EDITORIAL

In this winter issue of FEB Research Magazine we showcase our engagement with society. Our new slogan is “Connecting for impact” and throughout our research we have shown our connection to society.

Our first article is a good example of that impact. It shows how economics and business on the one hand, and medical sciences on the other, meet and how their joint forces could effect the well-being of people suffering from an acute stroke.

Sjoerd Beugelsdijk and PhD graduate Juliette de Wit talk about their research on polarization, a hot topic in the Netherlands. Beugelsdijk explains why he wrote his book ‘De Verdeelde Nederlanden’ (The divided Netherlands).

Last but not least, we have contributions on gas markets mergers by recently graduated Jann Keller and on sustainable seafood supply chain issues by Mellie Pullmann who recently joined FEB.

We hope you enjoy reading our magazine.

Annemiek Koning
Rina Koning
Anne Floor Lanting
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Organizing stroke care – doing research across disciplines
FEB researchers Durk-Jouke van der Zee and Erik Buskens joined forces with their colleagues Maarten Lahr and Maarten Uyttenboogaart from the University Medical Center Groningen (UMCG) to work on new solutions for organizing regional acute stroke care, thereby participating in externally funded projects.

“Acute ischemic stroke is the second leading cause of death and a leading cause of long-term disability world-wide. Acute brain infarction is caused by a blood clot obstructing blood flow in the brain. The clot deprives downstream brain tissue from oxygen and glucose, leading to neuronal cell death. The longer the clot blocks flow the more damage is done, resulting in (severe) disability and possibly death. In short: “time is brain”, explains Maarten Uyttenboogaart.

Not surprisingly, stroke care organization is recognized as a main determinant for patient outcomes as it impacts the time from symptom onset to start of treatment. By bringing in, applying, and extending concepts and methods from operations management, operations research and epidemiology the team seeks to improve regional stroke care organization.

Current efforts: CONTRAST project
The FEB/UMCG research team participates in the Dutch nationwide CONTRAST project sponsored by the Dutch Heart Foundation and several companies (€ 14 M). The COllaboration for New TR eatments of Acute Stroke (CONTRAST) consortium aims to improve the outcome of patients with a stroke. The consortium consists of researchers from all academic hospitals and associated universities in the Netherlands. Furthermore, many (major) hospitals and emergency medical services collaborate in the project. The development of this consortium is in agreement with the objective of the Dutch Heart Foundation in setting up a lasting national high quality consortium targeting stroke research.

CONTRAST merges health-based research on new stroke treatments with research on the organization and logistics of regional acute stroke care networks. The clinical partners will perform five large acute stroke trials to test novel treatment strategies. The FEB/UMCG team hosts the work package on the organization and logistics of the acute stroke care network (€ 600 K). Main focus of the work package is on new (cost) effective solutions for regional stroke care organization, thereby considering allocation of stroke facilities, patient routing and workflow management. Within the consortium the team works alongside health researchers with a focus on new stroke treatments.

Durk-Jouke van der Zee describes the search for new solutions. “We seek to improve patient logistics in two ways. Firstly, new concepts for organizing acute stroke care are (further) developed and put to the test using model-based approaches. For example, a drive-the-doctor model may reduce time to treatment by allowing to offer all stroke treatments at the same regional hospital: instead of transporting the patient to another hospital for advanced treatment, a doctor with the right expertise is driven to the regional hospital instead.

Secondly, we aim to strengthen model-based support in designing logistic solutions for acute stroke networks and assessing their...
cost-effectiveness. Until recently, clinical trials were the main vehicle in the domain for testing logistic solutions, while operations research methods hardly made an entrance. By using and developing these methods, especially (combined) simulation and stochastic models we provide a more efficient alternative for real-life tests as in clinical trials, allowing both research and clinical practice to benefit.”

Figure 1. Example of cost-effectiveness model for new comprehensive stroke centers.

A. Combined discrete event simulation and Markov model. mRS (modified Rankin scale) is a scale for measuring functional disability after stroke with higher score for more severe disability.

B. Markov model. In each one-year-cycle patients can remain their mRS state (from 0 to 5) or make a transition to another worse mRS state or death due to all causes.
Chi Nguyen and Willemijn Maas are the two PhD students who are part of the CONTRAST project.

Chi Nguyen

“I am a second-year PhD candidate in the Operations Department, University of Groningen, from March 2020. I come from Vietnam, where I obtained my bachelor degree in Pharmacy. In 2016, I came to the Netherlands for a 2-year Master program at Radboud University, with the major of health technology assessment. After master graduation, I went back to Vietnam to work for over a year and really missed the Netherlands (but not the Dutch weather). Now I am on the PhD journey in Groningen and can enjoy ‘Kibbeling’ and ‘Bitterballen’ again. I like doing yoga, cooking, hanging out with friends, and gardening in my free time. I also love travelling and visited many beautiful towns in the Netherlands.”

Research

“My research is about economic evaluations of stroke care treatments and their associated organization in the Netherlands. My project is closely linked to the project of my colleague, Willemijn Maas. In this project, we aim to develop new models to assess cost-effectiveness of stroke care strategies, and analyse the cost-effectiveness of stroke care strategies from a Dutch healthcare payer perspective and societal perspective.

Regarding the first objective, we combine discrete event simulation and Markov models, to provide a flexible and realistic representation of the acute stroke care pathway as well as considering long term effects of treatments (Figure 1). A Markov model is a stochastic model in which transitions between different states are run in a certain time to capture all consequences of new interventions and current practice. Furthermore, we will apply our model to answer questions about the cost-effectiveness of re-organizing stroke services. For example, is it cost-effective to add new comprehensive stroke centers in the North of the Netherlands? Further, the question “Should we introduce pre-hospital triage to transfer suspect stroke patients faster to comprehensive stroke centers?” could be answered by using the cost-effectiveness model.”

Impact

“The aging population and high economic burden of post-stroke require innovative treatments and well-organized stroke care pathways. However, introducing new stroke services could be costly while health resources are constrained. Therefore, questions regarding the efficient use of scarce resources are important topics for policymakers and clinicians.

Our new model allows a pragmatic approach to assess the cost-effectiveness of re-organizational stroke services with different set-ups. Additionally, our results will provide evidence on the cost-effectiveness of new strategies for policymakers, clinical physicians, and other stakeholders to make a better-informed decision in stroke care services. New stroke strategies may be applied in the Dutch setting if these strategies are cost-effective when compared to current practice.”
Willemijn Maas

“I am a fourth years PhD student at the University Medical Centre Groningen. Being multi-disciplinary, my project is also hosted by the Department of Operations, FEB. I did my bachelor and master Human Movement Sciences both at the University of Groningen. When I am not working, I spend a lot of my time with my family. Especially taking care and playing with my son. Next to that, I like to play tennis, try other sports, take a long walk in the woods and to meet up with friends.”

Research

“My research is about the organisation of acute stroke care in the Netherlands. Two acute stroke treatments are intravenous thrombolysis and endovascular thrombectomy (EVT). Both treatments are highly time dependent and not every hospital provides both treatments. I am especially focussing on patients that are eligible for EVT. EVT is only offered at specific hospitals. Therefore, respective patients may have to be transported from their regional hospital.

For research on the organisation of the acute stroke care I am using simulation models (see Figure 2). Simulation models allow to represent the stroke pathway in great detail, thereby capturing patient logistics, including uncertainties in their diagnostics and duration of services provided. After careful validation, models are used to put improvements of the stroke care system to the test by estimating their effects on patient lead times and outcomes. For example, we are assessing workflow efficiency, the addition of EVT hospital(s) in the north of the Netherlands and the design of a ‘drive the doctor’ model, where the doctor travels from a non EVT capable hospital to a local hospital to treat patients.

Impact

“Stroke is a leading cause of serious long-term disability. By researching the organization of acute stroke care and hopefully reducing the time from stroke onset to treatment, the likelihood of regaining functional independence will be increased.

In addition I try to show other researchers in the field how they can use simulation modelling in the design of their specific region to improve stroke care. Because regions differ in various ways, such as hospital spread, urban or rural environment and workflow efficiencies, I believe that there is no dominant organizational model that fits every region. A design approach, such as simulation modelling, could be a manner to deal with regional differences.”

Figure 2. Monte Carlo simulation model, the acute stroke pathway.

A hypothetical stroke patient is traversing the acute stroke pathway (baseline model). Each step from stroke onset to the start of treatment will create a certain delay. Because this is a probabilistic model, the delay will be drawn from the underlying distributions. These distributions are obtained from real patient data.
New in Groningen
Mellie Pullman
Why did you choose Groningen?
“I came to a EUROMA Sustainability conference at the University of Groningen in 2014 and really liked the colleagues, university and city. Last year after my sabbatical, I could not get back to the US so I asked the supply chain department if I could come as a visitor. The SCM group had a number of scholars working in sustainable supply chain, a more significant concentration than many schools in the US and the rest of Europe. This made FEB an ideal location to work with like-minded colleagues. As a visitor, I hoped to develop new projects for research in Europe such as focusing on sustainable seafood supply chain issues, social enterprises, and innovation in the wine industry. First, the oceans face declining fish populations while illegal and unreported seafood catches make up more than 30% of all captured fish; we look for methods to solve these problems that relate to seafood supply chain management. Here we are exploring ocean technology such as blockchain for possible solutions. Additionally, modern day slavery and other labor problems are rampant on the boats and in the processing. To solve these problems requires a combination of market and regulatory solutions. Second, we are exploring social impact supply chain management (SISCM), supply chains that are part of social enterprises or those organizations that pursue a social mission enabled by an economic activity. SISCM addresses how a social enterprise manages its supply chain to fulfill its social mission and achieve economic viability. Here the social missions vary from providing renewable energy to remote African villages or training and placing disadvantaged workers in decent jobs. It is an emerging business model design. Later, I went back to school for my MBA and PhD, which I both obtained at the University of Utah, the latter at the Production & Operations Management department. Since 1997, I’ve worked in several different US and UK schools, such as Colorado State University, Cornell University, and the London Business School, in operations or supply chain management departments. For the last 15 years, I worked at Portland State University where I eventually became a full professor in supply chain management.”

Could you tell us about your career so far?
“After studying at the University of Utah, I worked as a quality manager and test manager at several companies and as an entrepreneur in the beverage business and in landscape design. Later, I went back to school for my MBA and PhD, which I both obtained at the University of Utah, the latter at the Production & Operations Management department. Since 1997, I’ve worked in several different US and UK schools, such as Colorado State University, Cornell University, and the London Business School, in operations or supply chain management departments. For the last 15 years, I worked at Portland State University where I eventually became a full professor in supply chain management.”
and very little research exists from a SCM perspective, but at FEB more colleagues focus on this area. Finally, I’m working with colleagues in France on how industry clusters can foster innovation in the wine sector. These innovations make the industry more sustainable by minimizing water and pesticide use as well as allow for better use of the grape crop as the climate changes.”

**How about societal relevance?**

“Food and biodiversity issues are on a collision course. From my perspective, it’s very important to society to mitigate the negative impact of human activities on biodiversity and at the same time, find solutions to feed the planet. Current fishing practices have a terrible impact on biodiversity due to things like net trawling, fish farming, and fishing gear debris left in the oceans. These practices kill many animals that are not destined for the plate. By looking at different ways to incentivize more appropriate practices and applying different ocean technology solutions to identify proper practices, we can help mitigate the negative impacts.”

**What can we expect of you in the future?**

“I have written a number of books and articles on sustainable supply chain management, food and beverage supply chain management and service operations and want to work more with my colleagues at the University of Groningen on other kinds of sustainability research. As part of my job as Chair, I am also the academic lead of the Teaching Academy Groningen. In this role, I will develop a vision for the university on how quality and innovation in teaching can be improved. I hope to inspire lecturers and students to contribute to the Teaching Academy and to increase the number of courses that integrate blended learning.”

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**Key publications**


Polarization in the Netherlands

Polarization is a hot topic. Sjoerd Beugelsdijk wrote a book about it (De Verdeelde Nederlanden) and it has been discussed extensively in Dutch media. PhD student Juliette de Wit defended her thesis on values, culture, and national identity in economics last December. Both found interesting results about polarization. Time for FEB Research to talk to them.
According to Sjoerd Beugelsdijk, polarization is not a coincidence. “It is not just the result of social media, but has roots that go deeper. The book discusses these underlying drivers. I unpack important societal, economic and political trends, put these in historical context and try to do so in non-academic language. It is a popular scientific book in Dutch about the Netherlands derived from 20+ years of academic research.”

Why? The incentive system at universities is not geared towards books in Dutch about the Netherlands. Why spend so much time and energy on writing this book? “I am indeed part of a generation of scholars who have been trained and socialized in a system that mostly rewards English language international (top) journal publications. Yet, I have always tried to combine my academic interests with societal implications and relevance. This was one of the reasons for being involved in the national identity project of a Dutch government advisory think tank (Sociaal en Cultureel Planbureau). This book builds on that experience and is in a way a continuation of my ambition to balance societal and academic interests.”

Was it picked up? “Yes, luckily it was, right after publication mid September. It was and still is extensively covered in the Dutch press. Most people appreciate the careful explanation of the trends that I see as the driving factors of ongoing polarization of the country. I also compare the Dutch situation with other countries, especially The United States. Many people fear the Netherlands is becoming like the USA. I explain in my book this is not likely to happen despite the fact that many of the underlying determinants are similar.”

What trends do you mean? Can you explain them shortly? “Economically we have experienced a shock that radically changed the system. The economic shock is rooted in rapid technological change combined with globalization. This has changed the economic system with new winners and losers of globalization. Culturally, the Netherlands has one of the highest levels of societal individualism. The dominant norm “Dat bepaal ik zelf wel” (No one needs to tell me, I decide on that myself) is the result of the enormous freedom to make our own decisions, but also comes at a price. That price has to do with erosion of community feelings. The “I” clashes with the “we” and people increasingly look for their identity and the group they feel they belong to. Notions of us versus them have become part of that identity search.

Parallel to these developments it is the role of the government and the state that has
changed. From a universal welfare state, we have now organized the welfare system in a more transactional manner, a so-called needs-based system in which people have to satisfy more and more conditions in order to qualify for state support. Citizens themselves have become customers and behave like clients, and as a result of new public management practices the government itself is run like a firm. On top of that we have a political system with 19 (!) political parties and social media. It is the combination of all these social, economic, technological and political trends that has such a poisonous effect because they mutually reinforce one another. The solution is thus not obvious and I describe that it is important to deal with each of these root causes.”

You are a professor of International Business. Isn’t it a bit unusual to write a book that is so sociological for a business professor?
“Good question. I was trained as an economist doing research on socio-economic systems. These systems differ between countries. That is where international business comes in. I have done multidisciplinary research from the day I started my PhD, mostly combining economics and sociology. International business deals with differences between business systems which are deeply rooted in culture. International business logically combines the economic dimension with the cultural and increasingly also the political dimension.”

What’s next?
“Time to think about the next big project. I have a long-standing ambition to put together a textbook on international business. With an emphasis on the systems part, thus again combining the multidisciplinary notions that shaped my research career since the day I started more than 20 years ago. It never stops, because it is so much fun to work on stuff that matters.”

Sjoerd Beugelsdijk was one of Juliette de Wit’s supervisors during her PhD research. She found three different profiles that capture the way the Dutch identify with the Netherlands. And it seems that we have more in common than we think.

What is the topic of your thesis?
“I investigated values, culture, and national identity in economics. These closely related concepts have become more important following major changes in the 20th and 21st century: countries, firms, and people have become increasingly interconnected in today’s globalized world. Yet the benefits of globalization end up with only a lucky few. While the boundaries of nation states fade, national sentiments are rising. We all recognize that people seem to connect easily to people who share the same ideas...
through the internet, while they might not even know their own neighbours. Mainstream and social media increasingly shape the public opinion. Sometimes, issues attract a disproportionate level of attention and polarize public opinion (think for example of Zwarte Piet). I investigated these (and related) developments in my thesis, adopting an interdisciplinary approach that combines insights and methodologies from multiple social sciences (economics, political science, philosophy, and sociology)."

"You look at the relation between national identification, public opinion, and voting behaviour. Our gut feeling is that the debate on various issues (think of COVID, Zwarte Piet, immigration, or European integration) polarizes. What did you find?"

“There was not much existing evidence supporting these gut feelings. So I wanted to examine this further. To do so, I used a representative dataset of more than 4000 Dutch respondents. Using a statistical analysis called archetypal analysis, I found three profiles — archetypes — that capture the way people identify with the Netherlands. On the one hand there are people that identify with the Netherlands via symbols and traditions (think of the Dutch flag and the national anthem). On the other hand, there are people that identify with the Netherlands via civic liberties and the democratic system. I also found a third group which does not identify strongly via any type of characteristic. This group is indifferent when it comes to identification with the Netherlands. The three profiles correlate strongly to people’s opinions on some of the issues I mentioned above. There is a clear opposition between people identifying with symbols and traditions versus people identifying with civic liberties. The stronger people identify with one of these profiles, the stronger opinions polarize. Moreover, polarization in the debate on Zwarte Piet correlates to opinions on other issues, such as immigration and European integration. When extending the analysis to voting behaviour, I find the same the opposition between people identifying with symbols and traditions versus people identifying with civic liberties.

Interestingly so, even though many people have the feeling that polarization is rising, my analysis shows that only very few people can be positioned at the extreme ends of the debate. In other words, not many people fully represent one of the three profiles that I found. It is a minority that diametrically opposes each other. The majority of the sample has characteristics of each profile. Moving forward, it would be interesting to see whether this pattern changed following the pandemic, and how opinions related to COVID (vaccination, compliance to government regulations, etc.) fit into the picture.”

Speaking of COVID, how did this influence your defense?

“The 2nd of December was a day to remember. Not “just” because it was the day of my defense, but also because the pandemic gave a special feel to it. The pandemic links to topics investigated in my thesis and raises new questions. Values, social norms, and identities shape the way we behave. The pandemic challenges the way we used to do things by imposing constraints (e.g. the 1.5m distance does not allow us to shake hands), as well as lays bare some of the hidden tensions in our societies (i.e. between those identifying via traditions and symbols, vs. those who identify via civic liberties). I look forward to continue my work on these topics in the years to come!”
Researching regulation and competition in EU gas markets
Operators of gas transmission system networks are considered to be natural monopolies that don’t face effective competition. Thus, regulation is in place in order to protect customers against abuse of market power. But how do you find a balance between regulation and competition in EU gas markets in such a way that it is sustainable and ensures affordability and security of supply? “I found that market mergers can allow for competition amongst TSOs, ultimately leading to a higher efficiency,” Keller explains his main finding.

Policy makers in the EU responsible for the energy market should create a framework that benefits not only the economy, but society as a whole. There are three dimensions that policy makers need to take into account when building this framework: (1) security of supply, (2) affordability and (3) sustainability. “My research assesses the regulation of Transmission System Operators (TSO) in merged gas markets, while taking these dimensions into consideration. I focused on the impact of gas market mergers on the potential for competition between gas TSOs within the EU.” With his research, Keller contributes to the future regulation framework for EU gas markets and the acceleration of the energy transition.

Reducing monopoly power
Gas market mergers give network users access to transport alternatives; this can help in reducing the monopoly power of system operators. Thus, more competition and less regulation may be possible. “This was the starting point of my analysis,” Keller explains. The researcher reviewed the supply and demand of transport capacity in merged markets, analyzed the market position of TSOs in these markets and formulates policy recommendations with regards to competition between TSOs in merged EU gas markets. One of the regulations applied to TSOs concerns a cap of their total revenues; each operator is granted a certain maximum total revenue by the regulatory authority. The tariffs TSOs charge for the utilization of their networks are based on this revenue cap. A theoretical analysis shows that TSOs, being exposed to a revenue cap, are incentivized to charge lower tariffs when network users have a choice between different operators. Empirically, an analysis of German gas markets finds that tariffs are up to 52% lower at network points at borders where a variety of operators offer capacity than at borders where only one TSO offers capacity.

Relaxing regulations
On the basis of another study, Keller concludes that competition between TSOs in merged markets can be possible, as the risk of abuse of market power may be small since specific TSOs aren’t necessarily needed anymore; there is an oversupply of transport capacity. “This means the economic incentive for regulation is diminishing, so the government should consider relaxing...
sector specific regulations,” Keller states. In his thesis, the researcher discusses the intensity of the competition between TSOs that can be expected when regulations are relaxed, and offers a number of related policy recommendations that are aimed at allowing TSOs to engage in competition. “The increase in competition should ultimately increase efficiency, and benefit end-customers with more stable gas prices and an enhanced security of supply,” Keller concludes.

**Energy transition**
Keller’s findings are not only relevant for the future affordability and availability of gas, but also for the energy transition in the EU towards carbon neutrality. This transition is supposed to result in a decrease in the transportation of fossil gas. With a constant transport capacity and a decreasing demand, the competition between TSOs will become even stronger. Sustainable gases, like hydrogen, also require a transport infrastructure. “Hence, TSOs could consider making the necessary modifications to the existing gas pipelines to make them suitable for the transportation of hydrogen. In light of an increased competitive pressure for fossil gas infrastructure, TSOs could be stimulated to accelerate this process.”
NWO Veni-grant for Esther Metting
The Dutch Research Council (NWO) awarded a Veni grant to Esther Metting. With the grant money, Metting will be able to further develop her own research ideas for three years. Esther’s main appointment is at the UCMG, but she is also affiliated to FEB. The Veni grants, together with the Vidi and Vici grants, are part of the NWO Talent Programme. The Veni grants are designed for outstanding researchers who have recently gained a PhD. Together with COPD patients and care providers, Metting will develop a method that will enable non-digitally skilled people to benefit from the health advantages of E-Health. As the healthcare sector increasingly uses E-Health to improve treatment.

FEB and FSE researchers have received NWO grant of 500K for a joint project
Thom de Vries, Gerben van der Vegt, Dirk Pieter van Donk from the Faculty of Economics and Business (FEB), along with colleagues Ming Cao and Alexander Hübl from the Faculty of Science and Engineering (FSE) received funding from the Dutch Research Council (NWO) and knowledge platform Next Generation Infrastructures (NGinfra). The increasing role of data and data analysis, new types of sustainable energy, far-reaching urbanization and the need for circularity are all examples of transitions that infrastructure managers have to deal with. In their project, the five researchers will work together with the Port of Rotterdam, Rijkswaterstaat and Prorail to examine how these infrastructure organizations can use and manage so-called “systems-of-systems” to effectively deal with
multi-infra challenges, such as the renewal of infrastructure and the transition to sustainable transport or energy systems.

**Amazon grant for Maarten Gijsenberg**

Last autumn, associate professor Maarten Gijsenberg received a $85,000 grant from Amazon. He received the grant from the Amazon Research Awards Advertising Call for Proposals Summer 2021 for his research on “When, Where, and What amount” a brand should spend on advertising.

In his research, Gijsenberg will look at what the impact is of different budget allocation strategies for several strategic Key Performance Indicators (KPI) of a brand. He makes a distinction between long-term oriented strategies aimed at building and strengthening a brand and more short-term oriented strategies directed at immediately increasing sales. Gijsenberg’s research will cover both offline and online media, investigate to which extent media strengthen each other, and evaluate both short-term and long-term KPIs.

**Gratama Fund for Richard Jong-A-pin**

Assistant professor Richard Jong-A-Pin received a funding of 15,000 Euro from the Gratama Foundation for his project “The social profit of the village supporter”. Jong-A-Pin explains: “The goal of this project is to set up a learning community in which students get the opportunity to do research regarding the social profit that is created by village supporters in the province of Groningen.” A village supporter is a person that is firmly committed to optimizing the livability of a village. A village supporter mainly focuses on the organization of informal care and makes links between the demand for informal care and volunteers that offer informal care.

The Gratama Foundation, works with the Groningen University Fund to provide funding for small-scale academic projects, designed and conducted by the University of Groningen.

**Awards and prizes**

**10-Year Impact award for Jenny van Doorn and Peter Verhoef**

Professors Jenny van Doorn and Peter Verhoef, along with co-authors Katherine N. Lemon, Vikas Mittal, Stephen Nass and Doreén Pick, received a 10-Year Impact Award by SAGE Publishing for their paper “Customer Engagement Behavior: Theoretical Foundations and Research Directions” in the Journal of Service Research.

The 10-Year Impact Awards are a part of SAGE’s larger effort to inspire and change the conversation around research impact, especially in the social and behavioral sciences. SAGE has analyzed the citation data for articles published in SAGE journals of different disciplines in 2009 to reveal those most cited through the end of 2019. Van Doorn and Verhoef’s article has been cited over 1,300 times over the 10-year period.

**Appointments**

**Mellie Pullman appointed Chair of Sustainable Supply Chain Management**

From August 2021, Professor Mellie Pullman was appointed as Chair of Sustainable Supply Chain Management at the Department of Operations.

To read more about Mellie Pullman and her research, see page 11 for an interview with her.


PhD theses

Mental Health over the Lifecycle
An Economic Perspective
Hermien Dijk

Hermien Dijk
Promotores:
Prof. E. Buskens and
Prof. J.O. Mierau
Defended on November 8,
2021
consequently accept them. Consumers have internalized to be the norm. If, for instance, intuitively reject edible insects and lab-sustainable food alternatives. Consumers, for barrier and key to behavior change.

Achieving a sustainable lifestyle is arguably necessary conditions to face the current and future societal change. Technological obsolescence and the global effect from technology and international trade. Profound changes in the nature and structure of air, water, and soil, and threatens biodiversity. Rising consumption of meat fuels the pollution humanity’s biggest challenge to date. While

Enterprise, banking fragility, which may lead to a higher probability of welfare, which have received less attention in the determinants of financial inclusion; and third, the effect of financial inclusion on improving economic

This PhD thesis contributes to our understanding about financial development, focusing on three types of customers across all offered brands. As an effective marketing tool, both by itself and the synergy between a traditional and digitalization, new channels for communication and the synergy between a traditional and digital

Finally, chapter 4 presents a general discussion with the digital technologies? The question remains whether we know how to live without being digital nowadays, it was nearly

Whereas it is almost impossible to imagine living without being digital now, it was nearly

When Online Meets Offline: Research in Omni-Channel Marketing

Lisan Lesscher

Promotor: Prof. P.C. Verhoef
Co-promotor: Dr. L. Lobschat
Defended on August 26, 2021

Skills, Early-Life Environment and Health in Adulthood

Gianmaria Niccodemi
Promotores: Prof. R.J.M. Alessie, and Prof. V. Angelini
Co-promotor: Dr. G.E. Bijwaard. Defended on January 13, 2022

Yiqing Peng

Promotores: Prof. B.W. Lensink and Prof. C.L.M. Hermes.
Defended on November 8, 2021

Labor markets in a globalizing world: trends, challenges and opportunities

Nikolaos Terzidis

Promotores: Prof. S. Brakman and Prof. Ortega Argiles
Defended on December 13, 2021

Essays on Financial Development and Financial Inclusion

Nikolaos Terzidis

Promotor: Prof. B.P de Bruin, and Prof. S. Beugelsdijk
Co-promotor: Dr. C. Lisciandra. Defended on December 2, 2021

Jan Koch

Promotor: Prof. K. van Ittersum
Co-promotor: Dr. J.W. Bolderdijk
Defended on October 21, 2021
Research Reports

2021014-I&O
Slavtchev, V., and M. Wywich, TV and Entrepreneurship

2021015-EEF
Kate, F. ten, M.J. Klasing, and P. Milionis, Diversity, Identity and Tax Morale

2021016-EEF
Bergemann, A., and R.T. Riphahn, Maternal Employment Effects of Paid Parental Leave

2021017-GEM
Abolhassani, M., Productivity Spillovers of Multinational Enterprises through Worker Mobility: New Evidence for the Netherlands

2021018-GEM
Abolhassani, M., Productivity Spillovers of Superior Firms through Worker Mobility

Exploiting Individual Creative Inputs for Team Creativity: A Role Differentiation Approach
Suqing Wu

The PhD thesis will be defended on Wednesday August 25, 2021 at 9:00 in the Aula of the Academy Building, Broerstraat 5, Groningen. You are cordially invited to attend the ceremony.

Suqing Wu
Promotor: Prof. B.A. Nijstad
Co-promotor: Dr. Y. Yuan
Defended on August 25, 2021
Organisation of Research

SOM research programmes

• Accounting
  Prof. Paula van Veen-Dirks
• Global Economics & Management (GEM)
  Prof Sjoerd Beugelsdijk
• Economics, Econometrics, Finance (EEF)
  Prof Viola Angelini
• Organizational Behaviour (OB)
  Prof Floor Rink
• Innovation & Organization (I&O)
  Prof Albert Boonstra
• Marketing
  Prof Koert van Ittersum
• Operations Management, Operations Research (OPERA)
  Prof Ruud Teunter

Centres of Expertise

• Customer Insights (CIC)
  Prof Jaap Wieringa
• Local Government Economics (COELO)
  Prof Maarten Allers
• Center for Energy Economics Research (CEER)
  Prof Machiel Mulder
• Economic Growth and Development (GGDC)
  Prof Robert Inklaar
• Centre for Public Health in Economics and Business
  Prof Koert van Ittersum, Prof Jochen Mierau
• Human Resource Management, Organizational Behaviour (HRM&OB)
  Dr Peter Essens
• Center of Operational Excellence (COPE)
  Prof Kees-Jan Roodbergen
• Leadership (In the LEAD)
  Prof Harry Garretsen & Prof Janka Stoker

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  director of Graduate Studies
• Ms Rina Koning, policy officer
• Prof Robert Lensink, director of SOM/vice-dean research
• Dr Kristian Peters, PhD coordinator
• Ms Astrid van der Veen,
  funding coordinator
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