

The TSEconomist

Student Magazine

Issue # 8

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Tribute to Jean-Philippe Lesne

CORONATION OF A HUMBLE MAN

A photograph of a man in a light blue shirt, identified as Joseph Stiglitz, surrounded by a large crowd of students. Many students are holding up their smartphones to take photos or videos of him. The scene is set outdoors against a brick wall. The man is smiling and looking towards the camera. The students are of various ethnicities and are all smiling or looking at their phones with interest. The overall atmosphere is one of excitement and admiration.

Interview with Joseph Stiglitz

The Nobel Jean Tirole

Interview with Dani Rodrick



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New Beginnings

Welcome all to the newest issue of the TSEconomist. This year the magazine boasts a new and bigger-than-ever team, and we are confident the best is yet to come. This is our eight issue overall, the first of two planned for this year, and our goal for this year is to continue to grow and become an established student organization at the heart of the Toulouse School of Economics.

Last year was the most successful year for the magazine so far, with an impressive three issues published from September to March, and a talk organized by the magazine featuring Jean Tirole as the invited speaker. I would like to take this opportunity to thank my predecessor, Ildrim Valley, whose dedication and motivation helped the magazine thrive. I certainly would not be where I am today, heading the magazine, without his help and encouragement.

This year has already seen several significant successes, as projects that started last year have continued to flourish. Most notably, the TSEconomist has already hosted several well-attended Coffee Talks, featuring lively debate on a wide variety of subjects. This year also continues last year's project of TSEconomist-hosted talks with an invited speaker, with one confirmed talk due to occur in January 2015. This year the TSEconomist has also taken another step in integrating itself in student life at the TSE by making a significant effort to recruit L3 students. We have already been lucky enough to find several motivated individuals, and we hope that having a maximum of three years to be involved with the TSEconomist will be a huge boost to the magazine in terms of consistency of quality and overarching vision.

We are also proud to announce the new TSEconomist blog, the launch of which coincides with the printing of this new issue. The blog aims to further enrich student life at the TSE by introducing students to eminent debates among blogging economists, and serving as a platform for discussion (for example on the topics covered in the Coffee Talks), for students to share thoughts on the latest articles, etc. We also aim to be closer to the campus, covering more Business and Academic talks.

Finally I would like to thank the current team for their hard work, which has made this issue a reality. I am happy to have the opportunity to work with such competent, motivated individuals. Together, I am certain we can continue to make the TSEconomist an organization any university would be proud to have.

Julia Hoefer Marti
Editor-in-Chief



Tribute to

Jean-Philippe Lesne

The TSEconomist staff takes this opportunity to record our sadness at the passing away of Jean-Philippe Lesne, dean of the Toulouse School of Economics (TSE-UT1 Capitole) on the 19th of September after a courageous battle against illness



TSE directors pay tribute to their colleague

Christian Gollier, TSE Director
David Alary, Acting TSE School Dean
Joel Echevarria, TSE COO

Jean-Philippe had enthusiastically agreed to take command of the TSE School in 2012, after a distinguished career first as a researcher at ENSAE then as expert at INSEE, professor at the University Cergy-Pontoise and ESSEC, and finally as vice president of the polling institute BVA. Jean-Philippe was a graduate of the École Polytechnique and obtained his PhD in Economics at our university.

From the moment he was appointed as head of the school by the end of 2013, Jean-Philippe determinedly rallied the teaching and administrative teams around the ambitious project, launched in 2011, of developing "Grande École excellence within the University". Rapidly successful in his new role, he became a popular figure recognised for his human values, his communicative energy and his ability to "carry" this ambitious challenge. With the support of the University of Toulouse 1 Capitole and the Toulouse School of Economics Foundation, he strengthened the school's development. But in recent months, severe illness consumed him, finally

winning over his fighting spirit and eternal optimism. He continued, nevertheless, to follow the life of the school, insisting on attending the new term welcome gathering of his students, just a few days prior to his unfortunate passing.

Under his leadership, the school has established itself in the field as an ambitious collective project, dedicated to delivering the best possible education for the new generations of economists. Jean-Philippe was particularly involved in developing and strengthening the School's international openness, its professional qualifications, its partnerships with businesses, and its tailored services to students.

His colleagues and friends will hold dearly onto the image of an honest man; a demanding but compassionate director who helped his teams excel and inspired his students. Till the end, he followed the School's challenges and developments. He was proud, and rightly so, of the progress made.

May we now honour his memory by continuing to strengthen the Toulouse School of Economics.

May we now be inspired by his optimism and fighting spirit to carry on his hard work supporting our students.

University Toulouse 1-Capitole and Toulouse School of Economics organized on the 25th of September 2014 a tribute ceremony to Jean-Philippe Lesne, with the presence of the Lesne family, the President of UT1-Capitole, Bruno Sire, TSE directors, researchers, professors, staff, alumni, students, and ex-colleagues of Jean-Philippe. Below are extracts from some of the words said during the ceremony

The TSEconomist on behalf of the student community

Hussein Bidawi
Editor-in-Chief of The TSEconomist
(2012-2013)

I have many things to say in this sad occasion about Jean-Philippe, and my experience with him. I think people who have worked more closely with him will be better qualified to talk about all his accomplishments, notably the ones he did in TSE, and in such a short time, and so I would prefer to focus on two aspects of his personality that marked me the most: the first being his openness, which was obvious to us, students, by his humble approach towards us, and a great ease to talk to him. Indeed, one of his strong points was his talent for communication. Since the first day as dean, students came to him to talk about the school, how to improve it and the student life, etc. He wanted his door to always be opened, and it was.

The second thing that I admired about him was his commitment towards TSE, a commitment full of dynamism and optimism, which we could feel on a daily basis by the interest he gave to students: even though he was a busy director, he managed to find time for us, and tried to get to know us better, as much as possible, and help us in our projects, whether relating to the student community, like

the TSEconomist association, or more personal projects. I consider myself privileged to have worked with him on laying down the foundations of our student magazine as an active student association, and I was always impressed by how much support he gave to the students and to any student initiative: at times, we felt that he was fighting more than us for our projects to be realized.

In the name of all the members, past and present, of the TSEconomist Student Magazine, I would like to express great recognition for his support, his warm welcomes and especially his enthusiasm.

I would also like to take advantage of this opportunity to express personal gratitude: my experiences in the magazine and the gap year I took, based on his advise, have been key experiences in my life, and both are inseparable from Jean-Philippe. His close follow-up of the magazine's work, and hearty encouragement were great sources of motivation, and his follow-up of students' news whilst on their gap years or internships, pushed us to give more.

I think the only tribute to be given to Jean-Philippe is a feeling of belonging to his school, pride of belonging to TSE. For myself, I will always be a supporter and promoter of TSE, like I promised him.

A colleague's tribute

Christian Gollier, TSE director

The Toulouse School of Economics is an ambitious project serving our country and abroad. It requires from the professors, researchers and the staff an effort, unknown so far in the world of the French public university; mobilizing all the talents available. It necessitates reorienting our professors to skills that the world expects today from top economists. It needs to inaugurate a cultural revolution in the service of the students. As well as reinforcing the brand, attracting the top students from France and abroad. In sum, creating a competitive economics department matching the level of excellence that we have achieved as a research center.

A little less than two years ago, we have asked Jean-Philippe to accept these challenges. As you know, he accepted with a lot of enthusiasm, and gave it all his talent and efforts till the end. Jean-Philippe was a brilliant leader, who managed to transcend the individual energies working for our community to make this school much better, today, than it was just some time ago. He was the right man at the right place at the right time! I'm thinking especially about his success in establishing international partnerships and the internship service, the strengthening of the administrative teams, the business talks, and many more. Just two weeks ago he was telling me he's willing to work on writing an important folder about the professionalization of the master programs.



Paul Seabright, IAST director

An image that comes to mind of Jean-Philippe when we taught a course together ten years or so ago is of the way he would rush across the courtyard of the Manufacture to his class. He was usually a few minutes late, having arrived from his work at BVA, but he would stop and shake hands, grinning. “Trop de choses à faire! Mais on s’amuse, hein?” When the idea was floated that we might appoint him to run the École I took part in several preliminary discussions, and one day, over a drink in the bar of the Hotel du Grand Balcon, I told him that there was a rather “delicate” matter I had been mandated to broach with him. He was known to be busy, very busy, on very important things. Might he not find a return to being a professor, even a Dean, just a little... unglamorous? Jean-Philippe instantly became very serious, and almost berated me for underestimating

In the name of our community, dear Maryse*, I would like to express our intense recognition towards your husband for all his achievements. The impression he has left on in this school are eternal. Even though not everything was easy to do in this project, I think he was happy in this new professional experience in his life. And his joy and pride towards his “baby” (adopted baby, of course) was a pleasure to see. What other beautiful gift could we offer him than taking this beautiful baby to maturity and full accomplishment in the years to come?

These two years, surely too short, gave me a chance to better know a colleague that I have crossed numerous times in my career. I have the pleasure to believe that this professional relationship came with a friendship, sincere and reciprocal. Jean-Philippe had many qualities; empathy and charisma were not the least. I keep many memories of him that I really cherish, like trench companions fighting for the same causes, and sharing the same professional ideal.

* The Author address the wife of the deceased, Maryse Lesne, present at the tribute ceremony.

just how fulfilling teaching could be – till he saw I was teasing him. And sure enough, once he took up the post of Dean I had the opportunity to see just how exciting he found the job. I ran across him often in the Manufacture, moving fast from one place to another but always smiling broadly. “Trop de choses à faire – mais on s’amuse, hein?”

He did not have much to amuse him in the last few months. But still, when I proposed to visit him at his clinic in Ariège he could not resist a little vanity in telling me how excellent was the restaurant at the clinic where he proposed to invite me to lunch – for all the world as if he had just discovered in this out-of-the-way place a new chef who was a rising star. On the morning of our lunch date he texted to say that he had just been rushed in for emergency treatment for a relapse, and that our lunch would have to wait a few more days. I never saw him again. But the memory of that grin will not fade. ■



Interview With

Joseph Stiglitz

By Tannous Kass Hanna, Georgios Petropoulos, Selvin Thanacoody and Ildrim Valley



1. In your seminal work on globalization, notably in “Globalization and its Discontents” (2002) and “Making Globalization Work” (2006), you discuss the shortcomings and challenges of globalization. How do you assess the path of globalization following these publications? In particular, what new challenges has the global financial crisis added to globalization?

In both of these books, I had talked about the risk of global financial instability and the flow of money going backwards uphill from developing to developed countries. I think the 2008 crisis just reinforced the argument that deregulation had exacerbated the risks globally, and that capital

market globalization and financial market globalization had compounded the problems by making the risk of contagion much worse. So in a sense, 2008 was bearing out the forecast that I had already raised, showing that it was probably worse than I have fully anticipated. The positive side of the aftermath is the recognition that you need regulation; the IMF has actually said that capital controls are a good thing while in “Globalization and its Discontents” were virulently opposed to what I said whereas now we’re on the same side. There are still some disagreements about the conditions under which you want capital controls and the forms, but the basic recognition that seems to be now universal.

2. You have been an outspoken critic of the austerity measures adopted in response to the Euro Area debt crisis by characterizing them as “suicide pacts”. How has your evaluation of the overall response of international and European institutions to this crisis evolved, especially as the proponents of such measures claim their success in quickly moving the involved countries towards recovery (e.g. Greece has entered again the bond market, much sooner than it was expected)?

I think there has been a fundamental confusion between “stopping going over the cliff” and recovery. And even if these countries were growing again in the way that would’ve hoped, that still doesn’t say that the policy was a

Joseph Eugene Stiglitz is an American economist and a professor at Columbia University. He is a recipient of the Nobel Memorial Prize in Economic Sciences (2001) and the John Bates Clark Medal (1979). He is a former senior vice president and chief economist of the World Bank and is a former member, and Chairman of the Council of Economic Advisers.

Stiglitz is the 4th most influential economist in the world today based on academic citations, and in 2011 he was named by Time magazine as one of the 100 most influential people in the world. His work focuses on globalization, income distribution, asset risk management, corporate governance, and international trade, and is the author of ten books. The following interview took place at the Tiger Forum, organised by the Toulouse School of Economics this summer, where he was awarded the Jean-Jacques Laffont Prize

good policy because you have to ask: Could we have gotten where we are at a lower cost? And right now Europe is about 20% below the trend growth where it would've been, and that gap is not closing, the gap is actually widening. I don't think anybody looking at economies within Europe can deny that there's an average of 20% unemployment, youth unemployment of over 50%, GDP per capita lower than it was in 2007-2008. As for the most successful country Germany, a growth rate over the period of just around 1% per capita would be viewed as a dismal growth rate at any other context. I think what they hailed as a most success is a failure. Moreover, within that country the bottom 30% have actually seen their income go down. So I don't see how anybody can claim those policies as a success.

3. You have stated that with time, wages across the world would converge to the same level thanks to globalization. However looking at

real facts, it seems that inequality is still increasing worldwide. Why do you think is that?

The story of disparity between countries is complicated because there has been convergence between the best performing countries, say China, and the advanced countries, to the point where China will shortly be the largest economy; but there has not been convergence between the poorest countries and the richest. I think it's partly related to the policies that have been forced on the countries such as the "Washington Consensus" policies related to trade globalization leading to the deindustrialization. That was one of my main theses of my book "Creating a Learning Society" where I actually talk about this issue in the chapter on Industrial Policy. That's been one of the factors that has resulted in the non-convergence of the poorest countries.

4. We try to turn more on policy questions. In 2000 you created the initiative for policy dialogue. With the goal of coming up with policy ideas in development and bringing them to policymakers facing the challenges and opportunities of globalization. Has this think-tank lived up to your expectations and its conceived goals? And what are the contributions and limitations of such non-governmental initiatives with respect to the future of globalization?

I think if you look at the series of books that we've published and the interactions that we've had with government, I would say that we have been as successful as a small NGO can be. [Being] very small in some ways had more weight that could normally have been expected. If you look at the huge international organizations you look at the minuscule, but it does speak to the power of ideas. So, for instance two of our early books were about capital market liberalization, and those ideas now moved into the mainstream and we were successful. One of our early books talked about the need for better financial regulation and the fact that simply focus on inflation was not going to lead to better, strong economic growth. That now has moved mainstream as well. One

of our early books was "Fair trade for all" arguing that the trade system as it was, was unfair. I think there is broad; you know focusing on particularly the problems of, including the problems of intellectual property. I think again it was not the only voice but it was a voice trying to articulate that view. So, you know, there are other issues where, we did a book on sovereign debt restructuring, debt defaults. That remains an issue that is very unsettled. I don't know if you followed the recent court decisions in the United States. The US courts have come down in a very peculiar decision in support of vulture funds, and it's gone to the supreme court whether they will rule or whether they'll take the case. But interestingly France has joined me and saying what the US government is doing is wrong. So the French government has actually find how to breath in that case. So those of you who are very much alive and very much on. I guess the question you raised is a very good one. It's very difficult for a small group but the fact that, you know, and it's one of the great things of democracy, is that individuals and small groups can make a difference and can raise issues that otherwise would go beneath the radar screen. I should say one more thing that may be relevant. Probably have more influence in changing the debate in developing countries and emerging markets than we do in the developed countries, because these are matters of their life and death, I mean of their prosperity. They are gonna pay more attention and when we started this, one of our objectives, was in fact concerns was, there was an established wisdom coming out from the IMF and the World Bank. And they were, you might say, lacking confidence. They say, you know, "who are we to challenge the received wisdoms?" And we saw that one of our roles is saying in many of these cases "you're right and they're wrong". And so by doing that we changed the debate, at least we say ok "some people think this and some people say that" in exchange that give more confidence to people to stand up.

5. You've been highly engaging in climate change as well both as a researcher and a lead author at the Intergovernmental Panel for Climate

Change which won the Nobel Peace prize in 2007. So what are in your opinion the most pressing measures that need to be adopted on the international level for realistically addressing this global issue given political and economic considerations?

Well the last cause has everything in it. I think it's very clear that we need to have a carbon tax or an agreement on carbon reductions. Chapter 8 of my book on "Making globalization work", was on "Saving the planet". So I describe what I think can be done. I think the only difference is that book was written 8 years ago. Today the evidence is greater. The dimension on which there was not as compelling evidence then was the impact on weather variability and the cost of this weather variability. You know droughts, floods, hurricanes, typhoons. We now know so much more clearly the magnitude of the cost.

6. But at the same time it seems the evidence increased but also there are problems especially attached to the crisis that happened. So are you optimistic or pessimistic whether or not the government would be engaging in that sort of problem?

So my own feeling is that the major problem of inefficiency was in aggregated demand. If we passed the carbon tax and help provide some lending, funds through loans, we'll be able to stimulate the economy. So I actually think that the current context is one where we ought to be doing more investment in literally feeding the global economy for global warming. So the two are actually complementary, the downturn and addressing climate change are actually complementary. Just as an insight the point that I made yesterday that we need to also change our innovation system we need to focus more on saving the planet on reducing emissions and less on creating, saving jobs when we already have so much more unemployment. So again, redirecting our resources towards climate change and away innovations that kill jobs seems to me something that would be imperative on both the climate and the economics for instance. To me I view it would be complementary.

7. Your work has contributed to a

broad range of topics in economics, both in macro and microeconomics. As someone who has worked on the policy side of things, bringing ideas to policy makers, what would you say about the policy impact stemming from research in these areas. Would you say that research in either micro or macro-related topics holds more relevance to policymakers today?

Well obviously both do. Now research is a two-edge sword. I think that bad macroeconomic "research" played a very big role in causing the crisis in 2008. Too many policymakers paid too much attention to the theories and models that said that markets are self-correcting, markets were efficient, no such things as bubbles, all you need to do is focus on inflation. So the standard macroeconomic prevailing line for 10 to 20 years was one of the causes of our problems. There are other lines of research on macroeconomics, it's really important, and now are beginning to be reflected in the work, say of the IMF, I've been in a number of conferences that recognize that markets often don't work, they need a broader agenda. The good news is that they're beginning to focus on alternative models which recognize some of the problems and that will be absolutely critical if we're going to get stability going forward. A lot of these are really interesting in difficult areas like macroeconomic externalities, credit inter-linkages, network models...

On the micro, stuff that I talked about on the role of learning, but also areas like welfare economics such as how do get self-insurance market to work and how to mitigate the problems of moral hazard.

8. In the context of moral hazard, you proposed global greenbacks as way to balance risk-sharing between borrowers and lenders and to provide stronger global aggregate demand. How would you then allocate the greenbacks between countries to avoid the current behaviors between lenders and borrowers?

There are a number of proposals for the allocation of global greenbacks. One of them is to use the funds to incentivize countries to address the problems of global warming. Another one is to incentivize countries not to have excess surpluses, for surpluses are

the counterpart to deficient aggregate demand, if countries are producing more than they are spending, that was what Keynes talked about. That would be one of the ways I would do it.

9. What would you say to the economics students who are reading this interview?

What I would say is a couple of things. First, economics is really important; economists for better or for worse have a lot of influence and that means that bad ideas can have bad influence just as good ideas can have good influence. For a very long time economists focused mostly on efficiency and didn't talk about equity, fairness, income inequality; in fact in most standard textbooks you won't see much discussion of income inequality. If you think what are the major problems of our day, there are issues like income inequality, global warming; and those issues have a very large economic aspect to them, but unfortunately they have been given a very short shrift by the economics profession in the past and it's really important for them to focus on problems that are really at the core of the functioning of not just our economy but the whole society.

The other thing I would say is that progress in any discipline comes from questioning standard assumptions, not accepting authority; so question your teachers, don't accept what they say. When I was a student, we were told that markets were efficient. I grew up in a place where I saw discrimination, unemployment, poverty, and it seemed to me that what they were telling me was not true. I didn't know why and the question was: "which assumptions?". So one of the assumptions was obviously imperfect information, imperfect risk market. Another set of assumptions that is clearly not correct is that what we believe our preferences are given to us at birth as opposed to being socially determined, that we're all rational being, and we enter the world with well-defined preferences. In fact, we know that that is not true. And that set of assumptions served some purposes and some people and some problems. But there are other problems for which those assumptions are particularly unsuited. So the general problem is to ask questions. ■

Nobel Corner: Jean Tirole

Introduction by Georgios Petropoulos*

Faculty contribution by Jacques Crémer

Featuring testimonies from colleagues

Around noon, 13th of October 2014: The news spread rapidly throughout the Toulouse School of Economics: Jean Tirole had been awarded the Nobel Prize in Economics! The initial shock from such great news was followed by enthusiasm, happiness, pride, admiration. Students were so ecstatic they congratulated each other as if they had won the Nobel Prize themselves. Cocktail parties and other events were organized to celebrate this remarkable achievement. TSE alumni organized their own celebrations to honor Jean all over the world. The whole city of Toulouse was talking about it and our friends outside TSE were constantly asking us about Jean and his economic theories. We all feel like being part of it. Our team, excited as it is, decided with great pleasure to change the structure of this issue and dedicates this column to Jean. But, what can we write about Jean? We all know how humble,

polite, smiling, hardworking, efficient and smart he is. We all have been taught economics from his papers and his books. So we decided to let the experts talk about him: we invited some of his colleagues, co-authors and former students to share with us their personal memories and feelings regarding Jean. At the same time, we asked Jacques Crémer to write a longer article about his economic contributions (or any other synonym because Jean is repeated far too many times) (a quite challenging task) with his own unique style of writing. Despite the strict deadline and their busy schedule, all of them accept to contribute with pleasure. The list of people participating in this column is non-exhaustive. We hope you will find this column enjoyable and informative. Jean, our warm congratulations! You made us (again) very proud!



FRIENDS AND COLLEAGUES

Jacques Crémer (IDEI and TSE)

On Monday 13th October the Nobel committee announced that Jean Tirole had won the prize. On Tuesday 21st October, we found ourselves, by coincidence, on the same plane going to London. Jean was all excited because an hour and a half of flight gave him the chance to get back to ... working on papers! His enormous output is the fruit

of an exceptional intelligence, but also of a deep love for research. We are extremely lucky that he is our colleague in Toulouse; both thankful to Jean-Jacques Laffont for convincing him to settle in the "pink city" in 1991 and very proud that Jean has found the environment sufficiently to his liking that he has decided to stay since.

I arrived in Toulouse one year before

Jean, and it is presumably because I am one of his most senior (this is a polite way of saying oldest) colleagues that the editors of *The TSEconomist* have asked me to summarize the contributions which earned him the Nobel Prize. This is a mixed blessing: there is the fun of describing this great body of work, but also the impossible challenge (I have been given 1800 words) to do justice to three

*Note: A special thanks for his contribute to Georgios, Founding member of the *TSEconomist* and Editor-in-Chief 2012

or four books and dozens of article. The Nobel Prize committee summary of the work takes up fifty four very dense pages! It is often said that the Nobel Prize is given for one discovery; in his case it has been given for reinventing a field of economics. As the committee so justly puts it, "Tirole's overall scientific contribution is greater than the sum of his individual contributions. He has created a unified framework for IO theory and regulation, founded on a rigorous analysis of strategic behavior and information economics." Most economists would agree that his contributions can be usefully classified in three subgroups which we will now turn to.

The first group of contributions was the result of Jean's ability to take advantage of the state of Industrial Organization – the study of the way in which the strategies of firms and consumers shape individual markets – and of the development of new tools in economic theory at the time at which he was beginning his career. Up to the beginning of the 1980s, Industrial Organization (IO) had been dominated by the search for general laws of competition which would extend across different industries. At the same time, game theory, which had started as a minor field at the intersection of mathematics and economics, had come into its own and was beginning to make its influence felt all over economics. Jean realized that it provided a unified language for studying the strategies of firms at a finer level. For instance, with his friend and graduate school colleague Drew Fudenberg, they explained the mechanics of the way investment by a monopolist can influence, or even deter, future entry. They showed that the incumbent would sometimes want to overinvest, and sometimes to underinvest. But the importance of Jean's contributions to these developments by this and other articles pales compared to his classic book *The Theory of Industrial Organization* (MIT Press, 1988). There, he revisited the different aspects of the field and showed how a careful game theoretical analysis shed light on many issues. It provided a summary of what was known and highlighted what remained to be done. When you tackle the book, you are struck by the simplicity and the elegance of the writing. As you go further, you are struck by the depth of the economic intuition.

As he was still writing *The Theory of Industrial Organization*, Jean began

working with Jean-Jacques Laffont on the second line of work, which won him his Nobel Prize. In 1982, David Baron and Roger Myerson had published "Regulating a monopolist with unknown costs" which showed how the theory of asymmetric information, which was in full development at that time, provided useful insight on the regulation of a natural monopoly by a regulator. However, Baron and Myerson stopped far short of providing guidelines for actual regulation. Starting with their 1986 article, "Using Cost Observation to Regulate Firms" and culminating in their 1993 book *A Theory of Incentives in Procurement and Regulation*, Jean-Jacques and Jean tackled this task. They went much farther than exploring the fundamental tradeoff between efficiency and leaving rents to the regulated firm – they extended the analysis to study multi-product firms, the regulation of quality, the dynamics of contracts, the policy of the regulator when it has limited commitment power and, pushing further, they explored issues of institutional design: for instance, they showed how governments can limit the impact of regulatory capture through appropriate regulatory institutions. It is fair to say that the Laffont-Tirole agenda totally changed the way in which economists think about regulation. They also showed how this could be done in practice through research on specific sectors, in particular the telecommunications sector (see their 2001 *Competition in Telecommunications*). (Jean-Jacques actually spent lots of time in the last years of his life applying this approach to the problems of developing countries.)

Finally, at the beginning of the 2000s Jean developed, along with Jean-Charles Rochet (who has since left Toulouse for Zurich) the theory of two-sided markets. This work was linked to the contacts that the IDEI (Institut d'Economie Industrielle) had with Visa, frustrated by the "market-by-market" approach of industry supervisors – leading them to accuse Visa of charging excessively high prices in one market (namely, overcharging merchants) and predatory low prices in another market (namely, undercharging consumers). Thinking through the fundamentals of the industry, Jean and Jean-Charles highlighted the role of "two-sided" network effects: consumers are more willing to carry a card if more merchants accept them, and, conversely,



Jacques Crémer

merchants are more willing to join the network when more consumers carry a card. Other examples of "two-sided markets" include operating system software (end users and developers of programs or apps) and media (content and readers/viewers). This "two-sidedness" drastically affects the strategies of firms who need to take into account both the direct and indirect consequences of changes in prices. For Visa, for instance, lowering the price charged to consumers increases the number of consumers, as it would for any good, but also the number of merchants who join the network, as new merchants are attracted by the new consumers. As a result, it can be desirable to subsidize one side of the market (the too often used, but very striking, example of nightclubs provides a vivid illustration: both the club and men gain from the fact that women are often subsidized through a reduced price at entry). Most importantly for public policy, two-sidedness also changes the "socially optimal" prices – subsidizing is also what a social planner would do.

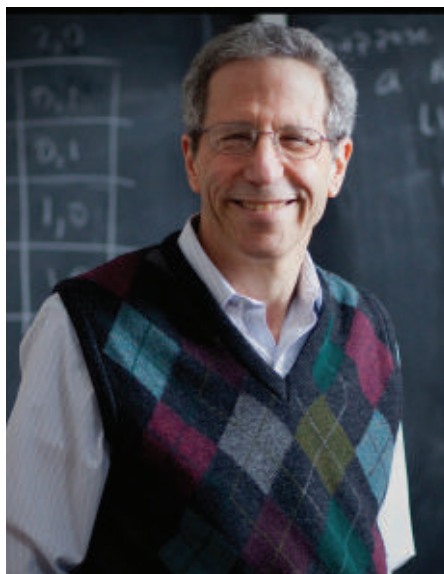
The analysis of two sided markets has had profound consequences for the analysis of firms' strategies – it is the basic conceptual framework for many courses in business schools – but also for competition policy, especially as it applies to the Internet and information technology. Jean's work has not only opened a new strand of literature, but it has also helped put the policy debate on better tracks. This is the reason why Joaquín Almunia, the EU commissioner in charge of competition policy, reacted to the prize by stating "We owe

Jean Tirole so much," adding that his work "has been central to the economic analysis underpinning many of our instruments in competition policy and beyond".

The editors of *The TSEconomist* have asked me to "write an article about the work of Jean on the analysis of market power and regulation, for which he was awarded the Nobel Prize." I hope that they will forgive me for a few addenda. First, Jean's contributions extend far beyond the domains for which he was recognized by the Nobel committee. He has been a leader in economic theory, in finance, in banking regulations and so on and so on. To give an idea of the breadth of his work, he has been one of the leading contributors to the rapidly developing field of "economics and psychology" – and he has read enormous amounts of psychology!

Second, and most importantly, Jean has not only written papers. He has contributed to the public debate under many forms, most prominently as a member of the French "Conseil d'Analyse Economique". He has also played a – I want to say the – crucial role in the development of the TSE. It is sometimes difficult to remember that TSE in its current form was created in 2007! Jean was the linchpin of the design of the new institution, and the driving force of its development. He was director for a couple of years at the start, and has since been its president – definitely not an honorary title! He has also imagined and created the TSE's sister institution, the Institute for Advanced Studies in Toulouse (IAST), which supports research in social sciences other than economics.

Finally, and I know that Jean will scold me for writing this, he is extremely generous with his time – one of my graduate students sent a copy of his paper to Jean, received it back completely covered with comments and told me how thankful he was. The development of the TSE has cost him many sleepless nights and hours away from his research. And finally, as Tyler Cowen put it in his blog *Marginal Revolution*, "Jean Tirole is renowned as an excellent teacher and a very nice person." The students who edit *The TSEconomist* know and are better judges than I am of the 'excellent teacher' part. I know about the 'very nice', but everyone else in the profession will also be a witness to this fact. Since the announcement, I have spoken to



Eric Maskin

many colleagues from other universities around the world and have been struck by how well liked he is and how personally happy they are for him.

Eric Maskin (Harvard University, PhD advisor of Jean Tirole at MIT and 2007 Nobel Priz winner in Economics)

Jean Tirole nearly ruined my teaching career. When I was a new assistant professor at MIT, Jean was one of the students sitting in my game theory class. He was always very polite, but repeatedly asked remarkably penetrating questions. With my inexperience, how was I supposed to know that such questions are unusual in a first-year student? Later on, he and another student, Drew Fudenberg, asked to meet with me weekly to discuss all the new game theory working papers that had come in (In those pre-internet days, working papers arrived by mail, in case anyone remembers what that is).

Can I be blamed for assuming that such initiative in students was normal? Later still, some casual conversations I had with Jean turned into a joint research project that became one of his thesis chapters. Did I have any way of telling that an equal partnership between a student and a professor doesn't happen very often?

Indeed, it was perfectly natural for me to expect all the students who came along afterwards to be just like Jean. That was a serious mistake....

Bengt Holmstrom (MIT)

First and foremost, I want to extend my personal congratulations to Jean and thank him for thirty wonderful years of friendship and collaboration. Jean is exceptional in so many ways. Let me try to give a glimpse of him by telling how we worked together and why it has been such a rewarding experience for me.

I met Jean for the first time in 1980 when he still was a student at MIT. He came to Northwestern for a conference on information and incentives, which the young faculty at Northwestern had put together. There was plenty of excitement in the air. Game theory, including information and incentive theory, was emerging as a major paradigm that was changing everything. Jean was there to be introduced to the profession as one of MIT's star students. He told us about his work on bubbles, which sounded interesting, but a bit esoteric. Little did I realize how relevant the work would be in today's post-crisis world.

Jean and I began working together in



Jean Tirole (left) and Bengt Holmstrom

1986 on a survey of the theory of the

firm. Grossman and Hart had just shaken up the field with their paper on incomplete contracting and we built our discussion largely around that work. It was a fun project with animated discussions and lots of ideas, some of which even made it into the paper. More importantly, it was the start of our long collaboration and deep friendship.

Jean is remarkable. Working with him is like playing tennis against a wall – some six feet away. You work hard on a problem and fax something to him one evening only to wake up the next morning to a ten page reply with comments, corrections, analyses and extensions, all logically presented and neatly written by hand. Just as one thinks there will be at least a couple of days of rest, the catch-up work starts over again. Initially, it was frightening. But Jean is not just quick. He is also patient, supportive and appreciative. Unlike the super-competitive days at Northwestern, there has never been any one-upmanship with him.

Our research on financial markets began when I was on sabbatical in Finland in 1991-92, the year the Nordic financial crisis erupted. We started to work on this problem even though it was a largely unknown field to both of us. There was an advantage in not being an expert. Our naïve questions led us down some little tried paths.

After many failed efforts we developed a theory of private and public liquidity supply in which the private sector could be short of collateral. It was an idea that many found strange. With so much wealth in the world, how could there be an aggregate shortage of collateral? The current crisis has put that question empirically to rest. The simple logic of limited pledgeability could address this question before the collateral crisis broke out. This has been one of the many rewards of working with Jean. Our journey together has been enlightening and delightful. I feel truly privileged to have been a co-traveler and companion.

Paul Joskow (Yale University)

I first met Jean when he was a graduate student at MIT and I was teaching the industrial organization (IO) sequence for PhD students with Dick Schmalensee. However, perhaps surprisingly, Jean did



Paul Joskow

not take the IO sequence when he was an MIT PhD student. Indeed, I don't think that he had ever heard of IO until just before we met. Rather, Drew Fudenberg introduced us after telling Jean about IO, ripe with opportunities for careful theoretical analysis. I did not really get to know Jean well until after he returned to MIT as a faculty member in 1984. By this time, Jean had begun to work on IO problems and he began to teach IO to MIT PhD students in 1986. We subsequently co-taught the two courses in the IO sequence several times. Jean systematically introduced the framework and material that became part of *The Theory of Industrial Organization* and later he presented his evolving work with Jean-Jacques Laffont on incentive regulation which ultimately grew to become *A Theory of Incentives in Procurement and Regulation*.

I learned a lot from Jean during this period of time. Jean gave me and the MIT graduate students the opportunity to see the development and application of theoretical models and analysis to a field that was starving for more comprehensive theoretical foundations. Since those days I have been impressed with Jean's deep interest in developing theoretical analysis that is relevant to real-world problems. It was also during this period of time that I got to know Jean-Jacques Laffont and his family and had opportunities to discuss his ideas for creating the IDEI in Toulouse.

It was a dark day at MIT when Jean told me that he planned to return to Toulouse. Again I was not surprised, but

certainly glad that he was my colleague on the MIT faculty for eight years. Luckily, at my instigation, MIT was pleased to offer Jean a visiting professor position, which has continued up to the present. Jean's return to France also coincided with my becoming closely associated first with IDEI and later with the Fondation Jean-Jacques Laffont and the Toulouse School of Economics (I am in the picture of the economists who attended the inauguration of the IDEI that is (or was) in the coffee room in Toulouse).

Jean and I began to do research together following the privatization, restructuring, and introduction of wholesale and retail competition in electric power sectors around the world in the 1990s. Our original goal was to develop incentive regulation mechanisms for application to unbundled electric transmission networks. We never actually completed that paper, but the problem remains unsolved so we still have work to do. We did complete and publish four related papers on electric transmission networks, retail competition, and network reliability problems. Working with Jean was a pleasant educational experience for me. I had never written papers with a theorist before. Jean made me think more rigorously and taught me how we could formulate our ideas into relatively simple models that yielded interesting results with sensible policy implications. And the speed with which Jean turned draft after draft around was amazing (and tiring). Jean taught me how to think more clearly about competition, market power, and regulatory problems that I thought I already knew a lot about.

Jean, congratulations, let's keep up our friendship, and let's try to finish that unfinished paper.

Drew Fudenberg (MIT)

Jean has a great sense of humor and a ready smile. One of his favorite expressions is "plutot mourir," which he has applied in jest to diverse activities such as ultimate Frisbee, certain branches of economics, and eating salad before the main course. Our families have kept in touch and have had dinner together regularly throughout the years, and Jean has said "plutot mourir" enough that our sons identify it with him. They have also commented that at our dinners Jean does not talk about work and seems



Drew Fudenberg

quite relaxed and easy-going: despite Jean’s ability to concentrate for many hours at a time, he is also able to stop working and enjoy himself. In addition to his love of tennis, he is a loyal son of Champagne, and unlikely to suffer from Keynes’ regret; he has also become a strong booster of Toulousain culture and cuisine.

Jean and Nathalie have both always been very generous with their time and possessions. When I married Geneen, he let my inlaws stay in his Boston apartment. When my family came to Toulouse for spring term 1992 he picked us up at the airport and helped us move in. Later Nathalie and Jean took us to their favorite local stores (such as Xavier) and Nathalie helped us negotiate Toulouse

and the French systems. More recently they surprised me with a birthday party, which was an unexpected treat.

I met Jean when we started graduate school at MIT. At that time my French was almost as good as his English and I could sometimes help provide translations, though he soon no longer needed this help. I had planned to take a few waiver exams; Jean planned to take many more, because he wanted to finish the program in two years. He talked me into studying with him for additional waivers in econometrics and macro, and we managed to waive out of most of the first-year program. We went on to work together in many classes, most notably Eric Maskin’s game theory class and a subsequent reading group. Jean had already done some research as part of his Master’s thesis with Roger Guisnerie, and his experience was a great asset as we shifted from criticizing other papers to writing new ones – both with the intellectual process and with what was then the all-too-physical process of “cut and paste.” Later on Jean suggested we should write a game theory text; as with the additional waiver exams, it wouldn’t have occurred to me to do that. I owe a lot to Jean’s fearlessness and vision.

Josh Lerner (Harvard Business School)

I have had the privilege of working with Jean Tirole over the last fifteen years on a variety of projects related to open source, standard setting, and patent pools, as well as related topics on the



Josh Lerner

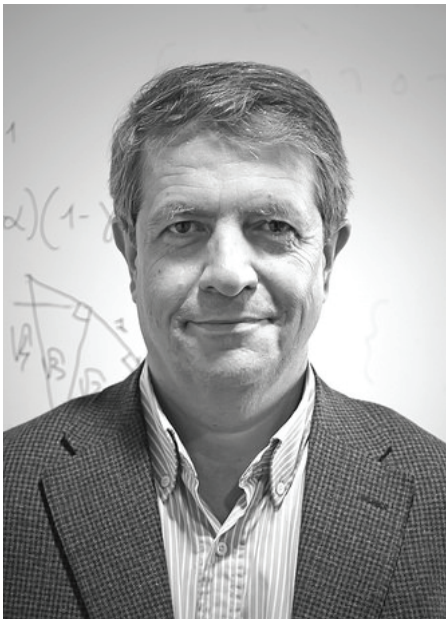
organization of and policies around innovation. In addition to his academic work, which the Nobel committee did a great job of describing, Jean is a stand-out on many other dimensions. He has been a tireless institution builder, establishing the Toulouse School of Economics as a preeminent place for thought and training in continental Europe. He is also a terrific mentor and all-round nice guy: down to earth, interested in other people, and always helpful – not always qualities one associates with successful academics (or successful people in other walks of life as well!).

Patrick Rey (IDEI, TSE)

I first met Jean as a student, when by pure luck I attended a course in IO that he was teaching in Paris, in what would nowadays be called a M2 program. This course was first of all a real eye-opener, not only because of the content (I discovered that I enjoyed IO, to which I devoted a large part of my work afterwards), but also because of Jean’s approach to the literature: I was very much impressed by the way in which he could convey key intuitions in the simplest manner, and present a large body of literature in such an organized way, and it has certainly had a huge impact on my own approach to teaching – ex post, it is difficult for me to say whether I liked the field of IO in and of itself, or whether I liked it because of the way it was presented; I wondered what I would have done if I Jean had been teaching macro-econometrics...



Daniel (left), Naïs, and Jean at Daniel’s 3-year birthday party



Patrick Rey

But this first interaction was also quite an experience, because what began as a series of questions and answers in the classroom soon became a collaboration on a research project, which produced a couple of papers, one of which in a top-five. (I remember Eric Maskin, introducing Jean's presidential address for the Econometric Society, mentioning what a terrible thing it had been to have Jean as first student – because this misled Eric to believe that all students were like him, a source of endless disappointment and frustration later on... In the same vein, having Jean as a teacher misled me to believe that producing top-five publications was a very easy task, with similar effects afterwards...)

Fortunately for me, this first interaction marked the beginning of a warm and friendly relationship over the years, during which Jean never stopped providing not only scientific leadership and guidance, but also advice and feedback on my projects and my work, and support in many ways. Jean had also a large impact not only on both on my professional itinerary but also the life of my family: Jean's help to obtain a visiting professorship at MIT led us to spend one year in Cambridge, which Jean and his wife Nathalie contributed to make even more enjoyable, and together with Jean-Jacques Laffont, Jean was responsible for our coming to Toulouse – a move that everyone in our family enjoyed, every day since then.

Of course, many of the great moments with Jean are associated with his passion for research. I keep a fond memory of a

year-long reading workgroup, together with Jean, Roger Guesnerie and Bernard Caillaud, where we spent Tuesday late afternoons exploring the literature on regulation. It was fascinating to search for new ideas, identify key ones and grasp their intuition. This contributed a lot to determining my professional career choices – and eventually convinced me to become a researcher.

Jean Charles Rochet (U. Zürich and IDEI)

It has been a privilege and a pleasure for me to write nine research articles and a book with Jean. Our first article was presented in a Fed conference in 1995 and I remember the discussant, Raghuraj Rajan, stating that our article was "so French" (by which he meant communist) since we were arguing that public intervention was needed to avoid systemic risk on interbank markets. This makes all the more ridiculous the critiques that Jean received by some French left wing (or should I say left bank?) journalists accusing him of having yielded to the demons of international finance.

Another memory is when we presented our analysis of credit card markets in the Visa offices in Mountain View. At the end of our talk, a top Visa executive told us: "if I understood you correctly, you conclude that the Fed should indeed regulate us," which was obviously the opposite of the conclusion they expected from us. This did not prevent Visa from continuing sponsoring IDEI's research for several years.

Working with Jean is a rewarding but humbling exercise. I remember several occasions where I came with excitement to his office presenting him with research ideas that had come to my mind the night before. He would listen to me carefully and would conclude something like: "this is a good idea, but it was already explored by Masters and Johnson in 1953 but rejected by the empirical analysis of Villeroy et Bosch in 1976." I also remember my frustration when he showed me his first draft of our first joint paper. Since I did not have anything to add, I tried to suggest crucial changes such as "Don't you think we should get rid of the comma on page 1 line 5?" He would respond something like: "certainly not; there are many reasons why I want to keep this comma..." Jean has



Jean Charles Rochet

one of the most important qualities for a successful researcher: he is incredibly stubborn!

When Jean is your office neighbor, which was my case for almost 20 years, you do not need Google or JSTOR. If you have some questions about an economic article, it is more efficient to ask Jean directly because he will also give you a critical analysis of the article and you will not have to actually read this article (while writing this I realize Jean will be mad at me, so let me rephrase: you do have to use JSTOR!).

More seriously, if I were to single out the most impressive talent of Jean, I would say it is his unique capacity to understand what other people have in mind, which is a strong form of empathy. I remember many occasions in which a young researcher would present her ideas so awkwardly that I had the impression nobody understood what she meant. But then Jean would discreetly go see her at the end of the talk and give her a whole page of hand-written notes showing how to present better the idea and giving the important references that were related to this idea.

FORMER PHD STUDENTS

Alessandro Pavan (Northwestern University)

The importance of a great advisor: Writing a thesis under the supervision of Jean Tirole

Most people know Jean Tirole for his dedication to research, his impact on all major fields in economics, his influential books and articles and his achievements and awards. He is equally impressive as an advisor: dedicated, generous and supportive of his students.



Alessandro Pavan

I met Jean for the first time in the spring of 1998. At the time I was unsure whether a PhD in Economics was for me, but talking to Jean convinced me once and for all. His passion for research and his energy and curiosity are contagious. The three years I spent in Toulouse will always be one of the most beautiful and significant periods of my life.

Jean played a major role in the development of my thinking and my style of research. While he was careful not to directly shape my research agenda, seeing how he approached problems by connecting ideas and techniques from various literatures had a great influence on my work. Jean also taught me to be ambitious and stay away from easy but unsatisfactory answers. After a few meetings, I quickly learned how to interpret his polite language and translate such comments as “Alessandro, this is nice; however, you may want to consider also X and Y” into “Come on, Alessandro, be serious, this is no good; come back in a week with something more promising.” Working with Jean can be challenging and somewhat intimidating, but it is also inspirational and highly rewarding. It is

impossible to describe just how much I learned from those weekly meetings.

At the end of my third year in Toulouse, Jean suggested I should visit MIT for a year. The prospect was fascinating, but there was a major obstacle: my wife’s hesitation. Jean offered to talk to her and, of course, managed to convince her (he can be as persuasive and convincing in person as he is in his papers). We ended up visiting MIT, trying the US academic job market, and are now living in Chicago. None of this would have been possible without Jean. I also remember the day he came to dinner at the modest basement in Beacon Hill where my wife and I were living while we were visiting MIT. He brought flowers and a bottle of excellent (obviously French!) wine. This was one of the first occasions in which I started appreciating the openness, curiosity and love for knowledge that Jean applies not only to economics but to all aspects of life. Despite being busy and overcommitted, Jean has always been generous with his time. I will never forget the care he put into my papers, reading multiple versions and offering detailed comments and suggestions. In my office I still have some of the drafts with Jean’s handwritten comments in the margins. They remind me of what it means to be not just a great researcher but also a dedicated advisor. I try my best to follow his example with my own students (two of whom are now in Toulouse with him), though Jean’s standards are, in fact, impossible to live up to.

E. Glen Weyl (Microsoft Research New England and University of Chicago)

Memories of Jean Tirole’s advising

At the beginning of 2006, I thought I was interested in behavioral economics and finance, popular topics at Princeton where I did my PhD. As a result, my advisers at Princeton specialized in these areas, including Roland Bénabou, from whom I took behavioral economics. But that summer I went to work for the US Department of Justice’s Antitrust Division and, through that process, got exposed to antitrust economics. No one at Princeton worked on IO at that time and Roland therefore recommended that I talk to Jean at a behavioral economics conference I attended that summer. Jean, despite being mobbed by tons of students who wanted to talk to him, took a very serious interest in my work



E. Glen Weyl

on two-sided markets and even invited me to come and present at Toulouse that December despite my still being an undergraduate. He repeatedly gave me detailed comments on my paper and as I progressed through my career invited me to come back to Toulouse for a month each year. During that time, the conversations we had fundamentally challenged the way I thought about many questions in economics. Jean’s command of so many areas of economics helped me see how different literatures and arguments weave together. He taught me to avoid the intellectual laziness of seeing different economic ideas as separate and unrelated to one another and forced me to always try to reconcile different and apparently contradictory strains in economic thought. That dialectical process has become the foundation of so much of my work that in a very real sense I most of my papers to a style Jean taught me.

Perhaps the most impressive thing about talking to Jean is his combination of overwhelming knowledge and insight with his modesty, both personally and intellectually. Jean never believed he had the complete or final answer to any question. He was always searching to challenge his own understanding even more vigorously than he insightfully challenged mine and that of other colleagues in seminar. It is this intellectual restlessness, rather than his stunning work ethic, that I really think accounts for his incredible productivity. Jean could not help himself from exploring the roads of thought that he didn’t have the chances to fully analyze.



Emmanuel Farhi

These roads not taken, but stored away deep inside his mind somewhere, were much of what made it so much fun to work with Jean. As we worked on our joint paper, I realized that, beyond the countless papers Jean had written, that there were nearly infinite other issues he had thought through in the course of previous projects and seminar discussions that were constantly coming back to the surface in the context of the problem we were working on. This made working with Jean not just incredibly productive, but enormously educational, as I felt like in every conversation I learned a new paper Jean had never written, but should have. His incredible recall of this richness of ideas was particularly ironic, because Jean was constantly taking notes and remarking on how he could not believe I did not take notes, because he claimed his memory was poor. Another example of his genuine, if misplaced, modesty.

Emmanuel Farhi (Harvard University)

Jean is an intellectual giant, one of the greatest economists of all times. But I do not want to use these few lines to pay tribute to his enormous scientific contribution, or to celebrate his unique mind. Instead, I want to convey some other, more personal and human qualities that set him apart, and that are even more remarkable given his incredible achievements: a profound, and always renewed passion for economics; an insatiable curiosity and eagerness to discover and learn; a relentless tenacity; an unshakable belief that economics is a serious enterprise that can and must contribute to improving the world; a strong sense of duty and a constant desire to give back to the community; an absolute

personal and intellectual integrity and fairness; an unbounded generosity; the deepest respect and interest for others; an indestructible loyalty; an incredible humility, simplicity, class and true gentlemanliness.

Jean is a mentor, an example, an intellectual companion and a dear friend. I am overwhelmed with joy, emotion and pride at his winning the Nobel Prize.

Sergei Kovbasyuk (Einaudi Institute for Economics and Finance)

It was always easy to work with Jean. His unparalleled efficiency and concentration made interactions with him very smooth: whenever I made an appointment with Jean I was sure that at the agreed time he would be there having already looked at the notes that I sent him. As sure I was about the timing of a meeting with Jean, I was more sure about its outcome. Whatever idea I shared with Jean he would always grasp it in just a few minutes and would comprehend it much better than me. But then he would never explain it to me, instead he would leave me struggling to understand it on my own (actually a couple of times I succeeded). Usually, Jean would pose several deep questions to me, the deepness of those questions was probably deliberately chosen to fit the limits of my intellectual capacity, and those questions would keep me puzzled and motivated to think.



Sergei Kovbasyuk

As a PhD student I could not have been happier, Jean would make me concentrate on the economic questions we discussed and all other concerns would appear secondary, and this was the perfect mindset for someone making his first steps in research. This was an amazing experience: no matter how

much I thought I understood before seeing Jean, after seeing him I always realized how much more I could potentially understand if I just keep thinking. So I kept thinking and I really enjoyed it. As one girl said to me once: "tu penses trop." She said so because she never met Jean. Thanks to him I know I never think enough.

Eric Mengus (HEC Paris)

It is mostly a sequence of unexpected circumstances that led me to study economics.



Eric Mengus

On my career track to becoming a civil servant, I completed an internship at the Banque de France, the French central bank. There, I discovered Jean's works about liquidity, banking and all their connections with monetary policy or regulation, and this is what really motivated me to do a PhD: I wanted to study Jean Tirole's (macro)economics. Studying with Jean Tirole during those three years was really a great pleasure. This is only mentioned by some senior academics, but Jean Tirole is nice with his students and, in particular, as far as I can say, with his PhD students. And how valuable this is! It was also a great chance. Of course, discussing with Jean Tirole is always double-edged: great comments and questions but also a great amount of work afterward! But, overall, I was always impressed by his availability or, even, his ability to grasp better than I do my own ideas. I am very pleased to see Jean receiving the Nobel Prize, as it honors a great researcher as well as a great adviser! ■

Interview with Dani Rodrik

By Jacint Enrich and Timothy Yeung

1. Concerning the economics sciences, you have criticised the methodology that economists use to diagnose and prescribe treatments to policymakers, arguing that we should stop acting as advocates for specific approaches. What do you think is the role of an economist and, in particular, a development economist?

I think economics is fundamentally about context, about teasing out the implications of different initial conditions, exogenous circumstances, the outcomes that we care about, economic wellbeing, economic development and growth, efficiency and equality. Thus, every model that we study and we teach is really a contextual model because it tells you what happens under the assumptions and, with that, comes the idea that we are not always very good at thinking through its implications, since different contexts and models produce different results.

So, if you are approaching the world with the framework where all markets are perfectly competitive and there are no borrowing constraints, you are going to get different results than when you have frictions and financial constraints and our wisdom, to the extent that we have any, consists in being able to figure out the implications of different parameters, initial conditions. Then, the craft part of economics is figuring out which model is the most appropriate one to apply in a given setting. However, this is something that we don't teach necessarily in graduate schools... We do teach about testing, but that is not real time: it is not necessarily useful and here is where we need to do a lot of more work.

2. Then how should we teach the new generation?

Well, I do not think that we necessarily do a bad job teaching graduate students. I think Introductory Economics is a little bit different because there we



tend to overly emphasize the benchmark with perfectly competitive markets and so on and not necessarily focus on the real world complications. But by the time that you get to be a grad student, you get exposed to all varieties of models, and what we could do a little bit better of is develop what I have called a science of economic diagnostics, which is learning how to pick the right model depending on context. However, as I mentioned before, this is always going to be partly hard, because it is going to be a question of judgement and experience, as much as empirical analysis and theoretical modelling.

The other thing we need to be much better at is in terms of the sociology of the prejudices where, regardless of what is told in the class, we tend to develop fixations and attachments to a subset of these models and the way that economists approach the real world. For instance, we had in the 50's and 60's maybe too much attachment to the planning model where we thought that the government could basically fix things. Then, in the 80's and 90's it turned around, and it became too much of a free market oriented approach, so, it is on these waves of dominant thinking about the real world where I think we need to fight

against and try to bring this heterogeneity and context specificity in a way that we discuss the real world.

3. You have argued that the success in China is, at least in part, due to its eclectic and pragmatic strategy with an experimental approach. Do you think there exists a contradiction, or at least, a constraint, between this strategy and other spheres of success like, for instance, democratic quality? In particular, do you think that democracy is indeed an obstacle for economic growth or for implementing the correct reforms?

I don't view democracy as an obstacle to economic growth, neither theoretically nor empirically. If you think of Latin America or Sub-Saharan Africa, for example, in many of those places some of the worst economic policies that produced significant and very costly crisis in the 80's were the result of authoritarian governments that ran their economies to the ground: and paradoxically, it were the democratic governments that subsequently came into power in Chile, Brazil, Argentina that stabilized and fixed those economies. Similarly in Africa, this last decade of relatively stable macroeconomic framework is really the product of much more democratic



governments.

I would say, on the other side, that in China even though the government certainly is an authoritarian one, the reason that the country has managed to reform and grow so rapidly is not because an authoritarian government has been able to take difficult reform decisions that ended up hurting some of the important insiders and political stakeholders. In fact, quite to the contrary, since the reform strategy in China was a Pareto superior strategy where they always do care to ensure that the insiders are beneficiaries of the rents from the planned and regulated system. They were compensated or able to retain their rents, like in the agricultural reform, the reform of the state enterprises, like the creation of private enterprises, and so on, where each of these policies was designed to prevent the creation of losers. Thus, the idea that the reforms are difficult because it means that some insiders and politically connected groups will lose,

and the need for an authoritarian government to take on this tough task, is not at all the model of reform that China has pursued. Moreover, you can expand and look at Vietnam, again an authoritarian regime with the Communist Party, where the method of reform has been highly consensual and not based on imposing significant distribution of costs on important insiders.

So I think that the relationship between democracy and economic performance is a more complicated one, where democracy tends to be associated with the difficulty of changing policies too rapidly so you get greater stability, but on the other side, democracy is also associated with the preference for avoiding policies that are going to be very costly economically and you tend to avoid much bigger crises. So, if you look at the data, you get much less volatility and long term instability under democracies than under authoritarian regimes.

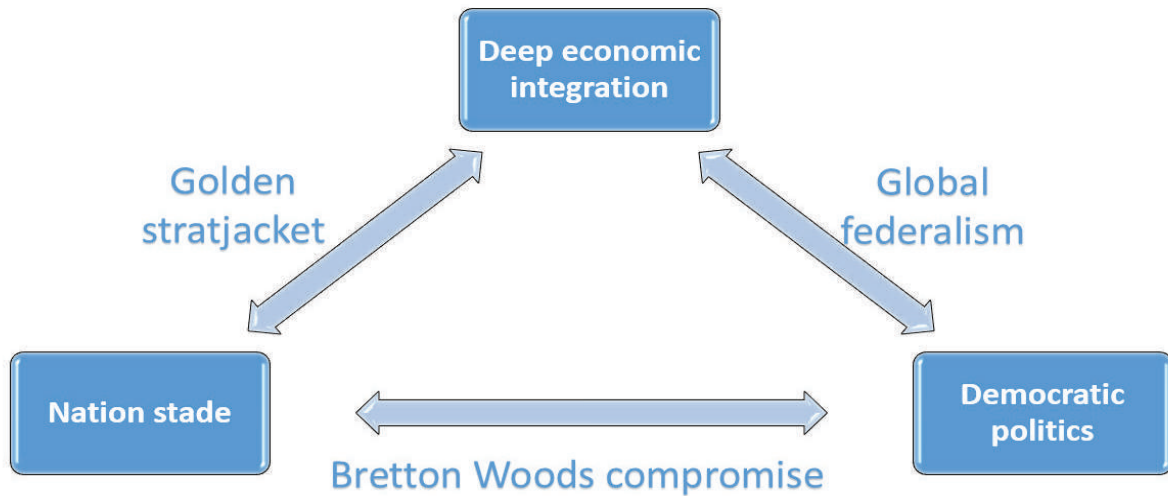
4. Turning to a third topic, which we are glad to discuss here due to your contributions to its understanding, you have exposed the problems that countries face with the process of globalization. Which are the main limitations (or the Trilemma in your work) that they have to take into account?

Let's start looking at the textbook model of globalization which I call Hyper-globalization. It is a model where there are no transaction costs associated with national borders. Such a world is possible not only if there are no barriers at the borders like tariffs, but also that national regulatory differences have been harmonized so that differences in regulation do not impose transaction costs at the border. We can achieve that kind of hyper-globalization under two different possibilities.

One is where we still have political entities that we call nation states, but essentially they are completely unresponsive to any attempt by democratic electorates to design regulation and these sorts of policies that might create differences in regulatory outcomes from those of their trade partners. I would say that in the 19th century, with the gold standard (or Golden Straitjacket) model, essentially countries do nothing at all on economic policy except to ensure that there are minimum transaction costs associated with national borders, and that is a model which effectively limits how much democracy you can have because you are telling to your voters, "You can ask for anything you want, but I can't give it to you since I am bounded by these restrictions, and thus, I cannot have taxation on capital or food and safety regulations that differ from those of my trade partners:" so that is the gold standard possibility.

The other allows to you to still keep hyper-globalization but getting rid of nation states, where we can collectively design these rules at the transnational level so we create transnational political institutions, a sort of a United States of the world. However, the problem of that is both, the practicality as well as that there is no reason to believe that, even with the best of the intentions, there is a common set of harmonized regulations that would fit from countries that are so diverse. And then, logically, the third possibility is to keep hyper-globalization at the bay and put some limits on globalization, and then be able to keep both nation states and democratic politics. So

THE POLITICAL TRILEMMA OF THE WORLD ECONOMY



that, in a nutshell, is the Trilemma that I talk about and that is summarized in the figure above.

5. These are extreme case decisions: is it perhaps possible to keep a part of the three possibilities.

Yes, but still you can take the Trilemma in a first-difference way where you cannot simultaneously expand globalization and deepen democracy while keeping the nation state as it is. This is how you would apply the Trilemma when you are not in the corners but somewhere in between.

6. How can these problems be applied to the actual situation that the Eurozone and, more generally, the European Union is facing now? What should be the right direction and the next steps or reforms that should we follow and implement?

As long as Europe wants to be governed democratically the choice has been either greater political union or less economic union: that is what the Trilemma says. I think that what the Eurozone has been doing is basically continually kicking the can down the road so we get a little bit of strengthening of transnational institutions like the Banking Union, but very little in terms of the creation of transnational political community and transnational fiscal and political institutions that would need to underpin a true political and economic union. So when you are stuck in the middle of very uncomfortable ground, what the Trilemma suggests is that you get a democratic backlash, just as in

1920's and 1930's with an ugly form of politics, because the respectable political forces have committed themselves ideologically to continue the union and remain economically with the union: this creates the argument for restrictions on European institutions, on immigration, and even potentially leaving the Eurozone.

Those arguments can only be made by extremist groups, and you are essentially empowering these extreme groups, whereas on the left or on the right, as we have seen on the latest European elections, this is a completely predictable outcome of these trade-offs which the Trilemma encapsulates. ■



Interview with William Hogan

By Nicholas Astier, Xavier Lambin and Selvin Thanacoody

Coordination and supervision: Georgios Petropoulos

1. We have seen a wave of deregulation in the electricity sector since the early 1990s. We have seen new challenges that have arisen, and we also have noticed a step back towards regulation, in many markets. From your point of view, in the end, did we really liberalize the markets?

We have certainly changed the markets. I think deregulation was always an inappropriate term to describe what was happening, because what we were doing was changing from one form of regulation to another. That's why I always refer to it as electricity sector "restructuring" as opposed to "deregulation" in order to open the market to competition and entry and move towards efficiency. But, that's a difficult challenge. And we have a lot of problems in designing the markets in an efficient way. We are still working on various problems such as the climate challenge and global energy, and the electricity sector is going to be an important part of that. But I think the restructuring and liberalization of markets has not been perfect but has been largely successful when it has been done correctly. There are places where they tried to do things which did not work in theory and also did not work in practice, hence, we had a lot of trouble.

2. Are we restructuring to prevent market failure or is it because we failed to deregulate properly at the first place?

There are two kinds of problems here. One is the inherent nature of the electricity system. If you want have a market with entry and competition by generators you have to adopt certain rules about how to handle the use of the high voltage transmission system because that's a natural monopoly and



everybody has to participate in that. And that's the central piece of the market design problem. Namely, how to handle interaction of high voltage grid. That's a fundamentally different market from typical markets in network industries such as the natural gas market. We know how to do it but not everybody has gone all the way to do it the right way. There is a second problem which is how to deal with market externalities and market failures like climate change issue and carbon dioxide. There we are having a debate on the different methods applied in different parts of the world. I consider that to be a work in progress. We haven't proposed a unique solution that has been adopted anywhere. I think it is sustainable, but we are working on it

and I think we can do better.

3. A researcher can either approach these issues fundamentally or be involved in more operational research. What do you think is the optimal and what is the most effective way in order to convince politicians?

I think both ends of the spectrum are important. I think the trick here is that as many people as possible should try to balance them and do both of them at the same time. You have to keep in mind the focus on the first principles. If you don't have an argument that fits into the general framework based on economic efficiency and the engineering requirements you are going to have trouble. But you always have to translate

it in practical realities of how it might be implemented and that requires some care, and thinking about what to do in that process. Then I believe another necessary condition is that you have to have champions for the ideas. Somebody has to stand up and say “this is a good idea” and explain why it is. And then these champions have to go through the process of endless repetition during which they can transmit their ideas through their continuous interaction with people. But this process goes on and on and on. I am just having conversations at lunch about some of these orders in the US where it’s clear that what they adopted is not going to work and they have to change it. We have to go back to remind them of the first principles, and keep reminding and we are getting better at this. The market is also getting better and I’m optimistic about making progress but it’s certainly not guaranteed. So thinking about first principles, having advocates of good ideas and then repeating the story over and over in the practical implementation phase, I think these are all necessary but not sufficient conditions for success.

4. We would also like to discuss another topic: costs and benefits of renewable energy. Do you think there is a trade-off between redistribution and environmental issues in the generation area of the electricity market? Coal-fired technology, for instance, might increase the amount of carbon dioxide you are emitting, but, at the same time, also reduce prices and thus benefit the consumers. Do you think that protecting the environment may harm the consumers by limiting competition?

Well, there are always trade-offs in any of these policy decisions, and I think this one is actually a little less stark than you might think because consumers are all affected by environmental problems. Thus in the aggregate there is less of a conflict than you might think. Now there are always winners and losers within particular groups, that is always true, but I would always come back again to the efficiency and first principles arguments. So if there are harmful effects associated with emissions from power plants, such as carbon dioxide, we should try to internalize these externalities as much as possible and do it in a way that’s economically efficient, and that doesn’t go too far, and that’s an important part, so you’ll have to have a benchmark of: I’m willing to pay a lot in order to internalize

these externalities but there is a limit of how much I am willing to pay. And then when you go to pass the limit then you should stop. We often have the problem that we think carbon is bad, renewables are good, therefore more renewables must be better. And that’s not true because an increase in renewables is expensive. So some more renewables is better, now the question is defining some, how far should you go, and that’s where the debate gets actually much more difficult, much more dependent on these arguments from first principles.

William W. Hogan, is the Raymond Plank Professor of Global Energy Policy at Harvard University and research director of the Harvard Electricity Policy Group (HEPG), which is examining alternative strategies for a more competitive electricity market, and a member of the Appointments Committee. Hogan has been a member of the faculty of Stanford University where he founded the Energy Modeling Forum (EMF), and he is a past president of the International Association for Energy Economics (IAEE). His current research focuses on major energy industry restructuring, network pricing and access issues, market design and energy policy. Hogan received his undergraduate degree from the U.S. Air Force Academy and his PhD from UCLA.

5. Are we moving with an appropriate speed toward renewable technologies? Or are we perhaps going too fast to allow markets to adapt, or too slow to meet the environmental challenges imposed by climate change?

I think speed is not the right question necessarily; I think it’s more about choosing the right kinds of technology. We have technologies today we could use to reduce carbon, but they’re too expensive. We don’t want to introduce them faster, we want to introduce them slower. Then we have other technologies which would be highly beneficial and are not too expensive and then you want to introduce them faster rather than slower. Hence, I think the speed question depends more on analyzing the fundamentals of when is the technology ready and unfortunately I am afraid, my own view is that most renewable technologies that are available today are not really ready. So it’s a research problem, not a deployment problem,

and we should be spending a lot more of our resources on trying to improve the technologies and a lot less on trying to deploy technologies that we already have. If we don’t get the cost of the technologies to be low enough, so that the developing world adopts some on their free will, we’re not going to make any difference on this problem. The challenge is enormous, so I think in terms of new technology the emphasis should be shifted much more towards R&D and trying out new ideas rather than deploying things that we already have.

6. Would it be better to adapt new technologies to the existing framework?

Let me give you an example. We’re working with a team at Harvard on a new kind of battery technology you can read about if you want to. It’s called flow-based batteries, Michael Aziz is the principal researcher, there is an article in Nature recently about it, but what’s relevant here is that the target goal we are working on right now is to produce a battery which costs 10% of the cost of the best technologies available today. Now if you can do that, you could make a huge difference to electricity markets, so we’d penetrate very rapidly if we actually get it to work and demonstrate it. It already works in principle, it works in the laboratory. The question is now how to scale it up to a particular size and do all the things we have to do, to get it ready. That’s the kind of radical breakthrough that we need. Now, we don’t need a battery that’s 10% better, it won’t be adopted by anybody if it is only 10% because it is too expensive. That’s where we should be focusing our attention, in upstream research.

7. What is the best way to provide incentives for the usage of renewables: targeted subsidies, making them market responsive, or maybe subsidizing research?

I think we need all of those in the right mix. Let’s take solar PV technology for example. It’s too expensive and you could imagine spending money in order to investigate new technologies that currently don’t exist (R&D investments). Furthermore, you could imagine providing subsidies for deployment because of learning by doing. But it turns out that if you estimate that externality –so learning by doing from solar PV– it’s a very small number. You can do it, but it really isn’t going to have an important impact. The final thing are the benefits from carbon production what you do through a

carbon tax. My optimal policy would be a carbon tax, larger than what we have in Europe today. Spending more in the R&D upfront, by probably a factor of 10, in terms of what we are doing globally on this matter, and then a very, very small subsidy for actually deploying this technology, which probably wouldn't make any difference. I think that's what conceptually is the right thing to do. What we have done is the reverse: We have a low carbon tax, no work on the R&D and huge subsidies to deploy.

8. Having witnessed the events which occurred in Japan three years ago. What is your personal view on the trade-off between efficiency and safety of nuclear energy. Isn't it that operating costs of nuclear power plants are among the lowest in the industry?

I know people say that, but I'm not sure if that is actually true because - at least in the US - we have very high safety standards for nuclear plants. If you look closely at the components which we have in the cost, the fuel consumption part of it is a very small part of the problem. That is low, you are just burning uranium. But every year you have to make new investments in these plants in order to keep them up to the safety standards. This is an extra operating cost. So, I think they are actually more expensive than people are willing to admit.

There was a conference on the future of

nuclear energy at MIT a few years ago. I was asked to chair one of the sessions. We had speakers from the industry from different perspectives. At the end of the session, the organizers asked the participants what would be the biggest surprise in this technology in the next 20 years. They all gave slightly different answers about smaller reactors, new kinds of new technologies that were coming along. My answer was "the biggest surprise for me would be if somebody built one of these plants with their own money".

I was trying to make the point that everybody talks about nuclear being such an attractive technology. Conversely, I always hear stories why I can't pay for it but someone else has to do so: We have to make people buy it, make people pay for it, the government has to deliver it, has to subsidize it. That makes me really suspicious that actually it is such a good deal.

My view of nuclear is that we must have very high safety standards. I don't want Fukushima to happen in my neighborhood, and I was very unhappy when it happened in Japan and sorry for the Japanese. I think these things are a problem. But we have safety standards and we should enforce them. Then, if people want to build them with their own money at risk, we shouldn't stop them. But I'm not going to subsidize it!

9. Do you have any remarks or comments that you would like to add?

Let me tell you a story. I run an organization called the Harvard Electricity Policy Group. It involves people from all over the energy system the United States: regulators, utility companies, independent power producers, NGOs. When we started that group in 1993, we made everybody promise that they would stick with it for at least two years. Because it wasn't worth gearing up and getting started if they had not committed; they had to commit money, and things like that. If they didn't want to commit for at least two years, then it wasn't worth the trouble; and I thought we would get all this done in 5 years

Last September, we had our 20th anniversary of the operation for this group. It's still growing strong, it is a completely voluntary thing, so that people could leave in a minute, but they haven't. I think what has been demonstrated during this process is that these challenges are complicated, they are continuing and they keep changing because of our concerns about related problems like climate. If you had asked me in 1993 whether I'd be sitting here talking about electricity market reform and energy policy, I would have said "no!" If you ask me now, if in 2034 I was going to talk about these issues, the answer is "yes!" (Laughs.) So I think there is a great future for you! ■



Spotlight on Armin Falk

The Gretchen-Question

By Christopher Sandmann



Typically, the disposal of clinical trial mice isn't something an informed economist is usually preoccupied with. Yet it seems to be very much an economic question when set in the context of bargaining, admittedly under different circumstances as demonstrated last year at Bonn University's Econ Lab. Armin Falk and Nora Szech had invited students at Bonn University to make an unpleasant choice: saving the life of a mouse or receiving money.

"What drives human behavior, induces us to wear yellow rather than green jumpers or to drink beer while wine is also available on the menu?" Armin Falk's often unorthodox answers to these questions have earned him the position of visiting professor at Harvard as well as a frequent visitor to the Toulouse School of Economics. Recently,

I've had the pleasure of sitting with him at Bar Basque in St. Pierre. His latest project focuses on a long-neglected aspect of decision theory as well as a branch of the science of philosophy: morality.

The mice experiment was famously published in *Science* and drew attention from a lot of major newspapers. Why is it important? The key hypothesis behind the experiment is that "markets display a tendency to erode moral standards." In order to verify this hypothesis, one needs to find consensus on two things: the definition of a market and the idea of morality. Arguably there "exists a basic consensus that harming others in an unjustified and intentional way is considered as immoral." An example of killing animals fits this notion well. In the experiment Armin

Falk and Nora Szech imitated different institutional setups and randomly assigned participants to three different trials.

In the first setup individual faced a choice between 10 € and sparing a mouse's life. In the second (bilateral) and third (multilateral) treatment participants were divided into groups of one buyer and one seller and seven buyers and nine sellers respectively. The life of the mouse was "entrusted" to the care of the sellers. Consequently sellers and buyers within their respective groups bargained over a mouse's life for a total gain of 20 euros that the parties could split up between themselves.

If trade waste occur on a morally neutral good, say a university gift voucher, one would not expect the results to differ in different institutional frameworks. And

in fact, they do not! Yet this is exactly what happened upon trading the life of a mouse. The percentage of traders willing to kill the mouse for an amount equal to or less than ten Euros rose from just below 50 % in the individual choice treatment to exceed more than 75 % in both bilateral and multilateral trading.

What happened here? Armin Falk believes that in part the finding can be reconciled in diffusion of being pivotal. Diffusion of being pivotal implies that “actors may perceive themselves as irresponsible for the outcome”, or, bluntly said, “if I don’t buy, someone else will. If I don’t kill the mouse, someone else will.” When thinking about institutions, we should perhaps favour those which do not allow actors to run away from their responsibility. In addition Armin Falk argues that in markets it takes two people who agree on trading to complete a trade, implying that responsibility and feelings of guilt may be shared and thus diminished. Moreover, market interaction reveals social information about prevailing norms. Observing others trading and ignoring moral standards may make the pursuit of self interest ethically permissible, leading further individuals to engage in trade.

On the other hand, the experiment hinges on the foundations of decision theory. A fraction of participants within the bilateral trading setup believed that the gassing of the seven mice would have happened in any case. At the same time, Armin Falk and Nora Szech verified a share of 10-15 % of participants who rejected payments well exceeding 100 Euros in order to save a mouse. These participants were not known for being animal rights activists, who would be willing to spend a large share of their income just to save a doomed laboratory mouse. If their true valuation for the life of a mouse indeed exceeded 100 Euros, transitivity would have induced them to just do that - a paradox.

“What if moral values bias parent schooling decisions, green energy investments or property rights? Then axiomatically defined rationality falls short of explaining human behavior on goods, which are perceived as morally loaded”

Indeed Economics does not know “reasonable and mathematically tractable concept of morals”.

Until now, the discipline is deeply rooted within a utilitarian paradigm. If a significant fraction of people don’t follow its prescriptions, we might ask ourselves if we are not missing out on an important part of human behavior. The killing of mice might be a stylized setup - but what if non-utilitarian, say Kantian moral values also prevail in a more realistic context. What if moral values bias parent schooling decisions, green energy investments or property rights? Then axiomatically defined rationality falls short of explaining human behavior on goods, which are perceived as morally loaded.

1. Does an economic notion of morals exist?

In my view there does exist a notion of prosocial behavior we sometimes conceive as a moral notion. This includes cooperation, altruism or the supply of positive externalities. But we do not have a reasonable and mathematically tractable concept of morals in economics, which is the reason why we [Jean Tirole and Armin Falk] are currently working on introducing such a concept into Economics.

2. Will such a decision theory rely on a utility function?

Without doubt economic thought is deeply rooted within the utilitarian concept. But clearly there exist other ideas, take Kantian principles for instance. Indeed we would like to consider decision criteria that are in some dimension orthogonal to the cost-benefit analysis. Our [Armin Falk and Nora Szech] results do emphasize that the majority of people follow utilitarian principles. Yet we can identify a fraction of participants whose decisions in experiments contradict utilitarian criteria.

“Observing others trading and ignoring moral standards may make the pursuit of self interest ethically”

In the mouse experiment a fraction (10-15 %) of participants had a firm belief that almost certainly all mice would be killed, but still refused to trade the life of a mouse for an amount exceeding 100 Euros themselves. One could perhaps argue that these participants acted on Kantian grounds, perhaps in just following some moral heuristic.

3. Could you match moral beliefs to other personal determinants?

Based on my experiments with Nora we consistently find that the likelihood to trade a mouse’s life against 10 Euros is lower for female, more intelligent and left-wing participants than it is for their respective counterparts.

4. Can we really infer moral beliefs from chosen actions?

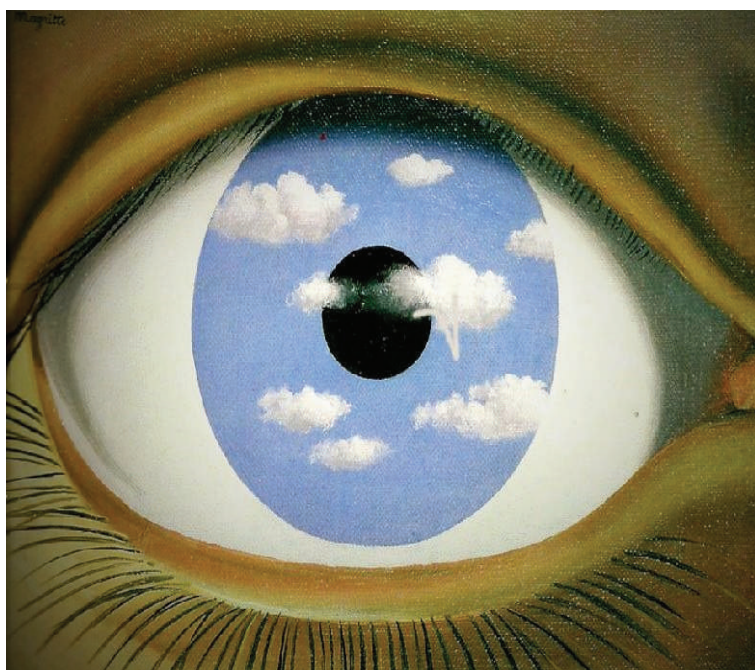
It is in fact not straightforward to infer values and beliefs from actions, in particular when it comes to moral decision making. What I find fascinating in this respect is our capability of reinterpretation of beliefs and actions. For example, if my environment allows me to construct a narrative, that will make my action appear in a favorable light, such stories will be told and the demand for them will be high.

5. Can Economics construct such a narrative?

Absolutely. I believe that we often impose normative system without reflecting upon them. We are used to interpreting the world along utilitarian concepts, or Pareto efficiency but often claim to be a non-normative science. Our concepts are productive, and can be justified, of course. But a critical reflection about what they imply in terms of our normative conclusions is important. ■

Scientific Consensus on Climate Change

By Marica Valente



“What is scientific consensus and why is it important? What does the scientific community think about anthropogenic global warming? And why do economists often struggle with natural scientists?”

This article will try to answer these deep, fundamental questions by giving a brief outlook on climate change issues, taking into consideration the role of public opinion, experts in climate sciences, and economists”

Scientific consensus implies agreement and unanimity among an overwhelming majority of scientists, i.e. experts, about a particular scientific issue. Consensus is based on the evaluation of evidence from a scientific point of view and, therefore, it must be achieved by writing papers and through peer reviews aimed at investigating the veracity of a hypothesis or theory. Thus, the requirement – and the strength – of the scientific consensus is to reach such an agreement on certain theories by formulating evaluations as objectively as possible.

Scientific consensus is very important because it can influence the public opinion and, consequently, the socio-economic development of countries. If there is scientific consensus about a theory, then this becomes a sort of public good, and everybody can start to believe its truthfulness and consequently act through an improved coordination and a reduced uncertainty. If there is no consensus among experts, then a debate can be raised between the different “parties”, i.e. the different views on the

subject in question. It follows that the public opinion cannot take a sound shape, in the sense that each single person will believe what is more compliant with her own beliefs, which are formed by level and field of education, family values, and political and religious adherences. In summary, only experts can verify theories’ veracity in their area of competence and possibly reach an agreement. Only this kind of agreement can have a full scientific objective value and can be, therefore, broadcast among the non-experts.

What about the scientific consensus on climate change (CC) and, especially, on anthropogenic global warming (AGW)?

Naomi Oreskes, geophysicist and professor of history of science at Harvard, and John Cook, climate communication fellow for the Queensland’s Global Change Institute, found reliable methods to investigate this matter. The method used to collect data on scientific consensus on CC and AGW discussed

by Naomi Oreskes (2004) involves the search for scientific papers written by experts in this field by typing the key word “climate change” in a database. Then, she checked whether and to what extent the papers endorsing the theory were supported, e.g. by the IPCC (International Panel on Climate Change), the NAS (National Academy of Sciences) etc. All papers agreed that the climate was changing, and in particular, the majority of them shared the opinion that it was human-caused, not natural. This result proves that there IS scientific consensus on the issue of global warming and, especially, the anthropogenic one. Therefore, this should not be ignored both by the general public and by governments.

In the other paper, John Cook (2013) collected data also by searching for scientific (climate-related) papers through key words. Then, he selected only their abstract. Afterward, these abstracts were randomly distributed to independent, anonymized raters via web, who evaluated the degree of endorsement. The raters – who did not know anything about to whom, to which journal, etc.

the papers belonged – followed Cook’s predetermined definitions of different endorsement-levels. It turned out that only 0.7% of papers rejected AGW, 0.3% were uncertain about its causes, the majority of them did not have a position on this topic, and 32.6% endorsed it. Then, the authors were asked to rate their own paper: 97.2% of the papers that had a clear position on the issue endorsed AGW. Thus, the conclusion reached by Cook was that the number of climate papers rejecting AGW is almost irrelevant and decreasing over time.

Therefore?

Is science on global warming “settled”? Of course not. Why? Because it is a complex system science. There is no way to reach a complete “settlement” of every single part of it. Even though there are well-established components about which nobody can argue – like “global temperatures are rising” – there are also competing explanations, like “ice melting is induced by humans” or “it is just a natural process.” Moreover, as in every complex science, there are speculative components, since people can also be very well paid to create confusion and misunderstanding.

What matters for either reaching or denying scientific consensus on CC and AGW is not falsification – Popper’s favorite way to “demarcate” science from non-science. In fact, ex ante, nobody’s aim is (or should be) to prove that there is absolutely no climate change. In this case the scientific method that needs to be applied is the preponderance of evidence. Nowadays, in fact, it is very easy for every polemical personality to claim that a theory is totally wrong and made up by conspirators who believe they live in a dystopia. By exploiting press coverage and people’s ignorance about climate and biological sciences, an understanding of the scientific side of the problem turns out to be impossible even by the bravest citizens and politicians without prejudices.

Thus, without a vague understanding, emissions reduction policies involving expenditures (or even worse: certain costs today for uncertain benefits not tomorrow but maybe in a hundred years) will be – rationally – considered useless by the public opinion.

Actually, it shouldn’t really matter that

there are speculative components, since climate science based on evidence cannot be easily falsifiable. IPCC, a scientific forum for climate change studies founded in 1988 by the World Meteorological Organization and the UN-Environmental Program, wrote that climate change is unequivocal and is happening now. Figures released by IPCC over time show clear trends of the relation between carbon dioxide emissions and rising temperatures. They do not provide a local, but a large scale level of confidence by taking into account many other factors which support this positive relation, like e.g. ice melting, sea levels rising, acid rains, oceans’ acidification and extreme weather events’ intensity.

Thus, by following the scientific method known as “consilience of evidence” in which all the diverse lines of evidence come together in a consistent mutually reinforcing way, the IPCC (2007) was able to state that it is very likely (i.e. more than 90% sure) that most of the global warming in the last fifteen years is due to the increase in greenhouse gas concentration as a result of human activities. One single line of evidence, if taken alone, cannot give enough reason to believe AGW, but all these occurring factors jumping together give this theory a pretty persuasive character.

irreversible – climatic tipping point. And that is the value trade-off that we face right now. For example, talking again about competing explanations, there is the issue of meltwater rivers occurring from melt ice bars in Greenland and Antarctica: is this water going to the bottom, being dispersed and slowly reaching oceans, causing higher sea levels, future submerged peopled land and the redistribution of coast lines, or it is just refreezing along its way? We are not 100% sure but again, we need to consider evidence: satellite data have shown that ice melting in 2007 in Greenland was occurring more quickly than IPCC estimations (60% faster) which have widely underestimated the actual sea level rise.

In fact, IPCC models of the fourth assessment report (AR4) have not included Greenland’s and Antarctica’s ice sheets contributions because, at that time, there was no evident scientific reason to think they will melt so soon. Thus, natural scientists need to do their job and calculate the risk, a matter which economists do not have the competence to question. Economists play a role after the “consensus process” is done, in particular when the society needs policy advice to understand what to do once acquainted with that objective risk.

“Even if we don’t know when the climatic tipping point will occur, it is highly irresponsible not to warn policy makers and the general public about the worst scenario possible”

Given that, how can we proceed next?

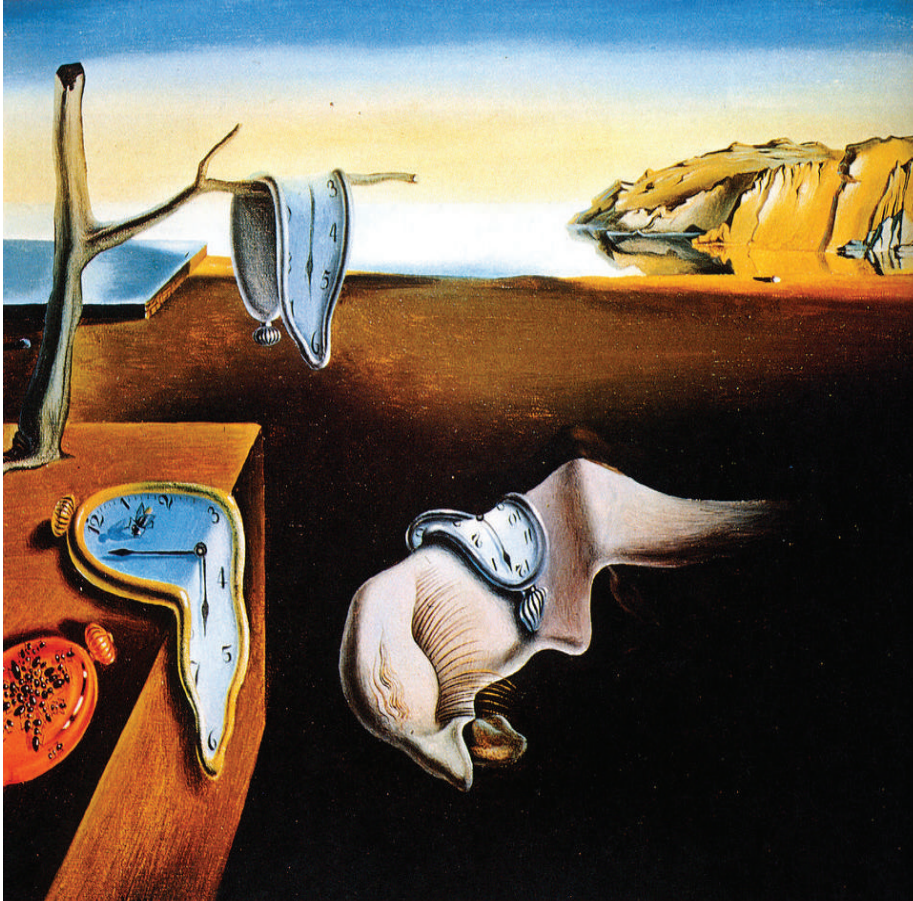
Even if there are large unknowns in the risk assessment, we can do risk management, which indeed involves risk that depends on what can happen and the probability it will happen, and management which is not as objective and scientific as the former. It is a value judgment on whether society fears more the risk of investing resources that may turn out to be “wasted” and could be used to solve other issues today, or doing nothing and bearing the risk of accelerating the time in which we reach the moment of a possible – but, if true,

Even though we are not going to know if the climatic tipping point will occur in centuries or millennia, it is highly irresponsible not to warn policy makers and the general public about the worst climatic and biological scenarios possible: we (general public and policy makers) need to be fully aware of the risk – scientifically and consensually determined – that something inevitable may happen if we don’t do anything to avoid it. At the same time, we have full political liberty to decide how to manage this risk, given the degree of our risk aversion. However, economists need to know about a cascade of uncertainties: unsure carbon cycle response, climate

sensitivity (which depends on the internal dynamics of sensitivity (which depends on the internal dynamics of the ecosystems, oceans, ice, clouds etc.), and the inevitable unpredictability associated to future happenings (IPCC produced three possible future scenarios corresponding to a low, medium, high

than a “community of experts” (D’Alisa, ICTA, 2010), not just quantitative, but also qualitative evaluations are possible by taking into account multiple perspectives under irreducible uncertainty. The public opinion needs to know that climate scientists have to research on AGW even if they do not have absolutely

By following this reasoning, if climate scientists would not research what their statistics suggest, if the public opinion would not be informed about that, and if policy makers would just ignore scientific consensus on AGW, then all this would certainly be considered irresponsible not just by our grandchildren - in the case where the worst scenarios occur - but already now by ourselves.



temperature rise).

A first conclusion may be that global warming issues do not need a multi-disciplinary approach – because this allows naysayers much room to maneuver speculative methods – but a proper interdisciplinary action. The latter integrates (not just puts side by side) different sets of studies based on evidence, not deduction. In contrast to the “normal science”, attempt to force nature within a certain paradigm (Kuhn, 1978), we need a “post-normal” epistemological framework that analyses the limitations of “normal” science when facts are uncertain, values are in dispute, stakes are high and decisions are urgent (Funtowicz&Ravetz, 1991, etc.).

Thanks to an “extended peer community”, i.e. an “expert community” rather

certain proof of it.

Actually, nobody in science has ever possessed the indisputable truth. Also the Ptolemaic system had been working for over 1500 years (even if at that time some theories tried to show its gaps), and it allowed to us make several correct astronomical predictions and calculations, e.g. on the position of some planets. However, after about two millennia we found out that geocentrism was not the right explanation of how things work up in space. Therefore the scientific consensus of that time had changed and so have our beliefs. But again, how can we be sure we are not wrong? Probably because of the preponderance of evidence: this offers many observations that support this theory through consilience.

Of course, looking at some plotted data and statistics is not enough to say we are following the method of evidence. Scientists need a theory that involves detection, i.e. the acknowledgment of rising temperatures and increasing CO2 levels in the atmosphere, and attribution, i.e. the determination of the inferred causality after having tested it.

Indeed, it was not just an upward-sloping curve showing the correlation between rising temperatures and CO2 emissions that had IPCC using the words “unequivocal” and “very likely” in its reports (as we all know, correlation does not imply causation). A theory - not a dangerous experiment – has been set up, and this is not to scare people, not to make the government lose its control over people who could start to act against past and current policies, but to drive a computer model for a better understanding of the repercussions of human activity on nature among time.

Nature has to be protected and defended for itself and not because of the services it provides to humans or as natural capital or as a means of production. By fighting now for the changes we would like to see in the future, we can pave the way for stronger and more unified efforts, populations and nations. In this way, Europe will soon get a wake-up call on global warming issues which should not wear any political color or regional pin. ■

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ECONOMICS OF CRIME on the Edge of Law, Economics and Sociology

How does mafia affect the Italian economy? A brief introduction

By Brenda Medaglia and Jacopo Bregolin

Mafia is, nowadays, described as the “biggest bank” in the country with 65 billion € in liquidity and it has an income of 10% of total revenue generated by loan sharking

As a matter of fact, criminal organisations are one of the main obstacles to the development of several regions around the world. To see this, one may well take into consideration low-income countries such as Mexico, Colombia or Albania. However, it is very interesting to consider the Italian Mafia and Organised Crime for three main reasons.

Firstly, the Italian Mafia is one of the most developed criminal organisation in the world with Russian Mafia, US Mafia (historically related to the Italian one), Mexican Narcos, Colombian Cartels etc. Secondly, from an historical perspective, Mafia-type organisations were born with the new-born Italian State in 1861, especially in the South. The organisations in the South have different features (duties and responsibilities of a family member, different godfathers, main area of investment etc.) and names. Camorra in Campania and 'Ndrangheta in Calabria that are the most powerful organisations, very active also in Piemonte and Lombardia. Also, we have Mafia (or Cosa Nostra) in Sicily and Sacra Corona Unita in Apulia and Basilicata.

So, the most striking feature of these organisations is the ability to resist and evolve over time to economic changes, crises and judiciary forms of suppression in a developed country. They resisted changing the area of investments and emigrating, both in Northern Italy and abroad. The biggest businesses abroad are in the USA, Spain, Germany, France, Albania, and Romania. Colombia and Venezuela especially for drug trafficking and in China for counterfeiting goods and for trafficking of migrants

Thirdly, according to a report released in 2013 by the Italian interior ministry (Ministero dell'interno), illegal activities are the biggest businesses in Italy, generating an annual revenue equal on average to 1.7% of the Italian GDP (25.7 billion €). For what concerns Mafia-type organisations, they don't have the monopoly on illegal activities. Their revenues account for a minimum of 8.3 billion € and a maximum of 13 billion €. The biggest part of this revenue comes from rackets (45%).

Criminal organisations affect both public and private sectors and small and

medium-size businesses are the main victims of rackets, but also, of robberies by criminal organisations.

Also, Mafia is, nowadays, described as the “biggest bank” in the country with 65 billion € in liquidity and it has an income of 10% of total revenue generated by loan sharking. Drugs generate the 23% of this income. Mafia has a large income coming from forgery and prostitution (8% each).

The Mafia portfolio is made up mainly by real estate, followed by movable assets, companies and stocks. The Mafia invests in real estate mostly in their original areas (Southern Italy) where they have a stronger territorial connection. This serves not only as investments for speculative purposes, but also for personal use and as a reward for Mafia organization members. The main motivations of investment in companies are money laundering, territorial control and social consensus. The sectors of investment of Mafia are mainly construction, mining (crucial for both building and illegal waste disposal), quarrying, hotels and restaurants.



Sheets commemorating murdered Antimafia judges Giovanni Falcone and Paolo Borsellino. They read: “You did not kill them: their ideas walk on our legs”.

“EcoMafia”

The new profitable frontier of Mafia

One of the most profitable activities today of Mafia in the South of Italy is illegal garbage disposal, especially involving toxic waste. This phenomenon has become very important in Campania, especially in Naples and Caserta areas. According to a document of the Italian Parliament of 2013, Mafia organizations organised it in a military style and use it to dispose of toxic waste (such as, coming especially from Germany, in fields, lakes and beaches of the area from 1988 onwards). They managed to control the area thanks to a process of vote control of the areas. All the mayors are and were controlled by Mafia and they allowed mafia-type organizations to control the waste disposal through companies or illegal activities.

The results of 20 years of exploitation are a very high risk of contracting cancer in the area and the impossibility to conduct agricultural activities. Carmine Schiavone, member of the very famous Camorra clan of Casalesi and involved in these events, said in a questioning about these facts that “radioactive wastes are in grazing land where today

we could find buffaloes, but where grass doesn’t grow anymore”.

Is Italian’s organized crime just mafia?

It is often the case that “mafia” and organized crime are considered as synonyms, but actually the second is a much more general term which includes the first. Moreover we just see that even the word “mafia” includes a much more diversified set of organizations whose activity could be considered independent, somehow comparable to two firms of the same industrial sector. Non-mafia criminal organizations share with Mafias the features to involve a sufficiently large number of people and to have a certain structure, characterised by a level of hierarchy and stable relations. On the other hand, for instance, they are generally less linked with the territory, lacking strong ties with the society.

I would like to focus on Italy and on two particular kinds of organized criminal groups: drug dealers (which, at least in the case proposed, do not show mafia features) and an Informal Value Transfer Systems (IVTS). This choice is due to the

fact that both of them are involved in a current study of Professor F. Varese, Professor of Criminology and Director of the Extra-Legal Governance Institute, University of Oxford to which I contributed, based on a police investigation carried in Italy during 2004 – 2006.

Starting from the drug trafficking business, I want first of all to underline a judicial peculiarity, i.e. being forbidden by law, to prove the existence of the activity, it is itself enough to justify search warrants and convictions. The cited investigation collected evidence of quite large businesses, mainly based on the importation and sale of heroin in the Milan area from the Balkan countries and Turkey.

Analysing the structure of the international trade, the conversations recorded by the police suggest that all the investigated drug traffickers groups are organised in a similar way. A part of the traders are established in Italy and receive the supply, store it, mix the heroin with other substances to reduce the purity level and sell it. Then one or more members of the group are staying in Albany or Turkey and in general nearer the producers. These individuals are in contact with the suppliers, they organise the imports in Italy and also directly manage the selling activity, finding costumers and addressing them to the Italian partners, as well as giving their partners advice and asking them to send Albanian/Turkish money to be able to pay for other supplies. Professor Varese was suggesting the possibility that they can also have a role of “hostage”. Being based near the producers they guarantee the fulfilment of the agreements, because cheaters could easily be punished.

It seems that there is no violence between the groups caused by competition, even if they are all selling heroin in the same area of Milan : for instance there has also been a case of collaboration for the reception of the supplies. In addition we can notice the lack of a strong hierarchy: even if the foreign-based member of the group behaves as a supervisor, there is often the exchange of advices, reciprocal support on risk management and partial freedom of independent decisions.

Finally, to give an idea of the size of the business, for what concerns the investigated groups of drug traders, between November 2004 and July 2005

the police had evidence of the transfer of 673 385€ (this is of course a lower bound estimate, being the police's certain information). This fact shows that the Mafia is involved in a considerable share of the drug market.

During the investigation the Milan anti-drug operative group found the presence of a completely different kind of organization which appeared to complement the drug business. The features of the activity made it correspond to the so called "Hawala" or "Informal Value Transfer System". The protagonists of this activity are the Hawala bankers, of Pakistani origin who, by the definition of H. van de Bunt[footnote2], are "financial service providers who carry out financial transactions without a license and therefore without government control". The main service that this organization provides is the transfer of money. Customers could be migrants who would prefer to use this system instead of the legal one because of the trust existing between people of the same ethnicity, efficiency reasons (speed of transfer, no need of bureaucratic papers, etc.) and lower costs.

However notice that these reasons are not necessarily valid given legal money transfer services nowadays. In fact often the service does not charge anything and profit is based only on the foreign exchange black market. In the Italian case, drug traffickers started to use this service for security reasons: even if the physical transportation of money to pay suppliers was a cheaper solution for the drug traders, it was also very risky due to cheating behaviours or the crossing of many controlled borders during the transportation.

On the other hand the Hawala system was fast, efficient and in particular strongly believable. To ensure the loyalty of the bankers it appeared to

present an extremely strong hierarchy and rigid structure, headed by an Indian businessman based in Dubai (picture). Every transaction was actually confirmed to him by both parts by phone, whose role was to create a sort of real-time connection between drug traders, drug suppliers and bankers. As in a normal bank, the money was not

taking place mostly in the Netherlands. This fact, together with clear differences on the management of "ordinary" customers and drug dealers confirms the hypothesis that the informal bank activity got involved with the international drug trade only later attracted by the huge profits. At the same time we have evidence of fear and worries from



physically moved and a foreign branch was in charge of the delivery. For this reason the police accused these bankers of money laundering.

The size of the transfers varied between a few hundred euros to millions. Apparently there was not a fixed amount charged at each transaction and it was often up to the Indian businessman to decide on the remuneration of the Italian banker. Besides more risky activities, for instance those involving large amounts of money or the need of physical movement of the banker, were charged at higher prices.

Apart from the money transfer service, the Italian IVTS was also involved with other typical banking activities, in particular a developed currency trade,

the banker and his family in relation to that part of the business.

These lines on non-mafia organized crime groups have then the purpose to give a hint on the size of the organized crime world which, in particular for European countries, is not often perceived in everyday life. They allow to better understand why the GDP can change significantly due to the inclusion of the informal sector, following the European directives on GDP computation. ■

References:

Van de Bunt, Henk (2008) "The Role of Hawala Bankers in the Transfer of Proceeds from Organised Crime", *Organised Crime: Culture, Markets and Policies Studies in Organised Crime, Volume 7, Chapter 9*, pp 113-126R. Saviano, "Gomorra"

Varese, Federico (2011), "Mafias on the move: How Organized Crime Conquers New Territories", Princeton University Press

Gambetta, Diego (1996), "The Sicilian Mafia: The Business of Private Protection", Harvard University Press

Calderoni, Francesco (2011), "Where is the mafia in Italy? Measuring the presence of the mafia across Italian provinces", *Global Crime, Vol 12, Issue 1*

<http://www.theguardian.com/world/2009/dec/08/india-arrests-naresh-kumar-jain>

<http://www.hindustantimes.com/india-news/newdelhi/court-extends-jc-of-hawala-kingpin-naresh-jain-in-drugs-case/article1-509124.aspx>

<http://timesofindia.indiatimes.com/india/ED-on-trail-of-Rs-250-cr-pulses-scam-probes-Naresh-Jain/articleshow/5453794.cms>

The Eurozone Banking Union: a 55 Billion Euro Bet

By Aurélia Nègre

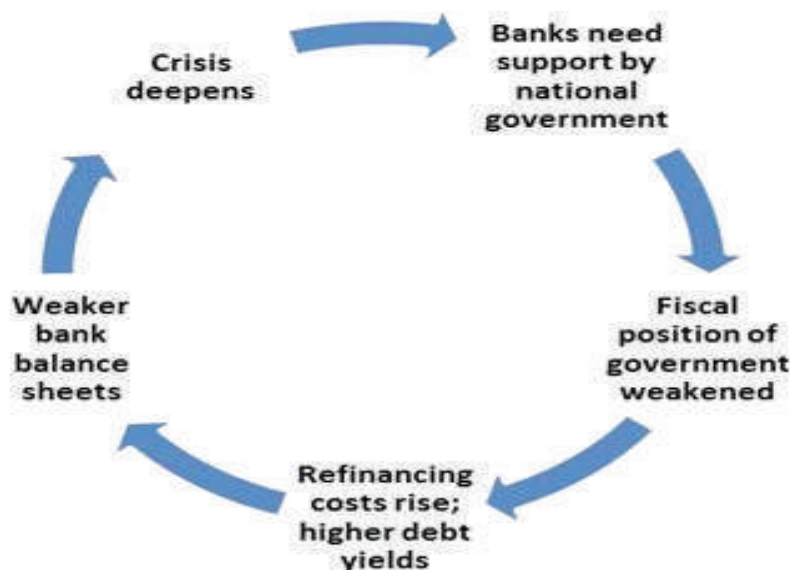
The principle of the Banking Union is easy to state: it transfers the supervision of Eurozone banks, and the power to wind them up, to European authorities, using a common European fund financed by European banks.

This project was launched in June 2012 during Spain's crisis, when Eurozone leaders vowed to "break the vicious circle between banks and sovereigns", represented in the adjacent graph.

For example, in Ireland the collapse of the banks almost bankrupted the state, and in Greece the quasi insolvent state wrecked the banks. The circle worked in both ways.

The Banking Union is based on three pillars:

- Firstly a single rulebook: the Bank Recovery and Resolution Directive (BRRD) harmonizes the supervision and resolution rules in the Eurozone, and the Deposit Guarantee Schemes (DGS) guarantees a reimbursement to citizens by national governments of up to €100,000 in case of bankruptcy.
- Secondly a single supervision mechanism (SSM): the European Central Bank (ECB) directly supervises the largest banks (banks that hold 85% of Eurozone assets) and coordinates the whole system. The SSM passed through the European Parliament in 2013 and will be implemented by the end of the year.
- Thirdly a single resolution mechanism (SRM): if a bank faces financial distress, the ECB will report it to the Single Resolution Board (SRB) based in Brussels and funded by levies on banks (€55billion over eight years, in order to cover approximately 1% of the total assets). The Board will make decisions such as appointing a special manager or increasing the bank's capital. The whole process is designed to take place in only 48 hours. With this system, bail-outs (banks saved



Source: European Commission

with taxpayers' money) should be avoided, as shareholders and large depositors are the first to contribute.

The rulebook applies to all 28 member states, while the SSM and SRM are mandatory only for Eurozone members. However, other countries from Europe can choose to participate.

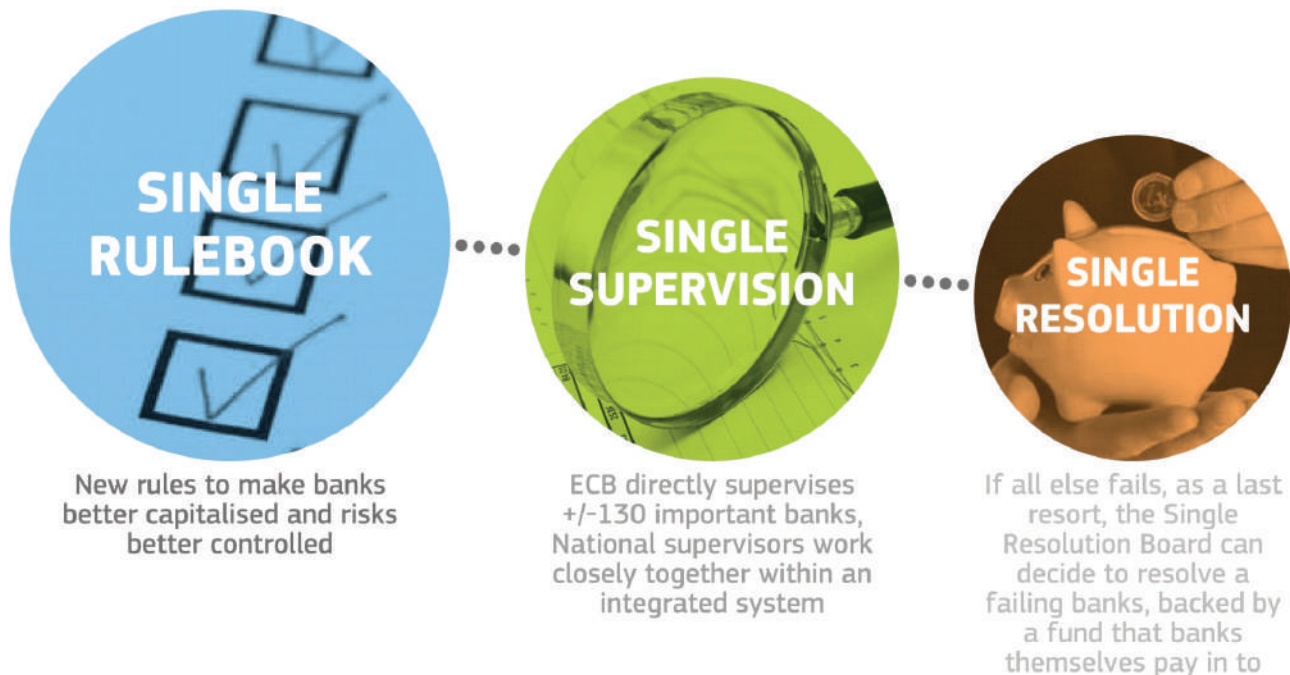
This system should have several positive effects. The sovereign/banks spillover effects should be weakened. Banks' ex-ante risk-taking should be dampened, as was observed following the creation of the Orderly Liquidation Authority (OLA) in the US in 2010 (see Ignatowski and Korte (2014)).

One should also observe less financial fragmentation, that is cross-border inter-bank lending, and more home-based asset portfolios for banks. The fragmentation of the European financial market was caused by the crisis, but was preceded by a long period of integration that is far from being reversed. This is particularly a problem for monetary policy, as the transmission of central bank decisions is heavily reliant on an integrated

financial market. As fragmentation decreases, transmission of policies to where they are most needed will improve (Ruparel 2014). In a steady state, an integrated architecture for financial stability in the euro area would bring a uniformly high standard of enforcement, remove national distortions, and mitigate the buildup of risk concentrations that compromises systemic stability (Goyal et al 2013).

However, the current Banking Union faces several shortcomings that might hamper its action. There is a plain lack of financial resources. The Resolution fund of €55billion will be built over 8 years to backstop a banking sector of more than €30 trillion.

The SRM could only refund a few medium-sized financial institutions. According to Willem Buiter, chief economist for Citi, €1 trillion is needed; according to OpenEurope, between €500 and €600 billion – in any case at least 10 times the amount of the future fund.



Source: European Commission

Moreover, the “too-big-to-fail” problem remains unsolved. If the resolution fund is not well furnished and/or the system is too complex to be efficient and credible, incentives are not sufficient to alter banks risk-taking behavior.

Ignatowski and Korte (2014) observe a threshold-effect: the introduction of the OLA in the US had a significant effect on the overall risk-taking in the banking sector, just not for the largest and most systematically important banks.

“In the aftermath of the financial crisis, world decision makers are leading in the dark”

Laeven et al. (2014) found that the six largest banks (Citigroup, HSBC, etc.) have a distinct, seemingly risky business model: they have lower capital, less stable funding, more market-based activities and are more organizationally complex than smaller banks.

These banks create most of the systemic risk in the current financial system through negative externalities for both financial markets and the real economy. Thus the design of the banking union might need to be complemented with other ex-ante measures to limit large and complex financial institutions’ risk-taking.

In addition, a lot of important data

required for the analysis of monetary policy are not available. In particular, much of the data needed to track systemic risk is not published, notably the international dimension and linkages between banks (see Cerutti et al. (2011). In the aftermath of the financial crisis, world decision makers are leading in the dark.

“Doubts arise on its ability to mitigate future spillovers, notably due to a credibility issue”

Recent initiatives that aim to improve aggregate banking statistics and gather better institution-level data are welcome, but the complexity of the system means that required data will not be available for some time, notably data concerning shadow banking.

The IMF and FSB have jointly issued a report to the G20 finance ministers and central bank governors recommending the creation of a common reporting template for globally systemically important financial institutions (G-SIFIs). Since we do not know how long this transparency and information sharing process will take, the efficiency of the Banking Union’s decisions is presently hindered by this lack of data.

The Banking Union seems to be a step in the right direction; in case of financial distress in the banking sector, countries

should not be jeopardized, leaving taxpayers to pay the bill.

However, doubts arise on its ability to mitigate future spillovers, notably due to a credibility issue: is a resolution fund of €55 billion sufficient to backstop a banking sector of more than €30 trillion? What will really happen if banks do not meet solvency requirements? So far it is hard to judge, but one will soon be able to do so when first resolutions are made. ■

References:

- Angelini, P., Grande, G., Panetta, F., 2014. “The negative feedback loop between banks and sovereigns” Bank of Italy Occasional Papers, No. 213
- Cerutti, E., Claessens, S., McGuire, P., 2011. “Systemic Risks in Global Banking: What Available Data Can Tell and What More Data are needed?” IMF Working Paper, 11/222
- Goyal, R., Brooks, P. K., Pradhan, M., Tressel, T., Del’Arricia, G., Leckow, R., Pazarbasioglu, C., 2013. “A Banking Union for the Euro Area” IMF Staff discussion note
- Ignatowski, M., Korte, J., 2014. “Wishful thinking or effective threat? Tightening bank resolution regimes and bank risk-taking” ECB Working Paper Series No. 1659
- Laeven, L., Ratnovski, L., Tong, H., 2014. “Bank size and systemic risk”, IMF Staff Discussion Note 14/04

Enter Network in Mannheim

By Michael Stiefel



University of Mannheim: main campus

If you are going to Mannheim, you will cry ...”, this is a common phrase heard about Mannheim, a city that is apparent to lack a good reputation amongst other cities in Germany. So why do the rational economists pick this rather unhappy place for their studies? The reason lies within the walls of the Mannheimer Schloss – the second biggest Baroque palace after Versailles. Here the city hosts its university, which is considered as one of the best places to study social sciences and business studies in Germany, and which is a partner university of TSE within the ENTER network.

Mannheim is located in the southwest of Germany, close to the picturesque student cities of Heidelberg and Frankfurt. The University of Mannheim is a rather young university, founded in 1967 and counting 12,000 students.

The economics department is one of the largest of its kind in Germany, with 23 senior and 21 junior faculty members. Currently, 859 students study economics at bachelor and master’s level, and

another 77 students are pursuing PhDs in the Graduate School of Economic Sciences (GESS). Many professors from Mannheim have received awards and grants for their research. For example, the macroeconomist Klaus Adam has received the Junior Prize in Monetary Economics and Finance of TSE and Banque de France in 2012, and the macro and family economist, Michèle Tertilt, the Gossen-Prize of the Verein für Socialpolitik, the association for German-speaking economists.

Only a few metres away from the department of economics is the Centre for European Economic Research (Zentrum für Europäische Wirtschaftsforschung, ZEW), an economic research institute with over 180 employees that holds very close ties with the economics department. For instance, many researchers of ZEW are also lecturers at the department of economics and there are weekly seminars in cooperation. For students, the ZEW offers many research assistant jobs as well as internships and thus provides a great opportunity to gain

practical experience.

The master’s and PhD programmes of the economics department are entirely taught in English whereas the bachelor’s programmes is mainly held in German with a wide array of electives as well as core courses taught in English. As many international students prove each year, it is possible to study in Mannheim without any knowledge of German. However, as in Toulouse, basic knowledge will make everyday life outside of the university easier and more enjoyable.

The links between TSE and Mannheim are quite strong. There are Erasmus exchange possibilities for undergraduates. Graduate students can apply for a joint master’s programme in partner universities within ENTER network such as Toulouse. In addition, the ENTER network allows PhD students either to spend one or two semesters as a visiting scholar in Mannheim or to present in one of the Ph.D. seminars.

Pierre Boyer and Raphaël Levy obtained

their Ph.D.s from TSE and are now assistant professors of economics in Mannheim. They both recommend TSE students to visit Mannheim. Pierre Boyer: "I would definitely encourage Ph.D. students of TSE to consider a stay in Mannheim and current students at licence or master level to consider the master or Ph.D.-programme in Mannheim. The department and the graduate school are very friendly places for exchange students and Ph.D. students. Students will have an opportunity to interact with the faculty and to present their ongoing work. Our programmes are very competitive at the international level and our students are well received in the best places. For instance, our graduate school has an exchange program with Yale and Berkeley

in the second year of the Ph.D."

Raphaël Levy emphasizes the close relationship between TSE and Mannheim: "We have had very close connections to Toulouse both in terms of research interests and organisation of joint events, and we are always sympathetic to applications from Toulouse students. Our Ph.D. program is very good here, with a student seminar in different fields, and a general audience Ph.D. seminar. I also think that interaction between students and faculty is very easy, which is very beneficial for the students."

So is the place the bitter pill anyone - who comes to study economics in Mannheim - has to swallow? Well, having lived more than three years in Mannheim, I can say that the place is certainly better than

its reputation. Students in general can hardly complain since they study in the nicest building in the city.

Many lecture theatres and the economics library are located in the palace. Moreover, the city offers many cultural activities, there is a stunning opera house and a variety of different theatres. The living expenses are relatively low compared to European standards. Students can easily find cheap accommodation within walking distance to the university and the city centre. In fact, the full phrase about Mannheim goes like this:

"If you are going to Mannheim you will cry twice, once when you arrive and once when you have to leave." ■

PhD Exchange-Damian Tago

Harvard School of Public Health



1. What is your main research topic?

My work is on Animal Health Economics. I analyze one of the main control strategies for animal infectious diseases which basically imposes restrictions to the movement of animals coming from

high-risk areas. This reduces the speed of expansion of the disease but it can be very costly for some producers. The idea is to estimate these costs and incorporate behavioral and economic elements to the epidemiological analysis of infectious diseases.

2. In what way has this visit helped you to advance your research project(s)?

Definitely. It was a great opportunity to interact with health scientists, biologists, and epidemiologists who work on similar topics but with different approaches. This experience was very useful not only to advance on my dissertation but it also gave me the opportunity to learn about other problems that are now part of my research interests.

3. Did you like the academic environment? Is it very different from that of TSE?

What are the main differences?

I really enjoyed the academic environment at Harvard, although I would not say that it is very different from the environment at TSE. Both environments are very stimulating and dynamic.

I would say that the main difference is the huge diversity of research topics and scientists in a school of public health (compared with a school of economics). Moreover, at Harvard the diffusion of science is one of their priorities and as a consequence it is common to have seminars about the negotiation and implementation of policies where politicians and policy makers from all around the world share their experiences.

4. Overall, did you enjoy this experience? Would you recommend to TSE students to visit another university during their PhD studies?

Do you want to add anything else about your experience?

It is definitely a good experience. I would advise any TSE student to spend some months abroad. Especially, I would recommend anyone to look for a multidisciplinary center. Interacting with scientist from other fields can help you to advance on your research and open the door to fruitful collaborations. ■

Why Economic History?

An Overview and Example from the Middle East

By Mohamed Saleh*



“Economic history should inform and even “revise” economic theory and public policies and should learn from both history and economics”

Economic History, which is, to begin with, totally different from “History of Economics” or “History of Economic Thought,” is a field that lies at the “cross-roads” of economics and history in that it applies economic theory and econometric methods to the study of economic (or more generally, social) phenomena in the past or in the long-run using historical micro or macro datasets.

The field, as practised in recent decades in North American and U.K. economics departments, but perhaps less so in Continental Europe, has been called “Cliometrics,” which is a term coined by joining the word “Clio,” the name of the Greek muse of history with the word “metrics,” or quantitative measurement. This terminology is no coincidence, however. In fact, it is the

need for emphasis on theorization and quantification in history that pushed a then-young generation of American economists in the 1950s and 1960s, such as Douglass North, Robert Fogel, Paul David and Peter Temin, who had a strong passion for history, to initiate the so-called “New Economic History” or the quantitative revolution in history, and to coin the term “Cliometrics” to describe the conceptual and methodological approach of this revolution. Needless to say, before the 1960s, economic history was mostly a qualitative field.

Since then, there have been many “victories” achieved by Cliometricians in re-interpreting U.S. history using economic theory and the then-modern quantitative methods. Among these major victories were Fogel’s estimation of the role

of railways in the growth of the U.S. economy in the nineteenth century. Also, together with Stanley Engerman, he reshaped our understanding of the history of the slavery institution in the antebellum U.S. South by arguing using quantitative evidence that slavery was in fact a profitable and economically efficient institution, and that it would not have declined for economic reasons alone without the U.S. Civil War intervention in 1861-1865. Douglass North (among others including, of course, Ronald Coase) emphasized the role of institutions in economic development, via assuming non-zero transaction costs, primarily because of his analysis of economic history.

But why do we need economic history? As a “cross-roads” field between

¹Note: I benefited a lot in writing this article from reading Meyer and Conrad (1957), McCloskey (1976), Greif (1997), and Kocka (2010). Please see the bibliography at the end of the article.

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economics and history, it is supposed to act as a peace messenger aiming at reconciling – or perhaps put in a more ambitious way, learning from – the two “mother” fields: economics and history. The latter objective, the need to learn from the two fields, which implicitly presumes a mutual need that economics needs history and vice versa, seems to have been rather “obvious” even back in the day.

In fact, many economists in the past even before the “Cliometrics” revolution were actually economic historians and benefited a lot from reading history. For example, Adam Smith, Karl Marx, Alfred Marshall, Joseph Schumpeter, and John Maynard Keynes were all economic historians in one way or another. However, again as a “cross-roads” field, economic history or Cliometrics then “suffered” from the divergent paths between the two fields, or more generally, between social sciences and humanities, that started in the 1970s.

Since then, economics has drifted towards an “ahistorical” approach to economic phenomena, based on the assumption that economic theory, in particular, neoclassical theory, is universally valid regardless of time and space. As Greif (1997) puts it, neoclassical economic theory “is an ahistorical approach that deductively assumes that the same preferences, technology, and endowment lead to a unique economic outcome in all historical episodes. Its ahistorical nature reflects theoretical assumptions rather than empirical observations regarding the relevance of these assumptions or conclusions.”

On the other hand, history was dominated until the 1960s by positive or analytical (mostly Marxist) approaches seeking to generalize or reach general laws of history. Starting from the 1970s, however, history, especially in North America, shifted from social/economic history towards “cultural” history and

post-modernist approach. It refrained from “theorization” or generalization altogether, based on the presumption that objective reality in history is non-existent or non-knowable, and we can only reiterate the different subjective narratives. In other words, history drifted in exactly the opposite direction to economics.

A renowned economic historian, Jürgen Kocka (2010), summarizes the situation in history as follows: “(Historians) called for greater attention to be paid to actions, perceptions, and experiences – the subjective dimension of history. Interest was soon to grow in the reconstruction of symbolic forms and the interpretation of cultural practices. Whereas the focus had often been on broad structures and processes, the charm of micro-historical approaches was now discovered.”

The divergence led to Cliometrics being practised almost exclusively by economists, who generally continued, however, to be only modestly interested in it (economic historians remained a small minority among economists), whereas historians grew more skeptical about quantification and theorization altogether, and hence became more interested in cultural history than social or economic history. In fact, economic history, as practised by economists, is as Donald McCloskey (1976) describes it an “imperialist” approach that seeks to impose economic theory and econometric methods on history. In other words, it is the economists’ solution to the problem. This is because it applies neoclassical economic theory and the standard econometric methods to historical datasets, just like what an applied economist would do to current datasets.

Yet, the original goal of economic history is actually different. Economic history should inform and even “revise” economic theory and public policies and should learn from both history and economics.

And this leads me to attempt to answer the initial question: Why is economic history useful for both economics and history?”

“Why is economic history useful for both economics and history?”

There are usually three arguments raised by historians against economic history (Meyer and Conrad 1957): (a) Causality cannot be established among singular historical statements, (b) Historical hypotheses cannot be stated in quantitative terms, and (c) Scarcity of data makes quantification impossible. These arguments could, however, be debated. First, causal statements and generalizations are what we are really after in history, and are “unavoidable.” It is useful to start the historical analysis with a priori ideas perhaps because this is how our minds work. Also, Avner Greif stresses the idea of “contingent laws” in history, which could act as a middle-ground between social science and humanities’ approaches to history. Second, econometrics has gone a long way in addressing the concern of “deterministic” relationships between social phenomena. We are no longer advocating for a “deterministic” approach to history. Third, contrary to a widely held belief about the lack of historical data, the primary data sources are right there, but we need to dig for them in archives and libraries.

The other side of the argument, however, is more difficult to convey: history useful for economics? McCloskey (1976) makes several arguments here: first, history is a huge source of datasets. Why do applied economists limit themselves to current data sources? Is it because of the burden of collecting historical datasets?

For example, the historical population censuses that can be linked constructing panel datasets in the very long-run have just no equivalent in any contemporary dataset. Second, history is the “society’s laboratory.” In history, natural experiments occur, which is quite useful in applied econometric analysis. Third, history informs economic theory, although this fact is often ignored. In fact, many claims on which economists base their analysis are historical in nature.

“Historical processes of self-selection across religions, which were induced by economic incentives, might have shaped the membership in religious groups, and hence, might have generated the observed correlation between religion and socioeconomic outcomes”

Finally, history informs public policies. If someone wants to study the effects of state industrialization, for example, the only way to go is history. Despite these points, I must note that recently, economic history has become closer to other applied economic fields such as development economics or labor economics. This perhaps comes at a cost: its ability to inform economic theory, and its ability to revise the neoclassical economic theory.

Example on Economic History from the Middle East

I now turn to discuss an example from my own research for using economic history in understanding the origins of current economic or social phenomena. The correlation between religion and socioeconomic outcomes (e.g. education, occupation, and wages) is observed throughout history in various parts of the world. For example, a very old and widely known empirical fact that perhaps triggered Max Weber to write his seminal work in 1905, *The Protestant Ethic and the Spirit of Capitalism*, is that Protestants in Western Europe have, on average, better socioeconomic outcomes than Catholics. The phenomenon is not confined to the Protestant-Catholic divide though. In the United States, Jews seem to be doing better than other religious groups, while in India, Hindus are traditionally better off than Muslims. In the Middle East, a region where religious divisions remain to be the major source of social segmentation, native non-Muslim minorities are, following a long medieval tradition, better off than the Muslim majority.

But why do we observe this phenomenon? The answers provided in the social science literature, perhaps following Weber's thesis, sought a causal impact of religion: perhaps some religious beliefs are more conducive to economic success than others. In this paper, I provide a different answer: historical processes of self-selection (on income) across religions, which were induced by economic incentives, might have shaped the membership in religious groups, and hence, might have generated the observed correlation between religion and socioeconomic outcomes.

The paper focuses on Egypt, where Copts (Egyptian Christians) were traditionally better off than the Muslim majority. I trace the origins of the phenomenon to a historical process of self-selection across religions, which was induced by a pure economic incentive: the imposition of the poll tax on

implemented in every region that Muslims conquered. It remains to be studied if the poll tax could explain why Christianity survived in Egypt and the Levant but was completely wiped off from North Africa, or why Hindus are better off than Muslims in India. ■



non-Muslims (jizya) upon the Islamic Conquest of the then-Coptic Christian Egypt in 640. The regressive tax, which remained until 1856, led to the conversion of poor Copts to Islam to avoid paying the tax, and to the shrinking of Copts to a better off minority. I test this hypothesis using new data sources that I digitized from the Egyptian Archives. Using a sample of men of rural origin from the 1848-68 census manuscripts (one of the earliest censuses in the region), I find that districts with historically stricter poll tax enforcement (measured by Arab immigration to Egypt in 640-900), and/or lower attachment to Coptic Christianity before 640 (measured by the legendary route of the Holy Family), have fewer, yet better off, Copts in 1848-68. This answer is not limited to Egypt, however.

The idea of self-selection of converts to specific religions could be generalized to the Jewish and Protestant contexts. In fact, the Islamic poll tax (jizya) was

References:

McCloskey, Donald, "Does the Past Have Useful Economics?" *Journal of Economic Literature*, 14(2), pp. 434-461 (1976).

Meyer, John R. and Alfred H. Conrad, "Economic Theory, Statistical Inference, and Economic History," *Journal of Economic History*, Vol. 17 (4), pp. 524-544 (1957).

Kocka, Jürgen, "History, the Social Science, and Potential for Cooperation: With Particular Attention to Economic History," *InterDisciplines* 2010 (1), pp. 43-63 (2010).

Greif, Avner, "Cliometrics after 40 Years," *American Economic Review*, 87(2), pp. 400-403 (1997).

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Interview with **Jean Tirole, TSE**

By Maria Paula Caldas, Safira Chavez, Theano Maria Tagaraki

The new season of Academic and Business Talks kicked off this year with Jean Tirole, who spoke on “Intellectual Property and Public Policy”. Though at the time the TSE community did not yet know that our esteemed professor would soon be awarded the 2014 Nobel Prize in Economics, the lecture hall was nonetheless filled with students wanting to get some insights on this subject.

Professor Tirole kindly agreed to an interview before his talk, in which he speaks about his research interests regarding intellectual property, which include patent pools, open-source software, standard setting organizations, and trade secrets.

1. What sparked your interest in intellectual property?

I guess a couple of things. The first aspect was the dispute on patent licensing. There are lots of patents and there is what we call a patent thicket: many patents in many industries, for example in software. This has led to disputes on licensing. If you want to implement a technology you have to license all the patents, which may be very expensive.

So that was one aspect, those disputes. I talk about that later on, about how you can make technologies cheap, which is not something that obvious. That technology (points at phones) by the way, has many patent pools in it. For example, I’m sure you have music in there. Your music relies on compression algorithms such that it can actually be on your iPhone. Those are standards and those standards are supported by pools. When Apple or Samsung, for example, want to use those compression algorithms in order for you to exchange music, they have to get a license for all those patents through a pool.

The second thing I was interested in was Open-source software. Through the institute here, Institut d’Economie Industrielle (IDEI), we had a visit in 1998 by Microsoft, who wanted to have some research done on Open-source software. At the time, they had a very conflicting relationship with Open-source software, so we said “We are independent and we can do some much needed research”. We then organized conferences with Microsoft and Open-source specialists and there were lots of interesting things that came from that.

I have focused mainly on patents and licensing. I haven’t done anything on copyright for example, which is of course important. I am now doing some work on trade secrets, which occurs when you don’t license a technology and you just keep it for yourself. All these kind of things are actually very challenging, and it seems that intellectual property nowadays is very important for the future of many industries.

"I have focused mainly on patents and licensing"



2. When it comes to intellectual property rights, they can both encourage innovation and hinder competition. At what point do you believe that the protection of intellectual property starts interfering with competition?

Well, it all depends on what you mean by protection. But one of the big issues is that intellectual property, which is not very important in itself, actually becomes important through standard setting. That is something that I have been working on lately.

There are currently big disputes between Apple, Google, Microsoft, Samsung, and many others. They all feel that the others are licensing their patents at too high a price. The issue is what they commit to when they are part of a standard. Again, those phones are full of standards. So the commitments you make when you make part of a standard setting organization, or a standard setting process, in terms of licensing rates, are very important.

The issue there is that there may be several patents which are substitutes ex-ante, but once you choose a particular solution, only one patent is left. You can thus be in competition before the standard is set, but be a monopolist once the standard is set such that you can raise your price. That is completely unfair. We have been working with Josh Lerner, from Harvard Business School, on finding solutions for that.

Another thing that may interfere with competition is the quantity of patents which are not serious in a sense, I would say. A patent in principle should be non-obvious, new and useful - but let’s forget about useful. One of the famous examples is the one-click exit. When you visit Amazon or any website, the website remembers your codes, your phone number and your credit card number. Once you are done shopping you just do one click such that you don’t have to enter all your information again. This is something completely obvious,

for that, the one-click patent. Fortunately this patent was invalidated later on. If it had not, Amazon could have been able to tax anyone working on the web, for an idea that is completely obvious and in a sense already known.

If patent offices don't do their job -- which is to select the ones that are innovations that are important, and not obvious, and new, from those that are not -- then you create obstacles to the diffusion of technologies and to growth as well. Nobody will want to invest anymore because you are blocked by those people who are just taxing the industry.

This is something completely obvious, right? But Amazon had a patent for that, the one-click patent. Fortunately this patent was invalidated later on. If it had not, Amazon could have been able to tax anyone working on the web, for an idea that is completely obvious and in a sense already known.

If patent offices don't do their job -- which is to select the ones that are innovations that are important, and not obvious, and new, from those that are not -- then you create obstacles to the diffusion of technologies and to growth as well. Nobody will want to invest anymore because you are blocked by those people who are just taxing the industry.

That is a big issue, and it means that patent offices must have the right incentives and basically only award patents to important innovations. If that is done then that is different, because you want to reward important innovations. You need a reward for innovation, but it has to be a reward for something that is useful and new.

3. One issue that keeps coming up regarding patent protection is the problem of free riding by countries that selectively choose not to adopt other's patents. Perhaps the most well-known example is that of the pharmaceutical industry. How should policy change in order to deal with this sort of situation?

I agree, there is obviously free riding by other countries, including France -- the price of drugs is not the same in France as in the US. There is always free riding; the question is to what extent should that occur. It is normal that poor countries do not pay as much. This is one reason why parallel trade should be prohibited. If we want poor countries to pay little and rich countries to pay more, you should not allow parallel trade, otherwise there will be arbitrage and the price will be the same in every country.

That is something people in Europe do not always understand, because in Europe there is the law of one price. Yet there is no reason why poorer European countries



should pay the same price as Germany, for example. Price discrimination is something that makes sense -- you don't have the same price in Rwanda and the US. So, if you allow generic production in poor countries, rich countries should at least be able to control the amount of production, and there should be no exports of those generics.

One of the issues we do not know how to deal with is that we don't want countries to decide by themselves whether they want to pay little or much, because it is easy to decide, right? So in a sense there should be criteria saying, you know, if your income is in this bracket, then you are allowed to actually get those medicines for a cheaper price. But when it is countries themselves who decide that, then it is bothersome, because you do want to be able to justify this investment, and if everybody free rides then this investment is not going to take place.

There is another issue which has to do with medicines just specific to poor countries -- we know that those medicines will be under supplied anyway so there must be different programs for that. But for drugs, against cancer or something like that, that are also rich countries' diseases, you want the investment to be made. You want to have some kind of system that is going to reward innovation while allowing to price discriminate according to the country. It's hard to do and there are a lot of interests involved. Countries that have no pharmaceutical industries are obviously not very keen on paying royalties.

4. As an academic you have conducted research on intellectual property and its relationship with innovation. What have been both the benefits and the difficulties when speaking to policy makers about your findings?

Well, on this front I have not interacted very much with policy makers. I think I have had some influence on the policies on the patent pool stuff. For example, the guidelines in Europe have been influenced by our work, in 2004 and then in 2014. So it is more like an indirect influence, I don't go to Brussels, or Washington, to say "You should change your laws", or anything like that. It is more like an indirect influence through the writings in economic journals.

It seems to me that this dialogue is very much political at this stage, maybe too political. In the end, it's like bargaining in a sense. The normative stuff or the economic stuff is not really very present in this debate.

Josh Lerner has written books on something I have not worked at all, on the patent trademark offices and the fact that they, in the past, have done a pretty bad job, granting too many patents because they have the wrong incentives. That has led to some reforms I think, especially in the US.

5. Do you think it would be a benefit for economists to have a more direct input on such matters or would it perhaps not make much of a difference?

Well, I think it would be useful. It's the usual question about what do economists do, right? Sometimes one is successful, and sometimes it is very hard. So you can just bring ideas and hope people will catch them.

Actually, sometimes it is easier when it is very technical. The patent pool stuff is very important, but you ask politicians "What is a patent pool?" and they have no clue. So they don't look at that. It is easier to have an influence because

patent pool stuff is very important, but you ask politicians "What is a patent pool?" and they have no clue. So they don't look at that. It is easier to have an influence because politicians do not see it as an electoral issue. If it were an electoral issue then it gets more difficult, because the lobbies are going to play a very important role there. You as an economist, you can say you don't agree, but I think the lobbyists will have more influence with the politicians than you.

What topics should be explored in future research on intellectual property? For example, could you elaborate more on your work on trade secrets?

Regarding trade secrets, one of the big issues, which was pointed out by Ken Arrow in 1962, is that it is very hard to license trade secrets -- so something that has not been patented. Because if I come to you and I say "Look, I have this great idea, do you want to buy it? Or license it from me?", then you say "No, no, I am not going to pay X euros for that if I do not know what it is". And then I have to tell you what it is. But once I have told you what it is you can just say "Jean, thank you, that was nice", and use it.

So it's very hard to license trade secrets. Besides, trade secrets are not that good, because it means I'm going to keep the technology to myself. You might have some use for it but if I cannot license it to you, well, I'm going to keep it for myself. That is what patents are for in a sense. Patents are there to protect and allow licensing. This is one of the things that people do not realize, that if you are too tough on patents, then people will use a lot of trade secrets, and the diffusion of innovations will be even smaller than with patents. I mean, you cannot just assume that people will share like this. This is not the case.

They share, I mean, sometimes they do share, an example is Open-source software. That is something we have looked at when trying to understand what is going on there in terms of incentives. Because, obviously, they don't share by pure altruism, that's what they say but it is just wrong -- unless you think that programmers are much nicer than other scientists.

They do that for various reasons. Actually, there is more and more work on that going on these days; about the incentives behind this sharing behavior.

So patents have lots of drawbacks, I am not a big admirer of patents. But people also have to realize that if you don't have patents then there will also be a lot of trade secrets, which is not very good either. You want technologies to be shared.

"Standard setting is very important and we know very little about it"

Standard setting is very important and we know very little about it at this stage. Standard setting organizations do three things: first, they try to understand the technology, what works with what. They perform an engineering function: they try to understand how it works, and what value can be created through various combinations. That is something that economists do not have that much to say about. Second, they basically certify, they say "This should work" -- which is interesting, there has been work on certification. Finally, they decide on a technology. They say "your patent will be included and yours won't be included". We cannot choose two different approaches to do the same thing, or similar things. But then, once you have chosen a particular path, that is what I was saying earlier, then you are going to end up with monopoly power, and that is an issue.

The dynamics of all that are important. For example, how standards evolve over time. A standard is not only one standard, usually it changes, but it has to be backward compatible -- for example you have iPhone 5, I am afraid mine is an iPhone 3, the old style. It has to be backward compatible and all these things. So there are all these sort of issues that arise with standard setting, and at this stage, this is not fully understood, and more research needs to be carried out. ■



Toulouse School of Economics
École d'économie de Toulouse

Business Talks

Mr. Sebastien Pouget:

"Can Investors Do Well by Doing Good?"

By Benjamin Prissé

When discussing the upcoming business talk on finance at the weekly TSEconomist meeting my attention wavered, given my poor interest in financial issues. But then someone mentioned the title of the conference "Can investors do well by doing good?", and some kind of positive karma suddenly spread throughout the room. I was half-stunned by the possibility that in this absurd and crude world some people still believe in changing things to the better. Julia, the Chief Editor, said that it seemed interesting exactly at the same time that it came into my mind, and it was clear to me that I wanted to cover this business talk very badly.

Sebastian Pouget's research interests span management science, economics, psychology and ecology with a particular interest on experimental methodology. Back in the real world he is a professor of finance at UT1 and IAE, directing the Master on Financial markets and being the vice-president of our beloved University. He is also the Co-Director of the research centre on socially responsible investments. Meanwhile he introduced himself as an inventor of neologisms, having, jointly with Christian Gollier, coined the "Washing Machine" principle. To fully appreciate its meaning you may want to continue reading until the end. Yet simply put the principle refers to the promotion of investment strategies and corporation behaviour in a more Socially Responsible environment, namely Environmental Social and Governance (short ESG) investments. Those investments do not only take into account profit maximization in monetary terms, but also consider externalities like pollution, working conditions, employee relation, product safety or transparency of decisions.

Surprisingly ESGs make up between 5 and 15 percent of total investment, amounting to several trillions of dollars in total! The major part of these funds is held by Pension and Sovereign funds, but also asset management companies become increasingly active in that market..

In the game (SRI from now on), there exist numerous strategies, but three of them are dominant, 'The first one is the "Exclusion", that is simply the action of boycotting a sector which is judged irresponsible (from a moral point of view). This strategy has exploded since 2005, between 2009 and 2011 the counterfactual investment adds up to 4 M\$.

The second strategy follows the principle of "Best in Class". According to this principle investment countries are chosen by overall ESG performance. Money flows should be redirected to those economies that act in the most



"responsible" way. In comparison to Exclusion this type of investments is still low, but has also doubled between 2009 and 2011.

The last strategy is defined by "Engagement": investors try to change the behaviour of corporations by exerting their control rights. This is a strategy in constant progression since the start of the XXIst century, and its growth rate is not as impressive as the two others in the last years, but accounts for 2M\$.

One could ask why it is important for firms to appear as socially responsible, and this is also a matter of debate: according to Fiedmand a social responsible firm behaviour maximises the value of the firm. This is also a way to maximize profits, since it also allows to reach financial objectives by creating economic value in the long run. But, who decides on which firm is to be considered as ethical and which firm is not? The Norwegian sovereign fund is an influential agent for the market of SRI, which has a blacklist of companies that they exclude from investment. This list is

attentively checked by external investors, and being on it can really damage your reputation. Airbus and Safran are on this list for instance, as is Total is under scrutiny in Western Sahara.

Contrary to stories from our childhood, being a nice and integer man is not necessarily the best way to be successful in this world. If you doubt this claim, take a look at the destiny of stark characters in the series Game of Thrones. So, why is SRI able to attract investment from traditional investments funds? There are three main reasons for that. At first SRIs are more able to spot promising companies by means of additional-financial analysis. Secondly SRIs are also more likely to anticipate changes in corporate social responsibility and benefit from the subsequent enthusiasm.

"Airbus and Safran are on the black list"



That will improve the image and impact of the company, potentially making it more valuable and attractive.

"The Socially Responsible Investment can generate exceptional profit"

Moreover, the model shows that if a free rider tries to enter the game, promising that he will change the firm but don't do anything, the next time that we proclaim cleaning a firm, nobody will believe it. In other words, being a washing machine firm is a matter of reputation. In a study published in 2012, Karakas and Li show that the SRI strategy can generate exceptional profit.

Last but not least, they can implement the "Washing machine" strategy, a term that we started talking about. But what is it exactly? In fact the concept is built upon a mathematical model. Put in a few words, it describes the strategy to buy dirty companies, to clean them, and then sell them.

Within this model one distinguishes between two types of investors, standard investors and responsible ones. The responsible investor takes externalities into account, he acts as a washing machine. To begin with, he buys sufficient shares of a company that doesn't behave in a prosocial way at low prices, until he can have an influence on decisions. Once he exceeds this threshold he is able to make decisions.

The Tau Investment Management may perhaps serve as a good example to follow such an investment strategy. The company buys shares of garment factories in emerging countries (such as Bangladesh where only some years ago a factory collapsed due to irresponsible working conditions) and improves on labour conditions and the supply chain organisation.

In conclusion, the newly emerged understanding of Social Responsible Investments is ever increasing and reveals itself full of promises for changing the immature behaviour of us humans, a stance our grandchildren will be thankful for. ■

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EPEX

The Missing Money Problem

By Christopher Sandmann,
Gabriel Ebert, Friedrich Lucke



At first glance it seems that Audrey Mahuet governs a very strange exchange. While at Christmas morning prices plunge to negative values their day average demand peaks just a month after to a level twice as high than what one observes during mild summer days. The energy market is essentially different. Power is nothing that you can efficiently store in a fridge or wrap in a gift paper to present it in the right moment. Energy units produced must be instantaneously consumed. The invisible hand residing over the efficient allocation of energy in France and its German speaking neighbours is called EPEX, its almost 80 employees run the spot market in Paris and are at the very moment in a leading position to accompany further integration of the European energy market to finally accomplish one goal: The single European energy market.

Enforcement of the idea started as early as in 1996 upon adoption of the European energy directive. Back then energy exchanges did not exist, nor did any competition on electricity markets occur as energy supply was often governed by state-owned companies. Yet 2014 sees markets still fragmented, the industry too often subject to uncoordinated national legislation and renewable energy

imposing new challenges to capacity constraints. In principal two challenges arise. Firstly an optimal allocation mechanism of cross border capacity has so far only been implemented in the day-ahead market for some but not all countries and is only at the beginning of being implemented on continuous intra-day trading. This last facility is to be implemented within the target model of European power market integration but proves to be much more complicated than anticipated. Secondly recurrent negative retail prices reflect on the fact that demand is very inelastic whereas supply is much exposed to external shocks.

While stock markets may crash occasionally and oranges may be sold out energy supply must be reliable. Capacity is a public good. If incentives to invest in capacity go out of season power supply stability is at risk. Given the specific nature of the electricity market consumers must rely on supplier's ability to quickly provide energy to the market if needed. While this is an essential promise to any industry heavily reliant on energy, power suppliers receive no reward to do so. Yet it seems that stability could have been ensured as long as the energy supplied to the market was generated by sources whose supply could be well predicted. Coal or

nuclear power plants tend to produce energy in a centralised but steady way (albeit they may coincide with disastrous environmental externalities). In contrast more recent power plants such as solar or wind energy cannot promise on delivering this capacity but are governed by the goodwill of the elements. In consequence incentives to invest in capacity have been eradicated, plans to construct gas power plants (and thus provide much needed capacity) relinquished.

The problem has received more intellectual and more prominent attention as early as in 2006. Having the enviable ability to perceive and see through economic issues well before others realise the existence of a problem Jean Tirole along with Paul Joskow worked on a series of papers dealing with the reliability of competitive electricity markets. In a first step they introduced the idea of remuneration payments to provide capacity to a framework with insensitive retail consumers. If energy suppliers receive a reward for providing available capacity to the market the missing-money problem may be solved.

"Achieving an efficient allocation of resources with competitive market mechanisms remains a very challenging task"

Energy suppliers could have sufficient incentives to invest in capacity. Indeed the authors concluded that "capacity obligations and associated capacity payments can restore investment incentives if all generating capacity is eligible to meet capacity obligations and receive capacity payments and all consumer demand is subject to capacity obligations." In fact remuneration schemes for capacity payments do exist, yet they are most often subject to the discretionary choice of federal grid agencies. While this is a framework that may easily be resolved from a theoretical point of view the efficiency of the general result hinges on very strong assumptions. For this reason the authors used a more complex model of uncertain demand and operating reserves with idle reserve capacity. In such an uncertain environment it is vital to retain operating reserves in order to avoid the collapse of the grid.

Similarly to the first result "without mandatory operating reserve requirements, there would be underinvestment in operating reserves and lower reliability than is optimal." In contrast a "knife-edge" problem arises. "Under certain contingencies, the market price and the associated scarcity rents available to support investments in generating capacity are extremely sensitive to small mistakes." Consequently efficiency is a much more delicate thing to achieve.

Many countries are about to establish capacity remuneration mechanisms by different approaches. Germany with the highest market volume in all of Europe is under a fundamental mechanism change. In the shade of the

events at Fukushima in 2011 the German government had decided to shut down its nuclear power plants until 2020. Consequently, there is a lack of capacity which has to be compensated. Furthermore, the Renewable Energy Act foresees that Network operators are required to preferentially feed-in electricity from renewable energy sources into the grid over electricity from conventional sources (nuclear power, coal and gas). This leads to times when the market is swamped by wind energy causing stress to grid stability and pushing capacity out of the market that is needed as soon as the wind is not blowing anymore. Wind energy makes up 10 % of the average electricity supply in Germany but is subject to a high variance. This is why the federal network agency of Germany has forbidden energy suppliers to close a number of power plants and distributes compensation payments in turn to ensure grid stability.

As suggested by Tirole and Joskow suppliers are remunerated with capacity payments. But unlike in the ideal theoretical world this mechanism can only be exercised ex-post. Remuneration may only be granted in the event of a request to shut down a plant. Consequently the given remuneration payment system creates no incentive to invest into capacity. Currently the agency revises 47 requests to shut down operating units. Its outcome is highly uncertain to energy suppliers. In contrast the UK will be the first major economy in Europe to actually introduce a capacity market starting from 2015. As had been recently confirmed by the European Commission the mechanism is in line with European State Aid Rules (editor's note: also take a look at the interview with Gert Jan Koopman in this edition). "Under the Capacity Market, the Great Britain System Operator will organise annual centrally-managed auctions to procure the level of capacity required to ensure generation adequacy. Auctions will be open to existing and new generators, demand side response (DSR) operators and storage operators."

Continental Europe should be curious about the experiences of the British project. If it becomes a success it may well serve as a role model for a unified French-German impetus on a European level to adopt a similar framework. Yet, the long time passed between the enactment of the directive in 1996 and today's partially still unsatisfied ambitions may remind us of both, the difficulty to find a unified European approach towards an integrated single energy market and the questions on how to incentivise sufficient investment in capacity. Put into Paul Joskow's and Jean Tirole's more elegant words, "achieving an efficient allocation of resources with competitive wholesale and retail market mechanisms [remains] a very challenging task". ■

References :

Paul Joskow & Jean Tirole, 2007. "Reliability and competitive electricity markets," *RAND Journal of Economics*, RAND Corporation, vol. 38(1), pages 60-84, 03. <http://economics.mit.edu/files/1927>

In-depth summary of the problem of capacity markets by the agency for the cooperation of energy regulators ACER
http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/CRMs%20and%20the%20IEM%20Report%20130730.pdf

Interview with Audrey Mahuet

By Gabriel Ebert, Friedrich Lucke,
and Christopher Sandmann



1. Could you describe the way EPEX organises spot market trading in electricity?

We have two market segments, one is called the day-ahead, the other is called intraday trading. On the day-ahead market electricity is traded for a delivery on the following day. Once per day at twelve o'clock we close the order book and do an auction. In summary we run a fairly complicated optimisation problem in crossing the demand and supply curve under the constraint that there is enough capacity to flow from one country to the other. Calculations take ten minutes at most while the entire process lasts for 50 minutes. At 12:53 we publish 24 prices for the 24 hours of the day. While this is the main market that exists for the spot market in Europe we also organise intra-day trading starting in the afternoon. This is a continuous market like a stock exchange. Similarly traders submit anonymous orders at least 45 minutes before delivery may take place.

2. Why do we need two distinct frameworks?

To some extent this is true for historical reasons. As power is not a storable commodity transmission operators (TSOs) are used to ask for a lot of information the day before. This information is much needed in order to foresee as closely as possible what is going to happen during the next hours. On the other hand the intra-day process is something that is

much more recent. While the day-ahead auction started

in year 2000, intraday was only introduced 5 or 6 years afterwards. Its purpose is rather to face unexpected events such as the failure of a power plant. Additionally renewable energy becomes more and more important. Since forecasts for renewable energy are not accurate intraday trading is very helpful. Still the day-ahead trading is the most liquid of all markets and participants trade their entire demand based on what they know the day before.

3. Why do we observe negative retail prices on the exchange?

This may occur when there is a huge quantity of energy coming to the market at times when demand is very low, say for instance the day after Christmas. While at 4 a.m. there may be a lot of wind blowing, no one wants to consume any energy but sleep and recover from Christmas Eve. In the meantime power is just flooding the whole of Europe. In such a case there are some producers who prefer to pay instead of cutting their own power plant because cutting a thermal, gas or coal power plant can be very costly knowing you would have to restart it in a couple of hours. If henceforth prices go until a certain negative threshold suppliers may be willing to keep their power plant running. Indeed this is a very strange feature of the market. It illustrates the lack of flexibility of

power generation in Europe and shows that our classical means of producing power are not flexible enough to react to shocks such as a high supply of wind energy which can make up more than 20 % of German energy supply.

4. Why are negative prices not transmitted to consumers?

On the one hand the way consumers respond to prices is not that developed. You may subscribe to different day and night prices but most households sign fixed price contracts. On the other hand the bill consumers pay consists of only a small fraction of generating costs. Taxes, expenses to excess the grid, technical support and subsidies for people in remote areas paying the same prices as those in urban areas all add up on the bill such that wholesale prices make up only 20 % of the bill that we pay.

5. How can we ensure sufficient incentives to invest into power capacity?

This is something that we call the missing-money problem, the remuneration for capacity which is not used but has to be there. When the wind does not blow we have to have some support power plants that are usually some gas or coal power plants. There is a lot of emotion in Europe about this topic. Conventional power plants find it more and more difficult to be alive and have their power plant running because they do not receive enough money for that. There are a lot of mechanisms that could be imagined in order to make sure that this capacity is paid.

We are working closely on the French case because French legislation is more finalized on this topic. RTE, the French TSO, already published some rules with regards to how the market should be organised that will be implemented next year. The principle is that every supplier should make sure that someone is in the market that is able to produce power. Thus some power plants will be obliged to supply capacity. The role of EPEX would be to help suppliers and generators to exchange capacity certificates and finally make a price out of it as we're doing for the energy market.

6. Why is this legislation only happening on a French level?

This is the contradiction we experience every day. While we are working on the development of a European market the responsibility for energy policy remains at the level of the member states. France has a specific problem for the winter peak due to electrical heating. Germany decided to adopt a specific policy in shutting down nuclear power plants. Yet for some specific reasons Germany has decided not to adopt a capacity market. Thus everyone has different problems. That's quite a mess and at times this is also a reason why the market does not work properly. Therefore there's quite a lot of work ahead on how to create an efficient mechanism and as a French-German company we would like of course to have a French-German market.

7. What are the main challenges ahead towards further integration of the market?

We are supposed to achieve what is called the target model of European power market integration by the end of this year. This is still not the case because it proves to be much more difficult than initially foreseen. At the moment power exchanges only optimise the flows between some countries creating prices at the day-ahead level. These include Portugal, Spain, Scandinavia, Germany, the UK and the Benelux countries, but leave out Italy and Eastern Europe.

8. Can TSE students help you doing so? What kind of profile are you looking for?

Most of the people working at EPEX are not engineers, despite the fact that the business is very technical. So don't be afraid to dig into technical things. What I think is important is a strong background in Economics and a lot of interest in the energy market. We like people to speak in English as our teams are multicultural and multinational. We usually don't publish any advertising or offer for internships, but we do welcome one or two internships per year. I don't like to have someone for less than three months, any duration between three and six months is fine. ■

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Tiger Forum 2014

Interview With Gert Jan Koopman European Commission

By Philine Schuseil



1. You are Deputy Director-General for State aid at the Directorate-General for Competition. What are typical cases you are dealing with?

The cases I am dealing with vary a lot. They involve many huge bank restructuring cases, such as Westdeutsche Landesbank or BayernLB. 25 percent of the banking sector in Europe has been restructured following Commission state aid decisions, 104 banks in total in all Member States. In some countries, 100 percent of the banking sector now falls under State Aid supervision. These were very tough negotiations to essentially arrive at a restructuring plan that will bring the banks back to viability while at the same time limiting distortions of competition. We also currently have important cases in Germany and the UK, to name but two, about the reform of

support systems for Renewable Energy. We are also dealing with many R&D&I (research and development and innovation) cases as well. These cases are typically very difficult as they involve restructuring in industries that are going through a transition like the airline industry (where companies received state aid in order to keep them in the market). So it's extremely varied - state aid control applies across the whole economy and you have cases in pretty much every sector of the economy. A new and very interesting area is fiscal state aid where Member States employ selective measures in tax regimes and administrations in order to support certain companies. This is also an area where we believe that there are important implications for the internal market.

2. How does your education as an economist help you in dealing with these issues?

We basically perform applied welfare economics. In essence we look at whether the state aid is addressing an interest that goes beyond that of the company concerned (e.g. remedying environmental problems, furthering knowledge spill-overs, protecting financial stability), if there is a market failure and if so whether the action is actually necessary and whether it changes the company's behaviour; i.e. if there is an incentive effect. Then we ask ourselves whether this kind of intervention is appropriate or if Member States could use a less damaging intervention. Typically, when we analyse these cases, we have to go through all these questions.

It's not academic, because at the end of the day we are dealing with real cases and have to make decisions, even if the information is limited. State Aid control therefore applies the analytical rigour that a study of economics gives you to real life cases. So it's applied macroeconomics, applied welfare economics, if you wish within a legal framework set

by our rules and the jurisprudence of the Courts.

3. In 2012, the Commission set out a state aid reform programme and the European Parliament adopted a Resolution supporting the initiative in 2013. Why do we need to modernise state aid and what will be the main changes and benefits?

This is a reform of state aid control regarding the Commission's rules and modus operandi. We did this basically for three reasons. The Treaty required the Commission to look at all state aid and says that unless it is approved it cannot be granted. In a union of six Member States that was maybe still feasible, but now with so many liberalised markets in 28 Member States this would simply be unworkable. We have, therefore, decided to concentrate only on those cases that are really important for the functioning of the internal market. So in a way it is a massive subsidiarity initiative on our side in an area where under the Treaty the Commission has exclusive competence. We want up to 90 percent of the cases that are smaller and less damaging to the internal market to be treated under very simple rules by Member States themselves without them having to be notified to us beforehand. This significantly cuts red tape and speeds up the processing of aid. So simplification and better prioritisation, including an emphasis on subsidiarity, were two reasons. Third, we wanted economic principles to be strengthened in the assessment of cases we scrutinise carefully: to be rigorous in the big cases in order to facilitate "good aid" and to reduce "bad aid" that is very distortive. By doing so, we hope to contribute better to economic growth, because at the end of the day we want to make sure that the money is well spent and leads to improvements.

4. Did the initiative come from the Commission itself or from the Member States?

We obviously discussed it with the Member States but we decided to do this ourselves. Member States welcomed it and supported us and we have now basically completed the reform of all these rules. The Member States, now responsible for up to 90 percent of cases, would of course need to manage them themselves and some of them feel that it is also a responsibility they have to take. We believe this is an important reform – you cannot regulate everything from Brussels, it is just impossible.

5. Who is then responsible at Member State level for managing these cases?

It depends. A priori it is the national state, typically not the competition authority who is in charge, although in some Member States the competition authority has taken the responsibility to manage state aid cases. In Germany for example, the Federal Ministry for Economic Affairs and Energy (BMWi) has a co-ordination function for state aids. They need to make sure that the aid that they don't have to notify to us beforehand complies with very simple rules that we have set out. Member States need to implement these themselves.

For example, when an aid is given for a broadband project in Bavaria, which doesn't have to be notified to us, they then need to check that the basic rules are applied. In a sense, they become 'mini' simplified controllers of other authorities and of themselves. They know that if they don't do it well – because we check from time to time through so-called ex-post monitoring – they will be in trouble. I think that in the Union we live in today we should not and cannot regulate every competition case from Brussels. Governance is much more continuous with some responsibility taken over by Member States and some responsibility by Brussels. The reform is a bit of a wake-up call for some Member States: They like the principle of subsidiarity but they like the responsibility that comes

with it a bit less.

6. The Commission's merger guidelines acknowledge the "failing firm defence" under certain conditions and an otherwise problematic merger is "compatible with the common market if one of the merging parties is a failing firm". Is there a similar concept for state aid and did that affect the role of state aid in the financial crisis?

Absolutely, Article 107 3(b) of the Treaty (TFEU) allows the Commission to take account of exceptional risks to the stability of the economy. And that Treaty Article has been used by the Commission in the crisis to allow massive state aids flow into the financial sector for reasons of financial stability. This had to be done, but under conditions set by us to avoid the internal market from fragmenting as a result of uncoordinated actions by Member States. We can and we do in practice take account of such exceptional circumstances in adapting the rules when faced with such challenges.

Another concept, that is very basic in state aid control and which is also highly relevant to the failing firm defence, is the counterfactual analysis. We check the necessity of state aid, often by asking the question what the

counterfactual of not giving aid would have been and what the company would have done if it hadn't received the aid. The failing firm defence is based on the same logic: the merger is allowed because there is no damage to competition as in the absence of the merger the failing firm and its assets would have disappeared. The logic behind the idea in State Aid that you have to look at the counterfactual is quite similar to the logic underpinning the failing firm defence and is a key feature of state aid control.

7. In 2013, the US government agreed to give Boeing \$8.7 billion in tax breaks, notably for the development of its 777x. The tax breaks are perceived as an unfair aid by Boeing's EU competitor Airbus. Will and can the

EU challenge these subsidies and is the Commission engaged in ensuring a level playing field between EU and non-EU companies?

This global level playing field issue is very important. Our slogan is "No protectionism at home, but activism abroad". What we do in practice is, first, if we are concerned we go the WTO; the Boeing/Airbus cases are at the WTO at the moment. The measures you refer to have been brought into on-going procedures before the WTO. Secondly, we try through the reform of the WTO rules to generate more transparency. At present, the only globally available data about subsidies date back to 2006, so they are obviously outdated. We would like this to be addressed in order to have more transparency at the WTO level concerning the subsidies WTO members grant.

Moreover, in our bilateral trade agreements, for example with South Korea or Singapore (and now we also want to achieve this for the trade agreement with the US) we try to build in state aid discipline, either through requiring transparency or by putting limits on what can be done in the case of rescuing or restructuring firms in difficulty. We want to use our trade policy to try to rectify problems in third countries.

Finally, at the very end, if we see that a company would not invest in an assisted area in Europe but go to a third country and if this is properly documented, then we would accept - this is the counterfactual again - that the European country would give matching aid to ensure that the company doesn't go abroad but stays in Europe. We see this rarely in reality in our case practice, but the possibility exists in our regional aid rules. Our R&D&I rules are another case in point: here we have a "matching clause" allowing a company to argue: my competitor is getting aid in China and I cannot compete with this company if I don't get R&D&I support in Europe. Then, in principle, we can consider this, in practice however, this clause has never been used.

8. Could this theoretically apply to Airbus?

This could theoretically apply to Airbus. But in the case of Airbus we have a lot of state aid going to its suppliers, which is mostly R&D aid, all of which we have



cleared under our rules. This is very important to realise: We have never taken a negative decision on a R&D aid in the past ten years. We sometimes modify the conditions or we make sure it is minimised or limited, but we never stopped R&D aid.

9. Do you think that the ongoing TTIP (Transatlantic Trade and Investment Partnership) negotiations between the US and the EU are an opportunity to establish global rules on state aid control?

The problem for the Europeans is that we also have so-called defensive interests in these trade negotiations. The 2006 statistics about subsidies show that Europeans give more aid than anyone else in the world. This is largely true because of

agriculture. So, the problem is that our Member States don't want to make state aid control a priority in the negotiations because they are worried that this may have implications for them in other areas where subsidies are concerned. Achieving a global level playing field is not an easy task but we are definitely pushing as hard as we can.

On behalf of the TSE students, thank you for your time, it has been very insightful. ■

Interview With

Jean-Philippe Platteau

By Aurélie Nègre and Marrit Teirlinck

On the 9th of October, during the Development Economic Seminar at TSE, Prof. Jean-Philippe Platteau presented his paper "Optimal Discipline in Donor-Recipient Relationships - Reframing the Aid Effectiveness Debate". Since its creation in 1994, he has been the director of the Centre for Research in the Economics of Development (CRED), at the University of Namur. As a professor at the economics department of Namur, he has published a wide range of influential articles and books concerning the role of institutions in economic development, aid effectiveness and governance. With his research approach he highlights the important contributions that other social sciences, such as sociology and anthropology, can deliver to the field of economic development. We were delighted to have had the opportunity to dive deeper into these intriguing topics and to ask some burning questions during an interview with the professor himself.

1. In September 2015 the United Nations will reveal its new development goals for the next period of fifteen years. Many of the millennium goals have been met. Still, improvements can be made in the efficient allocation of resources and the way aid contracts are structured. Do you have any suggestions for the new development goals?

"Firstly, it is always important to focus on a reduced number of objectives with a few measurable indicators. Secondly, it is more important to look at the quality rather than the quantity for some indicators. For instance, if the education target only focuses on school enrolment, you can have 90% of all children at school but what does this really mean if they are poorly trained. The content matters a lot and this is especially true for education and health. The right mix between quantity and quality increase is also country dependent. In some

countries it is obvious that the main problem is quality and that the basic source of inequality is in fact that the quality of health and education services differs considerably across areas. Often the poor areas are the most remote areas, where communication and infrastructure are lacking and especially in the rainy season these regions become almost inaccessible. Hence, one key problem is that no one wants to work there. How can you then induce good teachers and doctors to go into these remote areas and provide high quality services?

Concerning the MDG [Millennium Development Goals], if we assume a concave curve between performance and effort, what we have achieved in recent years is relatively the easiest, increasing the quantity rapidly. However, this becomes more and more difficult to do, so the marginal impact you can



achieve with extra funds will probably be disappointing compared to what you have done so far. Nevertheless, the effort has to be sustained in order to realize higher quality and equalizing impact across regions. We want all people to be included."

2. There has been a shift away from aid conditionality towards participatory aid programs. Do you think that current aid programs are more effective compared to previous programs?

"Well, there is still a lot of room for improvement. Slogans stating "conditionality is bad" has become big fashion. The response was to remove conditionality and to go into the opposite direction, which is policy dialog and ownership. Of course it was not an elaborated change to go from one extreme to the other. People started to realize increasingly that establishing effective aid programs is rather complicated and we are in need of more adapted programs and a subtle manner of devising aid modality.

It is true that the aid conditionality programs did not work well. However, the reasons why the programs did not work well differ. Sometimes these programs were well adapted to the country, but they were not well enforced. Often when there is a situation in which the conditions are not fulfilled, and aid should have been suspended, immediately several lobbies pop-up and will start to intervene and try to evade the imposition of the particular conditionality. Among the lobbies there are many firms, including firms from developed countries. These firms might have contracts with local businesses and cutting off the aid flow would possibly hurt the firms. So, often local and international lobbies align themselves to block the implementation of the conditionality. Hence, it is not only an issue of the design of the program, but also an issue of proper enforcement."

3. Lately, a larger share of aid resources has been allocated to Community Driven Development programs. These are programs that give the responsibility of for planning and decisions on the use of the resources of the aid programs to community groups. Do you think these programs are effective? What are the

advantages and disadvantages of the CDD approach?

"It is not a panacea, it may work but it may also be worse. The basic idea is that the state is corrupt so lets go around the state and lets go to the communities, because this is where the people who need the money are. The problem is that you don't just go to the community; you have to meet the local chief and you have to be accepted by the local authority. Often the political systems in developing countries are characterized by links between the top structure and the local structure. Hence, you may encounter as many problems at the local level as at the top and without proper check.

Monitoring at the local level is often more difficult, as the checks and balances are of less quality than what they are in the capital city, where there is a national press exerting pressure. For example in China, we know that there are a lot of problems at the local level; this is where you have most of the corruption and embezzlement. You have to adjust aid modalities to different countries; there is no unique formula that works everywhere.

The second thing I want to add to that is that when you look at it carefully, the monitoring of aid programs has been completely insufficient. Monitoring does not only involve punishment but it also functions as a support for local organizations. One of the reasons for the lack of monitoring is that donors want to see that their money is going entirely to the measurable target, not to an administrative staff for monitoring.

Lastly, I would like to add that community driven development works very differently in practice than on paper. The idea is in fact good, but we have to devote time and really listen to the people in the community. Often they do know better what would work and would not in terms of effectiveness and enforcement. However, the time needed to really listen to the community is often not taken."

4. What are the policy recommendations that can be drawn from the results of the paper you presented "Optimal Discipline in Donor-Recipient Relationships- Reframing the Aid Effectiveness Debate"?

"The main policy implication is that monitoring and sanctioning mechanisms are necessary if you want to be able to take countries on board, which have a very low level of governance, otherwise they will be excluded. These are the countries where often live the poorest people, hence in terms of poverty reduction you do not want to remove Haiti, Somalia, Eritrea from your aid programs. To overcome the exclusion of these countries with the lowest levels of governance, one has to make a trade-off between needs and governance but with the ability to influence governance. We have to be modest and humble and not try to change a political system. It has been demonstrated before that it will be a total failure when the West wants to try to change a political system, but we don't need to go as far as that. To improve governance is to improve the local capacity and accountability in a way that is reasonable and that goes step by step. The problem is when you have this trade off, a country might be highly effective in reducing poverty, has a strong state capacity, but the donor does not agree with the political system. This is where we have to decide what we want to achieve and I think that if your objective is to reduce poverty then we should continue. We did not become a democracy from one day to the next either."

5. In your research on the role of institutions and development, you stress the importance of social norms. As economists, we mostly focus on property rights and contract enforcement mechanisms. What can we learn from sociology/anthropology when looking at institutions that facilitate effective market systems?

"When we want people to have a better life, it is not only a question of income and consumption. An important component of well-being is dignity and self-respect. Currently, in a lot of societies we observe social-oppressive norms: we would like to remove them, but how? I am [referring to, for example,] early marriage of girls and genital mutilations like excision. Development is also a question of emancipation. When social-oppressive norms are internalized in preferences, and considered as a part of the culture, the identity, economists' tools are not appropriate anymore. If we search an equilibrium by maximizing preferences,

what happens if these preferences are contradictory with the general interest? What if people defend these norms? It is a psychological issue.

Culture plays an important role in development.”

6. We would like to conclude with a question related to a current issue, the rise of the Islamic State in the Middle East. One of your papers, “Political Instrumentalization of Islam and the Risk of Obscurantist Deadlock”, adverts that politics tends to dominate religion and that there are misconception present in empirical studies that advocate the strong link between Muslim countries and political performance indicators. How do your findings relate to the rise of the IS [Islamic State] in the Middle East?

“It is obvious that the ideology of this movement is not Islam. They are typically extremists and there is no possible dialogue. In my opinion, we should not allow them to reach power.

However, they are able to do so. We should wonder: what happened? What has created a situation where these people suddenly have obtained power?

The invasion of Iraq by the US has clearly played a role.

However, at least when they left, they had started to understand how to deal with the Sunnites and found a way that could marginalize Al-Qaeda.

The Prime Minister Nouri Al-Maliki has made a lot of political errors that led to the rise of ISIS, and destroyed what the US had achieved. He was narrow-minded, sectarian, and has disappointed a lot of people. He has been even worse with the army than the Americans were. As a result, we have generals from the Saddam Hussein army who are in ISIS even if they are absolutely not Islamists; they only want to take revenge because they lost everything, including their dignity. Now they want to destroy this regime. Moreover these people know how to manage a tank, are highly skilled and organized, compared to, for example, the Taliban.” ■

Alumni Testimony



ALUMNI NETWORK

Vivien Massot
Senior Economist

1. What is your current position today?

I am a senior economist at TAC - Thierry Apoteker Consulting. My principal task is knowledge management to collect information on emerging economies and macroeconomic issues (trade, investment, monetary policies, etc.); I therefore participate in synthesizing information and preparing reports on emerging economies, related to economic and financial risk assessments.

I also represent the company in India and manage our research office in New Delhi, with responsibilities in terms of finance and human resources.

2. What was your path from master graduation to this current post and what are the key elements which helped you to make your choices?

During my Master in Mathematics, Statistics and Econometrics, with a great emphasis in microeconomics and industrial organization, I decided to specialize in macroeconomics and did my master thesis on World Income Distribution. I then joined ENSAE in Paris for a 1-year postgraduate program in Forecasting and Economic Policy; I built upon my previous knowledge by choosing courses in international and development economics and additional quantitative techniques like macroeconometrics. My first position was with the French Embassy in India for 2 years, where I was in charge of the economic follow-up of India and South-Asian countries (growth, monetary and budgetary

policies, etc.) and of development issues in relation with the World Bank and IMF. Upon returning to France, I joined TAC in 2009 to work on country risk analysis as well as on specific country studies, and moved back to India in mid-2010, allowing a strengthened proximity to core economic issues in emerging countries.

3. According to your professional experience, what are the most useful skills that you obtained during your degree?

The Masters degree helped me develop an intense research approach to economic problems, with an acute awareness of the importance of extensive academic work already available. The academic program also allowed me to acquire stronger analytical and synthesis skills to assess and evaluate the relevance of economic information and research.

4. What advice would you like to give to the TSE students or to the School?

First, student must realize the wide range of professional economic areas, and determine as soon as possible their main interest to focus their studies on it. Also, I am delighted to see the efforts made by the TSE Alumni association, and I am sure it will provide greater opportunities for students to interact with professionals of various horizons (public and private research, policy-making, etc.) and strengthen their interests in the economic sphere. ■

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Internship Reports

Ibtissam Benibrahim,
Renault-Headquarters

1. What was your role during your internship?

I did my internship at the headquarters of Renault, which is a French multinational vehicle manufacturer. As part of the Renault-Nissan Alliance, the company is the 4th-largest automotive group by production in 2013.

My internship took place at the Global Sales Division, within the Statistics and Short-Term Forecasts department, which is in charge of producing the statistics of official sales and TIVs (Total Industry Vehicles) on a worldwide scale.

As an intern, I had the opportunity to work on two different areas. Firstly, I was in charge of producing statistical reports concerning the sales in Asia-Pacific and Eurasia. Secondly, I produced world sales forecasts by working with consultants and internal teams to analyze large quantities of data, build models and create tools effectively balancing quality, availability, timeliness, and cost factors.

Finally, I was in charge of automatizing statistical data crunching through a panel project in collaboration with the IT department.

2. How did your experience at TSE help you on the job?

My experience as a student of the Economics and Statistics section at TSE has given me solid skills to work on statistical projects using different statistical software in order to perform high level database management.

Furthermore, the different economic models I learnt during my Bachelors (Mathematics & Economics) gave me the opportunity to understand better the internal forecast models used at Renault to forecast future sales, and to understand better the links between commercial demand (with its estimation of risks and opportunities) and industrial response and constraints.

Moreover, as the internship required working with consultants and internal teams from different departments, a certain sense of social relationships and team spirit was essential. My experiences within the TSE Junior Etudes have actually given me the opportunity to be part of a large team,



and to work with people of different backgrounds, as well as clients from different fields and networks; this was all helpful for the smoothness of my internship.

3. How did you get the internship? Do you have any advice for students looking for a job in a similar field?

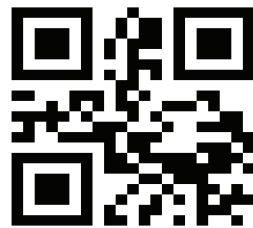
I got the internship by applying for an offer posted by the director of the Masters programme, Christine Thomas. I sent a CV to the person in charge of the recruitment and was interviewed by phone. The interview lasted one hour. First, I talked about myself and my personality, as well as my motivation for joining the company and the Global Sales Division.

However, as the internship was technical, the recruiter seemed to be more interested in the different projects that I had already carried out during my studies and previous experiences.

I would really advise students who are looking for internships and jobs in the field of quantitative research to highlight the different skills they have already acquired during their studies and workshops, in order to be more attractive for the recruiter. Talking about a previous experience gives the candidate more authenticity.

Furthermore, it is very important to ask questions and more details about the internship/job proposed, before starting to say that you are interested in it. In fact, asking questions could give you a more precise view of the different tasks that you would do if you get the internship. It may also give you an idea on the skills you have already acquired that match the internship/job, and hence allow you to talk about these skills and the context where you acquired them. ■

Join the Alumni
Network



<http://alumni.tse-fr.eu/>

Julia Hofer Martí, Oxera

1. What was your role during your internship?

Oxera is a medium-sized consultancy firm with offices in Oxford, London, Brussels and Berlin. It started out three decades ago, advising the British government on how to organise newly-liberalised sectors of the economy. The company's services are mostly centered on transport, telecoms, utilities (such as water or electricity), although it has also branched out into other sectors such as health and intellectual property. Oxera's aim is to provide high-quality economic consulting services, and works in finance, state aid, competition economics, and modelling – among others.

In my time at Oxera I was involved in various different projects: one involved running econometric models for cost analysis, and providing outputs and reports that could be presented to the client; another concerned assessing a regulated, non-publicly traded company's returns to determine whether it was being overpaid by the state. I was also involved in a more minor role in several other projects, including Oxera's work for Gatwick airport, and Ryanair's (many) state aid cases.

2. How did your experience at TSE help you on the job?

Without a doubt, the most useful class for me was Econometrics. Throughout my internship I was very involved in the modelling team's work, and the Econometrics course at the TSE gave me a very thorough understanding of the basics of the field. This made it much easier for me to understand what (for example) different tests do, and their implications, and in general allowed me to be much more comfortable in discussing statistical properties, etc. My class in Stochastic Processes also found practical application: Oxera took on a project that involved constructing a Markov chain, in order to model the probability of new businesses failing under certain parameters. Interestingly, something I found lacking in the M1 that would have been very helpful was a good course on Competition Economics. Luckily, I had already taken a course in Competition during my undergraduate degree; if I hadn't, I don't know whether I would have gotten the internship, as I wouldn't even have known what a natural monopoly was.

3. How did you get the internship? Do you have any advice for students looking for a job in a similar field?

I actually first found out about Oxera through the TSE's Business Networking Day. I attended the presentation they gave and was left with a very positive impression of the company's culture and the type of work they engage in. In fact, I would quite recommend attending the company presentations at the BND, as they can give you a very good idea of whether the company is the sort of place you'd enjoy working. In my case, it certainly worked out very well.



My advice to students looking to do an internship is the following: first off, don't be afraid to sell yourself in the initial application! Be sure the company knows what sort of value you can bring. Secondly, you can never be too prepared for an interview. For my interview with Oxera, I investigated all of their sectors and services to make sure I had a decent understanding of what they consisted of (this proved useful as I was asked a question on state aid, which I hadn't heard of before applying), and read a few of the company's recent publications. It's also a good idea to think about the answers to the more obvious questions – things like “why do you want this internship?” and “what made you choose this company/institution?” – beforehand, in order to have a cohesive answer in mind. Finally, relax! Being calm and confident goes a long way towards making a good impression. ■



Yifeng Guo,
Columbia Business School

1. What was your role during your internship?

I was selected into the Summer Research Program in Columbia Business School last year, and from June 2nd to August 3rd, I spent two months at Columbia Business School as a research assistant for Professor Patrick Bolton and Professor Neng Wang.

The Summer Research Program (SRP) hosted by Columbia Business School is a fully-funded research program that only seeks exceptional undergraduate or graduate students to engage in a variety of research projects, including possible projects in the areas of finance, economics, marketing, management, accounting, decision making, risk management, and operations management. During the program, interns work with faculty and other researchers at Columbia Business School on a summer-long research project, gaining valuable experience in applying analytical and quantitative skills.

My job was to work on the “Book Project on Corporate Finance Theory” with Professor Patrick Bolton and Professor Neng Wang. The aim of the project is to publish a new PhD level textbook in corporate finance.

Right now, the only PhD level book on Corporate Finance is written by Professor Jean Tirole. This classic book – unifying fragmented topics in corporate finance into one clear, accessible framework and enormously enhancing people’s understanding about corporate finance – was however not tied directly to the traditional valuation-based corporate finance course taught in business schools. So there is still a demand out there from researchers, doctoral students, and instructors. The two professors’ research interests in corporate finance naturally lent themselves to this project, as they see a clear dovetail between research and teaching.

This new book attempts to present classic materials (tax and incentive problems) in a systematic way and introduce recent research progress in dynamic corporate finance. I was required to work on literature and lecture notes, provide feedback and convert lecture notes into preliminary draft



chapters. Much of my work involved in dealing with deep models at PhD level.

2. How did your experience at TSE help you on the job?

The M1 courses I learnt in TSE, especially game theory and incentive theory, helped me a lot during the internship. Corporate finance theory is closely related to contract theory. With what I learnt in TSE, I was able to deal with advanced models in the lecture notes. Besides, rigorous training on quantitative methods in TSE allowed me to learn advanced materials quickly. This was quite helpful when I began to work on dynamic corporate finance theory, a totally new topic for me.

3. How did you get the internship? Do you have any advice for students wanting to find one in that field?

Well, I actually found information about this internship on a social network site. Then I went to CBS’s homepage and applied. After two rounds of selection, I was in. So, use Facebook or Renren wisely, and you will be surprised!

Again, what I learnt in TSE was very helpful during the interview. I was able to answer three-quarters of the questions regarding R and game theory. So I would suggest students who want to find RA positions ensure they really understand the material taught in class. Finally, I guess (just a guess) that TSE’s reputation and its connection with Professor Bolton helped me in terms of receiving the final offer. ■

Ana Safira Chavez,
Institute for Applied Economic Research, IPEA - Brazil

1. What was your role during your internship?

I had the opportunity to work at the Institute for Applied Economic Research (Instituto de Pesquisa Aplicada - IPEA), a prestigious public research center that provides technical and institutional support to government actions – enabling the formulation and reformulation of public policies and Brazilian development programs. Its work is publicised through numerous regular publications and seminars. My internship took place in the Coordination of Regulation Studies at IPEA

in the office Rio de Janeiro. I worked on a research project – “Collusion and corruption in public procurement, public carriers and forms of remuneration for the employees” – under the supervision of Eduardo Pedral Sampaio Fiuza and Lucia Helena Salgado, both researchers at IPEA and professors at Universidade Federal do Rio de Janeiro.

My job as an intern was to compile a database of cartel cases judged by CADE (Conselho Administrativo de Defesa Economica) between 1994 and 2006. CADE is the main



institution in Brazil that investigates and prosecutes antitrust cases. I found this process incredibly interesting because all I had learned about cartel formation in class was extremely theoretical. When I started the research I found out that cartel formation is all around us. There are cartels in many sectors of the economy: magazines, stores, drycleaners, funeral homes, gas stations, construction, metro stations and so on. In my work, I identified each antitrust cases and I gathered basic information about them (Date of Formalization, Trial Date, industry, etc.). Identifying and condemning cartels is a very

complex process not only due to technical issues but also corruption and lobbying by many firms. At the end of my internship I realized the importance of regulation of market failures and all the difficulties this implies.

2. How did your experience in the TSE help you on the job?

For this internship my classes in microeconomics were essential to understand and carry out the research, because I had to apply the concepts of cartel formation, price-fixing, price regulation and antitrust policies. Definitely these industrial organization theories became more concrete during the internship. The most interesting part was that until I did my internship these theses were mainly class concepts and I had never analyzed them in the real world.

3. How did you get the internship? Do you have any advice for students looking for a job in a similar field?

I was able to obtain this internship because of my personal networking. I talked to a friend of mine who studies economics in Brazil and asked him about the procedure in Brazil to get an internship at the IPEA. He then mentioned that one of his professors, Lucia Helena Salgado, had been visiting professor at TSE for Master 2 ECL and was a researcher at the IPEA. I believe that being a student at the TSE helped a lot when I contacted her.

I think that my recommendation is that we have to invest in networking using personal and virtual relationships, for example, professors, alumni and other students of the TSE. You can never know where a job opportunity might be. ■

Lorenzo Ferrari, Competition Authority of Ireland

As part of the programme of the Master 2 in Economics and Competition Law, I performed a four-month internship in the Monopolies Division of the Competition Authority of Ireland, in Dublin. This state agency deals, like its other European counterparts, with the enforcement of national and European Competition Law, and its objective is to ensure that competition between companies in Ireland is fair.

The Competition Authority of Ireland is organised in four main divisions, namely:

- Monopolies, where vertical restraints and alleged abuses of dominant position are assessed under Article 101 and 102 of the Treaty on the Functioning of the European Union.
- Cartels, that is responsible for investigating alleged illegal horizontal agreements between competitors.
- Mergers, where it is ensured that concentrations that are over a certain financial threshold do not lessen competition.
- Advocacy, whose duty is to promote competition by giving advice to the Irish government and public bodies and by analysing specific sectors of the economy to identify possible competition issues.

Two additional divisions, Strategy and Corporate Services, carry out administrative and coordination tasks.

As an intern at the Monopolies Division of the Competition



Authority of Ireland I was involved in the economic and legal analysis of complaints sent by firms alleging breaches of Irish and European Competition Law and in the draft of documents to be sent to my Divisional Manager under the direct supervision of a Case Officer. My tasks involved mainly:

- the definition of the relevant product and geographic market
- a presentation of the economic sector related to the complaints
- the assessment of market power of the companies operating in that market
- the analysis of the alleged anticompetitive conduct to check whether a breach of competition law actually took place

I was involved especially in the analysis of alleged abuses of dominant position and of vertical restraints occurring in several sectors of the Irish economy, such as

telecommunications, advertising and electronic payments. I had the opportunity to participate also in some activities carried out by the Cartels Division, in particular in the assessment of an alleged “hub and spoke” collusion.

The M2 in Economics and Competition Law provided me with the theoretical background I needed to deal effectively with my tasks at the Competition Authority of Ireland. Among the different classes I attended, I believe that the ones in “Competition Economics and Econometrics”, “Competition and Market Strategies”, “Competition Law in Practice” and the “Workshop on the Law and Economics of Competition” proved extremely useful for the understanding of the issues I

had to deal with every day at work.

I decided to apply to the Competition Authority of Ireland because of the advice of a previous year’s student of the Economics and Competition Law programme. It was not very difficult to get my internship since the Toulouse School of Economics is well-regarded all over Europe for the quality of its Master programmes and for its students’ theoretical skills. A work experience in a Competition Authority is probably the best way in order to get access to the job market in the field of competition policy, and that is why I will never stop suggesting TSE students to apply for an internship at such a kind of institution. ■

Felipe Acero Garay, United Nations, Regional Commissions New-York Office - USA

The RCNYO is the central body of the five Economic Regional Commissions of the United Nations (ESCAP, ESCWA, ECA,



ECE and ECLAC) at the UN Head Quarters. Its main role is to gather and distribute information on all economic and social issues discussed in the UN system, especially those that are directly related to any of the five Regional Commissions’ activities or mandates.

1. What was your role during your internship?

I was responsible for following all sorts of debates, panels and negotiations among Member States on economic and social issues directly related with the formulation process of the new Sustainable Development Goals (and the so-called Post-2015 Development Agenda, which will replace the current Millennium Development Goals). I was also responsible for elaborating analytical reports about interventions, opinions and critiques of the main economic bodies such as the US, EU, G-77, China and others, and their eventual agreements and undertaken decisions. The reports contained a historical background of the topic, the framework of discussion and the most important contributions from academia and other actors. Among the issues deliberated were technology transfers; inequalities in South America; South-South, North-South and Triangular

Cooperation; sustainable urbanism and foreign aid, all of which were extensively highlighted during the spring/summer session. All these focused on fostering development in the poorest areas of the world by using the human and economic resources of new developing economies. The reports were distributed to the Regional Commissions’ representatives. The internship had a great combination of economic and international relations analysis.

2. How did your experience at TSE help you on the job?

My experience at TSE helped in the sense that some of the topics I mentioned above were part of the M2-PPD courses. For instance, I had close knowledge of current and past discussions of the effectiveness of foreign aid in developing countries as well as the lack of monitoring and evaluation mechanisms, topics which are now having lots of circulation within the entire UN

system. PPD allowed me to understand the main issues when trying to foster development through different programs, and understand how the accomplishment of objectives can be measured.

3. How did you get the internship?

I got the internship applying through an online platform of the UN (inspira.un.org) where most of the internships for different UN bodies are advertised. The regular procedure is to create a profile, fill all the information required and upload a cover letter. If pre-selected, they may ask you to have a phone or Skype interview. There are some other specialized bodies of the UN such as UNICEF, UNESCO, FAO that have their own online platform and which recruit several interns during spring and summer. They may answer after one to two months after you sent your application, so my advice is to apply as soon as you can. They are very flexible on dates and be aware that interns are not paid!!! ■

The TSEconomist Coffee Talks

By Demelza Hays

*Starting this year,
the TSEconomist organizes bi-weekly discussion events.
Join us for free coffee and other bright ideas!*

The TSEconomist cordially invites you and your friends to attend our bi-weekly discussions on economics. Students and prospective researchers alike are more than welcome to attend the Coffee Talks in order to share ideas in a warm and welcoming environment. Plus, there are always free coffee and delicious sandwiches for everyone.

Our way might from time to time be paved philosophically, sometimes politically, yet we're always arguing about those topics that are of burning importance to us. The first meeting of this semester occurred on Oct. 7 at 12:30pm in MF 323, which covered self-determination, free association, and individual secession. In particular many Catalans joined us to exercise the question of self-determination of a people in the north-eastern region of Spain.

The next meeting of the semester took place two weeks later on Oct. 14. This time we discussed war in Ukraine, trying to dive into the sentiments governing not only Ukraine, but also the other conflict parties involved. With over 25 attendees, the third meeting, on Oct. 28, covered the morality of Intellectual Property Rights. It followed a talk on paternalism, Nov. 20 and one covering the ongoing protests in Hongkong on Nov. 25. The diverse environment at TSE allows us not only to look into global issues, but also to hear those, that sometimes witness these events happening right in their own backyard.



We are currently looking for moderators for upcoming meetings. Each meeting will require one moderator and one topic. Ideally, the moderator will choose a topic which is of interest to him/her; however, if the individual who wishes to be moderator is unsure of which topic to choose, the Coffee Talks team will be glad to help out.

Overall, the TSEconomist truly hopes to have many of you come out this semester for the Coffee Talks. They are a fun way to learn about various topics, and since we come from very different backgrounds, we will be able to offer unique perspectives on different economic questions. If you are interested, follow us on facebook to get the latest news and visit our blog tseconomist.wordpress.com, to join the ongoing debate! For information on how to get involved as a moderator email Demelza Hays at the.tseconomist@gmail.com.

Coffee Talks
on
Economics

Does Catalonia Have the
Right to Secede?

Oct. 7 // 12:30 PM Room MF323

The TSEconomist
Student Magazine

Toulouse
School
of Economics

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BANQUE ET ASSURANCES

IAST Distinguished Lecture: “Our Inner Ape War, Peace & Politics”

Frans de Waal

By María Paula Caldas, Laeticia Malingre & Mili Rogbeer

With the development of individualism and capitalism, our societies have given credit to the idea that we are rational beings driven purely by self-interest. We have disregarded evolution in order to create our own kind of ape: the homo economicus. As a student in economics, you have probably heard a hundred times your teachers say: “The consumer wants to maximize his utility.”

However, there has been a rising tide of scientific research that refutes this idea. On September 25th, expert primatologist Professor Frans de Waal came to Toulouse to share his surprising findings related to competitiveness and cooperation in the animal kingdom.

Using results from 40 years of study in the fields of evolution and genetics, Professor De Waal showed us that both competitiveness and cooperation are tied to our biology, and form part of human nature. We, as humans, have evolved in such a way that our genetics have internalized the notion of considering other individuals’ well-being into our decision-making process.

De Waal began his lecture by showing one of the earliest experiments in cooperation done at Yerkes National Primate Research Center. In this experiment, we observe a pair of chimpanzees helping each other get some food by pulling at a box that is too heavy for one of them to move alone. This result clearly shows that chimpanzees understand that cooperation produces benefits. The experimenters then decided to see if the apes would still cooperate if one of the two chimps had already been fed. There was certainly some persuading involved, but at the end the well-fed monkey helped its friend, even when there was no gain in it for him - the hungry monkey ate all the food.

Another one of Professor de Waal’s most intriguing discoveries is that apes are averse to inequities, especially when there is no difference in the amount of effort exerted. What de Waal found was that an ape would get upset if it got a smaller reward than the other ape when they had both put in the same amount of effort to perform a given task. As the experiment continued, the monkey that was getting the higher reward would also start to become upset, for the situation seemed to be unfair to its partner.

De Waal called the basis for this kind of behavior, as well as for reconciliation, the “valuable relationship hypothesis”. Essentially, an ape will get upset if it receives a higher reward than its peers, because it anticipates relationships being damaged if there is no equity. This behavior is especially apparent with individuals who have much to lose if a particular relationship deteriorates. As he noted, the



European Union is based on the very same principle: it was formed after World War II on the premise that if we could tie European countries together by creating an economic pact, then the value of the relationship would be enhanced and countries would have more reasons to be peaceful with each other.

As De Waal explained, the duality of human nature, hovering between war and peace, can be explored by looking at our two closest primate relatives: Chimpanzees and Bonobo monkeys. Chimpanzees are known to be murderous and power-hungry, whereas Bonobos maintain a peaceful society where the female is accepted as dominant. Bonobos, often referred to as the “hippies” of the apes, resolve conflicts by “making love, not war”.

The difference between these kinds of apes may come down to nature versus nurture. Through studies conducted with Stumptail monkeys, De Waal’s shows that tendencies towards cooperation and reconciliation are strongly enhanced by a monkey’s social environment. Therefore, reconciliation can be seen as an acquired social skill.

For economists, this might turn out to be a particularly interesting finding. As Frank et al. (1993) summarize in their entertaining paper “Does Studying Economics Inhibit Cooperation?”, a series of empirical studies seem to support the shocking hypothesis that economists behave in more self-interested ways than most people!

However, the idea of cooperation producing more value than competition is not unusual in the economic field. A well-known example can be seen in the movie “A Beautiful Mind”,

where a group of college guys decided to forgo individual ambition - each one going after the most beautiful girl - in favor of the best collective result, which was to go after her friends. This way, they succeeded in their ultimate goal, which was to leave the bar with a date for the night.

Frans de Waal considers that this human ability to cooperate is deeply rooted in our biology, and it goes beyond the simple desire of achieving better results than through competition. In his words: "I am always puzzled by this claim that we humans are uniquely cooperative. We are uniquely cooperative on a large scale - cooperating with thousands of people to build a road, for example. But these cooperative tendencies that we have are not unique, and can be found in many species".

References:

Frank, R., Gilovich, T., & Regan, D. (1993). Does Studying Economics Inhibit Cooperation? *The Journal of Economic Perspectives*, Volume 7, Issue 2, 159-171.

Now, let's give the floor to Dr. Frans de Waal, renowned ethologist and primatologist, famous for his work on primate behavior. He is a professor at Emory University and director of the Living Links Center at the Yerkes National Primate Research Center.

1. As you have said yourself, you hope to look at human society through the lens of animal behavior. What conclusions have you been able to draw from your studies on animals other than primates with respect to the evolution of human behavior?

For example, we have the impression that empathy is a mammalian characteristic. So in primatology, we often have a tendency to say that everything is primates, and related to primates; but a capacity like empathy, for example, is much broader.

That is true almost for everything we have found. Reconciliation, for example, we observed first in primates and now it has been observed in many other mammals. Inequity aversion was found in the primates first and now we see it in many other animals. So the general tendency is always, that we first find it in the primates and then we find it in many other species.

This means that all these tendencies are older than we think because, for primates, we are talking about 30 million years ago that certain behaviors evolved, whereas for mammals, it goes back to 200 million years ago.

2. It is clear that we are genetically programmed to be both cooperative and competitive. What would you say are the main factors affecting the degree of cooperation and empathy in individuals?

The degree of empathy and cooperation is

probably based on how much a species needs to cooperate. For cooperative hunters, like wolves or orcas, there needs to be very close coordination and cooperation for both hunting and sharing of food, so these animals automatically form stronger attachments to the group and its individuals.

However, there are other species that develop very strong social ties for defensive reasons. For instance, Elephants are very social animals who live in very dangerous environments, where there are lots of predators. The elephants themselves do not necessarily have a lot of predators, but the babies do, and so elephants need to be able to protect those babies against lions, hyenas, and the like.

So I think the level of attachment, empathy, or cooperation, depends very much of how much it is needed, given the lifestyle and the ecology of the animal. It is a question of whether you need it for your survival, yes or no. Whereas, if you are a solitary hunter, like a cat or a tiger, then you get less of this kind of cooperation and attachment behavior.

3. What do you think economists can learn from working with primatologists and what can primatologists learn from economists?

There is a lot of mutual learning going on. Actually, behavioral economics, or experimental economics, is very much the sort of thing that we do: we look at how monkeys cooperate and how they share the payoffs, how they get upset when those payoffs are not well shared, and under what sorts of circumstances they develop reciprocity. These are all sorts of economic issues, related to benefits and costs.

I think we biologists have adopted a lot of the language from economics in that regard and economists are learning from the primate studies that many of the tendencies that they study are not uniquely human. These are very old tendencies that we have integrated in a moral context, but still, our psychology is still basically primate psychology. ■



Paul Seabright (left) with Frans de Waal (right)

BDE Note



BDE · TSE
École d'économie de Toulouse

The BDE (Bureau Des Étudiants) of the Toulouse School of Economics (TSE) is the School's Students Association.

Its main purpose is to establish a connection between students of each class, from undergraduates to master students, and to bring them together.

Therefore, TSE students have the chance to know their colleagues through several activities all over the academic year such as the "WEI" (Integration Weekend), Ski Weekend and the Afterworks, which occur at least once per month and culminate with the last and most glorious event, the Gala.

These activities are organized by a team gathered by TSE students (from Licence 3, Master 1 and Master 2), and those very same students elect them.

The team is all about creativity and multiculturalism. It has always been made up of some foreign students (who may or may not speak French as their mother tongue), especially due to Master students who do not necessarily speak French. This also explains why these events are held both in French and in English.

In addition, you should look for them if you (even from outside of the School) want some TSE goodies, for example mugs, sweatshirts, t-shirts, etc.

A special t-shirt with the picture of Jean Tirole has also been designed in order to celebrate the Nobel Prize awarded to him by the Sveriges Riksbank.

Here, you'll find some pictures of the most recent activities and the current BDE team. ■



This year, the BDE team's president is Florent Laval (M1), the general secretary Sarah Lacroix (M1), along the treasurer, Emilien Simioni (M1)



The WEI 2014 at the Camping Le Pré Lombard, organized by the former team with several sports activities and parties every single night



The first Afterwork organized by the new team as a welcome and to celebrate Mr. Tirole's Nobel Prize

Junior Etudes Note



The TSE Junior Études is the "Junior Entreprise" of Toulouse School of Economics. Its purpose is to undertake economic consultancy projects for two main types of clients: researchers and firms.

This association, entirely run by students from TSE, is managed by a bureau and involves four different departments: Project Management, Quality Audit, Business Development and Communication. Ideally, the association team comprises between 25 to 30 members to offer the best quality of work.

Starting this summer however, the association worked with a much smaller team, as several students went abroad to complete an internship or a gap year.

Therefore, with the beginning of the academic year in September, TSE Junior-Études started to recruit new voluntary students to join the old team for the upcoming year.

The recruitment process followed the steps below.

1. Informative Meetings: TSE Junior-Études invited all TSE students to join several detailed informative meetings during the course of the first week of September. Each department introduced its activity and objectives to almost 40 curious newcomers to give a more precise view on the work done by the active members.

2. Choice of Positions & Tests: Interested students were encouraged to apply for several available positions within the association and were matched according to their preferences. They were asked to submit a CV and a motivation letter with a statement of purpose. Moreover, candidates had to pass a technical test, based on the previous informative meetings, to ensure the selection of the most suitable candidates. However, since the association is open to all students of TSE, generally all the candidates are offered an interview, in order to express their motivation for joining the team.

3. Selection: After analyzing the candidates' test results and interviews, the summer team selected the most suitable applicants. This was obviously not the easiest part of the process since all the candidates showed a real motivation for joining the team.



4. Integration process: Once the candidates were selected, many events had to be organized in order to endorse the aim of the association: "Team spirit". These events included activities such as cocktail nights, Fresher's parties, integration days and Afterworks. From the start students former and new members worked as a homogeneous team. For the upcoming year, TSE Junior-Études has many objectives, some of which they have already begun to achieve such as the recruitment process. Still the

Communication Department is continuously working on the recruitment of new members to undertake the missions that are being negotiated by the Project Management Department. Moreover, the Business Development Department and the Department of Project Management has already started to improve the communication between Junior Études and potential clients and spread the association's presence in the entrepreneurship field. Furthermore, the Quality Audit Department is working continuously on the improvement of the global quality in the different processes defining the organization of the association. The association is also pursuing a regional partnership with all the Junior-Entreprises from Toulouse. They hope to achieve this goal in the following weeks.

An example of a mission that we have been working on recently is the following. As the international community is already thinking about post-oil usage, we have been asked to conduct field research and an economic analysis to build a report on electro mobility implementation in Toulouse. Specifically, we were thinking about strategies that could enhance electro mobility. Our project was done within the framework of a big experiment, which revealed some issues regarding the economic modeling of the project. On the one hand we designed a survey that would be submitted and analyzed, on the other hand we used some pricing methods to propose an efficient strategy on how to increase electro mobility. Our work was really appreciated by the client and much to the taste of the students involved in it (almost 20!). For the moment, most ongoing projects are about conducting economic analysis for start-ups that want to build their business on solid foundations. ■

The Lost Paradise of J. M. Keynes

By Marica Valente



“Is there any brother who would not rather be a scientist than a business man, and an artist rather than a scientist?”
(Keynes, *Science and Art*, 1909)

I would like to open this new section *No Economics In The Title* by talking about a very well-known protagonist of our last century, John Maynard Keynes, and his lost paradise, Arts’ Eden. I think this article can be one of our magazine’s most representative contribution to all those young economists whose actual or potential artistic spirit survived and persisted even in the study of Economics. Thus, for once, having *No Economics In The Title* is explicitly a gift for their resistance and personal fight day after day, maximization after maximization.

I imagine that the following question, or sensation, has crossed the mind of some of us at least for once: Did Economics historically try to ignore or even downgrade Arts as a secondary, negligible mean to improve our social welfare? Maybe in this case the etiquette “keynesian economist” could perfectly be attributed to those who have ever thought about that. In fact, our beloved predecessor J.M Keynes clearly answered and expressed his

opinion on this issue: “The exploitation and incidental destruction of the divine gift of the artist by prostituting it to the purposes of financial gain is one of the worst crime of the present-day capitalism” (*Art and the State*, 1936).

Perhaps Keynes’ drastic opposition to Bentham’s utilitarianism is not analyzed and considered enough by our economic community. Together with immorality, Keynes considered individualism as an unsustainable luxury that, ex post, represented “the worm which has been gnawing at the insides of modern civilization and is responsible for its present moral decay. It was the Benthamite calculus, based on an over-valuation of the economic criterion, which was destroying the quality of the popular ideals” (*My Early Beliefs*, 1938).

Indeed, as many of us would not expect, Keynes represented an active member and committed exponent of the British literal, philosophical and artistic movement called The Bloomsbury Group

which gathered together inspired and eminent intellectuals (of the caliber of e.g. Virginia Woolf) who were related by friendship and the wish to share experiences, in particular the artistic one. At that time they have been using Arts as a privileged mean to rebel against the Victorian society.

“The members of Bloomsbury were generally exceptional children of exceptional parents, who had seen their parents’ lives being strangled by unnecessary duties. In place of these, Bloomsbury substituted the ideal, not of doing what one liked, but of doing what was good. Cultural enjoyment was placed at the center of the good life” (Skidelsky, 1983). For them, and for Keynes above all, the precondition to achieve the real well-being is Arts’ promotion by the State. Just in this way, the State itself can sustain citizens’ effort in trying to reach the enjoyment of life, what Keynes considered the highest purpose of one’s life.

Keynes was an incredibly passionate art collector and 1910 he organized the first Post-Impressionist exhibition in London. Due to his incredible artistic faith and involvement – probably strengthened also by his relationship with the painter Duncan Grant – he decided to found the London Artists’ Association with the intent of promoting and improving Arts’ status in the UK.

Therefore, Keynes can be deservedly considered as an aesthete and an above-average admirer of beauty, human creativity and nature – without which no artistic inspiration could have ever reached and instilled such strong inexplicable emotions and divine pathos to human feelings. For sure he was *à la recherche d’un paradis perdu*. On a very much smaller scale, by inaugurating this new section we are following in his footsteps, searching for the same. ■

Cinema Under a Different Light

By Russell Black

Economics and films do not generally go well together. Films rely on the audience's willing suspension of disbelief, but economists find it hard to buy into the fiction. Not the "school for teenage magicians". That's fine. The issue is why Harry doesn't just shoot Voldemort with a gun? Economists are supposed to point out "but that's not subgame perfect!" or "that violates the model's assumptions." We at least expect the fictional characters to act rationally.

Not that we should. The director, because this is real life, faces an optimisation problem: the film must maximise the number of romcom tropes or action sequences by contriving irrational scenarios and characters. There is no fun in an action movie where the main character strenuously (rationally) avoids danger. Instead, they must implausibly dodge bullets and progress through a series of antagonists who get incrementally more threatening. The final boss always talks for just long enough so the trapped hero can escape. Still, it is a sign of lazy writing. Exactly like a micro-founded model, the most satisfying fiction has characters that act rationally to events that don't feel contrived.

There are some good examples. One film, that comes straight out of a macroeconomics textbook, is *Deux jours, une nuit* (Two Days, One Night). Marion Cotillard plays a worker who will get fired from her low-paying job – unless she persuades a majority of her sixteen colleagues forego a pay rise. We are taken on a tour of labour market frictions. At the bottom end of the income spectrum, many need the extra money desperately. Altruism tapers off, even for people who have known each other for a long time. The bosses, desperate not to involve their own salary, send the problem downwards. (And in the back of a well-informed audience's mind, the workplace – a Belgian solar panel factory – is very vulnerable to Chinese competition.) In all, a thorough dive into Hicks-Kaldor efficiency.

Films about finance and economics are usually not up to this standard. The

Wolf of Wall Street is as much about business economics as *Anchorman* or *Dodgeball*. But not Oliver Stone's *Wall Street*. Michael Douglas won an Oscar playing Gordon Gekko, investment banker extraordinaire. Gekko's strong belief in the efficient markets hypothesis drives the plot of unscrupulous deals and insider trading as he tries to beat the market. Released just after the Black Monday crash in 1987, the film is the defining picture of the 1980s free-market revolution. In an impassioned speech defending his takeover attempts (to shareholders of a company with inefficient management) Gekko exclaims "Greed, for lack of a better word, is good! Greed is right, greed works!" It is a shame that the film walks this back, and Stone opts to end with a banal morality play as Gekko's victims take formulaic revenge. We never truly see the message that we know (as economists) to resonate in real life: for actions in aggregate, consequences have nothing to do with motivation, and are often in complete opposition.



By far the best work of fiction for economists is a TV series. *The Wire* is widely regarded as the greatest television show ever made. It is a drama about the battle between citizens, criminal gangs and police in the city of Baltimore. As the series progresses we see the gang leaders' attitudes fluctuate between violence and pragmatism while the underworld economy evolves. Do they fight for

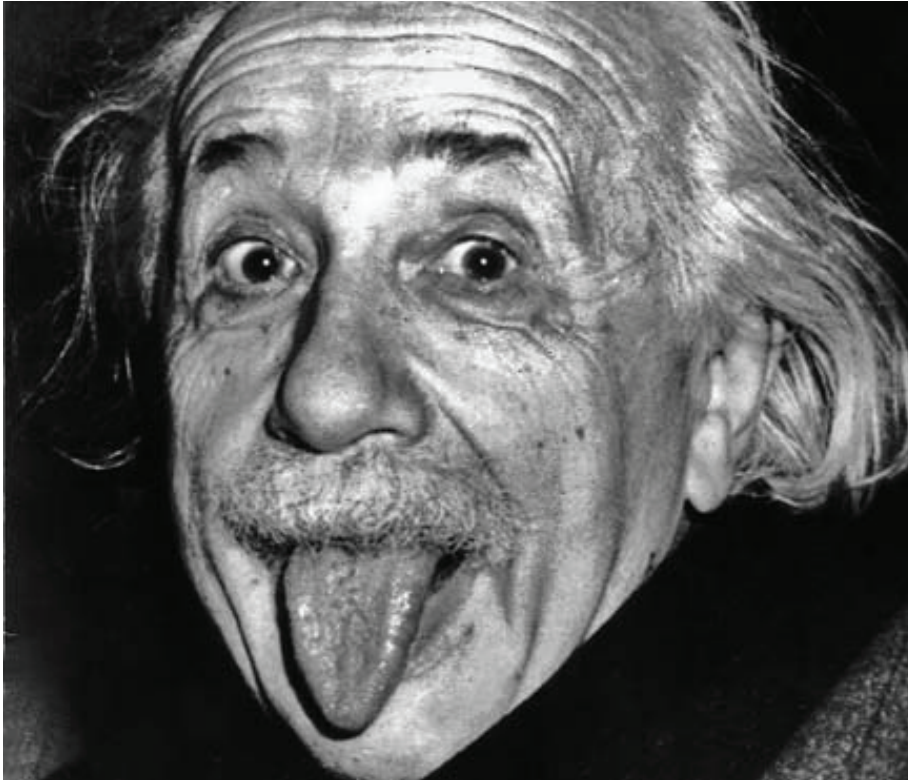
territory, or consolidate and cartelise the whole industry – but then won't not fighting signal weakness and encourage defection and/or entrants? Idris Elba plays a gang warlord who goes as far as to take evening courses in economics, and seeing him use microeconomics to argue over strategy with his underlings is one of the highlights of the series.

The Wire does full justice to the economics of drug crime in America, which by itself is an insanely interesting topic (e.g. in David Skarbek, "Governance & Prison Gangs", the only economics paper that reads like a tense thriller). But the show is more than that, an intense depiction of pretty much every economic issue from which we construct our society. We watch the gangs provide public goods in poor areas that were abandoned by the state, itself composed from an intricate balance of the political economy of the whole city. The police have little information and less resolve – surely it is easier to legalise the drug market and regulate the externalities, when the violence that gets out of hand. The whole world is

leaving Baltimore's rustbelt behind, and we are shown every consequence. In *The Wire* the main character is the city, Baltimore, more than any one person in it. It is a hyper-realistic world illustrated through the endless interactions of the supporting cast – and what more from a drama could economics want? ■

Einstein's Principle of Relativity

By Georgios Petropoulos



*In his latest flesh of genius Christopher Nolan made many spectacular claims. *Interstellar* takes you onto an unexpected convergence, owing heavily onto the world of physics. But what is relativity really about and should economists get their hands on it?*

In order to appreciate the contribution of the theory of relativity to the modern view of natural sciences and especially of physics and astronomy we should begin this journey (of the foundation of modern physics) by mentioning the scientific ideas and problems that this theory is related to. To start with, a wave is a disturbance that travels through a medium. For instance, water waves are disturbances traveling through water, while sound waves are disturbances traveling through air. After developing the idea that light consists of electromagnetic waves, James Clerk Maxwell supported the prevailing belief of many famous scientists of the nineteenth century. Space, empty of matter, is filled with a substance which is certainly the largest, and probably the most uniform body in the universe: the ether. As such, the ether is the medium through which

light waves and stellar objects are traveling. At the same time, the ether was the well-known fifth element of Aristotle's theory of world and nature. This theory describes the motions of objects of the universe while the rest of his four elements (Earth, Air, Fire and Water) describe the motions of object on Earth and its atmosphere. According to Aristotle, each object has the tendency to move to its natural positions and the observed movements of stellar objects were explained as movements of ether around the center of the universe, the immobile Earth.

Careful measurements have shown that light propagates with velocity $c=2.99 \times 10^8$ meters/sec. Assuming the ether to be stationary, we may say that light propagates relative to the ether with velocity c . If the Earth moves through

the ether with a velocity u without disturbing it, the velocity of light relative to the Earth should depend on the direction of light propagation. For example, the velocity of light relative to the Earth should be $c-u$ (minimum velocity) for a ray of light propagating in the same direction that the Earth is moving through ether, while, the velocity of light should be $c+u$ (maximum velocity) for the propagation in the opposite direction. Of course, the velocity of light takes values between those two limit cases if the light is not propagating parallel to Earth's movement through the ether.

Therefore, if scientists were able to observe such differences in the velocities of light propagating in different directions then they will have been able to provide an indirect proof of the existence of the ether. The most famous experiment that aimed to test the existence of the ether took place in 1887 by Albert Michelson (Nobel prize in Physics, 1907) and Edward Morley. In that experiment, apart from measuring the velocity of light that propagates in different directions, they also intended to determine the velocity of the Earth relative to the ether. Their experiment was repeated several times in different conditions. To their great astonishment, they found that within the high accuracy of their measurements, the velocity of light relative to the Earth was the same in all directions! This negative result led to extensive discussions among prominent scientists of that time. The main and crucial questions were: Is the world we inherited from Galileo Galilei and Isaac Newton the real one? Does the ether exist? And if not, how can we explain the movements of stellar objects? How is it possible for light waves to propagate without the existence of such a medium?

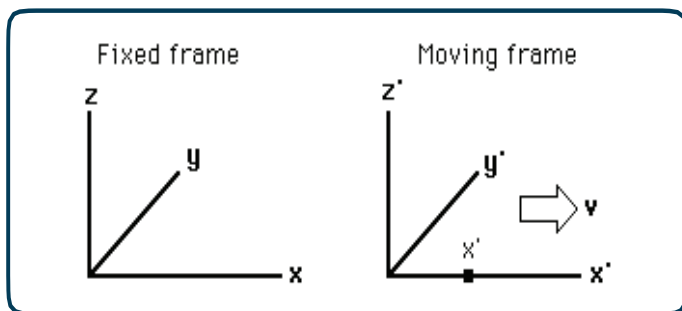
It was clear that the scientific community was puzzled; only few had anticipated this negative result. The strong supporters of the ether hypothesis tried to explain the result by assuming that the Earth drags the ether with it, as it drags the atmosphere. Therefore, close to the Earth's surface the ether should be

rest relative to the Earth and thus the velocity of the ether drag would manifest itself in other phenomena connected with light propagation, such as the change in the direction of light coming from stars as the Earth moves along its orbit. Despite the great effort, such phenomena were never observed, and as such this solution was abandoned.

1905 was the year that the foundations of modern physics were established. After eight years of discussions and debates about the existence of the ether, the speed of light and the movements of stellar objects a 26 years old scientist working as a teaching assistant in the Swiss Patent Office, postulated the most revolutionary theory of the previous century rejecting the notion of the ether and generalizing the Newton's theory of gravitation and mechanics.

Albert Einstein introduced the theory of relativity which is based on the following principle: **Light travels through a vacuum at a constant speed c that is independent of the motion of the light source.** So, regardless the direction of the propagation the velocity of light has a constant value and it does not depend on the relative movement of Earth. The laws of physics are the same for all inertial reference frames. In other words, the laws of physics are the same in all frames where the first Newton's law of motion is applicable (frames with uniform linear motion under constant velocity and zero acceleration).

After the postulation of his principle, Einstein extended the use of transformations developed by the Dutch astronomer Lorentz to study the relativistic effects. He introduced two reference frames, one with velocity equal to zero and one moving with constant velocity v with respect to the fixed frame at direction x. Hencerforth both satisfied the first law of Newton. Using the Cartesian system of coordinates he could write the transformation equations of the coordinates from the moving frame to the fixed one (the well-known Lorentz transformations):



$$x' = \frac{x - vt}{\sqrt{1 - \frac{v^2}{c^2}}}, \quad t' = \frac{t - \frac{vx}{c^2}}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$y' = y, \quad z' = z$$

Writing these in mathematical terms one realizes the following: if the test particle or object moves with constant velocity v that approaches the velocity of light c, some effects (relativistic effects) become important that are not present to the Newtonian theory.

One important effect of relativity is the **length contraction**: Consider an object that moves with velocity v with a respect to an observer A that is immobile (zero velocity) in direction x and an observer B that is moving together with the object.

Therefore, according to observer B the object is immobile. **The length of the object as measured by observer A will appear foreshortened in the direction of motion with respect to the length measured by observer B (proper length).** The amount of contraction can be calculated as following. If the length is measured by observer B and the length is measured by observer A, then the Lorentz transformations lead to:

$$L_B = \frac{x_2 - vt_2 - x_1 + vt_1}{\sqrt{1 - \frac{v^2}{c^2}}}$$

But since the two measurements are made simultaneously by observer A:

$$L_A = L_B \sqrt{1 - \frac{v^2}{c^2}}$$

The ratio v/c or the Lorentz factor as it is called is indicative of the importance of relativistic effects. The closer the velocity v to c is, the greater the ratio v/c is, and so the contraction is also greater.

Another important effect that proves the famous phrase "The time is relative" is the **time dilation**: Assume that each of the observers A and B (who continues moving with velocity v together with the object) have a perfectly accurate clock, clock A and B, respectively. Clock A will be seen to be dilated (run slower) with respect to clock B. If the time interval is measured by observer A and time is measured by clock B, then using again the Lorentz transformations we find that:

$$T_B = \frac{t_2 - \frac{vx_2}{c^2} - t_1 + \frac{vx_1}{c^2}}{\sqrt{1 - \frac{v^2}{c^2}}}$$

But since observer A makes her time measurement at the same location ($x_1 = x_2$), we conclude to:

$$T_B = \frac{T_A}{\sqrt{1 - \frac{v^2}{c^2}}}$$

The third famous effect of the principle of relativity is that **events that are simultaneous to one observer need not be simultaneous to another.** Whether or not two events are simultaneous depends upon your frame of reference. The time order of events that are close together in time but distant in space can be different in different frames.

Apart from the answers the theory of special relativity provides, it triggers further questions, something necessary for the scientific development. Some of those questions lead to paradoxes and discussions in order to explain them.

The most famous paradox related to special theory of relativity is the **"Twin Paradox"**: There are two twins, Emil and Rafael. Emil wants to make a family and live all his life in his hometown while Rafael is more adventurous. He wants to travel all over the world and the universe.

Emil should be the youngest one. So, different definition of reference frames leads to different results. But, who is right? The observer on the Earth or in the spacecraft? The scenario is complicated by the fact that Rafael must be accelerated up to traveling speed, turned around, and decelerated again



upon return to Earth. So the first law of Newton is not applicable to the moving frame and the special theory of relativity is not sufficient to explain this paradox as it focuses on reference frames with no acceleration. So, the twin paradox does not contradict Einstein's special relativity but incorporates extra elements that are absent from the theory.

The principle of relativity or better the theory of special relativity opened new horizons to research and explained many open questions of that time. It was a new theory that replaced the Newtonian theory and set the foundations of modern physics. It is the only theory eligible to describe high energetic particles and stellar objects with extremely high gravitational pressure like White dwarfs, Neutron stars and Black holes.

NASA offers Rafael to make an interstellar trip and he accepts with enthusiasm. Rafael leaves on a high speed space journey during which he travels at a large fraction of the speed of light while Emil stays behind, in his hometown. When Rafael returns back to Earth he is just 10 years older while Emil is 50 years older and has two children at the age of Rafael. Does the theory of relativity why Emil and Rafael have such a big age difference upon the return of Rafael back to Earth? If we consider as point of reference Emil's position, because of time dilation, time is running more slowly in the spacecraft as seen by the earthbound twin and the traveling twin will find that the earthbound twin will be older upon return from the journey.

The principle of relativity helped Einstein to understand better the interaction between mass, energy and gravity. 11 years after its postulation, in 1916, Einstein published the General Theory of Relativity which provides a modern description of gravitation and its properties. Einstein was awarded the Nobel Prize in physics in 1921 mostly for the explanation of photoelectric effect and not so much for his influential theory of relativity.

Can theory of relativity have real economic applications? Despite the fact that there are some efforts in the literature to introduce the theory of relativity into economic science there is no generally accepted economic framework.



The theory of relativity has not yet been used for the derivation of new, interesting and insightful results. But if we look behind the big picture and focus on the main message of this theory the theory of relativity may become relevant. The theory states that there is not an absolute truth, the beliefs of people depend on the reference frame they belong to, let it be geographically or ideologically. Probably Einstein's mathematical formulation of the four-vector analysis as shown by the Lorentz transformations will gain economic relevance in the future as relativity seems to be a main characteristic of our lives. ■

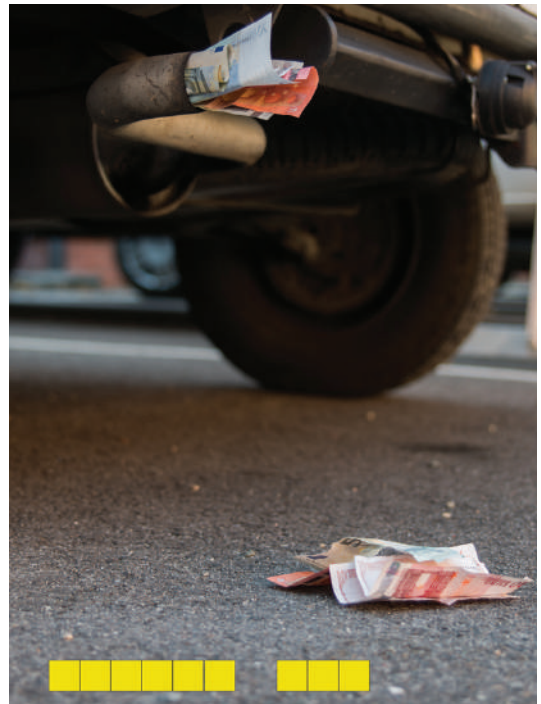
On the other hand, if we use as our reference frame that of Rafael, the moving frame is that of Earth, so, Earth is moving with velocity that approaches the speed of light while the spacecraft is in fixed position. So, according to time dilation,

Note: The material for this article was initially prepared to The Very Informal Seminar organized by the good friends and colleagues Emil Palikot and Rafael delVillar Ortiz Mena. I would like to thank them as well as Claire Galez, Elia Lapenta, Vicente Lagos, EvaRaiber and Yu Wen for their helpful comments and suggestions.

Picture Quiz

Can you guess these terms from the world of Environmental Economics?

Submit your four answers by February 1st to tseconomist.com and enter the draw to win one of two TSE sweatshirts!



Economic Jokes

The Light Bulb (revisited)

Q. How many Chicago economists does it take to change a lightbulb?

A. None. The darkness will cause the light bulb to change by itself.

Q. How many Keynesian economists?

A. 8, one to change the light bulb, and 7 to keep all other things being equal.

Q. And how many environmental economists?

A. Infinite. An endless discussion is the only way to make them converge on the need to change it.

Last Issue's Answers: 1. Pay as you go 2. Inflation 3. Great Depression 4. Taylor Rule

Share your favorite economic jokes with us!!!
Send them to: tseconomist@tse-fr.eu !

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