

SPILLOVERS



BANCO DE PORTUGAL
EUROSYSTEM

Research in Economics at Banco de Portugal • Biannual • Year V • Spring 2017

Overview

On the 21st November 2016, Banco de Portugal (BdP) organized the 8th Conference *Desenvolvimento Económico Português no Espaço Europeu* (Portuguese Economic Development in Europe). The aim of this periodic event is to promote the reflection on the Portuguese economy – and more concretely for this last conference – on the challenges that Portugal faces, both in terms of the economic adjustment to the crisis which is still underway, and in terms of the ability to grow at higher rates than the pre-crisis ones.

The first part of the conference was dedicated to an open discussion of some of the most relevant issues that Europe faces these days, the ones associated with the deepening of integration in Europe.

In the second part, three works on the Portuguese Economy were presented. They were developed and presented by staff from the Economics and Research Department of the BdP, DEE, with co-authors from outside the bank. The common motto across the different topics, from bank shocks on private investment to firm productivity and organization and to wage inequality, was the Portuguese economy. We can claim that the research topics selected by these economists are the ones that we could expect given the mission of the Bank: the analysis and ability to advice on the Portuguese economy. To fulfill this mission, it is necessary to deepen the knowledge of the Portuguese economy, so that a good diagnostic of the tensions and challenges can be made, and so that those tensions and challenges may be overcome by policies that improve the performance of the economy.

I think that we can use the works presented in this part of the conference to contend that, even if not directed, the options made by the researchers in the Bank coincide with the ones that should be given priority by the BdP. It could be claimed that the good quality of this match, between individual researchers interests and institution objectives, is not orthogonal to the observation that these works are in good part data-driven. But if this is the case, then we should be very happy that BPlim is growing in size and scope. This was

exactly the reason why a micro data lab was set up at the BdP, namely to be an incentive device that could, in a decentralized manner, reinforce the focus of economic research on the Portuguese economy. This is not a minor achievement for the evaluation of research at the Bank. It is well known that the balance between the need to allow researchers to pursue undirected research, with high gains in creativity, while giving incentives so that research efforts are directed to those questions that fulfill the Bank's mission, is fragile and difficult to achieve. The easier access to data of good quality, which helps deliver the desired outcome, should be encouraged and cherished.

On those works presented at the conference, let me also stress that each one of them was developed with co-authors working outside the BdP and outside Portugal. Again, this shows that the ability to catch the interest of economists to work on important topics of the Portuguese economy is part of our role as amplifiers of our small research hub.

Following this same reasoning, in this 8th edition of the conference we deepened one idea initiated two years ago: To help the dissemination of work on the Portuguese economy by Masters students at Portuguese universities, through a contest that selects the best thesis finished in the last two years. BdP was very happy to share this objective with Fundação Francisco Manuel dos Santos (FFMS). We should thank the collaboration from economics departments at Portuguese universities. The excellent results obtained with this initiative were only possible with the generous dedication of Rui Albuquerque, who represented the FFMS and chaired the jury of this contest.

Here again the role of the BdP was to act as a promoter of development and to help direct the human resources at Portuguese schools to the relevant economic questions.

I think that BdP provided a good service to the Portuguese economy!

Isabel H. Correia
Head of the Economics
and Research Department (DEE)

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In every issue, we ask an expert to briefly present and discuss two papers written by staff members. In this issue, the guest is Prof. Catarina Roseta-Palma.

Catarina Roseta-Palma is an associate professor and the head of the department of economics at ISCTE-Instituto Universitário de Lisboa. Her main research interests are in water management, where she has focused on groundwater and pricing policies. She has also worked on sustainable development, including growth models, and decision making under uncertainty. Catarina has worked with national water authorities, has been a consultant for the Portuguese Environment Ministry and the European Commission, and has participated to the Portuguese Commission for Green Fiscal Reform (2014). Finally, Catarina has been a member of the Council of the European Association of Environmental and Resource Economists, had been its vice-president between 2012 and 2013.

Featured published paper

Comment on **"The Good, the Bad and the Different: Can Gender Quotas Raise the Quality of Politicians?"** by Paulo Júlio and José Tavares, *Economica*

On the 8th March 2017, we once again marked International Women's Day. Celebrated regularly since 1975, this date is a yearly reminder of the achievements of women, commemorating the many advances that have been realized, raising awareness of significant issues that are still outstanding and calling for more action on gender parity. Several specific targets have been included in the United Nations' Sustainable Development Goal nr. 5. Gender equality matters, not just because of fairness considerations but also because there is ample evidence that fuller involvement of women reduces poverty, improves education and health outcomes and promotes well-being. One of the targets is to "ensure women's full and effective participation and equal opportunities for leadership at all levels of decision making in political, economic and public life."

While there is a clear trend towards equality in access to education and some visible improvements can be seen in terms of the workplace, progress in political representation has been "excruciatingly slow". An instrument that has been deployed throughout the world to improve this state of affairs is the setting of gender quotas. The specific implementation of quota policies can take many forms, as noted in Rosen (2017), but their effectiveness in raising

the participation of women in politics is recognized. However, all types of quota or affirmative-action scheme could be criticized for deviating from pure meritocratic systems and thereby potentially reducing the overall quality of outcomes. Júlio & Tavares (2017) tackle this issue through a simple citizen-candidate game, where heterogeneous individuals first decide whether they wish to compete for political office and then elections occur among selected candidates.

The authors assume that there are four types of individuals: male and female, each gender characterized by a proportion of high-skilled and low-skilled individuals. They show that even when this proportion is equal for both genders, under-representation of females in elected positions can arise if political market discrimination outweighs labor market discrimination so that females are discouraged from active political activity. The latter can come for instance from higher barriers to entry in political networks or higher opportunity costs for women. In these circumstances, as long as the political discrimination is stronger than the economic discrimination, setting quotas for female representation does not necessarily lead to a lessening in the quality of elected representatives – indeed, overall quality might increase if gender quotas encourage high-skilled women to run for office without discouraging high-ability male candidacies.

The paper is a useful reminder that when a distortion exists under the form of a pre-existing discrimination, introducing quotas – a second distortion – may induce both more diverse gender representation and higher average quality of the elected. These results can be seen as none other than an application of the second-best theorem, whereby the presence of two distortions may actually lead to more efficient outcomes than the presence of a single distortion. However, it must be noted that this conclusion, albeit relevant, is accessory to the main debate on political representation: equal representation is at heart a matter of principle.

Júlio, P. & Tavares, J., 2017. "The Good, the Bad, and the Different: Can Gender Quotas Raise the Quality of Politicians?", *Economica*. <http://onlinelibrary.wiley.com/doi/10.1111/ecca.12222/abstract>

Rosen, J., 2017. "Gender quotas for women in national politics: A comparative analysis across development thresholds", *Social Science Research*. Available at: <http://www.sciencedirect.com/science/article/pii/S0049089X17300844>.



Featured article from *Banco de Portugal Economic Studies*

Comment on **"Why wealth should not be taxed"**, by Pedro Teles and Joana Garcia

All market economies are built on scaffolding provided by governments. At a minimum, this scaffolding includes rules on citizen's rights and mechanisms for enforcement, but there is general acknowledgment that governments should also play a role in the provision of public goods as well as in the mitigation of other market failures such as environmental externalities, information asymmetries or excessive market power.

Additionally, some argue that governments ought to take into account the distribution of resources among citizens, particularly given the importance of fairness and reciprocity as ubiquitous social norms in all human societies. Taxation is an essential piece of government policy, since it finances government intervention while directly affecting the decisions taken by all other economic agents.

However, taxation can be levied on different sources and it can take many forms. The current paper builds a simplified growth model to analyze the choice between labor and capital taxation, in the particular form of wealth taxes, concluding that it is never optimal to tax capital accumulation even if it might be desirable to tax initial-period wealth, defined as the starting value of capital and outstanding debt held by households. The practical implications of this conclusion are moot since, as the authors

acknowledge, it is not realistic to expect a credible government commitment not to tax future wealth while taking (indeed, potentially confiscating) wealth today. Also recognized in the paper is that the results hinge on the assumption of constant price elasticities for both consumption and labor.

An alternative treatment of the capital taxation issue can be found in Straub & Werning (2014), who show that it is possible to find that positive capital taxation is optimal in the long run".

Additionally, there are many types of capital and it is far from clear that capital markets are perfectly competitive, as assumed in this paper; the question of rents is therefore crucial. Specific issues that could be highlighted as fruitful paths for policy debates are inheritance taxes (Piketty & Saez 2013) and property taxes (Barseghyan & Coate 2016).

Finally, a reference must be made to a type of taxes that are known to increase market efficiency rather than distort outcomes, in particular taxes on environmental externalities. Unfortunately, macroeconomists still often assume that these are too small and specific to warrant inclusion in economy-wide debates of optimal taxation, which is a shame, considering the potential benefits that could be had from environmental tax reforms (Jaeger 2012; Pereira et al. 2016). Climate change is the main challenge human civilization is facing and it is high time for it to stop being

ignored in macroeconomic debates. Additionally, given the current interest in universal basic income schemes along with the attendant debate on where revenue to finance it would come from, adequate energy taxation could be a winning proposal, sidestepping naïve ideas such as creating a "tax on robots".

Barseghyan, L. & Coate, S., 2016. *Property Taxation, Zoning, and Efficiency in a Dynamic Tiebout Model*. "American Economic Journal: Economic Policy", 8(3), pp.1–38. Available at: <https://www.aeaweb.org/articles?id=10.1257/pol.20150050>

Jaeger, W.K.z, 2012. *The double dividend debate*. In J. E. Milne & M. S. Andersen, eds. "Handbook of research on environmental taxation". Edward Elgar, pp. 211–229.

Pereira, A.M., Pereira, R.M. & Rodrigues, P.G., 2016. "A new carbon tax in Portugal: A missed opportunity to achieve the triple dividend?" *Energy Policy*, 93, pp.110–118. Available at: <http://www.sciencedirect.com/science/article/pii/S0301421516300970>

Piketty, T. & Saez, E., 2013. "A Theory of Optimal Inheritance Taxation." *Econometrica*, 81(5), pp.1851–1886. Available at: <https://eml.berkeley.edu/~saez/piketty-saezECMA13.pdf>

Straub, L. & Werning, I., 2014. "Positive Long Run Capital Taxation: Chamley-Judd Revisited", Available at: <http://www.nber.org/papers/w20441>

Recently published

Our economists publish in a wide range of economic and finance journals and scholarly books.

Mathematical and quantitative methods

de Carvalho, M. and A. Rua. 2016 "Discussion of 'Of Quantiles and Expectiles: Consistent Scoring Functions, Choquet Representations and Forecast Rankings' by Ehm, W., Gneiting, T., Jordan, A. and Kruger, F.", *Journal of the Royal Statistical Society, Series B*, Vol. 78, Issue 3, pp. 539-540.

Duarte, C., P.M.M. Rodrigues and A. Rua. 2017. "A Mixed Frequency Approach to Forecast Private Consumption with ATM/POS Data", *International Journal of Forecasting*, Vol. 33, Issue 1, pp. 61-75.

Gomes, S., N. Iskrev and C. Mendicino. 2017. "Monetary Policy Shocks: We Got News!", *Journal of Economic Dynamics & Control*, Vol. 74, pp. 108-128.

Hassler, U., P.M.M. Rodrigues and A. Rubia. 2016. "Quantile Regression for Long Memory Testing: A case of Realized Volatility", *Journal of Financial Econometrics*, Vol. 14, Issue 4, pp. 693-724.

Ribeiro, P. P. and J. D. Curto. 2017. "Volatility spillover effects in interbank money markets", *Review of World Economics*, Vol. 153, Issue 1, pp. 105-136

Valle e Azevedo, J. and J. Jalles. 2017. "Model-Based vs. Professional Forecasts: Implications for Models with Nominal Rigidities", *Macroeconomic Dynamics*, Vol. 21, Issue 1, pp. 130-159.

Forthcoming

Georgiev, I., P.M.M. Rodrigues and A.M.R. Taylor. 2016. "Unit Root Tests and Heavy-Tailed Innovations". *Journal of Time Series Analysis*.

de Carvalho, M. and A. Rua. 2017. "Real-time Nowcasting The US Output Gap: Singular Spectrum Analysis at Work", *International Journal of Forecasting*, Vol. 33, pp. 185-198.

Ribeiro, P. P., R. Cermeño and J. D. Curto. 2016. "Sovereign bond markets and financial volatility dynamics: Panel-GARCH evidence for six euro area countries", *Finance Research Letters*.

Rua, A. 2017. "A wavelet-based multivariate multiscale approach for forecasting", *International Journal of Forecasting*.

Microeconomics

Forthcoming

Amador, João and Ana Soares. 2016. "Competition in the Portuguese Economy: Insights from a Profit Elasticity Approach", *Empirica*.

Macroeconomics and monetary economics

Forthcoming

Júlio, P. and J. Tavares. 2017. "The Good, The Bad, and the Different: Can Gender Quotas Raise the Quality Of Politicians?", *Economica*.

International economics

Forthcoming

Amador, João and Sónia Cabral. 2016. "Networks of Value-added Trade", *The World Economy*.

Financial economics

Panetti, Ettore. 2016. "Market Participation in a Two-Sector Diamond-Dybvig Economy", *Studies in Economics and Finance*, Vol. 33, N. 4, pp. 660-678.

Forthcoming

Bonfim, Diana and Qinglei Dai. 2017. "Bank Size and Lending Specialization", *Economic Notes*.

Bonfim, Diana and Sónia Costa. 2017. "International Banking and Cross-border Effects of Regulation: Lessons from Portugal", *International Journal of Central Banking*.

Panetti, Ettore. 2016. "A Theory of Bank Illiquidity and Default with Hidden Trades", *Review of Finance*.

New titles in the Working Papers series

Technical working papers intended for publication in leading finance and economic journals. Find here the complete list of *working papers*.

Mathematical and quantitative methods

Zooming the Ins and Outs of the U.S. Unemployment • Pedro Portugal • António Rua – BP WP 3/2017

To better understand unemployment dynamics it is key to assess the role played by job creation and job destruction. Although the U.S. case has been studied extensively, the importance of job finding and employment exit rates to unemployment variability remains unsettled. The aim of this paper is to contribute to this debate by adopting a novel lens, wavelet analysis. We resort to wavelet analysis to unveil time and frequency-varying

features regarding the contribution of the job finding and job separation rates for the U.S. unemployment rate dynamics. Drawing on this approach, we are able to reconcile some apparently contradictory findings reported in previous literature. We find that the job finding rate is more influential for the overall unemployment behavior but the job separation rate also plays a critical role, especially during recessions.

Macroeconomics and Monetary Economics

Surviving the perfect storm: the role of the lender of last resort • Nuno Alves • Diana Bonfim • Carla Soares – BP WP 17/2016

When banks are hit by a severe liquidity shock, central banks have a key role as lenders of last resort. Despite the well-established importance of this mechanism, there is scarce empirical evidence that allows analyzing this key role of central banks. We are able to explore a unique setting in which banks suddenly lose access to market funding due to contagion fears at the onset of the euro area sovereign debt crisis. Using monthly data at the loan, bank, and firm level, we are able to test the role of the central bank in a scenario of imminent collapse. We find that the liquidity obtained from the central bank played a critical role in avoiding the materialization of such a scenario.

Public Debt Expansions and the Dynamics of the Household Borrowing Constraint • António Antunes • Valerio Ercolani – BP WP 18/2016

We show that the endogeneity of the household borrowing constraint accounts for a sizeable part of the effects

in output, credit and welfare of fiscal policies that entail government debt expansions, using an incomplete-markets model featuring heterogeneous agents. These policies make the borrowing constraint tighter because of a higher interest rate. The tightening favors a deleveraging process in terms of private credit and reinforces the precautionary saving motive. This in turn exerts a downward pressure on the interest rate, dampening the tightening itself. As an example, under a plausible debt-financed transfers policy, the majority of households supports the policy within our baseline economy with the endogenous borrowing constraint, whereas it is against the policy if the endogeneity of the borrowing limit is not considered.

Disentangling the Channels from Birthdate to Educational Attainment • Luís Martins • Manuel Coutinho Pereira – BP WP 6/2017

This paper uses a large multicountry database with data from the OECD PISA program to disentangle the effects of birthdate on educational performance. As far as age effects are concerned, we conclude that children are disadvantaged because they are the youngest in class (relative age effect), not because they are young per se. Our findings go against delaying mandatory school entry as a general policy, as there is no gain from a rise in entry age – keeping age differences among students constant – to make up for the shortening of length of schooling. This evidence that postponing school entry postpones learning is more marked for children belonging to disadvantaged households. In contrast, the relative age effect does not interact with family background, and remains stable across school entry age cohorts. The size of this effect, measured at the age 15 is not large, but its interaction with early grade retention and tracking may

enhance long-term effects. Finally, we do not detect an association between birthdate and achievement originating in unobservable characteristics of students.

Financial Economics

The Unsecured Interbank Money Market: A Description of the Portuguese Case • Sofia Saldanha – BP WP 15/2016

Money markets were severely impaired by the financial and subsequent sovereign debt crises. Although the euro money market has been studied substantially, little has been done for the particular case of Portugal. This thesis investigates how the Portuguese part of the euro unsecured interbank money market was affected by the two consecutive crises. I constructed and adapted a Furfine-based algorithm to identify the loans traded and settled in TARGET2, in which a least one of the counterparties is a Portuguese bank. Identified loans have overnight and one-week maturities. Data shows a clear trend towards a closed interbank money market. In addition, there is a visibly significant reduction in the number of times banks trade in the market, accompanied by a parallel drop in volumes transacted. Finally, I find that interest rates rise above the benchmark and those in the domestic market are persistently higher than rates agreed upon through cross-border operations.

Leverage and Risk Weighted Capital Requirements • Leonardo Gambacorta • Sudipto Karmakar – BP WP 16/2016

The global financial crisis has highlighted the limitations of risk-sensitive bank capital ratios. To tackle this problem, the Basel III regulatory framework has

introduced a minimum leverage ratio, defined as a bank's Tier 1 capital over an exposure measure, which is independent of risk assessment. Using a medium sized DSGE model that features a banking sector, financial frictions and various economic agents with differing degrees of creditworthiness, we seek to answer three questions: 1) How does the leverage ratio behave over the cycle compared with the risk-weighted asset ratio? 2) What are the costs and the benefits of introducing a leverage ratio, in terms of the levels and volatilities of some key macro variables of interest? 3) What can we learn about the interaction of the two regulatory ratios in the long run? The main answers are the following: 1) The leverage ratio acts as a backstop to the risk-sensitive capital requirement: it is a tight constraint during a boom and a soft constraint in a bust; 2) the net benefits of introducing the leverage ratio could be substantial; 3) the steady state value of the regulatory minima for the two ratios strongly depends on the riskiness and the composition of bank lending portfolios.

International Banking and Cross-border Effects of Regulation: Lessons from Portugal • Diana Bonfim • Sónia Costa – BP WP 5/2017

This paper offers a contribution to understand the cross-border effects of bank regulation using data on Portuguese banks. We find that the effect of foreign regulation on domestic credit growth depends on the type of regulation, on the channel of transmission as well as on the legal form of the bank. Our results show that a tightening in foreign regulation leads to a decrease in the growth of domestic credit in the case of concentration ratios and capital requirements and to the opposite effect in the case of sector specific capital buffers and reserve requirements in foreign currencies. We also find significant cross-border effects for the loan-to-value limits. In this case, cross-border spillovers work in different ways for domestic banks with international activity and for foreign banks: after a tightening in this instrument abroad domestic banks decrease credit growth in Portugal while foreign banks increase it. Finally, we show that the cross-border effects of capital requirements work differently through branches and subsidiaries.

Labor and Demographic Economics

Upward nominal wage rigidity • Paulo Guimarães • Fernando Martins • Pedro Portugal – BP WP 2/2017

In Portugal, as in many other countries in continental Europe, the collective wage agreements between trade unions and employer associations that define wage floors for specific job titles are systematically extended to the whole industry. This means that many firms are obliged to increase the wages of their workforce in order to comply with the newly-agreed bargained wages. With some trepidation, we call this phenomenon upward nominal wage rigidity, in close symmetry with the Keynesian notion of downward nominal wage rigidity. In this paper we provide evidence that firms that are more heavily affected by the change in the bargained wage floors decrease their hiring rates and, more importantly, significantly increase their separation rates. As a complement to our analysis, we suggest the estimation of a measure that attempts to disentangle the strength of internal and external wage conditions. Based on this measure we show that firms whose wages are more influenced by external wages exhibit much lower net job creation rates.

Labor market imperfections and the firm's wage setting policy • Sónia Félix • Pedro Portugal – BP WP 4/2017

We use matched employer-employee data and firm balance sheet data to investigate the importance of firm productivity and firm labor market power in explaining firm heterogeneity in wage formation. We use a linear regression model with one interacted high dimensional fixed effect to estimate 5-digit sector-specific elasticity of output with respect to input factors directly from the production function. This allows us to derive firm specific price-cost mark-up and elasticity of labor supply. The results show that firms possess a considerable degree of product and labor market power. Furthermore, we find evidence that a firm's monopsony power negatively affects the earnings of its workers, and firm's total factor productivity is closely associated

with higher earnings, *ceteris paribus*. We also find that firms use monopsony power for wage differentiation between male and female workers.

Business Administration and Business Economics | Marketing | Accounting | Personnel Economics

The Diffusion of Knowledge via Managers' Mobility • Giordano Mion • Luca David Opromolla • Alessandro Sforza – BP WP 1/2017

Better managers and managerial practices lead to better firm performance. Yet, little is known about what happens when managers move across firms. Does a firm hiring a good manager improve its performance? If yes is there some valuable knowledge the manager has acquired and successfully diffused to the new firm? In order to answer these questions we use information related to specific activities the manager was involved in when working for previous firms. More specifically, we use information on whether the manager has worked in the past for firms exporting to a specific destination country or a specific product. Our data is rich enough to allow controlling for both manager and firm unobservables and wash out any time-invariant ability of the manager as well as overall firm performance. We find that the export experience gained by managers in previous firms leads their current firm towards higher export performance, and commands a sizable wage premium for the manager. We use several strategies to deal with endogeneity including an exogenous event study: the sudden end of the Angolan civil war in 2002. We further refine our analysis by looking at different types of managers (general, production, financial and sales) and show how specific export experience interacts with the degree of product differentiation and/or the financial vulnerability of a firm's products as well as with rising import competition from China.

From the *Banco de Portugal Economic Studies*

Banco de Portugal Economic Studies aims to publish theoretical and applied studies prepared by economists at Banco de Portugal, often co-authored with external researchers. All articles are signed and are of the sole responsibility of their respective authors. The articles aim to contribute to an informed and high-quality debate on the Portuguese economy, in line with those published in the *Economic Bulletin* until 2014. The journal intends to be a reference publication in that debate, and is directed to a relatively specialized public on economic issues.

Banco de Portugal Economic Studies, October 2016



The precautionary saving: theories, measurements and policies • Valerio Ercolani

This article focuses on one particular form of saving, the precautionary saving. To this end, a simple theoretical framework is presented within which such a form of saving arises. Next, the potential risks triggering the precautionary saving are discussed. As a second step, examples which highlight the empirical importance of the precautionary saving are provided. Finally, it is shown how the precautionary motive can heavily influence the effects of both fiscal and monetary policies.

Financial situation of the households in Portugal: an analysis based on the HFCS 2013 • Sónia Costa

According to the Household Finance and Consumption Survey from 2013, the median value of the net wealth (i.e.,

the difference between the value of assets and liabilities) of the Portuguese households is around 71 thousand euros, which means that 50 per cent of the households have a lower level of net wealth. The top 10 per cent of households in terms of net wealth hold slightly more than 50 per cent of total net wealth, illustrating the high inequality of the net wealth distribution. For most households real estate has a dominant weight in their assets: 75 per cent of the households are owners of the main residence and about 30 per cent have loans using it as collateral. As compared to the first wave of the survey conducted in 2010, the value of real estate properties declined, contributing to a decrease in the value of household assets. The effect on net wealth was, however, mitigated by a reduction in the debt outstanding amounts. The degree of household indebtedness, measured by the ratio of debt to income or to assets, remained very high for a significant percentage of households. The decline in the Euribor rates contributed, however, to a reduction in the weight of the debt service on income.

Bank Switching in Portugal • Gil Nogueira

Using the population of firm-bank exposures from 2007 to 2014, bank switching in Portugal is studied. A firm is said to switch from the inside bank to the outside bank when it establishes a soft information relationship with the outside bank. It is found that the probability with which firms switch banks is related to macroeconomics, firm, bank, and firm-bank relationship factors previously studied in the banking literature. The probability of switching is procyclical, and firms are more likely to switch from

worse capitalized banks. Firms are more likely to switch if they have greater turnover, lower return on assets, are less opaque or are growing faster. Firms are also more likely to switch when they have longer bank relationships or a greater number of bank relationships. Riskier firms are more likely to switch and maintain their exposure to the financial system, while safer firms are more likely to switch and increase their exposure to the financial system.

Nowcasting Portuguese tourism exports

• Sónia Cabral • Cláudia Duarte

Given the increasing importance of the continuous monitoring of economic activity, techniques that allow taking advantage of the timely releases of high-frequency data play a key role in short-term forecasting. This article compares two single-equation approaches, namely the traditional bridge models and the more recent Mixed Data Sampling (MIDAS) regressions, to nowcast Portuguese quarterly tourism exports. We consider different specifications of bridge and MIDAS models, as well as combinations of nowcasts, in a recursive pseudo real-time exercise. The evidence is in favour of using short-term indicators for nowcasting tourism exports. MIDAS regressions tend to outperform bridge equations, especially when less current-quarter information is available. The best results are always obtained from a combination of nowcasts from a MIDAS specification with autoregressive dynamics.

Banco de Portugal Economic Studies, January 2017



Productivity in civil justice in Portugal: A crucial issue in a congested system

• Manuel Coutinho Pereira • Lara Wemans

This article focuses on the determinants of productivity in civil justice in Portugal using panel data covering the period from 1993 to 2013, from a strictly quantitative perspective. The performance indicators and the relationship

between demand and resource distribution in the territory suggest that there is room for improving the allocation of resources. Such evidence is confirmed by a positive response of productivity to incoming cases per judge, taking into account the casemix. Moreover, productivity is positively impacted by both the number of judicial staff per judge and the proportion of cases resolved in judgeships that deal mainly with civil cases.

Firm creation and survival in Portugal

• Sónia Félix

In this study we use a very rich panel dataset that allows us to identify new firms at founding and follow them over time. We provide a comprehensive characterization of the dynamics of firm entry and firm exit in Portugal, in the period between 2005 and 2012. In particular, we analyze the distribution of new firm creation and survival by sector of economic activity, size class, and over the business cycle. The results suggest that entry rates are fairly high while survival rates are small. Moreover, the share of new entrants' sales on

total sales and the employment share suggest that new firms are in general small. Entry rates and employment shares show as pro-cyclical for smaller firms.

Dating the Portuguese business cycle

• António Rua

The aim of this article is to establish a reference business cycle chronology for Portugal over the last four decades. Drawing on a non-parametric approach embedding the NBER's business cycle dating procedure, a monthly business cycle chronology is provided and its robustness is assessed resorting to a large data set.

Why wealth should not be taxed

Pedro Teles • Joana Garcia

Even if all the wealth in the economy was owned by one agent alone, with zero weight in the social welfare function, the accumulation of wealth should not be taxed. The workers lose by having the capital-rich pay taxes on the accumulation of capital.



Seminars

DEE regularly invites experts in various fields of economics to present their latest research. Banco de Portugal staff, as well as researchers from other central banks, Portuguese and foreign universities are invited to attend. The following is a list of the seminars that were organized during the last six months. See the [seminars' webpage](#) for a list of past and next seminars.

September 19 | 2016

Currency Wars or Efficient Spillovers?
A General Theory of International
Policy Cooperation

Anton Korinek • Johns Hopkins University

September 20 | 2016

Quantitative Easing in Joseph's
Egypt with Keynesian Producers

Jeffrey R. Campbell • Federal Reserve
Bank of Chicago

September 29 | 2016

Features and experiences of using the
DSGE model (Aino 2.0) in policy simu-
lations and forecasting at the Bank of
Finland

Juha Kilponen • Bank of Finland

October 11 | 2016

Monetary Shocks at High-Frequency
and Their Changing FX Transmission
Around the Globe

Jonathan Kearns • Bank for International
Settlements

October 20 | 2016

Sovereign Debt and Structural
Reforms

Fabrizio Zilibotti • University of Zurich

October 31 | 2016

Do Central Banks Face a Positive-profit
Constraint?

Martin Schmalz • University of Michigan

November 7 | 2016

Migrant Wages, Human Capital
Accumulation and Return Migration

Jérôme Adda • Università Bocconi

November 9 | 2016

On the Persistence of Monetary Trading:
Memory is Money

Guilherme Carmona • University of Surrey

November 21 | 2016

Trends in Distributional Characteristics:
Existence of Global Warming

Jesús Gonzalo • Universidad Carlos III
de Madrid

November 23 | 2016

Fiscal Multipliers and Financial Crises

Miguel Faria e Castro • New York University

December 7 | 2016

Monetary Policy and the Predictability
of Nominal Exchange Rates

Sérgio Rebelo • Northwestern University

December 12 | 2016

Non-Contributory Health Insurance
and Household Labor Supply:
Evidence from Mexico

Rita Ginja • Uppsala University

December 14 | 2016

A Model of Secular Stagnation:
Theory and Quantitative Evaluation

Gauti B. Eggertsson • Brown University

December 19 | 2016

Firm Dynamics, Persistent Effects
of Entry Conditions, and Business
Cycles

Sara Moreira • Northwestern University

February 8 | 2017

Securitization, Ratings, and Credit
Supply

Victoria M. Vanasco • Stanford University

February 21 | 2017

A Recursive Model for the Assessment
of the Cyclical Implications of IFRS9

Javier Suarez • CEMFI

February 22 | 2017

The Economics of Oil Markets

Sérgio Rebelo • Northwestern University

March 7 | 2017

Diagnostic Expectations and Credit
Cycles

Nicola Gennaioli • Università Bocconi

March 8 | 2017

Self-Fulfilling Debt Crises:
A Quantitative Analysis

Alessandro Dovis • University of Pennsylvania

March 14 | 2017

Large Time-Varying Parameter VARs:
A Non-Parametric Approach

Massimiliano Marcellino • Bocconi University

March 22 | 2017

Barriers to Entry and Regional
Economic Growth in China

Kjetil Storesletten • University of Oslo

March 28 | 2017

The Unemployment Accelerator

Gaston Navarro • Federal Reserve Board

April 5 | 2017

Low Real Interest Rates
and the Zero Lower Bound

Stephen D. Williamson Federal • Reserve
Bank of St. Louis

April 10 | 2017

An Analysis of Consumer Debt
Restructuring Policies

João Cocco • London Business School

April 19 | 2017

Monetary Policy for a Bubbly World

Vladimir Asriyan • Universitat Pompeu
Fabra

Conferences

November 21 | 2016

8.ª Conferência “Desenvolvimento Económico Português no Espaço Europeu”



Isabel H. Correia • Banco de Portugal

The 8th Banco de Portugal Conference on the Portuguese Economic Development in the European Context opened with a lecture by Francesco Giavazzi (IGIER, Università Bocconi) titled “How to fix the Eurozone?”, followed by a policy panel under the topic “The process of European integration: a view from Portugal”, accessible at <https://youtu.be/Rf5cqVgYaNo>, chaired by Helena Garrido, journalist, with Carlos da Silva Costa

(Governor, Banco de Portugal), António Barreto (*Instituto de Ciências Sociais*), and António Vitorino (President of Notre Europe).

The second part of the conference had two sections with studies about the Portuguese economy. The first session had three presentations by senior economists from Banco de Portugal.

In the first one, João Amador presented “The Effect of Bank Shocks on Firm-Level and Aggregate Investment”, a work developed in coauthorship with Arne J. Nagengast. The presentation focused on the effect of bank shocks on firm-level and aggregate investment, building on a working paper published by the authors. The paper applies a methodology developed by Amiti and Weinstein (2013) to Portuguese data for the period 2005 to 2013 and shows that credit supply shocks have a strong impact on firm-level as well as aggregate investment. The growth rate of individual loans is decomposed into bank, firm, industry and common shocks. This decomposition framework can be used in the presence of small firms with only one banking relationship, as long as they account for only a small share of the total loan volume

of their banks. Adverse bank shocks are found to impair firm-level investment, particularly for small firms and those with limited access to alternative financing sources. For the economy as a whole, granular shocks in the banking system are estimated to account for around 20-40% of aggregate investment dynamics.

The second work, in co-authorship with Lorenzo Caliendo, Giordano Mion and Esteban Rossi-Hansberg, “Productivity and Organization in Portuguese Firms”, was presented by Luca David Opro-molla. This study explores the fact that recent work in economics has underscored the large heterogeneity of firms – for example in terms of their productivity – and its importance in explaining aggregate outcomes. A firm's productivity depends on the way it organizes production. The decisions of its owners and managers on how to combine different inputs and factors of production with particular technologies given demand for their product determine the production efficiency of a firm. These firm decisions can be the response to exogenous demand or productivity shocks. For example, a sudden increase in demand due to a product becoming fashionable can lead a firm to expand and add either a plant, a more complex management structure, a new division, or a new building. These investments are lumpy and, as such, will change the firm's production efficiency and prices discontinuously as well. In this work the authors study the changes in productivity observed in Portuguese firms when they reorganize their management structure using a recently developed measure of changes in organization. As firms add organizational layers, their quantity-based productivity increases, although the corresponding expansion decreases their revenue productivity as they reduce prices. This



Francesco Giavazzi • IGIER, Università Bocconi



João Amador • Banco de Portugal

endogenous component of productivity determines, in part, the observed heterogeneity in both revenue and quantity-based productivity across firms. Failure to reorganize in order to grow can, therefore, result in an inability to exploit available productivity improvements.

The third piece, **“Wage Inequality”**, was presented by Pedro Portugal (in co-authorship with A. R. Cardoso, P. Guimarães, Pedro Raposo and Hugo Reis). In this communication the sources of wage inequality over the 1986-2013 period were investigated, using the microdata from *Quadros de Pessoal*. Four distinct types of factors driving wage dispersion



Luca David Opmolla • Banco de Portugal

were explored: compositional effects, structural effects, unobserved heterogeneity, and assortative matching. It was shown that, after a visible increase in wage inequality between 1986 and 1994, the wage dispersion remained roughly constant between 1996 and 2013. This occurred, despite the aging of the working population, the increasing participation of women in the labor market, the significant inflow better educated workers, and the shrinking trend of Portuguese firms. Furthermore, there were no indications of greater variability in the wage policy of the firms or higher wage dispersion between job titles (polarization). A notable result from this



Pedro Portugal • Banco de Portugal

study was evidence of decreasing assortative matching, meaning that, over the last two decades, high wage workers have been less and less matched with high productivity firms.

The second session was the result of a contest for junior economists in partnership with *Fundação Francisco Manuel dos Santos (FFMS)* and consisted of the presentation of the top works by their respective authors.

There were three main objectives guiding the contest and the organization of this session: to highlight the high-quality research produced by pre-experience Masters graduates at Portuguese universities; to promote research about the Portuguese economy; and to challenge students and motivate faculty to continue to produce high quality work.

With this aim an application process was developed. A Scientific Committee composed of researchers with varied interests, both theoretical and empirical, and based throughout the country, was created. The five committee members were: Anabela Carneiro (FEP), Carlos Robalo Marques (Banco de Portugal), Francisco José Veiga (U. Minho), Susana Peralta (Nova School of Business and Economics and FFMS), and Rui Albuquerque (Boston College). The staff of Banco de Portugal collected a comprehensive list



João Santos • Nova SBE | Filipe Silvério • Nova SBE | Sofia Saldanha • Católica Lisbon School of Business & Economics | André Nunes • Nova SBE | José Neves • Universidade do Porto – FEP | Rui Albuquerque • Boston College Carroll School of Management
(da esquerda para a direita)



Pedro Magalhães • FFMS

of directors of Masters programmes in Economics and in Finance across all Portuguese universities. Over 70 directors were initially contacted via email about the initiative and invited to participate, after which 26 phone calls were made by Prof. Albuquerque to those directors that had shown interest in participating. Directors were asked to select the top 1%-5% theses of their programmes and to submit them to the contest's

scientific committee. The results were remarkable: 56 theses were submitted from 19 institutions by 1st August 2016, with the following shares: Universidade do Porto, Faculdade de Economia (FEP), 30%; Nova School of Business and Economics, 13%; ISCTE – Instituto Universitário de Lisboa, 9%; Universidade de Lisboa, Instituto Superior de Economia e Gestão (ISEG), 9%; Universidade de Coimbra, 9%; Universidade de Aveiro,

9%; Universidade de Trás-os-Montes e Alto Douro, 7%; Católica Lisbon School of Business and Economics, 5%; Universidade do Minho, 5%; and Universidade do Algarve, 4%. A selection process was then implemented to judge the merits of the theses and rank them. The theses were assigned in equal number to the members of the Scientific Committee and each member was asked to select four theses to form a final pool of 20, which were then read by all five members of the Committee. A thorough evaluation and discussion of this pool of theses resulted in the top five that was presented at the conference. An additional ten theses were presented in a poster session. The top five theses were: Neves, José, 2014, "Exports R&D investment complementarity and economic performance: Are companies located in peripheral countries different?", FEP; Nunes, André, 2016, "Wage Adjustments under Extreme Downward Nominal Wage Rigidity," Nova School of Business and Economics; Saldanha, Sofia, 2014, "The Unsecured Interbank Money Market: A Description of the Portuguese Case," Católica Lisbon School of Business and Economics; Santos, João, 2015, "Shiva's Dance: Crisis, Local Institutions and Private Firms," Nova School of Business and Economics; and Silvério, Filipe, 2015, "What Hides Behind the Fixed-term Contracts Wage Gap?", Nova School of Business and Economics.

The best thesis prize was awarded to André Nunes.

The presence of FFMS helped in many ways including with the dissemination of the contents of the theses. FFMS committed to produce an e-book with a summary of the dissertations selected for the conference. The Foundation also actively participated in the design of the programme and in the Scientific Committee. Many thanks also go to the invisible contributors Manuela Lourenço and Fátima Santos from the Economic and Research Department of Banco de Portugal.



André Nunes • Nova SBE | Pedro Duarte Neves • Banco de Portugal

Meet our researchers

In this issue we present two members of our research staff.



Sharmin Sazedj has been working in the Public Finance and Structural Studies Division of the Economics and Research Department of Banco de Portugal since October 2013. She holds a undergraduate degree and MSc in Economics, both from Nova School of Business and Economics. She is currently enrolled in the Economics PhD program of the same school, where she has also been working as an invited teaching assistant since 2010.

Please, tell us about the research you are carrying on at DEE

My recent research has focused mainly on the management of Portuguese firms. The performance of a firm is greatly affected by the characteristics of its management and their incentives, which in turn depend on their pay. So it is key to characterize the top managers in terms of exogenous and endogenous characteristics and identify which of these traits, and to what extent, are determinants of their compensation and

of the firm's performance. Additionally, I have increasingly developed an interest in network theory tools, which allow to account for the impact of the interactions surrounding a manager. I focus particularly on executive professional networks, composed of the ties with co-workers formed throughout one's career. I compute measures that quantify how well connected a manager is or how central his position is in a network. These tools allow to explore whether there exists a network

premium in terms of added bargaining power, status and higher pay, and/or in terms of flow of information, knowledge and value added for a firm.

My broader research interests and agenda include the sustainability of public finances and the macroeconomic developments of the Portuguese economy, namely topics related to assessing the business cycle position of the economy and the policy implications, particularly for public finances.



Pedro Prego has been an economist in the Economic and Research Department at Banco de Portugal since 2012. He has an undergraduate degree from Universidade da Beira Interior and a M.A. degree in Strategy, Entrepreneurship and Technological Change from Carnegie Mellon University, USA. His work has been published in the Banco de Portugal Economic Studies journal.

Please, tell us about the research you are carrying on at DEE

My main research projects have covered topics in corporate finance benefiting from the richness of the micro databases available at Banco de Portugal. I

have looked at the relationship between a firm's investment decisions and the availability of internally generated funds related to the firm's cash-holding policies. More recently, I have been working in developing a risk assessment model for the Portuguese non-financial

corporations which will contribute to the Banco of Portugal mission of evaluating the state of the Portuguese financial institutions. My current work focuses on analyzing the impact that financial institutions have on firms' productivity levels.

Visiting Fellows

Banco de Portugal offers cash grants to support research projects in the field of Economics, with a view to promoting interchange between the scientific and academic communities and the Bank, and to contributing towards the improvement of theoretical and applied research in Portugal.

Alessandro Sforza is a PhD student at the Centre for Economic Performance (CEP) of the London School of Economics. His research focuses on firm behaviour in relation to credit shocks and the implications for the organisation of the firm and wage inequality; the role of managers in determining firms' international activities and in transferring export knowledge across firms; and the effects of international migration on the labour market.

The collaboration of Alessandro with DEE at Banco de Portugal during the last summer has mainly focused on two topics: the way knowledge diffuses via managers' mobility and the effect of a credit shock to the organization of the firm. With respect to the first topic, Alessandro worked with Luca David Opromolla (DEE) and Giordano Mion from the University of Sussex on a research paper titled "The diffusion of knowledge via managers' mobility" (Banco de Portugal Working Paper 1/2017). In the paper, they use information related to specific activities the manager was involved in when working for previous firms. More specifically, they

use information on whether the manager has worked in the past for firms exporting to a specific destination country or a specific product. They find that the export experience gained by managers in previous firms leads their current firm towards higher export performance, and commands a sizable wage premium for the manager. Moreover, they examine how Portuguese firms responded to the sudden and unexpected end of the civil war in Angola in 2002, and discover an immediate spike in export entry rates for firms with at least one manager with previous experience of exporting to Angola.

Regarding the second topic, Alessandro analyses – both theoretically and empirically – the effects of an exogenous credit supply shock to the organization of a firm. The research titled "Credit shocks and the organization of the firm: who pays the bill" uses the rich information on credit and firms for Portugal to understand the mechanisms that link bank credit and the hierarchy of the firm, with a special attention to the labour market frictions in the Portuguese economy.

Visitors

Hugo Vilares •
London School of Economics - The Centre
for Economic Performance (CEP)

Lorenzo Caliendo •
Yale University

Fernando Parro •
Johns Hopkins University

Filomena Garcia •
Indiana University

Alessandro Sforza •
London School of Economics

João Pereira dos Santos •
Nova School of Business
and Economics

Gil Nogueira •
NYU Stern

Artashes Karapetyan •
BI Norwegian Business School

Mónica Costa Dias •
Institute for Fiscal
Studies

Upcoming events and announcements

Seminars

April 26 | 2017

Low-frequency Asset Pricing Dynamics • Federico M. Bandi, Johns Hopkins University, Carey Business School

May 5 | 2017

Financial Frictions, Asset Prices, and the Great Recession • José-Víctor Ríos-Rull, University of Pennsylvania

May 8 | 2017

The Cross-Section of Household Preferences • Francisco Gomes, London Business School

May 17 | 2017

to be announced • Thomas F. Cooley, New York University

June 7 | 2017

The Impact of Brexit on Foreign Investment and Production • Ellen McGrattan, University of Minnesota

June 9 | 2017

to be announced • Greg Kaplan, University of Chicago

June 26 | 2017

to be announced • Carlos Viana de Carvalho, Banco Central do Brazil

June 28 | 2017

Unemployment Cycles • Jan Eeckhout, University College London

July 5 | 2017

to be announced • Vania Stavrakeva, London Business School

July 12 | 2017

to be announced • Karim M. Abadir, Imperial College London

July 19 | 2017

to be announced • Robert Ulbricht, Toulouse School of Economics

September 21 | 2017

to be announced • Dirk Krueger, University of Pennsylvania

October 16 | 2017

Earnings and Consumption Dynamics: Nonlinear Persistence and Partial Insurance • Richard Blundell, University College London

October 18 | 2017

to be announced • Ramazan Gençay, Simon Fraser University

December 4 | 2017

to be announced • Loukas Karabarbounis, University of Minnesota

Courses

To be announced | 2017

Causal Inference in Corporate Finance • Daniel Paravisini, London School of Economics

Workshops

July 3 | 2017

Public Finance Workshop on Fiscal-Structural Reforms: Towards Economic Growth and the Sustainability of Public Finances

Meetings

July 4 | 2017

WGPF meeting – Lisboa, Banco de Portugal

Conferences

June 11/13 | 2017

9th Banco de Portugal Conference on Monetary Economics

July 7/8 | 2017

7th Banco de Portugal Conference on Financial Intermediation

August 20 | 2017

2017 ESCB Day-Ahead Conference

September 29/30 | 2017

Conference on Banker's Pay: Incentives and Regulation

Correspondence to the editor

Luca David Opromolla

Economics and Research Department,
Banco de Portugal

spillovers@bportugal.pt

This newsletter, as well as other online
information about Economic Research
at Banco de Portugal is available [here](#).