



Fall 2013

# tinbergen institute 27 magazine

Interview with Elhanan Helpman:  
**Recent developments in international trade  
and foreign investment**

Interview with Mark W. Watson:  
**Low Frequency Econometrics**

Column  
**Microfinance:  
From Knowledge  
to Action**

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# tinbergen institute



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## In memoriam **Piet Rietveld**

**It was with great sadness that TI learned of Piet Rietveld's death. Piet passed away, after a short period of illness, on November 1, 2013.** Piet Rietveld was Professor of Transport Economics at VU University Amsterdam, and member of the TI STEE research group. He had been a TI research fellow since the start of TI and was a former member of the TI Board. Piet will be remembered for his kindness, wisdom, warm personality and gentleness by all who worked with him.

Piet studied econometrics at Erasmus University Rotterdam (cum laude degree) and received his PhD in economics at VU University Amsterdam. He worked at the International Institute of Applied Systems Analysis (Austria) and was research co-ordinator at Universitas Kristen Satya Wacana in Salatiga, Indonesia. Since 1990 he was professor in Transport Economics at the Faculty of Economics and Business Administration, VU University Amsterdam. He was a fellow of the Regional Science Association International (RSAI) and the Netherlands Institute for Transport Policy Analysis (KiM). Furthermore, he was a member of the Royal Netherlands Academy of Arts and Sciences (KNAW). Piet was Head of the Department of Spatial Economics since 2002. Under his unique and inspiring leadership, the Department flourished and attained and maintained its unique position worldwide in the fields of Spatial, Transport and Environmental Economics. As a researcher, Piet made groundbreaking contributions to these fields, on a wide variety of themes including transport and regional development, valuation, transport pricing, public transport, transport and environment, land-use modeling, and policy assessment. TI Magazine 4 (Fall 2001, available online) contained an interview with Rietveld. A good impression of his remarkable scientific legacy, the scope of the themes he was working on, his academic network, and the wide impact of his research, can be obtained from the overview of his work on Google Scholar:

<http://scholar.google.nl/citations?user=qVEsFisAAAAJ&hl=us>

## TI on **social media**

**Facebook:** Tinbergen Institute has two new exciting social media features. To raise the profile and visibility of TI's graduate school and research institute we have developed a Facebook page to let the wider world know of TI's challenging MPhil and PhD programs and cutting-edge research. Please 'like' our Facebook page and spread the word!

TI's Facebook page can be found at:

<https://www.facebook.com/InstituteTinbergen>



**Twitter:** TI has also set up a Twitter account to highlight TI's research and to facilitate interaction and discussion between TI fellows, PhD students and others. Stay in touch with new developments in the field of economics, econometric and finance. Please follow TI on Twitter: [@ResearchTI](https://twitter.com/ResearchTI)

## New research fellows

**Victor Maas** is professor of management accounting at the Erasmus School of Economics. He holds a Chair endowed by the Erasmus University Trust Fund. Victor received his PhD in business economics from the University of Amsterdam (2007). His research interests include the design of performance measurement and evaluation systems, the role of the control function in organizations and judgment and decision-making processes in accounting and auditing.

**Pierre Koning** is the Chief Science Officer at the Ministry of Social Affairs and Employment, and a Professor on Labour Market and Social Security at the VU University Amsterdam. He holds a PhD in economics from the VU University Amsterdam (1998). His research interests include applied econometrics, health, labor, policy evaluation, welfare-to-work policies, disability insurance, absenteeism and public sector incentives and performance.

**Richard Tol** is the Professor of the Economics of Climate Change at the Institute for Environmental Studies and Department of Spatial Economics, VU University Amsterdam and a Professor of Economics at the University of Sussex (United Kingdom). He holds a PhD in economics from VU University Amsterdam (1997).

**Jan R. Magnus** (1948) is a visiting professor at the VU University Amsterdam. He worked at the University of British Columbia (Vancouver), and then in 1981 moved to the London School of Economics. He was involved with CentER in Tilburg from 1988, but remained at the London School of Economics until 1996, when he was appointed as Research Professor of Econometrics at Tilburg University. He became emeritus professor in June 2013. He holds a PhD in econometrics from the University of Amsterdam (1981). His current interests are model averaging, sensitivity analysis, environmental economics and sport statistics.

## PhD Defense Grega Smrkolj



Are cartels really bad? TI PhD student Grega Smrkolj claimed in his thesis that technology industries can well be beneficial. On June 28, 2013, Grega defended this PhD dissertation on "Dynamic Models of Research and Development" at University of Amsterdam (UvA). Supervisor was professor and TI fellow Jeroen Hinloopen (UvA) and co-supervisor was TI Fellow Florian Wagener.

## Philipp Koellinger appointed at the Amsterdam Business School

**Fellow Philipp Koellinger** was appointed professor of entrepreneurship and innovation at the Amsterdam Business School (ABS) of University of Amsterdam. Koellinger will also remain affiliated with the Erasmus School of Economics of the EUR for one day a week, and will keep his appointment as co-director of the new interdisciplinary research institute EURIBEB (Erasmus University Rotterdam Institute of Biology and Economic Behavior), which is a joint effort of ESE and the Erasmus MC. Koellinger's research interests are in the fields of geno-economics, behavioral economics, entrepreneurship and innovation. In particular, he studies the role of genes, cognitive limits and affect on economic behavior, with entrepreneurship as a particularly vivid and relevant example. Koellinger aims to help building the new entrepreneurship section at ABS. He would also like to bring 'geno-economics' to the UvA by building a strong collaboration with ESE and EURIBEB, with joint PhD students, research projects and linking this research stream to the UvA competence cluster on 'brain and cognition' and behavioral economics.

## Coen Teulings appointed at University of Cambridge

TI fellow and chairman of TI's supervisory board Coen Teulings has been appointed as professor in economics at the University of Cambridge, as of October 1st.

Teulings is the former director of CPB Netherlands Bureau for Economic Policy



UNIVERSITY OF  
CAMBRIDGE

Analysis. He will remain affiliated with the University of Amsterdam (UvA) as professor in economics.

## Mirjam van Praag appointed as Maersk Mc-Kinney Møller Professor of Entrepreneurship and Organisation at Copenhagen Business School



TI fellow Mirjam van Praag has been appointed as the Mærsk Mc-Kinney Møller Professor of Entrepreneurship and Organisation at the Copenhagen Business School (CBS), effective 1 January 2014. Mirjam van Praag is professor of Entrepreneurship and Organization at the Faculty of Economics and Business of University of Amsterdam and a TI research fellow since 2002. Van Praag is the founding academic director of the Amsterdam Center for Entrepreneurship.

## Willem Verschoor New Dean FEWEB VU University Amsterdam

VU University Amsterdam appointed TI fellow Willem Verschoor as the new dean of the Faculty of Economics and Business Administration (FEWEB). Verschoor will succeed current dean Harmen Verbruggen as of January 1, 2014.

## Bernd Heidergott appointed professor of Stochastic Optimization

Bernd Heidergott has been appointed as professor of Stochastic Optimization as of August 1, 2013 at the Faculty of Economics and Business Administration of VU University Amsterdam. Heidergott is a TI research fellow and a member of the Department of Econometrics and Operations Research at the FEWEB of the VU. He is also research fellow at EURANDOM. His research interests center on mathematical methods, gradient estimation, differentiation theory, Taylor series expansions and max-plus algebra.

## NWO Research Talent Program

TI MPhil students Ilke Aydogan and Travers Child and TI PhD student Christiaan van der Kwaak have been awarded three-year grants by NWO (Netherlands Organization for Scientific Research) to fund their PhD projects. Ilke Aydogan will be funded for his research project entitled: 'Decisions from Experience and a Descriptive Study of Ambiguity'. This project combines a new ambiguity (decisions with unknown probabilities) theory (source method for prospect theory) with the new decisions-from-experience theory (DFE). Supervisor is TI fellow Professor P.P. Wakker (Erasmus University Rotterdam). Travers Child has been awarded for his research project 'Economics and political violence'. Though political violence has been examined by economists, seldom have researchers questioned the supposedly beneficial relationship between economic development and political violence. Supervisor is TI fellow and Associate Professor R.H. Oostendorp (VU University Amsterdam). Christiaan van der Kwaak received a grant for his research project 'Alternative fiscal and monetary policies under financial fragility and sovereign default risk in a currency union (eurozone)'. In the proposed research he will investigate the intermingling of financial crises and sovereign default risk. Supervisor is TI fellow Professor S.J.G. van Wijnbergen (University of Amsterdam).

## Eric Bartelsman appointed at Columbia University



TI Fellow Eric Bartelsman has been appointed visiting scholar of the Columbia University Center on Capitalism and Society, which brings together leading scholars in economics, business, finance and law to study capitalist institutions, their effectiveness and their weaknesses, in order to explore basic questions about capitalism— its working, its dynamism and the instability it may cause, its inclusiveness or lack thereof, and its role in a democracy. The Center was founded in 2002 and is directed by Nobel-prize winning economist Edmund S. Phelps. Eric Bartelsman (1960) is professor of economics at VU University Amsterdam. He studied economics at Massachusetts Institute of Technology and received his PhD from Columbia University. He has served as economist at the Federal Reserve Board in Washington DC, as advisor to CPB Netherlands Bureau for Economic Policy Analysis, and as head of the economic research department at the Ministry of Economic Affairs in the Netherlands. His research interests focus on the sources of productivity growth, both from a micro and macro point of view.

## Kirsten Rohde appointed professor of Behavioral Economics

Kirsten Rohde has been appointed as endowed professor of Behavioral Economics with a focus on intertemporal choice at the Erasmus School of Economics. She will hold this endowed chair through the Erasmus Trustfonds EUR within the department of Applied Economics, as of September 1, 2013. Since 2006 Rohde has been working at ESE, and in 2007 she became a fellow of TI. She received ESE Top Talent Research Awards in 2008, 2010, 2011 and 2012 and a prestigious VENI Research grant from the Netherlands Organization for Scientific Research in 2008. Rohde's research predominantly centers on intertemporal choice, a field of decision theory that analyses the trade-offs people make between the present and the future. She has been working on an often-observed irrationality in such trade-offs: procrastination. Rohde is interested in developing nudges to help people overcome such irrational behavior. She does both theoretical and experimental work. Other research areas include concerns for equality and social preferences, and decisions under risk.

## Inaugural Lecture Dennis Fok

On October 4, 2013 TI fellow Dennis Fok, endowed professor of Applied Econometrics at Erasmus School of Economics gave his inaugural lecture, 'Stay Ahead of Competition', at the main auditorium of Erasmus University. The widespread use of the Internet and computer systems has led to a situation where data are available on almost everything. The volume and the level of detail of these data is something we considered to be impossible until a few years ago. Researchers in economics and business now have access to a new variety of data. Such data are often not directly comparable to the data that have historically been considered in econometrics. This brings opportunities and challenges for academic researchers, companies, and even econometrics as a field and as an educational program. All parties involved can, or even have to use these data to stay ahead of the competition.



## NWO Awards VENI Grant



TI fellow  
Hans van  
Kippersluis

received a VENI grant by the Netherlands Organization for Scientific Research. The € 250.000 grant will support his research project on socioeconomic differences— in particular, income, in health.

## Lennart Ziegler wins Prof. Bruins Prize

The Executive Board of Erasmus University Rotterdam awarded MPhil student Lennart Ziegler the Prof. Bruinsprijs this year. The award consists of a monetary prize of € 4,500 for the benefit of a period of study abroad. The award was presented to Ziegler at the official opening of the academic year 2013-2014 on September 2, 2013 in Rotterdam. It is the first time that a TI student wins the Bruins prize. The fifth Prof. Bruins Prize will be presented to a research master's student who has achieved an excellent academic record and demonstrated outstanding research qualities. Ziegler completed the MPhil program and has started as a PhD student under the supervision of TI fellows Erik Plug (University of Amsterdam) and Bas van der Klaauw (VU University Amsterdam). Ziegler's PhD research will focus on the impact of social networks and interpersonal ties on labor market outcomes such as employment prospects and earnings.

## New candidate fellows

**Marc Gabarro** is an assistant professor in corporate finance at the Department of Business Economics of the Erasmus School of Economics. He holds a PhD in Finance from the London Business School (2011). His research interests include corporate finance, corporate governance, executive compensation and banking.

**Marius Ochea** is an assistant professor at the department of Quantitative Economics and the Center for Nonlinear Dynamics in Economics and Finance (CeNDEF) at the University of Amsterdam. He holds a PhD in Mathematical Economics from the University of Amsterdam (2010) and he is an alumnus of TI's MPhil program. His research interests include Bounded Rationality, Evolutionary Game Theory, Game Theory, Learning and Non-Linear Dynamics.

**Mike Mao** is an assistant professor of the Finance Group at the Department of Business Economics of the Erasmus School of Economics. He holds a PhD in Finance from Hong Kong University of Science and Technology (2011). His research interests include Asset Pricing, Corporate Finance and Finance. His publication with Michael Lemmon, Laura Xiaolei Liu and Greg Nini on 'Securitization and capital structure in nonfinancial firms: An empirical investigation,' is forthcoming in the Journal of Finance.

**Suzanne Bijkerk** (1979) is an assistant professor at the Economics department of the Erasmus School of Economics, since January 2013. She holds a PhD in accounting (2013)

from the Erasmus University Rotterdam. Her research interests are risk management for financial and non-financial institutions, applied economic theory in banking and auditing, internal control and management of organizations.

**Katarzyna Lasak** is an assistant professor at VU University Amsterdam and an international fellow at the Center for Research in Econometric Analysis of Time Series (CREATES), Aarhus University (Denmark). She received her PhD in 2007 from University Autònoma (Barcelona). She was a postdoctoral fellow at CREATES from August 2007 until July 2011. Her research interests include econometrics, time series analysis, statistics, stochastic processes and long memory.

**Victoria Galsband** is an assistant professor at the finance department of VU University Amsterdam. She received her PhD (magna cum lauda) from the University of Zurich (Switzerland) in 2011. She worked as a visiting assistant professor and lecturer at the University of Mainz (Germany). Her research interest are in the fields of asset pricing, macro-finance and forecasting.

**Jona Linde** is a behavioral economist who will join both the economics and the political science department of the VU University Amsterdam as a postdoctoral fellow. In March of 2012 he successfully defended his PhD thesis entitled 'Experimenting with New Combination of Old Ideas' at University of Amsterdam. Through his research he attempts to broaden the applicability of behavioral

economic theories to new types of decisions, in recent years to education at TIER (Top Institute for Evidence Based Education Research at University of Amsterdam) and now to political decision making within the High Risks Politics project at the political science department of the VU. Jona's research interests are in the fields of Behavioral Economics, Education, Experimental Economics, Field Experiments, Labor, and Risk and Uncertainty.

**Melissa Lin** is an assistant professor of the Finance Group at the Department of Business Economics of the Erasmus School of Economics. She holds a PhD in Finance from National University of Singapore (2012). Her research interests include empirical asset pricing, institutional investors and liquidity. Her dissertation "Investor Sentiment and the Fragility of Liquidity" has won the Doctoral Dissertation Support Competition Award, Betty F. Elliott Initiative for Academic Excellence, from The University of Michigan (Dearborn).

**Maurizio Montone** is an assistant professor in behavioral finance at the Erasmus School of Economics. Maurizio holds a PhD in economics from the University of Cassino (Italy), where he defended his thesis on asset pricing and mental accounting. His main research interests are behavioral finance, asset pricing and corporate finance, both theoretical and empirical, with a focus on capital market dysfunctionality.

## Publication

### Paper accepted in *Econometrica*

Congratulations to Aico van Vuuren, Coen Teulings, Sebastian Buhai and Miguel Portela, whose paper was accepted for publication in the leading journal *Econometrica*. Their paper 'Returns to Tenure or Seniority?' documents two empirical facts using matched employer-employee data for Denmark and Portugal. First, workers who are hired last are the first to leave the firm. Second, workers' wages rise with seniority, where seniority is defined as a worker's tenure relative to the tenure of his colleagues. Controlling for tenure, the probability of a worker leaving the firm decreases with seniority. The increase in expected seniority with tenure explains a large part of the negative duration dependence of the separation hazard. Conditional on ten years of tenure, the wage differential between the 10th and the 90th percentiles of the seniority distribution is 1.1-1.4 percentage points in Denmark and 2.3-3.4 in Portugal. Sebastian Buhai is a TI alumnus (PhD 2008, MPhil 2003) and visiting faculty at Stockholm University (Sweden), Miguel Portela is a TI alumnus (PhD 2007) and an assistant professor at the University of Minho (Portugal), Coen Teulings is a TI fellow, professor in economics at the University of Cambridge (United Kingdom) and University of Amsterdam, Aico van Vuuren is a TI fellow and associate professor at VU University Amsterdam.

## Programs

### Short-term visitor program updated

TI would like to announce that it has updated its short-term visitor program relating to the program's conditions for funding and eligibility. The objective of this program is to give fellows the opportunity to invite researchers for a visit to start or continue collaboration in research. As of September 1, 2013, TI would like to focus the budget of the short-term visitor program again on the junior fellow category, recently renamed candidate fellow category, the group the funding originally applied to. TI believes that this group of young researchers will benefit the most from this program. It will help them to build a high quality international academic network because this group of candidate fellows has relatively little access to research funding. Also, when reviewing applications, TI will attach priority to visitors who intend to present their research at a TI seminar during their stay and who are available for discussions with MPhil students and PhD candidates of TI, for at least one afternoon. Please access the TI's intranet pages (you will need a password) to read more about the updated regulations and application criteria for the short-term visitor program.



# Recent developments in international trade and foreign investment

**\*Elhanan Helpman is the Galen L. Stone Professor of International Trade at Harvard University and a Fellow of the Canadian Institute for Advanced Research. Helpman's research includes contributions exploring the balance of payments, exchange rate regimes, stabilization programs and foreign debt. He is perhaps best known for his studies of international trade, economic growth and political economy.**

**How would you summarize in a few lines the main points you have communicated to the students in your TI lectures?**

It is hard to summarize in a few sentences, but what I have tried to do is to bring the students up to speed regarding the most important research in the subject in recent years. I started by providing an overview of earlier research, to provide some background. The most important point was to emphasize the main shift that took place in the field: instead of thinking of trade as taking place at a sectoral level, we are able now, due to the availability of much better datasets, to think of trade at a firm level. And a great deal of improvement on this account has taken place only in the last ten years.

**Your recent research focuses on the interaction between globalization, inequality and unemployment. One of the complex ideas of globalization is that it destroys jobs in western countries. Based on your own research and the evidence, what would you say to this idea?**

I'm not sure whether it destroys jobs but it does destroy some jobs. However, it also generates opportunities for other jobs. Of course, this is to the detriment of some people who had an advantage in the old jobs that does not necessarily apply to the new jobs. So there is a redistribution of the types of jobs that are desirable under the new conditions.

Another point is that new research shows that theoretically, even though globalization reduces employment overall, this does not imply that is not beneficial. It is beneficial in *expectations*. Then the big issue that I think is a relevant issue for policymakers is how to provide a security network from which everybody gains, if possible— and if they happen to lose they get some compensation in order to not suffer excessively. I think that this may be the main issue for policymakers. But in terms of expectations, people should come out ahead of globalization even though unemployment might go up. But you know, it goes up because of the frictions in the labor market and therefore, one resolution is to try to work it out and reduce it.

Close  
interview

“We must understand how firms organize their supply chains in order to understand **what is driving trade and foreign direct investment**. This has direct implications for the wellbeing of different nations.”

**With regard to inequality, what predictions arise from your research? Are these along the same lines as for unemployment, or is it somewhat different?**

It is somewhat different. The issue is the following. Once countries engage in foreign trade, liberalization may increase inequality or reduce it, and this depends very much on the extent to which countries open up to beginners. So, if the country does not open very much (meaning it has very small trade volumes relative to its income), then globalization is initially going to increase inequality. But this is inequality of a particular type—

there is nowadays a massive reallocation of activities occurring around the world, and in different formats done by different firms. We must therefore understand how firms organize their supply chains in order to understand what is driving trade and foreign direct investment.

This, in turn, has direct implications for the wellbeing of different nations. And this depends on whether they serve as a base for multinationals or whether they serve as a base for subsidiaries of multinationals, and so on.

**'It is worth the effort only if you are really passionate about it.'**

what we call residual inequality. However, it will eventually decline, particularly for countries that are very exposed to foreign trade. Globalization is supposed (by the predictions of the theory) to reduce inequality. Now it is also important to take into account the experience of individual countries. This is important because some countries may be on the left side of the curve but others on the right side, so they have to factor it in.

**Part of your research focuses on differences in the organizational structures of firms that engage in trade and foreign direct investment and those that do not. The question is which are the most intriguing questions in this area of research?**

This whole area of research was triggered by the observation that international supply chains have grown in importance, and within these chains multinational corporations have become essentially dominant. So the reason people are interested in these issues is that in order to understand comparative advantages we cannot just look at the old rules of the game and think in old terms. This is because

**At the beginning of this interview you said/implied/seemed to say that recent developments in international trade focus on intra-sectoral developments on firm heterogeneity. Also, in your recent book you say that these developments were partly determined by the availability of new data at the firm level. Suppose you could make a wish and say, 'I would like to have a certain dataset'. Leaving availability limitations aside, what kind of data would you like to have to further advance the field?**

For some countries, we do have datasets which are what we call linked employer-employee data, and for some of these countries we also have trade data that we can link with the employer-employee data. But, for many countries these are separate datasets. It is not yet possible to link them. On the other hand, even when you can link the data, there is a limited amount of information on two fronts typically. One front is related to what it is that we know about firms. So in the good cases, so to speak, we have data on balance sheets. But this is not really detailed enough to understand exactly what firms employ,

what they sell and so on. The other thing is that even when we can link these firms' data with trade data, we often don't know to which countries they export and what it is that they export and how much. This is very hard to come by, actually. So if we could enrich the datasets to provide these additional pieces of information, it would help a great deal in trying to assess to what extent you are thinking about the validity of a certain subject. This constitutes one sort of major data issue. The other major data issue is that is not feasible as yet to pool across countries firm-level datasets. Particularly for datasets that are linked employer-employee datasets. We cannot consider these out-of-cross-country variations, which are important for a lot of issues. Although there is some attempt in Europe to build up a common dataset, I'm afraid that it will take too long. I will probably retire before the data become available. And also when they become available, I doubt that the datasets will be available in great enough detail to conduct this sort of study. This is a huge obstacle. If we could have had pooled datasets for many countries with all these items, I think we could have done a much better job on what we do.

**Lastly, what is your advice to the economic PhD students of today?**

What is my advice? I think that my advice hasn't changed much over the years. They should pursue what they like the most. This is rule number one. But, there is the question of how someone finds out what he or she likes the most, so my advice is always for students to explore— for example, to take courses in different fields so that they can manage to identify something that inspires them. Once they identify this area, my advice is to put all of their energy into it. It is hard to make serious progress on a part-time basis; you really have to invest in it a lot. So this means that it is worth the effort only if you are really passionate about it. If you are not, you know, you should probably consider finding another job. ○



## Microfinance: From Knowledge to Action

### Sanne Blauw

(Oikocredit Netherlands,  
Erasmus School of Economics)

### Robin Gravesteijn

(Oikocredit International,  
University of Bath)

### References

Crépon et al. (2011),  
Attanasio et al. (2011)

Microfinance has grown tremendously over the last four decades. It has sparked interest as a way to fight poverty, even resulting in a Nobel Peace Prize in 2006. Close to home, Queen Máxima is a strong proponent of microfinance in her role as UN Secretary-General's Special Advocate for Inclusive Finance for Development.

The success of microfinance can partly be explained by the surprisingly high repayment rates on microcredit. Many microfinance institutions (MFIs) report that close to 100% of the clients pay back their loans. Financially, the concept seems to work. But what about the social impact of microfinance? Does it actually make people better-off?

This question is essential for Oikocredit. Oikocredit is a worldwide cooperative and social investor, providing— among its other services— funding to the microfinance sector. Although it is quite straightforward to assess the financial performance of microfinance organizations, it is perhaps more complex to detect their social performance.

First of all, microfinance should not be viewed as a homogenous and/or ideologically neutral institution. Microfinance comes in different forms, including credit, saving and insurance products. Every intervention has its own unique characteristics, in terms of geographic location, target group and setup of the program. Also, MFIs have different practices to offer their services: some are commercially oriented, while others focus more on development. Because of this heterogeneity in the industry, the social performance of one intervention cannot easily be generalized to other contexts.

Secondly, it is not always feasible to do impact assessments. Impact studies require substantial resources, and often need a minimum sample size. Also ethical concerns play a role. For example, when randomly selecting individuals for a control group it may be considered 'unfair'

not to give them a loan while giving others access to credit.

Despite these limitations, impact studies can provide valuable insights into the effects of microfinance. One strand of impact assessments are randomized controlled trials (RCTs). These studies tend to find modest impacts. Two such studies— Duflo et al. (2011) in Morocco, and Attanasio et al. (2011) in Mongolia— find a significant positive effect of microcredit on entrepreneurship and consumption, but only for certain groups of lenders. Qualitative assessments constitute another branch of impact studies. In-depth interviews can shed light on the added value of microfinance, taking the perspective of those that receive a loan, savings account or insurance. A third category of impact studies takes a mixed-methods approach, combining quantitative and qualitative data.

But the process of assessing impact does not end with carrying out social performance assessments. It is key to use the findings in order to learn to improve programs. Oikocredit works closely with several MFIs in a continuous cycle of measurement and improvement: monitoring social performance indicators, providing capacity building and gathering feedback to develop products and services. For instance, Oikocredit supported the International Labor Organization's 'Microfinance for Decent Work' program, in which MFIs piloted new ways of working in order to improve employment outcomes.

We see an increased number of agencies trying to measure and manage social performance. New technologies offer promising directions for future research. For example, social media and smart phones make it easier to collect data from borrowers— both more frequently and on a larger scale. Academics and practitioners can combine their efforts to enhance the evidence base and to use results to improve interventions.

# Low Frequency Econometrics

**\*Mark Watson is the Howard Harrison and Gabrielle Snyder Beck Professor of Economics and Public Affairs at Princeton University and a research associate at NBER. His research interests include time-series econometrics, empirical macroeconomics and macroeconomic forecasting.**

**H**ow would you summarize in a few sentences what were the objectives and the main message of your lectures?

Some questions in economics involve low-frequency properties of stochastic processes. Two examples are cointegrating relations and the variances of sample averages for serially correlated data (“long-run” variances). Sample data contain very limited low-frequency information: a time series with 80 years of data contains only eight non-overlapping ten-year samples. The lectures described methods for inference about low-frequency properties that account for the paucity of sample data.

**Two years ago, Bengt Holmstrom (see *TJ magazine* 24) offered some thoughts on the possible causes of the financial crisis. We are still not out of this crisis. Could you thus tell us what is your view on the crisis and how low-frequency econometrics could help predict the end of the current crisis and help policymakers more effectively to prevent such crises in the future?**

One contributing factor to the crisis was a misunderstanding of the risk associated with returns on financial assets. Part of the work that Mueller and I have been doing involves measuring long-run uncertainty— for example, the uncertainty in average returns over, say, the



“The center of gravity of **the economic world is always changing**, and it is critical that measures of uncertainty surrounding long-run forecasts recognize these changes.”

next 50 years. Our hope is that this work will help clarify these risks and, therefore, lead to better economic decisions.

**An obvious follow-up question is: given that the timing and extent of crises seem so hard to predict, are accurate long-run predictions for the economy possible (obvious reference here is your recent work with Ulrich Mueller)?**

As your question suggests, it is difficult to make accurate long-run economic predictions. However, determining the uncertainty around these predictions is much easier. For example, while it is difficult to know if stock returns will average 2%, or 4%, or 6% over the next 25 years, it is straightforward to determine a range (say, 2%-7%) that will include the future average returns with high probability (say, 90%).

How do you see the future of academic work on business cycle dynamics and long-run predictions? In particular, in your 2003 *European Economic Review* article with Marcellino<sup>1</sup>, you stated that “there typically are gains from forecasting [time] series at the country level, then pooling the forecasts, relative to forecasting at the aggregate level [via, for example, factor models]”. Thus, your view in 2003 seems to have been that pooled country-specific models are to be preferred to factor-model ones. Do you still share this view?

Empirical work over the past 15 years or so has shown that there are forecasting gains from using the information in large datasets. How best to do this—pooling, factor models, Bayesian shrinkage, and so forth— is still an active research area. As we gain more empirical experience with the various methods, we’ll learn more about which methods work well in particular circumstances. My 2003 *EER* paper with Marcellino and Stock is just a small piece of the puzzle.

**Given this, what is your view on the tools that the European Central Bank currently uses to analyze and keep track of the European business cycle? Would you like the Bank to modify or expand its toolkit? And if so, in what way?**

I don’t know the tools used by the ECB well enough to comment on specifics. As a general matter I can note that researchers at the ECB have been at the forefront of large-data forecasting—both in development of new methods and applying these methods to interesting and important questions.



#### Notes

1 Marcellino, M., J.H. Stock and M.W. Watson, 2003, Macroeconomic Forecasting in the Euro Area: Country Specific versus Area-Wide Information, *European Economic Review*, 47:1, pp. 1-18.

2 What went wrong with economics?, 2009, *The Economist*, July 16 2009.

**Going beyond Europe and the US, what is your view on long-run fluctuations, now that the center of gravity of the economic world seems to be pointing irreversibly away from the Western world, towards China and India?**

The center of gravity is always changing, and it is critical that measures of uncertainty surrounding long-run forecasts recognize these changes. This requires models that allow for the kinds of variation (“shifts”, “breaks”, “nonstationarities”) that accompany center-of-gravity changes of the sort we’ve seen in the past and that we are bound to experience in the future.

**Will the tools that you and your colleagues have developed fit a world dominated by these new powers? Behavioral economics suggests that the way agents take decisions under one culture could be quite different from the way such decisions are taken under another culture. Are macroeconomic, long-run fluctuations immune to such behavioral differences or should culture- and behavior-specific models be developed?**

The methods are designed to accommodate the sorts of shifts that, for example, we have experienced in the US over the past 100 years (and these have been substantial). Whether they offer too little or too much flexibility for the next 100 years is something that only time will tell.

**Data analysis looms very large in macroeconomics. To be provocative, we could say that, nowadays, outsiders would seem to be justified in believing that there are no macroeconomists anymore, only macroeconometricians... Contrast this with the balance and separation between microeconomics**

**and microeconomics, which is clearer. Why do you think data has become so important in macroeconomics?**

Macroeconomics has always been empirical. That said, theory is more important in macroeconomics than ever before. Empirics without theory can’t sort out cause and effect, but neither can theory without empirics. Both are required.

**Is this preponderance of macroeconometrics not a symptom of the failure of macroeconomic theories, as was argued by *The Economist* back in 2009?**

Not at all. Theory did its work before the Great Recession, in the sense that it laid out the key mechanisms that led to the financial collapse. Macroeconometricians are only now struggling with incorporating these mechanisms into empirical models that can be used for prediction and policy analysis.

**Do you have any final words of advice for the graduate students here at Tinbergen Institute?**

You’re lucky. You’ve started your research career at an opportune time – there are plenty of problems to solve. ○



# Letters from Alumni

life after TI?



## Paul Frijters

The University of Queensland,  
Australia

I am from the class of 1999, when TI was still in the centre of the city of Amsterdam in an old building on the Keizersgracht.

Well do I remember the many nights spent with 'kratjes pils' and 'borrelnoten' as we were all struggling to finalise our PhD theses and be competitive in academia and elsewhere. It was hard work, but since it was also the 'wild west' days of an emerging Internet, when IT oversight was minimal, it was also an exciting period full of communal online games where groups of us would play 'hartenjagen' or compete in one of those first-person aeroplane-shooting games, among a host of other distractions available.

What has life been like for me after that, in terms of personal life? The usual set of things, really. My wife and I now have three kids, two of whom were already born before the end of my PhD days—which seems to me to be the best period to have kids, as one is flexible with time. We moved around a couple of times, from the UvA to the VU, and then to Melbourne, Canberra and now Brisbane, Australia. We now live in a great city in the tropics where life is safe, opulent and relaxed. I spend my weekends having barbeques and bike rides with friends and family. The grass is simply not greener anywhere else.

What about my intellectual life? Well, I basically have pitted myself against every major problem I could find, both physically and mentally. I was research director of a large study into the greatest human stampede ever, which is the move from the countryside to the city in China and Indonesia; I have tried to figure out the political economy of the economic growth we now see in India, and the lack of it in places like Somalia and Zimbabwe; I threw myself at the problem of the unexpected economic collapse in Eastern Europe after the breakdown of the communist trading block; I have tried my hand at building local research groups; I am currently looking at failing nation states; I have researched the causes of happiness, the reasons for the recent increase in mental health problems, the

issue of economic growth take-offs, the Arab spring, the GFC, the optimal reaction to global warming, and so on.

My intellectual life is thus essentially spent trying to figure out the main drivers of individual and aggregate human behaviour, using major problems as sources of data, by which I don't just mean the problems themselves, but also the whole circus of media, 'concerned scientists and commentators' and politics surrounding these problems. And I have used all of my TI training to do this, meaning that I run field experiments, do large-scale surveys, use Google trends alongside longitudinal panels, employ structural models when convenient and old-style OLS when it really doesn't matter, construct simple game-theoretical models as well as large macro-models, engage in participatory observations (that is, I see and watch), and so forth. In terms of giving academics good skill-sets, I owe a debt of gratitude to the Dutch education system, in general, and to TI, in particular.

Oh, I have of course avidly played the publication game, a game that one must play and do well at in academia nowadays. That publication game is a necessary hurdle to get recognition and to pay the mortgage, but I have found it to be somewhat tangential to the much wider agenda I have found of truly trying to figure out what is going on in the world.

In terms of what I am most proud of so far, I can recommend you my main book summarising my current best-guess theories as to how you should read human behaviour: "An economic theory of Greed, Love, Groups and Networks", which just came out in 2013 with Cambridge University Press. Although it's not a quick read, I did have economic PhD students in mind as a key target audience— so 'you had bloody well better appreciate it'! © And if you want to know what else I am up to, read my blogs at [economics.com.au](http://economics.com.au), or follow me on twitter (@FrijtersPaul). The best of luck to all you PhD students and alumni! Do drop me a line if you are in the neighbourhood and I will put an extra steak on 'the barbie' for you!

## papers in journals

### Systemic Risk and Social Networks and Research Output

Good recruitment requires an accurate prediction of a candidate's potential future performance. Sports clubs, academic departments and business firms routinely use past performance as a guide to predict the potential of applicants and to forecast their future performance. However, the use of references and sayings such as "It's not what you know, but who you know" suggest that not only past performance but also social and professional connections matter when forecasting future performance. This paper, which focuses on academic research activity, evaluates the importance of the social network of an individual— as embodied in his or her coauthor relations— in order to forecast his or her future performance. Social networks may reveal information about the potential of a candidate through two different channels: first, the network facilitates the diffusion of knowledge between researchers; and second, the links created by individuals may reflect imperfectly known characteristics, such as ability, sociability and ambition, which facilitate both high productivity and the attraction of co-authors. Our findings indicate that almost 39.5% of the variation in productivity can be explained by past performance; as expected, experience and reputation are important factors explaining the potential of a researcher. Moreover, once a recruiter has information about the past performance of a particular candidate, knowing

the structure of her social networks will improve the accuracy of forecasts about individual output. In particular, the recruiter will be able to predict around 42% of the variation of future output using network and past productivity information. Our results suggest that networks are more useful in predicting the performance of young researchers (that is, individuals without an established publication record) and high ability individuals. Our results suggest that recruiters and promotion committees would benefit from gathering and analyzing information about the social connections of a candidate.

#### Authors

Lorenzo Ductor (Massey University), Marcel Fafchamps (University of Oxford), Sanjeev Goyal (University of Cambridge) and Marco van der Leij (CeNDEF, Uva, De Nederlandsche Bank, TI). *Social Networks and Research Output*, *Review of Economics and Statistics*.

### Sexual Orientation, Prejudice and Segregation

Using the discrimination perspective laid out in Becker's 1957 book, *The Economics of Discrimination*, this paper examines how gay and lesbian workers fare in the labor market. The paper focuses particularly on prejudice-based segregation, and tests whether gay and lesbian workers shy away from 'prejudiced occupations' because of prejudicial attitudes held by employers and fellow workers, and not because of something else.

To obtain empirical evidence on prejudice-based segregation, the study uses an Australian

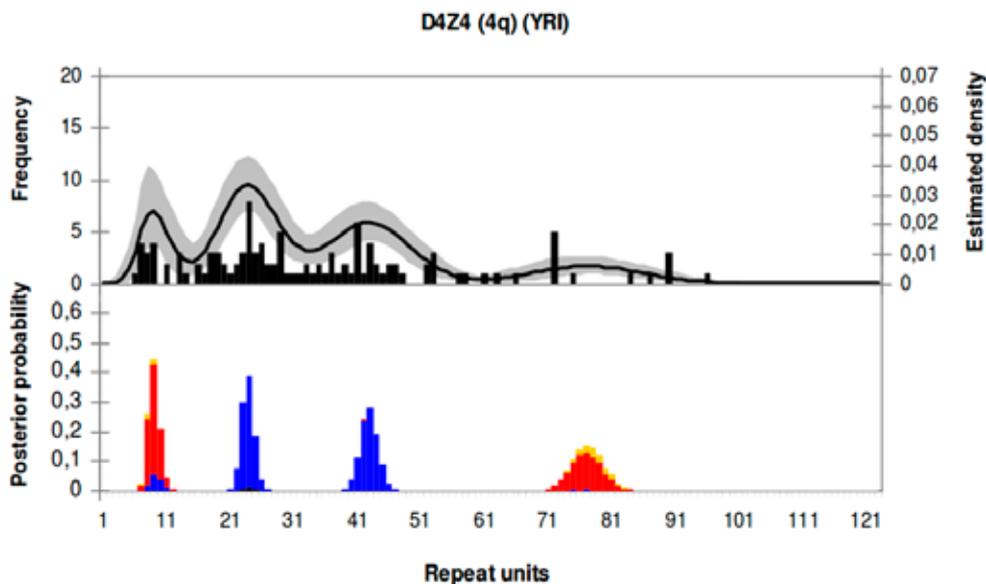
survey in which identical twins were asked about their sexual orientation, attitudes that touch on various aspects of homophobic sentiments, and the type of occupation in which they were employed. Based on prejudice scores calculated for each occupation, we find that gay and lesbian twins sort into more tolerant occupations. Moreover, we find that the choice for tolerant occupations is driven neither by genetic and family background factors, nor by observable characteristics that strongly correlate with productive skills and vocational preferences. We therefore conclude that the sexual prejudices held by employers and employees play an important role in the occupational choices of gay and lesbian workers, in ways that are predicted by prejudice-based discrimination theories.

#### Authors

Erik J.S. Plug (UvA, TI, UCL, IZA), Dinand Webbink (Erasmus School of Economics, TI, IZA), Nick Martin (University of Queensland), *Journal of Labor Economics*, 2013, forthcoming

### Analyzing Genetic Variation

Analyzing genetic variation across individuals is important to gain insight into genetic diseases. Key issues in analyzing such genetic variations are the differences and similarities in the distribution of quantified genetic data and differences in the modes of these distributions. The paper analyzes the genetic information from a large dataset consisting of 210 individuals of Caucasian, Asian and African origin. The genetic information is based on count data of a set of macrosatellite



repeats (MSRs), a specific type of repeated units in the DNA of each individual. In the literature, differences in the distributions of some MSRs, such as D4Z4, are linked to certain diseases. This study is the first comprehensive study of MSRs in different human populations. We find that there are large deviations across individuals in terms of the genetic decompositions, and multiple modes exist in the distributions of MSRs. These deviations are found to be highest among Africans and least among Asians. Future work may shed light into the link between these deviations and genetic diseases. This study contributes to the statistics and econometrics literature in two ways. First, a novel method is proposed to analyze and approximate count data distributions. The method is based on the mixture of shifted Poisson distributions to approximate the possibly non-standard data distribution. Second, the study shows that Bayesian estimation of the proposed model provides several statistics of interest without additional computational costs. The number of modes and the

difference between the modes of different populations can be obtained directly from the estimation results. An example of the estimated density is given in the figure below. The proposed statistical method can be used in studying genetic variation as well as in economic applications with count data. We plan to make the computer program available to facilitate a general use of this novel method.

#### Authors

Mireille Schaap, Richard J.L.F. Lemmers, Roel Maassen, Patrick J. van der Vliet (Department of Human Genetics, Leiden University Medical Center), Lennart F. Hoogerheide (VU, TI), Herman K. van Dijk (EUR, VU, TI), Nalan Ba türk (EUR, and Rimini Centre for Economic Analysis), Peter de Knijff and Silvère M. van der Maarel (Department of Human Genetics, Leiden University Medical Center), *Genome-wide analysis of macrosatellite repeat copy number variation in worldwide populations: Evidence for differences and commonalities in size distributions and size restrictions, BMC Genomics* 2013, 14:143.

### Tournament Incentives in the Field: Gender Differences in the Workplace

Throughout the world, in business as well as in government, men are strongly overrepresented in top positions. For instance, in 2008, only 16% of all ministerial positions worldwide were held by women. We ran a field experiment in a Dutch retail chain consisting of 128 stores, to study gender differences in the reaction to competition among teams of employees, each headed by a professional manager. Using the variation in the gender composition of the teams as well as in the gender of the manager, the paper examines whether female-dominated and female-led teams respond differently to competitive incentives, which were introduced in a random sample of the geographically dispersed teams. The paper also explores possible interaction effects between the gender of the manager and the gender composition of the team. The results suggest that sales competitions have a large effect on sales growth, but only in stores where the store's manager and a sufficiently

large fraction of the employees have the same gender. Remarkably, results are alike for sales competitions with and without monetary rewards, suggesting a high symbolic value of winning a tournament.

#### Authors

Josse Delfgaauw (EUR, TI), Robert Dur (EUR, CESifo, IZA, TI), Joeri Sol (EUR, TI), Willem Verbeke (EUR, ERIM), *Tournament Incentives in the Field: Gender Differences in the Workplace, Journal of Labor Economics*, 2013, vol. 32(2), pp. 305-326.

### Violent Conflict and Behavior: A Field Experiment in Burundi.

Civil wars are sometimes referred to as "development in reverse." They are typically associated with the destruction of physical capital and temporary drops in income. When conflict affects institutions, social organization, or other preferences, it is not obvious that societies will bounce back to prewar income levels. If wars contribute to the erosion of social capital or raise levels of impatience, adverse growth and level effects could eventuate. The opposite could happen when war invites institutional improvements or alters preferences in such a way that savings are encouraged. To shed light on the above questions, this paper used a series of field experiments in rural Burundi to examine the impact of exposure to conflict on social, risk, and time preferences. The findings suggest that conflict affects behavior: individuals exposed to violence display more altruistic behavior towards their neighbors, are more

risk-seeking, and have higher discount rates. Large adverse shocks can thus alter savings and investments decisions, and potentially have long-run consequences— even if the shocks themselves are temporary. These findings shed new light on postwar recovery processes by speaking against overly pessimistic views on the destructive long-term consequences of civil war.

#### Authors

Maarten J. Voors (Wageningen University, University of Cambridge), Eleonora E. M. Nillesen (Wageningen University), Philip Verwimp (Free University Brussels), Erwin H. Bulte (Wageningen University, Tilburg University), Robert Lensink (University Groningen, Wageningen University), and Daan P. Van Soest (VU, CentER, Tilburg University), *Violent Conflict and Behavior: A Field Experiment in Burundi. American Economic Review, 2012, 102(2): 941-64.*

### From Baghdad to London. Unraveling Urban Development in Europe, the Middle East and North Africa, 800-1800

In 800, the Islamic World was, in virtually all respects, more advanced than Europe. In the following centuries, however, development in the Islamic World stagnated, whereas Europe slowly closed the gap, eventually overtaking the Islamic World to become the most urbanized, developed region in the world. This paper focuses on this reversal of fortunes. Although several hypotheses have been put forward that explain the rise of Europe and the stagnation of the Islamic World, attempts to back up these

hypotheses empirically are few. This is where the main contribution of the paper lies. We collected a large new data set covering a wide range of city-specific characteristics for about 800 cities in Europe and the Islamic World over the period 800 to 1800. The data were used to shed empirical light on the relevance of different prominent explanations for the two regions' divergent long-term development.

In a nutshell, two defining differences were found between the two regions that help to explain their reversal of fortunes.

The first is their different choice of main transportation mode. In the Islamic World caravan-trade was most important. In the long run, however, possibilities for efficiency gains in the caravan-trade (i.e. camels) were low. In Europe, most trade was water-borne. There, innovations in shipbuilding, and sailing and navigation techniques, resulted in huge productivity gains. This led to the eventual dominance of European nations on the main trade routes.

Second, the two regions' institutional differences stand out. In the power vacuum following the demise of the Carolingian Empire, cities in Europe developed forms of local participative government (parliaments, city states and so forth) that, in the most successful regions, survived the rise of the nation state. This contrasts sharply with the Islamic World, where power was always concentrated in a few large states. Not surprisingly, development heavily concentrated in the few capital cities only. Europe's much more state-independent institutional environment was more

conducive to investment and the adoption of new technologies, contributing to its economic rise.

#### Authors

Maarten Bosker (EUR, CEPR), Eltjo Buringh (Utrecht University), Jan Luiten van Zanden (Utrecht University, University of Groningen). *From Baghdad to London: unraveling urban development in Europe, the Middle East and North Africa, 800-1800. The Review of Economics and Statistics.*

## discussion papers

### Climate Skepticism in the Face of Catastrophe

Despite overwhelming scientific evidence for manmade climate change, many people remain skeptical. While climate-skepticism prevents implementation of environmental policies around the globe, it is ignored in economic models of climate change. This paper fills this gap by modeling policymakers with varying levels of skepticism facing a climate change catastrophe. The paper has three main findings. First, when potential damages are catastrophic, even a completely climate-skeptic policy does not result in unbounded climate change, because of the adverse effect on capital and thus the economy generated by a fully climate-skeptic policy. Second, the additional long-run expected increase in temperature resulting from a fully skeptic policy is over 6 degrees Celsius (compared to an increase of 1.5 degree under the optimal climate-aware policy). Finally, moderate



inShort

skepticism (a belief that climate change may be manmade, but isn't necessarily) leads to emission cuts that are still fairly stringent. Thus, even a policymaker who believes that there is a 10 percent chance that climate change is manmade will prefer to cut emissions by over 50 percent leading to a temperature increase of just 3 degrees Celsius.

By Mark Kagan (VU), *Climate Skepticism in the Face of Catastrophe, TI12-112/VIII*

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### Behavioral and Experimental Economics

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Eight themes distinguish Tinbergen Institute's research program:

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- II. *Finance – FIN*
- III. *Labour, Health, Education, and Development – LHED*
- IV. *Macroeconomics and International Economics – MIE*
- V. *Behavioral and Experimental Economics – BEE*
- VI. *Organizations and Markets – OM*
- VII. *Spatial, Transport and Environmental Economics – STEE*
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Tinbergen Institute offers two research master tracks (MPhil): one in Economics and one in Econometrics. Due to the demanding nature of the programs, the MPhil programs are open only to a rigorously selected group of students. An excellent preparation for PhD thesis research, the MPhil programs are connected to three-year PhD positions in the economics departments of Erasmus University Rotterdam, University of Amsterdam, and VU University Amsterdam.

The research master program has been accredited by the Dutch and Flemish Accreditation Organization for higher education (NVAO), and eligible students can claim two years of financial aid ("studiefinanciering"). In addition, Tinbergen Institute allocates scholarships each year based on academic merit. Detailed information on the institute's graduate program and the application procedure can be found in the Graduate School section of [www.tinbergen.nl](http://www.tinbergen.nl). Please send any questions to [applications@tinbergen.nl](mailto:applications@tinbergen.nl).

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# hora est PhD Corner

Q&A with new PhD: Grega Smrlkolj

## Dissertation title “Dynamic Models of Research and Development”

### What was your highlight of your time as a PhD student?

It struck me the other day that during my studies here I've gotten to know over a hundred new people. Being involved in the Students Council and in organizing all those social activities was a good idea. Also, travelling to conferences all around the globe, from the USA to Australia, on university funds, was one of the most exciting parts of my PhD.

### What was your biggest blooper?

Well, when I started my PhD I thought my research papers would move mountains. It was a bit disappointing to see that the normal state of the things is that each paper makes a tiny contribution and I should be happy if a few people in my narrow field read my papers. But I tell you, I still haven't given up on this one!

### What should you have known before you started?

The only thing I have continued to regret is that I did not do more math before starting with my MPhil, or PhD. It's not just knowing theorems, but also having a mathematical way of thinking, which takes time. Working in economic dynamics, I'm constantly facing problems that require an understanding of some theorem for which I would first need to study five other books to really grasp. And once you are teaching, working on your papers, and you are amid all this hustle and bustle of the university life, it is much harder to just take time and study a few books.



### What's your tip for MPhils or new PhD students?

My advice is to try your best to have a single-authored job market paper, as coauthored papers are regarded less highly in the market. Work hard in the beginning to have a first working paper soon, and then go present it at conferences and get to know as many people as possible in your field. Connections do matter a lot! Try to involve some prominent researcher into one of your papers— good recommendations can open many doors. Also, the first year of the MPhil is not a good time for making any escaping decisions. It sucks big time, but note that later you will be completely free to pursue whatever topic in economics you wish. In that first year, just keep moving!

### What's next?

This year I'm taking up a job at the Newcastle University Business School. As my research is currently focused on how firms handle innovation and imitation, I look forward to benefiting from the school's good links with industry.



## David Smerdon

**Economics was not my first passion; for as long as I can remember, I have been fascinated by the game of chess. In fact, I even considered making it my full-time profession before I joined the TI programme.**

In 2009 I became Australia's fourth chess grandmaster, which gave me the opportunity to use the game to see a bit more of the world. I've been lucky enough to compete in international chess events in over forty countries, and last year I had the opportunity to captain Australia in the World Chess Olympiad in Istanbul. In a similar way to economics, chess offers complexities and challenges, and I particularly enjoy the battle of wits that comes about from competing strategies over the same set of pieces, regardless of a player's age, gender or background. No wonder almost a billion people can play it! Unfortunately, another similarity of chess to economics is that, at the highest levels, its pursuit demands essentially full-time dedication. Academic life has meant that I have had to seriously curtail studying and playing chess, but I still keep involved in the chess world in less exhausting ways, such as chess commentary and writing chess articles and books. And of course, organising the Tinbergen Chess Championship and the TI-DSF Chess Battle!