Colophon

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On the cover:
Professor Angus Maddison (6 December 1926 - 24 April 2010) was one of the founders of the Groningen Growth and Development Centre (GGDC). The GGDC celebrated its 25th anniversary with an international conference in Groningen in June 2017. This portrait is part of the collection of the University Museum.

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Yingjie Yuan accepted a position as Assistant Professor in Management and Organization Psychology. “I see a fit between myself and Groningen both in terms of research topics as well as the city itself.”

SOM Awards 2016-2017

On September 1, 2017 during the Next Step Festival to celebrate FEB’s 10th anniversary SOM’s director Gerben van der Vegt presented the 2016-17 awards for Outstanding Junior Researcher and for Outstanding Researcher.
Outstanding Researcher
Tammo Bijmolt, professor of marketing at FEB was awarded 2,500 euro by the SOM Board for his overall performance. Tammo Bijmolt has numerous publications in top journals, has supervised 12 PhD theses and co-organized the 2017 EMAC conference in Groningen. As the former director of SOM he significantly contributed to the further development of the research infrastructure at FEB.

Outstanding Junior Researcher
The 2,000 euro prize for junior researcher was awarded to John Dong. He obtained his PhD degree in 2014, and he already published three articles in top journals. He is also associate editor of Decision Support Systems.

The other two nominees were FEB researchers Francesco Cecchi and Ward Romeijnders.
Providing the world with data for 25 years

From left to right: Eddy Szirmai, Bart van Ark and Marcel Timmer. In the front Rainer Fremdling.
The Groningen Growth and Development Centre (GGDC) was founded in 1992 within the former Economics Department of the University of Groningen.

Originally, it was set up by a group of researchers working on comparative analysis of economic performance over time and across countries in the tradition of Angus Maddison. More recently, it has grown into a research centre that studies the interactions of globalisation, technology and institutional change, and its impact on long-run economic growth, structural change, productivity and inequality.

The GGDC provides unique information on comparative trends in the world economy in the form of easily accessible datasets, along with comprehensive documentation. These data are made publicly available, which enables researchers and policy makers from all over the world to analyse productivity, structural change, and economic growth in detail. This includes the Penn World Tables, the World Input-Output Database (WIOD) and the Maddison Historical Statistics.

An important aim of the GGDC is to carry out, and encourage, new empirical research that is innovative and at the same time policy relevant. This is done through the GGDC’s own research, by compiling comprehensive databases for public use and submitting (joint) proposals to finance collaborative research in this field. International cooperation is key given the comparative nature of the research. The centre also organises seminars, summer schools and conferences, such as the annual Maddison lecture series.

The GGDC consists of a dedicated group of senior and junior staff members, PhD students and support staff, with a large collaborating network of local, national and international affiliates. Its current director is Marcel Timmer.

GGDC timeline 25 years of successful international collaborative research

- 1992 The Groningen Growth and Development Centre founded by Angus Maddison, Rainer Fremdling, Eddy Szirmai and Bart van Ark.
- 1992 International Comparisons of Output and Productivity (ICOP) project. Results are used by academics and international organisations such as McKinsey, OECD and ILO.
- 1993 International conference with proceedings published as “Explaining economic growth: Essays in honour of Angus Maddison”: Adam Szirmai, Bart van Ark and Dirk Pilat (eds.).
Dirk Pilat is Deputy Director of the Directorate for Science, Technology and Innovation at the OECD. Prior to his work at the OECD, he earned his PhD in economics in 1994 at the University of Groningen. He spoke at the GGDC Conference 2017 on the OECD’s work on productivity and global value chains, and how the organization cooperates with the GGDC.

How have you used GGDC data in your work?
“There has been cooperation between the GGDC and the OECD for many years. We are users of the databases, particularly of the World Input-Output Database but also of the KLEMS database, but we are also developing our own databases in a slightly different way. We are often in friendly competition with the GGDC, that also involves much cooperation.

There is quite a bit of work at the OECD using data and analysis from GGDC. That’s partly because the GGDC is one of the few places in the world, together with the OECD, where this type of data is being developed. Many universities don’t do much work on databases, because they think it’s too time consuming. It is great that GGDC is doing this. It’s important because a good evidence base and databases provide insights on issues that many countries are dealing with, often offering a new angle on it.”

Can you give an example of how GGDC data has been useful?
“WIOD is a good example. Until not long ago, people thought imports were bad and exports were good. However the discussion of global value chains makes clear you need imports in order to have exports. The Apple iPhone is assembled in China, but a lot of the inputs come from other countries. If we just look at the exports from China we are getting the wrong
picture of who is creating value and who are the biggest players. That's why it's important to know what's really going on in global trade, and the World Input-Output Database allows us to do that. It's the kind of work that has helped to change thinking in these areas and what we need to do for trade. It shows the interconnections between countries, how we depend on each other. WIOD gives a much better picture for policymakers, to allow them to figure out what they need to do. The work on productivity is also very important. Productivity is a very big issue on the policy agenda in many countries, as many are struggling with low productivity growth. The more we know about it the better we can address it."

**Could you describe the reputation of GGDC in the economics research community?**

"I think GGDC has a good and growing reputation. There's a lot of appreciation here at the OECD for what is done at the GGDC, and it's a source for a lot of ideas. For the OECD, GGDC is one of the few organisations that is doing similar work to us. We can compare experiences, and it's very useful for us that GGDC is also doing this kind of work. I think the work speaks for itself, a lot of people are using the data and are aware of the data. GGDC is also bringing in other data like the Penn World Tables, which is an opportunity to make its work known to others and put GGDC even more on the map. The data itself speaks for itself, but the analysis that's done with it can further help advertise the work."

**How did your experience as a researcher in Groningen help your future career?**

"I partly ended up where I am at the moment coming from Groningen because I was working with Angus Maddison. Angus had worked at the OECD for 25 years and encouraged me to apply. Many things I learned in Groningen have been helpful for me: the importance of data, evidence and empirical analysis; the value of cross-country analysis, which is something we are doing a lot here at OECD - where Angus received some of his inspiration. I sometimes run into people who started in Groningen, who also have this basis. For example, I was at a conference in Valencia on the role of IT in productivity in 2005 with four speakers who studied in Groningen. Bart van Ark was one of them, and the two others worked at the European Commission and the European Central Bank. I think this shows the type of basis Groningen can give you: being evidence based and not too theoretical in your work."

**What should the GGDC focus on more in the future?**

"I think there are some areas where we’re doing things that complement what GGDC is doing. For example, micro data from statistical offices can provide more detailed insights. That could be something to develop, but that’s a choice to be made. There are always more extensions to the data that are possible. The question is whether to broaden the databases or deepen work in some specific areas. Perhaps there could also be more connections between different areas: such as between productivity and global value chains and also with the historical work. There’s a lot of good work going on, and the issues that GGDC has long been working on are becoming more and more important. Some of these areas were once only niche areas. Until 10 years ago no one spoke about global value chains, but now they are a really hot topic. With the discussion on global trade heating up in many places, these are areas which are going to be ever more important."

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**2010** The Maddison Project begins. Initiated by a group of close colleagues of Angus Maddison, the project aims to continue Maddison’s work on measuring economic performance in the world economy.

**2011** Start of Angus Maddison lecture series, bringing leading scholars from around the world to Groningen to present on major topics of economic history, growth and development.


**2013** Release of the next generation of the Penn World Table, PWT 8.0 by GGDC in collaboration with Robert Feenstra and Alan Heston, funded by US NSF. The most consulted macro database in economics, and underlying research is published in the American Economic Review.

**2013** Project on African growth with Dani Rodrik and Maggie McMillan funded by UK DFID. The Africa Sector Database (ASD) is released, providing a long-run internationally comparable dataset for eleven Sub-Saharan African countries from 1960 onwards.

**2013** NWO VICI grant awarded to Herman de Jong: “Pessimism and prosperity. The welfare paradox of interwar Europe in a global perspective”.

**2015** NWO VICI grant awarded to Marcel Timmer: “Modelling Global Value Chains: a new framework to study trade, jobs and income inequality in an interdependent world.”

**2016** Latest version of Penn World Table, PWT 9.0, released, reaching more than 1,000 citations on Google Scholar.

**2016** More than 300,000 website visits reached for GGDC in one year.

**2016** Wallenberg Academy Fellowship to Jutta Bolt.

**2017** Silver jubilee international conference in Groningen.
Robert Feenstra is a Professor at the Department of Economics, University of California, Davis, and holder of the C. Bryan Cameron Distinguished Chair in International Economics. He gave a keynote address on 'The 'China Shock' in Trade Reconsidered' at the GGDC Conference 2017, marking 25 years of the centre. Feenstra works closely with FEB’s Robert Inklaar and Marcel Timmer on producing the Penn World Table. He explains the importance of the work of the GGDC and its reputation in the scholarly community.

How have you used GGDC data in your work?
I am more of a producer of data for GGDC than a consumer, because I collaborate with Robert Inklaar and Marcel Timmer on the Penn World Table (PWT). Since PWT version 8.0 was released in July 2013, the GGDC at Groningen and my complementary work at the University of California, Davis, have been the source of the PWT database. I use these data myself when doing work on China, and when computing the quality-adjusted prices in international trade that feed into the calculation of new variables in the PWT database.

Could you describe the reputation of GGDC in the economics research community?
The GGDC is well-known, of course, for the historical work of Angus Maddison and for the work by many faculty dealing with the measurement of sectoral productivity across countries. By taking over PWT from one of its originators, Alan Heston at the University of Pennsylvania, the GGDC is extending this work in both historical and productivity comparisons. With Robert Inklaar and Marcel Timmer, we have improved the measurement of real GDP across countries by introducing real GDP on the expenditure side and on the output side. These two distinct concepts are important for research in macroeconomics. Real GDP on the expenditure side is what has traditionally been measured by PWT, reflecting the cost of obtaining final goods. Real GDP on the output side is what you would end up with if you were able to measure the real value-added of each and every sector in the economy, and then add this up across sectors. But it is too difficult to make that calculation for all countries. So we take a short-cut by using countries terms of trade (i.e. quality-adjusted prices of exports and imports) to measure the difference between real GDP on the expenditure side and on the output side, and then basically infer the latter using data on the former and on the terms of trade.

In addition, the new methods used in PWT can be pushed back in time to “rebase” the calculations of Maddison for early periods, as done in recent work by Jutta Bolt, Robert Inklaar, Herman de Young and Jan Luiten van Zanden. I believe that economic historians will embrace these new calculations.

Is there a particular data point from GGDC data that you remember as illustrating an important trend?
According to PWT 9.0, the real GDP of China exceeded that of the United States in 2014. That is more of a milestone than a trend, and it will not be reversed.

What research that has come out of GGDC do you think is particularly valuable?
Well, I think that that PWT is very valuable, of course. This dataset was developed in the 1960s by work at the University of Pennsylvania, and it therefore pre-dates the recent trend towards randomized controlled trials (RCT) in development economics. Naturally, the PWT data cannot answer the same questions as can RCT, but the PWT data is better able to give an overview of the living conditions and productivity across countries. A friend of mine from graduate school, Steven Radelet, has recently used the PWT data in The Great Surge: The Ascent of the Developing World (Simon and Schuster, 2015) to argue persuasively that the developing world is better off today than at any time in the past.

Can you think of a milestone in the history of the GGDC?
I was fortunate to attend the 25th anniversary conference in June 2017, and that was a milestone and a gala event!
**Interview**

**Ingvild Almås**

Ingvild Almås is a professor at the Department of Economics, Norwegian School of Economics (NHH), and currently a visiting associate professor at IIES, Stockholm University. Almås’ research is mainly focused on gaining a better understanding of economic inequalities. She delivered a paper on ‘Consistent international comparisons with heterogeneous tastes’ at the GGDC Conference 2017.

**How do you use the GGDC data in your work?**

I have been following the latest round of the Penn World Table most closely. It provides a research base, it’s super good for research to use the Penn World Table and I think is a big improvement. I teach it in my courses and use it sometimes in my research.

The parts of the data I work with are highly regarded among researchers. The Input-Output database and the productivity data are well regarded, and the Penn World Table is used in many research papers. The historical tables are the only data we have on the historical period so that's a very valuable resource.

What I have found useful in my teaching and reference in my own work is the American Economic Review paper by Robert Feenstra, Robert Inklaar and Marcel published two years ago on The Next Generation of the Penn World Table.

**What is the value of having historical economic datasets?**

This is hugely important. We can have lots of nice theories and have lots of nice thoughts but if we can’t quantify it with data it’s not very reliable. Only once you can confirm what you think and what the theory says with the real data can you have a real impact and conclude on development. I think that the key to understanding economic development is to have data.

**How does this relate to your own work?**

I work on microdata, so in my own work I would push for the use of other data sources. I have been critical towards national datasets: think they are very aggregated and there could be many problems with the data. But even so, I think it’s hugely important to have data. Many of the papers that are written on economic history wouldn’t have data at all. So it’s a huge improvement from that.

What I have been trying to push in my own work is to ask households and ask individuals how well off they are. We have historical data on microdata as well, which would report individual or household levels on how well off people are. I think a combination of that with more national accounts based data is a promising route to take.

**Could there be a way to integrate both approaches?**

If you want to have comparisons that are consistent with both economic theory and how we know people behave from microdata, you need to go to micro sources because if you only use aggregate data you wouldn’t be consistent necessarily with individual behaviour, individual consumption and individual choices. So there is something you lose when you use very aggregated data.

**How was the GGDC conference 2017?**

I enjoyed the conference very much. What was new to me was to interact with economic historians, and I found that very useful. It was very nice and we felt that it was a celebration, and I got an impression of the GGDC and what is going on there. It was informative and very nice. I would like to thank the organisers for such a nice conference.
New in Groningen
Assistant Professor
Yingjie Yuan

rug.nl/staff/yingjie.yuan/
After spending time in the Netherlands for her PhD, Yingjie Yuan spent several months at Penn State University, only to come back to the Netherlands. She accepted a position as Assistant Professor in Management and Organization Psychology and started her tenure track in 2016.

Why did you choose Groningen?
“I gladly accepted the offer based on the fit I see between myself and Groningen both in terms of research topics as well as the city itself. From journals, conferences, and seminars I have learned about research interests of the HRM/OB group in Groningen – teams, creativity and innovation, diversity, and information processing. What appealed to me was not only the fit between my research interests and those of the HRM/OB faculty, but also the high quality of research in this group – as reflected in the publication outcomes. And Groningen as a city is attractive to my husband and me due to its green urbanism. We both love nature and in Groningen we find all the urban facilities we need and many “green spots” in and around the city.”

Could you tell us more about your career so far?
“Before I joined FEB, I completed my PhD study at the Rotterdam School of Management, where I finished my dissertation on the emergence of team creativity from the composition of individual creative sources embedded in network structures. In 2015, I visited Pennsylvania State University for 4 months. Before that, I received my master degree and two bachelor degrees in China. As a result, I have a diverse network of coauthors from different countries – Netherlands, US, and China.”

Your position is in Management and Organizational Psychology. What issues are dealt with in your research?
“In the past years, my research has dealt with one general issue: how do individuals, particularly star individuals (i.e., the most creative members in teams), shape team processes and outcomes? I mainly use a social network perspective to answer this question. For example, my PhD studies examined how star individuals embedded in team networks determine team creative outcomes and how centralised leaders embedded in team networks shape team processes and performance. My current research includes two different streams: One is to examine individual-team dynamics at the team level by looking at how network dynamics facilitate/hinder star individuals in teams and how this impacts team decisions. I also extend this question to the corporate level by examining the dynamics of top management teams and its impact on corporate decisions such as interfirm alliance. The other research line is to explore individual-team dynamics at the individual level. Research questions include what and how individuals gain from engaging in such team dynamics, for example, working with star employees.”

And how about societal relevance?
“Whilst team research has contributed substantially to the stimulation and management of collective processes, leveraging and managing the role of “extreme” individual inputs such as star employees is of vital importance for organisations. My research helps managers to understand how they might deal with star individuals in teams. For example, my study on the impact of creative stars has generated actionable insights in how practitioners may strategically and efficiently allocate their resources to stimulate team creativity. For instance, in order to optimally utilise the potential benefits of creative stars, it is important to couple them with good team players who recognise and disseminate the star member’s inputs rather than team members who mix all dispositional opinions for a middle-ground solution. Linking to prior research findings, this therefore indicates different strategies of resource allocation: either relying on the disproportionate impact of star employees or depending on the teamwork effect that synergises all members’ inputs.

My study on leaders and their impacts suggests that practitioners should adjust the role of leaders to the size of teams and the nature of central positions. Small teams have little need for coordination, and leaders who play a prominent role in these teams’ advice-giving network lower team performance because this hinders the subordinate collaboration. Larger teams, by contrast, do call for more unitary coordination from central leaders. As I extend this line of research, I hope to uncover what and how team members may benefit from engaging in team dynamics such as working with star employees.”

What can we expect of you in the future?
“I hope to extend the societal relevance of my research. I presented my research at various international conferences including the Academy of Management, the Interdisciplinary Network for Group Research, the International Network for Social Network Analysis, and the International Association for Chinese Management Research. Some of my papers are in the revision processes at top-tier journals in the management field.

I also endeavour to communicate and apply my research findings to managerial practice through working with companies who are interested in my research questions. For example, in the project of creative stars in the Chinese bakery chain group, I discussed my findings with corporate managers to resolve managerial issues. By showing them the diagnosis result of team dynamics and its relationship with team creative performance to the management team, I provided suggestions on how to better stimulate team collaboration and foster higher creative performance of teams. Besides, given my cross-cultural background, I am looking forward to bringing in more collaborative opportunities with different research groups in the form of joint projects.”
Joining forces to delve into an academic goldmine
A good bottle of wine with an unusual label stands proudly on the table. It says ‘Cheers!’, followed by a summary of an academic article. The message couldn’t be clearer. Marijke Leliveld and Hans Risselada have something to celebrate. Their interdisciplinary research into the dynamics of our charity donation behaviour has earned them a more than respectable open access publication in Science Advances. About biking on Schiermonnikoog, shining in a top-class journal and a unique, exciting partnership.
A good cause or your own wallet? Insight into the dynamics of our donation behaviour

Participants of a research panel are rarely inclined to donate the financial reward for their efforts to a good cause. Marijke Leliveld and Hans Risselada researched 300,000 decisions by 20,000 individuals who were given the choice after completing a questionnaire whether to keep the financial reward themselves or to donate it to a good cause. This data is unique because it contains details covering a ten-month period during which participants completed several questionnaires and thus had to regularly choose between a good cause or their own wallet. Leliveld and Risselada’s research throws new light on the question of how previous decisions and the amounts at stake influence future donation behaviour.

First, Leliveld and Risselada found that no less than 89% of the researched participants always chose to keep the reward in their own pocket. Moreover, they ascertained that the people who sometimes donate and sometimes decide to keep the money themselves (known as ‘switchers’) also do not often change their minds. All of this is in line with moral consistency literature. However, they also found some evidence for moral licensing. If people had decided to donate the previous time, the chances of them choosing to keep the reward themselves this time increased if the amount they earned this time was higher than for the previous questionnaire.

Leliveld remembers every detail. She nearly fell off her chair when Steven Noordam, director of Kien market research bureau, unknowingly revealed an academic goldmine during his presentation. ‘He came to our Customer Insights Centre to talk about his company’s database. He just sort of mentioned that all the decisions that his panel members make about whether or not to donate had been carefully recorded. Over a very long period. I could hardly contain my excitement. All I could think was: MINE!,’ laughs Leliveld. ’I made an appointment with Steven and raced over to Hans: “If we get hold of that data, I’m going to need your help”. I’m useless with a dataset like that, and so our partnership was born.’ Risselada laughs: ‘Steven didn’t understand our excitement at first, but we were itching to get our hands on the data. Quantitative marketing, working with big datasets; that’s right up my street.’

Social psychologist Leliveld has an entirely different field of expertise and background. “In practice, these are fairly different worlds, even within the same marketing department. My focus is on consumer behaviour and I do a lot of experimental research in the lab here at the Faculty. I use different methods and read different academic journals from Hans, who deploys more econometric strategies.”

Eroding the language barrier

“The tricky part for Marijke was that our research was now based on historical data. For her, this was a different basic premise from working in a lab where you are pretty much in control. But we managed to get onto the same page so we could eventually analyse the recognizable aspects of consumer behaviour theories in this amazing dataset. Our joint quest also generated some very interesting discussions, for which we had to translate the language of experiments, which is new territory for me, into the language of my field,” says Risselada.

“I often had to explain exactly what I wanted to know so that Hans could understand and turn it into a sort of formula. Using theory from my field, we were able to make a number of predictions, and then Hans did his magic. “Can we test that?”, I’d ask, and we usually could. That made things a lot easier”, says Leliveld.

“We had to trust each other’s expertise’, adds Risselada. And that can be a bit weird, because it means that there are parts of the joint research project that you simply don’t understand.’ Leliveld: ‘I still find the interaction terms in the paper very complicated. I understand them, but usually only if Hans explains them first. In the end, we were both able to present the entire research project at conferences in our own field without batting an eyelid, but we sometimes needed to check with each other first. We’ve learned so much from each other.”

Taking a risk

The researchers would like to stress that although obviously very useful, a new interdisciplinary partnership like this is not all plain sailing. Risselada: “The structure of the articles in the two fields is very different. This forms a risk. We both want to shine in our own top journal, but this is almost impossible. To be blunt, we’re judged by our output in marketing journals. Aiming for interdisciplinary publication in a ‘science’- type journal means taking a risk. There aren’t very many journals in this category and I’m not familiar with the way the articles are arranged.”

Leliveld: “This style of writing was new to both of us. We had to go back to basics, back to the essence of our fields. In your own field, your colleagues know exactly what you mean. That’s very different in an interdisciplinary partnership. Having said that, it was the perfect opportunity to publish in a general
Leliveld and Risselada published their research in Science Advances, the Open Access version of the renowned journal Science. “We were both determined to publish in Open Access. It’s the way to go at the moment”, says Leliveld. “Mainly because our research was partly funded by my Veni grant, but also because both of us are paid with tax-payers’ money. I already had some experience of Open Access publishing with PloSOne and Frontiers in Psychology. One of the advantages of publishing online in Science Advances is that there are fewer restrictions, on the length of the article, for example. Also, it’s great to be able share your research so easily and raise your profile by being visible in Google, for example.”

Admittedly, Open Access publishing isn’t a matter of course (yet). Risselada: “We noticed that it’s still quite a new thing at the UG. Within a couple of weeks of submitting our paper, we were sent a huge bill. It was a lot of money, and it took a lot of time and effort to get everything sorted out. At the same time, it’s valuable experience. We wrote our article in fairly simple language, so it can used for workshops in companies or charity organizations.”

Another bonus: the research is attracting plenty of attention. “The statistics show that a lot of people are downloading and reading our article. There seems to be a steady flow”, says Leliveld. “This is largely due to the type of journal, as well as the Open Access character. Science Advances is widely read, so it reaches more people than a trade journal aimed purely at marketeers or purely at social psychologists. Another advantage is that the publication appeared very soon after we’d finished our research, whereas it would normally take up to 18 months. This is a very clear difference between Open Access and “normal” publishing.”
FEB researchers Artūras Juodis and Ward Romeijnders of the Faculty of Economics and Business have both been awarded a Veni grant as part of the Innovational Research Incentives Scheme run by the Netherlands Organisation for Scientific Research (NWO). The personal Veni grants are worth up to a maximum of €250,000 and enable talented researchers who have just completed a PhD to conduct research of their own choice.

**Name: Ward Romeijnders**  
**Position: Assistant Professor of Operations**

**Planning for the unknown**  
**Towards optimal decisions under uncertainty**

**Research**

"Many practical decisions have to be made before key information is known. For example, network operators have to make investments in the electricity grid while future costs of capital and future supply in renewable energy are uncertain. Decision support is required for such problems, also in healthcare, logistics and engineering. However, this support is only available to a limited degree because of the high complexity of the underlying mathematical optimisation problems. Such so-called stochastic mixed-integer optimisation problems are extremely difficult to solve since they combine the difficulties of having integer decision variables (i.e., discrete or yes/no decisions) and uncertainty in the parameters of the problem. Traditional solution methods combine solution approaches from deterministic mixed-integer and stochastic continuous optimisation, but are generally unable to solve practical problems of realistic sizes. Even simplified, deterministic versions of these problems are challenging since they are not convex, and thus efficient solution methods from the well-developed field of convex optimisation cannot be used to solve them.

Interestingly, however, my recent work has shown that stochastic mixed-integer optimisation problems are (approximately) convex. Thus, from a "convex" perspective, these stochastic problems are easier to solve than their deterministic counterparts. In this sense, the introduction of uncertainty to mixed-integer optimisation problems overcomes the difficulty of having integer decision variables. The aim of this project is to design fast solution methods for stochastic mixed-integer optimisation problems, exploiting this new and exciting perspective and building on my previous work. The newly developed solution methodology will be validated by applying the developed method."

**The biggest challenge of this research**

"Designing fast and efficient solution methods that are able to solve multistage stochastic mixed-integer recourse models in which decisions have to be made in multiple time stages and information only becomes available gradually over time."
“We live in an open and interconnected environment, where no “bubble” protects us from constant changes. For example, the key country level economic variables (e.g. interest rates) are subject to global economic shocks (trends), thus countries cannot be studied in isolation. Common economic shocks also affect decisions made by individuals, e.g. occupational choices. As these shocks cannot be measured perfectly, appropriate procedures accounting for them have to be used in empirical analysis.

Fortunately, given that countries and individuals can be observed over multiple years, it is natural to analyse data of this type as double index (panel). The unobserved characteristics are then captured by using unit/time specific parameters. However, as the number of parameters increases with the sample size, the statistical analysis becomes challenging.

The literature on this topic has seen a major development in the last decade, especially after the Great Recession. But most of the procedures are developed assuming correct empirical specification, which is overly simplistic for complex economic data. In this project, I study how costly the relaxation of this assumption is, i.e. what kind of conclusions can be drawn in misspecified models? And are they of any relevance for policy makers and the society at large?

The theoretical arguments leading to the answers are established in several steps. At first, I investigate the sensitivity of already available procedures when some of the underlying assumptions are violated. Later, I suggest a set of new statistical approaches that are less sensitive to misspecification.”

“The biggest challenge of my project comes from the (statistical) theoretical aspects of this research topic. The current state of the art mathematical toolkit used by panel data researchers is not rich enough to cover all of the situations I want to study. More importantly, at this stage of the project it is unclear whether necessary (or sufficient) conditions are likely to be satisfied in data structures micro and macro economists are interested in.”

Name: Artūras Juodis
Position: Assistant Professor of Economics

We do not live in a bubble: economic shocks in misspecified panel data models
In the past months, several FEB researchers have been appointed to various positions and grants were obtained.

Grants

NWO grant for research on large-scale infrastructure maintenance
A consortium led by FEB professor Dirk Pieter van Donk has been awarded an NWO grant worth EUR 500,000 for research on how to improve large-scale infrastructure maintenance and renewal projects. The research proposal is a joint project of Van Donk and FEB researchers Dr Peter Essens, Professor Gerben van der Vegt, Dr Kirstin Scholten, Dr Bram de Jonge and Dr Thom de Vries. The project illustrates the interdisciplinary approach within FEB’s Collective Resilience signature area. The external partners in the consortium are water company Vitens, Schiphol Airport, energy network company Alliander and the Port of Rotterdam. NWO and NGinfra are funding the research from the Next Generation Infrastructures, Responsive Innovations scheme. The grants will fund two PhD research projects into ‘joint maintenance planning models’ and ‘multi-stakeholder coordination and collaboration’.

VENI grants for Artūras Juodis & Ward Romeijnders
FEB researchers Artūras Juodis and Ward Romeijnders have both been awarded a Veni grant as part of the Innovational Research Incentives Scheme run by the Netherlands Organisation for Scientific Research (NWO). The personal Veni grants are worth up to a maximum of € 250,000 and enable talented researchers who have just completed a PhD to conduct research of their own choice. Read more on their research on page 16-17 of this issue.
Awards and Prizes

Class Maintenance Award for Minou Olde Keizer
Former FEB PhD candidate Dr Minou Olde Keizer has won the 2017 World Class Maintenance (WCM) Award for the best PhD thesis in the field of maintenance. WCM is a network organization promoting 'smart maintenance' in Dutch industry. The WCM jury was enthusiastic about Olde Keizer's research on maintenance strategies for complex systems.

Olde Keizer gained her PhD in December 2016 for research on the optimization of maintenance and logistics in the processing industry, with a focus on condition-based maintenance (CBM). Her PhD research, supervised by Prof. Ruud Teunter and Dr Jasper Veldman has already generated four scientific publications.

Laurens Sloot named Food Manager of the Year
FEB professor Laurens Sloot was selected from a shortlist by a jury of previous Food Managers of the Year, including Gerard van Dulmen, the director of Superunie, and Sander van der Laan, CEO of Action. "We see Laurens Sloot as an industry expert who is able to advocate the opportunities and threats facing the food industry to an audience beyond our sector," the jury's judgement read. "He does this consistently in a thoughtful and considered way, with full consideration for the market stakeholders that he analyses in his work." The jury also praised Sloot's work as academic director of the EFMI Business School, saying that he had managed to develop it into "flourishing knowledge institute and training hub for the sector". The Food Manager of the Year award is an initiative of FoodPersonality magazine, a monthly publication for the supermarket sector.

MOA Wetenschapsprijs for FEB Researcher Tammo Bijmolt
FEB researcher Tammo Bijmolt, together with former PhD candidate Alec Minnema and former colleague Sonja Gensler of the University of Münster, have won the MOA Wetenschapsprijs [Science prize], awarded by the MOA Center for Information-Based Decision-Making & Marketing Research. The marketing experts received the MOAward 2017 for their article 'Oorzaken en gevolgen van het terugsturen van online aankopen' [Causes and consequences of returning online purchases]. The article presents the surprising result that returning online purchases is not necessarily negative, because returning products can strengthen the link between client and shop.

FEB's subject Business Administration #32 in Academic Ranking of World Universities!
In the recent annual Academic Ranking of World Universities (ARWU) the University of Groningen has strengthened its position from #72 to #59. In the subject specific ranking there is a tremendous achievement for Business Administration (based at our Faculty of Economics and Business): the subject is #32 worldwide! Further FEB subjects ranked in the ARWU are all in the top 100: Management #50, Economics 51 - 75 and Finance #76 - 100. The ARWU presents the global top 500 universities that is published annually. See the ARWU website for all results.

Appointments

Robert Inklaar appointed professor
As of 1 July 2017, Robert Inklaar is appointed professor in Economics of Productivity and Welfare. Inklaar works at the department of Global Economics & Management.

Jana Oehmichen appointed professor
And as of 1 November 2017, Jana Oehmichen is appointed professor in Organization & Management Studies at the department of Innovation, Management and Strategy.

Albert Boonstra appointed senior editor Information Systems Journal
FEB Professor Albert Boonstra has been appointed senior editor of the Information Systems Journal. The ISJ (impact factor 4.122) is an international journal promoting the study of, and interest in, information systems. It features articles on research, practice, experience, current issues and debates. The journal integrates technical, social, and management issues of information systems in organizations. The research areas Boonstra covers for the ISJ include acceptance and adoption of information systems, big IT projects, IT in healthcare, human behavior, organizational behavior, politics and stakeholder management.

Read more about our research on our FEBblog:
rug.nl/feb/blog/
Publications and activities

Please find below an overview of publications in top journals (with an AIP of 85+), PhD theses & research reports in the period June – December 2017 as well as an overview of upcoming conferences and workshops to be organised at FEB.

Publications


PhD theses

Amber Geurts
Firm Responses to Disruptive Innovations: Evidence from the Music Industry
Supervisors: Prof. W.A. Dolsma & Dr. T.L.J. Broekhuizen
Defended on October 23, 2017

Feng Hu
Factors Influencing the Performance of Innovation Contests
Supervisors: Prof. T.H.A. Bijnol & Dr. K.R.E. Huizingh
Defended on October 19, 2017

Pieter IJtsma
Financial Stability, Economic Growth, and the Banking Sector
Supervisors: Prof. L. Spijerdij & Prof. B.W. Lensink
Defended on November 30, 2017

Linyang Li
Financial Inclusion: Progress, Motivations and Impact
Supervisors: Prof. C.L.M. Hermes & Prof. B.W. Lensink
Defended on June 22, 2017

Nele Manheim
Shared Leadership in Teams: A Theoretical and Empirical Investigation
Supervisors: Prof. O. Janssen & Prof. G.S. van der Vegt
Defended on June 1, 2017

Elena Martinescu
Why We Gossip: A Functional Perspective on the Self-Relevance of Gossip for Senders, Receivers and Targets
Supervisors: Prof. O. Janssen & Prof. B.A. Nijstad
Defended on June 19, 2017

Marianna Papakonstantinou
Understanding the Effects of Human Capital on Economic Growth
Supervisors: Prof. M.P. Timmer & Prof. R.C. Inklaar
Defended on November 2, 2017

Erik Renkema
Professionals’ Attitude and Behavior in an Accountability Context: The Physician’s Case
Supervisors: Prof. C.T.B. Ahaus & Dr. H. Broekhuis
Defended on November 30, 2017

Suthinee Supanantaroek
Supervisors: Prof. B.W. Lensink & Dr. N. Hansen
Defended on July 6, 2017

Liz Teracino
Value Co-creation in the Cloud: Understanding Software-as-a-Service-Driven Convergence of the Enterprise Systems and Financial Services Industries
Supervisors: Prof. J.C. Wortmann & Prof. S. Brinkkemper
Defended on November 6, 2017

Xianjia Ye
A Global Value Chain Perspective on Trade, Employment, and Growth
Supervisors: Prof. M.P. Timmer & Prof. J.J. de Vries
Defended on June 20, 2017

Ran Zhang
Upward Voice and Influence: The Underlying Motivational Complexity
Supervisors: Prof. O. Janssen & Dr. D.S. de Geest
Defended on October 12, 2017


Working Paper Series

17011-i&O
Bogt, H. ter
Accountability, Transparency and Control of Outsourced Public Sector Activities

17012-GEM
Bezemer, D., A. Samarina, and L. Zhang
The Shift in Bank Credit Allocation: New Data and New Findings

17013-EEF
Boer, W.I.J. de, R.H. Koning, and J.O. Mierau
Ex-ante and Ex-post Willingness-to-pay for Hosting a Major Cycling Event

17014-EEF
Laan, N. van der, W. Romeijnders, and M.H. van der Vlerk
Higher-order Total Variation Bounds for Expectations of Periodic Functions and Simple Integer Recourse Approximations

17015-GEM
Oosterhaven, J.
Key Sector Analysis: A Note on the Other Side of the Coin

17016-EEF
Romensen, G.J., and A.R. Soetevent
Tailored Feedback and Worker Green Behavior: Field Evidence from Bus Drivers

17017-EEF
Trinks, A., G. Ibikunle, M. Mulder, and B. Scholtens
Greenhouse Gas Emissions Intensity and the Cost of Capital

17018-GEM
Qian, X., and A. Steiner
The Reinforcement Effect of International Reserves for Financial Stability

17019-GEM/EEF
Klasing, M.J., and P. Milionis
The International Epidemiological Transition and the Education Gender Gap

Upcoming conferences and workshops

Healthwise Conference
April 3, 2018

Digital Business Model Conference
April 4-6, 2018

IAEE Conference Doctoral Seminar
June 8-9, 2018

IAEE Conference (International Association Energy Economics)
June 10-13, 2018
http://iaee2018.com/

6th International Conference on Corporate Governance in Emerging Markets
July 5-6, 2018
https://www.rug.nl/igor/corporate-governance/on-offer/events/

Workshop Health Economics
September 13-14, 2018

FEB Summer Schools 2018
http://www.rug.nl/education/summer-winter-schools/

Groningen Collaboration for Innovation
July 7-14, 2018

Corporate Governance and the Effectiveness of Boards
July 7-14, 2018
https://www.rug.nl/education/summer-winter-schools/summer_schools_2018/corporate_governance/

Financial Inclusion and Sustainable Growth: Recent Developments
July 14-20, 2018

Stata Tips and Tricks for the Management and Business Researcher
July 30 – August 3
Organisation of Research

SOM research programmes
www.rug.nl/feb/som

Global Economics & Management (GEM)
Prof Sjoerd Beugelsdijk
Economics, Econometrics, Finance (IEEF)
Prof Rob Alessie
Organizational Behaviour (OB)
Prof Floor Rink
Innovation & Organization (I&O)
Prof Dries Faems
Marketing (Marketing)
Prof Koert van Ittersum
Operations Management, Operations Research (OPERA)
Prof Dirk Pieter van Donk

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Centres of Expertise
www.rug.nl/feb/coe

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Prof Jaap Wieringa
Local Government Economics (COELO)
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Center for Energy Economics Research (CEER)
Prof Machiel Mulder
Economic Growth and Development (GGDC)
Prof Marcel Timmer
Health Care Management & Economics (Healthwise)
Prof Kees Ahaus
Human Resource Management, Organizational Behaviour (HRM&OB)
Dr Peter Essens
Center of Operational Excellence (COPE)
Prof Kees-Jan Roodbergen
Value in Collaboration
Innovation (VinCI)
Dr Eelko Huizingh
Institute for Governance and Organizational Responsibility (IGOR)
Dr Kees van Veen
Leadership
(In the LEAD)
Prof Harry Garretsen & Prof Janka Stoker