

THE TOULOUSE SCHOOL OF ECONOMICS MAGAZINE

TSE MAG

Living economics

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Special issue

Development economics

Mariacristina
De Nardi on
the origins of
inequality

..... Daniel Garrett
on overbooking
in the airline
industry

..... Esther DuFlo &
Abhijit Banerjee
on fighting
poverty

..... Jérôme Bolte
on the future
of optimisation
algorithms

The new term 2016-17 has brought bustling academic life back to our Manufacture campus, and some exciting developments. We have launched our new international masters programme taught in English, welcoming 135 students for the first year. We have also welcomed four new faculty members: Johannes Hörner, one of the most gifted economic theorists of his generation, who joins us as full professor from Yale University, and three new assistant professors. Isis Durrmeyer, Ana Gazmuri and Tim Lee, whose profiles you can discover on page 5. These arrivals bring our tenure-track junior faculty base to 17, a record for us.



A remarkable confirmation of the high calibre of our tenure-track faculty came in September with the award of two prestigious ERC starting grants to Takuro Yamashita and Daniel Garrett, two of our assistant professors in theoretical economics and industrial organisation. Congratulations to them both!

In this issue you'll find a special dossier featuring our research activities in development economics. Understanding economic development has been at the heart of our field ever since Adam Smith wrote *The Wealth of Nations*, drawing inspiration from his long stay in Toulouse where he witnessed first-hand the world's largest infrastructure project at the time, the Canal de Midi. Development economics has been one of the most exciting and innovative areas of economic research in recent years, at the forefront of the use of new empirical tools such as randomized control trials, discussed in this issue. Going back to TSE's forefather Jean-Jacques Laffont who had a keen interest in the field, our thriving development group has made great contributions, as the articles featuring the work of Emmanuelle Auriol, Matteo Bobba, Pepita Miquel Florensa and Stéphane Straub show. This summer, the group brought some of the world's most eminent researchers in the field together in Toulouse for a state-of-the-art workshop, including Abhijit Banerjee and Esther Duflo, and we're delighted to offer you interviews with them in this special issue.

Wishing you an enjoyable read, and hope to see you soon,

Ulrich Hege, TSE Director
Jean Tirole, TSE Chairman

"Development economics has been one of the most exciting and innovative areas of economic research in recent years, at the forefront of the use of new empirical tools"

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Appointments & Prizes

Jean-François Bonnefon

work published in Science

Are you ready to drive a car that's programmed to kill you? That is the question that Jean-François Bonnefon (TSE-IAS -CNRS-CRM) and his co-authors Iyad Rahwan (MIT) and Azim Shariff (University of Oregon) answer in their study, unveiling a moral paradox related to using driverless cars.



tse-fr.eu/people/jean-francois-bonnefon

Emmanuelle Auriol

winner of the Grand Prix du livre éco 2016

Emmanuelle Auriol, TSE-UTC professor, won the first Grand Prix BFM BUSINESS du livre éco (BFM BUSINESS Grand Prize for Economics Books) for her book "Pour en finir avec les mafias - sexe, drogue et clandestins : et si on légalisait ?" (Putting an end to mafias - sex, drugs and people smuggling: what if we legalised them?) published by Armand Colin in May.

tse-fr.eu/people/emanuelle-auriol

Michel Moreaux

work honoured by the EAERE

Michel Moreaux (TSE - UTC) received the 2016 Lifetime Achievement Award in Environmental Economics from the European association EAERE (Association of Environmental and Resource Economists).

The prize rewards his enormous scientific productivity over more than 30 years, which helped to develop current knowledge in environmental economics.

tse-fr.eu/people/michel-moreaux



Marc Ivaldi

(TSE-EHESS) named Vice-President of the International Transportation Economics Association (ITEA)

In June, Marc Ivaldi became the Vice-President of this association dedicated to promote the development and application of transport economics. The annual ITEA conference was hosted by Toulouse School of Economics in 2014.

tse-fr.eu/people/marc-ivaldi



Maddalena Ferranna wins prize

Doctoral candidate Maddalena Ferranna won the prestigious 2015 Ernst Meyer Prize from the Geneva Association for her thesis on decision-making. This prize is awarded every year and recognises particularly promising doctoral theses in risk and insurance. Christian Gollier (TSE-UTC) was her PhD supervisor.



Emmanuelle Auriol joins the Institut Universitaire de France

By order of the Minister of National Education, Higher Education and Research on 11 April 2016, Emmanuelle Auriol was appointed as a senior member of the Institut Universitaire de France as of 1 October 2016, for a five year period.

Teaching researchers appointed at the Institut Universitaire de France continue to work at their "home" institution and are discharged of two-thirds of their teaching duties.

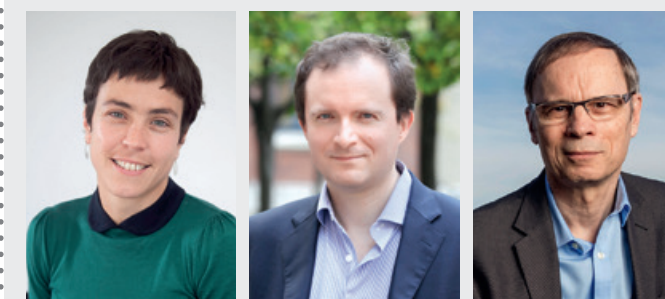
15 other TSE professors are also IUF members:

- Jean-Paul Azam
- Bruno Biais
- Helmuth Crémer
- Pierre Dubois
- Patrick Fève
- Jean-Pierre Florens
- Christian Gollier
- Christian Hellwig
- Augustin Landier
- Michel Le Breton
- Thierry Magnac
- Michel Moreaux
- Franck Portier
- Patrick Rey
- Jean-Charles Rochet

Strengthening French venture capital

Marie Ekeland (Paris School of Economics), Augustin Landier (TSE-UTC) and Jean Tirole (TSE) have submitted the following recommendations to the *Economic Analysis Council* with the aim of reinforcing French venture capital:

- 1 Clarify and streamline the objectives and investment policies of Bpifrance and the "Investissements d'Avenir" programmes.
- 2 Rethink the operation of the French Public Investment Bank (Bpifrance) as an industrial policy aiming at the emergence of an autonomous venture capital industry.
- 3 Assign Bpifrance a governing body that ensures its independence and long-term responsibility, in line with the best international practices. Articulate its strategy with other key actors to optimize public intervention and its assessment.
- 4 Develop and encourage links between the scientific community and entrepreneurial industry in France.
- 5 Clarify the fiscal situation for foreign investors in French venture capital, whether they are individuals or institutions, and simplify their access to these funds.
- 6 Ensure the tax structure for entrepreneurs encourages reinvestment of capital gains in the ecosystem.
- 7 Assess the efficiency of current public policy (both fiscal and industrial) on venture capital to get the most out of the budget for creating an autonomous entrepreneurial ecosystem.



Newcomers 2016-17

A warm welcome to our new TSE faculty members:

- Professor
- Assistant professors
- Postdoctoral research fellows



TSE is also proud to welcome five long-term visitors this year:

Visiting researchers

Alessandro Bonatti
MIT Sloan School of Management

Mikhail Drugov
New Economic School, Moscow

Pinar Keskin
Wellesley College, USA

Marta Troya Martinez
New Economic School, Moscow

Dan Yang
Southwest University, China

Save the date

17 NOVEMBER 2016
Conference on Jean Tirole's book

17-18 NOVEMBER 2016
Sustainable Agro-food Sectors and Public Policies

6 DECEMBER 2016
Health Economics Workshop

16-17 DECEMBER 2016
European Conference of the Econometrics Community

12-13 JANUARY 2016
10th Conference on the Economics of Intellectual Property, Software and the Internet

Events by invitation only: tse-fr.eu/events

What shapes inequality?

This summer, TSE hosted the 27th annual meeting for the Society of Economic Dynamics, welcoming more than 600 participants. One of the brightest and most industrious minds at the event was that of Mariacristina De Nardi, invited to give one of three fascinating plenary talks. Professor at University College London as well as a senior economist and research adviser at the Federal Reserve Bank of Chicago, she broke from her busy schedule to talk to TSE Mag about inequality, the secrets of academic success and the impact of Brexit.

How does it feel to be in Toulouse?

This is a great moment for me. The SED has an incredibly high quality of participants and to be invited to speak in Toulouse has special meaning to me. Although I grew up in Italy, my father is French and I always felt strongly about my French identity. My kids have been in a French school abroad since they were three.

What drives your work?

Ultimately, my goal as an economist is to try to make people's lives better. But to propose better policies, you need to understand why people behave the way they do. For instance, I started studying Social Security reforms in the US with [SED founder] Tom Sargent. Our models predict that the savings of retired people go down very fast when people get very old. But the data shows that highly educated people don't run down their assets until they are well past 90. You have completely counterfactual saving behaviour and that poses a big problem.

Your plenary talk focused on savings and wealth inequality. To what extent can governments make a difference?

A lot of what governments do is deciding how to take resources from people who are rich to give them to others. A large part of government budgets is thus made up of transfers. So we care a lot about inequality. In addition, the rise of Trump and the Brexit vote make you think that inequality has repercussions that go beyond aggregate output and consumption – they have much broader reach. Governments need to worry about all of these aspects.

"Piketty had an incredible impact, but we need more solid models to interpret the data"

One of your papers praises Thomas Piketty for revitalizing the debate on inequality. How are other economists trying to build on his research?

Piketty had an incredible impact. He made inequality front and centre of a stimulating political and economic debate. He and his team also worked really hard to provide better data and facts, helping to put together the World Wealth and Income Database that is now available to everyone. We have a lot more data now, but we need more solid models to interpret it – for instance, to compare the importance of intergenerational bequests and entrepreneurship in determining inequality.

What role does family have in shaping inequality?

We have a lot of exciting empirical evidence that the family is an important determinant of key economic outcomes. There is work suggesting that by age 16-23 at least half of inequality in lifetime income is already realized. People are shifting the focus to younger and younger ages to investigate the creation of human capital, which relates to earning capacity and health. For instance, it seems that mathematical and IQ capabilities are shaped at age three. The family has a crucial role in education and shaping attitudes.

How do relationships and marriage act as a source of both risk and insurance?

One thing that hasn't been studied a lot is how husbands and wives are exposed to each other's wage risk. Depending on



the market they face, they can use the labour supply of both partners – if one gets unemployed, the other can take a second job or work more and can share savings and housing. In addition, couples, and especially older ones, are also exposed to the health risks of both partners. On the other hand, the healthier one can help the one who is sick.

Does your research influence your relationships with your own family?

An important lesson from economics is that people are complicated but respond to incentives. I was trying to teach my children about the importance of giving to others, but it wasn't working. So I decided to show I had some 'skin in the game'. I said: "I will put up a matching contribution every time you decide that a toy can be given to someone who needs it more."

Do you have any advice for TSE students?

Successful people work incredibly hard. Look at Nobel prize winners who keep

being productive: their passion is their work. You can have ideas but it's a ton of work to go from an idea to a convincing finished product. My biggest advantage is that I never give up. Satisfactions happen very rarely and every day you're faced with frustrations. You have to keep going and take it one step at a time, but you also need to listen to feedback from others. You talk with people, you present to people, and almost every single one of them has something that will make you a better economist. At the same time, you cannot be pushed in all directions. You need to develop a good sense of what people are saying and why they are saying it in deciding to what extent that should influence what you do and how you do it.

As a Franco-Italian who has spent several years in London, what was your reaction to Brexit?

Every economist I know, and especially those most involved in Europe, thinks this is a big mistake that will turn out to

"Brexit was mystifying to me. It's a big mistake that will turn out to be very costly"

be very costly. It's likely to get worse if article 50 is triggered, because right now the markets are hoping that this will not happen. We need to find a way to work with the people who voted for Brexit. If we do not, it is going to be hard – the pound and the markets will drop further. What happened was mystifying to me. I didn't have the sense that people were ignoring what the vast majority of economists were saying in the UK. Clearly we have failed to communicate. But I know my colleagues at UCL will make sure UCL remains a top-tier economics department and stays at the very heart of economics research in Europe. ■

The views expressed in this article are those of Professor De Nardi alone and do not reflect those of the Federal Reserve Bank of Chicago, IFS, TSE, UCL, or NBER.

Mariacristina De Nardi
Professor at University College London

Why do airlines overbook?

Daniel Garrett joined TSE in 2012 as assistant professor (UTC) after completing a PhD at Northwestern. A specialist in microeconomic theory and industrial organisation, much of his research deals with dynamic mechanism design. He tells us about his work and two recently accepted articles on consumer value.

One of your recently accepted articles deals with overbooking in the airline industry. Can you tell us more?

We know that airlines sometimes sell more tickets than they have seats on their flights. Should all the passengers show up at the airport, they then try to negotiate with passengers to get some of them to take the next flight. Data indicates that about 1% of passengers find themselves in this situation on any flight in the US.

What is the reason behind this behaviour?

Airlines typically explain that a certain random number of passengers can be expected not to show up for a flight and overbooking allows companies to anticipate these defections. This is also the view expressed in the extensive body of literature in operations research. Our article tries to develop an alternative, complementary theory.

What is this new theory?

Along with Jeff Ely, who was one of my supervisors at Northwestern, and Toomas Hinnosaar (Collegio Carlo Alberto, Turin), a former classmate, we tried to model the ideal strategy for airlines to maximize profit. The twist we introduce to existing theories is that consumers don't know in advance exactly how much

they will be willing to pay for a specific flight. This makes selling tickets in advance a good strategy for the airline, and indeed the airline may want to overbook the flight by selling more tickets than there are seats. Tickets purchased in advance are then

"options to fly"; on the travel date, some passengers will choose to be seated while others will give up their seat for compensation paid by the airline. To get passengers to purchase tickets in advance, the airline raises the price of a seat as the

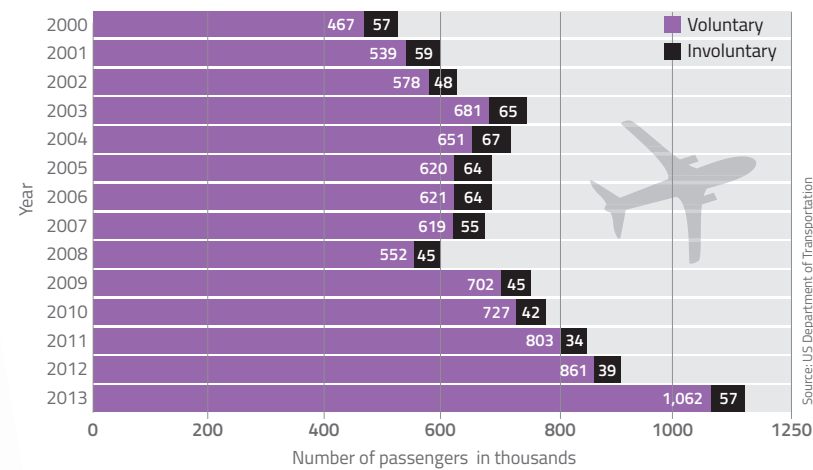
flight approaches, a pattern we see in many airline markets.

What are the limits of your model?

Our theory is developed under the assumption that there is a monopolistic company with no competition. While most air routes are subject to some competition, we believe such competition is often imperfect (e.g., simply because each carrier provides a somewhat different service), and so the key ideas we develop might be expected to apply.

"Data indicates that about 1% of passengers find themselves in this situation on any flight in the US"

Number of passengers denied boarding by the largest U.S air carriers from 2000 to 2013, by type (in 1,000s of passengers)



How do companies compensate passengers for overbooking?

We know that several companies ask passengers how much they would be willing to take to give up their seat, effectively using an auction to determine the buyback price of the overbooked tickets. This auctioning seems to be the optimal way to compensate bumped passengers.

You also individually wrote an article on the pricing of durable goods. Can you tell us more?

The idea was to build a new theory explaining price fluctuations or sales based on consumer values, which is the price consumers are willing to pay at a given time for a product. In the benchmark model of the literature, the seller's optimal price does not fluctuate: i.e., it is constant over time. I show that, when consumer values change randomly over time, optimal prices fluctuate. There are high prices at some dates and temporary "sales" at others.

How do changing consumer values affect the existing theory?

Once you accept that people don't necessarily know how much they will be willing to pay for something in advance, it becomes much more evident that you need to hold sales on your products.

Why did you focus on durable goods?

The interesting thing about durable goods is that there is a dimension of choice for customers about when to buy, because you usually need only one durable good. The fact that customers only need one of many durable goods makes the details of the theory easier to work out, but the idea seems to apply in most settings where customers have a choice about how to time their purchases.

What are your next research projects?

One project related to the above is with Toomas Hinnosaar. We are trying to understand better why people buy tickets in advance, given that they buy complementary services such as hotels to go with their flight tickets. In

particular, passengers may want to purchase tickets early because they have to plan their activities and make other purchases (such as hotel bookings) in advance. Perhaps surprisingly, this consideration has not been studied in the existing literature.



Consumer value

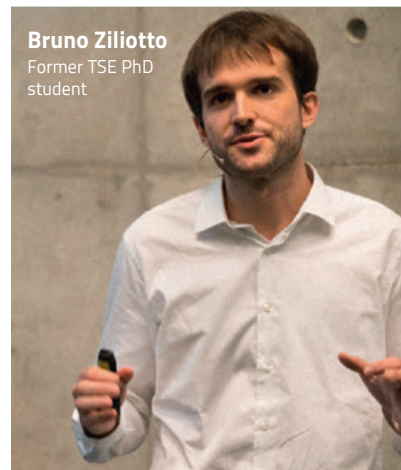
Consumer value is how much someone is ready to pay for a particular good. If a consumer is willing to buy a good, it implies that the customer places a higher value on the good than the market price. The difference between the value to the consumer and the market price is called 'consumer surplus'.

Daniel Garrett
TSE-UTC assistant professor

SHAPLEY LECTURE

An outstanding counter-example

Bruno Ziliotto was attending a conference on game theory in Singapore when he heard the news: he had been chosen to present the prestigious Shapley Lecture at the Fifth World Congress of the Game Theory Society, held in Maastricht in late July. The Shapley Lecture is presented every four years by a researcher aged 40 or under whose work represents an exceptional breakthrough in game theory. At age 27, Ziliotto is by far the youngest researcher to have presented it.



Bruno Ziliotto
Former TSE PhD student

After earning a masters in probability and macro-economics at the École Normale Supérieure in Lyon, Bruno undertook a challenging PhD at Toulouse School of Economics. He started the thesis, entitled "Long term strategies in repeated two-player games", in 2012 and defended in September 2015. It looked at a mathematical study of game models repeated a large amount of times, involving two players who compete against each other (zero-sum game). It was for this work that he was chosen to present the renowned Shapley Lecture.

Ziliotto's work generated a lot of attention, in particular because it included a counter-example to two conjectures formulated by Jean-François Mertens, a Belgian economist and pioneer in repeated games. These conjectures concerned a very general repeated game model, where the players have limited knowledge of their environment and their opponent's

decisions. "These models and these conjectures were presented in 1986, the discovery of a counter-example will help us to better understand how they work and the limits to their application," explained Ziliotto. This discovery helps to narrow down the conditions under which Merten's conjectures can be verified.

Ziliotto points out that he came across this counter-example by following suggestions given to him by Jérôme Renault (TSE-UTC), his PhD supervisor. "Jérôme suggested that I focus my work on a specific repeated game model, where players receive no information about their environment throughout the game. He thought I might be able to find something, and he was right."





Renault is still very impressed by the young mathematician: "Bruno is a great young mathematician and an excellent problem-solver. I obviously guided him in his research and helped him to finish a few proofs, but he was exceptionally creative and discerning, and less than a year after the start of his thesis, he was able to present a wholly remarkable counter-example. In my opinion his PhD at TSE was an extraordinary success, and I would like to add that it would be difficult to find a game theory thesis with more profound results."

While the discovery of this counter-example does not have a direct practical application, it makes it possible to reconsider part of the repeated game theory which is used in many fields (see below).

In October, Ziliotto moved to Paris Dauphine University, initially as a postdoctoral laureate then as a CNRS researcher, where he continues to study continuous-time repeated games and hopes to find further promising results. ■

Game theory

Game theory appeared in 1945 and was heavily developed from 1950 onwards by John Nash, winner of the Nobel Prize in Economics, and others. Their work has been used in many fields:

-  **Geopolitics**
e.g. modelling nuclear deterrence
-  **Economics**
e.g. matching students with universities
-  **Political Sciences**
e.g. modelling spending options for election campaigns
-  **Biology**
e.g. understanding and predicting the results of the evolution of species

Game theory is also sometimes used in sociology, history and philosophy.

"These models and these conjectures were presented in 1986, the discovery of a counter-example will help us to better understand how they work and the limits to their application"

Special issue Development economics



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RESEARCH AT TSE

Meet the TSE development team

Development economics was a driving passion of TSE's charismatic founder Jean-Jacques Laffont. Today, TSE regularly plays host to the world's best researchers in this field, and boasts a rich crop of its own creative thinkers who are proud to keep this flame alive. Meet some of its members.

Emmanuelle Auriol

“I’ve been a professor at TSE since 1998. I am also a fellow of the EEA, CEPR, EUDN, CESifo and a member of the IUF. My research interests include industrial organisation, regulation, labour economy, collective decision-making and development economics. I rely both on theory and empirical studies to derive policy recommendations on industrial organisation issues such as privatization, regulation or markets design. Since in practice policy implementation matters as much as policy design, I also study incentive in public organisations and government structure.”

OTHER RESEARCH INTERESTS:

- Regulation
- Theory of organisations
- Industrial organisation

Matteo Bobba

“I’m an applied microeconomist and my research interests lie at the intersection between development and labour economics. I received my PhD in economics from the Paris School of Economics in 2011. In the same year, I joined the Inter-American Development Bank (IDB) in Washington DC and worked as a research economist before becoming an assistant professor (junior chair) at TSE in 2015.”

OTHER RESEARCH INTERESTS:

- Labor economics
- Applied microeconomics

Josepa (Pepita) Miquel-Florensa

“I am an assistant professor at TSE and a member of the Institute for Advanced Study in Toulouse. In addition to journal publications on water services in Tanzania and signalling with limited resources, I have written working papers that investigate transfers in rural Mexico, and the challenges faced by Costa Rican coffee farmers and Colombian fishermen. My current work extends this research to cover trustworthiness in Haiti and corruption in Paraguay.”

OTHER RESEARCH INTERESTS:

- Industrial organisation
- Behavioural economics

Mohamed Saleh

“I am an assistant professor (junior chair) at TSE and the Institute for Advanced Study in Toulouse. My research interests are focused on economic history, development economics, and empirical political economy. In particular, I am interested in understanding the historical origins of the observed socioeconomic differences between religious groups in the Middle East and in the effects of state industrialization and mass education on these differences. I approach these questions using new datasets constructed from both primary and secondary data sources.”

OTHER RESEARCH INTERESTS:

- Economic history
- Political economy
- Middle East, especially Egypt

Stéphane Straub

“I am a professor of economics at TSE, and head of its development research group. My work revolves around the impact of physical and institutional infrastructure issues on the process of economic development. Having spent 10 years in Paraguay, some of which I recall in my book *Frontières*, I also retain a particular interest in that beautiful country at the heart of Latin America’s southern cone. I am also secretary of the Jean-Jacques Laffont association, a charitable organisation created after his death by his wife Colette to provide scholarships to students from developing countries studying at the University of Toulouse.”

OTHER RESEARCH INTERESTS:

- Industrial organisation
- Contract theory
- Applied microeconomics
- Latin America

OTHER MEMBERS OF THE TSE DEVELOPMENT GROUP

Philippe Alby, Stefan Ambec, Jean-Paul Azam (featured in the Campus pages), Milo Bianchi, Liliane Bonnal, Rachid Boumahdi, Marie-Françoise Calmette, Jean-Luc Demonsant, Andrezy Dudzinski, Farid Gasmi, Jean-Louis Guy, Marc Ivaldi, Christine Maurel, Georges Molins-Ysal, Isabelle Pechoux, Vincent Rebeyrol, Michel Simioni





The future of research is increasingly borderless

In some sense, development economics used to be at the centre of all of economics. The classical economists of the 17th, 18th and early 19th centuries were all development economists, as they were usually writing about a developing country (in many cases, Britain) going through a process of industrial transformation. Yet, development took off as a separate field within economics only in the middle of the 20th century with the pioneering work of Hirschman, Myrdal, Lewis, Prebisch and others. These scholars departed from neoclassical economics in its standard Walrasian form with constant returns to scale, pure competition, perfect information and so on, by attempting to identify specific rigidities, market failures, shortages and surpluses, and other structural characteristics of countries in Africa, Asia and Latin America that affect economic adjustments and the choice of development policy.

The field has much evolved since then. The microeconomic orientation is increasingly evident. Economic behaviour is traced from the individual to the family, and in some cases to local schools or communities and labour markets. Because most people in poor countries continue to work in agriculture, the focus is often on the family farm and includes household production, as well as the emphasis assigned to human capital as a constraint on development.

A second emerging feature of the field is an interest in explaining how institutions develop and operate in low-income countries, and how they potentially enhance or hinder the process of economic development.

A third change is the vast improvement in data, primarily in the form of household surveys and censuses combined with local community modules which facilitate the identification of causal effects

from outside of the household, in terms of environmental factors, relative prices, and local policies.

A fourth development is the alternative strategies adopted to evaluate the effects of policy initiatives, including the selection of participants in the policy programmes from among those who are eligible to participate. The different methods for programme evaluation are founded in classical statistics and econometrics, but ultimately rely on different identification strategies for estimating key parameters, such as the response or outcome changes attributable to programme treatment. Beyond structural or reduced-form econometric approaches to evaluation, the profession has increasingly relied on the design and implementation of social experiments, also called randomized control trials (RCTs), whereby the policy treatments are administered randomly at the individual, family, or community level (you will see more on this topic in the upcoming pages).

The development group at TSE well reflects the rich diversity in both topics and methodological approaches that permeates the field today. In recent years, we have used both theoretical and empirical tools to produce research on topics such as education, aid, regulation and infrastructure, corruption, social policies, and conflict, to mention only a few. We have presented and discussed our work in seminars and conferences around the world and have been one of the focal points in Europe for development scholars and practitioners from international organisations. We are extremely proud of the academic work done by our research group and we hope this dossier will give the reader a sense of our scientific contribution in the field, and in economics in general.

Matteo Bobba, Stéphane Straub
TSE researchers

POLICY SOLUTIONS

Ideas to change the world

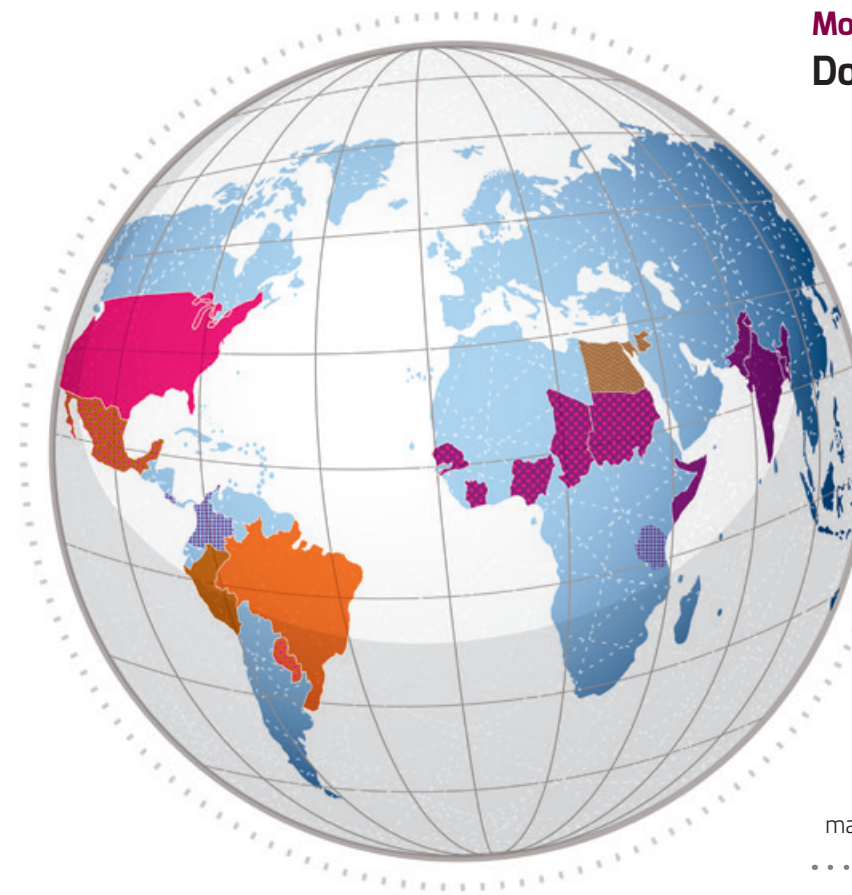
TSE's development economists are committed to producing world-class research that can improve the lives of others. Here we present a snapshot of their suggestions to help policymakers address the intractable problems that afflict those on the lower rungs of the global ladder.

Josepa Miquel-Florensa How can we protect small farmers?

"Our analysis of the Costa Rican coffee sector suggests market volatility can encourage excessive integration of export-oriented agricultural chains, to the detriment of farmers' welfare. By vertically integrating, firms can shift profits downstream by paying lower prices, undermining small producers. In Costa Rica, guaranteeing payments at the end of harvest reduces price-risk exposure while contract enforcement curbs excessive entry. Alternative organisational forms, such as networks, alliances and consortia, may help promote secure market participation and achieve higher exporters' margins."

Matteo Bobba What widens the reach of social policies?

"When potential beneficiaries share their knowledge and attitudes about a policy intervention, this may influence their participation and the effectiveness of the policy. Studying conditional cash transfers in rural Mexico, we find spillover effects have implications for the design, implementation and evaluation of social policies. In particular, the spatial concentration of the target population may offer large gains, as local networks can act as social multipliers."



Mohamed Saleh Does building schools reduce inequality?

"Our findings from Jordan indicate that improving the supply of public basic schools significantly increases intergenerational mobility, especially among daughters. At secondary level, improving the availability of schools increases boys' educational achievements, but girls may be more constrained by conservative parental attitudes."

Emmanuelle Auriol Can we eliminate human smuggling?

"Our analysis shows that legalisation of migration through the sale of visas, combined with repressive measures, is an efficient way to dismantle smuggling networks. In past decades, border controls have been constantly reinforced in spite of very small effects. Reinforcing systematic controls of undocumented workers at the workplace may be much more effective."

Stéphane Straub Does grade repetition help students?

"Looking at Brazilian primary schools, we find that students progress more rapidly, and are less likely to fall behind in their studies, when exposed to episodic social promotion than when they face the threat of repetition every year. A significant fraction of students who are pushed ahead – despite low achievement – appear to make up their learning shortfall before the subsequent retention year."

Jean-Paul Azam Can economic incentives tame jihad?

"Our research suggests economic incentives are often stronger than ethno-religious ties. The recent history of Sudan and Chad shows that the so-called 'ancient hatred' between Muslims and Christians gives way to pragmatism when economic calculations dictate a cooperative strategy. For over 15 years, Darfur waged war on rebels in southern Sudan. But the northern coalition fell apart and peace was quickly agreed when the Chinese built an oil pipeline across the country."

19 countries studied by the TSE Development Economics research group:

Emmanuelle Auriol (USA)	Matteo Bobba (Peru)	Mohamed Saleh (Egypt, Jordan)
Jean-Paul Azam (Somalia, India, Pakistan, Bangladesh)	Matteo Bobba, Emmanuelle Auriol (Mexico)	Stéphane Straub (Brazil)
Jean-Paul Azam, Emmanuelle Auriol (Senegal, Sudan, Chad, Nigeria, Cote d'Ivoire)	Josepa Miquel-Florensa (Colombia, Costa Rica, Tanzania)	Stéphane Straub, Emmanuelle Auriol (Paraguay)

FIGHTING POVERTY

The empiricists strike back

Few economists have had as much impact on the way we think about poverty as Esther Duflo and Abhijit Banerjee. Tipped as a future Nobel prizewinner, Duflo has already won the John Bates Clark Medal, for the best economist in America under 40, and a MacArthur “genius” fellowship. The Independent called her “the new face of French intellectualism” and Foreign Policy included her in its Top 100 global thinkers. Not bad for a 43-year-old who hated economics as an undergraduate.

The career trajectory of Banerjee – her mentor, partner and MIT colleague – is no less impressive. Once an unpromising student living next to a Calcutta slum, his dedication ultimately earned him a Harvard PhD. Together with Duflo, their revolutionary work has won them the ear of world leaders, aid agencies and billionaire philanthropists.

In Toulouse in June, they told TSE Mag how cutting-edge economic methods can change lives for the better.

Esther Duflo
Abhijit Banerjee

It's a Franco-Indian partnership that marries contrasting styles and abilities, a combination well suited to the intellectual, logistical and physical challenges of their punishing global schedule. “Abhijit has a much better understanding of the conceptual, theoretical side,” says Duflo. “My background is the empirical stuff and I’m more focused on the day-to-day implementation of things. We work together to bridge the span.” Banerjee agrees: “In terms of skillsets we’re completely different. If you’re doing lots of experiments, it’s about keeping your eye on all the balls in the air and Esther is amazingly good at that. I can write down models, think through the implications, organise and interpret findings, design the intervention... But for keeping the train running on time, I’m disastrous!”



Measuring aid

Despite the billions spent on aid projects, little has been understood about their impact. “We don’t know if they fail or succeed because we don’t measure,” shrugs Duflo. “It’s hard to measure the counterfactual, so you don’t know what would have happened if you didn’t implement the project.” Banerjee and Duflo’s response has been to appropriate the scientific rigour used to test new medicine, subjecting aid projects to randomized control trials (RCTs, see page 21). In 2003 they established the Poverty Action Lab (J-PAL), with the aim of reducing poverty by ensuring that policy is informed by scientific evidence. J-PAL is now a network of 136 affiliated professors, with an online database of 770 randomized evaluations.

The study of poverty offers the pair a unique opportunity to pursue simultaneous objectives: doing good research and doing good. “The questions are important,” says Duflo. “That’s why I became an economist. As it turns out, it’s also a delightful field to be in, serious without being dogmatic. Development economists work with very different tools but we are still able to talk to each other. The research is defined by questions, not methods.”

Banerjee agrees: “Why there is so much poverty in the world? What can we do to fix it? Where is it going? Anything relevant to these questions is development economics. It’s good that a development course at MIT is very different from one at Harvard. But the fundamental insights are often very similar. In Toulouse, theory is done in a way that’s very relevant to all questions in the world – and that’s a wonderful thing.”



Poor decisions

Understanding the impact of poverty on opportunities and behaviour is a central concern. “The poor are not just like everybody else but with less money,” says Duflo. “Say two people have the same idea, but one of them will not be able to borrow to execute this idea because they are poor. That’s a very foundational development problem. Why? Because being poor cuts you off from opportunities. And these problems are much bigger outside richer countries, where information flows and access to credit are better.”

In their bestselling book Poor Economics (2011), Duflo and Banerjee show how poverty can both hinder and improve decision-making. “Imagine an item in a shop costs \$10, but at the other end of town it costs \$8,” Duflo suggests. “People are much more likely to go to the other shop when the price goes from \$10 to \$8 than from \$100 to \$98. This is of course a mistake because it’s \$2 regardless. People often get fooled by this kind of stuff, but not the poor. But the poor might get other decisions wrong because they have less information or are so focused on having no money. In another experiment, farmers take tests

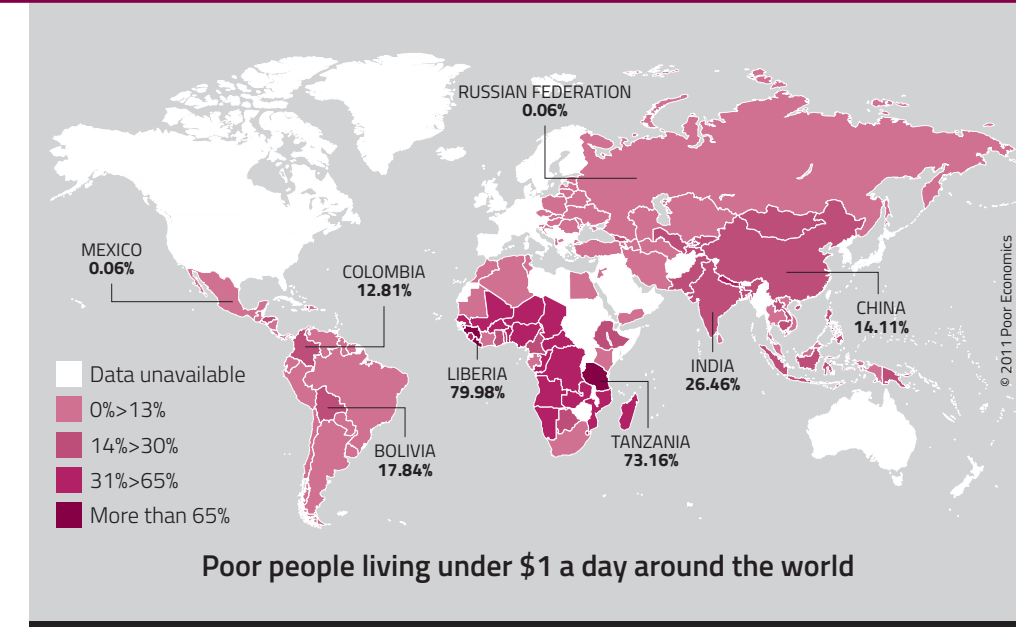
for intelligence, self-control and the ability to delay gratification. They do much better after harvest, when they have more money.”

Thanks in no small part to the work of J-PAL, this micro perspective has revolutionized attitudes about what works. “I used to think a lot of problems were structural,” says Banerjee, “but I realised we were just getting some details wrong. This makes me optimistic because I don’t have to change the entire framing of the economic system, but it also makes our intellectual challenge very different. In Indonesia, we gave out cards which said, ‘This is the amount of rice subsidy you are entitled to’ and the amount of words you print – three lines versus four lines – makes a huge difference. The card nearly doubled the delivery of rice. So I used to want to address the big questions. Now, I don’t know what the big things are because small things appear to have enormous consequences, and vice versa. It’s a more confusing world.”



Female leaders

Duflo counters this “confusing world” by refusing to be swept along by received wisdom. “I don’t have very strong ideas or priors about things. Ex ante, I’m able to persuade myself that this could happen, or that could happen.” ●●●



...

And she's particularly careful not to make inferences that go beyond her findings. This cautious pragmatism is evident in Duflo's assessment of the exclusive focus on women by some microcredit and other aid projects. "I'm all in favour of female empowerment. I don't see any reason why half the population should have less rights and opportunities. But I'm sceptical of the argument that there is a business case for this. Lending exclusively to women can improve female bargaining power and investment in kids, maybe even household efficiency. But I don't think there are large effects leading to a virtuous circle of happiness. When you redistribute to a girl, you're not giving to a boy; and it would be an illusion to think the pie will be so much greater that men will be better off, even with a smaller share."

Evidence from experiments in West Bengal is more clear cut, showing that quotas for female politicians are effective at countering voter prejudice. "This is an example where the research really changed my view. I am absolutely in favour of quotas for women in politics,

because you are increasing the pool of talent. Voters realised that these women, despite all their disadvantages, were actually just as good as men at running the show. And this evidence is much better at convincing people about female leadership than any discourse."



Low-hanging fruit

Banerjee is similarly sceptical about the prospects for one "big idea" to save the world, but he believes there is plenty of low-hanging fruit. "We have much better technologies now. There's no reason for service delivery to be as abysmal as it is. If a teacher doesn't show up, they are cheating the poorest out of things they are owed. We have very good ways of monitoring that people do their job. In India, most people thought that the food grain distribution system was totally broken, but World Bank data shows the proportion of food reaching people has gone up sharply. The money that was vanishing from the government's giant labour programme has gone down

from 50% to 20%. These are massive improvements."

Progress in persuading politicians has been hit-and-miss, says Duflo, but both researchers have generally been surprised at the willingness of policymakers to bring them on board. "When I started, my first instinct was that governments would say, 'We don't want your research because it's not politically viable,'" says Banerjee. "We discovered that, in many cases, they'll say, 'Great. Can you come and implement this?' So the problem is often lack of capacity. We've put together a pot of money for embedding people inside governments to help them try out and scale up successful programmes. But there's so much demand for the money that we're running out fast."

"In Toulouse, theory is done in a way that's relevant to all questions in the world – and that's wonderful"

Choosing a charity

How can the public maximise the impact of their donations to development projects? "Effective altruism is a great movement that's helped young people become aware of many issues about poverty," says Duflo. "If you want to give money, be very careful of organisations that rate charities on the ratio of their overheads over what's been given to the people directly. It's a stupid measure because it's the impact that is important."

The following websites have useful recommendations and use ratings based on impact:



www.thelifeyoucansave.org



www.poverty-action.org



www.givewell.org

RCTS ROUND TABLE

The devil is in the detail

Randomized controlled trials (RCTs), in which a treatment group is compared with a control group, have become a gold standard in the assessment of social policies. Here, we present excerpts from a stimulating debate on the subject at a high-profile TSE workshop in June.

Orazio Attanasio (University College London): The main role economists can have in the evaluation of policy interventions comes from the fact that we are trained to model human behaviour, with all its problems and difficulties. RCTs give us a powerful tool to isolate and remove some of the biases of simple observational data. From that we can estimate very simply the impact of a programme in a given context. But, most importantly, we need a model that explains what we observe and helps us to understand how policies work. RCTs can make the identification of such models easier. To do so, when running an RCT we need to collect much more data. We can also construct many more measurement tools, which you need to validate and pilot.

Esther Duflo (MIT): RCTs have grown enormously in scope and number. They're also crowding in other things, partly because they're a benchmark. If you do a shoddy job, someone is going to do an RCT and show that. We've all realised that the devil is in the detail.

Abhijit Banerjee (MIT): The great benefit is we can test exactly what we are modelling. I know that test scores can be improved by hiring and training teachers, changing textbooks, the curriculum, painting walls, buying school buses and providing meals. But which piece of this is important? Experiments allow us to get inside that black box



– we can decide not to paint the walls and learn if the painting has any effect.

Price of precision

Duflo: It's a very powerful tool and getting cheaper. It's because it's useful to policymakers that we're being allowed in. When I started, I thought policymakers would ask us what to do. But typically, policymakers are interested in how to do what they're planning to do anyway.

Banerjee: It has become very difficult to do a useful, low-budget policy evaluation. Ten years ago, you could do an RCT with \$20,000, but now expectations and standards have gone through the roof. It's completely perverse and it discourages people from trying. Lots of questions can be answered for \$20,000 and the world would be a better place.

Replication crisis

Frederico Finan (University of California-Berkeley): Multi-country studies might solve external validity issues, but there's a lack of researchers who want to take on the replication conundrum.

Will this be naturally solved over time? Or do we have to create some independent, low-ranked journal to host replication studies?

Duflo: If there is a problem, it's matching the money and the people. Coordinated activities are costly and low return in terms of ink in a journal; but they are high return in terms of influence. Uncoordinated work is also useful, but we need a place where we can see it all. The American Economic Association has successfully started a new registry. If it sticks, we'll have a good sense of the universe of studies that are out there.

Pascaline Dupas (Stanford): Incentives to replicate are very low. But it's also very important to ensure we can do meta analysis later on. We've been compiling evidence from 16 randomized experiments and we had to write to the authors asking for very basic facts. In public health, they have a template for how to write a paper. We need more information to extrapolate about whether the experiment will work in another context.



HEALING AID

Should aid donors be taxed?

“The aid business is a maze,” say TSE researchers Emmanuelle Auriol and Josepa Miquel-Florensa. This maze is overcrowded with donors, including Western nations, emerging countries such as China, Brazil and Arab states, the World Bank and other multilateral organisations, as well as thousands of NGOs, foundations and private entities. This proliferation of donors and the persistence of bilateral, micro-managed aid projects places a heavy administrative burden on often ill-equipped recipient countries, wasting valuable resources.



So why don't donor countries pool their efforts? Benevolent donors may want to circumvent the corruption and inefficiency of recipients. Self-interested donors may devise projects and rules to promote their own exports or maximize media coverage. Either way, most prefer bilateral aid because they want control. In 2009, for example, bilateral aid was almost three times greater than multilateral aid.

“From the point of view of the recipients, aid fragmentation generates huge transaction costs,” explain Auriol and Miquel-Florensa, who specialize in industrial organisation and development economics. “For example, the Tanzanian government has to prepare over 2,000

reports to donors and 1,000 delegations every year. Each of the donors have different accountability and procurement rules, and each project must be matched with the recipient country's existing portfolio.” As a result, administrative costs absorbed a massive 4.7% of bilateral aid in 2005 (only 9.6% went to humanitarian and food aid and just 2.2% went to NGOs).

Efforts to fix the ‘donor coordination’ problem have had limited success. In fact, since the Paris Declaration on Aid Effectiveness in 2005, fragmentation of aid has increased. This makes it increasingly difficult for recipient government representatives to coordinate and manage aid flows. Confusion on available resources and procedures to reach them is common.

To improve aid effectiveness, Auriol and Miquel-Florensa propose a simple, original tool. In a recent working paper titled ‘Taxing Fragmented Aid to Improve Aid Efficiency’, they argue that if a donor country insists on pushing its own development goals, it should pay a fee for it. Recipient countries, their model suggests, should be allowed to impose a tax on uncoordinated, unilateral aid.



“For recipients, aid fragmentation generates huge transaction costs. Tanzania has to prepare over 2,000 reports to donors every year”

“The novelty of our approach is to look at the fragmentation problem from the recipient's point of view,” say the TSE researchers. “Our paper explores the actions the recipient might take to discipline the donors. In our setting, the recipient does not reject unilateral projects if they are useless, but instead taxes them to redirect the aid where it is most needed. The tax instrument therefore fills a double purpose. First it helps the recipient country to collect funds to strengthen its administrative capacity. Second, it helps to align the interests of the donors with the interest of the recipient. It is a stick used to keep the donors in line and to modulate their aid flows.”

From a policy perspective, this mechanism is appealing as it is simple and might help to finance administrative costs. Auriol and Miquel-Florensa's model also proves the existence of an upper bound on the donors' aggregate budget above which the recipient stops using the aid money. This comes from the agent's management costs and the decreasing returns of the projects' productivity. Waste of resources comes both from agent's and principals' choices. So increasing the aid budget does not necessarily lead to higher development production.

The empirical evidence presented suggests that even when donors are altruistic, their heterogeneity and lack of coordination causes inefficiencies. This result militates against “cosmetic” micro-aid schemes. Instead, say the researchers, donors should follow the example of the Nordic Plus group, which includes Denmark, Finland, Norway, Sweden, Ireland, the Netherlands and Britain. Through joint financing arrangements, procurement policy, and



complementary principles, this group aims to reduce transactions costs for recipients and to increase aid effectiveness, even at the cost of reduced visibility for the donors.

The paper shows that the optimal tax rates should be different for different donors, depending on the donors' bias and on the productivity of their unilateral projects. But Auriol and Miquel-Florensa admit it is unlikely that donors will agree to this in practice. Another concern is that

allowing recipients to arbitrarily tax unilateral aid would facilitate corruption.

“A better solution would be to negotiate corrective taxation rates at the international level,” the TSE researchers propose. “Coordination at an earlier stage of programme design, allocating tasks to donors according to their comparative advantage and budgets, and allowing recipients of aid to tax unilateral aid and micro-aid schemes, could greatly improve the effectiveness of aid.” ■



Find out more:

‘Taxing Fragmented Aid to Improve Aid Efficiency’ by Emmanuelle Auriol & Josepa Miquel-Florensa, see: www.tse-fr.eu/sites/default/files/TSE/documents/doc/wp/2015/wp_tse_600.pdf



TOMORROW'S ECONOMISTS



1

TSE's PhD students

Anaïs Dahmani ①
"Government strategies and individual's choice in autocracies"

PHD SUPERVISOR: EMMANUELLE AURIOL

Born in Toulouse, Anaïs Dahmani holds a Toulouse School of Economics MASS (Applied mathematics) degree and a Public Policy and Development Masters. She spent 6 months in London at the University College London and City University working on her Thesis "Government strategies and individual's choice in autocracies". She has also spent three months in Namibia in order to develop a field experience. She is currently in Toulouse for her last year of thesis and should present her work next year.



2

Julie Lassebie ②
"Essays in Development Economics"

PHD SUPERVISOR: EMMANUELLE AURIOL

After studying economics and mathematics at Toulouse School of Economics, Julie Lassebie worked as an economics consultant at RBB Economics in Brussels. She then came back to TSE to pursue her PhD. Her work uses both theory and empirical techniques to investigate governance issues and questions related to the quality of institutions. She also recently travelled to Ghana to conduct a field study on religious beliefs. She is expected to present her work next year.



3

Vitalijs Jascisens ③
"Essays on Public Procurement"

PHD SUPERVISOR: STÉPHANE STRAUB

Vitalijs Jascisens grew up in Riga, Latvia and studied theoretical physics at the St. Petersburg State University and University of Latvia before joining the Stockholm School of Economics. He then moved to Toulouse where he received a Masters degree. In his PhD thesis, he uses large administrative datasets to empirically analyse various policy failures in the design of procurement, social security and taxation systems.

Oleg Polivin ④
"Three essays on infrastructure, conflict and development"

PHD SUPERVISOR: JEAN-PAUL AZAM

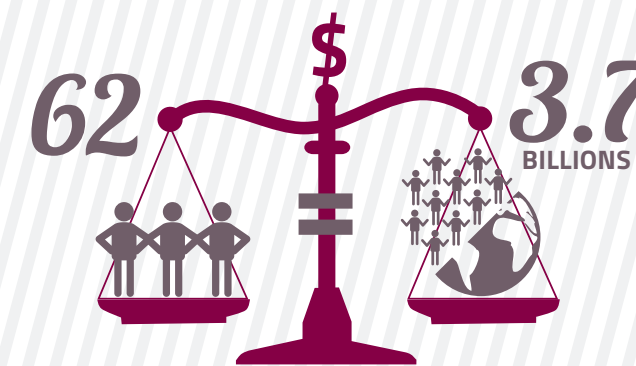
Born in Voronezh, Russia, Oleg started to enjoy economics at the Moscow State University. He later joined the Barcelona Graduate School of Economics before arriving to Toulouse School of Economics for his PhD. His research work combines history, economics and conflict studies to better understand complex situations.



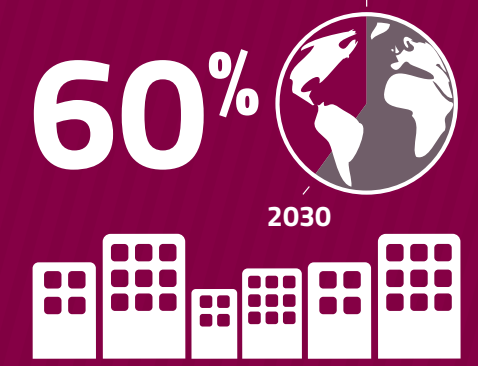
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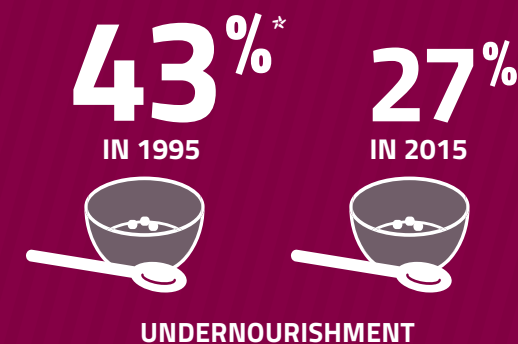
Find out more
on the TSE website



Source: <https://www.oxfam.org/>



Source: data.worldbank.org/



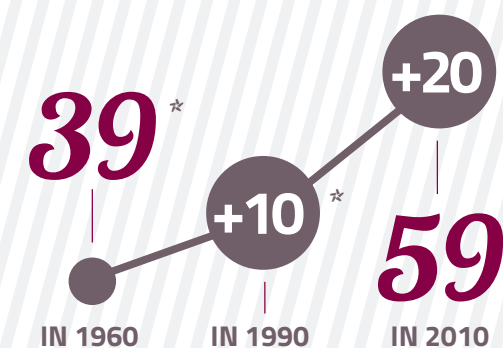
Source: data.worldbank.org/

Undernourishment has declined globally but remains high in low-income countries

(* % of population, approximately)



Source: data.worldbank.org/



Source: data.worldbank.org/

Life expectancy at birth, total (years) in low-income countries

(* Approximately)



Source: data.worldbank.org/

Big data & the military

Jérôme Bolte (TSE – UTC) is a mathematician specialized in optimisation algorithms. His work, and more precisely an article co-written with Hedy Attouch (University of Montpellier) and Benar Svaiter (Instituto Nacional de Matemática Pura e Aplicada, Rio de Janeiro), has caught the attention of researchers at the US Air Force, which has decided to fund his research.

In 2011, Bolte and his co-authors received a surprising email. "The sender's email address was quite intriguing, listing all sorts of ranks and serial numbers," the researcher recalls. The message explained that the US Air Force was very interested in their work and was willing to fund several trips to the US to exchange ideas and solutions regarding optimisation algorithms.

"The US Air Force owns research departments in many fields, including mathematics and calculus. Their theoretical topics are very close to ours regarding optimisation," Bolte explains. "They are constantly looking for new research and our article caught their attention."

The three researchers now fly regularly to a research centre at the former Griffiss Air Force Base, outside New York, to exchange on their latest projects. Those discussions led the US Air Force to agree an extended, three-year research partnership with the TSE-UTC researcher which began in 2014.

"The US Air Force has three funding plans named 6.1, 6.2 and 6.3. The 6.1 plan, which I received, gathers theoretical research; 6.2 is for projects with possible applications; while 6.3 funds research projects directly linked to military application."

If the US Air Force is interested in Bolte's work, it's largely because of the challenges they face in dealing with the gigantic datasets gathered by modern technology.

Applications vary greatly and range from digital imagery to artificial intelligence issues, deep learning, to the simulation of quantic calculus. "With

"With traditional data analysis techniques it would take centuries to class and use the data we have today"

traditional data analysis techniques it would take centuries to class and use the data we have today. The storage capabilities are colossal and we need new ways of exploiting big data."

Because of its 6.1 status, Bolte's partnership with the US Air Force allows him complete freedom in his research. "I can publish my work in the journals of my choice. The US Air Force isn't interested in the exclusivity of my research but is willing to develop new theoretical approaches and techniques in optimisation."



"Although it may be surprising for researchers in France, the US Air Force bureau in London AFOSR/EOARD does fund projects all over Europe and I believe the area of research of Jérôme Bolte, Optimisation with a focus on Lojasiewicz inequalities, will be important for many future applications in many areas, including machine learning and big data at large."
Bruce Suter, Rome Laboratory, NY



Jérôme Bolte
TSE – UTC researcher

Bolte has been pleasantly surprised by the mindset of the US Air Force. "After meeting with an operational research director, I must say that they seem very enthusiastic for each and every discipline. They are very open-minded and deeply convinced that solutions can come from anywhere and that nothing is useless. This humility and curiosity is fascinating and refreshing."

His contract with the US Air Force will be up for renewal in 2017. Meanwhile, as the accumulation of data continues to rise, optimisation algorithms will become increasingly important to organisations in every sector of society.

US AIR FORCE RESEARCH LABORATORY

The laboratory and its predecessors have overseen more than 80 years of critical research efforts for the Air Force and Department of Defense. Its technological breakthroughs can be found in all of today's modern aircraft and weapons systems. It has also contributed to significant advances in modern communications, electronics, manufacturing, and medical research and products.



TEACHING AT TSE

Masters in public policy and development

The TSE Public Policy and Development masters programme aims to teach students how to analyse social and economic issues related to developing countries. Here's a quick presentation of the programme as well as testimonies from alumni Laura Berméo and Anaïs Dahmani.

Under the direction of Jean-Paul Azam (TSE-UTC), the teachers encourage students to address the core question of development economics: why are there so many inequalities between countries in terms of wealth? The answers can be found both at the level of states, by studying economic policies; and among firms, by observation of their strategies.

Ever since the Second World War, the international community has become more focused on helping developing countries out of poverty. International organisations such as the World Bank or the UN Development Programme were created in an attempt to make

public policies in developing countries more favourable to economic development. Many economists and public policy consultants work in these institutions. Through this masters, TSE aims to help its students become actors in this field, able to use theoretical knowledge and empirical data to help millions of people in developing countries.



Jean-Paul Azam
Programme Director

After publishing mainly on the macroeconomics of Africa, Jean-Paul Azam has focused since the mid-1990s on explaining violent conflict and its prevention, with application to foreign aid, civil war, and transnational terrorism. His recent article "Killing for the Sake of Infamy: The Herostratos Syndrome and What to Do about it" will be published by the Peace Economics, Peace Science and Public Policy journal.

Laura Berméo

Where do you work and which position do you hold?

Since completing my masters degree, I've been working in Honduras for almost a year as a field coordinator of an impact evaluation (IE) for a World Bank research group. Honduras has one of the world's highest homicide rates. In this context, the IE studies the protective role of a labour market intervention that aims to move at-risk youth away from the market of crime.

How do you apply the skills you learned during your TSE masters degree to your new role?

My job responsibilities relate to the implementation of the project intervention and the collection of data used for IE. I am mainly responsible for bridging the requests and needs of the investigation



Laura Berméo
Alumni - Policy

team and the project implementation unit. Additionally, I provide input to the design of the intervention and help adapt the study to the local, Honduran context. I am also involved in data analysis and administrative tasks.

The M2 PPD degree has been extremely helpful for my work because of its

strong emphasis on programme evaluation. I had three different courses on this subject as well as other complementary courses which provided a good mix of theory and its "real life" application. I also consider the TSE masters programme as very demanding, with high standards that enabled me to develop many valuable skills.



Anaïs Dahmani
Alumni - PhD

Anaïs Dahmani

My research interests relate to both development economics and political economy, with an emphasis on government strategies and citizens' choices in autocracies. I look at how political and economic forces affect political institutions, when there is a conflict.

As an example, my work "Social media, heterogeneous networks and government strategy: The Egyptian Arab Spring" focuses on the impact of information and communication technologies (ICTs, such as mobile phones or the internet) on popular uprisings, depending on existing social networks and government propaganda.

This work is highly correlated with my masters thesis. In 2012 my adviser Emmanuelle Auriol suggested many themes, and I chose "ICTs and governance". My research then evolved towards political economy, as I drew inspiration from the Arab Spring events.

It has often been said that social media were used as revolutionary tools by rebels aspiring to regime change – ICTs allow easier and faster communication among citizens, improving both the spread of information and coordination of groups. Despite widespread optimism that ICTs would help spread democracy around the world, most autocracies have now realised the power of such tools and use them to channel propaganda and repress rebels. There is an important trade-off between users' freedom and government surveillance.

As my research is related to both political economy and development, I decided to get a glimpse of more applied development work and accepted a three-month job as a research assistant for IPA Namibia. Being involved in a local project has helped me a lot in understanding development and political issues, such as power and bargaining games.



Overseas Development Institute

The Overseas Development Institute (ODI) is the UK's leading independent thinktank on international development and humanitarian issues.

"The ODI Fellowship Scheme offers postgraduate economists and statisticians the opportunity of working as a civil servant in a developing country for two years. We are looking for people who have a good grasp of applied economics and statistics, who can communicate technical concepts to non-specialists, who can work in a foreign bureaucracy and live in a very different culture, and who can thrive in challenging environments generally. Over the past few years the Fellowship Scheme has recruited several graduates from TSE who have proven well-suited to the demands of the scheme. Five graduates from TSE are currently enjoying successful fellowships in some of the toughest countries we operate in."

ODI Head of the Fellowship Scheme - Robin Sherbourne



Teaching inspired by research

Most of the teachers - Emmanuelle Auriol, Jean-Paul Azam, Matteo Bobba, Sylvain Chabé-Ferret, Pepita Miquel-Florenza, Mohamed Saleh, Paul Seabright, Stéphane Straub - are leading lights in their field of research, with experience of consulting for international organisations such as the World Bank or the French Development Agency.

Kicking off the academic year

Alexandre de Cornière (TSE-UTC) gave new and returning TSE students the traditional Inaugural Lecture for the academic year 2016-2017, presenting his latest work on "The Economics of Digital Media Platforms". Here, we present some of the highlights of his talk.

"In many ways, the internet has deeply impacted our daily lives, forever changing our ways of communicating (for example, email, Skype...), shopping (Amazon, Ebay...), moving (Uber), planning holidays (online tour operators, AirBnB...) and socializing (Facebook, Twitter, Meetic...). I'd like to address another area that is being completely redesigned by the internet: the media industry.

Historically, the media industry has been financed through a mix of advertising and consumer fees (subscription and per-issue) as well as public subsidies. For example, in France, around 70% of the printed press' revenue have come from advertising, and 30% from sales. But many media outlets relying on sales were also relying on advertising, creating what economists call "multi-sided-platforms" which can generate more revenue from advertisers if they have more consumers.

Academic literature on multi-sided-platforms suggest that we can divide media into two categories:

1. Relying more on advertisements and thus proposing cheap content that is attractive to many viewers
2. Relying on sales and therefore develop high-quality, premium content that is very attractive to a few viewers

By making most news coverage available for free, the internet has eased the media towards the first category. While about 30% of people were paying for news in the pre-internet era, this fell to 9% in English-speaking countries in 2015.

"On the internet you're more likely to read articles and opinions that are similar to yours"

An ever-increasing number of online media are now fighting for consumers' attention as the internet abolished the entry cost for the industry. There is no longer any need to invest heavily in a distribution network or printing.

Another massive change brought about by the internet is the introduction of media gateways or platforms such as Google News or, increasingly, Facebook. These gateways select articles based on complex algorithms which try to present you with articles suited to your profile. This "customization" of the news is facilitated by the enormous amount of data those companies have about their customers.

One side-effect of this development is that you're more likely to read articles and opinions that are similar to yours. Researchers call this the "echo chamber effect", in which people are presented the same opinions repeatedly and rarely come across alternative views.



Alexandre de Cornière
TSE-UTC researcher

The internet is forever changing the media landscape and it is very hard to know whether this is for better or worse. These profound changes are still unfolding before us as the media industry struggles to develop new, sustainable business models for the 21st century.



IS ECONOMIC GROWTH NECESSARY TO ELIMINATE ABSOLUTE POVERTY?

GIVE YOUR OPINION ON DEBATE.TSE-FR.EU/POLL



RECENT POLL RESULTS FROM TSE DEBATE:

66%

think the fall of oil prices
is a good news for the
global economy

52%

had anticipated
the COP21
agreement

71%

don't see "uberisation"
as an economic
threat

68%

think intelligent software
and robots won't create
mass unemployment

debate.tse-fr.eu



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