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"CONTEMPORARY ECONOMIC, FINANCIAL, BUSINESS AND POLICY ISSUES"

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A1. Banking in the Euro Area

The nexus between sovereign and banking risk in the Euro area: The PSI effect

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Abstract

Aim

Our aim is to study the nexus between sovereigns and banks during a crisis with a focus on the effects of PSI, the voluntary exchange program of Greek sovereign bonds with private sector involvement. We investigate the effectiveness of the program through its impact on daily credit default swaps of 8 Eurozone countries and 21 banking institutions, using daily data over the period January 2009 to May 2014. We address the following questions. Was the PSI program effective in mitigating the nexus between banks and their sovereigns? Were such effects more pronounced in the causal relationship running from Greek sovereign CDS to bank CDS? Which countries were more vulnerable?

Methodology

We follow a step-by-step procedure to test empirically linear and nonlinear causal relationships between the sovereign and bank CDS series. First, we assess linear

causality between sovereign and bank CDS spreads for the periods before and after the PSI program, utilizing Granger and Hsiao causality tests combined with Impulse Response and Forecast Error Variance Decomposition analysis. For robustness, we also employ a difference-in-difference model, to study the causal relationships between the sovereign and bank CDS premiums over the full sample period. Second, we assess nonlinear causal effects between the CDS series in both subperiods applying the nonlinear dependence BDS test and the non-parametric Diks and Panchenko (2006) causality test. In addition, we perform nonlinear causality tests on VAR- or VECM-filtered residuals, thereby removing systematic linear causality patterns from the data. This enables us to check if any observed causality is strictly nonlinear. GARCH effects are a potential source of nonlinearities between the CDS series, which in turn may affect the robustness of causality tests. We filter out autoregressive conditional heteroskedasticity using a bivariate GARCH-BEKK (1,1) model and re-run the non-parametric causality test using standardized residuals. We pursue to capture higher-order causal relationships by using volatility-filtered series, so that we are able to ascertain if nonlinear causal relationships in the data persist after second moment filtering rather than being driven purely by volatility spillover effects

Results

Our tests reveal significant linear and nonlinear dynamic causal relationships between the CDS series. We find causal effects to be bidirectional in the majority of cases, especially during the first period, and this finding is preserved as we move from linear to nonlinear causality testing. We observe a public-to-private risk transfer consistent with the aim of PSI. In particular, we find that the strength of both linear and nonlinear causal effects between banks and sovereigns appears to ease-off in the period following the implementation of the PSI program. Moreover, we observe that volatility spillovers underpin the nonlinear Granger causal relationships. However, the interconnectedness between the series persists after first and second moment filtering. This implies that any nonlinear causal linkages between the CDS series are not solely due to volatility effects.

Conclusions

We conclude that sovereign debt restructuring initiatives, such as PSI, could be an effective policy measure to ease off pressure on the nexus between banks and their sovereigns, whereby unstable bank balance sheets degrade the solvency of their sovereigns, and vice versa.

A2. Public Debt, Volatility and Growth

The Growth Empirics of the Eurozone: A Panel Data Analysis

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Abstract

Aim

In recent years there has been increasing skepticism regarding the ability of the euro to effectively serve the Eurozone with the future of the Eurozone to appear uncertain. The purpose of this empirical study is to determine whether there are growth effects for the Eurozone emerging from the introduction of the euro. Thus, the study seeks the causal effect of the euro on the growth of the Eurozone.

Methodology

The theoretical foundation of the model specification is based on the neoclassical theory of growth extended to include human capital accumulation and convergence to a steady state. The empirical analysis is organized in terms of a natural experiment as randomization is conducted by nature. A number of non-Eurozone economies that exhibit similar characteristics with the economies of the Eurozone serve as counterfactuals. The role of the non-Eurozone counterfactuals is to simulate the growth of the Eurozone in the absence of the euro. The difference-in-differences framework is applied to evaluate the difference in growth between the non-Eurozone counterfactuals and the Eurozone.

Panel data and fixed effects are used for estimation. The choice of fixed effects is made not only on the basis of the rejection of the random effects model but also because the hypothesis that the fixed effects are redundant is rejected. In addition, the nature of the data favors fixed effects estimation as the dataset is not a random sample but the actual population. This is because the cross-sections included in the dataset are all the possible cross-sections available. Besides, the time series within each cross-section contains all possible observations of the relevant time series. To ensure robustness in terms of cross-sectional correlation and heteroskedasticity, the regression coefficients are estimated

using cross-section seemingly unrelated regressions, whereas, the standard errors are computed using heteroskedasticity consistent cross-section coefficient covariance matrix.

Results

The analysis reveals that the euro has induced an uneven growth effect within the Eurozone. The euro has had a significant favorable effect for Eurozone's core economies. Quite the contrary, the euro has exerted a significant adverse growth effect for the economies of the southern periphery of the Eurozone. The evidence also reveals that the adverse growth effect on the southern periphery outweighs the favorable growth effect on the core. For this reason, the overall euro growth effect on the entire Eurozone is adverse and significant.

Conclusions

The euro has not impacted the growth of the Eurozone in a consistent manner. The euro has brought prosperity for the Eurozone's core, whereas, Eurozone's southern periphery has suffered under the weight of the euro. This imbalance may unleash centrifugal forces within Eurozone. Policy change should be directed to correct this imbalance in terms of stimulating growth for Eurozone's southern periphery.

A3. Health Economics

Identification of the training needs of health care professionals in Greece

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Abstract

Aim:

The aim of the present study is to demonstrate the occupational profiles and indentify the training needs of the health care professionals both in the public and the private sector in Greece.

Methodology:

The sample consists of four hundred fifty three (453) participants who have fully completed the valid Greek version of the Training Needs Assessment (TNA) questionnaire. A series of unreleated t-tests and multivariate linear analysis was used to identify the training needs of the health care professionals.

Results: All 30 items of the questionnaire were reported by significant training needs and for all the health care professionals. The organizational development considered to be a priority of the health care professionals. Between training needs and sex no significant differences were found. The Cronbach's score was over 0,6.

Conclusion:

The results indicate that the health care professionals need further training in the domain of research/audit, especially the professionals working in the public sector.

Does Work Engagement and Job Satisfaction predict employee's Job Performance in Hospitals?

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Abstract

Objective**:**

The purpose of this study was to explore the level of employees' Job Satisfaction and Work Engagement and how they affect employees' Job Performance, on Hospitals in Greece. Additionally we tried to estimate the relationship between Job Satisfaction and Work Engagement.

Methodology:

The study collected data from a target population of employees working in the Healthcare industry, using questionnaires to determine the level of Work Engagement and Job Satisfaction, their interrelationship, and how they affect employee's Job Performance using ANOVA regression Analysis.

Findings:

Our results suggest that Work Engagement positively affects employees' Job Performance in the Healthcare Sector. We found that none of the demographics significantly affect the level of Work Engagement. Secondly, our findings show that Job Satisfaction can predict employee's Job Performance. Concerning demographics, we found that only age affects the level of job satisfaction significantly.Lastly, results point out to a positive relationship between Work Engagement and Job Satisfaction.

Conclusions:

The work attitudes of Work Engagement and Job Satisfaction have considerable importance for determining the employees' work behavior and Job Performance.

A4. Institutions and the Economy

Exploring the connection between IMF and Democracy

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Abstract

Aim:

Even though, most studies within the aid effectiveness of IMF literature focus on economic outcomes, some others have empirically examined the impact of foreign aid on political outcomes. In this paper we are going to explore deeper the connection between IMF and Democracy

through four points of view that are analyzed through some serious previous studies: 1) the determinants of IMF participation, 2) the impact of IMF programs on Democratization in developing countries, 3) the positive effect of IMF in democracy by using "matching technique" and 4) the effect of IMF programs on inequality.

There are incentives and constraints that are created for the borrower government and the domestic civil society, that are responsible for any positive or negative impact on democratization in IMF programs. The question is whether IMF programs encourage or inhibit democratization and how is this done.

Methodology:

By pairing treatment, we are able to generate more credible estimates, resulting in increases in the level of democracy.

Another issue analyzed in this paper is the "matching technique". A number of studies have produced evidence that directly or indirectly supports the deleterious political effects of IMF lending. Barro and Lee's (2005) analysis suggests that greater IMF involvement produces lower democracy scores. Abouharb and Cingranelli (2009) find that human rights conditions worsen in the presence of IMF programs. We get a better grasp on the relationship by comparing the level of democracy in countries under and countries not under IMF programs, conditional on factors that are known to affect the level of democracy.

Results:

Countries that spend more time under the IMF lending programs experience big improvements in the level of democracy.

Nelson and Wallace (2005) indicate that there is indeed solid evidence of a positive relationship between IMF programs and measures of democracy. IMF programs are not distributed randomly, as some countries are more likely to receive the treatment, and the factors that increase the propensity to get the treatment may themselves be correlated with the quality of democracy. To handle this problem, matching technique is used.

The last issue that is analyzed in this paper is the causal effect of IMF programs on income inequality. The results show that IMF programs substantially increase income inequality in democracies, while having no such effect in non-democracies. The size of this effect on democracies is smaller, the more democratized the IMF's decision-making processes are.

Conclusions:

As previous literature has shown, there is a connection between IMF and Democracy that depends on the time period, the regimes and on some other factors that will be further analyzed. Traditional lending types have significant negative short-term effects on the extent of horizontal accountability and civil liberties in recipient countries, while more flexible policy lending types increase the extent of checks and balances in the long term.

A5. Topics in Open Economies

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Abstract

Aim:

International Joint Ventures (IJVs) are considered a significant strategy to gain and maintain competitive advantage in the international markets. The aim of this research is to examine the impact of prior experience in the establishment and management of IJVs, on a) knowledge transfer, b) partner compatibility and c) trust among IJV partners. To the best of our knowledge, no similar research has been conducted before in the South East Europe region.

Methodology**:**

Greek firms participating in IJVs in South East Europe are empirically examined, based on elements from the Resource Based View and Social Exchange Theory. This study

uses 50 valid questionnaires which represent, based on our estimations, approximately 25% of the total population of Greek firms with IJVs in the region.

Results:

The findings contribute to the International Business literature by showing a positive impact of prior experience in the establishment and management of IJVs on successful knowledge transfer and partner compatibility as perceived by the foreign partner. However, the expected positive effect of prior IJV experience on the level of trust the foreign partner has towards the local IJV partner is found to be statistically insignificant in the same national context.

Conclusions:

The findings provide interesting implications for academics and practitioners whose firms' intent to enter into IJV arrangements in the South East Europe region. Furthermore, the significant response rate allows for the generalization of results, in IJVs operating in this region.

Impact of the Free Trade Agreements on the dairy market price co-movements between EU, Oceania and the US

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Abstract

Aim

The aim of the present study is to investigate the impacts of major Free Trade Agreements and liberalization policies, initiated in 2008 or shortly before, on the spatial price co-movements between the dairy markets of EU, Oceania and the US.

Methodology

To this end, we consider two main dairy products, that is, butter and whole milk powder (WMP) and employ the statistical tool of R-Vine copulas to assess the development in tail dependence between the price series. We split the time span for butter (i.e. 02.2000 to 05.2017) and for WMP (i.e. 01.2000 to 05.2017) in 12.2007 to capture the change in the tail dependence as well as in the potential of each region to act as the central market (i.e. a region establishing direct connections with more than one other regions), in the two dairy products.

Results

Our results indicate that EU acts as the central market in butter in both sub-periods, whereas regarding WMP, EU succeeds Oceania in acting as the central market from one sub-period to another. Further results highlight slightly increasing tail dependence in the butter market; and in the WMP market for the pairs EU-OCE and EU-US. However, tail dependence for the WMP prices between Oceania and the US gets weaker.

Conclusions

It is concluded that in the butter market, the Free Trade Agreements as well as the liberalization policies taking place around 2008, have had some impact on the price transmission between the EU and Oceania; and between the EU and the US but their impact in the price transmission between Oceania and the US has been negligible.

Furthermore, in the WMP market we conclude that the Free Trade Agreements and the liberalization policies, impacted on the price linkages between the EU and Oceania; and the EU and the US. On the other hand, tail dependence between Oceania and the US decreased substantially, probably due to the 2013 Chinese ban on milk powder imports from Oceania on botulism scare. This ban has resulted in the collapse of WMP trade between Oceania and China in most of the second sub-period, which has affected the price transmission between the two regions that compete in the Chinese WMP market.

The results obtained in this study provide evidence that the dairy market is segmented rather than well-integrated but the overall price dependence increases illustrate that price linkages get stronger in the aftermath of the trade agreements and the policy changes.

B1. Special Session on Forecasting

"Forecasting Naval and Aerial Violations in the Aegean: Methods and Implications for Strategic Resource Planning"

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Abstract

Aim

The problem of forecastability of aerial and naval violations from Turkey to Greece is considered for the first time using the relevant historical data. There has been no previous attempt to analyze the data on such violations, as they have been recorded over the years, and this is a persistent tactical problem in operations' management for the Hellenic Armed Forces. The forecastability of such violations is important in terms of both military preparedness and readiness as also as on strategic resource planning. The costs of addressing such violations are known with a very small uncertainty margin (e.g. the costs of intercepting planes intruding in Athens FIR is known on average).

Methodology

We show that there are models that are capable of producing better forecasting performance over the associated benchmarks, examine the implications of structural changes in these series (as there are periods of abrupt movements in the number of violations) and provide examples where forecastability can be used to improve not only the underlying economic costs but also the full aspect of military necessities associated with these violations.

Results

We run several forecasting exercises to examine predictability of violations. Our results indicate that especially over the last few years, predictability is quite high, both in terms of forecast error variance and also (more importantly perhaps) in terms of sign/direction of change. Whether we use levels or differences, we find predictability (more so in differences) and therefore considerable cost reduction decisions could have been made following the forecasts.

Conclusions

Our analysis is confined within the limits of non-tactical, non-seasonal and without intervention models. It should be clear that the employement of such methods that combine the strategic or/and tactical needs of facing such violations, along with an appropriate treatment of the nature of our data, would improve predictability.

Predictive Ability and Economic Gains from Volatility Forecast Combinations

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Abstract

Aim

The availability of numerous modeling approaches for volatility forecasting leads to model uncertainty for both researchers and practitioners. A large number of studies provide evidence in favor of combination methods for forecasting a variety of financial variables, but most of them are implemented on returns' forecasting and evaluate their performance based solely on statistical evaluation criteria. In this paper, we exploit the existing methodologies for combining forecasts in the context of volatility forecasting, evaluating them according to standard statistical loss functions, as well as economic-based and risk management loss functions.

Methodology

We combine various volatility forecasts based on different combination schemes and evaluate their performance in forecasting the volatility of S&P500 index. The volatility forecasting models considered include GARCH models, option based forecasts (i.e. implied volatility) and forecasts based on high-frequency data (i.e. realized volatility). Our methodology consists of simple combination methods as the mean, the median, the geometric mean, the trimmed mean and a transformed trimmed mean method and more complex combination methods. More specifically, we use the discounted Mean Squared Forecasting Error (DMSFE) combination and the inverse MSFE that counts for a discount factor equal to unity. From a regression approach, we consider least squares combinations based on different assumptions for the estimated parameters/weights. Based on the fact that several times parametric combinations lead to worse out-of-sample results, we also take into consideration nonlinear combination models, as well as a Kernel regression approach. Finally, we include a nonparametric combination scheme, the so called triangular weighting method.

Results

Based on both symmetric and asymmetric statistical loss functions volatility forecasts based on advanced combination techniques are superior to individual forecasts and forecast from simple combination techniques. Moreover, combination forecasts based on regression and more complex methods perform better than the simple combinations and the single models also in economic terms. Though, there is no clear winner across all loss functions suggesting that different combination techniques are preferable based on the economic application to be used.

Conclusions

The empirical analysis in this paper yields an important conclusion. Combination forecasts based on more complex methods perform better than the simple combinations and single models both in statistical and economic terms. A logical next step could be to optimally combine forecasts based on economic loss functions expecting these combination forecasts to lead to more accurate forecasting performance. Taking into consideration the instability in the performance of single forecasts and the fact that different loss functions are relevant for different decision makers, our results encourage investors or financial institutions to use the combination forecasting methodology to improve forecasting accuracy and economic gains.

Keywords: volatility forecasting, combination methods, forecasting performance, statistical evaluation, economic evaluation

JEL codes: C52, C53, C58, G1

Forecasting Agricultural Prices: Adaptive Learning for Short Time Series

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Abstract

Aim

Forecasting prices of agricultural commodities is a determinant factor of the financial and tradeable markets. Agricultural commodity prices do generally vary with global economic trends and are believed to influence price levels more broadly and thus are of interest to central banks, policy makers, firms and consumers. On the other hand, agricultural productivity is very vulnerable generating important economics problems to the farmers and the consumers.

It is thus of considerable interest to examine how we can achieve forecastability of agricultural prices. The magnitude of this issue is to assure that there will be knowledge for the governments so as to implement appropriate trade policies and for the farmers enough market information.

Methodology

We perform a comprehensive rolling window evaluation of the forecasting performance of several standard benchmark models plus a suite of *theta* related models, both univariate and multivariate, some of which are presented for the first time. Furthermore, the main methodological contribution of the paper is to propose a combination of averaging and learning, which we term “adaptive" learning, where the forecasts are

updated based on past forecast errors via minimum variance optimization and various heuristic rules. We show that the learning rate is a non-linear function of the average forecast error autocorrelation and suggest various methods for learning.

Results

Our results can be summarized as follows. First, in terms of the proposed adaptive learning methodology we show that it yields substantial performance improvements in almost all cases considered, across different variables and rolling windows. Second, this performance improvement is not constrained to standard measures of forecast evaluation, such as RMSE or MAE, but it extends to the quality of the efficiency of the forecast. Third, we find that most of the *theta* models provide superior forecasts to other models and/or benchmarks and, in particular, we find that bivariate models (in the context of agricultural prices) are frequently better than the univariate ones – and it is of practical interest (in terms of the agricultural implications) to note that the productivity measure used as auxiliary variable tends to give the best results compared to the national product variable.

Conclusions

It has been shown that forecastability of agricultural prices is feasible, in levels and in differences. The newly introduced *theta* models, univariate and multivariate, appear to continue the *theta* tradition in providing accurate forecasts.

The novel approach to adaptive learning introduced in this paper offers from mild to considerable forecast enhancements by combining the power of average and learning from past forecast errors.

B2. Foreign Direct Investment

Long Run Effects of Foreign Direct Investment on Economic Activity

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Abstract

Aim

Foreign Direct Investment (FDI) is considered to promote overall economic activity in the host countries. However, it is also asserted that foreign capital increases volatility both in the financial markets and the real economy (Stiglitz, 2000). Furthermore, it is also claimed that recent adverse experience in the Eurozone periphery countries (Greece, Ireland, Portugal, Spain) has been triggered by large current account deficits financed by large capital flows from surplus Eurozone member countries, irrespective of the formers' sound fiscal positions (see e.g. Portes, 2014). We investigate the long-run effect of intra-Eurozone FDI on the economic activity of Eurozone member countries.

Methodology

We estimate a Vector Autoregressive (VAR) model for a cross-sectionally depended nonstationary panel of 12 Eurozone member countries spanning from 1982-2015. To model FDI, we use a log-linear modified gravity trade model, as in Anderson and van Wincoop (2003).

Results

Our results prove the presence of a cointegrating relationship among the two endogenous variables under consideration, namely intra-Eurozone FDI and Eurozone member countries' yield curves.

Conclusions

The long-run co-movement of the above endogenous variables is deemed to justify a persistence of regional disparities among the members of the common euro-currency area.

An empirical investigation of FDI determinants in developing economies

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Abstract

Aim

The international allocation of capital flows is determined by various political, institutional, social and financial conditions. Multinational companies and foreign investors consider several determinant factors when investing their capitals in developing and under - developed economies. Similarly, the recipient countries proceed to significant reforms in order to increase their attractiveness and to absorb more foreign capitals. The purpose of the present paper is to empirically examine the determinant factors of foreign capitals in the developing economies from 1970 to 2016, focusing on foreign direct investment (FDI) inflows.

Methodology

A panel data analysis is presented in order to investigate the characteristics of the host economies that mostly affect the multinational companies' investment decisions. The sample of the study consists of 18 developing countries, which, to our knowledge, has not been so far a subject of study as a group of economies. Econometric tests, including tests for heteroscedasticity, autocorrelation and cross – section dependence are presented in order to conclude to an empirical model which best explains the determinants of FDI in the studied countries during the specific time period.

Results

Considering the rapid social, economic and political changes, as well as certain factors, such as the recipient country's characteristics or unexpected economic shocks, affected the researchers' interest of the FDI determinants. It is observed that in the studied economies, FDI inflows are affected not solely by traditional FDI factors, but from emerging or non – traditional determinants as well. Furthermore, it is argued that, at present, multinational companies consider certain factors when investing abroad, which did not affect the investment decisions in the past. Additionally, FDI are positively affected by the traditional FDI factors, including market size and trade openness; however, some emerging factors, including certain forms of globalization, are proven to be deterrent factors of FDI inflows. Finally, countries that present high rates of violent incidents, focusing on terrorist attacks, are less likely to attract FDI inflows. The

role of the financial crisis and the geographical region in which the recipient country is located could also affect the amount of inflows.

Conclusions

The paper concludes that political and institutional factors mostly affect the recipient countries' attractiveness towards foreign investors. The contribution of the study refers to the fact that the influencing factors of FDI are econometrically tested and an extended econometric model is presented. In addition, the study is not limited to a certain geographic region. Suggestions for policymakers are presented.

The interplay of firm and country factors to outward FDI: a firm level analysis

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Abstract

Aim

FDI is a key element of globalization, and can serve as an important vehicle for local enterprise development, and improve the competitive position of both the recipient ("host") and the investing ("home") economy. Large multinational enterprises (MNEs) are traditionally the dominant players in FDI transactions, although, it is believed that small and medium-size enterprises have also become increasingly involved in FDI. Though the majority of works is concentrated on inward FDI, there is an on-going growing interest in understanding the push factors of outward FDI (OFDI). One of the most important components for the location decision of foreign investors is considered the quality of institutional framework of a country; hence the absence of strong

institutions may deter investments by increasing the cost of doing business and uncertainty. One way for MNEs to counteract the competitive disadvantages resulting from home institutional voids is outward FDI. In the present study we examine the significance of ownership and location advantages in determining the investment decisions by the total population of Greek MNEs. Specifically, we employ sectoral analysis by classifying the sample of Greek firms in 8 sectors while simultaneously we classify the Greek MNEs in three categories according to firm size (Large, Medium, Small). Particular attention is paid to the manufacturing industry according to technological intensity in low/medium low and medium high/high tech. In our knowledge, empirical evidence for these links are very scarce and our scope is to fill this gap in the existing literature and explore the role of ownership and location advantages on Greek outward FDI using firm level data.

Methodology

By employing panel estimation method for a sample of Greek firms for the period 2001-2010 we reach to significant results for policymakers. Particularly you use fixed-effect estimation method to capture the effects of institutional framework on FDI and the behavior of Greek MNEs over time.

Results

The results reveal that traditional economic factor like the size of the host market and openness are significant and have the expected signs while wages and interest rate present differences on the level of significance and the sign depending on the sector and the size of the firms. As for location factors taxation presents highly significant and negative effect on OFDI while in the case of Medium and Small sized firms and high technology intensive firms, taxation loses its significance. The institutional framework has a significant and positive effect on OFDI as it expected. Moving to ownership determinants we observe that the prior presence (the number of affiliates) is very significant and has a positive sign in every case except for the Small sized firms and the level of leverage and the efficiency of the firm present differences on the level of significance and the sign according to the sector and size of the firm. Finally, in case of technology intensity classification, we observe that in low technology intensive firms, prior presence and tax intensives present the most significant effect on OFDI while in high tech firms, prior presence and the quality of host institutional framework present the most significant effect on OFDI.

Conclusions

In the present paper we explore the effects of firm and country determinants on Greek Outward FDI, in a firm level analysis. According to our results both ownership and location advantages play an important role on Outward FDI. While some determinants present the expected sign and level of significance, others present differentiations according to the size and the sector of the firm. In future research we will try to examine the interaction effect of ownership and location determinants and enrich our sample with more resent data, in order to explore in depth, the sectoral behavior of Greek MNEs and compare this behavior in pre and post crisis period.

B3. Greek Economic Issues

Overcoming Greek Sovereign Debt crisis. A new fiscal policy framework.

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Abstract

Aim

This paper aims to shed light on the critical matter of overcoming the existing Greek sovereign debt crisis, a crisis that brought to the surface the chronic structural problems of the Greek economy and the long-standing state distortions, while demonstrating the importance of a sound and efficient model of fiscal governance.

Methodology

The research methodology implemented is a literature review on the existing research around the multi-significant issue of fiscal governance at both international and Greek level, which helps in identifying the problematic issues in the current fiscal model. Furthermore, a new fiscal policy framework is developed that aims to showcase the required actions needed and the policies to be implemented by the Greek authorities in order to fix the existing deficiencies and achieve fiscal stabilization.

Results

This study highlights that the main shortcomings of the Greek fiscal governance model are the state budget preparation procedures, the ineffective tax administration model and the size of the shadow economy. Based on these findings the proposed Greek fiscal policy framework relies on three main pillars – the procedures for setting up the state budget, a more efficient tax administration model and the proper operation of the Independent Fiscal Council.

Conclusions

This paper adds on the existing literature around the crucial issue of Greek fiscal governance, setting the required fiscal policy mix so as for Greek economy to overcome the existing sovereign debt crisis and return to positive growth rates, while achieving sustainable growth, a perquisite for socioeconomic welfare. The author also hopes this study to initiate a fruitful discourse on the subject among all the involved parties.

Sustainable Forms of Tourism and their Prospects for the Development of Corfu

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Abstract

Aim

This article aims to highlight the particular features of Corfu that make it a popular tourist destination and to promote the sustainable development of the tourism industry, based on the island's opportunities and potential.

Methodology

The research method on which the paper is based is mainly the bibliographic research and the data gathered from the literature are based on secondary data, drawn from

books, articles and websites from the internet, as well as material from the Greek Statistical Office, the EUROSTAT and the Hellenic Chamber of Hotels.

Results

Considering the above mentioned sources, Corfu is the model for the development of mass tourism with over-concentrated tourists in certain areas of the island, especially during the summer months. Thus, there is a lack of basic infrastructure, problems with wastewater management and degradation of the quality of the environment. Regarding the distribution of employees by sector of production, the tertiary sector in Corfu employs 80.25% of the employees, which are 35.594 employees (Hellenic Statistical Authority, 2011). In addition, Corfu has turquoise waters, beautiful scenery, coves, bays, marvelous marine life, reefs, shipwrecks and caves that encourage the development of diving tourism.

It also has a remarkable cultural heritage that promotes cultural tourism, as well as conference halls with soundproofed and light-proofed rooms and the necessary technical equipment. Finally, the climate conditions prevailing on the island, as moisture and mild climate, contribute to the development of golf tourism throughout the year.

Conclusions

The model of sustainable tourism development in Corfu, will help to reduce the negative environmental impacts as everything will be based on alternative forms of tourism and innovative, healthy investments. The goal is to implement an environmentally friendly development policy without lowering Corfu's economic revenues. This can be achieved through a means of sustainable tourism development, including planning, which aims to create and strengthen the balance between society, economy and environment. Corfu should promote its alternative tourism based on one of its forms, or combine the development of more of these forms in order to cover a wider range of its tourist potential. Another form of alternative tourism that is proposed (other than those previously mentioned congress, cultural and golf tourism) is diving tourism, because Corfu has crystal blue turquoise waters, beautiful places, coves, bays, wonderful sea life, reefs, shipwrecks and caves. Yet important pillars of the effort to upgrade the island, to boost tourism and protect it from the effects of climate change, must be both regional and local authorities, as well as local communities, which should take on more active role for environmental protection because they live in it and indirectly boost the core economic activity of their regions.

Keywords: Corfu, Tourism Policy, Sustainable Development, Environment

B4. Financial Economics I

Investment Advising: Pay-to-Play, or Capture?

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Abstract

Aim

This article illuminates the effect of the investment consulting industry, on the welfare of the ultimate recipients of benefits of privately managed retirement accounts, in the United States. I show, that the ratings assigned to investment managers are inversely related to their current performance, at the time they are issued. In essence, these ratings 'penalize' investment managers if they have good recent performance, and 'reward' them, if they have bad performance, on average, through ratings of portfolio managers. Ratings equate to recommendations to plan sponsors, to allocate retirement funds. Ultimately, the act of following ratings and implicit recommendations involves plan sponsors' propensity to losing money, on behalf of the plan or retirement account, that they are in charge to safeguard.

Methodology

MLE estimation of the regime-switching model used involves a hyperbolic tangent function. The dependent variable is information ratio (*IR*) of investment strategies with monthly returns. A special proxy-benchmark is constructed, to measure this information ratio, based on linear regression of five selected market indices, and three principal components of U.S. LIBOR Swap rates (level, slope and curvature), while the

intercept of the regression is zero. For independent variables, I estimate a rolling regression portfolio returns against the same five selected market indices, and three principal components of U.S. LIBOR Swap rates (level, slope and curvature), this time allowing an intercept for "alpha." The set of alpha and beta coefficients then, become the independent variables based on which the information ratio described above, is estimated.

Results

Based on performance, if a manager is a good tactician, he/she is or should be a good strategist. Consultants artificially represent universes to their clients, as spit into managers who are tactical, versus those who are strategic but not both. This fictitious bifurcation generates losses:

i. For rating groups *A*, *B*, recommended to institutional clients, plan sponsors who abandon partition *q* based on outperformance and hire/keep managers based on *r* ratings lose 17.8% and 5.4% in average *IR*, on behalf of retirees.
ii. For rating groups *R*, *N*, not recommended to institutional clients, sponsors who abandon *q* based on outperformance, and fire/avoid managers based on *r* ratings, forgo 2.1% and 22.5% of average *IR*, for beneficiary retirees (outliers are not excluded, or fixed here).
iii. Viewed as a combined effect of loss and opportunity cost, the plan sponsors who follow ratings incur a staggering 47.7% reduction (17.8%+5.4%+2.1%+22.5%) in information ratio. Rating *R* has a high *IR* distortion (squared sum) due to High Yield universe.

Conclusion:

Through ratings, on-line platforms re-shuffle strategies in a way that entails losses in information ratio to the ultimate retiree. Favorable ratings provide a license to justify investment and avoid responsibility. The distortion of tactical and strategic elements increases fees. Such distortion in recommendations is evidence of pressure exerted on consulting firms, described as capture of the advisors by investment managers; not pay-to-play imposed on managers by consulting firms.

An Examination into the Usefulness of the Bitcoin Futures Contracts

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Abstract

Aim

Given that two different bitcoin futures contracts were independently introduced by the Chicago Board Options Exchange (CBOE) and the Chicago Mercantile Exchange (CME) on December 2017, the purpose of the paper was to examine if they provide investors with pricing, hedging and/or portfolio diversification opportunities.

Methodology

Based on the futures pricing arbitrage model and using the bitcoin cash and futures prices, various regression models were estimated to examine pricing and hedging efficiencies provided by the bitcoin futures. Also, the presence of the portfolio diversification effect was examined by calculating the correlation coefficients between bitcoin futures and various asset classes such as stocks, bonds, real estate, gold, and crude oil.

Results

Because the regression coefficients between the bitcoin cash and futures prices, and their differences, were not statistically equal to 1 for both CBOE and CME futures, they were judged not to provide investors with either pricing or hedging efficiencies. Also, the positive correlation coefficients with all asset classes indicated that no portfolio diversification effect was provided by the bitcoin futures.

Conclusions

Because the bitcoin futures contracts introduced by CBOE and CME failed to provide investors with pricing, hedging, and/or portfolio diversification effect, it was concluded that they were likely being used as a speculative tool. However, this conclusion suffers robustness due to the short study period considered.

C1. Energy Economics

Substitution Trends in US Production with Capital, Labor, and Energy Inputs

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Abstract

Aim

This paper aims to derive trends in productivities and price elasticities including energy Btu input with fixed capital assets and the labor force in annual US data from 1949 to 2013. The focus is long term trends in the marginal productivities of the three inputs and the evolving trends in price elasticities. The paper contributes to the vast literature on the issue of capital and energy as substitutes or complements. The pattern of price elasticities in substitution have implications for economic policy designed to affect the three inputs in production. Trends in marginal productivity go some of the way to addressing the issue of the declining share of labor in income distribution. Including energy input is production or cost functions seems to be a fundamental way to improve simulation and forecasting models.

Methodology

The series are tested for stationary properties and are difference stationary with some evidence of a structural break at the energy crisis. The resulting difference equation estimates compare log linear production functions with log quadratic that include cross effects of input interaction. Different specifications of the production function are compared. The estimates provide evidence on how to model or capture technological change. The unrestricted estimates also provide evidence regarding constant returns to scale and competitive factor markets, assumptions that can be tested as null hypotheses on estimated parameters. Estimation of factor share equations would require imposing these assumptions.

Results

The results show that fixed capital assets successfully imbed technological change without any separate treatment of technology. Constant returns to scale are not rejected

as a null hypothesis in the difference equation estimates. Including energy input increases explanatory power by half, suggesting estimates with only capital and labor suffer misspecification bias. The marginal product of labor is considerably reduced when energy is included. Energy input is underpaid relative to its increasing marginal product, evidence that policy aiming to control the price of energy and its income share have been successful. In contrast, labor is overpaid relative to its decreasing marginal product evidence of a successful political strategy. Labor faces increasingly elastic own substitution implying an increase in the wage decreases the input of labor enough that to possibly decrease the labor share of income. In some of the specifications, labor has elastic own price substitution. Labor also emerges as a weak complement with energy suggesting rising energy prices over the coming decades will decrease the demand for labor as the economy becomes more capital intensive. The capital that is recently coming online saves energy and saves labor as well. Capital is a weak substitute for energy.

Conclusion

The estimated properties of input productivities and price elasticities go some of the way toward explaining the increasing difficulties of labor over recent decades. Simulation models should routinely include energy input along with capital and labor. Future research will examine the model with skilled labor separated from unskilled.

Could Nuclear Energy Production and Economic Growth Relationship for Developed Countries Be An Incentive for Developing Ones?

A Panel ARDL Evidence Including Cointegration Analysis

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Abstract

Aim

The purpose of this study to produce policy options for developing countries defined as debtor nation and have significantly current account deficit problem because of their huge level of energy costs and bills in their balance of payments. For this reason, the paper initialy aims to explore developed countries' nuclear energy policies and thus, to guide developing countries (especially for Turkey and similar countries) for adopting alternative energy resources to reach a sustainable higher GDP per capita and to protect themselves against energy price volatilities.

Methodology

Thus, in mostly examined statistical studies, developing countries, also called as middle income countries whose GDP per capita is lower than developed countries, have been looking for different strategies to catch up the wealth level of developed countries from the aspect of catch-up effect in the Growth Theory. For this reason, in the context of cross sectional and limited time series, the paper analysis all available retroperspective panel data method which uses time interval between 1977-2014 for 15 developed countries. We employed Panel ARDL approach to serve the aim of the study.

Results

According to the emprical results, as expected, vector error correction coefficient was founded negaitvely and accepted numerical interval. Results indicate that there has been significant and positive relationship between the increment of nuclear share in electricity production and GDP per capita.

Conclusion

Therefore, this linear relationship between the incerement of nuclear share in electiriticy and GDP per capita may alternatively recommend an increase in nucluear type of energy production in developing countries and thus, may convince those who are against this kind of energy.

C2. Political Economy

Where Has All the Demand Gone?

Challenges to Growth in a "Neo-Mercantilist" Age

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Thomas Mondschean Professor of Economics, DePaul University, USA
Rowena Pecchenino Professor of Economics, National University of Ireland-Maynooth

Abstract

Aim

The aims of this paper are to (1) document how and why current account imbalances are increasing in emerging and developed nations; (2) explain the motivations behind such country behavior, especially on the surplus side; and (3) demonstrate how various types of expenditure switching policies can lead to lower global economic growth.

Methodology

Our method of analysis is to first conduct a wide-ranging review of the literature to understand better the political and economic forces that lead to surplus enhancing policies that also restrain global aggregate demand. We examine the various motivations for and promulgations of these policies and compare their similarities and differences. We also explain how the breakdown of the Bretton Woods system of international finance in the 1970s provided the opportunity to increase either trade surpluses or deficits depending on a country's policy objectives. Next, we develop a version of the Mundell-Fleming model to show how a neo-mercantilist economic strategy can be employed, and illustrate out how this behavior can lead to slower global growth. Finally, we develop a sample of approximately 60 countries comprising over 95% of world GDP from 1990 to 2015 to examine empirically if current account imbalances are increasing.

Results

We find that surpluses and deficits appear to be large and path dependent. We report that the number of countries with significant surpluses (at least 5% of GDP) has been rising since the end of Bretton Woods, and these imbalances have continued to persist since the 2007-09 financial crisis. This leads us to ask what this trend portends and what can be done to mitigate or reverse it if it bodes ill for global economic well-being.

Conclusions

A significant number of countries have been running large and continuous trade surpluses to achieve a variety of domestic policy objectives. We have documented this trend, shown how the institutional architecture of international finance makes it possible, and developed a model to show how this can be done with no exchange rate effect. We conclude by suggesting that countries that have benefitted from large surpluses for many years rebalance their policies, reduce their surpluses by increasing aggregate demand, and share their good fortune thereby enabling their trading partners to thrive and grow.

C3. Brexit, Externalities and Taxes

Vertical Fiscal Externalities and Federal Tax-Transfers under Variable Factor Supplies

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Abstract

Aim

The objective of the paper is to re-examine the issues of the vertical fiscal externality and of the bottom-up/top-down transfers, and their relationship in a model of a multi-states, or jurisdictions, federal economy with federal-cum-state specific factor taxes, and where capital and labor are in variable supplies.

Methodology

Within a model of variable supply of capital due to international mobility and variable labor supply due to endogenous labor-leisure choice, we revisit the issues of vertical fiscal externalities, and of federal tax-transfers. Capital and labor taxes by federal and state governments finance the provision of federal and of state public consumption goods.

Results

Capital and labor taxes by federal and state governments finance the provision of federal and of state public consumption goods. When capital and labor are substitutes in production, we show (i) that the vertical fiscal externality can be reversed from negative, implying inefficiently high Nash capital taxes, to positive, implying inefficiently low Nash capital taxes and (ii) under centralized leadership the federal government replicates the second best optimum with a capital tax, and possibly, top-down transfers.

Conclusions

We show that, first, when capital and labor are substitutes in production, then, the vertical fiscal externality can be reversed from negative, implying inefficiently high Nash specific capital taxes, to positive, implying inefficiently low Nash specific capital taxes. Second, with co-sharing of tax bases and variable supplies of capital and labor, the federal government by pre-commiting to its policy achieves the unitary government's second-best optimum. Specifically, with an exogenous labor tax, when capital and labor are complements in production, then the second-best optimum is achieved with a capital subsidy and bottom-up transfers. However, when they are substitutes in production, the second-best optimum is achieved with a capital tax and possible top-down transfers.

Assessing the impact of cigarette taxation on the supply chain stakeholders' profit shares in Greece

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Abstract

Aim

Tobacco taxation is the most effective policy for reducing smoking consumption, while at the same time being a powerful tool for raising government revenue. Although the implications of smoking and the tobacco control policies have been well documented in the literature, little is known about the stakeholder analysis of tobacco industry in Greece. The present paper aims to cover this searching gap, studying the impact of cigarette taxes evolution over the period 1992-2017 on the profit shares of the three main tobacco supply chain stakeholders; Tobacco Companies (TCs) (producers and importers), Wholesalers – Distributors (WDs) and Retailers (Rs).

Methodology

This empirical analysis uses a pooled time series from 1992 through 2017 including a data set of retail prices, three tax groups levied on cigarettes (specific tax, ad valorem tax and V.A.T.) and profit share data for the three categories of stakeholders. Retail price, total tax and total profit are the first three variables tested for normality of the distribution through Kolmogorov–Smirnov Test. The independent variables are the prices and taxes, while the earnings of stakeholders constitute the dependent variables. The analysis results in regression equations explaining how any change in the Price, the Excise Tax and the V.A.T. may affect the profit shares of each category of stakeholder.

Results

Our results indicate that the tax burden on cigarettes, including both V.A.T. and excise tax, is gradually increasing during the period 1992-2017. However, the proportion of excise tax changes rapidly the last four years with the specific tax gaining double share in 2013 over the ad valorem element. In addition, the profit share of the three stakeholders is decreasing over the whole period and specifically, their shares drop by half in the last fifteen years. Regarding the data analysis, the V.A.T. increases seem to have a strong negative effect on the earnings of TCs (Coef. Value: 0,719). The profit of Retailers proves to be influenced almost equally by both the prices and all the types

of taxes as well, as regression coefficients appear nearly similar in size (0.3). Finally, no variable proves to be remarkably associated with the profit of WDs.

Conclusions

We conclude that tobacco taxation in Greece is the most prominent policy for reducing smoking prevalence but also a reliable source of revenue. Articles reviewed highlight that gains to society from an increase in cigarette tax revenue and health care dollar savings offset the potential costs borne by smokers, retailers, distributors and producers. Nevertheless, given that the most of researching efforts focus mainly on smoking taxation, there is a need for future research in the field of other tobacco control policies examining to what extend they have been actually implemented in Greece and how they have affected the tobacco industry overall.

C4. Banking and Asset Markets

Analyzing the impact of IAS 39 on the banking system's lending channel and profitability: Evidence from major European banks.

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Abstract

Aim

This paper aims to analyze the impact of the adoption of IAS 39 on the banking system's lending channel and profitability, placing the focus on major European Banks.

Methodology

The research methodology implemented is a panel data regression analysis on a sample of 490 major European banks for the time period 1999 – 2017. Data were derived using the Bankscope database and a sufficient number of observations was utilized for purposes of validity and consistency of the results.

Results

The findings highlight that, even though loans loss coverage ratio was a determinant factor for European banks' lending decisions and performance, as expressed by return on equity (RoE) and return on assets (RoA), before the regulatory regime implementation, the same impact has not been captured after its adoption. Furthermore, non-performing loans (NPLs) and provisions for loans losses (PLL) do not have an explanatory power on European banks' lending strategy and performance either before or after the implementation of the specific principle.

Conclusions

The study concludes that even though European banks' lending channel to the real economy and their reported earnings were expected to be influenced by the implementation of IAS 39, mainly on specific ratios that reflect dynamic information about loans and relevant assets' classification, the results emphasize that the impact was not the same before and after the adoption. Moreover, based on the analysis, further concerns are raised regarding the effectiveness of the recently adopted, improved version of IAS 39, the International Financial Reporting Standards 9 (IFRS

C5. Regulation and Market Outcomes

Lobbying in Europe: new firm-level evidence

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Abstract

Aim

We aim to shed some light on lobbying activities in the EU, by creating a unique firm level dataset of European firms, which draws on lobbying activity recorded by the Brussel-based Transparency Register merged with firm-level characteristics derived through AMADEUS. Through a battery of estimations we attempt to distinguish the factors that matter for a firm's decision to engage in lobbying and the firm attributes that affect lobbying intensity. Moreover, the paper looks at the effect of lobbying activities on structural reform effort by cross-referencing lobbying data at the sector level with the implementation of Country Specific Recommendations (CSRs) outlined by the European Commission.

Methodology

We gauge the determinants of lobbying by regressing lobbying expenditures on specific firm attributes such as size, employees, profitability, productivity and patents for 2000 firms in the TR. We add sector and industry fixed effects and control for non-tradable sectors to account for protection. In order to tackle selection bias we augment the sample with non-lobbying firms and use Heckman's (1979) two-step procedure as well as Tobit and Truncated regression estimators.

Results

First, more profitable firms, as measured by our profit margin indicator, in turn, seem to be inclined to assign more resources to lobbying. In line with the high correlation coefficient, also the estimates in the various regression models point to a robust positive relation. Second, firms with high productivity growth are less likely to lobby much, as indicated by the negative, but significant coefficient. Third, we account for the level of competition in a sector, by either adding a dummy for the non-tradable sector or explicitly accounting for the degree of regulation. Both the non-tradable dummy and the regulation indicator are positive and significant. This could be read as confirming the positive correlation between rather closed or protected sectors (as often the cased in non-tradable sectors) and lobbying activities of firms. In terms of innovation, the correlation coefficient suggested a positive relation between patents and lobbying activity. The results point towards a weak but positive correlation between lobbying intensity and the lack of reforms in a sector. This is true, however, except for the category of reforms in which the Commission found no progress at all.

Conclusions

We aimed to shed some light on lobbying activity in the EU, by creating a unique firm-level dataset of European firms, which draws on lobbying activity recorded by the Brussel-based Transparency Register merged with firm-level characteristics derived through Amadeus. We find that firms' lobbying activities associated to their size. Moreover, we conclude that firms from the non-tradable or higher regulated sectors tend to be more engaged in lobbying than firms from export-oriented or more competitive markets. Also firms with higher lobbying expenditure seem to have a higher profit margin and are less productive, which according to the literature indeed tend to be features of firms operating in closed or highly concentrated markets.

D1. Business, Entrepreneurship and Institutions

Doing Business in a Corrupt World: The Impact of Regulation

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Abstract

Aim

Corruption is a serious problem worldwide, especially in emerging market and frontier countries. It can impede business activity especially for small and medium-sized enterprises (SME). This study investigates the linkage between corruption and regulatory costs for starting and operating businesses for SME.

Methodology

We limited our study to 49 emerging market and frontier countries for the period 2007 to 2015. Since 2003, the World Bank has been compiling and publishing its annual *Doing Business* reports such as *Doing Business: Going Beyond Efficiency 2015* that measure the costs, procedures and requirements facing SME. In 2015, it ranked 183 countries with the highest rankings going to the economies in which it is easiest for SME to conduct business. The ranking was a simple average of the individual ranking of 10 indicators such as Starting a Business or Getting Credit. Each of these indicators, in turn, was a simple average of several components that include measures such as number of procedures and costs of regulation such as Starting a Business. Our procedure was a two-step process: 1) we regressed the corruption variable (CPI) on the nine EDB (Ease of doing Business) indicators and four control variables and then 2) regress CPI on the components of the statistically highly significant (at the 99 percent confidence level) indicators and statistically highly significant control variables from step 1.

Results

SME corruption was most prevalent for the following variables: starting a business, obtaining construction permits, registering property, paying taxes, and international trade. We also found that corruption affects SME most in countries with low GDP per-capita, high inflation, and limited press freedom. The results for Starting a Business, Construction, Registering Property, Taxes, Trade and Resolving Insolvency indicators show that SME use bribery to evade restrictions on doing business support the earlier findings. For our second step regression, we found that six of the twelve EDB components were statistically significant at the 95 percent confidence level: Time spent in Starting a Business, Costs and number of Procedures in Paying Taxes, Costs of Exports, and number of Documents and Costs of Imports. Thus, our results suggest that depending upon the indicator, corruption could be attributable to alternatively monetary cost, time involved or number of procedures. Our study suggests that these obstacles also foster corruption especially in terms of starting a business, dealing with corruption permits, registering property, paying taxes, and international trade. In investigating this issue in greater detail we found that for the highly significant indicators, both monetary cost and red tape encourage corruption. Thus this study adds to the literature finding regulation being one of several causes of corruption.

Conclusions

There appears to be ample room to reduce corruption for emerging market and frontier countries simply by improving the ease to conduct business.

FDI, Culture and Females' Education in EU Countries

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Abstract

Aim

The main aim of this paper is to examine how national culture, religion, and education shape the FDI inflows in a panel of European Union countries for the period 2000-2012. Culture, religion and human capital are considered important determinants for innovation and investments in various fields. When seeking to understand the factors that influence and promote entrepreneurship and innovation, the role of gender is gaining increasing importance. While in the past so few females held international positions, nowadays more and more females are present and successful in international positions and have achieved professional success despite the difficulties of working in international organizational contexts. Thus, recently particular attention has been devoted on the importance of education in subjects such as science, technology, engineering and math (STEM) for the promotion of innovation activity. To our knowledge, empirical evidence for this link is scarce, despite the emphasis made in the literature by policymakers on the choice of study at the tertiary level. While females have been entering STEM fields in increasing numbers, there still remain large disparities in specific sub-fields. Some of the barriers to greater female participation and innovation in STEM fields particularly engineering and computer science are socio-cultural factors, such as negative stereotypes and workplace biases. Thus, the aim of

the present paper is to examine the separate effect of culture and females' STEM education on FDI as well as their interrelationship by placing a theoretical background behind this relationship and by taking into account the economic, cultural and institutional environment and to show how the presence of tertiary graduates and tertiary graduates in STEM fields shape FDI inflows.

Methodology

In terms of education, we focus on tertiary level and Science, Technology, Engineering and Mathematics (STEM) fields; the latter is vital in the modern labor market. However, the females' graduate rate in EU is very low; thus particular attention is paid on the role of females' education in attracting FDI. By using IV estimation method for the period 2000-2012 for EU countries we end up to significant conclusions for policymakers in order to enhance EU competitiveness.

Results

The results reveal that not only tertiary education graduates but even more so tertiary graduates with STEM skills are important in attracting FDI. Moreover, the presence of high female STEM labor force is particularly an attracting feature for FDI. Finally, institutions, culture and the economic environment are important determinants in attracting FDI in EU countries.

Conclusions

In the present paper we examine the separate effect of females' education and culture on inward FDI as well as their joint effect in a sample of EU countries. Females' education can be considered as a part of a country's culture. According to our results both culture and females' graduates in STEM fields when examined separately are positively significant in the eyes of foreign investors but their joint effect seems to be negative and significant. Policymakers should pay more attention to females' education especially in STEM fields to increase the competitiveness of their countries.

D2. Economic Growth

Demand adjusted capital input and potential output in the context of U.S economic growth

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Abstract

Aim

We derive two alternative measures of demand adjusted capital input for the U.S non-farm private business sector and compare their differential impacts on the potential supply of output relative to the unadjusted index of capital services published by the Congressional Budget Office

Methodology

Congressional Budget Office (CBO) researchers estimate potential output by relying on the traditional Solow type growth accounting approach. When they reckon the flow of capital services, they postulate that the potential supply of such services is equal to their available supply, because "the potential flow of capital services will always be related to the total size of the capital stock, not to the amount currently being used." However, be this as it may, there is considerable literature establishing that the potential flow of capital services is not related to the total size of the capital stock but to that which is useable on rational entrepreneurial grounds. In this paper we have relied on this conceptualization to introduce into the estimations of potential output demand side considerations via the utilization rate.

Results

The results show that, allowing for the demand pressure on the fixed assets of firms, leads to three effects. It raises the level of estimated potential output well above CBO's estimates; with the exception of the 1990s, the estimated growth rates turn out to be higher than those computed by CBO; and, lastly, the long term trend of the growth rates with and without the demand adjustment to the capital input is sloping downwards. The latter finding was not unexpected since aggregate demand, as reflected in the utilization rate of fixed assets by firms, has been trending downwards throughout the postwar period.

Conclusions

Drawing on these findings we conclude that the path to secular stagnation that the U.S. economy is following in the postwar period is not due solely to headwinds on the supply side. To some degree, perhaps significant, the deceleration in the expansion of

productive capacity as well as in the intensity of its utilization is due to the declining long term trend in aggregate demand. So it is high time that research economists turn their attention to confront the headwinds that beset this side of the puzzle. For it is certain that several of the headwinds, like, for example, the widening of the inequality in the distribution of income, the worsening balance in the fronts of energy and the environment, and the burgeoning ratio of public and private Debt to Gross National Product, which are mentioned frequently as impediments on the supply side, have also economic growth decelerating ramifications on the demand side.

Leisure Externalities, Routinization and Labor Productivity in an Endogenous Growth Model

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Abstract

Aim

In this paper we try to investigate the possible positive or negative externalities of leisure time on labor productivity depending on the level of routinization.

Methodology

We construct a growth model with endogenous R&D investment and human capital similar to Romer (1990) where we endogenize labor supply and we add leisure externalities in the production of innovation activity. Then we check empirically by using smooth coefficient semi parametric econometric methods if the effect of leisure on the gdp per capita growth differs on the level of routinization.

Results

The results from the theoretical model suggest that the leisure time can enhance the labor productivity if the production sector is more routinized for the same level of human capital skills by the workers. The OLS results are mispecified in comparison to a more flexible semi parametric econometric methods. However, both of the econometric methods verify our main conclusions and we have robust results by including different control variables.

Conclusions

Recent findings in the literature of labor economics consider that less working hours lead into higher labor productivity. We consider that the working environment of different types of jobs (research oriented vs no-research oriented) varies in the level of routinization. Moreover, if the level of routinization is high in a working environment, it is expected a reduced labor productivity. Under the existence of the previous assumption, the leisure time can be either beneficial or not beneficial for labor productivity and growth. We construct a model with the above assumptions and empirically our idea is supported.

D3. Financial and Institutional Frictions

Monetary policy with asymmetries in the asset markets participation, counter-cyclical fiscal policy and «non-atomistic» wage setters

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Abstract

Aim

The purpose of the paper is to study the monetary policy implications of unionized labor markets and asymmetries in the asset market participation

Methodology

We calibrate and simulate the typical_New Keynesian model, augmented with asymmetries in the asset markets participation and counter-cyclical fiscal policy.

Results

We show that the concern of «non-atomistic» wage setters for their members that cannot smooth consumption, the political exchange between government and unions (in the form of «Social Pacts») and the ability of monetary policy to activate fiscal policy, lead to the following results: i) the determinacy regions may be dependent on the incentive to moderate wage claims, and hence on institutional parameters, and ii) the monetary authority's policy trade-off between the variability of inflation and the output gap, induced by cost-push shocks, is endogenized and hence contingent on the distortions in labor and asset markets and the degree of fiscal policy counter-cyclicality. Most importantly, in our framework, this trade-off is improved, relative to an economy with «atomistic» wage setters and when counter-cyclical fiscal policy is aggressive.

Conclusions

These findings suggest the stabilisation role of the institutions, when the monetary authority is unable to commit to future policies.

D4. Transition Economies

The Term Spread as Economic Indicator for Transition Economies: Case of Georgia

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Abstract

Aim.

In Georgia, the banking sector plays an important and dominant role in the financial sector, especially with respect to mobilization of savings and provision of credit. The article shortly explains how the term spread might predict future economic activity.

This paper analyses some aspects of dynamics of the spread between short and long-term interest rates in countries with transition economies

Methodology.

The role of financial sector in supporting economic growth and development is well acknowledged. The term spread (the difference between the yields on long-term and short-term Treasury securities) has been found useful for predicting economic variables as output growth, inflation, industrial production, consumption. The term spread is one of leading economic indicator according NBER methodology. Leading economic indicators are widely used in forecasting of economic activity. Many empirical studies find that the term spread predicts future economic activity. There is no universally theory as to why a relationship between the term spread and economic activity should be positive or negative. The evidence on the accuracy of the term spread in predicting economic activity comes from the estimation of linear model.

Results.

The research paper analyses term spread dynamics in Georgia and compare it with post-communist countries and transition economies spread dynamics. We based on statistical data of spread and GDP in Georgia and built regression model.

Concussions.

Our results suggest that the term spread has been useful for forecasting cumulative real GDP growth.

TIONAL INNOVATIVE SYSTEMS OF GEORGIA AND WORLD EXPERIENCE

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Abstract

Aim.

The article discusses the formation of the national innovative systems and factors influencing them. Are highlighted those signs of general national systems characteristic to them as interactive blocks. In particular creative block, technology transfer block, production block and staff training block. The state of innovation development of Georgia is highlighted and the transition to the model of the system that is most relevant to its level of development is proposed.

Methodology

While national innovation systems differ significantly from each other, they have common signs, which include a combination of interactive blocks. These blocks are: creative block, technology transfer block, production block and staff training block.

The creative block is often called the Knowledge Block, which includes universities, scientific institutes, social networks, which provide informal interaction of researchers from different institutions and universities.

Results

In order to achieve innovation policy in the country real actions of the government is necessary, namely the recognition of the innovative development of the country as a priority and create a favorable environment for that. It is noteworthy that the idea on innovative development of Georgia is different. Mainly, two types of strategy are underlined. One of them implies transformation of Georgia into a developed country by 2030; The second strategy, on the basis of world experience, implies the moderate and gradual development of Georgia. We adhere to the second strategy, since the implementation of the first strategy, in a short period, almost all the countries failed.

Concussions.

The overseas experience of the formation of different types of national innovations suggests that in most countries today, they are looking forward to innovative development and are thus choosing a model of a national innovation system that is most relevant and capable of their economy. In addition, the selection of a specific model should be determined by the level of education and science of the country's economic development.

E1. Microeconomics and IO

Disclosure Regime & Bargaining in Vertical Markets

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Abstract

Aim

The objective of this paper is to endogenize the disclosure regime of vertical contract terms (i.e. observability or secrecy of the contract terms between an upstream supplier and a downstream retailer), and consider the possible strategic implications of this decision. Thus far, this decision is exogenously imposed in the relevant literature.

Methodology

We use a dynamic multi-stage game and Nash-in-Nash solution concept along with backward induction. We assume consumers having a linear demand, constant returns to scale and a single upstream monopolist acting as a supplier of two downstream retailers. In Stage 1, all three market participants decide whether to sign a non-disclosure agreement (NDA) or not. For a contract to be secret, both members of the bargain pair must sign the NDA. For a contract to be observable, at least one member of the bargain pair must deny signing the NDA. In Stage 2 the vertical chain bargains over the trade terms. We assume two-part tariff contracts and we use an asymmetric generalized Nash bargain product to model the bargain. In Stage 3, downstream retailers decide their output (Cournot style oligopolistic competition).

Results

By endogenizing the choice of the disclosure regime we show that no matter what is (i)the mode of the downstream competition (Cournot or Bertrand), or (ii)the horizontal differentiation of the product, or (iii)the type of the contracts used (non-linear or linear), a common upstream supplier will not convince the retailers to keep their contracts secret. On the contrary, a dedicated upstream supplier will convince his exclusive retailer to use secret contracts in order to gain market shares. Social welfare follows the

exact opposite pattern, so a policymaker should consider enhancing the observability of the terms of the vertical contract in any possible case except the case of Bertrand competition downstream, where he should enhance secrecy of contract terms.

Conclusions

The disclosure regime of vertical contract terms is too important to be exogenously imposed. It should be part of the bargain between the members of the vertical chain. In most of the cases, the upstream suppliers have motives to keep the contract terms secret, while the opposite holds for the downstream retailers. A policymaker should consider the mode of the downstream competition before he enforces a disclosure regime because observability does not always maximize social welfare.

Does Personal Data Security Matter for the Adoption of ISO 9000 certification and Firm Performance?

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Abstract

Aim

The rapid development in information technology combined with the urge of firms to gain competitive advantage in the demanding global market environment facilitate the collection and processing of increasingly high volumes of personal data. The data protection legislation makes demanding provisions for the protection and secure processing of personal data especially with the introduction of the General Data Protection Regulation (EE) 697/2016 as the main common legal framework directly applicable to all EU member states. This is intensified by the important changes introduced in the 2008 version of the ISO 9000 International Quality Management

Standard where the quality management requirements are extended to include personal data. This study aims to explore a) the relationship between ISO 9000 certification and personal data security and b) whether the impact of the ISO 9000 certification on firm performance is affected by the level of personal data security.

Methodology

To investigate the above research questions, two approaches were considered the Structural Equation Modeling and the Difference-in-Differences econometric modeling. The former approach is used for the specification of the measurement model and the hypothesized structural model. This approach is also used for the estimation of the above models using items about the personal data security measures adopted by the 96 firms listed at Athens Stock Exchange which completed the administered questionnaire. The later approach is used to assess financial performance differences between ISO 9000 certified and non-certified firms considering the level of personal data security achieved by the above firms.

Results

The empirical findings indicate that the ISO 9000 certification has a positive effect on the secure processing of personal data. Certified firms are more likely to adopt measures for the secure protection of personal data relative to the non-certified. Moreover, the empirical evidence suggests that the impact of the ISO 9000 certification on the firm's financial performance is affected by the level of personal data security. Certified firms which achieve personal data security above the average level, exhibit higher market value relative to the non-certified with the same level of personal data security. Also, achieving personal data security above the average level is related with an increase in the market value of certified firms in comparison to the certified ones with personal data security below the average level.

Conclusions

The empirical findings provide useful insights to managers and other stakeholders regarding the impact of the widely adopted ISO 9000 on firm's important statutory obligations as the secure processing of personal data, which has implications for the advantages of the ISO 9000 certification on firm performance.

E2. Policies and Empirical Evidence

The interplay between bank credit terms and conditions and the business cycle in the Euro-area: A note

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Abstract

Aim

We explore the trajectory of bank loan Terms and Conditions over the business cycle.

Methodology

By employing the Christiano-Fitzgerald filter on the logarithmic transformation of real GDP, we decompose it into its long-run (trend) and short-run (cyclical) components. Then we investigate whether these two components have any impact on senior bank loan officers' decisions regarding the bank loan Terms and Conditions they set.

Results

We find that deterioration of each business cycle component leads to a significant tightening of credit terms and conditions. We found mixed results concerning the symmetry of impacts of the short and long run components. Symmetry was found between the terms and conditions on loans for small vs. large enterprises.

Conclusions

With respect to previous empirical studies, this study tries to investigate the behavior of the European bank loan T&Cs over the business cycle for the period 2009H1-2016H1. Our analysis produced three main findings: First that both short and long run expansionary (contractionary) phases lead to eased (tighten) bank loan T&Cs, implying that banks behave procyclically. Secondly, we found that there are mixed results regarding the symmetry of impacts of the cyclical and the long run components on T&Cs and finally that there is uniformity across firm sizes of the cyclical and long run impacts on T&Cs.

E3. Financial Economics II

Diversification, Integration and Cryptocurrency Market

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Abstract

Aim

One possible explanation for investors' interest in cryptocurrencies is their alleged diversification benefits. We revisit this question while our main contribution is that we construct optimal portfolios and assess their performance in a non-parametric way. We manage to do so by employing a stochastic dominance (SD) approach.

Methodology

We conduct our analysis both in- and out-of-sample by constructing and comparing optimal portfolios derived from two respective asset universes: one that includes only the traditional asset classes (equities, bonds and cash) and one that is augmented with cryptocurrencies. We employ the S&P 500 Total Return Index, the Barclays U.S. Aggregate Bond Index and the one-month Libor rate to proxy the traditional asset universe. We also use prices for four cryptocurrencies: Bitcoin, Ethereum, Ripple and Litecoin.

We use the Arvanitis et al. (2017) stochastic spanning methodology to test whether a portfolio set originating from a traditional asset universe spans the same set augmented with cryptocurrencies. Our focus is on the most common SD criterion of second-order. In the out-of-sample analysis, at any point in time we construct optimal portfolios based separately on an asset universe comprising traditional asset classes and on an asset universe augmented with cryptocurrencies, in a rolling window fashion. We compare the real performance of these portfolios using the Davidson and Duclos (2013) non-parametric SD test, as well as parametric performance measures.

In order to establish whether cryptocurrency markets are segmented from equity and bond markets we use the approach of Cambell and Hamao (1992). We obtain data on a

set of variables documented to forecast returns in equity and bond markets: the dividend yield, the default spread, the term spread, the money supply growth and the growth in the Baltic Dry Index.

Results

In the in-sample analysis, we find that the portfolios based on the traditional investment opportunity set do not span the corresponding portfolio strategies that include cryptocurrencies. The results indicate that the performance of traditional portfolios can be improved by including cryptocurrencies. Thus, some risk averse investors could benefit from the augmentation. In the out-of-sample analysis, we find that the expanded investment universe with cryptocurrencies empirically dominates the traditional investment universe, making the investor better off, w.r.t. to all the aforementioned performance criteria. Finally, we find that cryptocurrency markets are segmented from equity and bond markets and exhibit characteristics of a unique asset class.

Conclusions

To expand the analysis of cryptocurrencies as assets, we have adopted a SD approach. In an empirical application we test whether a portfolio set originating from a traditional asset universe spans the same set augmented with cryptocurrencies. The main contribution of this paper is the statistical finding that, both in-sample and out-of-sample, the augmented portfolio with cryptocurrencies could be a good option for some risk averse investors to help diversify their portfolio risks.

E4. Topics in Macroeconomics

Title of Paper

Labor market frictions and TFP: are there threshold effects?

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Abstract

Aim

Though there is abundant evidence on how employment protection affects the labor market, there is much ambiguity about how labor frictions affect total factor productivity of a country. This paper aims at analyzing how specific labor market imperfections impact on total factor productivity growth of a country shifting the interest on the potential existence of threshold effects

Methodology

We aspire to shed some new light on this topic by applying the Hansen threshold effects analysis, allowing for heterogeneous effects along the spectrum of labour deregulation within countries. Our analysis covers a more recent period starting in 2000 up to 2015 when significant labour market reforms have been proposed and undertaken. Moreover, most studies focus on developed economies; we rather investigate the impact of labour market flexibility both in developed and developing countries as the latter show growing exposure to international market forces. Finally, we examine total labour market regulations and two specific labour market frictions: hiring and firing regulations and centralized collective bargaining in order to identify differentiations.

Results

For the total regulation index we find the presence of one threshold in the relationship for the developed group and two threshold levels for the developing group of countries. Looking at the developed group results we see that there is a significant relationship between labor regulations and TFP growth only below the threshold level. In highly de-regulated environments the effect of labor regulations on TFP is insignificant. So, further de-regulation of the labor market will have no effect on the productivity growth of the growth. The effect below the threshold appears positive and significant. In this area, further liberalization of the labor market will increase the productivity growth of a country

For the developing group the relationship is described by two threshold levels. The first split is at 4.37. We observe that below the 4.37 level no significant relationship

exist between labor regulations and productivity growth. Above the threshold we observe an overall positive and significant relationship. Within the area above 4.37, another threshold level emerges at index 5.36. Below the second threshold we observe a negative and significant relationship, while above it the effect is positive and significant. This suggests that in the area between 4.37 and 5.36 of the index, further deregulation causes a decrease in the productivity growth of the country. Above 5.36 the effect is beneficial for productivity. Breaking total regulation into hiring and firing regulations and then for centralized collective bargaining gives different results.

In the developed group hiring and firing deregulations has no effect on the productivity of the country and no threshold exist. The TR model for the developing group shows a positive and significant relationship both below and above the threshold level. Below the threshold the effect is 0.061 while above is 0.019, suggesting that deregulating in highly regulated environments (index low) will have a larger impact on productivity growth. Generally, we see that more flexible hiring and firing laws will have a positive effect on TFP growth.

No threshold effects appear for centralized collective bargaining. The linear results suggest that liberalization of centralized collective bargaining will cause an increase in productivity growth only in the developing group of countries. No effect in the developed one.

Conclusions

Based on the results deregulating labor in general will not always have the same impact on the TFP growth of a country. The effect will depend on the labor regulation sub-index (category) under investigation as well as whether the country is developed or developing. Careful, planning is needed before proceeding with deregulating since the impact appears to vary and also threshold effects exist in the relationship.

E5. Environmental Economics

Title of Paper

The Dual Nature of the Ship Recycling Industry: Land-based industry and Integral part of shipping.

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Abstract

Aim

The ship-recycling industry is an important component of the shipping industry; it serves as a driving force in reinstating equilibrium in the supply and demand for vessels. During the last decade, the ship-recycling industry has been booming and is at the focus of attention of researchers and practitioners due to its dual nature; it is both a land-based industry but also an integral part of shipping.

The purpose of this study is to investigate the mechanism of interdependence between the demolition or scarp price and the shipping sector in all of its segments: dry-bulk, tankers and containers**.**

Methodology

We deploy VECM(Vector Error Correction Models), following cointegration testing, in each segment of the shipping sector and investigate: a)the determinants of scrap price using variables independent of the shipping sector and b) the interdependence between scrap price, earnings and the fleet size in each market, that is in the dry-bulk, the tankers, and the containers.

Results

We find that international steel scrap prices explain to some extent scrap prices, but crude oil prices and the price of nickel have an even higher positive explanatory power on them. We attribute our findings to the economic nature of the major ship-breaking countries: they are all developing economies, heavily relying on oil as well as nickel.

Further, we establish interdependence in each shipping segment between the price of scrap, earnings and the fleet size. Specifically, we show that the scrap or demolition

price contributes in the determination of earnings in the shipping sector, given that it is an integral part of the ship valuation process (on the part of revenues). Also, the price of scrap as an economic magnitude, balances out supply and demand conditions by contributing to the adjustment of the fleet.

Conclusions

One of the strongest results of our paper is the finding that the interdependence between scrap prices, earnings and the size of the fleet is strong when the demolition price,is determined by Bangladesh or Pakistan, economies which consistently escape ILO regulations in dismantling a ship, where if the average Chinese or Indian price is used the interdependence breaks(both countries have gone far in applying regulations of ILO).Bangladesh and Pakistan account for over 60% of total gross tonnage of demolished ships.

International Environmental Agreements – The Impact of Heterogeneity Among Countries on Stability

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Abstract

Aim

We examine the stability of self-enforcing International Environmental Agreements (IEAs) among heterogeneous countries in a two-stage emission game. In the first stage each country decides whether or not to join the agreement, while in the second stage the quantity of emissions is chosen by all countries. The model utilizes quadratic benefit and environmental damage functions of emissions. Each country's benefit function depends on its own emissions while its environmental damage function depends on the global emission level. The main purpose of our study is to relax the, widely used in the

literature, assumption of symmetry among countries and use this framework to examine the existence and stability of environmental agreements.

Methodology

We assume that the countries which decide to participate in an agreement (called signatories), form a coalition and behave cooperatively by maximizing its joint welfare. At the same time, individual outsiders (called non-signatories) compete in a non-cooperative way by maximizing their own welfare functions. We examine the case where all countries (members or non-members of the agreement) react to climate change by choosing simultaneously their emission levels (Cournot approach). Regarding heterogeneity, we introduce any type of countries differing in their benefits and costs due to the global pollutant. To determine the stability of an agreement, we use the internal and external stability conditions as proposed by D' Aspremont et al. (1983). In their setting, an agreement is considered self-enforcing if no signatory country has an incentive to leave the agreement (internal stability) and if no non-signatory country has an incentive to further participate in the agreement (external stability), taking the membership decisions of all other countries as given.

Results

Results show that, even though we assume heterogeneous countries, the size of stable coalitions attempting to mitigate environmental problems remains small. That is, the introduction of heterogeneity does not yield larger stable coalitions. In particular, we show that the maximum coalition consists only of two members. Moreover, we prove that coalitions that are stable under symmetry may become unstable when asymmetry is introduced.

Conclusions

Therefore, the assumption of homogeneity is not the determining factor driving the pessimistic result of very small agreements.