Adrien Pacifico

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Research interest

Taxation, Microsimulation, Equality of Opportunity, Fertility, Reproducibility in Economics, Data Science in Economics, Judicial Decisions and Economics.

Current Positions

- 2018-2020: Temporary Lecturer and Research Assistant (ATER) at Cergy-Pontoise University (THEMA)
 2019-2020: Associate faculty at Aix-Marseille School of Economics
 2019- : Post-doc RA at HEC Paris (working for www.cascad.tech) (hourly contract to certify that a piece of research is reproducible).
 2020- : Part-time consultant at ETH Zurich for Elliott Ash (work on an intergenerational
 - **2020-** : Part-time consultant at ETH Zurich for Elliott Ash (work on an intergenerational mobility project).

Past Positions

2018-2020: Temporary Lecturer and Research Assistant (ATER) at Cergy-Pontoise University (THEMA)
2014-2019: PhD Candidate at Aix-Marseille School of Economics (Advisors: O. Bargain, A. Trannoy)
2014-2017: Member of IDEP

Education

June 2019 : PhD in Economics from École des Hautes Études en Sciences Sociales.

Thesis title: Three Empiral Essays in French Household Taxation. Advisors: Alain Trannoy & Olivier Bargain. Examinators: Clément Carbonnier, Étienne Lehmann, Laurent Simula, Roberta Ziparo.

- 2014–2019 : Aix-Marseille School of Economics PhD program.
- 2012–2014: Aix-Marseille School of Economics graduate program.
- Fall 2012 : Visiting student, Bishop's University (Canada).
- 2011-2014 : Magistère ingénieur économiste (Faculté d'économie gestion, Marseille, France).
- 2009–2012 : Bachelor in economics (Faculté d'économie gestion, Marseille, France).

Teaching experience

- 2018-2020 : Macroeconomics, 1st year bachelor students (60 hours, CM-TD).
- 2014-2015 : Teaching assistant in mathematics, 1st year bachelor students (60 hours, assisting Antonin Macé).
- **2014-2016** : Teaching assistant in Microsimulation, M2 students (24 hours, assisting Mahdi Ben Jelloul).

Publication

2016: Fiscalité des familles aisées sous le quinquennat Hollande: vers un crédit d'impôt par enfant ? Revue Française de Finances Publiques n°133, p.209 (with O. Bargain & A. Trannoy).

Policy briefs & Press

- Abandonner la décote, cette congère fiscale.
 IDEP Analyses N°7 (with A. Trannoy); cited in Les Échos, 2016-02-04, p.3.
- Les petits pas du "grand soir" fiscal Le Monde du Jeudi 9 juillet 2015 (with O. Bargain & A. Trannoy).
- Fiscalité des familles aisées : vers une forfaitarisation de l'enfant. IDEP Analyses N°6 (with O. Bargain & A. Trannoy).

Research Replicability Certification

• May 2019 : A Direct Measure of Inefficiency within Couples, has been certified RRR (Perfect Replication) by the cascad certification agency (https://www.cascad.tech).

Conferences

- 2018-06-25 : "Rich Households' Taxable Income: A French Natural Experiment to Disentangle Income and Substitution Effects" 17th Journées LAGV - international conference in public economics, Aix-en-Provence, France
- 2017-07-13 : Tax Frequency: Theoretical and Empirical Investigations (in collaboration with Olivier Bargain & Alain Trannoy) 18th annual Meeting of the Association for Public Economic Theory, Paris, France
- **2016-03-15** : Tax frequency : Theoretical and empirical analysis (in collaboration with Olivier Bargain & Alain Trannoy) École thématique CNRS Évaluation des politiques publiques, organisée par "La Fédération Travail, Emploi, Politiques Publiques" (FR CNRS n° 3435)
- 2015-12-17 : Du sacrifice égal au transfert forfaitaire par enfant : un bilan des réformes du traitement fiscal de la famille (in collaboration with Olivier Bargain & Alain Trannoy) Évaluations des politiques publiques, organized by "Direction générale du Trésor", and the french economic association (AFSE)

• Inefficient Couples: Non-minimization of the Tax Burden among French Cohabiting Couples (with O. Bargain, D. Echevin & N.Moreau) (started in 2017, revise and resubmit National Tax Journal).

The present paper investigates the tax returns of French cohabiting couples with children, defined here as neither married nor in a civil union. These couples represent an interesting case, because they form two separate tax units according to French tax laws and must optimally assign their children to one of the parents' tax units to optimize tax rebates. Using administrative tax data and a microsimulation model, we analyze whether cohabiting couples allocate their children to minimize the joint tax burden of the family. We find, however, that children are not optimally allocated in 25% of cases. We interpret the reasons why couples fail to financially optimize their situation by discussing the usual explanations (e.g., transaction costs, "simple rule," inertia) as well as a more specific reason: the potential non-cooperative behavior of cohabiting couples, possibly related to the lack of a binding agreement or potential asymmetries of information between partners. We also find suggestive evidence regarding heuristics (such as the equal split rule for an even number of children), a large degree of inertia (based on fiscal status changes over two years), and possible non- cooperation (suboptimal couples tend to separate more and marry less in the subsequent period).

- Intergenerational mobility in France (with E. Ash & M.Guillot) (started in 2019).
- Rich Households' Taxable Income: A French Natural Experiment to Disentangle Income and Substitution Effects. (started in 2018)

This paper evaluates the taxable income behavioral reactions of French high-income households to a tax change. I focus on a 2013 tax reform creating a unique framework that allows controlling for position in the income distribution. With this framework I temperate the *mean reversion bias* and the *change in the distribution bias* usually associated with the assessment of elasticities with panel data. I can do so because the reform treats differently households based on income but also family composition. The analysis is conducted with a recently released big administrative panel dataset. I run a *triple-difference* regression on the change in taxable income depending on the group an high-income household belongs to: the untreated (no effect), the ones facing only a change in their disposable income (pure income effect), and those facing a change in marginal tax rate and disposable income (income and substitution effect). Quite surprisingly and contrasting with the rest of the literature, I find that the income effect strongly dominates the substitution effect, that women react less than men, and that a significant part of the effect is driven mainly by workers nearing retirement by reacting on the extensive margin.

Monthly Income Tax Frequency: Theoretical and Empirical Investigations (with O. Bargain & A. Trannoy) (stated in 2014).

The pioneering work of Vickrey (1939, 1947) on the income-tax frequency has not inspired a lot of further studies. We propose an investigation of this issue both from a theoretical and empirical viewpoint within an annual framework. We first show that increasing the income-tax frequency (from an annual tax basis to a monthly tax basis) is Pareto-improving for any convex tax scheme. This result is obtained for the same tax revenue. Welfare gains are all the larger as the infra-annual volatility of income is large and the propensity to save is low, implying that the benefits should be larger for the bottom of the income distribution. We submit an empirical illustration using French administrative data and simulations of the current tax-benefit system. Despite that this system is not convex over the whole income domain, we show that increasing the tax frequency can lead to substantial social welfare gains.

- Pr. Alain Trannoy: EHESS, alain.trannoy@univ-amu.fr
- Pr. Etienne Lehmann: CRED/Université Panthéon Assas, alain.trannoy@univ-amu.fr
- Pr. Olivier Bargain: Université de Bordeaux,

Internships

 April-August 2014: Microsimulation Commissariat général à la stratégie et à la prospective (joint with Etalab), *Paris*, supervised by Mahdi Ben Jelloul. Developed and worked on Openfisca, an Opensource microsimulation software. http://www.openfisca.fr/

May–July 2013: Research GREQAM, Marseille, (France) Worked on decision under total uncertainty and on national public spendings (under the direction of Nicolas Gravel)

- July 2012: Management Control Bacardi, Geneva, (Switzerland) Created a database of FTE workers in Bacardi's plants.
- June 2012: Research GREQAM, Marseille, (France) Translated experiments from English to French (under the direction of Nobuyuki Hanaki)

Hackathons

- **2016-11** : La fiscalité à l'épreuve de la modernité, organised by *IMF & La Direction* générale des Impôts et des Domaines du Sénégal, Dakar, Senegal
- 2016-04 : #CodeImpot, organised by Etalab & Direction générale des Finances publiques, Paris, France
- **2015-12** : #HackRepNum , organised by *HackYourPhD & LISIS*, Paris, France

Computer Skills & Languages

- **Programming**: Python(main language), Bash, LAT_EX, Sas - *Currently learning*: Julia, Tensorflow, R, HTML5
- Microsimulation: OpenFisca (Contributor)
- Version Control: git, gitless
- Collaborative tools: GitHub, Slack, Google Colab, VS Live Share
- Continuous Integration: Travis CI
- Mathematics: Sympy, Sarge
- Cloud computing: AWS, Scaleway, Kaggle Kernels.
- Virtualization: Docker Python Specific
- Statistics: Pandas, Statsmodels, linearmodels, Scikit-Learn
- Web scraping: Beautiful Soup
- Textual analysis: NLTK
- Unit testing: Pytest, Nose
- Plotting: Matplotlib, Seaborn, Bokeh, Plotly, Altair
- Other: Black

Jupyter Specific

- **IDE**: Jupyter Notebook, Jupyter Lab, nteract
- Cloud : Binder, Google Colab
- Workflow: nbconvert, nbdime, Jupytext, ReviewNB, Treon
- Widgets: BeakerX, jupyter_contrib_nbextensions , ipywidgets

Databases

- Echantillon Démographique Permanent (EDP): EDP is a French big administrative database that contains many administrative sources such as income tax returns, local tax returns, administrative payslips, civil registry (birth, marriage), census surveys (diplomas). It allows to follow over 2 million households in panel over 6 years with individualized information (about 6 millions persons). It is constituted of more than 50 databases for over 50Gb of data.
- Enquête Revenus fiscaux et sociaux (ERFS): ERFS is a match between the French labor survey (EEC), fiscal returns (POTE) and social benefits payments (CNAF). It contains more than 40 000 households, it contains an *activity calendar* that can be used to derive monthly information.
- Other Databases: Budget des Familles, Enquête logement