Greek construction companies of 5th, 6th and 7th class. Surprisingly, the outcome of the statistic analysis of this research was that smaller size companies of the 1st class are more keen on implementing activity based cost systems. The owners of first class companies in the majority were younger in age (personal observation, as age specification question was included in the questionnaire) and therefore more keen on experimenting with new technologies in order to achieve success in their businesses. In addition, this research found that there is an association on company's culture and ABC implementation. Construction companies that use ABC as a costing system in Greece, also provide training on those systems to their employees. On the contrary, those that use different costing systems than ABC, provide no training at all to its users.

5.1 Limitations

The sample of the population for this study was taken only from companies involved both in public and private sector and they are logged on the register of contractors for public works of Greece. There are numerous private contractors nationwide that cannot be tracked through any reliable registers and for that

reason they were excluded as it would not be possible to relate the population to the sample. Moreover, this study has allowed the respondents to self-specify whether their organization operate an ABC system despite the fact that there is also some disagreement as to whether systems described by survey respondents as ABC are really ABC systems by various authors in ABC literature (Dugdale and Jones, 1997; Innes and Mitchell, 1997 in Al-Omiri and Drury, 2007). It would probably be more appropriate, in order to find out whether the companies have installed actual ABC systems or not, to contact the supplier software companies (for example Oracle), but it is almost impossible to get this information.

5.2 Conclusion

Construction companies in Greece nowadays are experiencing the world economic crisis in great extend. Therefore using appropriate costing systems according to each company's needs is essential. Activity based costing (ABC) is considered as a more modern and accurate product or service costing method because of a more successful way of overhead allocation. This study is an investigation to the application of activity based costing systems in Greek construction companies. Studying thoroughly the international literature on ABC costing method, the author realized that the potential of the specific costing method is greater than expected, and for that reason it is being still investigated by various researchers worldwide despite its first implementation was almost two decades ago. Activity based costing, is considered as a system that can provide accurate costing estimation for a project, especially when the company experiences extend cost overheads. Therefore, this research investigates on the costing systems used by construction companies in Greece, focused to the ones that are active both to private and public sector. In spite of the difficulties on collecting information through questionnaires and interviews due to general suspiciousness on finance based subjects, such as costing, caused by the unfavourable finance situation for most of the construction companies, this research was competed successfully. It was expected that the larger companies, due to their amount of resources, would be more likely to use more advanced costing systems than the smaller ones. However, the results revealed that smaller size companies used ABC as a costing system instead. This finding can be explained, looking at the life cycle literature that indicates that firms in maturity tend to use more sophisticated systems, regardless their size. The lack of knowledge on ABC systems could be a "key" reason why only 60% of the Greek companies do not use this method even though they are experiencing cost overheads in every project. Moreover, only 7,4% of the companies use ABC capabilities to a full extend.

That means, that only a few companies get information, not only about cost estimations, but also information that can be used in decision making such as cost generating source identification and reorganizing activities information in terms of value management. It is also connected with each company's culture, as it was found that companies that use ABC systems, also provide training to its users while companies using traditional systems did not provide any training at all.

The fact that ABC systems can be combined with other operations, gives plenty of ground for further research. Moreover, the constant conflicts among the researchers on whether or not activity based costing does worth been invested in fires up the need to go further this research on the application in Greek construction companies, by introducing an actual ABC implementation in one Greek construction company in terms of a case study and compare the results with the previous costing system used by that company. After all, the end of every research is almost certain the beginning for another, as the need to seek the truth motivates man since antiquity.

References

Books:

Cobb, I., Innes J., and Mitchell, F. (1992). Activity Based Costing, Problems in Practice. The Chartered Institute of Management Accountants.

Dimopoulou-Dimaki, I. (2006). Accounting Management: Costing, Budget, Decision Making. Interbooks.

Hansen, D., and Mowen, M. (1997). Cost Management, Accounting and Control. (2nd ed.). South-Western College Publishing.

Kaplan, R.S., and Cooper, R. (1998). Cost and Effect: Using integrated systems to drive profitability and Performance. Harvard Business School Press.

Kish, L., (1965). Survey Sampling. Wiley.

Varvakis, K. (2001). Cost Theory: Cost and Business Decisions. Papazisis AEBE Publications.

Venieris, G., Khoen, S. and Koletsi, M. (2005). Cost Accounting: Principles and Applications. (2nd ed.). P.I.Publishing.

Journals:

Al-Omiri, M., Drury, C. (2007). "A survey of factors influencing the choice of product costing systems in UK organizations". Management Accounting Research, 18, pp.399-424.

Assaf, S., Bubshait, A., Atiyah, S., and Al Shahri, M. (2001). "The management of construction company overhead costs". International Journal of Project Management, 19, pp.295-303.

Ben-Arieh, D., and Qian, L. (2003). "Activity based cost management for design and development stage". International Journal of Production Economics, 83 (2), pp.169-183.

Chou, J.S. (2011). "Cost simulation in an item-based project involving construction engineering and management". International Journal of Project Management, 29, pp.706-717.

Gietzmann, M. (1991). "Implementation issues associated with the construction of an activity-based costing system in an engineering components manufacturer". Management Accounting Research, 2, pp.189-199.

Guo, S.J., and Tucker, R.L. (1996). "A generic cost-concern matrix for identifying automation needs in construction". Automation in Construction, 5, pp.91-104.

Kallunki, J.P., and Silvola, H. (2008). "The effect of organizational life cycle stage on the use of Activity-based costing". Management Accounting Research, 19, pp.62-79.

Leu, S.S., Chen, A.T., and Yung, C.H. (2001). "A GA-based fuzzy optimal model for construction time-cost trade-off". International Journal of Project Management, 19, pp.47-58.

Partovi, F. (1991). "An analytic hierarchy approach to activity-based costing". International Journal of Production Economics, 22, pp.151-161.

Pike, R., Tayles, M., Mansor, N.N.A. (2011). "Activity-based costing user satisfaction and type of system: A research note". The British Accounting Review, 43, pp.65-72.

Schulze, M., Seuring, S., and Ewering, C. (2012). "Applying activity-based costing in a supply chain environment". Int. j. Production Economics, 135, pp.716-725.

Staub-French, S., Fischer, M., Kunz, J., and Paulson, B. (2003). "A generic featured driven activity-based cost estimation process". Advanced Engineering Informatics, 17, pp.23-39.

Staubus, G.J. (1990). "Activity Costing: Twenty years on". Management Accounting Research, 1, pp.249-264.

Vazakidis, A., Sarri, A., Chatzis, A., and Folinas, D. (2010). "Research in the application of costing methods for decision making in Greek logistics businesses". Applied Research Review Journal of the Technological Education Institute of Piraeus, 14 (2), pp.27-43.

Warszawski, A. (1994). "Current trents in the operation of building-construction

companies". International Journal of Project Management*, 12 (4), pp.261-268.

Yereli, A.N. (2009). "Activity-based costing and its application in a Turkish University hospital". Aorn Journal, 85, (3), pp.573-591.

FINANCIAL DEVELOPMENT AND ECONOMIC GROWTH: A THEORETICAL SURVEY

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Abstract

This paper surveys the theoretical relationship between financial development and economic growth. The purpose of this paper is to cover the theoretical gaps relating to the relationship between financial development and economic growth taking into account the results of the most important empirical studies. Finally, this paper provides some critical conclusions for the above relationship based on the different methodological reservations resulted from the empirical literature.

JEL Classification: O11, C22
Keywords: financial development, economic growth, survey

1. Introduction

In recent years the relationship between financial development and economic growth has become an issue of extensive analysis. The question is whether financial development precedes or simply follows economic growth. A general proposition states that the development of the financial sector is expected to have a positive impact on economic growth. The theoretical relationship between financial development and economic growth goes back to the study of Schumpeter (1911) who focuses on the services provided by financial intermediaries and argues that these are essential for innovation and development (Ghali, 1999).

Schumpeter's (1912) view is that a well functioning financial system would induce technological innovation by identifying, selecting and funding those entrepreneurs who would be expected to successfully implement their products and productive processes. Robinson (1952) claims that "where enterprise leads, finance follows" – it is the economic development which creates the demand for financial services and not vice versa. Financial development follows economic growth as a result of increased demand for financial services. This explanation was originally advanced by Friedman and Schwarz (1963).

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Economic theory provides conflicting aspects for the impact of financial development on economic growth. The most empirical studies are based on those theoretical approaches proposed by some different economic school of thoughts which can be divided into three categories: (i) structuralists (ii) the repressionists, (iii) endogenous growth theory proponents.

The structuralists contend that the quantity and composition of financial variables induces economic growth by directly increasing saving in the form of financial assets, thereby, encouraging capital formation and hence, economic growth (Goldsmith, 1969; Patrick, 1966; Demetriades and Luintel, 1996; Berthelemy and Varoudakis, 1998).

Patrick (1966) identified two possible causal relationships between financial development and economic growth. The first –called "demand following"– views the demand for financial services as dependent upon the growth of real output and upon the commercialization and modernization of agriculture and other subsistence sectors. Thus, the creation of modern financial institutions, their financial assets and liabilities and related financial services are a response to the demand for these services by investors and savers in the real economy.

The second causal relationship between financial development and economic growth is termed "supply leading" by Patrick (1966). "Supply leading" has two functions: to transfer resources from the traditional, low-growth sectors to the modern high-growth sectors and to promote and stimulate an entrepreneurial response in these modern sectors. This implies that the creation of financial institutions and their services occurs in advance of demand for them. Thus, the availability of financial services stimulates the demand for these services by the entrepreneurs in the modern, growth-inducing sectors.

Therefore, the supply-leading hypothesis contends that financial development causes real economic growth, while in contrary to the demand-following hypothesis argues for a reverse causality from real economic growth to financial development.

The financial repressionists, led by McKinnon (1973) and Shaw (1973) – often referred to as the "McKinnon-Shaw" hypothesis contend that financial liberalization in the form of an appropriate rate of return on real cash balances is a vehicle of promoting economic growth. The essential tenet of this hypothesis is that a low or negative real interest rate will discourage saving. This will reduce the availability of loanable funds for investment which in turn, will lower the rate of economic growth. Thus, the "McKinnon-Shaw" model posits that a more liberalized financial system will induce an increase in saving and investment and therefore, promote economic growth.

The Mckinnon-Shaw school examines the impact of government

intervention on the development of the financial system. Their main proposition is that government restrictions on the banking system such as interest rate ceilings and direct credit programs have negative effects on the development of the financial sector and, consequently, reduce economic growth.

McKinnon (1973) and Shaw (1973) extend the earlier argument by noting that financial deepening implies not only higher productivity of capital but also a higher savings rate and, therefore, a higher volume of investment. Unlike Goldsmith (1969), where growth and financial intermediation are both thought of as endogenous, the focus of McKinnon (1973) and Shaw (1973) is on the effects of public policy regarding financial markets on savings and investment.

Furthermore, McKinnon (1973) and Shaw (1973) argue that policies that lead to financial repression –for example, controls which result in negative real interest rates– reduce the incentives to save. Lower savings, in turn, result in lower investment and growth. Thus, they conclude that higher interest rates resulting from financial liberalization induce households to increase savings.

The two different schools of thought are agreed to the transmission channels effect on the relationship between financial development and economic growth. Most of the theoretical models followed the emergence of endogenous growth theory.

The endogenous growth theory has reached to similar conclusions with the McKinnon-Shaw hypothesis by explicitly modelling the services provided by financial intermediaries such as risk-sharing and liquidity provision. This theory also suggests that financial intermediation has a positive effect on steady-state growth (Greenwood and Jovanovic, 1990, Shan et al, 2001), while the government intervention in the financial system has a negative effect on economic growth (King and Levine, 1993b).

Endogenous growth theory also predicts that trade liberalization between two or more countries reduces redundant research efforts and increases: (i) the market size for products, (ii) the efficiency of investment and (iii) positive externalities for firms (Rivera-Batiz and Romer, 1991).

The recent revival of interest in the link between financial development and growth stems mainly from the insights and techniques of endogenous growth models, which have shown that there can be self-sustaining growth without exogenous technical progress and that the growth rate can be related to preferences, technology, income distribution and institutional arrangements. This provides the theoretical underpinning that early contributors lacked: financial intermediation can be shown to have not only level effects but also growth effects.

Pagano (1993) suggests three ways in which the development of financial sector might affect economic growth under the basic endogenous growth

model. First, it can increase the productivity of investments. Second, an efficient financial sector reduces transaction costs and thus increases the share of savings channelled into productive investments. An efficient financial sector improves the liquidity of investments. Third, financial sector development can either promote or decline savings.

Many models emphasize that well-functioning financial intermediaries and markets ameliorate information and transactions costs and thereby foster efficient resource allocation and hence faster long-run growth (Greenwood and Jovanovic, 1990; Bencivenga and Smith, 1991; Bencivenga, Smith, and Starr, 1996).

In the models of Levine (1991), Bencivenga and Smith (1991), and Saint-Paul (1992) financial markets improve firm efficiency by eliminating the premature liquidation of firm capital, enhancing the quality of investments and therefore increasing enhance economic growth. Enhanced stock market liquidity reduces the disincentives for investing in long-duration and higher-return projects, since investors can easily sell their stake in the project before it matures, and is expected to boost productivity growth (Bencivenga et al., 1996).

During liquidity shocks, investors can sell their shares to another agent. Financial markets may also promote growth by increasing the proportion of resources allocated to firms. Through the diversification of productivity risk, even risk-averse investors can invest in firms. Portfolio diversification, through the stock market, may have an additional growth effect by encouraging specialization of production (Saint-Paul, 1992).

Saint-Paul (1992) develops a model where financial markets affect technological choice. In this model, agents can choose between two technologies: One technology is highly flexible and allows productive diversification, but has low productivity; the other is rigid, more specialized, and more productive. Financial markets, in contrast, allow individuals to hold a diversified portfolio to insure themselves against negative demand shocks and, at the same time, to choose the more productive technology.

Under Saint-Paul's (1992) model, productivity growth is achieved through a broader division of labour and specialization of enterprises. Specialization, however, carries risk. Financial intermediaries support specialization by permitting investors to hedge with a diversified portfolio. Specialization in the absence of a properly functioning financial sector, however, may be too risky individual investor. If it is financing for efficiency improving projects dries up.

King and Levine (1993b) employ an endogenous growth model in which the financial intermediaries obtain information about the quality of individual projects that is not readily available to private investors and public markets. This information advantage enables financial intermediaries to fund innovative

products and productive processes, thereby inducing economic growth (De La Fuente and Marin, 1994).

Levine (1997) who proposed that financial development promotes economic growth through the two "channels" of capital accumulation and technological innovation, while King and Levine (1993) have identified innovation as the main channel of transmission between finance and growth. Financial markets evaluate the potential innovative projects, finance the most promising ones through efficient resource allocation.

2. Stock market development and economic growth

Stock market development has been the subject of intensive theoretical and empirical studies (Demirguc-Kunt and Levine, 1996, Levine and Zervos, 1998). More recently, the emphasis has increasingly shifted to stock market indexes and the effect of stock markets on economic development. Levine and Zervos (1996, 1998) examine the specific role of stock markets, since banks provide different services from those of the stock markets, and show that various measures of equity market activity are positively correlated to measures of real economic activity.

Stock markets contribute to the mobilization of domestic savings by enhancing the set of financial instruments available to savers to diversify their portfolios. In doing so, they provide an important source of investment capital at relatively low cost.

Another important aspect through which stock market development may influence economic growth is risk diversification. Obstfeld (1994) suggests that international risk sharing through internationally integrated stock markets improves the allocation of resources and accelerates the process of economic growth. A well functioning and liquid stock market, that allows investors to diversify away unsystematic risk, will increase the marginal productivity of capital (Pagano, 1993). Levine (1991) also suggests that a developed stock market will allow agents to avoid both liquidity and productivity risk.

Rousseau and Wachtel (2000) and Beck and Levine (2003) show that stock market development is strongly correlated with growth rates of real GDP per capita. More importantly, they found that stock market liquidity and banking development both predict the future growth rate of economy when they both enter the growth regression Stock market liquidity –as measured both by the value of stock trading relative to the size of the market and by the value of trading relative to the size of the economy– is positively and significantly correlated with current and future rates of economic growth, capital accumulation, and productivity growth.

The large stock markets are more liquid, less volatile, and more internationally integrated than smaller markets; countries with strong information disclosure laws, internationally accepted accounting standards, and unrestricted international capital flows tend to have larger and more liquid markets; countries with markets concentrated in a few stocks tend to have smaller, less liquid and less internationally integrated markets; and internationally integrated markets are less volatile.

Bencivenga and Smith (1991) present a model in which individuals face uncertainty about their future liquidity needs. They can choose to invest in a liquid asset –which is safe but has low productivity– and/or an illiquid asset– which is riskier but has high productivity. Levine (1991) derives a model where more liquid stock markets –markets where it is less expensive to trade equities– reduce the disincentives to investing in long duration projects because investors can easily sell their stake in the project if they need their savings before the project matures. Enhanced liquidity, therefore, facilitates investment in longer-run, higher-return projects that boost economic growth.

Similarly, Devereux and Smith (1994) and Obstfeld (1994) show that greater international risk-sharing through internationally integrated stock markets induces a portfolio shift from safe, low-return investments to riskier, high-return investments, thereby accelerating long-run growth. These liquidity and risk models, however, also imply that greater liquidity and international capital market integration ambiguously affect saving rates

However, there are some doubts relative to the contribution of stock markets to long-run growth. For example, the role of stock markets in improving informational asymmetries has been questioned by Stiglitz (1985) who argues that stock markets reveal information through price changes rapidly, creating a free-rider problem that reduces investor incentives to conduct costly search.

The contribution of liquidity itself to long-term growth has been questioned. Demirguc-Kunt and Levine (1996) point out that increased liquidity may deter growth via three channels. First, it may reduce saving rates through income and substitution effects. Second, by reducing the uncertainty associated with investments, greater stock market liquidity may reduce saving rates because of the ambiguous effects of uncertainty on savings; third, stock market liquidity encourages investor myopia, adversely affecting corporate governance and thereby reducing growth.

3. Credit market development and economic growth

The literature has emphasized the role of the banking sector as the only organized capital market in most developing countries. It has neglected the

potential role of stock markets for efficient capital allocation and risk sharing in a liberalised financial market. According to Keynes (1936) study in a minimally developed financial system, credit creation causes economic growth. Credit creation, however, is supposed to be unconstrained by the supply of deposits because of the existence of idle balances in the banking system and because of the possibility of borrowing from the money market or the central bank. Therefore, the availability of money in the financial sector translates into credit creation to finance the economic activity and consequently, results in higher growth.

The literature on financial liberalization has emphasized abolishing interest rate ceilings and encourages free competition among banks as the way forward to achieve economic growth. However, it has largely overlooked the possibility that endogenous constraints in the credit market, such as imperfect information, could be a significant obstacle to efficient credit allocation even when assuming that banks are free from interest rate ceilings. Stiglitz and Weiss (1981) were the first to consider the importance of banks in allocating credit efficiently, particularly to new and innovative investments.

A high risk premium would only encourage the riskier borrowers, as the higher the risk the higher the expected return from investment. The expected return of the borrowers is an increasing function of the riskiness of their projects, the higher the risk the higher the return. This fact would discourage less risky investments from taking place, although they could be more productive (selection effect). Safe borrowers, which deal with banks only, will be left with no other choice.

At times of high interest rates, investors would favour investments with a high probability of default (incentive effect). Reducing opportunities to innovate will have a negative impact on economic growth in the long run. King and Levine (1993) use different measures of bank development for several countries and find that banking sector development can spur economic growth in the long run. Oι Jayaratne and Strahan (1996) show that when individual states in USA relaxed interstate branching restrictions, bank lending quality increased significantly leading to higher growth.

Government restrictions on banking systems through interest ceilings on deposits and high reserve requirements create a shortage of funds and reduce the efficiency of capital. Government ownership of banks is another form of intervention in financial systems which may have adverse impact on financial development. Privatizing government owned banks can enhance credit allocation and thereby increase quantity and quality of investment (Demetriades and Andrianova, 2004).

Bagehot (1873) and Schumpeter (1911) emphasize the critical importance of the banking system in economic growth and highlight circumstances when banks can actively spur innovation and future growth by identifying and funding productive investments. In contrast, Lucas (1988) states that economists "badly over-stress" the role of the financial system.

In a modern economy, banks and stock markets constitute a major part of the financial system. Although they may perform different roles in the process of economic development, their uniqueness is hardly emphasized within the framework of economic growth. The development of stock markets is necessary to achieve full efficiency of capital allocation if the government is to liberalize the financial system. While banks finance only well-established, safe borrowers, stock markets can finance risky, productive and innovative investment projects (Caporale et al, 2005).

As far as physical accumulation is concerned, both stock markets and banks provide sources of external financing for firms. For the purpose of resource allocation, they both create information to guide the allocation of resources. They differ only in the way the information is transmitted. Information in stock markets is contained in equity prices, while loan managers collect that in banks (Caporale et al, 2005).

Dow and Gorton (1997) argued that if the main role of the stock markets to signal information for evaluation, financing, and monitoring, banks may be equally effective at efficient resource allocation.

Evolution of stock market has impact on the operation of banking institutions and hence, on economic promotion. This means that stock market is becoming more crucial, especially in a number of emerging markets and their role should not be ignored (Khan and Senhadji, 2000). As explained in Levine and Zervos (1998), a well-established stock not only can mobilize capital and diversify risks between market agents, it is also able to provide different types of financial services than banking sector and then stimulate economic growth.

Do well-functioning stock markets and banks boost economic growth? Theory provides conflicting predictions about whether stock markets and banks are substitutes, compliments, or whether one is more conducive to growth than the other. Boyd and Prescott (1986) model the critical role that banks play in easing information frictions and therefore in improving resource allocation, while Stiglitz (1985) stresses that stock markets will not produce the same improvement in resource allocation and corporate governance as banks. Arestis et al (2001) show that while both banks and stock markets play an important role in the growth process, the banking sector development effect on economic growth in the long run is much higher than the stock market development one.

On the other hand, some models emphasize that markets mitigate the inefficient Monopoly power exercised by banks and stress that the competitive nature of markets encourages innovative, growth-enhancing activities as opposed to the excessively conservative approach taken by banks (Allen and Gale, 2000).

Finally, some theories stress that it is not banks or markets, it is banks and markets; these different components of the financial system ameliorate different information and transaction costs. Furthermore, they do not distinguish clearly between the roles played by different financial institutions, such as banks and insurance companies, and bond or stock markets in the relationship between financial markets and economic growth.

In previous studies, banks and insurance companies are normally regarded as intermediaries rather than markets; also, the channels through which stock markets affect growth are not exactly identified. Omitting stock market development makes it difficult to assess whether (a) the positive relationship between bank development and growth holds when controlling for stock market development, (b) banks and markets each have an independent impact on economic growth, or (c) overall financial development matters for growth, but it is difficult to identify the separate impact of stock markets and banks on economic success.

4. Financial systems and economic growth

The relationship between financial structure and economic development can be examined on the basis of competing theories of financial structure. These are: the bank-based, the market based and the financial services. The third theory, the financial services view is actually consistent with both the bank-based and the market-based views (Levine, 1997).

Quite simply, this theory suggests that it is neither banks nor markets that matter; it is both banks and markets. They are different components of the financial system; they do not compete, and as such ameliorate different costs, transaction and information, in the system (Boyd and Smith, 1998; Levine, 1997; Demirguc-Kunt and Levine, 2001).

Under these circumstances, financial arrangements emerge to ameliorate market imperfections and provide financial services that are well placed to facilitate savings mobilization and risk management, assess potential investment opportunities, exert corporate control, and enhance liquidity. In the financial services view, the issue is not the source of finance. It is rather the creation of an environment where financial services are soundly and efficiently

provided. The emphasis is on the creation of better functioning banks and markets rather than on the type of financial structure.

Financial systems improve economic performance by assessing investment opportunities and exerting corporate control, easing risk management, and lowering the costs of resource mobilization (Levine, 1997). As financial systems develop, they become more efficient in providing these services, which enhance economic growth.

Other economists, however, announced skepticism about the capacity of financial systems to affect economic growth, Lucas (1988) and Chandavakar (1992) follows. The bank-based theory emphasizes the positive role of banks in development and growth, and, also, stresses the shortcomings of market-based financial systems.

It is argued that banks can finance development more effectively than markets in developing economies, and, in the case of state-owned banks, market failures can be overcome and allocation of savings can be undertaken strategically (Gerschenkron, 1962). Those banks that are unhampered by regulatory restrictions, can exploit economies of scale and scope in information gathering and processing (Levine, 2002, Beck and Levine, 2002).

The bank-based view also stresses the shortcomings of market-based systems. The latter reveal information publicly, thereby reducing incentives for investors to seek and acquire information. Information asymmetries are thus accentuated, more so in market-based rather than in bank-based financial systems (Boyd and Prescott, 1986).

Banks can ease distortions emanating from asymmetric information through forming long-run relationships with firms, and, through monitoring, contain moral hazard. As a result, bank based arrangements can produce better improvement in resource allocation and corporate governance than market-based institutions (Bhide, 1993). In Allen and Gale (1995), the market-dominated US financial system and the bank-dominated German financial system are compared in their capacity to provide risk sharing opportunities. It is argued that bank dominated systems are better at providing intertemporal risk sharing through long-term commitments while market-dominated systems provide better cross-sectional risk sharing by providing a more diverse set of financial instruments.

Proponents of bank-based systems Stigliz (1985), Shleifer and Vishny (1997) note that in highly liquid markets, information is quickly revealed to investors at large, creating a free-rider problem, while small outside investors are unable to exert corporate control due to superior information of managers. Liquid markets make it easy for concerned stockholders to simply sell their

shares rather than coordinate pressure against management. The combination of all of these market failures leads to an inefficient allocation of saving.

Those favouring bank-based systems argue that banks, with their long-term relationships with particular firms, mitigate these market failures. Proponents of market-based systems, (Rajan, 1992, Black and Moersch, 1998) focus on the weaknesses of bank-based systems, arguing that

1. large banks tend to encourage firms to undertake very conservative investment projects and extract large rents for firms, leaving them with low profits and little incentive to engage in new and innovative products and
2. shareholders have little oversight of bank managers, who control not only banks, but also indirectly through financing the firms.

Furthermore, the advocates of market based systems claim that the latter provide a richer set of financial instruments that allows greater customization of risk management techniques than in a more standardized bank-based system. La Porta et al (1997) suggest that establishing a legal environment that credibly protects the right of investors is much more important than considerations involving comparisons between bank – or market-based systems. Levine (1997) convincingly argues that the choice is not either banks or markets. Rather, banks and markets provide complementary financial services to the economy, with both having positive implications for economic growth. The most important empirical studies that investigate the relationship between financial development and economic growth according to the existing literature are presented in table 1 for the period 2000-2005.

Table 1. Empirical studies (2000-2008)

Author (Year)	Time Period	Model-Variables	Examined Countries
Asteriou Price [2000]	1983:Q1-1997:Q1	Y= f(X,Z) • per capita GDP (Y) • capital to labour (Z) • money supply to GDP (X)	UK
Demirgüç-Kunt, Maksimovic [2000]	1989-1996	STCOUNT = f (TOR, BC, INFLATION, SIZE, GDP/CAP, LAW & ORDER) • stock market index (STC) • volume of trading (TOR) • bank credits (BC) • index for assets (SIZE) • inflation (INF) • per capita GDP (GDP/CAP) • index law (LAW & ORDER)	40 countries
Dickinson [2000]	1980-1995	SH = f (IP, IR, EX) • industrial production index (IP) • share index • interest rate (IR) • exchange rate (EX)	USA, UK, France, Germany
Rousseau, Wachtel [2000]	1980-1995	PGDP = f (GDP, EDU, EXR REV, FD) • financial development index (FD) • capitalisation SMC/GDP • total value of trade (TVTR/GDP) • money supply (M3/GDP) • per capita GDP (PGDP) • education (EDU) • revolution (REV) • exchange rate (EXR)	47 countries
Cetorelli, Gambera [2001]	1980-1990	GDP = f (IND, B, D) • GDP (PGDP) • industrial production index (IND) • banking index (B) • dummies	42 countries

Methodology	Conclusions
Time series analysis Stationarity tests (Dickey-Fuller (ADF), Phillips-Perron (PP)). Johansen cointegration test. Vector error correction model Granger causality test	Unidirectional causality with direction from financial development to economic growth Z®
OLS regression analysis.	The stock market development and credit market development have a positive effect on economic growth through direct financing the firms.
Time series analysis Stationarity tests (Dickey-Fuller) (ADF) Johansen cointegration test. Vector error correction model	Stock exchanges in UK and France are affected by the evolutions in stock exchanges of New York and Frankfurt, while stock exchange of Germany is affected by the evolutions in stock exchanges of New York and London.
Cross-country regression analysis. Panel estimation.	Unidirectional causality with direction from financial development to economic growth FD->PGDP.
Cross-country regression analysis. Estimating dynamic model.	Bank development has a positive effect on economic growth through direct financing of bank credits to private sector.

Author (Year)	Time Period	Model-Variables	Examined Countries
Arestis Demetriades Luintel [2001]	1973Q1-1997Q4 1972Q2-1998Q1 1974Q2-1998Q1 1968Q2-1997Q4 1974Q1-1998Q1	$Y = f(MC,BY,SMV)$ • real GDP (Y) • stock market capitalisation (MC) • domestic credits to GDP (BY) • stock market volatility (SMV)	Germany, USA, Japan, UK, France
Shan Morris Sun [2001]	1976-1998 1977-1998 1977-1998 1960-1998 1977-1998 1977-1998 1982-1998 1982-1998 1982-1998 1974-1998	$OUTPUT = f(BC, TFP, INV, TRADE, CPI, STK)$ • real GDP (OUTPUT) • bank credits (BC) • productivity (TFP) • gross fixed capital formation to GDP (INV) • exports and imports to GDP (TRADE) • consumer price index (CPI) • stock market index (STK)	Australia, Canada, China, Denmark, France, Italy, Japan, New Zealand, UK, USA
Hassapis Kalyvitis [2002]	1957-1999	$STM = f(IND, DR, CPI)$ • stock market index (STM) • industrial production (IND) • interest rate (DR) • consumer price index CPI)	USA, Austria, Canada, Denmark, Finland, France, Germany, Italy, Japan, Holland, Norway, Spain, Sweden, UK
Levine [2003]	1960-1989	$PGDP = f(DEPTH)$ • per capita GDP (PGDP) • liquid liabilities as proxy of financial depth (DEPTH)	USA
Dritsakis Adamopoulos (2003)	1960Q1-2000Q4	$GDP = f(FD,OP)$ • economic growth (GDP) • financial development = supply money to GDP (M2/GDP) • trade openness (OP) = sum of exports and imports to GDP (EXP+IMP/GDP)	Greece

Methodology	Conclusions
Time series analysis Stationarity tests (Dickey-Fuller) (ADF) Johansen cointegration test. Exogeneity and sensitivity tests	Stock and credit market have a positive effect on economic growth for Germany, France and Japan, while this relationship is not statistically significant in UK and USA. Financial development follows economic growth in these countries.
Time series analysis Stationarity tests (Dickey-Fuller (ADF), Phillips-Perron (PP)). Johansen cointegration test. Vector error correction model. Granger causality test	Unidirectional causality with direction from stock market development to economic growth STK ®
Vector error correction model Impulse response and variance decomposition methods Benchmark model, G-7 model, Two-country model	Productivity index does not respond significantly to exogenous shocks in real domestic stock returns. This result changes when the exogenous shock is examined for international stock returns.
OLS-Cross-Country Analysis GMM-Panel Estimation	Countries with highly developed financial system tend to increase the rate of economic growth rapidly due to the stock market liquidity and bank lending of firms, while there is not any problem of simultaneity bias between the examined variables.
Time series analysis Stationarity tests (Dickey-Fuller (ADF), KPSS. Johansen cointegration test. Vector error correction model. Granger causality test	Unidirectional causality with direction from financial development to economic growth FD®

Author (Year)	Time Period	Model-Variables	Examined Countries
Hurlin, Venet [2004]	1960-1995	GDP = f (LLIAB, BC, PRCR) • per capita GDP (PGDP) • liquid liabilities (LLIAB) • bank credits (BC) • private credits (PRCR)	63 countries
Guiso, Jappelli, Padula Pagao, [2004]	1981-95	GDP = f (FD, X) • per capita GDP (GDP) • financial development (FD) • industrial production (X)	Austria, Belgium, Denmark, Italy, Finland, France, Germany, Greece, Ireland, Sweden, Netherlands UK, Portugal, Spain
Beck, Levine [2004]	1976-1998	GDP =f (SC, GC, OP, IR, BM, BC, TR) • GDP (GDP) • volume of trading (TR) • bank credits (BC) • Black market premium (BM) • inflation rate (IR) • trade openness (OP) • consumption (GC) • education (SC)	40 countries
Christopoulos Tsionas [2004]	1970-2000	Y=f (F, S, P) • production (Y) • financial depth (F) • investments (S) • inflation rate (P)	Colombia, Paraguay, Peru, Mexico, Ecuador, Honduras, Kenya, Thailand, Dominican R, Jamaica

Methodology	Conclusions
A panel test of the Granger Non Causality Hypothesis Sensitivity analysis	Unidirectional causality with direction from financial development to economic growth in 35 countries, while there is a unidirectional causality with direction from economic growth to financial development in 28 countries.
Regression analysis Sensitivity analysis Estimating dynamic model	Financial development have a positive effect on economic growth of European Union members countries. The level of financial development differs from country to country. Each country like Greece has benefited by its economic integration as an entire member of European Union.
GMM (Generalised-Method-Moments)	Stock and credit market development have a positive effect on economic growth taking into account the inflation rate, trade openness.
Stationarity tests ADF, IPS, MW. Johansen cointegration test panel LL, HF. Generalised least squares method (GLS) Causality test with Wald test	Unidirectional causal relationship with direction from financial development to economic growth F®

Author (Year)	Time Period	Model-Variables	Examined Countries
Dritsakis Adamopoulos [2004]	1960Q1-2000Q4	GDP = f (FD,OP) • economic growth ΑΕΠ (GDP) • financial development = money supply to GDP (M2/GDP) • trade openness (OP) = sum of exports and imports to GDP (EXP+IMP/GDP)	Greece
Nieuwer-burgh Buelens Cuyvers [2005]	1830-2002	GDP = f (STKD, BD) • GDP (GDP) • stock market development (STKD) • credit market development (BD)	Belgium
Fink, Haiss, Mantler [2005]	1990-2001	Y= f (A, K, L) ή lny = f(lnTFA, lnk) • GDP (Y) • technology (TFA) • physical capital (K)	33 countries
Liang, Teng [2005]	1952-2001	Y= f (BCR, K, TR, R) • per capita GDP (Y) • bank credits (BCR) • physical capital (K) • trade rate (TR) • interest rate (R) TR = EXP + IMP / GDP = sum of exports and imports to GDP	China
Chinn, Ito [2005]	1980-2002	GDP = f (FD, OPEN) • per capita GDP (GDP) • financial development (FD) • trade openness (OPEN) OPEN= EXP+IMP/GDP = sum of exports and imports to GDP	108 countries

Methodology	Conclusions
Time series analysis Stationarity tests (Dickey-Fuller (ADF), (KPSS). Johansen cointegration test. Vector error correction model. Granger causality test	Unidirectional causal relationship with direction from financial development to economic growth M2®
Johansen cointegration test. Vector error correction model. Granger causality test	Unidirectional causal relationship with direction from stock market development to economic growth and credit market development to economic growth (STKD ®
Mathematical model analysis	Positive relationship between stock market development and economic growth taking into account the productivity effect.
Time series analysis Stationarity tests, Dickey-Fuller (ADF) and Phillips-Perron (PP), Kwiatkowski et al (KPSS). Johansen cointegration test. Vector error correction model. Granger causality test	Unidirectional causal relationship with direction from stock market development to economic growth Y->BCR
OLS panel estimation. A panel error–correction model. Estimating dynamic model. Reverse causality.	Credit and stock market development have a positive effect on economic growth. Trade openness consists a precondition for capital market development.

Author (Year)	Time Period	Model-Variables	Examined Countries
Dritsakis Vazakides Adamopoulos [2005]	1960-2002	GDPN = f(INV, HC, FD, OPEN) • per capita GDP (GDPN) • investments as percentage of GDP (INV) • human capital (HC) • financial development (FD) • trade openness (OPEN) FD = M2/GDP = money supply to GDP OPEN= EXP+IMP/GDP = sum of exports and imports to GDP GDPN = GDP/N = GDP to population	Turkey
Hondroy-iannis Lolos Papapetrou [2005]	1986-1999	RGDP = f(TCAP, TBC) • productivity (RGDP) • total capitalisation (TCAP) • total bank credits (TBC) RGDP = f(ICAP, IBC) • productivity (RGDP) • capitalisation αγοράς (ICAP) • commercial bank credits to industrial sector as percentage of GDP (IBC)	Greece

Methodology	Conclusions
Time series analysis Stationarity tests, Dickey-Fuller (ADF) Johansen cointegration test. Vector error correction model.	Long run equilibrium relationship between the examined variables following the Johansen cointegration test.
Time series analysis Stationarity tests, Dickey-Fuller (ADF) and Phillips-Perron (PP), Kwiatkowski et al (KPSS), Zivot-Andrews (ZA). Johansen cointegration test. Granger causality test based on exogeneity tests.	Bilateral causal relationship between stock market development and economic growth and also between credit market development and economic growth for Greece (RGDP ↔TCAP, και RGDP ↔TBC).

5. Conclusions

In recent years the relationship between financial development and economic growth has become an issue of extensive analysis. Examining the relationship between financial development and economic growth it is unclear whether finance causes or simply follows economic growth. A general proposition states that the development of the financial sector is expected to have a positive impact on economic growth. Although the positive role of finance on growth has become a stylized fact, there are some methodological reservations for the results of the previous empirical studies Ang (2008).

Patrick (1966) identified two possible causal relationships between financial development and economic growth. The supply-leading hypothesis contends that financial development causes real economic growth, while in contrary to the demand-following hypothesis argues for a reverse causality from real economic growth to financial development. The "McKinnon-Shaw" hypothesis contends that financial liberalization in the form of an appropriate rate of return on real cash balances is a vehicle of promoting economic growth. The endogenous growth theory has reached to similar conclusions with the McKinnon-Shaw hypothesis by explicitly modelling the services provided by financial intermediaries such as risk-sharing and liquidity provision.

Do well-functioning stock markets and banks boost economic growth? Economic theory provides conflicting predictions about whether stock markets and banks are substitutes, compliments, or whether one is more conducive to growth than the other. The development of stock markets is necessary to achieve full efficiency of capital allocation if the government is to liberalize the financial system. While banks finance only well-established, safe borrowers, stock markets can finance risky, productive and innovative investment projects (Caporale et al, 2005). Research so far has mainly focused on testing the effect of financial development on economic growth. Little has been done to examine what determines this relationship. So, more research is necessary on this area taking into account the different econometric techniques and the main features of each examined country. Furthermore, future research should be focused on the prediction of economic crises and their effects on the global economy.

References

Allen, F. and Gale, D. (1995) A Welfare Comparison of the German and U.S. Financial Systems, *European Economic Review*, 39, 179-209.

Allen, F. and Gale, D. (2000) *Comparing Financial Systems*, Cambridge, MA: MIT Press.

Ang (2008) A survey of recent developments in the literature of finance and growth, *Journal of Economic Surveys*, 22(3), 536–576.

Arestis, P., Demetriades, P. and Luintel, K. (2001) Financial development and econo-mic growth: The role of stock markets, *Journal of Money, Credit and Banking,* 33(1), 16-41.

Bagehot, W. (1873) *Lombard Street, A description of money market*, Homewood, IL: Richard D. Irwin, (1962 Edition).

Beck, T. and Levine, R. (2002) Industry Growth and Capital Allocation: Does Having a Market- or Bank-Based System Matter?, *Journal of Financial Economics*, 64, 147-180.

Beck, T. and Levine, R. (2003) Stock Markets, Banks, and Growth: Panel Evidence, *Journal of Banking and Finance*, forthcoming.

Bencivenga, V. and Smith, B. (1991) Financial intermediation and endogenous growth, *Review of Economics and Studies*, 58, 195-209.

Bencivenga, V., Smith, B. and Starr, R. (1996) Equity Martkets, Transaction Costs, and Capital Accumulation: An Illustration, *The World Bank Economic Review,* 10(2), 241-265.

Berthelemy, J. and Varoudakis, A. (1998) Financial Development, Financial Reforms and Growth: A panel data approach, *Revue-Economique*, 49(1), 195-206.

Bhide, A. (1993) The Hidden Costs of Stock Market Liquidity, *Journal of Financial Economics*, 34, 1-51.

Black, S. and Moersch, M. (1998) *Financial Structure, Investment and Economic Growth in OECD Countries*, In: Competition and Convergence in Financial Markets: The German and Anglo-American Models, Eds: S.W. Black and M. Moersch, New York: North -Holland Press: 157-174.

Boyd, J. and Smith B. (1998) The evolution of debt and equity markets in economic development, *Economic Theory*, 12, 519-560.

Boyd, J. and Prescott, E. (1986) Financial Intermediary-Coalitions, *Journal of Economics Theory*, 38, 211-232.

Caporale, G.M., Cipollini, A. and P.O. Demetriades (2005), "Monetary policy and the exchange rate during the Asian crisis: identification through heteroscedasticity", *Journal of International Money and Finance*, 24, 1, 39-53.

Chandavarkar, A. (1992) Of Finance and development: neglected and unsettled questions, *World Development*, 22, 133-142.

De la Fuente, A. and Marin, J. (1996) Innovation, Bank Monitoring, and Endogenous Financial Development, *Journal of Monetary Economics,* 38, 269-301.

Demetriades and Andrianova (2004) Finance and growth: what we know and what we need to know, in C. Goodhart, (ed) *Financial Development and Economic Growth: Explaining the Links*, 38-65, Palgrave Macmillan: Basingstoke and New York.

Demetriades, P. and Luintel, K. (1996a) Financial development, economic growth and banking sector controls: evidence from India, *Economic Journal,* 106, 359-374.

Demirguc-Kunt, A. and Levine, R. (1996) Stock markets corporate finance and economic growth, *World Bank Economic Review*, 10(2), 223-240.

Demirgüç-Kunt, A. and Levine R. (2001) *Financial Structures and Economic Growth: A Cross-Country Comparison of Banks, Markets, and Development*, Cambridge, MA: MIT Press.

Devereux, M. and Smith, G. (1994) International Risk Sharing and Economic Growth, *International Economic Review*, 35, 535-550.

Dow, J. and Gorton, G. (1997) Stock Market Efficiency and Economic Efficiency: Is There a Connection, *Journal of Finance*, American Finance Association, 52(3), 1087-1129.

Friedman, M. and Schwartz, A. (1963) *A Monetary history of the United States.* Princeton: Princeton University Press.

Gerschenkron, A. (1962) *Economic Backwardness in Historical Perspective - A Book of Essays,* Cambridge: Harvard University Press.

Ghali, K. (1999) Financial development and economic growth: The Tyisian experience, *Review of Development Economics,* 3(3), 310-322.

Goldsmith, R. (1969) *Financial Structure and Development*, New Haven: Yale University Press.

Greenwood, J. and Jovanovic, B. (1990) Financial development, growth and distribution of income, *Journal of Political Economy*, 98, 1076-1107.

Jayratne, J. and Strahan, P. (1996) The Finance-Growth Nexus: Evidence from Bank Branch Deregulation, *Quarterly Journal of Economics*, 111(3), 639-670.

Kahn, M. and Sendahji, A. (2000) Financial development and economic growth: An overview, *IMF Working Paper*, WP/00/209, International Monetary Fund.

Keynes, J. (1936) *The general theory of employment interest and money*, London: Macmillan.

King, R. and Levine, R. (1993) Finance, entrepreneurship, and growth: Theory and evidence, *Journal of Monetary Economics*, 32, 513-542.

King, R. and Levine, R. (1993b) Finance Entrepreneurship and Growth, *Journal of Monetary Economics*, 32, 513-542.

La Porta, R., Lopez-de-Silanes, A., Shleifer, A. and Vishny, R. (1997) Legal Determinants of External Finance, *Journal of Finance*, 52, 1131-1150.

Levine, R. (1991) Stock Markets, Growth, and Tax Policy, *Journal of Finance*, 46, 1445-1465.

Levine, R. (1997) Financial development and economic growth: Views and agenda, *Journal of Economic Literature*, 35(2), 688-726.

Levine, R. (2002) Bank based or market-based financial systems: Which is better? *Journal of Financial Intermediation,* 11, 398-428.

Levine, R. and Zervos, S. (1996) Stock markets, banks and economic growth, *Policy Research Working paper 1690,* The World Bank Policy Research Department, World Bank.

Levine, R. and Zervos, S. (1998) Stock markets, banks and economic growth, *The American Economic Review*, 88(3), 537-558.

Lucas, R. (1988) On the Mechanics of Economic Development, *Journal of Monetary Economics,* 22, 3-42.

McKinnon, R. (1973) *Money and capital in economic development*, Washington, DC: Brookings Institution, D. B. Crane, et al. Boston, MA: Harvard Business School Press.

Obstfeld, M. (1994) Risk-Taking, Global Diversification, and Growth, American *Economic Review*, 84, 1310-1329.

Pagano, M. (1993) Financial markets and growth: An overview, *European Economic Review*, 37, 613-622.

Patrick, H. (1966) Financial Development and Economic Growth in Underdeveloped Countries, *Economic Development and Cultural Change*, 14, 174-189.

Rajan, R. (1992) Insiders and Outsiders: The Choice Between Informed and Arms Length Debt, *Journal of Finance*, 47, 1367-1400.

Rivera-Batiz, L. and Romer, P. (1991) Economic Integration and Endogenous Growth, *Quarterly Journal of Economics*, 106, 531-55.

Robinson, J. (1952) *The Rate of interest and other essays,* London: Macmillan.

Rousseau, P. and Wachtel, P. (2000) Equity markets and growth: cross-country evidence on timing and outcomes, 1980-1995, *Journal of Banking and Finance,* 24, 1933-1957.

Saint-Paul, G. (1992) Technological Choice, Financial Markets and Economic Development, *European Economic Review*, 36, 763-781.

Schumpeter, J. (1911) *The Theory of Economic Development,* Cambridge: Harvard University Press.

Schumpeter, J. (1912) *Theorie der Wirtschaftlichen Entwicklung*, Leipzig: Dunker & Humblot, [The Theory of Economic Development, 1912, translated by R. Opie. Cambridge, MA: Harvard University Press, 1934].

Shaw, E. (1973) *Financial Deepening in Economic Development*, Oxford: Oxford University Press.

Shleifer, A. and R. Vishny (1997) A Survey of Corporate Governance, *Journal of Finance*, 52, 737-783.

Stiglitz, J. (1985) Credit markets and the control of capital, *Journal of Money, Credit, and Banking*, 17(2), 133-152.

Stiglitz, J. and Weiss, A. (1981) Credit rationing in markets with imperfect information, *American Economic Review,* 71(3), 383-410.

THE RHODIAN MARITIME CODE AS A PRECURSOR OF MODERN MARITIME CONTRACTS

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Abstract

This article examines the provisions of the Rhodian Maritime Code concerning maritime contracts, in which the chartering contract –in other words the charter party– has a sovereign role. Its aim is to prove that the concept of the written contract in the maritime field first appeared in world history in the form of a comprehensive statute that was broadly welcomed during the Byzantine period. It was based on maritime law provisions –albeit not statutory– of the island of Rhodes during the Hellenistic era.

To this end, the Code itself was examined in its original form and a conceptional interpretation of the words specifically used for maritime contracts was attempted. At the same time, data was drawn from Greek and international bibliography on the existence of statutory and comprehensive maritime law prior to the Rhodian Maritime Code. The study demonstrates that the concept of the maritime contract as a written text, accompanied by the signatures of the involved contracting parties and providing them with the possibility of challenging it in court, first appears to be enshrined in the Rhodian Law.

JEL Classification: K29, N70
Keywords: history, law, shipping, sea, Rhodes island, Byzantium

1. Introduction

The aim of this paper is to demonstrate that the concept of the contract in shipping first emerged as a statutory legal text in the Byzantine era. Any maritime agreement, whether oral or written, cannot be valid unless there is an appropriate legal framework that will facilitate its general acceptance and ensure that its possible violation can be challenged in court. It has been established that a Code of Maritime Law was instituted in the Byzantine years and it was based on the maritime law of the thriving island of Rhodes of the Hellenistic era. This is the Rhodian Maritime Code, or Rhodian Law which, along with various local customs, came into being and enjoyed broad acceptance between the 6th and 8th centuries AD. This Code encompasses the concept of the written contract, including the signatures of the involved parties. Moreover, it also provides for the consequences of a party breaching the initial agreement.

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Throughout the study and enumeration of the chapters of the Rhodian Law, parts of the text have deliberately been used in the original language of its time. It should be noted that during this era, the polytonic orthography was prevalent.

2. The Rhodian Maritime Code

In modern day shipping, the concept of the contract refers to a series of written agreements related to actions such as chartering, financing, marine insurance, ship crew recruitment, shipbuilding, ship sale and purchase etc. Of course various international contracts and conventions exist which are broadly accepted and thus go beyond the daily shipping practices and transactions.

A historical reflection on shipping contracts shows that these were often oral; in other words, they were simple agreements. Even the chartering of a ship for the transfer of goods that is realized only by a written agreement called a charter party, used to be oral in ancient times; or in any case, it has not been stated anywhere that it was somehow written. But even if there was a document of agreement, sit was not statutory and therefore not broadly accepted. According to Rokkas, no ancient text has been found ruling maritime relations, which seem to have been regulated by local customs and habits (Rokkas, 1968). In the Athenian Republic, maritime law derives from the forensic speeches of Attic rhetoricians which, of course, constitute no law. The maritime customs that existed since the days of Demosthenes gained particular power later, during the Hellenistic period (Houmanidis, 1980).

Moreover, there is no evidence to support the existence of a law regulating maritime transactions even for the other ancient peoples of the Mediterranean, the Phoenicians, the Cretans, the Egyptians, the Caledonians and the Babylonians. Daniel Danjon states "Il n' est resté rien, on a peu près rien des lois maritimes des Phéniciens, des Egyptiens, des Crétois, des Athéniens et des Carthacinois, lois qui devraient capendant être developpées en égard à l' importance de la marine chez ces peuples" (Danjon, 1910). In other words, there is no evidence of some maritime law governing the transactions of the ancient peoples of the Mediterranean, despite the fact that these civilizations were characterised by a flourishing merchant marine.

Neither in Roman times were there any laws regulating sea matters or a law of navigation according to Rokka. However, some provisions of the Rhodian Maritime Code were known to the Roman jurists of the last years of the Republic as Lex Rhodia de Jactu (Houmanidis, 1980) and addressed issues that are now commonly referred to as average. Part of the Rhodian Law was

included in the Digesta ("Πανδέκτες") of the Code of Justinian (Corpus Juris Civilis, 533 AD). Specifically, in Book 14 of the Digesta, Title 2 is inscribed De Legge Rhodia Jactu (namely "about average"). In latin the meaning of the word Jactu is jettison.

The Rhodian Maritime Law (or the Rhodian Maritime Code or the Rhodian Law or the False Rhodian Law) first appeared sometime between the 6th and 8th centuries. It spread –with some variations– in Venice, Southern Italy and Sicily and regulated maritime relations and other general matters such as maritime safety. Ashburner, in his famous book The Rhodian Sea Law, claims that the Law was first drafted in this period and substantiates this view stating that the general style of the Law is not that of ancient Rhodes but rather the prevalent style of the Byzantine Middle Ages (Ashburner, 1909). Rhodes was indeed a maritime legend of the Hellenistic and Roman times and it even had written laws and legislation. However, the Rhodian Law is most probably not a product of that time. This is an opinion that most writers share. This is the reason why it is called the False Rhodian Law as it did not originate in the ancient times when Rhodes flourished. Pantazopoulos supports that the Rhodian Maritime Law codifies the customary maritime law of the East Mediterranean and, as mentioned before, its provisions were already known to Roman jurists (Pantazopoulos, 1974).

The Rhodian Maritime Code focuses on maritime law matters of the Hellenistic Era Rhodes, which –along with certain maritime customs– later formed a collection that was included, as mentioned above, in the Code of Justinian. Most scholars, however, agree that the Law was not enacted by Justinian (527-565 AD) but by Isaurian Emperors and most probably by Leo III (717-741 AD) when the first codification of laws in Greek instead Latin comes to light. There are various views on the exact date of the codification of the Rhodian Law, but these are beyond the scope of this paper.

3. The structure of the code

The Rhodian Maritime Code consists of three parts.

The First Part discusses who enacted the Law. There are various Roman Emperors such as Tiberius, Vespasian, Septimus Severus and others who simply validated the Rhodian Law as the law of the seas of the Empire. As is stated in some point "ὁ δέ νόμος τῆς θαλάσσης τῷ νόμῳ τῶν Ροδίων κρινέσθω τῷ ναυτικῷ, ἐν οἷς μή τις τῶν ἡμερέρων αὐτῷ νόμος ἐναντιοῦται" –in rough translation– "the maritime law shall be implemented according to the Rhodian Law; none of our decrees shall conflict with the Rhodian Law…". In other words, the Rhodian Law shall prevail over Roman law on maritime law matters.

The Second Part consists of 19 Chapters. Chapters 1-7 refer to seafarers' salaries by specialty. Those chapters refer only to the levels of the salaries, without making any mention of seamen's contracts. Chapters 8-15 refer to the rights and obligations of the passengers. Chapter 16 discusses the contribution in the event of damage or shipwreck, what is now known as average. Chapters 17-19 discuss maritime loans and it is stipulated that a maritime loan is based on a written agreement.

The Third Part consists of 47 Chapters. Chapters 1-8 refer to cases of theft and violent incidents among the crew on board. Chapters 9-16 cover the issues of average and consignment. Chapters 17-25 refer to the matters of loaning, chartering and the cargo of the ship. Chapters 26-47 address the issues of shipwreck or serious damage to the ship underway or during the loading progress as well as the salvage of ship objects.

An observation must be made here. In the Second Part of the Law, each of the 19 Chapters has the text following its numbering, while in the Third Part next to each of the 47 Chapters, the title –i.e. what the chapter is about– precedes the text.

The following Chapters are those which clearly indicate or even prove that a maritime transaction had the form of a contract, even a contract in writing between the parties involved. In the Byzantine times, in the case of an agreement, the verb "I write" ("γράφω") (in all its tenses) usually connoted "I agree in writing". The word "compose/write" ("συγγράφω") which meant "sign" ("υπογράφω") was used to indicate the full confirmation of a written agreement. In the Second Part this occurs mainly in the case of maritime loans, i.e. financing, and in the Third Part mainly in the cases of chartering and average.

4. The contracts in the second part of the code

Chapter 17. The Chapter addresses the issue of maritime loans. In a rough translation (Simpsas, 1982), it is stated that sea loans paid with land property without risk should not be agreed upon. At the time of the Law, the loans fell into two categories: loans at sea and loans at land. The latter were "ἔγγαια", namely they involved a land property mortgage; therefore, they remained unaffected by possible perils, unlike the first ones, sea loans, where the lender was involved in the risk of the maritime business. As the text states, "ὁ νόμος κελεύει· τά ἐν τῇ θαλάσσῃ δεδανεισμένα ἔγγαια καί ἀκίνδυνα μή γραφέτωσαν, εἰ δέ καί ἐπιγράφουσιν, ἄκυρα εἴτω ἐπί τόν ῥόδιον νόμον· τά δέ ἐν ἀγροῖς ἢ ἐν ὄρεσι δανειζόμενα ἔγγαια καί ἀκίνδυνα ἐπιγραφέτωσαν κατά τόν ῥόδιον νόμον".

In this Chapter, the meaning of the written contract derives from the words

"γραφέτωσαν", "ἐπιγράφουσιν", "ἐπιγραφέτωσαν" which indicate "I agree in writing". It should also be noted that they are used in different tenses. In addition, the initial phrase "ο νόμος κελεύει" which means "the law commands" and the last sentence "κατά τον ρόδιον νόμον", which means "according to the Rhodian Law", once again imply that the Roman emperors simply ratified and adopted the pre-existing Rhodian Law without it being statutory.

Chapter 18. Reference is made to maritime loans but the focus is shifted to specific issues such as interest, its payment period and extraordinary incidents that may occur during the loaning period. An illustration is given, in a rough translation (Simpsas, 1982): if someone borrows money with interest and during a period of eight years he regularly pays this legal interest but over time there is a catastrophe or fire or theft by barbarians and robbers, then he is allowed to stop paying the interest. If, however, there has been no regular payment of the interest by the debtor within the eight-year period, then the written agreement remains valid and interest must be paid even after the eight-year period in accordance with the initial agreement. As the original text says "ἐάν δανείσηται τις ἐν τόκοις καί εἰ ἔτη ὀκτώ τελέση τους ἐννόμους τόκους, μετά δέ ὀκτώ ἔτη συμβῇ ἀπώλειαν γενέσθαι ἢ πυρκαϊάν ἢ διαρπαγήν βαρβάρων, τῶν τόκων διάλυσης γενέσθω κατά τόν ρόδιον νόμον· εἰ δέ μή τελέση τούς τόκους ἐκ τῶν νομίμων, τά ἔγγραφα κύρια ἐστί κατά τάς προτέρας συνθήκας, καθώς τό ἔγγραφον προφέρει".

In this Chapter, the phrases "τα έγγραφα κύρια εστί" which means "the written agreement is valid" and "το έγγραφον προφέρει", namely "the written agreement mentions" explicitly illustrate the existence of a written maritime loan contract including terms. Also, in this chapter, as was the case in Chapter 17, "κατά τον ρόδιον νόμον", namely "according to the Rhodian Law" is mentioned, indicating the origin of the Rhodian Law that was ratified in the Roman era.

Chapter 19. This chapter refers to the captain who can obtain an emergency loan depending on the needs of the ship. This loan is ratified by a written agreement. The text of the Law reads as follows: "οἱ ναύκληροι ναυκληροῦντες … καθό δεῖ χρήματα χρηννύειν καί ἀποστέλλειν ἐπί πλοίου κατά θερείαν καί κατά πλοῦν, καθώς ἂν συνεγράψαντο κύρια ἔστω…". A significant phrase in this passage is the phrase "καθώς ἂν συνεγράψαντο κύρια ἔστω" which means "whatever they have agreed on in writing and signed is considered to be valid".

It should be noted that a maritime loan could facilitate the purchase, construction or repair of a ship, the payment of seafarers' salaries, the purchase of cargo or travel expenses. If the ship reached its destination port, the borrowing ship owner had to repay the capital, including an extraordinarily high interest

rate of 24-36%, known as "τόκον θαλασσινόν", namely "sea interest". However, if the ship did not reach its destination, the borrower was not obliged to return the capital. This high interest received by the lender indicated his acceptance of the risk, since he theoretically participated in the maritime business and its perils as an investor as opposed to a land-based lender who was covered by collateral.

In conclusion, the Second Part of the Rhodian Law clearly includes the concept of the contract, especially the written one; this contract concerned the financing of shipping. Using modern terminology, this would have been defined as Contract Financing.

5. The contracts in the third part of the code

Chapter 9. "Περί ναυκλήρου καί ἐπιβατῶν περί ἀποβολῆς βουλευομένων", namely "about the consultation between the captain and the passengers regarding jettison" This Chapter refers to a meeting between the captain and the passengers of the ship about the average. They are all expected to vote on what should be done, evaluate not only material goods but also slaves, and decide on their contribution to the average. However, this Chapter also provides for an agreement on their share of the travel profits, so the contribution to the average will include not only the goods and the ship, but also the loss of profits of those who had carried out the business agreement. The text reads "εἰ δέ σύμφωνον κερδοκοινωνίας ἐστί, μετά τό ἀπαντα συμψηφισθεῖναι τά ἐν τῷ πλοίω καί τό πλοῖον, κατά τό κέρδος ἓκαστος ἐπιγνωσκέτω καί τήν προσγενόμενην ζημίαν".

Although the word "contract" is not explicitly mentioned, it is implied that the agreement between some passengers and the captain was in writing and therefore it had the form of a contract. This is further supported by the fact that a similar case for participation in both the maritime operation and the profits is also referred to in Chapter 17, where the contract had the form of a document.

Today the issues of the average are laid down in the charter party signed by the contracting parties.

Chapter 12. "Περί πάσης παρακαταθήκης διδομένης ἐν πλοίω ἢ ἐν οἴκῳ", namely "about consignment of any type agreed upon on board or in a house". The Chapter refers to a consignment of any kind agreed upon either on board or on land (this is what "ἐν οἴκῳ" / "in a house" indicates). It says, among other things, that if the object of the consignment is of great value, the consignment must be ratified in writing. It is noted that most of the times, not always, the trustee, i.e. the one who was in charge of keeping things, was the captain of the ship. As the text states "ἐάν δέ ᾖ τό θέμα βαρύ, ἐγγράφως τήν παραθήκην παραδιδότω…".

This statement, especially the word "ἐγγράφως", which means "in writing", reveals the existence of a written agreement. This is an insignificant issue in the modern shipping practice as opposed to the business of chartering, financing, etc. However, it directly affects the general transactions taking place in the maritime field, the ship and sailing.

Chapter 17. "Περί χρυσίου καί ἀργυρίου ἐπί κερδοκοινωνία χρησθέντων", namely "about gold and silver offered in order to participate in the profits of the business". The Chapter refers to the one who will offer gold or silver to join the shipping business for a voyage. The chreokenonia, a business agreement like the commenda, must indicate until when the agreement will be effective, something determined by the party that makes the payment. Cases of damage, shipwrecks, fire and thefts that may occur before or after the expiry of the partnership are reported and similar provisions are in place. For example, it is claimed that if a loss occurs before the expiry date of the partnership, it is right for the person who gave gold or silver to participate in the maritime operation to suffer damage and loss of profits because he had a share in the potential danger and consequently he is not even entitled to a return of his capital. The text says "ἐάν τις δώση ἐπί χρεία κοινωνίας χρυσίον ἢ ἀργύριον καί ταύτην κατά πλοῦν ἐγγράψηται καθώς ἀρέσει ἕως πόσου χρόνου τῇ χρεοκοινωνίᾳ, ἐάν…".

The word "ἐγγράψηται", which means "to write", referring to the obligation of the party that makes the payment "to write" at his discretion, indicates that the contract had the form of a document i.e. a type of private contract or what nowadays would be defined as a contract regulating participation in a maritime operation.

Chapter 20. "Περί τοῦ ναυλωσαμένου πλοῖον καί ἐγγράφως συμφωνησάντων ἢ καί ἀγράφως ὁρισάντων", namely "about the chartering of a ship that has been agreed upon in writing or whose terms have been orally set". The Chapter states that when someone charters a ship, the contract must be written and signed by both parties in order to be valid. Otherwise it is invalid. The contracting parties can also create clauses –penalties– and add various terms. The Chapter outlines what will happen if either party, captain or charterer, breaches the agreement. The text reads as follows: "ὃς ἂν πλοῖον ναυλώσηται, ἔγγραφα συνεσφραγισμένα κύρια εἴτω· εἰ δέ μή ἄκυρα· γραφέτωσαν δέ καί ἐπιτίμια, ἐάν θέλωσιν,…". This is one of the articles of the Law that asserts that there is a written contract when chartering a ship. This, in other words, is the charter party which is not only a contract but in addition it is written and includes the signatures of the contracting parties. This is also demonstrated by the use of the words "ἔγγραφα", translated as "the written agreement" and "συνεσφραγισμένα" which means "signed". Besides, it is highlighted in the

text that a non-written contract is considered to be invalid. This is made clear in the title of this Chapter, where the phrase "ἐγγράφως συμφωνησάντων" means "that have been agreed upon in writing".

Chapter 21. "Περί δύο κοινωνιῶν ναυκλήρων ἀλλήλοις ἀντιλεγόντων", namely "about two captains participating in a joint venture that have a disagreement". The Chapter refers to a possible disagreement between two captains who participate in a joint venture. The original text states that the agreement can be written or non-written if they trust each other because they have worked together without conflicts in the past. It gives a detailed account of what may happen in the event of an accident on one of the ships, namely who will be liable for the damage and how much each will be burdened by the damage. However, the Chapter also refers to the written and signed between the captains agreement, in which case the general rules of contribution apply in the event of damage. The text starts with "ἐὰν κοινωνίαν ποιήσωσιν ἀγράφως δύο καί ἀμφότερα τά μέρη καθομολογήσωσιν ὅτι…" and goes on to say "…ἐπειδή ἔγγραφα οὐ προφέρουσιν ἀλλά λόγω μόνω κοινωνίαν συνετάξαντο, τά ἔγγραφα σφραγιζόμενα βέβαια καί ἰσχυρά ἔστωσαν…" The word "ἀγράφως" means that there is no written document, therefore it is an orally agreed joint venture while the word "ἔγγραφα" means that it was not only a "written" agreement but also "ἔγγραφα σφραγιζόμενα" which means that "the agreement was signed by the participating parties", thus becoming powerful and valid. Consequently, this Chapter declares that a partnership in a joint venture has the form of a written or not written contract. Specifically, in the case of the written and signed by the two contracting parties contract, the general rules that appear to be in place shall apply, since this Chapter only refers to what shall happen in the case of losses when a joint venture derives from an unwritten agreement.

Chapter 23. "Περί ναυκλήρου καί ἐμπόρου περί γόμου συγγραψαμένων", namely "about a written agreement between a captain and a merchant concerning the cargo". It refers to the agreement between the captain and the merchant and says that if this agreement is written, then it is binding. Specifically, if the merchant does not carry a full load of cargo, he is obliged to pay the freight for the full load in accordance with the written agreement. The text says "ἐὰν συγγράψωνται ὁ ναύκληρος καί ὁ ἔμπορος, κύρια ἔστω· ἐὰν δέ ὁ ἔμπορος μή παρέχη τόν γόμον πλῆρες, τῶν λοιπαζομένων παρεχέτω τά ναῦλα, καθώς συνεγράψαντο". The words "ἐὰν συγγράψωνται" and "καθώς συνεγράψαντο" respectively mean "if there is a written and signed agreement" and "according to the written and signed agreement". Even the title of the Chapter elucidates this with the phrase "περί γόμου συγγραψαμένων" which means "the written and signed agreement concerning the cargo". Therefore, the agreement on the

cargo to be loaded and transported by ship may also be verbal, but the Chapter lays emphasis on the written agreement only because it considers it to be powerful and provides for actions to be followed in the event of the shipper being unable to produce a full cargo. So this is also the case of a written contract concerning the chartering of the ship and the freight.

Chapter 24. "Περί ναυκλήρου καί ἐμπόρου συγγραψαμένων καί τά ἡμίναυλα δοθέντα καί μεταμέλους γινομένης", namely "about the written agreement between the captain and the merchant whereby half of the freight was paid in advance but afterwards the contracting parties breached the contract". This Chapter is similar to the previous one except that Chapter 23 concerned a case of less cargo being transported than agreed, while Chapter 24 refers to the case of half of the freight being paid in advance by the shipper and what happens afterwards if the parties breach the agreement. Chapter 24 indicates that this agreement is written as the text includes the phrases "…ἒγγραφα δέ συνεσφράγισαν…" which means "the written agreement was signed and validated" and "…τῶν ἐγγράφων γενομένων…" which means "according to the written agreement". This is also the case of a contract concerning the chartering of the ship and the respective freight.

Chapter 25. "Περί εμπόρου πρός τά ἐγγραφα ὑπερπροθεσμήσαντος", namely "about a merchant who failed to meet the deadline". This Chapter refers to the days of the ship's loading and the delays associated with them, what is now called laydays, demurrage and detention. The text refers to the deadline of the "ἐγγεγραμένων", namely "written" days that have been agreed on in writing in the contract. Besides, the phrase "πρός τά ἐγγραφα ὑπερπροθεσμήσαντος" in the title of the Chapter, means "that failed to meet the deadline set by the written agreement".

Chapter 29. "Περί πλοίου κλασματισθέντος πρό τῆς προθεσμίας τῶν ἐγγράφων ἢ μετά τήν προθεσμίαν", namely "about a ship that wrecked before or after the determined by the contract date". It discusses the contribution –or not– of the shipowner and the merchant in the event of damage, piracy, fire, shipwreck occurring when the trader delivered the cargo for loading. To put it another way, a period of time is set for the merchant to deliver the cargo to the ship. This deadline is established by a written contract; something made clear by the use of the word "συγγράψονται" which means that "it has been agreed upon in writing and signed", referring to the agreement between shipowner and merchant. To be more specific, the text reads "ἐάν ἒμπορος ἐν τῶ τόπω, ὃθεν συγγράψονται μή παράσχη τά φορτία πληρωθείσης τῆς προθεσμίας καί συμβῆ ἀπό πειρατείας ἢ …". This is made clear in the title of the Chapter where the phrase "πρό τῆς προθεσμίας τῶν ἐγγράφων" means "before the date determined by the written agreement".

Chapter 32. "Περί πλοίου ναυλωθέντος ἢ κοινωνίαν πλέοντος καί ἐν τῷ ἐκπορίζειν κλασματισθέντος", namely "about a chartered ship or a ship that belongs to a partnership and is wrecked while traveling to upload cargo". This Chapter addresses the case of a chartered ship that is damaged or destroyed while traveling to upload cargo. It specifies the contribution of each party namely the merchant and the captain, and stresses that their written agreement will determine the return of the freight advance. It is noted that usually upon the commencement of the agreement, during the loading process, the charterer paid half the freight or even more. The text states that "…ἐάν δέ καί τήν προχρείαν δώση ὁ ἔμπορος ἢ ὁ τήν κοινωνίαν, καθώς συνεγγράψαντο κύρια ἔστω". The use of the word "συνεγγράψαντο", meaning "that they have agreed upon in writing and signed" elucidates that the agreement was written.

Chapter 39. "Περί πλοίου πεφορτωμένου βολήσαντος τῆς ἐνθήκης σωθείσης", namely "about a ship that resorted to jettison, yet the cargo was salvaged". This refers to the case when a ship loaded with cargo was destroyed underway but the goods were salvaged. The main cargoes of that time were wheat, wine and oil. The captain would be held responsible for the ship damage, if he steered the boat towards a place or a bay that was not agreed upon. However, the merchant was held responsible if he had asked the captain to lead the boat in a place that was not mentioned and agreed upon in the chartering document. The Chapter clarifies what would happen in each case, drawing information from the written charter party in which the initial destination of the ship should be mentioned. To be more specific, the text states "…εἰ δέ ἀρμενίζοντος τοῦ πλοίου εἴπη ὁ ἔμπορος τῶ ναυκλήρω· ἐν τῶ τόπω τούτω χρήζω εἰσελθεῖν, τοῦ τόπου τούτου μή ἐγκειμένου ἐν τοῖς ἐγγράφοις καί συμβῆ ἀπώλειαν…". The phrase "ἐν τοῖς ἐγγράφοις", meaning "in the written agreement" demonstrates the written form of the agreement between captain and merchant.

In conclusion, in the Third Part of the Rhodian Law as well, the concept of the contract, and especially in writing predominates. This concerns various areas such as participation in a maritime enterprise, consignment, average and chartering. The prevalent issue in this Chapter is chartering which also includes matter of average. Therefore, this Part of the Rhodian Law mainly addresses the chartering of a ship and its terms, what is now called a Charter Contract or Charter Party.

6. Conclusion

Studying the Chapters of the Rhodian Maritime Code, it is concluded that they cover not only a wide range of maritime transactions but also every day events or simple incidents such as how much space a man, a woman or a child

takes up aboard or how much water each passenger is allowed to consume aboard etc. If a comparison is made between modern times with the issues covered by the Rhodian Law, it is obvious that its provisions reached to matters belong to the realms of both Private and Public Maritime Law. All issues have been addressed since that time and today they appear to be articles of the Code of Private Maritime Law. Such issues are boat co-ownership, crew matters, chartering, mortgage, average etc. The Rhodian Law had probably an even broader scope as it also covered everyday matters. Its main issues were loaning, chartering, and average; it should not be forgotten that chartering and average constitute basic provisions of the Code of Private Maritime Law in modern times as well.

It seems that the Rhodian Law is historically the first written legal text in the world that was both statutory and widely implemented, regulating a wide range of maritime matters, even practical and everyday ones. After all, Petimezas argues that the modern European Maritime Law is a product of historical development, which dates back to the early Medieval times (Petimezas, 1928).

Most importantly, it determined the significance of a written agreement for many transactions, namely a Contract, without which the agreement could be considered to be void or in any case could not be challenged in the courts. Therefore, the Rhodian Law is the foundation of the legislation of the concept of the Contract, especially in matters of chartering a ship which is the dominant issue in shipping, i.e. the creation of a charter party and the establishment of its terms. However, the Law also gets into great detail, mentioning the days of loading the ship or the case of any delay in loading etc. These are all issues that are currently covered and addressed by a typical charter party, whereas in the times of the Rhodian Law each charter party had to mention them separately. It is impressive that the Rhodian Maritime Code had all this provided for in its respective Chapters (what would be defined as articles today).

Several centuries later, Armenopoulos compiled the Hexabiblos ("Εξάβιβλος", 1345 AD) that constituted the civil code of modern Greece until 1946. In the chapter "About Marine Matters" and in the first article, he states, in a rough translation "All maritime issues and everything related to the sea are subject to the Rhodian Law and are judged according to it, unless of course there is another, contrasting law. The laws of the Rhodians are the oldest of all the maritime laws".

Therefore, this old Law, where the concept of a written Contract on maritime issues first appears, constitutes the precursor of modern maritime contracts.

References

Ashburner W. (1909): "The Rhodian Sea Law", Clarendon Press, Oxford.

Danjon D. (1910): "Traité de Droit Maritime", ed. Librairie générale de Droit et de jurisprudence, Paris.

Deloukas N. (1979): "Maritime Law" (in greek), ed. Sakkoulas, Athens.

Houmanidis L. (1980): "Economic History and Economic Theories in their historical evolution" (in greek), Vol I, ed. Papazissis, Athens.

Houmanidis L. (1990): "Economic History of Greece" (in greek), Vol I., ed. Papazissis, Athens.

Houmanidis L. - Zois K. (1998): "About the first shipping codices and especially on the Nomos Rhodion Nauticos", Archives of Economic History, Vol. IX - No 1-2, pp. 7-26.

Houmanidis L. - Zois K. (1999): "A brief overview of the development of Greek merchant shipping from ancient times to this day" (in greek), ed. Synhroni Ekdotiki, Athens.

Pantazopoulos N. (1974): "Roman Law" (in greek), Part A, ed. Sakkoulas, Thessaloniki.

Petimezas Thr. (1928): "Commercial Law Vol II – No 1 Maritime Law" (in greek), ed. Estia, Athens.

Roccas K. (1968): "Maritime Law" (in greek), ed. of the author, Athens

Simpsas M. (1982): "The Navy in the Greek History" (in greek), Vol. 2, ed. GEN (Hellenic Military Navy General Stuff), Athens.

Tsakalotou E. (1926): "Latin to Greek Dictionary".

Vasiliev A. (1984): "History of the Byzantine Empire" (in greek), Vol. I, trad. By D. Savramis, Athens.

Zois K. (1991): "Historical starting point of the ships loading time (lay days, demurrage, detention); The Nomos Rhodion Nautikos" (in greek), Archives of Economic History, Year A', Vol. I – No 2, pp. 117-130.

ZAMBIAN PUBLIC ECONOMIC LAW[1]

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Abstract

Zambia, a former colony of the UK being marked by a tradition of economic wars, includes Northern Rhodesia and Barotseland, a dissolved country that began a fight for independence. It was inspired by the concept of virtual economic war and later became a heavily indebted poor country whilst the Zambian case resulted in the revision of UK's law and the emergence of the 4G right to sovereign debt restructuring. It is pioneer in terms of African constitutionalism ("Republic" from scratch, endowed with a flexible Constitution consecrating the Christian character of the Nation) and it has similarities with Cyprus but it has not amended its 1991 Bill of Rights, which could be enriched with the rights to food and water.

JEL Classification: K

Keywords: Barotseland (/Western Province of the Republic of Zambia), Cyprus, Public Economic Law, Republic of Zambia, right to food, right to sovereign debt restructuring

1. Introduction: Economic aspects of the Republic of Zambia

The territory that is nowadays Zambia was a protectorate of British Empire. Zambia's colonial heritage is subsumed under two broad headings, the artificial character of geographical and political unit, which encompassed a large number of "often rival polities", and the extractive character of colonialism, consisting in the exploitation of copper (Soest, 2009). Mineral-resource extraction evolved side by side with the neglect of political, social, economic and administrative development (Soest, 2009).

It would be interesting to focus on various aspects of this relatively new, sovereign country, from the point of view of public economic law and symmetrical practices.

First of all, the current paper will shed light to the concept of economic war, as the political regime of Zambia proceeded to various radical actions during the First Republic (1964-1972), mainly during the 1969 pivotal year.

Besides, although Northern Rhodesia was the main political entity which evolved to the sovereign State on the matter, it incorporated the kingdom of Barotseland. So, the present analysis refers to the political deconstruction of

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this entity and the recent development consisting in the demand for recognition of its independence.

Afterwards, it examines the phenomenon of constitutionalism in the current period (from 1990 to date) in the context of Africa, with a special reference to the human right to food. It also introduces to the concept of neopatrimonialism, particularly in the Republic of Zambia, which is comparable to African constitutionalism.

Furthermore, it focuses on the crisis of Zambian international debt and the emergence of the new right to sovereign debt restructuring.

Besides, it deals with the problem of the protracted underdevelopment of rural regions of Zambia, particularly examining the marginalization of the demand for rural development.

Finally, it ends up to critical remarks, with emphasis on human rights, and it highlights some similarities of the Republic of Zambia with the Cypriot one.

2. The "economic war" in the first Republic of Zambia

The Republic of Zambia emerged as the British protectorate of Northern Rhodesia and Barotseland, the British "protectorate within the protectorate" of Northern Rhodesia, gained their independence in common, through their fusion into a new, sovereign, unitary State, in 1964.

The first Republic (1964-1972) was regulated by the independence Constitution, which was prepared by the UK through negotiations with various social groups of Northern Rhodesia and Barotseland and was put into force in 1964. All sovereign States of Africa are endowed with a written Constitution, let alone with a rigid one, with the exception of Zambia. The independence Constitution was very flexible, although it previewed a two-thirds majority of the National Assembly for the amendment of its dispositions. In contradiction to the other African constitutions, it allowed any amendment of all its dispositions whilst it previewed no religious character of the State. However, if the amendment aimed at altering any part of the Constitution relating to fundamental rights, such a bill could not come into force until submitted to a national referendum and approved thereby.

In 1968, the government of the ruling "United National Independent Party (UNIP)" embarked on economic reforms, designed to enhance African participation in the economy (Ndulo and Kent, 1996). As the government desired to take over substantial sectors of private businesses through large-scale nationalizations, the property clause in the Constitution was considered as an impediment. So, a constitutional "referendum to end all referenda" was held on 17

June 1969 and was passed with 85% voting in favor of the proposed change. Constitutional (Amendment) (No. 3) Act of 1969 amended the Constitution so that, after it became law, it would no longer be necessary to submit to a referendum any Act of Parliament which provided for the alteration of Chapter III, namely the extended Bill of Rights (corresponding to the current Part III of the 1991 Constitution) and Chapter VII and articles 71 (2), 72 and 73 of the Constitution.

The year 1969 was a year full of dramatic developments for Zambia, whose nation suffered from a pervasive malaise (Caplan, 1970). Britain's failure to end Unilateral Declaration of Independence (UDI) of Rhodesia (the current State of Zimbabwe) embittered race relations along the line of rail and twisted the national economic priorities, in Zambia (Caplan, 1970). The political crisis peaked in August. On the 11th, representatives from seven of the eight provinces of the State, including a faction of the Bemba tribe, were to introduce motions of non-confidence in the nation's leading Bemba, Vice-President of the Republic Kapepwe, in the National Council of UNIP. Instead, the President of both the Republic and the party Kenneth David Kaunda took over the meeting and declared that Zambia was "virtually at economic war" with powerful vested interests in Britain, South Africa and the United States (Caplan, 1970).

The doctrine has signalized that evidence suggests that trade wars are irrational, and the vast majority of economists would agree with this assessment and hence favor free trade (Tsaousi, 2018). But, even if irrational, trade wars still persist. A now infamous example of the war is related to Smoot Hawley Act of 1930, an American statute that significantly hiked American tariffs at the beginning of the Great Depression. This example, which is today universally understood as a classic bunder, did not stop later, smaller trade wars from erupting between the U.S. and the E.U., such as the "Chicken Wars" of the early 1960s, or the Banana Wars of the 1990s. Scholarly histories of trade wars have traced these conflicts back to medieval times, and Britain and France waged one such war for over two centuries, with the French imposing punitive tariffs on British woolens and the British responding with high tariffs on silk products from France (Tsaousi, 2018).

Economic war is not only a phenomenon of financial reality, it may be used in the framework of political life, particularly as far as internal "consumption" is concerned, and therefore it may be related to populism. So, in case of Zambia, it would be connected with the phenomenon of the demand for a people-driven Constitution, which has been activated from the Second Republic (1972-1991) and on, in contradiction to the 1964 Constitution, which essentially had been prepared by the UK.

Besides, economic war may be related to a political rivalry between countries. Obviously, it is more likely to occur, or at least to have a tangible effect, as long as the opponent parties are neighboring countries. For instance, early in 1970 the prime minister of Rhodesia (or Southern Rhodesia) Ian Douglas Smith threatened to cut off Zambia's power supply if Kaunda's government continued to assist the "terrorist incursions into Rhodesia" (Caplan, 1970). Anyway, despite the effect of economic and diplomatic sanctions, the unrecognized State of Rhodesia developed and maintained a powerful and professional military during a very serious civil war in the period 1964-1972, namely which coincided with the First Republic of Zambia.

3. The deconstruction of Barotseland and its demand for independence

In the complex case of the severe economic crisis of Zambia in 1969, the economic war was inter alia oriented against an "internal enemy" of the State, consisting in the old kingdom of Barotseland. The Western Province, being the poorest in the country, was offended, being deprived not only of its political power but also of its economic privileges.

Kaunda in his aforementioned major speech also stated that he had sent units of the Zambian Air Force, Army and Police to guard unspecified installations of the country and that he was nationalizing the copper industry (Caplan, 1970). Among other reforms of the party and government that he proceeded to announce was the forfeiture by the Litunga (King) of Barotse Province (Barotseland) of his remaining concession rights. On 26 August 1969 he announced that he was reshuffling his cabinet and taking on several new portfolios for himself. At the same time, he unexpectedly declared, in his despotic way, that Barotse Province would thereafter be known as Western Province and that its traditional rulers would lose their authority over the area's wildlife and fishing rights. Old Bemba nationalists and old Lozi traditionalists (namely the people of Barotseland) were thus hit simultaneously (Caplan, 1970).

As far as marginalization of Barotseland is concerned, the Barotseland Agreement of 1964, which led to the fusion of the two British protectorates with some privileges to the Zambian province on the matter, was ended through the Constitutional (Amendment) Act No 36 of 1969. The national government proceeded to mass arrests of the activists who demanded the repeal of that Act. Not only was Western Province transformed into a mere province of the State, but also afterwards the government passed the Western Province (Land and Miscellaneous Provisions) Act No. 47, depriving the Litunga of his powers over land and vesting all land in this territory in the President of the Republic.

On this completed process of Barotseland's deconstruction, just 80 years after its King, Lewanika, had signed the first agreement for mineral concession to British entrepreneurial interests, called the Ware Agreement, the doctrine remarked in 1970 that not even larger and economically more viable kingdoms, such as that of the Ganda and the Ashanti, could escape the inexorable fate implicit in the nationalist creed (Caplan, 1970). The tragedy related to Biafra, officially Republic of Biafra, (1967-1970), an unrecognized State which wanted to gain its independence against Nigeria, is quite indicative. Biafran war has been a civil war, from July 1967 to January 1970. The Biafrans, in south east Nigeria, fought for their independence whilst the Nigerian armed forces tried to keep the State intact. This war resulted in the loss of perhaps two million people, whose majority died from malnutrition or disease, so the importance of both the right to food (being a right of the 4G era of fundamental rights) and the right to health is highlighted. Biafra rejoint the federal State of Nigeria in 1970 whilst the Movement for the Actualization of the Sovereign State of Biafra emerged in 1999 as a non-violent nationalist group.

Anyway, the irony of the history is that the reference to the case of Ganda seems nowadays rather antithetical to the status quo in Barotseland. After the fact that Uganda gained its independence in 1962, the Kingdom of the Ganda people, called Buganda, was abolished by Uganda's first Prime Minister, Milton Obode, in 1966. Nevertheless, since 1993, this subnational kingdom has been restored. It is about a monarchy endowed with a large degree of autonomy against the State of Uganda, in spite of the fact that tensions between the two States keep being an important feature of Ugandan political life.

Besides, similar remarks are valid even to the Ashanti people. The Ashanti Empire was a monarchical State from 1670 to 1957 in what is nowadays Ghana. Now, this Kingdom survives as a constitutionally protected subnational State being in union with the Republic of Ghana.

The institutional comeback of these two Kingdoms is not the case of Barotseland, whose social groups have recently inaugurated a political struggle for recognition of its independence. More precisely, in March 2012, the Barotseland National Council resolved that it finally accepted the repudiation of the 1964 Barotseland Agreement by the Government of Zambia and that it no longer wished to be part of Zambia. As a result, activists have contacted various international organizations, such as African Union and United Nations, with no tangible results (Kakanku, 2018). In the framework of this peaceful mobility, Barotseland entered in 2013 the Unrepresented Nations and Peoples Organization.

4. African neo-constitutionalism, with emphasis on the right to food, and neopatrimonialism

The Second Republic of Zambia (1972-1991) was marked by the one-party, authoritarian regime of UNIP. Throughout the period from 1973 to 1991 Zambian economy continued to stagnate with attendant unhappiness of many segments of society (Ndulo and Kent, 1996). As power became more centralized and increasingly concentrated in the hands of Kaunda, popular dissatisfaction with living standards became more difficult to ignore (Sims et al., 2013). The government's inability to secure loans or enact economic reforms not only undermined its legitimacy, but it also closed off vital patronage through which it could influence key individuals and contain dissidence (Sims et al., 2013). The trade union movement (never captured by the Party), the business community, the churches, scholars and students at the University, the legal profession: all from time to time expressed increasing hostility (Ndulo and Kent, 1996). It is also notable that there were two significant coup attempts, in 1980 and 1990, with the second one after food riots to protest against the rising cost of food, particularly maize meal (Ndulo and Kent, 1996).

The beginning of the 1990s was marked in Africa by a veritable constitutional boiling consecrating pluralist democracy and the rule of law to the formal and material senses (Mvaebeme, 2019). The neo-constitutionalism was combined with a turn to classical economic liberalism, which is related to competition and mobility of the market (Maniatis, 2018a). It is desirable for the vitality and the good exercise of democracy that the populations reach a minimum of education and economic well-being (Senou, 2019). It is notable that the two-thirds of African countries fall into the category of countries with low levels of human development, according to the report of the United Nations Development Program, whilst in Zambia there is a low literacy rate, which was estimated at 61.4% of the total adult population in 2016 (Lumina, 2016).

African neo-constitutionalism is particularly marked by the recognition and promotion of human rights. This remark has inter alia to do with the aforementioned, new right to food, which has gained the status of constitutional right in the same phase, in constitutions of various countries, particularly of Latin America. Over the last two decades, the right to food has developed as a justiciable human right (Tura, 2018). At least 30 countries worldwide expressly recognize the right to food for all, or for specific groups including children, prisoners or indigenous peoples. These include but are not limited to Brazil, Colombia, Costa Rica, Republic of Congo, Egypt, Fiji, Guatemala, Honduras, Kenya, Malawi, Maldives, Mexico, Moldova, Nepal, Nicaragua,

Niger, Panama, Paraguay, Philippines, South Africa, and Zimbabwe (Tura, 2018). As far as Zambia is concerned, it has not consecrated the right to food in its Constitution, but it is endowed with directive principles contributing to the realization of the right to adequate food.

If this feature of Zambia is antithetical to that of its neighboring country of Zimbabwe, it has also a mainstreaming difference in its political and constitutional history with another neighboring State, Botswana. Since independence, Botswana has maintained a multi-party democracy with a Westminster-type parliamentary system consisting of two chambers whilst the fundamental of the political system have not changed since independence. Therefore, it is one of the few polities in sub-Saharan Africa which consistently have run a functioning multi-party system and have allowed for "democratic political contestation" (Soest, 2009). However, this diamond-rich State is not exempted from the existence of relatively big unemployment, whose percentage is 20%, just like Zambia has to cope with important socioeconomic problems. So, it is obvious that the existence of wealth-generating resources does not implicate necessarily the economic well-being of the inhabitants.

Anyway, Africa has been related to neo-patrimonialism, which is a system of social hierarchy, within patrons use State resources to secure the loyalty of clients in the general population. This phenomenon has raised criticism, as it is likely to undermine political institutions and the rule of law.

Researchers working in social science as well as area studies, have widely used neopatrimonialism for explaining the exercise of authority in very different contexts over space and time, including Latin America, the Middle East, Southern Europe and, particularly, sub-Saharan Africa whilst the defining feature of neopatrimonialism is the simultaneous operation of patrimonial logics and the opposite component, consisting in legal-rational logics (Soest, 2009). Patrons typically are office-holders in State institutions who use public funds or office to build their personal loyalty among clients in order to stay in power. Social practice, as a result, is fundamentally different, compared to the impersonal formal rules, which are supposed to guide official action. Neopatrimonialism politics consist of the following features:
- A high concentration of political power, i.e. big man rule,
- The provision of personal favors and
- The misuse of State resources for political legitimation (Soest, 2009).

The political practice of Zambia's elite has been characterized by this system, since independence (Soest, 2009). The Republican Presidents, such as at least the initial ones, Kaunda, Chiluba and Mwanawasa, have all behaved as big men who regularly rotated their cabinet ministers and maintained large

cabinets, which is indicative of providing personal favors to other elite members. Besides, the socioeconomic development and the neopatrimonial profile have been the most important variables in shaping the environment of Zambia's tax administration (Soest, 2009).

5. The Zambian loan crisis and the right to sovereign debt restructuring

As the first loan of the Greek State in the period of memorandums of understanding with its international creditors (2010-2018) was subject to the English law, the similar case of Zambia became actual in the international context, particularly in Greece. Furthermore, in June 2015, Greece was compared to Zambia because it requested the International Monetary Fund (IMF) the bundling of its four upcoming payments into one. In the framework of this international organization, countries have the option of bundling, making a single payment at the end of the given month. This is a policy that was adopted back in the 1970s but it is rarely used. The case cited occurred in the mid-80s, in which Zambia bundled payments to the Fund.

In the 1970s, Zambia fell into poverty after international copper prices declined and the price of oil went up. It went bankrupt because it had defaulted on Western banks.

It is to point out that a considerable number of the Third World countries has known the role of English law in its international contracts of loan. This is the case of Zambia, which perceived 15 million $ from Romania in 1979 (Maniatis, 2018b). This State was in need of money to buy agricultural machines and vans. However, the imported goods were received partly in a bad condition.

In 1983, the IMF, of which Zambia is a member from September 1965, interfered to enable it to pay its debts to banks. Besides, a "vulture fund" registered in the British Virgin Islands, the US company Donegal International, owned by US citizen Michael Sheehan, emerged in the case of Zambian economic crisis. The term "vulture fund" describes investment companies that circle round very poor countries at a time when they are renegotiating unpayable debts, often run up by a previous, corrupt regime (Seager, 2007). The funds buy up the debt on international markets at way below its face value and then try to enforce collection of the debt at full face value plus interests that have arisen in English courts or in American courts that apply a similar law. The debt is usually cheap because in most cases there is little expectation it will ever be repaid (Seager, 2007).

Donegal assumed the Zambian debt from Romania in 1999, by paying 3.3

million $ whilst Zambia approved the Donegal intervention at the time. In the same year, the company inaugurated a trial against Zambia in the English courts, asking for 55 million $, interest included. Finally, in 2007 the high court did the favor to the African country to condemn it to pay barely 15.5 million $. Nevertheless, it should be noted that this third-world country was in need of this sum of money, to meet its own needs in the field of public health and education, which still keep being problematic. Zambia lodged with the court the nullity of the acquisition of the debt by Donegal, supporting the argument that the company had committed bribery of the officers of Romania, which at that time incidentally also went through a phase of deep crisis.

The looting of poor countries' fortunes, based on public debt, has been targeted by the British Jubilee Debt Campaign for years, which has annexes in the USA. Having launched a campaign for the removal of "odious debts", the organization denounced the action of 54 vulture funds that come from tax havens, such as Virgin Islands. This organization estimated in 2011 that at least 12 countries of extreme poverty had faced legal action by representatives of aggressive speculation.

In September 2015, the General Assembly of United Nations adopted the resolution 68/304 "Towards the establishment of a multilateral legal framework for sovereign debt restructuring processes" whilst restructuring processes were a frequent phenomenon in the international financial system. This text has been presented as a declaration recognizing to any State "the sovereign State to restructure its sovereign debt" (Lequesne Roth, 2018). However, it avoids making a frequent explicit use of the technical term "right" and so it is marked by embarrassment on the matter. In the preamble, the General Assembly is "*Recognizing the sovereign right of any State to restructure its sovereign debt, which should not be frustrated or impeded by any measure emanating from another State*". Argentine took the initiative for the adoption of the resolution and was supported by the States belonging to G77, namely an alliance of (initially) 77 developing countries in UN, including Zambia. It held this development as a victory against vulture funds but the fundamental principles that were consecrated in this non-binding text have a limited significance and effectiveness. It initiated a counter-offensive movement which, protean and disordered, is the result of the desire to reorganize the negotiating space by banning the holdout strategies. In the framework of this policy, the following two categories of measures have been adopted: laws against seizure by these funds and new contractual dispositions to encourage bargaining.

As far as the first category is concerned, it is notable that national lawmaking to rebalance the debt relations is nothing new. In response to the excitement

of the Zambian affair, in 2010 the UK adopted an original law, the Debt Relief Act, which became permanent in 2011. The law introduces a regime derogatory to the benefit of the States identified as heavily indebted poor countries by the IMF and the World Bank, in accordance with the program "Heavily Indebted Poor Countries (HIPC)". This program, inaugurated in 1996 by the World Bank, the IMF and other creditors, and also the related Multilateral Debt Relief Initiative (MDRI) has relieved 36 –30 of them in Africa– countries of 99 billion $ in debt.

6. The marginalization of the demand for rural development

Zambia, the second-largest copper producer, experienced rapid economic growth during a decade (2004-2014) and graduated from a low-income to a lower middle-income country in 2011. However, growth only benefitted a small segment of the urban population and had limited impact on poverty (The World Bank, 2019). Zambia ranks among the countries with highest level of inequality globally (The World Bank, 2019). As of 2015, 58% of Zambians earned less than the international poverty line of $1.90 per day (compared to 41% across Sub-Saharan Africa) and three quarters of the poor lived in rural areas (The World Bank, 2019). After the visit of a staff team of the IMF in Lusaka during 13-19 November 2019, this organization stated that macroeconomic outcomes have weakened, as a difficult fiscal position combined with a severe drought has resulted in projected growth slowing to below 2 percent and an increased risk of food insecurity (Mboto Fouda, 2019).

Besides, a convention of the Constitution consists in the political priority of the so-called "national issues" against the socioeconomic ones, relevant to internal policy. In early 1970, Zambia was arming itself at great expense against the threat from the south, though one hoped its government would not have to choose between aiding the liberation movements and being attacked by South Africa (Caplan, 1970), whose government supported the white-people regime of Rhodesia, which was not officially recognized even by it. At the same time, there was to be a concerted effort in the area of rural development. It is quite indicative of the seriousness of this internal problem that the President Kaunda described in December 1969 "the yawning gap between the urban and rural people as Zambia's most vexing and explosive problem". However, at least till then, most third world nations, including Zambia, had found it incomparably easier to modernize their armed forces than their peasantry.

The underdevelopment of rural areas against the urban ones has proved to be a serious, diachronic problem. If the Western Province is the poorest and

least developed of the (nowadays ten) provinces, the incidence of poverty is characteristic of all rural provinces. There is an important convention of the constitution in Zambian political system, inaugurated by Kaunda and maintained by the rest Presidents. It is about the "tribal balancing" policy, due to which governance representation in the country has been void of inequities likely to cause dissent in the dominant ethnic groups, and, as a result, equities at the "governance elite level" has caused inequalities in the regional levels (Mufalo, 2011). In this context, the revival of Barotse secessionism should not be attributed to a sense of socioeconomic and political marginalization but is interpretable on the basis of the sense of belonging to a traditionally and colonially recognized, historically defined, nationhood, and the consequent Lozi national consciousness (Mufalo, 2011).

It is also remarkable that not only economic democratization of the country is a taboo but also the political one, independently to the aforementioned question of Barotseland. For instance, the 2016 version of the 1991 Constitution has been considered as very progressive as many, if not all, of the submissions that were made to the Mung'omba Constitutional Review Commission have been included, with the exception of the creation of the provincial parliaments. The rejection of this proposal for the democratization of provinces was justified on the basis of economic data, namely with the argument that it would be too costly for the nation (Chipalo, 2016).

7. Conclusion: Zambia, a challenge for rights and its similarity to Cyprus

The current paper ends up to the following remarks:

a. Constitutional developments influenced by economic factors

The constitutional and political profile of the copper-rich country of Zambia has been drastically shaped by economic data and developments, such as the nationalization of the copper sector and later the traders' struggle to restore liberalism.

b. Zambia, a challenge for the consecration of fundamental rights

Zambia faces some very important problems, in terms of quality of life, in contradiction at least with the average of the Western world. For instance, there are extended illiteracy, nutrition problems and AIDS, given that 1.200.000 people lived with HIV in 2018.

This country has constituted a challenge for the consecration and promotion of modern fundamental rights, of both private individuals and countries. This is

emblematically the case of the right to food, exemplifying the current era of the fourth generation of fundamental rights worldwide (1992 to date). This right, such as other institutions, like presidentialism, particularly are related to Latin America whilst the 4G right to sovereign debt restructuring is related to Latin America countries, such as Argentina, but also mainly to African ones, including above all Zambia. Anyway, it is obvious that this American region, which has invented presidentialism, and Africa have very important constitutional features, if not novelties, in common. Including the right to food into constitutions is an important step but insufficient condition in itself to enforce it (Tura, 2018). Anyway, it is recommended Zambia consecrate the human right to food in its Bill of rights and make it a mainstreaming political priority, along with the rights to health and to education. Besides, droughts have highlighted the connection of the right to food with the 3G human right to water, which could be itself consecrated in the Constitution. Constitutionalism of this country has been ambivalent, particularly as far as human rights are concerned, which have never been tackled in the Bill of Rights of the 1991 Constitution, after 1991. So, the anachronism of the constitutional protection of fundamental rights is obvious and rather important. Anyway, the Constitution was amended in 1996 to declare for the first time the Zambian Nation as a Christian one, so an indirect influence on the normativity on the freedom to religion has been introduced.

c. Barotseland, an ambivalent case of demand for independence

As far as Barotseland is concerned, the Zambian State in 1969 illegally got rid of the privileged status of this country. On the one hand, the irony of the history is that larger and economically more viable kingdoms, such as that of the Ganda and the Ashanti, were dissolved in the post-independence period but later gained a status of a State within the sovereign State involved. On the other hand, States, such as the unrecognized Republic of Biafra, were never restored.

Anyway, the right to self-determination is still actual, particularly with the recent revival of the demand of Barotseland for self-rule, in the form of independence against the Republic of Zambia. This demand seems to be ambivalent and, as a general rule, deprived of support by international factors.

d. Economic and constitutional similarities of Zambia with Cyprus

Zambia resembles to Cyprus, in both natural and economic terms. There are various similarities between this copper supplier and this island, whose name comes from the Latin word "cuprum" signifying copper. Besides, the two countries have some constitutional features in common. For instance, Cyprus became the first country gaining its independence from the UK, which

adopted from scratch the non-monarchical form of State whilst Zambia was the second one. The people of this African country desired no transitional phase of monarchical form and so a Republic was established. The UK did not lead the independence developments towards the model of a unitary Republic, exempted from privileges of ethnic groups. The First Republic mainly of Cyprus but also of Zambia was marked by the institutionalization of some privileges of a certain group being a minority, at least in quantitative terms. It is about the Turkish-Cypriots and the Lozi people, respectively.

Notes

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References

Caplan, G. (1970). The elites of Barotseland 1878-1969. A Political History of Zambia's Western Province. London: C. Hurst & Co.

Chipalo, C. E., (2016). "History of Zambian Constitution – part V". Daily Nation, 18 May, https://www.zambiadailynation.com/2016/05/18/history-of-zambian-constitution-part-v/

Kakanku, K. (2018). The 1964 Zambia Barotseland agreement conflict. A report submitted to the University of Catalonia/United Nations Institute for Training and Advanced Research in partial fulfilment of the requirements of the award of an International Master's Degree in Conflictology. UOC/UNITAR 2017 Fall Season. Lusaka, 2018, https://www.academia.edu/36579824/THE_1964_ZAMBIA_BAROTSELAND_AGREEMENT_CONFLICT.

Lequesne Roth, C. (2018). "La fin des « vautours »? Retour sur le contentieux stratégique des dettes souveraines". R.I.D.C., 3, pp. 351-367.

Lumina, C. (2016). "Zambia's failed constitutional referendum: what next?". ConstitutionNet, 12 September 2016, http://constitutionnet.org/news/zambias-failed-constitutional-referendum-what-next.

Maniatis, A. (2018a). "Cryptocurrency, Tax Law and Anti-money Laundering Law". Archives of Economic History, XXX (2), pp. 29-38.

Maniatis, A. (2018b). "Les aspects juridiques de la crise économique de la Grèce". HREL, pp. 107-116.

Mboto Fouda, L. (2019). IMF Staff Concludes visit to Zambia. IMF, November

20, 2019, https://www.imf.org/en/News/Articles/2019/11/20/pr19426-zambia-imf-staff-concludes-visit-to-zambia.

Mufalo, M. (2011). Re-examining the argument for the restoration of the Barotseland Agreement. A paper presentation to the CPD National Conference on Traditional Authorities, Decentralisation and Rural Development Lusaka, Zambia February 28-1 March 1, 2011. https://www.academia.edu/4401202/1_RE-EXAMINING_THE_ARGUMENT_FOR_THE_RESTORATION_OF_THE_BAROTSELAND_AGREEMENT

Mwaebeme, É. St. (2019). "Regard récent sur les tendances du constitutionnalisme africain. Le cas des États d'Afrique noire francophone". R.I.D.C., 1, pp. 163-196.

Ndulo, M., and Kent, R. (1996). "Constitutionalism in Zambia: Past, Present and Future". JAL, 40 (2), pp. 256-278.

Seager, A. (2007). "Court lets vulture fund claw back Zambian millions". The Guardian, Fri 16 Feb 2007, https://www.theguardian.com/business/2007/feb/16/debt.development

Senou, J. I. (2019). "Les figures de la séparation des pouvoirs en Afrique". RDP, 1, pp. 183-216.

Sims B, Eaglestone A., and Yezi A. (Eds), (2013). A revolution revisited. The State of democracy in Zambia since 1991. Idasa, https://www.academia.edu/32545544/A_Revolution_Revisited_the_State_of_Democracy_in_Zambia_since_1991.

Soest von, Ch. (2009). The African State and Its Revenues. How Politics Influences Tax Collection in Zambia and Botswana. Nomos.

The World Bank (2019). The World Bank in Zambia. Overview. The World Bank, Oct 13 2019, https://www.worldbank.org/en/country/zambia/overview.

Tsaousi, G. (2018). "U.S. trade wars and how they affect the world". Archives of Economic History, XXX (2), pp. 49-64.

Tura, (2018). "The right to Food and Its Justiciability in Developing Countries". Haramaya Law Review, 7, pp. 48-74.

THE UNEMPLOYMENT-OUTPUT RELATIONSHIP FOR THE NATIVE LABOUR FORCE IN GREECE: FOCUSING ON THE DIFFERENCES BETWEEN OKUN'S COEFFICIENT FOR THE NATIVES AND THE IMMIGRANTS IN THE COUNTRY

A. BLOUCHOUTZI[*]

Abstract

The outburst of the economic crisis in Greece deepened the problems in its labour market affecting both the native and the immigrant population. The purpose of this paper is to examine Okun's coefficient in the case of the native population in Greece and compare it with the one referring to the immigrant labour force in the country.

JEL Classification: E24
Keywords: Okun, unemployment, growth, immigration, recession, Greece

1. Introduction

The economic, political and social environment in Greece has changed recently due to the economic recession the country faced and the outbreak of the migration crisis that followed. After the collapse of Lehman Brothers, the economic crisis spread from the US to the rest of the world affecting disproportionally the economies. Moreover, the Greek economic crisis was connected to structural weaknesses but also the implications of the country's entrance to the monetary union (Michail, 2013, 266). From 2008-2015 the country's GDP dropped by 23%, the unemployment rate reached a peak of 27.5%, the real adjusted gross disposable income of households per capita and the gross fixed capital formation decreased (Visvizi, 2016). The household consumption expenditure also contracted. As a result, Greece requested a bailout package from the EU and the IMF. This came along with several austerity measures which, in turn, deepened the recession (Giglioli, 2017, 5).

Moreover, Greece, along with other Mediterranean countries, has been in

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the frontline of the recent immigration outburst, for as much as 1 out of the 2 million people who entered the European Union since 2014 used the Eastern Mediterranean sea route (UNHCR, 2019). After the outbreak of the Syrian civil war, massive inflows of immigrants emerged towards the European Union countries. Instead of estimating the appropriate integration strategies, national governments had to deal with the scepticism over the implications of immigration with regard to their economies. The European sovereign debt crisis, which had decelerated economic growth and had affected adversely the labour markets of several European member states, was probably somewhat responsible for formulating a perception of this influx of immigrants as a threat rather than as an opportunity.

This paper examines Okun's law validity in the case of the native population in Greece. Moreover, it compares Okun's coefficient as derived from an econometric model testing the relationship of the natives' unemployment with the GDP growth with the one referring to the immigrant population. The paper is organized in four parts. The subject of the next part of the paper is an introduction to Okun's Law. A short literature review on other researches relevant to the Law in the case of Greece is presented in the third chapter. The empirical findings are produced in the fourth part of the paper and the conclusion sums up the main outcomes of this research.

2. Okun's Law

Okun (1970) reported that unemployment is negatively correlated with the output in the short run and estimated this empirical regularity using two approaches, the first-difference form and the gap model. According to Okun, a one percentage point change in the unemployment rate is associated with approximately three percentage points change in output in the opposite direction. Since Okun's formulation of the inverse relationship between unemployment and GDP growth, the literature on this subject has been growing either validating Okun's Law or questioning it in specific case studies. However, the Law seems to fit the data in most countries and there is a consensus over its empirical validity. The coefficient in the relationship between the two variables varies though.

Okun's Law presupposes that there is some kind of long run level of output which is called potential output, a natural rate of unemployment for the long run level of unemployment and also a long run level of employment. The factors determining potential output is the technological change and the factor accumulation while employment and unemployment are determined by the size of the labour force and the labour market's dynamics. The main argument

of Okun's law is that shifts in aggregate demand cause movements in real output which in turn lead firms to demand labour, thus reducing unemployment. The relationship expressing the changes from the potential output and the natural rate of unemployment are expressed in the gap model described by Okun in the following relationship

$$U_t - U_t^* = b(Y_t - Y_t^*) + e_t, \; b < 0$$

where U_t is the unemployment rate, U_t^* is the natural rate of unemployment, Y_t is the log of output, Y_t^* is the log of potential output, b is Okun's coefficient and $e_{t \; is}$ the error term. Okun's coefficient depends on the technological costs, the employment protection costs and the number of workers entering and exiting the labour markets as employment fluctuates. The white noise term is small when Okun's Law fits well and captures unusual changes in productivity or in the labour force participation (Ball et al., 2013, 4).

The first-difference form is expressed with the variables in first differences and the white noise term as follows:

$$\Delta UN_t = a + b\Delta Y_t + e_t$$

It provides with a convenient way to achieve stationarity in data containing a unit root and depicts the changes from the previous period. It follows the previous equation if we assume that the economy is in a steady state position where all markets are clear. Thus, the changes in the unemployment rate display changes from the natural level, while output grows in a constant rate.

3. Literature Review

Okun's Law has been revisited with regard to Greece. Apergis and Rezitis (2010) have estimated Okun's relationship between 1960 and 1997 for certain regional areas in Greece, finding a structural change in the responsiveness of unemployment to output changes after 1981. They used two methodologies concluding that there are no significant interregional differences except in two cases, Epirus and North Aegean. Christopoulos (2004) also applied the law at a regional level, confirming the relationship in 6 out of 13 Greek regions. The high long term unemployment in the other regions was probably responsible for the variations in the changes in unemployment and output. Karfakis et al. (2014) have more recently tested the validity of the output-unemployment relationship in the case of Greece for the period 2000-2012, suggesting a 3:1

ratio. They made use of a dynamic specification of the law and they showed that unemployment is more responsive to output during the recession periods than during the periods of economic growth.

In a general framework of OECD, European or Mediterranean countries, the aforementioned relationship has also been examined for Greece, by Moazzami and Dadgostar (2009), Blazquez-Fernandez et al. (2018) and Perman and Tavera (2007) respectively. The former using quarterly data between 1988 and 2007 and an error correction model allowed for short run deviations to take place from long run equilibriums and concluded that the output unemployment relationship is on the order of (2,6-4,7):1. The latter tested the convergence of Okun's coefficient among alternative groupings of European countries. The medium term convergence was rejected though for most of the groupings. Blazquez-Fernandez et al. (2018) selected specific European countries and confirmed the robustness of the law taking into consideration different age cohorts and gender. They used both the difference and the gap model and suggested that in the countries under study there is smaller output loss related with higher unemployment.

On the other hand, Rigas et al. (2011) and Koutroulis et al. (2016) examined thoroughly the implementation of the law, calibrating the model to the structural differences and specific characteristics of the Greek economy. The former used the first differences version to confirm the inverse relationship between output and unemployment and suggested that the form of the relationship for Greece differs from the other European countries. The latter focused on the asymmetric response of unemployment to output changes and confirmed it.

Furthermore, Okun's law has been studied with regard to gender differences. Zanin (2014) investigated estimates for male and female age cohorts in OECD countries showing that the younger generations are most vulnerable to the business cycles while the coefficient becomes smaller up to a certain age cohort and then tends to stabilize. Bod'a and Povazanova (2015) examining the PIGS during 1998 and 2014 established minimal different responses of male and female unemployment to output changes in Greece. Brincikova and Darmo (2015) also suggested that the sensitivity of male and female unemployment to output changes is more similar in countries with lower economic performance, as in Greece.

4. Empirics

For the purpose of this paper, the growth rate form of Okun's Law, or else the difference version, is used. Moreover, a dynamic version of the law is derived when adding to the previous specification the lagged values of the unemployment rate and the output.

The variables of the model are the unemployment rate of the native population in Greece and the natural logarithm of real GDP and include quarterly data for the years 1998-2017, available from the Eurostat database (2019), which are adjusted for seasonality. Table 1 portrays the descriptive statistics of the variables. Skewness and kurtosis are positive and skewness is around zero while kurtosis is around two.

Table 1: Descriptive Statistics

	UN	GDP
Mean	14.98500	5.20E+10
Median	11.60000	4.99E+10
Maximum	27.20000	6.33E+10
Minimum	7.500000	4.40E+10
StD. Dev.	6.565543	6.20E+09
Skewness	0.725774	0.453749
Kurtosis	1.846077	1.701450
Jarque-Bera	11.46177	8.365947
Probability	0.003244	0.015253
Sum	1198.800	4.16E+12
Sum S. Dev.	3405.402	3.04E+21
Observations	80	80

The Phillips and Perron unit root test indicates that both LGDP and UN series contain a unit root and they are not stationary processes. They are stationary in their first differences. Moreover, the relationship of the two variables is analysed using cross-correlation analysis, which portrayed that the GDP growth leads the changes in the natives' unemployment by 1 quarter and their relationship is countercyclical.

Table 2: Unit Root Test

Variables	Phillips Perron t-test statistic	Test critical Value 5% level
UN	-0.752786	-2.898623
ΔUN	-5.805872	-2.899115
LGDP	-1.358018	-2.898623
ΔLGDP	-7.281548	-2.899115

Afterwards, the time series are analysed using an ARDL model which is more efficient with a small sample size. Although the ARDL model approach could be used without first searching for unit roots, the variables were tested for stationarity to make sure that no series is integrated of order 2, I(2). The maximum lag length is set up at 6 and the Akaike Information Criteria determines 6 lags are necessary for the dependent variable and 2 for GDP growth. The model also includes two dummies, a crash dummy variable for 2009Q1 (DUM1) and another one, depicting the wide fluctuations of ΔUN after 2015Q2 (DUM).

Table 3: Estimated ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
ΔUN(-1)	0.118900	0.114737	1.036280	0.3042
ΔUN(-2)	-0.06099	0.111639	-0.054627	0.9566
ΔUN(-3)	0.042508	0.087021	0.488482	0.6270
ΔUN(-4)	0.594145	0.083009	7.157571	0.0000
ΔUN(-5)	-0.164924	0.109682	-1.503664	0.1378
ΔUN(-6)	-.0344448	0.105232	-3.273226	0.0018
ΔLGDP	-0.125037	0.044639	-2.801080	0.0068
ΔLGDP(-1)	-0.067967	0.042604	-1.595329	0.1158
ΔLGDP(-2)	-0.096927	0.043836	-2.211131	0.0308
DUM	-0.534645	0.178092	-2.002065	0.0039

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DUM1	0.219412	0.530572	0.413539	0.6807
C	0.173057	0.071545	2.418865	0.0186

Included observations=73 after adjustments, R-squared=0.788414, F-statistic=20.66352

The diagnostic tests indicate that there is no serial correlation, heteroskedasticity or functional misspecification and the residuals are distributed normally. Stability diagnostics confirm that the parameters of both our models are stable. Table 4 presents the results of the Bounds test which unveil whether there is a long run relationship between the two variables of each model.

Table 4: Bounds Test

Significance	I(0) bound	I(1) Bound
2.5%	5.77	6.68
5%	4.94	5.73
10%	4.04	4.78
F-statistic: 11.05183		

The computed F statistic is greater than the upper bound I(1) whether compared with the critical values of Pesaran et al. (2001) or Narayan (2005), so the null hypothesis is rejected and the Error Correction Models are specified. Hence, the long run relationship between the unemployment and the growth rate receives the following form:

$$\Delta UN = - 0.3815 \, \Delta LGDP - 0.7036DUM + 0.2887DUM1 + 0.277$$

The long run coefficient is indicative of a long-term negative and significant (p-value= 0.0000) relationship between changes in unemployment and GDP growth and shows a ratio of 2.62:1, that is, every 1% decrease in the unemployment rate is connected to a 2.62% GDP growth. The cointegration coefficient (CointEq(1): -0.759918, p-value: 0.0000) portrays that 75% convergence is achieved from the previous period.

The short run coefficients are presented in Table 5. The Pairwise Granger

causality test isn't indicative of a short run causal effect so that the past values of GDP growth are useful predicting the future values of the changes in unemployment.

Table 5: Short run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
$\Delta(\Delta UN(-1))$	-0.121182	0.149199	-0.812217	0.4198
$\Delta(\Delta UN(-2))$	-0.127280	0.139768	-0.910656	0.3661
$\Delta(\Delta UN(-3))$	-0.084772	0.126673	-0.669222	0.5059
$\Delta(\Delta UN(-4))$	0.509373	0.114049	4.466245	0.0000
$\Delta(\Delta UN(-5))$	0.344448	0.102157	3.371772	0.0013
$\Delta(\Delta LGDP)$	-0.125037	0.041512	-3.012037	0.0038
$\Delta(\Delta LGDP(-1))$	0.096927	0.042091	2.302802	0.0247
DUM	-0.536465	0.162058	-3.299102	0.0016
DUM1	0.219412	0.509222	0.430876	0.6681
CointEq(-1)	-0.759918	0.158202	-4.803464	0.0000

What is more interesting though, is that according to our findings the unemployment of the natives seems to be far less responsive to GDP growth than the immigrants'. The paper of Blouchoutzi (2019) suggested that every 1% decrease in the unemployment rate of immigrants is connected to a 1.56% GDP growth portraying a long run relationship between the unemployment of immigrants in Greece and the growth rate as follows:

$$\Delta UN = -0.6395 \; \Delta LGDP -0.9789 \; DUM + 0.2764 \; DUM1 + 0.3513$$

5. Conclusion

The econometric survey of Okun's law using available data for the native population in Greece, demonstrates a relationship between GDP and unemployment on the order of 2.62:1 contrary to the 1.56:1 immigrants' ratio. However, it should be stressed that the Law doesn't distinct between job places of good and bad quality. Consequently, in a period of economic recovery from

a deep recession, the faster responsiveness of immigrant workers towards the output growth could be somewhat the result of their eagerness to accept low-skilled or part-time jobs.

Furthermore, combining the projections of the IMF for the real GDP growth in Greece with the aforementioned findings, the picture for the employment potentials of the native population becomes less optimistic than that for the immigrants. Specifically, for 2019, GDP growth is expected to reach 2.4% (Athens Macedonian News Agency, 2018), the level of which could affect positively the immigrant population as it is reported above in the empirical part of this chapter. The midterm projections are even less optimistic for the natives, since in 2020 it is expected a 2.2% growth while till 2024, output growth will slow down to 1.2%. As it can be concluded, despite the nature of the available jobs, that is whether they are of low quality or not, immigrants are going to be benefited more than the natives by the economic growth in the country and it could be easier for them to be employed. This could lead to further emigration of the native population so as they search for better job opportunities abroad.

Since Greece has been a country in deep recession, the necessity for drastic policy measures to stabilize the economy has become urgent. First and foremost, overcoming the economy's structural weaknesses is an essential target to aim at while trying to find the push out of the recession. Following the path of the New Deal applied in the UK in the late 90s, there is first to provide as many jobs as possible and then try to make them better.

References

Athens Macedonian News Agency (2018, October 9). IMF revises Greece's growth estimates upwards.
https://www.amna.gr/en/business/article/299488/IMF-revises-Greec-es-growth-estimates-upwards. Accessed 5 August 2019.
Apergis, N. and Rezitis, A. (2003). "An examination of Okun's law: evidence from regional areas in Greece". Applied Economics, 35(10), pp. 1147-1151.
Ball, M. L., Leigh, D., and Loungani P. (2013). Okun' Law: Fit at Fifty? National Bureau of Economic Research Working Paper 18668.
Blázquez-Fernández, C., Cantarero-Prieto, D., and Pascual-Sáez, M. (2018). "Okun's Law in Selected European Countries (2005-2017): An Age and Gender Analysis". Economics and Sociology, 11(2), pp. 263-274.
Blouchoutzi A. (2019) The Impact of Immigration on Growth and Vice Versa. An empirical analysis of the Greek case from 1998 to 2017. Paper

presented at the 9th Biennial Hellenic Observatory PhD Symposium on Contemporary Greece and Cyprus, 15/6/2019, The London School of Economics and Political Science, London.

Bod'a, M. and Povazanova, M. (2015). "Gender Asymmetry in Okun's Law in the Four PIGS Countries". Procedia Economics and Finance, 30, pp. 111-123.

Brincikova, Z. and Darmo L. (2015). "The Impact of Economic Growth on Gender Specific Unemployment in the EU". Scientific Annals of the "Alexandru Ioan Cuza" University of Iasi Economic Sciences, 62(3), pp. 383-390.

Christopoulos, D. K. (2004). "The relationship between output and unemployment: Evidence from Greek regions". Papers in Regional Science, 83(3), pp. 611-620.

Eurostat. (2019). Labour Force Survey. Luxembourg: European Commission.

Giglioli, I. (2017). Migration, Austerity and Crisis at the Periphery of Europe. Paper presented at the Othering and Belonging Conference, Haas Institute for a fair and inclusive society, University of California, 30/4/2017-2/5/2017, Berkeley, USA.

Hellenic Statistical Authority (2018). Annual Labour Force Survey. Athens: Hellenic Statistical Authority.

Karfakis, C., Katrakylidis, C., and Tsanana, E. (2013). "Does Output Predict Unemployment? A look at Okun's Law in Greece". Discussion Paper No. 1, Department of Economics, University of Macedonia.

Koutroulis, A., Panagopoulos, Y., and Tsouma, E. (2016). "Asymmetry in the response of unemployment to output changes in Greece: Evidence from hidden co-integration". The Journal of Economic Asymmetries, 13, pp. 81-88.

Michail, D. (2013). "Social Development and transnational households: resilience and motivation for Albanian immigrants in Greece in the era of economic crisis". Southeast European and Black Sea Studies, 132, pp. 265-279.

Moazzami, B., and Dadgostar, B. (2009). "Okun's Law Revisited: Evidence From OECD Countries". International Business and Economics Research Journal, 8(8), pp. 21-24.

Narayan, P. (2005). "The Saving and Investment Nexus for China: Evidence from Cointegration tests". Applied Economics, 37(17), pp. 1979-1990.

Okun, A. (1970). The Political Economy of Prosperity. New York: Norton.

Perman, R. and Tavera, C. (2007). "Testing for convergence of Okun's coefficient in Europe". Empirica, 34(1), pp. 45-61.

Pesaran, M. H., Shin, Y., and Smith, J. R. (2001) "Bounds testing approaches to the analysis of level relationships". Journal of Applied Econometrics, 16, pp. 289-326.

Rigas, J., Theodosiou, G., Rigas, N., Blanas, G. (2011). "The validity of the Okun's law: an empirical investigation for the Greek economy". Journal of European Economy, 10(1), pp. 16-38.

UNHCR (2019). Mediterranean Situation. Operational Data Portal. https://data2.unhcr.org/en/situations/mediterranean. Accessed 30 April 2019.

Visvizi, A. (2016). Greece, the Greeks and the Crisis: Reaching Beyond "That's how it Goes". Carnegie Council for Ethics in International Affairs.

Zanin, L. (2014). "On Okun's law in OECD countries: An analysis by age cohorts". Economics Letters, 125(2), pp. 243-248.

SMART SPECIALISATION STRATEGIES AND THE TOURIST DEVELOPED REGIONS IN SOUTHERN EUROPE

G. ZOGRAFOS[*]

Abstract

This paper focuses on the application of smart specialization strategies (which are imposed by European Union for its regions), on specific regions of Southern Europe which are global leaders in tourist industry. The actual non incorporation of tourism as a recognized industry by official EU policies contradicts to the need of the employment of smart specialization as a developmental tool of certain European regions. This is the right chance to be shown that the notion of smart specialization can be successfully applied on those regions. Partnership between them can be a result of their smart specialization strategies.

JEL Classification: R58
Keywords: smart specialization, Southern Europe, tourism, regional competitiveness

1. Introduction

The aim of this paper is threefold:

- Firstly, it examines the smart specialization concept and explains the challenges involved in applying this originally concept of economic sectors to an explicitly spatial and regional setting
- Secondly, it explains ways in which this might be achieved as to make the concept suitable as a tool for tourism policies in various levels
- This paper however has as its main purpose to examine what will be the character of smart specialization for regions of Europe (especially in the South) where tourism is the predominant economic activity

The paper is organized as follows. The first section is about the meaning of the original concept. Therefore, it examines challenges in linking the concept to economic geography. The second section is about the implementation of a coherent application of the notion in tourism policies in specific regions of Southern Europe, which are considered to be global leaders in tourism.

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Domination of an industry in a regional economy is a profound specialization. Specializing in a certain activity may be the source of many jobs, or a high level of output or a large number of firms for the locality. Absolute and relative concepts of specialization provide very different images of the economy and rankings widely used do not provide in absolute terms an efficient outlook of how specialization benefits regions or not. This much is due to several other factors, as are the size of local population and others.

Given each of these considerations, in terms of the vast literature covering the links between economic geography, entrepreneurship and innovation one can summarize that:

- Firstly, entrepreneurship and innovation tend to be higher in cities and more densely populated regions than in lower populated regions. (Acs, 2002)
- Entrepreneurship and innovation tends to be higher in more sectorally diversified regions (Van Oort, 2004)
- Entrepreneurship and innovation tend to be higher in regions that are dominated by a small number of large firms (Chnitz 1961; Duranton and Puga, 2001)
- Entrepreneurship and innovation tend to be higher in regions with large numbers of multinational companies which are internationally engaged (Mc Cann and Acs, 2011)

Entrepreneurship and innovation tend to be higher in regions with large market potential. Furthermore, entrepreneurship tend to be lower in regions with lower population densities, lower in regions that are more specialized into sectors, lower in regions dominated by a small number of large firms, lower in regions with firms of limited international engagement and lower in regions with low market potential.

2. The notion of smart specialization

A relative specialization discussion would start by mentioning a commonly used applied version of the idea that a region is relatively specialized when an industry has a higher share in the regional economy than it does in the national economy. Today, there is less consensus around whether having a high share of an activity would improve economic performance. Consider a regional economy with a sector that has a high share of regional employment and output. Due to the profound footprint, the agglomeration will exercise a dominant role in regional demand for labor, land infrastructure and other resources. Firms in any given industry might prefer not to have competition from other sectors in the local labor market. But the region might very well

benefit from including other activities, and even if they raise competition for factors and resources and even if they thereby ultimately drive out the dominant sector. There is no general explanation of how relative specialization, by minimizing resource competition, would be systematically good or bad for regional economic development. Thus, upon closer examination, it does not provide much justification for the benefits of a narrow regional economic base.

The smart specialization concept originated in the literature analyzing the productivity gap between the US and Europe, a gap which became evident since 1995 (Ortega-Argiles, 2012). There is a wide literature attempting to identify key factors which underpinned the increasing productivity gap. One common thing that emerged was the critical role which technological linkages and spillovers between cities and regions, play in explanation of this productivity gap. European policy attempts to close this gap which is identified between cities and regions and in particular those related to information and communication technologies.

However, a more fundamental rethinking of the productivity challenges facing Europe was undertaken by the "Knowledge for Growth" expert Group. This group of scholars suggested a conceptual framework for thinking about a possible policy prioritization logic aimed at promoting EU growth, a framework which they labeled smart specialization. The concept of smart specialization therefore emphasizes issues of economic potential and the mechanisms whereby such potential is most likely be realized and can be summarized as follows. Within a particular domain, the entrepreneurial search process leads to the identification of the distribution of potential opportunities for technological improvements

Regions and Member States are enforced by the Cohesion Policy to look for EU investments which are to be placed on four key areas, targeting economic growth and job creation:

Those four areas are:
- Research and Innovation
- Information and Communication Technologies (ICT)
- Enhancing the competitiveness of small and medium-sized enterprises (SMEs)
- Supporting the shift towards a low-carbon economy

Furthermore, Cohesion Policy provides the necessary investment framework and delivery system to deliver the Europe 2020 objectives (Europe 2020 strategy: https://ec.europa.eu/.../european.../europe-2020-strategy). Among others there would be:
- Employment: 75% of the population aged 20-64 should be employed

- Innovation: 3% of the EU's GDP should be invested in Research & Development
- Poverty: Reduction of poverty by aiming to lift at least 20 million people out of the risk of poverty or exclusion

Each region will focus on a limited set of priority areas, in which it already has a competitive advantage, establishing a smart specialization strategy. A smart specialization strategy differs from the average innovation strategy, as it uses local know-how in order to promote existing strengths and assets of a region and settle them as keys to economic success. In this way, regions use their own capabilities in order to appoint themselves as national or even international champions.

That differentiation through specialization which will be the critical factor for a region's increased competitiveness stands on a platform which has as its pillars the focus on new technologies and the exploitation of current knowledge. An important process in the overall scheme seems to be that of "entrepreneurial discovery", which actively involves key stakeholders such as researchers, businesses, such as the innovation community, and public authorities. An equally important process is the one which consists of the synergies between Cohesion Policy and other EU policies and funding instruments, such as Horizon 2020.

3. Smart specialization and tourism

Examining regions of Southern Europe we can easily find a group of them, where tourist activity is predominant. The South of Europe in general, is a tourist destination area of global appeal (Zografos & Deffner, 2007). Its lush tourist product covers all aspects of recreational tourism (Papathanasiou – Zhurt & Sakellaridis, 2006). Its key characteristic however is its fragmented nature. Examining the outstanding concentration of tourist activity in certain regions, we easily recall the words of Marshall in Principles of Economics (1922), where he discussed "the concentration of specialized industries in particular localities". Marshall identified a self-reinforcing handful of factors that drive geographic clustering of economic activity such as the accumulation of a skilled, localized (and largely closed) labor pool committed to the district rather than the firm, the co-location of businesses with relationships of competition and supply between one other.

The aforementioned clustering of tourist activity in certain regions in Southern Europe leads to the conclusion that those areas are already significantly specialized. As they are already specialized, the matter is how they will

be "smartly" specialized. Those regions include in their geographical boundaries many established destinations of global class and they can be considered as destinations themselves. Those regions are for sure national champions and they are considered to be global leaders in their sector. Lack of EU tourism policies however, shows that Europe does not take into account that those destinations form assets for Europe, in a parallel way as automobile industries do.

As this paper tries to identify the character of smart specialization for regions of Europe (especially in the South) where tourism is the predominant economic activity this should be a result of the efficient and dynamic networking of subject regions. Something which barely happens today and it is clearly an EU task.

Regions of Southern Europe, specialized in tourism should be part of a "smart network" which will build its usefulness on helping regions cope with international competition, with issues deriving from monetary limitations and of course incorporating any kind of critical technological evolution. A major issue that the network would have to promote is the existence of complementarities among destinations. Common marketing activities in the global market are a profound benefit from that cooperation through specialization. It seems of quite importance the promotion of 'smart' interconnection of South European metropolitan regions (where tourism is a significant economic sector) with those regions which are typically oriented to tourism.

Global appeal of Southern European destinations for summer, winter vacations and for vacations throughout the year is booming and becomes clear that the dependence of Southern European destinations from EU markets may become lesser in the near future, although it seems inevitable that demand generated inside EU will always be a major proportion of the South European destinations performance (Zografos, 2009). At the end development of tourism is essential for EU policies, because tourism supports heavily small and medium businesses, reducing significantly unemployment (Daskalopoulou & Petrou, 2006).

Smart specialization involves the actual reestablishment of core elements of tourist destinations existence (Zografos, 2016). Tourism Marketing evolves rapidly and becomes a major field able to enhancing overall success for a subject destination. In this way, improvement in destinations' infrastructure seem to be necessary for overall repositioning of tourist destinations, but evolution in tourism marketing show the way for Southern European regions.

The dominance of tourism in their productive base seems to be a fact that will not change in years to come. Tourism does not exclude other activities because there are no other activities able to attract the same interest of local

population. Definitely, tourism helps the unthinkable. Achievement is about putting those mainly isolated regions due to morphology of landscape, into the global map. Tourism is the prism where landscape, history, climate and traditions turn themselves into economic assets (Zografos & Deffner, 2009).

Tourist developed regions of the Mediterranean form Andalucía to Crete and from single nation regions such as Malta to Cyprus are all oriented in tourist industry. Application of smart specialization strategies means that in the area of tourism those regions need to apply specialization in tourism in a smart way. How this can be achieved?

As it is mentioned above, increased competitiveness is a major characteristic of a smartly specialized region. In the area of tourism competitiveness has to do mostly with effective marketing procedures. But how regions can be involved effectively to sophisticated marketing techniques?

Effective marketing techniques for place marketing can be a true adventure. What are the interrelations between key stakeholders of local tourist activity such as hoteliers associations, local tourist organizations, associations of tour operators and travel agencies? How all these stakeholders communicate under a certain goal?

Smart specialization in the context of tourism comes along with partnerships between key stakeholders which might be private or public bodies. Local and National politics play a significant role in those processes. In this way, addressing a smart specialization strategy has to be a clearly defined goal and has to incorporate all other actions involved in this area such as branding etc..

It is for sure that effective marketing for a region in the context of Southern Europe where leaders of tourism development are located is not an easy task. Certain cultural similarities across the Mediterranean countries impose limitations and suspiciousness for the successful cooperation between different bodies. Key aspect of this misleading cooperation is that there are regions with significant potential for tourism development which they cannot exercise productive tourist policies due to insufficient staffing of regional or local tourist organizations. Those are the bodies which are going to implement regional tourist policies. Marketing consulting definitely helps in such cases but commission of consulting work has to be continuous and that does not happen in most cases.

On the other hand, whatever is the result of cooperation between bodies, repositioning techniques' aim is to increasing tourist consumption. That could happen with the increase of tourist arrivals or/and with the upgrading of tourist arrivals.

Often people employed by regional government in key position of local tourist organization do not have the right background in understanding issues in tourism marketing and how tourism marketing affects directly the destinations in any level.

A continuous smart specialization strategy will identify key figures in public scene which would enable the smart character of specialization. Unfortunately, in the area of tourism that is not as easy as it happens in other industries as the high tech ones. It is for sure that is needed a significant change in perceptions in local government think tanks.

The sole presence of tourism as an economic activity in regions such as the Southern Aegean Islands in Greece does not automatically mean that this region is a smartly specialized one. European Union has to implement strategies of showing how these regions could exploit the predominant role of tourism in their favor. Attracting international visitors from any part of the globe is a major target for those regions. European Union has to face tourism as major industry of the Union and produce guidelines of how destinations located there, could appoint themselves as global leaders.

That could happen with the edit of a practice guide of how a regional tourism promotion agency can be. Internet and social media have changed a lot the way tourism promotion is done. The affection of tourism exhibitions especially of the regional ones tend to fade. Tourism marketing in the context of places has to be creative and has to be directly related to creative economy of the place so as to present the dynamic identity of the present.

4. Conclusions

The global leadership of established destinations of Southern Europe means that the emergence of new nearby destinations will be introduced. In this way, retaining of subject tourist destinations' global leading position will benefit adjacent regions in becoming more competitive and attractive as tourist destinations.

Conservation of leadership in the future for subject regions might be the result of actions held by the network. For example issues of strategic regional planning, issues of common marketing features, issues of improvement of the tourist product, issues of sustainability and of course the enhancing of competitiveness of small and medium tourism businesses might be guided by an EU directive.

In any case there are great similarities between the lifecycles of products and that of destinations. The life cycle of a destination has various stages and a destination needs continuous monitoring in order to retain and increase its competitiveness. That is more obvious when we are talking about "destinations-products" which are global champions. It is time for them to base their success not on specialization but on "smart" specialization.

References

Acs Z.J. (2002). Innovation and the growth of cities. Cheltenham: Edward Elgar .

Chinitz B. (1961). "Contrasts in agglomeration: New York and Pittsburgh". American Economic Review 51(2), 279-289.

Daskalopoulou, I., and Petrou, A., (2006). "Small Business Performance in Urban Tourism". (Proceedings of the 46th European Regional Science Association Congres*s,* September 2006 (CD-ROM)). Volos, Greece.

Duranton G. and Puga D. (2001). "Nursery Cities: Urban diversity, process innovation and the life cycle of products". American Economic Review 91(5), 1454-1477.

Mc Cann P. and Acs Z.J. (2011). "Globalization: Countries, cities and multi-nationals". Regional Studies 45(1)17-32.

Ortega - Argiles R. (2012). "The transatlantic productivity gap: A survey of the main causes". Journal of Economic Surveys, 26 (3), 395-419.

Papathanasiou – Zuhrt, D. & Sakellaridis, O., (2006). "Transinterpret II: Transnational Quality Management in Heritage – Interpretation within the framework of C.I. Leader+. The case of Greece". (Proceedings of the 46th European Regional Science Association Congress*,* 2006 (CD-ROM)). Volos, Greece.

Van Oort F.G. (2004). "Urban Growth and Innovation: Spatially Bounded Externalities in the Netherlands". Ashgate, Aldershot.

Zografos, G. (2016). "Developing tourism in Mediterranean port cities" Regions, 303 (3) 21-23.

Zografos, G. & Deffner, A., (2009). "Dramatic changes in the continuously evolving tourist destinations: The case of Paralia Pieria in Greece". Tourismos, 4*,* (2) 129-47.

Zografos, G. & Deffner, A., (2007). "How does a mega event affect the hosting country's tourist development?" (Proceedings of the 47th European Regional Science Association Congress, 2007 (CD-ROM)). Paris, France.

Zografos, G. & Deffner A., (2009). "Using history as a tool for tourist development: Could the organization of an event be the vehicle for that event? Evidence from Greece." (Proceedings of the 4th Scientific Conference "Planning for the Future – Learning from the Past: Contemporary Developments in Tourism, Travel & Hospitality", 2009 (CD-ROM)). Rhodes, Greece.

European Commission (2015) "EUROPE 2020 Strategy". Accessed in 17th September 2016 https://ec.europa.eu/.../european.../europe-2020-strategy.

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