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Social animal and social interaction

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Chaim Fershtman*

Chaim Fershtman, professor at the Eitan Berglas School of Economics, Tel Aviv University, has been a TI research fellow since 2006. His research interests include industrial organisation and sociological aspects in economics.

Human beings are social animals. We are part of a group, a nation, a tribe or a family, and we define ourselves by such affiliations. Belonging to a group and caring about the opinions of the members of that group affects our choices, actions and behaviour. We care about what people think about us, and our standing and reputation in the community. Often these types of social goods are far more important to us than some of the consumer goods that we consume. One is not able to fully understand decision making without paying attention to the social environment in which decisions are made and the social consequences of those choices.

The recent wave of behavioural economics is rooted very much in the interface between Economics and Psychology. But it seems that recognizing the fact that human beings are social animals with extensive social interaction emphasizes the importance of combining sociology and economics as part of a more unified paradigm for economic analysis.

The difference between economics and sociology can be traced to their different paradigms regarding human behaviour: the difference between *Homo Economicus* and *Homo Sociologicus*. The main player in economic modelling is "*Homo Economicus*"—a rational decision maker with given preferences who chooses among different possible actions or bundles of goods. The freedom to choose is a cornerstone of economic analysis. "*Homo Sociologicus*," on the other hand, is a passive player whose behaviour is governed not by free choice but by following prescribed norms of behaviour, conventions, social customs and forces of inertia. There are norms that specify behaviour towards family members, norms that restrict the type of food we eat and norms that govern our social activity. There are norms that specify the ownership of goods, basic civil rights, fair behaviour, contribution to a common cause or the meaning of negotiation in good faith.

Integrating sociology and economics requires integrating "*Homo Economicus*" and "*Homo Sociologicus*". That is, we need a player who has free choice, is forward looking and maximizes his utility, but at the same time recognizes the relevant social norms and taboos. The freedom of choice allows this player to violate social norms and taboos—but at the cost of suffering social penalty. The second element that is required by the integration of economics and sociology is emphasizing social interaction as part of the economic paradigm.

Social norms are supported by informal social punishment. Members of the group change their behaviour towards people who violate the norm. But the punishment itself may be costly and may contradict self-interest. Therefore, often the social punishments themselves become social norms, and individuals who do not punish are condemned to be punished by society. The severity of the punishment may be endogenously determined by the social interaction between the different group members. At the same time, the willingness to follow the social norms and the number of group members that choose to violate them may shape the norms themselves. Social norms and taboos are therefore not a stable system. They keep changing and evolving over time. Often the evolution of these norms is affected by the behaviour and social interaction among the members of the society.

Clearly, the paradigm sketched above—one with rational decision makers who take into account social norms, and one that allows, at the same time, social norms to be shaped by the combined behaviour of individuals—is much more complex than the current mainstream paradigm. I believe, however, that this is our next challenge.
You recently received a grant from the European Research Council. For what kind of research do you think you’ll use this grant?

The proposal I wrote is on the interplay between industrial economics and transport economics. All too often, transport specialists study transport markets using a sort of two-layered approach in which the models implicitly assume that there is a government that controls a network used by atomistic individuals—essentially, they assume a market of perfect competition. In reality, there is very often market power in transport markets—and that can lead to surprising results. An example: Pigou showed in 1920 that when there is congestion, road users impose a negative externality on one another. The solution is that we should levy Pigouvian taxes equal to the marginal externality cost. Until very recently, many believed that this would also be an ideal way of dealing with traffic congestion at airports. It was only in 2001 that Jan Brueckner (University of California at Irvine) showed that the market power of these airlines provided them with the incentive to internalise the self-imposed part of the congestion externality. This means that the Pigouvian response would be overcharging for congestion. The optimal solution is then to correct the Pigouvian charge for the share of the market power of the airline. This has the interesting implication that the airline that has the bigger market share (and
There is an important element of the research project to study behaviour in terms of networks. Networks in aviation are not as fixed as they are in road transport. In the long run, the hub airport may even be replaced, which means that the network choice is an important strategic choice. One of the projects funded by the grant will explore competition between privately operated roads in networks, focusing on the optimal division of private operators on a road network. In a network market it is by no means certain that a system featuring more market power (fewer suppliers) is less efficient. This is because of a double-marginalisation type of mechanism: the same travellers will be charged by different private companies, so they will face a total charge above the optimal charge. Whereas parallel competition is usually good for economic efficiency, serial competition is not. This raises all sorts of questions on how to distribute private suppliers over a network.

Another topic that I have been studying in my PhD (and ever since) involves second-best policies. The topic remains interesting: having to do with both studying the theoretical benchmark policy and exploring what is possible under a more realistic but constrained set of instruments. The possibility of network-, price- and capacity choice by different groups of public and private operators presents a big challenge.

You mentioned market power as one of the reasons why you need to resort to second-best policies. Do you think that social pressures might present another reason?

Yes, that can definitely be one of the motivations for having second-best policies. Therefore the larger capacity for internalising the congestion (should face lower congestion charges at an airport. Sometime later, Eric Pels and I extended this model, taking into account the fact that if airlines have market power they have some degree of monopolistic pricing. In this case, the optimal charge may well be negative—so a traditional Pigouvian-based charge would be welfare reducing—and this is just a simple example, showing that taking into account the market structure in transport markets gives you different insights into the impact of policies.

It is argued that a downside of cancelling fixed costs is that people will buy more cars.

Yes, and it's true. As an economist you might wonder if that is a problem. Suppose that with your road tax you perfectly internalise the costs of the use of the road and parking places; there would then be no problem with more people consuming cars—as long as they use the cars in an optimal way, as induced by the externality charge. Such an outcome even adds to welfare, because more consumers benefit. That argument ignores, of course, the fact that there are also environmental costs associated with production of the vehicle—and that would provide a motive to maintain a tax on the purchase of the vehicle as well.

From an economic perspective, what would be the first-best solution in terms of congestion pricing?

For first-best, you would need to combine the ideas of Pigou with those of Vickrey. When you hear politicians talking about congestion and about road pricing, you have to realize that what they have in mind implicitly is a static model of traffic congestion—a bit in the Pigouvian tradition. Transport economists, however, try to emphasize the importance of having a dynamic view on traffic congestion—as developed by William Vickrey (who later got the Nobel prize). The Vickrey model showed that it is especially the variation of prices within the peak—not just between peak and off-peak—that is essential for the welfare gains from pricing policies. The fact that congestion charges should be differentiated over time—not just peak versus off-peak, but within the peak as well—has thus received insufficient attention in the debates in the Netherlands.

So there could be as many cars in the peak as there are now, but drivers would cause less congestion in that same time?

Yes. To understand why that is the case, you should think of a typical bottleneck. If you would stand next to the entrance of the bottleneck, you would observe a flow of traffic that in the beginning of the peak exceeds the capacity of the bottleneck, so that the queue is growing in

The airline that has the bigger market share ... should face lower congestion charges at an airport.
Could you give us some reasons why we might believe that road pricing will actually work?

You could start by looking at a number of sources. We have data on implementations abroad—for instance, in Singapore, London and Stockholm. There are also some modelling studies for the Netherlands. Additionally, some experiments in the Netherlands have used financial incentives to motivate commuters to avoid the peak—the difference being that rewards were given instead of taxes charged (but the underlying idea that the incentive is differentiated over time being, of course, the same). Another source is stated-preference studies, which show how people respond to different combinations of travel duration, travel moment and time-varying toll.

In order to set the optimal time-varying price, what kind of information would be needed?

The optimal time pattern of the toll should replicate the current time pattern of the value of travel delays. What you would first need to know is how the travel times develop over the morning peak. Nowadays, detectors in the highways produce fairly accurate information on travel times. Also, you would have to know the value of travel time, and that is something that we have studied extensively. For commuting, it is around 10 euros per hour.

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Do you still expect some substitution to public transport or carpooling?

I think that the extent of the substitution effects is overestimated most of the time. Current predictions are that vehicle kilometres will drop by 15% in the Netherlands, but that the number of public transport kilometres will rise by only 6% due to road pricing. Since the number of vehicle kilometres is about seven times as high as the number of public transport kilometres, you see that only a very small part of the traffic is shifted towards public transport. And that again has to do with people being more likely to adjust their time of travel, and perhaps also their frequency of travel (they might work at home more often), than to change mode. For example, experiments with free transport show that it attracts people that had been used to cycling or walking (as opposed to driving in a car) before, or those who made no trip at all. Another important reason why the effects are smaller than what is hoped for is that people for whom public transport is a viable alternative have already switched.

What I find alarming is that nowhere is it stated explicitly that the projects ... should pass some cost-benefit test.

Might an alternative to pricing traffic on the road then be, instead, to improve the public transport system?

Well, that would be a second-best policy. While it might have some merit—the idea that making the alternative as attractive as possible might solve road congestion—it must also be said that it would be a very expensive way of reducing traffic congestion, especially because the substitution is relatively low. One challenge in this respect is that in public transport you can have only one quality. Of course, there is first class and second class—but it’s difficult to think of a public transport system that would cater to the wishes and demands both of current car users and current public transport users. Moreover, you have the problem that travellers want to minimize the number of stopovers—and because you’re tied to a certain network, it will never be an optimal solution for everybody. But there are some gains anticipated for public transport improvements, because we can expect the Mohring effect to take place. This is the idea that if the demand for the public transport system increases, then individuals benefit because of the higher frequency and the denser networks. This could lead to an accumulative process whereby public transport might become more attractive—also to current road users.

Don’t you think that if you have the road pricing per kilometre, it would affect the decision of companies settling in the Netherlands, since it increases their transportation costs and the commuting costs of their employees?

My guess is that it will attract firms. As you might expect, business travellers and freight travel have the highest values of time. So the trade-off between higher road taxes and less congestion is especially favourable for business: they should be the primary beneficiaries of this policy. In the longer run you can expect spatial reordering of location patterns. Some firms will settle outside the more congested areas, and others (those with a higher value of time) will move in. But when this reordering is induced by optimal policies it will probably be a welfare-improving reordering—and this will represent a spatial reordering that I think is part of the objectives of road pricing rather than part of the problems arising from the policy.

When the road pricing system is implemented in the Netherlands, what do you think the revenues will be used for?

Currently, there is a political commitment to create an infrastructure fund where all the revenues are to be returned to the transport system. The idea that the revenues are earmarked is something that, from an economic viewpoint, you could question. If this is what is needed to buy enough public or political acceptance then you need to pay the price, but what I find alarming is that nowhere is it stated explicitly that the projects financed from these revenues should pass some cost-benefit test. This implies running the risk of raising money and turning it into projects that are socially not justified. A solution could be to have preferential treatment for infrastructure projects—and if none of the proposed infrastructure projects pass the cost-benefit test the money could go to different fields of investment. But that is politically less attractive than it is economically.

Notes


One of the main themes in your research has been the role of social interactions in economics. Could you tell us something about this?

At the start of my PhD, I initially planned to do research on oligopoly tobacco markets in the Czech Republic. But my supervisor, Peter Kooreman, had another proposal on social interactions in economics that we both considered more exciting. There was no blueprint for the project, so it evolved over time. We used a dataset on the consumption behavior of children at high school to examine whether the probability of a pupil smoking was influenced by the number of classmates who smoked. It did, and my interest for doing empirical work had been aroused.

I then did a study on charitable giving in churches, a field experiment in which I randomly changed the observability of donations. This project was a real eye-opener concerning the willingness of people to participate. If you have a good idea and a good strategy, people are often willing to cooperate. There will always be practical complications, though. In the field experiment I just mentioned, I had to order 150 identical baskets (which is more difficult than it might seem) and weave purple string through half of them to prevent mixing up of treatments.
Hinloopen and I studied leniency programs in the lab. In real life you only see cartels that get caught; in the lab, however, we could observe all communication between firms.

In the end, though, you want to go outside the lab to see whether the results hold in practice. If you study abstract game theoretical models or things like risk aversion, then the lab is excellent. For more policy-oriented questions— like whether leniency programs have an effect on cartel formation, people will want to know about the behavior of firms in real life.

What kind of policy advice comes from your work? Does your work suggest more room for government intervention?

My research has shown me that social interactions are quite local phenomena: they operate not so much at the city level, but much more at the level of small neighborhoods or within school classes. Peer effects are important for policy. If you help one person to quit smoking you not only affect that individual, but you also have a positive effect on the smoking behavior of his or her peers, which is good news.

Do you think a scientist has an obligation to do policy-relevant research?

While I do like to carry out policy-relevant research, I must say that I value the fact that researchers can determine their own research agenda. In the competition for NWO grants, for example, you are more likely to be successful if you do research on a timely issue— like, at the moment, the financial crisis. This makes sense because the crisis has led to new questions. This can, however, induce a drive to propose things that are fancy, but that may not have a lasting impact on further research and policy. I think that the system we have— with peer-reviewed journals— helps ensure that scientists answer relevant questions. If you are able to publish in the top journals, you should also be able to get a grant.

On to your new position as DGS: What motivated you to take this position?

I’m not a TI alumnus, so my first encounters with TI were from the outside. I met TI students at a NAKE course and heard about their having to cover the entire Mas-Colell in two blocks, so I got the impression that it was a tough program. I also think it’s very good to have the combined forces of three departments. I admire the program and the institute, and I feel honored to lend my services to it. In my five years at UvA, I’ve spent most of my time on teaching and research. I feel it is time to develop other skills, and to get more involved in the organization of the department.

What attracts you to field experiments?

Field experiments are a great way to identify social interactions as well as other economic phenomena. Members in a group might exhibit similar behavior because they influence each other or because people self-select into the group. With a random allocation of treatments you avoid the selection problem.

In performing field experiments, I also found that one is rather quickly considered to be an expert. After doing the study with churches, I got a phone call from a producer of debit terminals who had heard about my work. This company, CCV, wanted to do some research—and this led to another paper. My basic approach is: go wherever there are opportunities to collect interesting data.

Your research covers a range of topics. Does this mean that you are more attached to the research method than to the particular topic?

I like theory, but prefer testable theories that I can test myself. I started in applied micro, and now I am in the IO group— so it makes also sense to do research in this area. But it is difficult to get the right data. In consumer research, you can randomly pick 2000 consumers out of a large population. The number of firms is more limited, and information is often proprietary. To some extent, the lab offers a solution. Jeroen Tinbergen
I think the job suits me for a couple of reasons. Since I’m not that far away from my own PhD years, I hope to be accessible to the students. I like the combination of managerial tasks and research that is explicitly stated in the job description.

The last two DGS of the economics and finance track both left before the end of their terms. Are you concerned that your duties will take too much time away from your research?

Of course I’ve thought about it, but I really aim to complete the full five years. One advantage may be that I’m relatively young and fresh. You do have to be careful not to spend all your time on TI and none on research. I had a nice talk with Jaap [Abbring] about this, and he seemed to manage rather well, during his time as DGS, to strike a good balance. At the moment, things are busy— with applications, courses running and the transition of second-year students to the PhD positions. But we’ll see.

One of the challenges for TI is the integration of the Duisenberg School. What are your thoughts on this?

My predecessors have already put a lot of work into integration. While it still needs some fine-tuning, things are running. Many research schools have a finance- and an economics track, and I think that’s a good thing. One thing I’ve heard is that the class size at TI has gotten bigger. That is something to keep an eye on in the future.

Are there any particular priorities you have for the program?

It’s my first week in office, so it’s safe to say that I will probably still come across a few things I would like to change. One of the nice things about TI is that we have small cohorts. You study together, work together and spend time together. If the class size becomes too large you lose that kind of dynamic. I would really like to keep this kind of atmosphere—where people feel privileged to be part of the program.

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1 At the time of the interview the move of TI had not yet been officially announced.

I am very open to the criticism that sometimes TI is not very visible to students from the participating departments. What could be done is to give master students the opportunity to follow a couple of courses at TI. Since class sizes will then certainly play a role, we will have to keep an eye on the developments. My sense, from looking at the applications, is that at UvA things are going well. We get a decent number of applications from UvA students who want to follow a research master at the TI, but we see fewer applications from VU and Rotterdam. One of the things I would really like is to be more visible to Erasmus and VU students.

Do you think that has something to do with TI’s location? Also, there has been talk that TI might move to the ZuidAs.1

Yes, and I think it is going to happen. TI is going to move. In principle, I am quite neutral about that, but if you move you do uproot the local dynamics. This is on my radar. Small things can make a big difference, and I’ll do all I can to arrange having a kitchen, for example, along with a comfortable atmosphere at the new location.

Some things will be different. Access by public transport is good, but you don’t have the small cafés that you have here across the street. That will be hard to replicate.

Logistically, things will also be different. At present, when there’s a seminar, 20 people from UvA will walk a few hundred meters to attend. That is very nice for the MPhil students because they come in contact with the TI fellows—and I really hope this will be the same at the new location. The move also creates some opportunities, because I’ve heard that the seminar rooms are somewhat bigger than they are here. I’m open to all suggestions that students and fellows may have about how to organize all of these things.

Another thing is the placement of the students. Ideally, MPhil students should be able to choose freely to which of the three departments they go for their PhD; this is one of the basic principles and attractions of the TI MPhil program. Having said that, I must admit that there is sometimes a mismatch with the number of positions available at each university. This year, for example, UvA is experiencing financial difficulties and at the moment, it is not clear whether this will have consequences for the transfer of MPhil students to PhD positions at UvA. So it takes a continual effort to optimally match the students with their department of choice.
To what extent do you think the TI research master is in competition with the other masters programs at the universities that participate in TI? Might a professor feel unhappy about sending a student to TI if the preference of a student to do research in a particular field is clear?

Of course, as DGS I would really dislike it if my colleagues at the participating departments felt that they had to send their students to TI. On the contrary, sending students with a strong interest in doing academic research to TI should be seen as the best option, independent of the background of the students.

This is a fundamental question, because TI was founded on the idea that bundling forces is good. TI should not be seen as separate from the participating departments, but as a complement to them. Most of the students enrolled in these different masters programs will move into employment outside academia, while the TI MPhil is really meant to prepare a student for an academic career.

Job market placement is also an area that could benefit from the bundling of forces that is available through TI. At some point I will probably organize a workshop on preparing for the US job market. It is really important—not only for the departments, but also for TI and the students involved, that students are able to move on to the best career that is within their reach. It is really too bad if you are not prepared in an optimal way.

Are you happy about the content of the program?

A couple of things changed last year—the new finance track, for example. I’m wary, though, of changing too many things too often. In general, the first year of the program should teach what people need to know in their future careers. Field courses should give excellent TI fellows the room to teach a course related to their research. I will do my utmost to monitor field courses, and may now and then replace a field course that is not popular with one by a promising young star who has been hired by one of the faculties. The challenge in the second year is to offer a range of field courses that are on the border of what is being done in research.

This year there are some elective courses in the first year, so I’m going to evaluate how that works out. When I asked a few students what they thought, some of them said they liked having more options from which to choose. Other students like it less, however, so it’s something I have to evaluate. Don’t expect major changes in the first-year curriculum, though. Doing Mas-Colell is still good.

In December 2010, Tinbergen Institute’s Amsterdam office will move to the first floor of the prestigious Symphony building, located at the new financial heart of Amsterdam: the “Zuidas” business district. The move is related to the recently formalized cooperation between TI and the Duisenberg School of Finance (DSF), which was announced in a press release on March 5th. Through this alliance—in which TI contributes the scientific expertise of its fellows in International and Financial Markets, Macroeconomics and Econometrics, and where DSF’s focus will be on an International Behavioural Finance Network of experts and regulators—DSF and TI aim “to strengthen the Dutch financial research capability, and to attract international top researchers to the Netherlands.” For some time, now, TI and DSF have been collaborating on the research master (MPhil) and PhD programme in Finance.

This sums up the theory behind the new partnership. An excellent way to underline their commitment, and to facilitate day-to-day cooperation, suggested itself in a move of both institutes to a new location. Herman van Dijk, director of TI, aims at establishing “a lively academic atmosphere for all persons who will work at the Symphony building.”

In an interview appearing in this issue of TI Magazine, Adriaan Soetevent, the new DGS for the Economics track, mentioned some very practical considerations surrounding the move, like making sure that a kitchen is installed, and doing all he can to make the atmosphere in the new location as comfortable as it has always been at the current offices—although he does admit that the cafés across the street from the current location will be hard to replicate. Herman van Dijk believes that the new building will be easily reachable for fellows from Amsterdam and Rotterdam, for MPhil and PhD students, and for international guests.

The new venue, which can accommodate up to 120 persons for MPhil courses, TI lectures, workshops and conferences, will also lend itself nicely to the development of a programme for a TI summer school.

December 2010

New offices for TI Amsterdam

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Like many Dutch economists, I was trained as an econometrician. In fact, I did my Master’s degree in one of the last cohorts that had to follow a five-and-a-half year program. So when I started my PhD training with Frans van Winden in 1984, I had a solid technical background. My thesis was basically an applied econometric analysis of voter behavior. Although the primary goal was to understand voter behavior, a lot of the effort (and pleasure) was invested in techniques. In the first couple of years after my thesis, this basic framework continued. Looking back, I recall how happy Hans van Ophem and I were when we developed an alternative to the nested logit model—and especially that our solution involved using complex number theory to solve an integral. Of course, it didn’t really matter much to us that the nested logit model itself could explain behavior as well as our model could: no one really needed an alternative.

Then, I started to grow up. At the beginning of my career (in Leiden), I grew more interested in behavior itself. I began to see economics as a behavioral science—and I wanted increasingly to focus on studying behavior without too many technical distractions. While I still believe that complicated econometric techniques are necessary and useful in disentangling complex datasets (even a simple problem like causality often requires extremely complicated methods if one wants to address it using naturally occurring data), it became obvious to me that focusing on the collection of data on how people behave might be a crucial step in obtaining a better understanding of this behavior. The comparison with other academic fields is easily made. If a physicist wants to study gravity, her first inclination is not to collect data on various naturally falling objects and then to apply a statistical analysis to these data. Instead, she may decide to climb up a tower, drop two balls and carefully monitor their path. Similarly, a psychologist interested in the effect of noise on sleeping patterns will prefer to monitor carefully the sleep of a particular group of people while manipulating the noise surrounding them—rather than collecting data on how people have slept and what noises occurred in their proximity. Economists started to use this more controlled data collection in the late 1950s. They dubbed this field Experimental Economics, a discipline that started to bloom around 1990.

With all this in mind, I was pleased that Frans van Winden included me in his plans to import Experimental Economics into the Netherlands. With the help of a huge NWO grant we founded the Center for Research in
Experimental Economics and political Decision-making (CREED) at the UvA in 1991. The rest is history.

My first application of the experimental method was an extension of the topic of my thesis, voter behavior. Voter turnout is a phenomenon that is hard to understand from the starting point of traditional economic ideas about behavior. Regardless of whether a person’s goal is selfish (‘choose the party that best serves my interests’) or altruistic (‘vote to preserve democracy’), rational choice theorists find it hard to explain why anyone would think their vote matters in a situation where the probability of making a difference is extremely small. This also holds if one takes into account the strategic interaction inherent in voting (if no one else votes, my vote is pivotal with probability 1). For this purpose, one can model the turnout decision as a participation game (like Palfrey and Rosenthal did in 1983). A participation game allocates players to two distinct groups. Each player individually decides whether or not to ‘participate’, which is a costly action. Each member of the group with the higher participation—irrespective of the individual participation decision—obtains the same positive payoff (larger than the costs of participation). Except for special cases, the Nash equilibria of these games predict low turnout, however—even for small electorates. Although we cannot organize large-scale elections in the laboratory, we can test the model’s predictions for small groups. Joep Sonnemans (Ti fellow at CREED) and I did exactly this in two papers published in 1996. These show that even in small electorates, voter behavior cannot be captured in this purely rational choice framework.

Since then, I have been doing experimental work on a wide variety of topics— including the organization of electricity wholesale markets, worker recruitment, auctions, the evolution of cooperative behavior amongst humans, and the causes and effects of using contract audits. While only a few of my papers explore the political economics of voting, they do constitute a recurring theme. It is this theme that I would like to illustrate here.

With Jens Großé (Ti alumnus 2006, now at Florida State University) I worked on further elaborations of the participation games. Simultaneously, Goeree and Holt (2005) and Levine and Palfrey (2007) were thinking about these issues. Goeree and Holt show that the results that Sonnemans and I had published ten years earlier are predicted by the so-called Quantal Response Equilibrium (QRE). QRE is an equilibrium concept developed by McKelvey and Palfrey (1995). It allows for bounded rationality by adding noise to individual decisions. This noise decreases as the stakes rise. While Goeree and Holt show that QRE predicts well for small laboratory electorates, Levine and Palfrey extrapolate the analysis and find equilibrium levels of voter turnout that are close to those observed in large-scale national elections.

Jens and I followed a different path. Our interest lies in explaining turnout differences—and specifically the role that information plays. Großé and Schram (2006) investigate how information about another voter’s turnout decision affects a voter’s choice. We create an environment in which half of the voters can decide to vote early on (but can also choose to postpone their decision). The other half decides late, and each gets to hear the decision of one other voter—unless this other voter has postponed her decision. We call this ‘Neighborhood Information Exchange (NIE)’.

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Political (voter) choice is an area in which behavior is at the same time complex and important. Also, many people make this kind of decision quite consciously. Field data are often messy and untrustworthy. For example, if you ask people the day after an election whether or not they voted, reported turnout is often closer to 100% than to the actual turnout. The laboratory allows us to observe this behavior in detail in a controlled environment, just like the physicist observing the two balls she dropped. And just as the physicists needs to take into account many other factors before she can determine how the forces of gravity can be overcome, there are many steps needed before our understanding of fundamental aspects can be used to completely describe voter behavior in large-scale elections. This observation does not in any way diminish the importance of laboratory observations for understanding this behavior, however—and that is why I find laboratory studies, in general, and the art of designing economic experiments, in particular, so fascinating.

References


Letters from Alumni

life after the PhD thesis defense

De Nederlandsche Bank
Chen Zhou

It seems a bit unusual to be writing a “letter from an alumnus” after being an alumnus for less than two years. This is comparable to another situation a few years ago when I wrote down some impressions for a piece in the TI information brochure during the second year of my PhD. Back then, I remember writing something to the effect that I felt I was standing somewhere in-between mathematics and economics. It would have been difficult then to imagine where I am now: working as a central banker at the Dutch Central Bank (DNB). In a sense, I feel I am still operating somewhere in-between being a mathematician and an economist, but now I would perhaps add another corner—being a central banker—to make it a stable triangle of roles.

My work at DNB has been particularly interesting, since I started working there in mid-2008. We researchers often feel that we are hiding somewhat at the edge of the real issue: dealing with the financial crisis. Nevertheless, quite a substantial proportion of research activities within DNB (and also other central banks, of course) have quickly steered course towards issues related to the financial crisis. This is quite different from research in academia: central bank research is more demand driven.

Luckily, my own research topic was focused on financial stability even before the crisis started. It is, in fact, right at the centre of interest. I still remember the time that I presented my working paper internally; since the title “Are banks too big to fail?” sounds quite hot, quite a number of policy makers turned out for the presentation. This is another way that research at the central bank differs from that in academia: fresh research output can immediately make an impact on the policy side.

My TI background is quite helpful for my work at DNB. DNB is quite close to TI—not only in a geographical sense (about a ten-minute walk from TI Amsterdam), but also in many other aspects. For instance, evaluation of my research at DNB is based on publications in DNB-approved journals; the DNB list resembles quite closely the one TI uses for TI fellow evaluation. Life as a researcher looks quite similar in the two institutions, which also gave me a smooth transition from TI graduate student to my DNB position.

Having said all this, I cannot deny that something seemed to be missing. Being located now so close to TI Amsterdam, I found myself missing the other part of TI, the Rotterdam branch, where I had “grown up” to be an independent researcher. Therefore, at the end of 2009 I applied for a EUR fellowship, seeking a closer connection with Erasmus. Having now been granted the fellowship, I currently enjoy more flexibility in carrying out research from both the demand-driven side (research questions related to central banking) and the supply-driven side (research questions that match my personal interests). With this flexibility, I feel I am better balanced—further stabilizing the triangle of roles that I am playing.

In all, TI doesn’t ever seem to be very far away from me—even after graduation. Not only did TI help me take the step from doing a PhD to my current career, but also my experience during my years at TI will always provide inspiration for my further steps.
Job search and academic achievement

The final stage of education is a period during which students not only try to progress academically, but also start considering their career opportunities and looking for work. During this period, the students face a trade-off between studying and getting higher grades and allocating time to search for jobs. This issue is of importance in the Netherlands, as both politicians and university administration offices suggest that students devote just enough effort to pass courses, rather than having the ambition to get the highest grades possible. This paper focuses on a dataset from a survey of a large number of individuals who completed their undergraduate education in economics, business, Dutch law and psychology in the Netherlands. A job-search model is developed to explain the labour market decisions of these individuals just after completing their education and to study the interdependency between labour market transitions, academic achievement and wages. The students’ responses are investigated for two policy interventions: namely, changes in unemployment compensation and the provision of financial rewards for good academic achievements.

It is shown that, conditional on graduating, the returns to academic performance are very low. This finding explains that study effort among college students in the Netherlands is low (Leuven et al. 2009). It is also shown that macroeconomic conditions, measured by Gross Domestic Product (GDP) growth and the unemployment rate, have strong effects on the conditions that new graduates face in the labour market. During recessions, average wage offers for new graduates are significantly lower. In particular, a 1 percentage-point decrease in the unemployment rate is found to increase wage offers by around 3 percent. Despite the changes in wage offers, the job-search effort by new graduates is found to be unaffected by recessions. It is argued that lower wage offers during recessions do not change the job-search effort, since the alternative to getting a job (i.e. unemployment compensation) is quite low. Finally, simulations are used to analyse the effects of two policy instruments. The first policy under consideration is the promise of financial rewards for graduating with high degrees. They find that financial rewards have a considerable influence on the study behaviour, and hence on grades. Second under consideration is the effect of entitlement to unemployment benefits. Results suggest that changing students’ job-search behaviour is much more difficult. Both the employment rate at graduation and the average wage in the first job are scarcely affected by changing entitlement to unemployment benefits.

References

Retrieving unobserved consideration sets from household panel data

Households visiting supermarkets have to decide which groceries to buy. Once they have made their decision to purchase in a product category they then must choose a particular brand/size combination (brand hereafter). Brand-choice models in marketing are usually based on the random utility framework resulting in conditional logit/probit models. The choice options in these discrete choice models are all brands available in the store. It is, however, more plausible that households do not consider buying all brands, but that they have a selected set of brands from which they choose. This selected set is usually called a choice set or a consideration set. The paper uses the concept of consideration sets to analyse brand choices of households based on household scanner panel data. The main problem is that consideration sets are not observed. Another problem is that the number of possible consideration sets can be quite large (e.g. for six brands, there are already 63 possible consideration sets). The paper shows how to infer on consideration sets using household scanner panel datasets—even if the number of brands is large. Non-price promotional activities such as feature and display and shelf-space are usually included in the logit/probit model to explain brand choice. It is questionable, however, whether such variables will provide extra utility to households. The paper argues that non-price promotions and shelf space will increase the probability that a household considers a brand. This idea is then used to identify the unobserved consideration sets of households. The proposed solution is validated using an experimental dataset. The results show that taking account of consideration sets leads to different estimates of the effect of promotions on brand choice.

The cyclical behaviour of debt and equity finance

It is important to know how firm financing varies over the business cycle, since a decline in the amount of funds that firms raise during an economic downturn is likely to reduce firm investment and the ability to continue operations—which in turn would worsen the recession. The literature often focuses solely on debt finance. It is important, however, to include equity finance, because Fama and French (2005) document that firms frequently issue equity—and equity issues are quantitatively important. Existing theories on firm financing imply procyclicality
of total firm financing, but either debt- or equity issuance could be countercyclical, due to substitution between these two forms of financing. This paper sheds light on these different theories of firm financing by documenting the cyclical behavior of both debt- and equity issuance. Existing studies rely on aggregate data, and their results contradict each other. This paper documents the fact that the use of aggregate data gives a misleading picture of the cyclicality of debt- and equity issuance at the firm level, because the aggregate data is strongly influenced by a small subset of very large firms. By sorting firms into size-based portfolios, the study provides a set of empirical facts that is much more relevant in the evaluation of different theories of firm financing and their implications for the business cycle. The findings suggest, in particular, that both debt- and equity issuance by listed US firms are procyclical—as long as the largest firms are excluded. Moreover, the procyclicality of equity issuance depends on firm size: the procyclicality is stronger for the smaller firms. Another important finding is that firms safeguard their investment during economic downturns by shedding financial assets.

References


Bank ownership and financial stability
The state greatly influences banking, through either direct ownership or regulation of private banks. The effects of such state influence pose important questions about product market competition, the incidence of banking crises, and efficiency in the banking sector. This article seeks to explain the assignment of bank control as a political choice, in order to understand its effect on access to finance and stability. The paper proposes a novel political economy model to explain the politician’s decision on bank control. The results indicate that the politician prefers state control when accountability is low, as it allows them to capture more rents from limited entry. As accountability increases the politician attaches greater weight to the social costs of default, so that risk-taking by state banks decreases. Because state banks are less efficient, at higher levels of accountability there is a shift to private control. Importantly, after privatisation, banking crises become more likely and access to finance may narrow rather than broaden. As such privatisation endogenously occurs at an intermediate level of accountability, the newly privatised banks that emerge are vulnerable to capture by special interests. The resulting captured banks limit lending and take excessive risk, as they do not internalise the social costs of default. As accountability rises further, special interests lose grip, the ownership of private banks broadens and the politician leaves more rents to private banks to discourage risk-taking. In a very recent paper, Morck, Yavuz and Yeung (2009) show that family banks provide narrower finance and exhibit greater instability than either state- or diffusely held private banks. In line with this theory, the current paper shows that state banks dominate in low-accountability countries, family (or captured) banks in intermediate countries, and diffusely held banks in high-accountability countries.

References

By Enrico Perotti (UvA & CEPR) and Marcel Vorage (UvA), Bank ownership and financial stability TI 2010-022/2

Terrorist targeting, information and secret coalitions
State-terrorist alliances have been a central feature of modern terrorism since the late 1960s. For terrorists, state sponsorship is an important factor, offering a source of material- and financial aid, diplomatic cover, and often a comparatively secure environment from which to prepare and launch their operations. In the setting of secret coalitions, terrorist groups are rarely more than a political nuisance. Because of the difficulty of responding to terrorist actions directly, many targets of attack are tempted to respond to these actions indirectly by threatening the terrorists’ state sponsor(s). Hence, the sponsoring state has an incentive to hide the specific nature, and sometimes even the existence, of its relationship with the terrorist group. For example, after some rocket launchers that Sweden had sold to the Venezuelan government appeared in FARC hands, Chavez’s justice minister “told state television that the case of the rocket launchers appears ‘a cheap film of the U.S. government’.” (NYTimes, 27 July 2009). The expected effectiveness of any policy aiming to threaten the terrorists’ state sponsor depends, among other things, on whether there actually is a relationship between the state and the terrorists. Should such a sponsoring relationship exist, the success of the target in carrying out such a policy depends on how important the alliance is to the terrorist group. Especially if the terrorist group can exist without the supporting state, any attempt to target the group through the sponsor state fails. The expected success of such a policy, in short, depends on how confident the retaliator is that the relationship between the sponsoring state and its proxy is actually what it seems. Addressing this important problem in counter-terrorism policy using a game-theory setting of secret coalitions, this paper considers a game played by a state sponsor of terrorism, a terrorist group, and the target of terrorist attacks. Since the sponsoring state wishes to see as much damage inflicted on the target of attack as possible, but wishes to avoid retaliation, it prefers a secret coalition with the terrorist group. The target of attack, on the other hand, wants to end the terrorist attacks and considers the option of retaliating against the sponsor state. There is a penalty, however, if the target state retaliates against a state that is not supporting terrorist operations: even if the target is aware of this relationship, it will be necessary to convince third parties that the relationship actually exists. The paper approaches the problem by introducing an “evidence” variable in a
dynamic setting. It is shown that the interplay of different strategic- and non-strategic effects boils down to three qualitatively different scenarios, which are determined by key parameters. Based on this result, two alternative instruments of retaliation are identified whereby targets can resist terrorist activities. First, assuming that the target is able to change some parameters by monetary investments, the paper provides an economic analysis of how to invest optimally in order to make the sponsor lose incentives to support the terrorist group. Second, the study proposes changing the structure of the game. Here, the key insight is that the target country can make a unilateral statement as to its strategy. The sponsor cannot do so, as it claims, in fact, that there is no cooperation with terrorist groups. While the discussion in this article is motivated by an important problem in contemporary counter-terrorism policy, it applies more generally to the study of secret coalitions.

By Maurice Koster (UvA), Ines Lindner (VU), Gordon McCormick (Naval Postgraduate School) and Guillermo Owen (Naval Postgraduate School),

**Tainted food, low-quality products and trade**

Media reports around the world abound with examples of malpractice in the daily running of international trade. Particularly alarming have been headlines alerting consumers to safety issues of imported products. Consider, for example, the recent revelation that some unscrupulous companies in China had routinely added melamine to milk to artificially boost protein readings in quality tests. Though imports from China have drawn the most criticism, producers in other developing nations violate basic food safety standards as well (Mexican cantaloupe, Indian relishes, etc.). As more goods from distant locations are increasingly traded internationally, it is important to look at the determinants of the deviant behaviour of foreign firms in terms of product quality. An important factor affecting firms’ behaviour is consumer preference for domestically made products over imported goods, especially when it comes to food. Consumers in richer countries discount goods produced abroad—all the more so goods coming from developing countries such as China and India. Thus, goods with the same attributes become differentiated by their countries of origin and are priced differently. Given this, various governments and consumer organizations of nations relying on food imports have repeatedly put forward the view that the process of further globalization should be halted. Central to the issue is the popular conjecture that the global food crisis calls for more restrictions on international trade in order to increase consumption of local products. This paper examines the theoretical premises of such conjecture in a model of quality choice, with international trade involving tainted food and other low-quality products. Of particular interest are the conditions under which foreign exporters have incentives to produce tainted goods. In addition, several other questions are raised: (i) Does globalisation, via freer trade, lower product safety? (ii) How does a firm’s strategic behaviour (such as image building and sabotage) affect rivals’ export quality? (iii) And ultimately, how is consumer welfare affected? The paper first finds that for a large class of environments, free trade is the trading system that conveys the highest incentives to produce non-tainted high-quality goods by foreign exporters. Free trade, however, cannot prevent the export of tainted products, and the conditions under which tainting can arise become more easily satisfied if the marginal cost of high-quality production increases or if errors of testing product quality matter. The paper also examines cases of image-building investment and sabotage of rivals, and finds that a tariff in either case tends to exacerbate import tainting. Finally, we conclude that the effects of product quality on welfare cannot be generalized. Under certain conditions—although it is not desirable—tainted products from abroad can even be welfare improving.

By Jean Marie Viaene (EUR, CESifo) and Laixun Zhao (Kobe University),

**Competition and educational quality: Evidence from the Netherlands**

The literature abounds with discussions on whether competition between schools increases the quality of educational outcomes. Positive effects on educational outcomes can occur if students choose schools with higher quality levels. This increases the incentives for schools to invest in the quality of the primary process to improve educational outcomes. From a theoretical point of view, a negative effect of competition on quality is also possible. In practice, many other characteristics influence school choice. If, for instance, students look more at their friends’ choices or at the attractiveness of sports programs, the link between school choice and quality might be very different. Schools might choose to invest time and money in characteristics that, while appreciated by potential students, are not related to the (direct) quality of education. In this case, the effect of competition on educational outcomes might become negative since less time and money are spent for the primary process. In addition, measuring and interpreting quality might not be straightforward and costless for students and their parents. Which effect dominates is a matter of empirical analysis. Unfortunately, empirical analysis of the effect of competition on the quality of educational outcomes is scarce, due to the absence of real and large-scale competition in many countries. Tiebout choice, small-scale voucher programs and experiments do not necessarily shed light on the long-term effects of fully free parental choice. In the Netherlands, free parental choice has been present since the beginning of the 20th century, and can be characterized as a full voucher program with 100% funding. This study uses panel data for the Netherlands to show that there is indeed a relation between competition and educational outcomes in secondary education—but that the relation is negative and small. This effect is larger for small- and medium-sized schools and for schools that do not have a Protestant or Catholic denomination.
The second part is about the nature of incomplete cartels. The first part analyses the consists of two main parts. This thesis deals with such Exporting Countries (OPEC), Organization of Petroleum famous cartel, the market. Perhaps the most approximately 75% of the industry controlled North Atlantic shipping instance, a cartel in the relevant market. For typically assumed to have a cartel is all-inclusive. Yet, many of the known cartels did not include all firms in the relevant market. For instance, a cartel in the North Atlantic shipping industry controlled approximately 75% of the market. Perhaps the most famous cartel, the Organization of Petroleum Exporting Countries (OPEC), is not all-inclusive. This thesis deals with such incomplete cartels. It consists of two main parts. The first part analyses the nature of incomplete cartels. The second part is about cartel detection and explores ways in which incomplete cartels can be detected. The thesis is organized around four main research questions: What explains why optimal cartel size is less than all-inclusive? What are the traits of firms that join the cartel? What is the relationship between industry structure and optimal cartel size? How can economics be used to detect (incomplete) cartels? The main results can be summarised as follows: Optimal cartel size is all-inclusive when colluding is costless, but less than all-inclusive when colluding is costly and the smallest firms in the industry are sufficiently small. Moreover, the incentive to take part in a cartel is positively correlated with firm size. Thus, we should not expect a cartel to encompass all undertakings in an industry with one or more relatively small suppliers. As to the economics of cartel detection, the main focus is on basing-point industries. Basing-point pricing is a pricing method that incomplete cartels have been known to abuse in order to protect local markets against distant competitors. Findings of the thesis indicate that the basing points applied by a cartel differ from those of competitive firms, and that collusive basing-point pricing is difficult to detect with known methods. These findings have made it possible to develop a novel detection test that attempts to trace the bases used by firms. By way of input, the test requires transaction data and firm- and customer locations. Basing points that are far from plants and located relatively close together are indicative of collusion. Conversely, basing points that are close to firm locations with a large variance are compatible with competition. Software has been developed in order to deal with large amounts of data as well as noise in the data. It is shown that this test is hard to beat for cartels using this otherwise elusive form of price-fixing.

References

Thesis: ‘Incomplete cartels and antitrust policy: Incidence and detection’, by Iwan Bos. Published in the Tinbergen Institute Research Series #463

Thesis: ‘Incomplete cartels and antitrust policy: Incidence and detection’, by Iwan Bos. Published in the Tinbergen Institute Research Series #463

 Essays on finite-mixture models
Finite-mixture distributions are a weighted average of a finite number of distributions. As such, these distributions are very flexible for modelling data, and are therefore frequently used as a building block within modern econometric models. This thesis introduces new applications of finite mixtures to deal with several different modelling issues. Each chapter of the thesis focuses on a specific modelling issue. Whereas the parameters of some of the resulting models can be estimated using standard techniques, new estimation and inference methods were developed for some of the chapters. To illustrate how the methods can be applied, the thesis analyses at least one empirical dataset for each approach. These datasets cover a wide range of research fields, such as macroeconomics, marketing and political science. The first problem under consideration is that empirical analysis of individual response behaviour may be limited, due to the lack of explanatory variables at the individual level. Therefore, applies a new approach to estimate the effects of explanatory variables on individual response is developed, where the explanatory variables are unknown at the individual level but observed at some aggregated level. The subsequent chapter considers the situation in which respondents rank different items. It is well known that the standard rank-ordered logit model for analysing such data may be biased if respondents are unable to rank all items. The study therefore introduces a new method for analysing this rank-ordered data that makes optimal use of the information in the rankings, while at the same time not suffering from biases due to the ranking inability of respondents. The subsequent two chapters use finite-mixture models for clustering data. One chapter deals with clustering regions according to the development of house prices in those regions. The next chapter provides a new methodology for two-mode clustering. That is, both the rows and the columns of a data matrix are clustered simultaneously into their own set of clusters. The main advantage of this method is that it enables statistical inference to be done on the model parameters.

Thesis: ‘Essays on finite mixture models’, by Bram van Dijk Published in the Tinbergen Institute Research Series #458

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Thesis: ‘Essays on finite mixture models’, by Bram van Dijk Published in the Tinbergen Institute Research Series #458

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**References**

**Theses**

466 JONNEKE BOLHAAR (25-03-2010), Health Insurance – Selection, Incentives and Search

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‘Let me dream on!’ Anticipatory Emotions and Preference for Timing in Lotteries

09-101/1
Sander Onderstal, UvA, Arthur Van de Meerendonk,
Maastricht University, Auctioning Incentive Contracts: An Experimental Study

09-103/1
Anke Gerber, Hamburg University, Kirsten I.M. Rohde, EUR, Eliciting Discount Functions when Baseline Consumption changes over Time

09-106/1
Riemer P. Faber, EUR, Asymmetric Price Responses of Gasoline Stations: Evidence for Heterogeneity of Retailers

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René van den Brink, VU, Comparable Axiomatizations of the Myerson Value, the Restricted Banzhaf Value, Hierarchical Outcomes and the Average Tree Solution for Cycle-Free Graph Restricted Games

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Maarten Janssen, University of Vienna and EUR, Vladimir A. Karamychev, Emiel Maasland, EUR, Auctions with Flexible Entry Fees
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McCormick, Guillermo Owen, NPS Monterey,
Terrorist Targeting, Information, and Secret
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Arjan Non, EUR, Gift-Exchange, Incentives, and
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Harold Houba, VU, The Condorcet Paradox revisited

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Herbert Hamers, Tilburg University, A Note on
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Matthijs van Veenen, UvA, But Some Neutrally Stable
Strategies are More Neutrally Stable than Others

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Otto H. Swank, Bauke Visser, EUR, Decision Making
and Learning in a Globalizing World

10-035/1
René van den Brink, VU, Youngsub Chun, Seoul
National University, Seoul, Korea, Balanced
Consistency and Balanced Cost Reduction for
Sequencing Problems

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Education and Labor Market Activity of Women:
An Age-Group Specific Empirical Analysis

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Falko Juessen, Ludger Linnemann, Andreas
Schabert, TU Dortmund University, Default Risk
Premia on Government Bonds in a Quantitative
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VU, Blockholder Dispersion and Firm Value

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Economic Growth and the Volatility of Foreign Aid

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Sweder van Wijnbergen, UvA, Corine Franken,
Nomura, Private Capital Flows to Low Income
Countries: Country-Specific Effects and the Lucas
Paradox

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Siem Jan Koopman, André Lucas, Bernd Schwaab,
VU, Macro, Industry and Frailty Effects in Defaults:
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Jean-Marie Viaene, EUR and CESifo, Laixun Zhao,
Kobe University, Tainted Food, Low-Quality Products
and Trade

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EUR, World Equity Premium-based Risk Aversion
Estimates

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Harry P. Bowen, Queens University of Charlotte,
Haris Munandar, Bank Indonesia, Jean-Marie Viaene,
EUR and CESifo, On the Extent of Economic
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Stefan Arping, Zacharias Sautner, UvA, Corporate
Governance and Leverage: Evidence from a Natural
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Hauptmeier, European Central Bank, Transmission
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University of Antwerp and Utrecht University,
Justin van der Sluis, UvA, Returns for Entrepreneurs
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Industry Dynamics and Entrepreneurship: An 
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BV and VU, Erik Verhoef, VU, Biases in Willingness-
to-Pay Measures from Multinomial Logit Estimates 
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Reference Groups

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of Tolling

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Piet Rietveld, VU, Weather and Travel Time of Public 
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09-104/4  Yebin Cheng, Shanghai University of Finance, 
Jan G. de Gooijer, UvA, Dawit Zerom, California 
State University at Fullerton, Efficient Estimation 
of an Additive Quantile Regression
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