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Editors: António Afonso, Isabel Proença, Joana Pais

<https://rem.rc.iseg.ulisboa.pt/>

Contacts: Phone: +351 213 925 912. e-mail: rem@iseg.ulisboa.pt

Dear subscriber,

We hope this message finds you well despite the difficult situation that we are all facing. **REM** would like to wish you and your family a very happy, joyous and safe holiday season and a prosperous New Year. **António, Isabel, Joana, Sandra, Andreyana, Olaf.**



The Latest REM [Working Papers](#)

The center of [Research in Economics and Mathematics \(REM\)](#) circulates research, notably by its affiliated members, as working papers intended for professional and public discussion and comment. The papers have not been peer reviewed.

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Events

For your 2021 calendar:

[9th UECE Conference on Economic and Financial Adjustments](#), ISEG/UL – Lisbon School of Economics and Management/University of Lisbon, **July 30, 2021**. Submissions until **15 June 2021**, to rem@iseg.ulisboa.pt

INFER 2021, 23rd Annual Conference, ISEG/UL – Lisbon School of Economics and Management/University of Lisbon, **September 8-10, 2021**. Submissions until **31 July 2021**, via Conference Maker: <https://editorialexpress.com/conference/INFER2021>.

REM Working Papers

[The Interplay between Monetary and Fiscal Policies in the EU](#), António Afonso, Alexandre Sousa, *Working Paper 0153-2020*

We study the interactions between monetary and fiscal policies in the EU countries, for the period 1995-2019. Our results show notably that: i) the inflation rate has a relevant impact over the central banks' decision making; ii) the cyclically adjusted primary balance reacts positively to increases in the level of government debt; iii) monetary policy reaction functions do not seem to take into consideration the cyclically adjusted primary balance; iv) fiscal policy, via the cyclically adjusted primary balance, seem to be affected by the short-term interest rate in a negative way. The global economic and financial crisis impacted negatively both the short-term nominal interest rates and the cyclically adjusted primary balance, however with a higher degree in the euro area.

[Post-Cartel Behavior: assessing the effects of antitrust policy on Brazilian fuel market](#), Pedro Cavalcanti G. Ferreira, *Working Paper 0152-2020*

Papers assessing the antitrust effect on cartel cases usually take the form of a quantifying approach, measuring the impact on prices with methods like before-and-after dummy regressions, difference-in-difference, or synthetic controls designs. However, these approaches have some downsides (notably, the requirement of establishing an exogenous date or breakthrough event, based on assumptions that may not be accurate). To overcome this weakness, we applied Structural Break Analysis (Bai and Perron Test) and Markov Switching Regressions to four cases in the Brazilian fuel market (Brasília, Belo Horizonte, São Luís and Londrina) to analyze the effectiveness of competition policies. As a comparative test between MSR and Bai Perron procedures, our paper shows that the former was more sensible to transitions between regimes, without missing breaks, and exhibited precise results. From the point of view of the antitrust policy evaluation, our findings indicate a low capacity of the antitrust authorities to extinguish price-fixing practices in targeted markets.

[On the Political Economy Determinants of Tax Reforms: Evidence from Developing Countries](#), Sanjeev Gupta, João Tovar Jalles, *Working Paper 0151-2020*

This paper analyzes the role of political variables in the implementation of structural tax reforms in 45 emerging market and low-income economies during 2000-2015. The existing literature identifies several hypotheses that drive reforms, but empirical studies that support these hypotheses are lacking. Relying on a new database of structural tax reforms and on binary-type models, our results suggest that a left-wing government is less inclined to implement tax reforms while both proximity to elections and political strength or cohesion are positively associated with tax reforms. The influence of the left government is stronger in low-income than in emerging market economies and revenue administration reforms are resisted the most by such governments. Proximity to elections seems to trigger reforms of personal income tax (PIT) but opposite holds for trade tax reforms. Political cohesion is a necessary ingredient to reform most tax categories and revenue administration.

[Uncertainty and the Effectiveness of Fiscal Policy in the United States and Brazil: SVAR Approach](#),

Eduardo de Sá Fortes Leitão Rodrigues, *Working Paper 0150-2020*

This paper analyses the harmful interference of uncertainty on the effectiveness of fiscal policy. We investigate this issue through the lens of a Structural Vector Auto Regressive (SVAR) model for the United States and Brazil. Imposing government spending shocks, we find a positive effect on economic activity. The results suggest Keynesian effects on consumption and GDP. To assess the effects of uncertainty, we used the Economic Policy Uncertainty Index (EPU) and the World Uncertainty Index (WUI). Our findings indicate that the fiscal effects are considerably less intense when uncertainty reaches high levels, consistently with the Real Options approach. The results suggest that agents are more cautious when the high uncertainty overshadows the outline of the economic scenario. In this sense, uncertainty disturbs agents' decisions and decreases consumption, investment and economic activity.

[Reinsurance of multiple risks with generic dependence structures](#), M. Guerra, A.B. de Moura, *Working Paper 0149-2020*

We consider the optimal reinsurance problem from the point of view of a direct insurer owning several dependent risks, assuming a maximal expected utility criterion and independent negotiation of reinsurance for each risk. Without any particular hypothesis on the dependency structure, we show that optimal treaties exist in a class of independent randomized contracts. We derive optimality conditions and show that under mild assumptions the optimal contracts are of classical (non-randomized) type. A specific form of the optimality conditions applies in that case. We illustrate the results with some numerical examples.

[Public Debt and Economic Growth in Brazil](#), António Afonso, Sérgio Gadelha, Agatha Silva, *Working Paper 0148-2020*

This paper provides new insights on the relationship between public debt and economic growth in Brazil. We used Granger causality tests, in multivariate and bivariate analyses using respectively VEC and ARDL methodologies, and monthly data over the period 1998:1-2019:11. We find that: i) debt-to-GDP and GDP growth rate have a bi-directional Granger causality relationship; ii) debt can improve growth in the short run and becomes harmful in the long run; iii) GDP growth always reduces debt, both in the short and long run; iv) the dynamic between debt and growth in the long run is influenced by the inflation rate, exchange rate and the Emerging Markets Bond Index Plus(Embi+).

[Government Spending Efficiency, Measurement and Applications: a Cross-country Efficiency Dataset](#),

António Afonso, João Tovar Jalles, Ana Venâncio, *Working Paper 0147-2020*

This chapter conducts a review of the literature dealing with overall public sector performance and efficiency, it defines a methodology to assess public sector efficiency and it creates a novel and large cross-sectional panel dataset of government indicators and public sector efficiency scores. The focus is on a balanced sample covering all 36 OECD countries over the time period between 2006 and 2017. First, we define a set of economic and sociodemographic metrics necessary to construct performance composite indicators. Second, we calculate and report a full set of (input and output oriented) efficiency scores based on the performance indicators previously computed.

[Structural Tax Reforms and Public Spending Efficiency](#), António Afonso, João Tovar Jalles, Ana Venâncio, *Working Paper 0146-2020*

We evaluate the effects of structural tax reforms on government spending efficiency in a sample of OECD economies over the period 2007-2016. After calculating input spending efficiency scores, we assess the

relevance for efficiency of narrative tax changes in a panel setup. We find that: i) input efficiency scores average around 0.6-07; ii) increases in the tax rates are reflected in falling public sector efficiency; iii) such negative effect is significant for PIT and VAT; iv) controlling for endogeneity, increases in tax rates are still associated with lower public sector efficiency, mainly in PIT; v) increasing tax bases for PIT and VAT improve public sector efficiency; vi) in economic expansion periods, increasing CIT base and reducing PIT rates, positively affect public sector efficiency; ix) in recessions, efficiency improves when PIT and VAT bases increase and CIT rate increases.

[Evolução das assimetrias na produção de conhecimento científico e tecnológico a nível global: análise com enfoque nas trajetórias de Brasil e Portugal](#), Manuel Mira Godinho, *Working Paper 0145-2020*

Este artigo avalia se o crescimento da produção científica e tecnológica a nível mundial tem ocorrido homogeneamente ou se ocorrem cenários de “convergência” ou “divergência”. São observados os casos de Brasil e Portugal, situando-se sua evolução no panorama global. Para o período 1996-2018 concluiu-se que apesar de a nível global se registar um padrão de diminuição da divergência relativa tanto na publicação científica como no conhecimento tecnológico, o distanciamento absoluto entre os diferentes países tem aumentado. Em relação a Brasil e Portugal, observa-se que ambos apresentam uma dinâmica superior na produção de conhecimento científico que no tecnológico, embora seguindo trajetórias distintas.