

### LABEX ECODEC

# Axis 4: Evaluating the Impact of Public Policies and Firms' Decision

**Activity Report, October 2014** 

### 1 Main research areas

The three institutions develop research into the evaluation of causal effects along four dimensions: (1) New field experiments to go beyond the numerical impact of a decision and rather identify the most prominent channels generating the effects; (2) Randomized evaluation techniques to analyze social choices, in particular to help design efficient public policies against poverty; (3) New econometric tools for program evaluation; (4) Scientific evaluation of corporate decisions (product attributes and pricing, production technologies, human resources policies and management, financing, and, in general, marketing decisions).

## 2 Composition of the team

The axis "Evaluating the Impact of Public Policies and Firms' Decisions is directed by Bruno Crépon (Principal Investigator, CREST-ENSAE), Yukio Koriyama (co-Principal Investigator, Ecole Polytechnique) and Stefan Worm (co-Principal Investigator, HEC).

Our team is composed of economists, researchers in business, applied mathematicians, and statisticians of Ecole Polytechnique, HEC Paris, and Ensae-ParisTech.











Resear	cher	Institution		
ALLAIN	Marie-Laure	ECOLE POLYTECHNIQUE		
ANDRITSOS	Dimitrios	HEC		
BELZIL	Christian	ECOLE POLYTECHNIQUE		
BOURGEON	Jean-Marc	ECOLE POLYTECHNIQUE		
CREPON	Bruno	CREST-ENSAE		
CRIFO	Patricia	ECOLE POLYTECHNIQUE		
DAVEZIES	Laurent	CREST-ENSAE		
DEVALCK	Kristine	HEC		
D'HAULTFOEUILLE	Xavier	CREST-ENSAE		
FOUCAULT	Thierry	HEC		
FOUGERE	Denis	CREST-ENSAE		
GARY-BOBO	Robert	CREST-ENSAE		
GOH	Ai-Ting	HEC		
HAGENBACH	Jeanne	ECOLE POLYTECHNIQUE		
HOLLARD	Guillaume	ECOLE POLYTECHNIQUE		
HOMBERT	Johan	HEC		
JOHN	Anett	CREST-ENSAE		
KAMIONKA	Thierry	CREST-ENSAE		
KERBACHE	Laoucine	HEC		
KORIYAMA	Yukio	ECOLE POLYTECHNIQUE		
KRAMARZ	Francis	CREST-ENSAE		
LARAKI	Rida	ECOLE POLYTECHNIQUE		
LE BARBANCHON	Thomas	CREST-ENSAE		
MICHALSKI	Tomasz	HEC		
MINDRUTA	Denisa	HEC		
PEREZ	Eduardo	ECOLE POLYTECHNIQUE		
PICARD	Pierre	ECOLE POLYTECHNIQUE		
PONS	Vincent	CREST-ENSAE		
PONSSARD	Jean-Pierre	ECOLE POLYTECHNIQUE		
RUIZ-ALISEDA	Francisco	ECOLE POLYTECHNIQUE		
THESMAR	David	HEC		
VANHUELE	Marc	HEC		
WORM	Stefan	HEC		



## **3 Publications**

In Subsections 1 and 2 we display a selection of published papers and working papers produced by the team within the axis topics. The papers In Subsections 3 and 4 have been specifically funded by the Labex Ecodec.

#### 1) Published and accepted papers

Thomas BRODATY, Robert J. GARY-BOBO and Ana PRIETO, "Do Risk Aversion and Wages Explain Educational Choices?", 2014 forthcoming, *Journal of Public Economics*.

Robert GARY-BOBO and Touria JAAIDANE, "Strikes and Slowdown in a Theory of Relational Contracts", 2014 forthcoming, *European Journal of Political Economy*.

Luc Behaghel and Thomas Le Barbanchon, "<u>Unintended Effects of Anonymous resumes</u>", 2014 Forthcoming in American Economic Journal: Applied Economics
Luc Behaghel, Marc Gurgand and Thomas Le Barbanchon, "<u>Please Call Again: Correcting Non-Response Bias in Treatment Models</u>", 2014 Forthcoming in *The Review of Economic and Statistics* 

Florencia Devoto, Esther Duflo and William Parienté, "<u>Estimating the Impact of Microcredit on Those who Take It Up: Evidence from a Randomized Experiment in Morocco</u>", 2014 Forthcoming in American Economic Journal: *Applied Economics* 

Luc Behaghel and Marc Gurgand, "Private and Public Provision of Counseling to Job-Seekers: Evidence from a Large Controlled Experiment", 2014 Published in American Economic Journal: Applied Economics, 6(4): 142-74

Esther Duflo, Marc Gurgand, Roland Rathelot and Philippe Zamora, "<u>Do Labor Market Policies</u> Have Displacement Effects: Evidence from a Clustered Randomized Experiment", 2013 Published in *Quarterly Journal of Economics* vol. 128(2), pages 531-580, Paper selected as editor's choice

#### 2) Working papers and papers in revision

Touria JAAIDANE et Robert GARY-BOBO, 2012, "La réforme des régimes spéciaux de retraite a-t-elle été "ratée"? Etude du cas de la RATP", 27 juillet 2012, manuscrit, CREST ENSAE et Université de Lille1. 2014 revise and resubmit, *Revue Economique*.

#### 3) Labex Ecodec published and accepted papers

Robert GARY-BOBO, Alain TRANNOY, "Le recrutement collégial: l'Université comme partenariat à but non-lucratif", 2014, forthcoming, *Revue Economique*.



Yukio Koriyama, Jean-François Laslier, Antonin Macé and Rafael Treibich "Optimal Apportionment." (2013) *Journal of Political Economy*, 121(3): 584-608.

#### 4) Labex Ecodec working papers and papers in revision

Robert GARY-BOBO, Marion GOUSSE and Jean-Marc ROBIN, 2013, "Grade Retention and Unobserved Heterogeneity", CREST-ENSAE, manuscript, submitted for publication.

Robert GARY-BOBO and Alain TRANNOY, 2013, revised 2014, "Optimal Student Loans and Graduate Tax under Moral Hazard and Adverse Selection", CESIfo discussion paper no 4279, revise and resubmit Rand *Journal of Economics*.

Christian Belzil, Jorgen Hansen and Xingfei Liu (Concordia University), "Estimation of a Life-Cycle Skill Accumulation Model with Comparative Advantages and its Economic Implication, 3rd version revised for *Journal of Political Economy*.

Christian Belzil, Jorgen Hansen and Xingfei Liu (Concordia University), "Dynamic Skill Accumulation, Comparative Advantages, Compulsory Schooling and Earnings", IZA WP 6167, 3rd version revised and re-submitted at *Quantitative Economics*.

Ana Babić, Francesca Sotgiu, Kristine de Valck, Tammo H.A. Bijmolt, "Factors Influencing the Effectiveness of Electronic Word of Mouth (eWOM) on Sales: A Meta-Analytic Review" Manuscript under review at *Journal of Marketing Research* 

Xavier d'Haultfoeuille, Clément de Chaisemartin, "Fuzzy Changes-in-Changes", submitted in June 2014

Stefan Worm, Sundar Bharadwaj, Jialie Shen, Rajendra Srivastava, "The Firm Performance Outcomes of Top Management Team Marketing Attention", Manuscript under preparation for submission to *Journal of Marketing Research* 

Yukio Koriyama, Ali Ihsan Ozkes (2014) "The Condorcet Jury Theorem under cognitive hierarchies: theory and experiments" mimeo, Ecole Polytechnique Departement of Economics, cahier de recherche 2014-24.

Jean-Francois Laslier and Karine Van der Staeten, "Strategic Voting under Committee Approval: A Theory" (2014)

Romain Lachat, Jean-François Laslier and Karine Van der Straeten, "Strategic Voting under Committee approval: An application to the 2011 regional government election in Zurich" (2014)

Laurent Davezies, Manon Garouste, "Evaluation of the "Ambition Success Networks Program", under revision, *Revue Economique*.



## 4 Grants allocated to research projects

## Year 2013

Researcher		Project title		
Belzil	Christian	Estimation of a Life-Cycle Skill Accumulation Model with Comparative Advantages and Implications for Compulsory Schooling Policies		
Davezies	Laurent	Evaluation of the "Ambition Success Networks" program		
d'Haultfoeuille Xavier		Fuzzy Change in Change		
Gary-Bobo	Robert	Public Finance, Public Organization and Re-Organization		
Koriyama Yukio		Public decision-making under bounded rationality		
Jean- Laslier François		A Swiss voting system		
Le Barbanchon	Thomas	Human resources practices and workers' productivity		



## **Year 2014**

Researcher		Project title		
Allain Marie-Laure		Are Cartel Fines optimal? Theory and Evidence from the European Union		
Belzil	Christian	Ex-ante Evaluation of Higher Education Financial Aid Policies using a Canadian Field Experiment		
Bourgeon	rgeon Jean-Marc Optimal Territorial Org			
De Valck	Kristine	The business value impact of social media marketing strategies		
Gary-Bobo	Robert	Public Finance, Public Organization and Re-Organization		
Koriyama Yukio		Endogenous cognitive hierarchy model in public decision making		
Ors Evren		Analyse de l'efficacité du Droit Français des entreprises en Difficulté		
Ruiz-Aliseda	Francisco	When do switching costs make markets more or less competitive?		
Worm	Stefan	The Stock Market Value Relevance of TMT Marketing Strategy Attention		



### **Project Descriptions**

Project Title: Are Cartel Fines Optimal? Theory and Evidence from the European Union Principal Investigators: Marie-Laure Allain (Ecole Polytechnique), Jean-Pierre Ponssard

(Ecole Polytechnique)

Co-authors: Marcel Boyer (University of Montreal), Rachidi Kotchoni (Université de Cergy)

Deterring the formation or continuation of cartels is a major objective of antitrust policy. Though a number of countries have adopted criminal sanctions against individuals who engaged in hardcore cartels, antitrust authorities rely mainly on financial penalties to enforce laws against cartels. In this project, we focus on fines as the main instrument for antitrust authorities to deter the formation of cartels.

The first step of this project is theoretical, and much progress has already been done there. We develop a dynamic framework to characterize the compensation and deterrence properties of fines, based on the fact that cartel stability depends on the ability to prevent deviation, which itself depends in part on fines imposed in case of detection and conviction. We show that the proper consideration of cartel dynamics plays a major role in determining optimal deterrent fines. We first determine the optimal fine level as a function of four parameters, namely the competitive markup, the cartel overcharge, the elasticity of demand, and the probability of cartel detection. We embed this analysis in a dynamic model of cartel stability where we consider that (illicit) communication is necessary for collusion and that it generates verifiable evidence the antitrust authorities will discover if they audit the industry. The benchmark fine level we recommend satisfies both the deterrence and compensation requirements.

The second step of the project, which we plan to develop in 2014, is the empirical analysis. Having already built a database of all European cartel cases from 2005 to 2010, we plan first to complete the database with more recent years. Then we plan to review the fines imposed on cartel members by the EC and to compare them to the optimal fine level we derived and recommend. We also plan to complete a database on French cartel cases in order to develop a similar analysis at the French level, as smaller cartel cases are dealt with by national antitrust authorities. We hope to finish the empirical paper on the EU data, and to complete the database on French cartel cases in the coming year. The outcome should be of interest to academics and practitioners in the field of antitrust economics.

Project title: Ex ante Evaluation of Higher Education Financial Aid Policies using a Canadian

**Field Experiment** 

Principal Investigator: Christian Belzil (Ecole Polytechnique)

Using data drawn from a field experiment conducted in several Canadian high schools, we estimate a structural model of higher education financing in which risk aversion and discount factors are non-parametrically identified. Our preliminary estimates imply that the median



agent would be willing to pay an additional rate of 3% to secure a loan comparable to those offered by Canadian institutions and give up 50 cents of current consumption for a 1\$ reduction in yearly tuition. We find that the distribution of the willingness to pay is mostly explained by risk aversion and discount rates and to a lesser extent by parental income. The paper will be presented in seminars and conferences for the first time in early 2015.

Project title: Estimation of a Life-Cycle Skill Accumulation Model with Comparative

Advantages and Implications for Compulsory Schooling Policies Principal Investigator: Christian Belzil (Ecole Polytechnique)

**Co-author: Jorgen Hansen (Concordia university)** 

My current research agenda spans a relatively wide set of topics in the Economics of Education and Human Capital and in Education Policies. Designing optimal education policies is a major challenge to most advanced economies. In particular, and in the presence of comparative advantages, some individuals are more likely to accumulate skills in the labor market while others are particularly confortable in an academic environment. For this reason, it is particularly important to quantify the fraction of the population more effective at producing skills in the labor market. To do this, it is crucial to estimate models that take into account the possibility that education have "long lasting" effects on life-cycle earnings growth. These issues, along with a few more, are at the center of two working papers described below.

#### **Working papers**

Estimation of a Life-Cycle Skill Accumulation Model with Comparative Advantages and its Economic Implications

with Jorgen Hansen and Xingfei Liu (Concordia University).

Status: 3rd version revised for Journal of Political Economy.

Abstract: We estimate a structural model of schooling, labor supply and life-cycle earnings in which heterogenous agents can produce skills both in school and in the labor market and we analyze various behavioral implications of comparative advantages. The model is estimated using a sample of white males taken from the 1979 cohort of the National Longitudinal Survey of Youth (NLSY). We find that schooling induces more skill formation (at

1an average rate of 5.9% per year) than full-time work (at a rate of 4.9% per year), in the early phase of the life-cycle. Although the correlation between the individual specific rates of skill production in school and in the market is positive (0.19), our estimates imply that 24% of the US while male population is more effective (ex-ante) at producing skills in the market than in school and has already accumulated as much skills in the market (as in school) by age 35. We show how comparative advantages transforms the usual Ability Bias into a positive correlation between realized schooling and subsequent wage growth and also reduces the importance of individual differences in the utility of attending school in favor of more educational selectivity based on heterogeneity in skill production. Comparative advantages also tends to damp the portion of wage inequality explained by initial conditions (about 50% of observed inequality at age 35 is explained by heterogeneity). Finally, we show how comparative advantages may help explain the incidence of negative IV estimates of the return to schooling and why negative



compulsory schooling IV estimates are unlikely for the US.

Dynamic Skill Accumulation, Comparative Advantages, Compulsory Schooling and Earnings, IZA WP 6167

with Jorgen Hansen and Xingfei Liu (Concordia University)

Status: 3rd version revised and re-submitted at Quantitative Economics.

We show how a dynamic skill accumulation (DSA) model allowing for comparative advantages may be used to explain the negative effects of schooling on productivity that have been recently reported in the micro literature on compulsory schooling, in the micro literature on estimating the distribution of expost returns to schooling, and in the macro literature on education and growth. The fraction of the population more efficient at producing skills in the market than in school is a pivotal quantity that determines the sign (and magnitude) of different parameters of interest. Our model reveals an interesting paradox; as low-skill jobs become more skill-enhancing (ceteris paribus), IV estimates of compulsory schooling become increasingly negative, and ex-post returns to schooling (inferred from a Roy model specification of the earnings equation) become negative for an increasing fraction of the population. This arises even if each possible input to skill production has a strictly positive effect. Finally, our model provides a foundation for the existence of a negative effect of education on growth measured in the empirical literature.

## Project Title: Optimal Territorial Organization Principal Investigator: Jean-Marc Bourgeon (collaboration with Marie-Laure Breuillé, INRA)

Territorial organization varies highly from one country to the other. Although this great variety is admittedly the outcome of country-specific differences in geography, history, and political and social movements, territorial organization reforms should be guided or at least motivated by a quest for an optimal organization. We explore this issue with the aim of determining the number of tiers, the degree of territorial dispersion (i.e. the number of same-tier jurisdictions which geographically and administratively belong to the same jurisdiction in the upper tier) that characterizes an optimal territorial architecture, and how this structure is modified by political and fiscal constraints.

Project title: Analyse de l'efficacité du Droit Français des entreprises en Difficulté" Principal Investigators: Vedran Capkun (HEC), Evren Ors (HEC)

"In this research paper, we aim to examine the efficiency of the French corporate bankruptcy regime and the changes therein. The legal treatment of corporate bankruptcies in France has changed little in its essence since its adoption in 1549. French approach to corporate bankruptcy reflects the decision power of the bankruptcy judge ("jige consulaire" in French), who is not a lawyer by training but a professional from the business community who is elected



to the commercial court by his peers. The court judge is assigned the objective "to enable the continued operation of the company, maintaining employment and settlement of liabilities ." Creditors play a mainly advisory role and are not allowed, as in other jurisdictions, to decide the fate of the debtor, the latter is insolvent or experiencing a liquidity crisis. We aim to examine the role of judges, and any biases they may exhibit given their professional background. The research project requires that we access French bankruptcy court documents. We have been able to download the court documents, which we are in the process of digitizing for the empirical analysis stage.

Project title: Evaluation of the "Ambition Success Networks Program"

Principal Investigators: Laurent Davezies (CREST-ENSAE), Manon Garouste (CREST-ENSAE)

#### 1. Diffusion of results:

This work (cf. point 3) has been presented at the following conferences:

- -Journées de Microéconomie Appliquées (June 2013)
- -Journées Louis-André Gérard-Varet (June 2013)
- -Atelier de la Direction de l'Evaluation, de la Performance et de la Prospective du Ministère de l'Education Nationale (December 2013)
- -Séminaire Ségrégation Spatiale et Economique dans les espaces urbains, dans le cadre du Plan Urbanisme Construction et Architecture au ministère de l'Egalité des Territoires et du Logement (March 2014)
- -International Workshop on Applied Economics of Education (June 2014)
- Congress of the European Economic Association (August 2014)

#### 2. Publication:

This work has resulted in two research articles, the first one is under revision for publication in the French journal "Revue économique", the second one will soon be submitted to a peer-review journal.

#### 3. Short report:

We are working on two projects related to the evaluation of the "Réseaux Ambition Réussite" policy. In the first project, we evaluate the changes in schooling choices at the entry into sixth grade that this policy has caused. In the second one, we evaluate the effect of this policy on pupils' achievement by controlling for possible changes in schooling choices. In both projects, the evaluation is based on the fact that schools which entered the "Réseaux Ambition Réussite" program are similar to other schools which were eligible to the program but did not enter it. More precisely, the probability of being part of the program is more important for schools enrolling 10% of repeaters in sixth grade and / or schools enrolling 67% of pupils from disadvantaged social backgrounds than for other schools. For schools being close to these 10% and 67% thresholds, this generates an assignment to the program that is comparable to what a random draw would do. The results show that this policy leads to a change in schooling choices; the least advantaged students (scholarship pupils and pupils from disadvantaged social backgrounds) are less likely than other pupils to avoid treated schools. This tends to reinforce social segregation across schools. Concerning academic achievement (measured as the results to "Brevet des collèges"), the program seems to be neither detrimental nor



beneficial to treated pupils.

Project title: Factors Influencing the Effectiveness of Electronic Word of Mouth (eWOM) on

Sales: A Meta-Analytic Review

Principal Investigators: Ana Babić, (HEC Paris), Francesca Sotgiu, (HEC Paris), Kristine de Valck (HEC Paris), Tammo H.A. Bijmolt (University of Groningen, the Netherlands)

#### Status:

Manuscript under review at Journal of Marketing Research

The growing amount of electronic word of mouth (eWOM), such as online reviews, star ratings, tweets, and Facebook "likes," has significantly affected the way consumers make purchase decisions. Empirical studies establish an effect of eWOM on sales but disagree on what drives this effect. While some evidence suggests that the main predictor of sales is the volume of eWOM, different measures (e.g., valence, variance) have also been found influential. The authors conduct a meta-analysis of 1318 effect sizes across 76 published and unpublished studies. They find an average correlation of eWOM on sales of .069. The effect varies significantly across eWOM metrics, with volume being the most important metric linked to sales. In addition, positive eWOM has a larger effect than negative eWOM, indicating positivity bias. The effect of eWOM differs across online platforms but not across product types. The effect also depends on methodological choices, such as accounting for product price and previous levels of sales. These findings have implications for brand managers and online platform managers, as well as for research on eWOM.

#### PRESENTATIONS AND CONFERENCE PROCEEDINGS

Ana Babić, Francesca Sotgiu, Kristine de Valck, and Tammo H.A. Bijmolt, "Factors Influencing the Effectiveness of Electronic Word of Mouth (eWOM) on Sales: A Meta-Analytic Review", Special Track "Internet and Interactive Marketing", INFORMS Marketing Science Conference, Atlanta, June 2014

Ana Babić, Francesca Sotgiu, Kristine de Valck, and Tammo H.A. Bijmolt, "Factors Influencing the Effectiveness of Electronic Word of Mouth (eWOM) on Sales: A Meta-Analytic Review", invited talk, Thought Leaders in Marketing Channels Conference, Paris, June 2014

Ana Babić, Francesca Sotgiu, Kristine de Valck, and Tammo H.A. Bijmolt, "The Business Value of Electronic Word of Mouth: A Meta-Analytic Review", 35th Annual INSEAD-ESSEC-HEC Research Seminar, INSEAD, Fontainebleau, March 2014

Ana Babić, Kristine de Valck, and Francesca Sotgiu, The Business Value of Electronic Word of Mouth: A Meta-Analytic Review, Special Interest Group session "User Generated Content In E-Commerce: Taking The Next Step", 42nd European Marketing Academy Conference (EMAC), Istanbul, June 2013



**Project title: Fuzzy Changes-in-Changes** 

Principal Investigators: Xavier d'Haultfoeuille (CREST-ENSAE), Clément de Chaisemartin (Warwick University)

In this project, we extend the Change in Change model of Athey and Imbens (2006) to fuzzy designs where the control group, or the treatment group in first period, may be treated. Treatment effects on compliers are fully identified if the treatment rate remains constant over time in the control group, and partially identified otherwise. We develop inference for both cases and apply our results to three examples, revisiting in particular Duflo (2001) and Field (2007).

Working paper CREST 2014-18 (paper submitted in June 2014).

Presented (since 2013) at:

Brown University (séminaire d'économétrie),

Boston University (séminaire d'économétrie),

Warwick University ("Applied Economics, Econometrics and Public Policy Workshop"),

Chicago University (conférence "Interactions: bringing together Econometrics and Applied Microeconomics")

Project title: Public Finance, Public Organization and Re-Organization Principal investigator: Robert Gary-Bobo (CREST-ENSAE)

Co-authors: Jean-Marc Robin (Sciences Po, Paris), Alain Trannoy (EHESS, Aix-Marseille), Touria Jaaidane (University of Lille 1), Nabil Al Najjar (Northwestern University, Evanston, Illinois)

The project combines applied economic theory and empirical work in Public Finance. The general idea is to apply the *theory of contracts and incentives* to the *economic analysis* of *public pay, public careers* and *pensions* on the one hand, and to the *optimal regulation* and funding of some categories of public sector providers of services such as *schools, universities* and *hospitals*.

#### 1. Public Finance; Public Personnel.

The revision of my manuscript with Touria Jaaidane on pension reform and the Paris metro workers has been resubmitted to the *Revue Economique*. The English version of this research is almost ready.

My paper on the theory of strikes with Jaaidane has been accepted for publication in *European Journal of Political Economy* in July 2014. See list above.



#### 2. University governance and reform.

One accepted papers, with Alain Trannoy; in *Revue Economique* (see list below).

#### 3. Theory of Incentives.

The paper on student loans with Trannoy underwent two revisions for *Rand Journal of Economics* (with three positive reports on the first round), and two positive reports on the first revision. The second revision was for minor points only. We have good hopes that the paper will be accepted before the end of 2014.

#### 4. Economics of Education.

The third revision of my paper with Brodaty and Prieto on risk aversion and education has been accepted for publication in Journal of Public Economics in Spring 2014.

A new manuscript, with Jean-Marc Robin and Marion Goussé, was finished in December 2013, on "Grade retention and Unobserved Heterogeneity". This paper has been submitted for publication.

Thomas Brodaty (CEE), R. Gary-Bobo and J-M Robin are currently working on a joint paper on Education and Wages.

5. Public Finance, Optimal Taxation.

A new research in preparation with Nabil Al Najjar on Optimal Taxation.

Project title: Public decision-making under bounded rationality, and Endogenous cognitive hierarchy model in public decision making

Principal Investigator: Yukio Koriyama (Ecole Polytechnique)

We build a model of endogenous cognitive hierarchy model, which explains group behavior of public decision making under bounded rationality. We extend the model which do not hinge on the overconfidence assumption, and discuss in what class of the games the behavioral prediction would differ significantly with and without the overconfidence assumption. We show that the information aggregation game in group decision making à la Condorcet is such a game. We conducted laboratory experiments at Ecole Polytechnique in 2013. Analysis of obtained data shows that the endogenous cognitive hierarchy model exhibits a better fit to explain the behavior of agents with bounded rationality in group decision making. Working paper

 Yukio Koriyama and Ali Ihsan Ozkes (2014) "The Condorcet Jury Theorem under cognitive hierarchies: theory and experiments" mimeo, Ecole Polytechnique Departement of Economics, cahier de recherche 2014-24.



#### Presentations

- Ecole Polytechnique, lunch seminar, Palaiseau, May 2014
- 5<sup>th</sup> Murat Sertel workshop on Economic Design, Istanbul, May 2014
- SAET (Society for Advancement of Economic Theory), Tokyo, August 2014
- Transatlantic Theory Workshop, Paris, September 2014

**Project title: A Swiss voting system** 

Principal Investigator: Jean-François Laslier (Ecole Polytechnique)

Working papers (soon to be submitted):

 "Strategic Voting under Committee Approval: A Theory" (2014) Jean-Francois Laslier and Karine Van der Staeten.

We propose a theory of strategic voting under "Committee Approval" where a fixed-sized committee of M members is to be elected. Each voter votes for as many candidates as she wants and the M candidates with the most votes are elected. We assume that voter preferences are separable and that there exists a tiny probability that any vote might be misrecorded. Then strategic voting involves voting by pairwise comparisons. Two candidates play a critical role: the weakest expected winner and the strongest expected loser. Expected winners are approved if and only if they are preferred to the strongest expected loser and expected losers are approved if and only if they are preferred to the weakest expected winner. At equilibrium, if any, a candidate is elected if and only if he is approved by at least half of the voters. With single-peaked preferences, an equilibrium always exists, in which the first M candidates according to the majority tournament relation are elected.

- Strategic Voting under Committee approval: An application to the 2011 regional government election in Zurich. (2014) Romain Lachat, Jean-François Laslier and Karine Van der Straeten.

In several cantons in Switzerland the regional government, i.e. a set of governors who share the executive power in the canton, is elected according to an original voting rule, in which voters can vote for several candidates (up to a maximal number of votes). Up to some details, these elections are instances of what is known in Social Choice Theory as "Committee Approval Voting". The contribution of this paper is twofold. First, we propose a theory of individual rational voting under such a rule. Second, we use data from a panel survey collected during the 2011 Zurich cantonal election to check whether this theory is consistent with individual behaviour observed during that election. We show that roughly 70% of the individual decisions on candidates are consistent with our model of rational voting.



Project title: Human resources practices and workers' productivity

Principal investigators: Thomas Le Barbanchon (CREST-ENSAE), Roland Rathelot (CREST-ENSAE)

In this applied research, we ask whether workers should be paid a fixed wage rate or a piece rate. We study the wage structure and workers' productivity in one particular firm that conduct surveys.

Project title: when do switching costs make markets more or less competitive? Principal investigator: Francisco Ruiz-Aliseda (Ecole Polytechnique)

Switching costs arise when the consumers of a product develop a stronger preference towards such a product after trying it out. This inertia could be due for example to the existence of (product-specific) learning costs, as happens with software products. Although identifying them is empirically challenging, switching costs have been documented for many products in industries as diverse as banking, ketchup, telecommunications, paid-TV or cigarettes.

The theoretical literature in industrial organization (IO) argues that firms will compete fiercely to attract consumers who will then become attached to the firm and be largely monopolized. The temporal price pattern given this competition for customer lock-in exhibits a so-called "bargains-then-ripoffs" evolution. The policy prescription is that, overall, switching costs make markets more competitive because of the intense competition for new consumers (for a survey, see Joseph Farrell and Paul Klemperer's chapter on the Handbook of Industrial Organization, volume III, published in 2007 by Elsevier-North Holland).

In drawing such policy implications, the IO literature has made a key technical assumption that ensures equilibrium existence: products must exhibit sufficient horizontal differentiation from each other once they have been tried out by consumers. The starting point for the current project is to show that the common wisdom that firms should be willing to fight for new consumers is entirely driven by this technical assumption.

We argue that making such an assumption is not innocuous. Thus, if demand from consumers were elastic enough (e.g., switching costs are very small) once they have tried out a product, capturing new consumers at the expense of the rival may induce the latter to try to steal them away even after having tried out the firm's product. That is, attracting new consumers may make the rival compete more aggressively for them once they have become attached to the firm. As a result, firms may be willing to compete for new consumers, but not for all of them, which softens competition to attract them: capturing too many may make the rival more aggressive for consumers who become locked-in in the future, which is not desirable.

The conclusion of the project is that, when horizontal differences between firms are not that important, enlarging the size of switching costs will actually make markets less competitive. In the absence of horizontal differentiation, the common wisdom remains true only when switching costs are large (and hence demand from consumers who already tried out a product is sufficiently inelastic). The way we depart from the standard assumption in the literature is by introducing switching cost heterogeneity in the consumer population, which allows us to relax the technical assumptions that drive policy implications derived up to now. Our work is



relevant not only for the classical literature on switching costs, but also for the more recent one on full-fledged dynamic models with continuous arrival of consumers. Such a literature has restricted attention to (Markovian) equilibrium pricing strategies that grow linearly with the number of consumers captured, a monotonicity property that is shown not to hold in our setup.

Project title: The Firm Performance Outcomes of Top Management Team Marketing Attention

Principal Investigators: Stefan Worm (HEC Paris), Sundar Bharadwaj (University of Georgia, USA), Jialie Shen, Rajendra Srivastava (both Singapore Management University)

#### Status:

Manuscript under preparation for submission to Journal of Marketing Research

Marketers firmly believe that they should be in the firm's driver's seat, but in reality the attention paid to marketing issues in the boardroom is fairly limited. This paper explores the mechanisms through which top management team (TMT) marketing attention affects firm performance outcomes. In this pursuit, we compile a unique panel data set combining text analysis-based measures of TMT attention with consumer brand ratings, innovativeness measures, and financial performance. The study first develops and validates a higher-order measure of TMT marketing attention using a novel statistical textual analysis framework based on a machine-learning algorithm. Next we examine how TMT attention affects non-financial (e.g., brand perceptions and innovation) and financial performance (e.g., firm value and risk). Then we investigate how these outcomes are contingent on firm-specific and industry-level factors.

#### PRESENTATIONS AND CONFERENCE PROCEEDINGS

Worm, Stefan\*, Jialie Shen, Rajendra Srivastava, & Sundar Bharadwaj, "The Firm Performance Impact of TMT Marketing Attention," 2014 Marketing Science Conference Conference, Atlanta (USA).

Worm, Stefan\*, Jialie Shen, & Sundar Bharadwaj, "The Value Relevance of Top Management Team Marketing Attention," 2014 AMA Winter Educator's Conference, Orlando (USA).

Worm, Stefan\*, Jialie Shen, Rajendra Srivastava, & Sundar Bharadwaj, "The Value Relevance of Top Management Team Marketing Attention," *Marketing Strategy Meets Wall Street Conference 2013*, Frankfurt (Germany).

Worm, Stefan\*, Jialie Shen & Sundar Bharadwaj, "The Value Relevance of Top Management Team Marketing Attention," *Marketing Science Conference 2013*, Istanbul (Turkey).



## **5 PhD and postdoc grants**

Name	Surname	Contract typ	PhD Subject/Research subjects	
DE CHAISEMARTIN	Clément	PhD	Modèles d'effets du traitement en économétrie et application à l'évaluation des politiques publiques	
DELBOURG	Esther	PhD	Empirical Analysis of Water resources Allocation for Food Security	
GOUSSEBAILE	Arnaud	PhD	Impact Economique des catastrophes naturelles et des changements climatiques	
NEZAMI	Mehdi	PhD	Reaction of the Stock Market to Brand Leverage Announcement	
PERNAUDET	Julie	PhD	Parent's attitude and child development	
PHILIPPE	Arnaud	PhD	L'importance de l'information dans la justice pénale	
PONS	Vincent	Post doctoral fellow	Political Economy, Development	
RENAULT	Chloé	PhD	Marketing strategy evaluation	
REZAEE-VESSAL	Sara	PhD	Organizing Gloabal Innovation Projects	
TREIBICH	Raphael	PhD	Essais en économie normative	



#### Two examples of PhD topics

Julie Pernaudet, PhD topic: Human capital development policies in early life

#### Abstract:

The first project of this thesis, co-authored with Bruno Crépon, addresses the issue of low investments in health among unemployed young people. We investigate whether providing them with individualized information on health insurance and/or on the utility of health care and prevention increases their investments in health. Based on a randomized controlled trial (RCT) implemented among more than 1 500 French young people, we find that information on health insurance only does not increase the demand for healthcare, whereas combining the two types of information significantly increases the probability to consult a psychologist.

The second project, co-authored with Marc Gurgand and Nina Guyon, evaluates a French educational policy targeting children, within deprived areas, who cumulate important medical, social or academic difficulties. This policy aims to provide individualized support to the child, involving both family and school. Our identification strategy relies on difference-in-difference matching estimation.

The third project intends to investigate the role of risk aversion in the choice of field of study after high school. The econometric approach will be structural and based on the German Socio-Economic Panel (GSOEP) data.

#### Arnaud Philippe, PhD topic: The effect of information on criminal justice

Arnaud Philippe's research focuses on criminal justice. In his PhD dissertation he concentrate on the effect of information on criminal justice: offenders' behavior and judges' decisions. In the first chapter of his PhD dissertation, co-authored with A. Ouss (Chicago University), A. Philippe document the causal effect of media on judicial decisions. Using precise administrative data on both convictions and media contents the authors showed that crime coverage increase sentences in the following days. The second article, coauthored with R. Galbiati (Science Po) and A. Ouss, deals with the impact of job creation and destruction on former inmates' recidivism. The authors show that local news affect people's behavior. In the last chapter of his PhD dissertation A. Philippe evaluates the deterrent effect of a reform increasing sentence times in case of reoffending. He shows that, thanks to a biased presentation of the law, the short term effect exceed the medium term deterrent effect.

The paper "No hatred or malice, fear or affection: media and sentencing", co-authered with A. Ouss (Chicago University) won the Junior Price at "6th Workshop on Economics of Crime" in Milan, October 2014.



## 6 Invited researchers

#### Sundar Bharadwaj (University of Georgia, USA)

During the visit, Prof. Bharadwaj worked with HEC Marketing faculty on research and provided tutoring (e.g. friendly review of papers etc.) and he gave a 10-hour PhD seminar at HEC.

Sundar Bharadwaj has an impressive track record of impactful publications in the domain of strategy evaluation in marketing. He has recently been listed as the 12th most productive researcher by the American Marketing Association. He contributes to the track by emphasizing the importance of strategy evaluation among the hEC faculty and PhD students.

#### Tammo Bijmolt (University of Groningen)

Tammo Bijmolt is a co-author on the paper "The Business Value of Electronic Word of Mouth: A Meta-Analytic Review" together with Ana Babic (HEC Paris), Kristine de Valck (HEC Paris), Francesca Sotgiu (HEC Paris).

The project looks at how social media activities impact business performance (sales, stock prices, etc.) across different industries and product categories to provide guidelines to companies for future firm policies

#### **Robert Palmatier (University of Washington)**

Prof. Palmatier gave a PhD seminar at HEC open to students affiliated with LABEX. He was also a speaker at HEC's 2013 marketing research camp. In addition, he co-chaired a specialized LABEX conference on marketing channels.

#### **Martin Klarmann**

Prof. Klarmann gave a research seminar at HEC and interacted with with faculty.

## 7 Conferences

#### **2014 Thought Leaders in Marketing Channels Conference**

Both practice and research focused on marketing channels have changed dramatically over the past few decades. The large shift of GDP from products to services in many economies, the increasing use and importance of the Internet and other technological advances, and the internationalization of many markets and industries is significantly impacting marketing channel structures and strategies. With this conference, commemorating Louis P. (Pete) Bucklin's exceptional body of research on channels of distribution, it is our aim to link the past



to the future by both looking back to what we has been done and by looking forward to what will be done in marketing channel research and practice. Specifically, we encourage presentations of state-of-the art research providing clear insights into how changing environments have and will be impacting marketing firms' channel policies. We purposely left the domain of marketing channels broad to include wholesale, retail, franchise, distribution, supply chain, and business-to-business contexts. Research topics of specific interest for this conference could include (abbreviated list):

- What is and will be the impact of "shifting to services" on the effectiveness of marketing channel policies?
- What is and will be the impact of "online channels" on marketing channels?
- What is and will be the impact of "new technologies" on marketing channels?
- What is and will be the impact of "globalization" on marketing channels policies?
- What is and will be the impact of "new competitive structures" on marketing channels?
- How do marketing channels fit in the marketing mix decisions of entrepreneurial and start up firms?
- What is the optimal number of channels a firm should use?
- What is the role of brand in channel structures and strategies?
- What is the role of relationship marketing in channel structures and strategies?
- What is the role of culture in channel structures and strategies?
- What is the impact of social media on marketing channels?
- How does multi-channel usage impact channel strategies and outcomes?
- How do customers make channel decisions in the "emerging" multichannel environment?
- What factors are impacting the disintermediation of marketing channels?
- Meta-analyses and reviews papers on marketing channels.
- Conceptual papers on marketing channel structures and strategies.

With this conference we aimed to attract papers by leading researchers from Europe, USA, and Australasia working on marketing channel strategies and policies. The timing just before the European Marketing Academy Conference in Valencia, Spain should make it easier for researchers from overseas to attend. The linked special issue in the Journal of Retailing along with the broad international network of the four co-chairs with will also help to bring in high-quality contributions. The following table shows an overview of editors and editorial board members who were among the attendees:



Name	Surname	Institution	Position Title 1	Position Title 2	Editorship
GANESAN	Shankar	University of Notre Dame	Professor of Marketin g		Editor-in-chief of the Journal of Retailing
HOYER	Wayne	UT Austin	Departm ent Chair, Professor	Director, Center for Customer Insight and Marketing Solution	Area Editor for the Journal of Marketing
KRAFFT	Manfred	University of Münster	Chaired Professor	Director of the Institute of Marketing at	Editor-in-Chief, Journal of Personal Selling & Sales
MANTRALA	Murali	University of Missouri, Columbia	Sam M. Walton Distingui shed Professor of Marketin g and Chair		Associate Editor of the Journal of Retailing
NESLIN	Scott	Tuck School at Dartmouth	Professor of marketin g		Associate Editor for Marketing Science
PALMATIER	Rob	University of Washington & HEC Paris	Professor of Marketin g, John C. Narver Endowed Professor in Business Administ ration	Research Director, Center for Sales and Marketing Strategy	Area Editor for the Journal of Marketing



Name	Surname	Institution	Position Title 1	Position Title 2	Editorship
RINDFLEISCH	Aric	University of Illinois	Professor of Business Administ ration	Department Head and John M. Jones Professor of Marketing	Area Editor for the Journal of Marketing, Area/Associate Editorship, Journal of Supply Chain Management, 2008-2012, Area/Associate Editorship, International Journal of Research in Marketing, 2006-2012
SCHEER	Lisa	University of Missouri	Emma S. Hibbs Distingui shed Professor	Professor of Marketing	Journal of Marketin g Editorial Review Board
VENKATESAN	Rajkumar	University of Virginia, Darden Graduate School of Business	Professor of Business Administ ration	Bank of America Research	Journal of Marketin g Editorial Review Board