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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 The papers have not been peer reviewed.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

8th UECE Conference on Economic and Financial Adjustments, ISEG/UL – School of Economics and Management / University of Lisbon, Lisbon, 27th November 2020.

REM Working Papers

This Changes Everything: Climate Shocks a Investment Home Bias in the European Union, António Martins, *Working Paper 0140-2020*

The creation of the European Single Market (ESM) and the adoption of the Euro eliminated barriers for capital mobility. This paper analysis the dependency of investment on domestic savings across European Union (EU) economies over three different time frames split by major milestones in the economic history of the union. Using a panel error correction model, I find evidence of low capital mobility before the creation of the ESM and after the crisis of 2008, suggesting that a solvency constraint can bind investment to domestic savings even when barriers for capital mobility are eliminated. The estimates suggest that there is a long-run relationship between the aforementioned aggregates associated with a solvency constraint. However, this constraint does not appear to be binding between 1993 and 2007, matching with an increased spread in the current account balances between high and low income economies among the EU. Between 2007 and 2020, restrictions on borrowing faced by some EU economies reduced capital mobility, despite the absence of capital controls and exchange rate risk.

Fiscal Discipline and Exchange Rates: Does Politics Matter? , João Tovar Jalles, Carlos Mulas-Granados, José Tavares, *Working Paper 0139-2020*

We look at the effect of exchange rate regimes on fiscal discipline, taking into account the effect of underlying political conditions. We present a model where strong politics (defined as policymakers facing longer political horizon and higher cohesion) are associated with better fiscal performance, but fixed exchange rates may revert this result and lead to less fiscal discipline. We confirm these hypotheses through regression analysis performed on a panel sample covering 79 countries from 1975 to 2012. Our empirical results also show that the positive effect of strong politics on fiscal discipline is not enough to counter the negative impact of being at/moving to fixed exchange rates. Our results are robust to a number of sensitivity checks, including the use of different estimators, alternative proxies for fiscal discipline and sub-sample analysis.

Dream Jobs, Giordano Mion, Luca David Opromolla, Gianmarco I.P. Ottaviano, *Working Paper 0138-2020*

Understanding why certain jobs are 'better' than others and what implications they have for a worker's career is clearly an important but still relatively unexplored question. We provide both a theoretical framework and a number of empirical results that help distinguishing 'good' from 'bad' jobs in terms of their impact on a worker's lifetime wage income profile through wage jumps occurring upon changing job ('static effects') or through increases in the wage growth rate ('dynamic effects'). We find that the distinction between internationally active firms and domestic firms is a meaningful empirical dividing line between employers providing 'good' and 'bad' jobs. First, in internationally active firms the experience-wage profile is much steeper than in domestic firms, especially for managers as opposed to blue-collar workers. Second, the higher lifetime wage income for managers in internationally active firms relies on the stronger accumulation of experience that these firms allow for and on the (almost) perfect portability of the accumulated dynamic wage gains to other firms. Static effects are instead much more important for blue-collar workers. Finally, the distinction between internationally active and domestic firms is relevant also at a more aggregate level to explain cross-sectional differences in wages among workers and spatial differences in average wages across regions within a country.

Tax Revenue Reforms and Income Distribution in Developing Countries, Sanjeev Gupta, João Tovar Jalles, *Working Paper 0137-2020*

We explore the impact of major revenue mobilization episodes on income distribution dynamics using a new "narrative" database of major policy changes in tax and revenue administration systems, covering 45 emerging and low-income countries from 2000 to 2015. Our main finding is that after a tax reform (particularly those affecting the personal income or the operation of the revenue administration), the Gini index falls and the bottom income share rises. This result does not hold for sub-Saharan Africa, calling into question the design of tax reforms implemented in the region (mostly fragile states in the sample). In general, to reduce more rapidly income inequality (and improve the income prospects of the poorest strata of the population), it would be more effective to implement tax reforms when the economy is growing relatively slowly. Finally, the smaller the government and the smaller the tax system, the larger the beneficial impact of tax reforms on income distribution. Our results are robust to a battery of sensitivity and robustness tests.

Time Inhomogeneous Multivariate Markov Chains: Detecting and Testing Multiple Structural Breaks Occurring at Unknown, Bruno Damásio, João Nicolau, *Working Paper 0136-2020*

Markov chains models are used in several applications and different areas of study. Usually a Markov chain model is assumed to be homogeneous in the sense that the transition probabilities are time invariant. Yet, ignoring the inhomogeneous nature of a stochastic process by disregarding the presence of structural breaks can lead to misleading conclusions. Several methodologies are currently proposed for detecting structural breaks in a Markov chain, however, these methods have some limitations, namely they can only test directly for the presence of a single structural break. This paper proposes a new methodology for detecting and testing the presence multiple structural breaks in a Markov chain occurring at unknown dates.

Measuring inequality of opportunity across EU-SILC countries: national and urban-rural perspectives, Zbigniew Mogila, Patricia C. Melo, José M. Gaspar, *Working Paper 0135-2020*

Inequality in individuals' outcomes resulting from unequal access to opportunities due to differences in individual circumstances, such as family background and/or race, are generally considered to be unfair and ethically unacceptable. Since wealthier individuals and their families tend to live in more affluent areas and mingle with similar more affluent peers, the territorial distribution of inequality of opportunity may partially be viewed as a measure of the extent of spatial (in)justice. One of the ways governments can use to mitigate inequality of opportunity is to improve access to socially valued resources, e.g. education, health. If the spatial distribution of these resources is not equitable, or prevents equitable access to them, persistent or even growing differences in inequality of opportunity may arise. Improving the spatial distribution of socially valued resources can help individuals enhance their socioeconomic prospects, while also increasing the full utilization of territorial capital and, consequently, contribute to greater socioeconomic cohesion. This paper measures the extent of inequality of opportunity at the national level and by degree of urbanization for the countries covered in the survey European Union Statistics on Income and Living Conditions (EU-SILC). Emphasis on the degree of urbanization allows exploring whether large(r) cities can act as social elevators compared to smaller urban and rural areas. Using the EUSILC data, we implement regression models to measure the percentage of the variation in individual's labour income that is due to family background, namely, the education, occupation and activity status of parents, and household financial situation. Our results indicate substantial variation in inequality of opportunity ranging from 4% (Iceland) to 25% (Luxemburg). In addition, the distinction between more liberal economies and the rest of the countries is seen with the former more income unequal, however, with the smaller impact of family-related factors on individual's income. Moreover, the findings suggest that cities, especially larger ones, do not seem to work as social elevators and may in fact benefit individuals with a better family background.

Exploring the relation between income mobility and inequality at the regional level using EU-SILC microdata, Zbigniew Mogila , Patricia C. Melo, José M. Gaspar, *Working Paper 0134-2020*

This paper investigates empirically the impact of labour-related income inequality on income mobility in French and Spanish NUTS2 regions. We explore whether the negative relation between income inequality and mobility - known as the Great Gatsby Curve - is also present in the short and medium run. Using longitudinal microdata from the EU-SILC, we construct NUTS2-level measures of relative income mobility from transition matrices between income deciles for 2-year and 4-year income trajectories and measures of income inequality based on the Gini index and inter-decile ratios. We then combine these measures with other regional-level factors and implement regression models to test the relation between income inequality and income mobility. The regional perspective allows us to investigate the extent to which territorial heterogeneity may also affect income mobility. The findings from the regression analyses do not provide evidence of a significant relationship between income mobility and income inequality, at least when considering mobility over the short-to-medium term (i.e. up to 4 years).

Explaining higher education progress through risk dominance in an n-person coordination (Stag Hunt) game, José Pedro Pontes, *Working Paper 0133-2020*

In this paper, we use HARSANYI and SELTEN (1988)'s risk dominance concept to explain the growth in the Portuguese higher education system during two time periods: 1998 - 2005 and 2005-2018. During the first time period, the high annual growth rate in tertiary schooling (8.2%) can be accounted for by a n – person, k – coordination Stag Hunt game framework. Hence, the progress in university education can be described as the outcome of a noncooperative game, where youngsters and their families can take decisions without needing to communicate previously. By contrast, during 2005-2018, the former coordination game seems inadequate to rationalize the continued progress in college schooling at an annual rate of 5%, since the wage premium of tertiary education fell drastically (more than 20%) during the same interval. Hence, we switch to an "unanimity" game as framework of analysis. Within such a game, the widespread tertiary enrolment can be accounted for a diminishing "unanimity" requirement, derived from a shrinking demography and the sheer cumulative effect of past spread of college education. We apply here NASH (1950, 1953)'s intuition that the selection of an equilibrium point within an unanimity game is a tool for modelling the outcome of a game, where the players discuss in order to reach an agreement. Hence, we can describe the rise in college education in Portugal in the more recent time period as the outcome of a cooperative process, leading to a wide policy consensus.