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Personal Information:

20-Jun-1986, Male, Colombian.

Education

Universitat Autònoma de Barcelona, 2015 to 2019
Ph.D. in Economics, Management and Organizations
Thesis Title: "Three Empirical Essays on R&D Subsidies and Innovation in Firms"

Msc, Public Policy, Maastricht University-UNU, Cum Laude, 2018
MA, Economics, Regulation and Competition, Universitat de Barcelona, 2016
Msc, Economics, Universidad de los Andes, 2013
Bsc, Economics, Universidad de la Salle, 2010

References:

Professor Isabel Busom
Universitat Autònoma de Barcelona
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Professor Pierre Mohnen
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(ZEW) Leibniz Centre of European Eco-
nomic Research
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Professor Katrin Hussinger
University of Luxembourg
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Teaching and Research Fields

Primary fields: Economics of Innovation, Innovation policy, microeconometrics.

Teaching Experience

Winter, 2018, Innovation Policies (Postgraduate), UAB
Fall, 2015, Business Economics I (Undergraduate), UAB

Spring, 2016, Business Economics II (Undergraduate), UAB
Fall 2015, Principles of Economics (Undergraduate), Pompeu Fabra University

Research Experience and Other Employment

2015-2019: Universitat Autònoma de Barcelona, Research-fellow
2017-2018: Maastricht University UNU-MERIT, Doctoral Stay
2011-2014: Ministry of Information and Telecommunication Technologies, Consultant

Honors, Scholarships and Fellowships

2015-2019: Doctoral Scholarship, Ministry of Economics and Competitiveness, Spain
2015-2019: Doctoral Scholarship, Colciencias, Colombia
2017: Student Best Paper Award, Rovira i Virgili University, Spain
2010: Colombian Economics Student Olympiad, 1st place.

Published paper

"Innovation, public support, and productivity in Colombia. A cross-industry comparison." 2017 World Development, 99, 75-94. With Busom, I.

We investigate the association between perceived barriers to innovation and the allocation of public support for innovation in manufacturing and service industries in Colombia, as well as the potential heterogeneity of returns to innovation across the firm-level productivity distribution. Extending the CDM recursive system, we include an equation for the allocation of direct support and use quantile regression methods to estimate the productivity equation. We find some differences across manufacturing and service industries. Financing constraints are correlated with obtaining public support in manufacturing and in some services, but in knowledge-intensive services (KIS) barriers associated with regulations are more significant. The introduction of innovations increases mostly the productivity of firms below the median of the productivity distribution, especially in services. Increasing human capital would boost productivity of firms in all industries, providing support to the hypothesis that human capital is indeed a bottleneck for productivity growth across the board in Colombia. We conclude that addressing factors that hinder innovation by low-productivity firms in all service industries could significantly contribute to increasing productivity and reduce its dispersion.

Completed Papers

"Innovation Subsidies and Business Cycle" Job Market Paper

This paper investigates the impact of public support to business investment R&D over the different phases of the business cycle. It uses firm-level data for Spain during the period 2005 to 2014, thus covering an expansion, a recession and a recovery. Propensity score matching and differences in differences methods are combined to estimate the response of supported firms in each phase. Findings show that the profile of beneficiaries of public

support did not change significantly over the cycle. Estimated effects depend on the stage of the cycle, the duration of support and the type of outcome indicator. The impact on total investment is positive during expansion years and null during the crisis years; when looking at firms' allocation of human resources to R&D, the multiplier effect is higher during the crisis years; finally effects last longer for longer spells. Direct support allowed participating firms to allocate more of their employees' time to R&D activities during the recession. This suggests that under some conditions the multiplier of public support to innovation may be higher during recessions.

"Duration dependence in R&D subsidization and Firm's innovative behavior."

We investigate the determinants of R&D subsidization persistence and its impact on innovation results. The empirical analysis comprises three reduced-form equations which involve estimating survival rates of R&D subsidies and analyzing their effect on firms' innovation results including the decision to stop innovation projects. First, we find that firms' continuous engagement into R&D subsidies is a self-sustained process which is in part fueled by the accumulation of experience in getting funding even once unobserved heterogeneity is controlled for. Second, R&D subsidy persistence is positively correlated with innovation outcomes, including a lower probability of abandoning innovation projects. Results confirm some heterogeneity between SMEs and large firms. In particular, R&D subsidy persistence is associated with New-to-market innovation for SMEs but not for large firms. From the policy perspective, encouraging continuous use of R&D subsidies in SMEs seems to be particularly more appropriate in fostering innovation results which are far from the market (i.e., more radical innovation) and whose degree of market failure may be higher.

Research in progress

"Creative firms and entrepreneurship capital spillovers" (with Jose-Luis Massón Guerra)

Pre-PhD publications

(2017). ICTs and the informal economy: mobile and broadband roles. *Digital Policy, Regulation and Governance*, 19(1), 58-76. with Garcia-Murillo, M.

(2013). The Techno-Institutional Leap and the Formation of New Firms. *Journal of Information Policy*, 3, 501-536. With Garcia-Murillo, M., & Vargas-Leon, P.

Other professional activity

Editor in Chief- Student lead Journal, Maastricht Policy Journal

Member Young Scholars Initiative

Member European Economic Association

Seminars and Conferences

2018 (Sep): Jornadas de Economía Industrial-, Barcelona, Spain

2017 (Jul): Innovation Network conference.- IDB, Washington, EEUU.

2016 (Jun): INFER annual research conference, Reus, Spain

2016 (Feb): PhD workshop on Industrial and Public Economics, Reus, Spain

Advanced courses

Panel Data Econometrics (Prof. Steve Bond, BGSE); Non-linear panel Data (Sergi Jimenez, BGES); Empirical modeling of dynamic Firm Decision (Mark Roberts, UPenn)

Software Skills

Stata, Eviews, SPSS Matlab, \LaTeX , Maple, SPSS, Gretl, R. Optimal Design, Python, HTML5