Erasmus
School of
Economics

Meet Rotterdam
Work, live, enjoy: why Rotterdam keeps growing

Meet our Alumnus
Pim Schmitz
Media Matters

Research
in a Nutshell
Are boys better at economics than girls?

BackBone

Erasmus University Rotterdam

Preface

Dear reader,

Rotterdam: a young dynamic city known for its progressive mind-set combined with a down-to-earth work ethic. A city renowned for its international, liberal-minded character and its courage to do things differently.

People from all over the world have chosen and continue to choose this city to be their home. Partly because this city provides space and prosperity to shape your personal future. Partly because of the constant and inspiring urge within many of her residents to innovate, renew and recreate.

Even today, we build on a strong legacy of pioneering spirit. Rotterdam has more than 400 hundred years of successful experience in trade and shipping. The port of Rotterdam is Europe's largest sea port, with outstanding accessibility for sea-going vessels and intermodal connections. Rotterdam's strategic location, groundbreaking architecture and diverse cultural activities contribute to its success as a primary destination for both business and pleasure. A place where unlimited ambitions can become reality.

Of course the same applies for Erasmus School of Economics that is highly appreciated for its excellent research and educational programmes. Both city and School take pride in having the word reflected in their people, their mutual international perspective and connecting cosmopolitan flair.

Erasmus School of Economics has played host to many of the world's experts in their fields of research and boasts the first Nobel Prize in economic sciences, awarded to Jan Tinbergen in 1969. To this present day I still like to repeat in speeches the wise words of Professor Tinbergen: 'sharing is multiplying'. If two people exchange coins, they both end up with one coin. Exchanging ideas however, is a win-win-situation. If we share knowledge, expertise and solutions, we don't just achieve great results in the Netherlands, globally people and business will benefit.

Students play an indispensable part in this process. The knowledge and skills gained during university years will undeniably be welcomed by the numerous national and international businesses and organisations that keep this city moving. Thereby I sincerely invite you to become a part of this city's future and hope that you will continue to help us shape this city furthermore.

This Backbone provides an insight into Erasmus School of Economics, its students, activities and research. I hope you enjoy reading it!

Ahmed Aboutaleb,
Mayor of the city of Rotterdam

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5 days in the Netherlands

As a student it is important to take time to relax and explore what the city of Rotterdam, but also our beautiful country has to offer. Rotterdam is a great starting point to have your first taste of the Dutch culture. Because of its central location, there are many other fun cities to discover, all within an hour of Rotterdam. **Larissa van Boxem,** Bachelor student International Economics and Business Economics, takes us on a 5-day trip through the Netherlands, showing us what is on her must-do list.

Day 1: Rotterdam

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The first day will be in our lovely city where you can start your day with a **picnic in Het Park,** where you will get a beautiful view of the Euromast. This is also where you will start your exciting afternoon activity. Every weekend, from May to September, it is possible to go **abseiling from the famous Euromast.** You will hang around 100 meters above the ground with a stunning view of the city, while slowly letting yourself descend. The speed of the descent is up to you and you can even go together with a friend! After this thrilling afternoon, end your day at **Madam Chen** for Asian street food, cocktails and even some karaoke.

Day 2: The Hague

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The Hague is only 30 minutes away from Rotterdam, and is therefore the perfect city to visit if you want to get familiar with the Dutch culture. Start your day with a tasty breakfast at **Haver**. From pancakes to the so-called "Hangover breakfast", there is something for everyone. After having discovered the bustling streets of the city centre, it is now time for a more artistic experience. Public transport takes you in 30 minutes from the Hague Central Station to **Museum Voorlinden** in Wassenaar. This is a relatively new museum for modern and contemporary art. Besides its remarkable permanent collection, it also displays different exhibitions over the year. End the day on the rooftop bar at **Bleyenberg Den Haag** for a lovely view, a bite and a cocktail.

Day 3: **Amsterdam**

Don't want the basic Amsterdam tourist experience? Visit the city during the **Amsterdam Dance Event**, which takes place each year in October. With more than 2,500 artists from around the world, the Amsterdam Dance Event has grown into the world's biggest club festival. But first, start your day at **Slowth** where they have all day breakfast and Taiwanese & Japense style brunch. At Slowth you won't have your normal breakfast, with a Beef pancake roll or Taiwanese burrito. End your day at the waterfront of **Strandzuid** for a chill vibe, dinner and drinks.

Day 4: **Breda**

Maybe less known, but just as fun is Breda. The charming city in the south is only 25 minutes by train from Rotterdam Central Station and therefore worth visiting. For breakfast and your dosage morning caffeine, go to **Coffeelicious.** Go for the cheesy scrambled omelette, the coffeelicious pancakes or the vegan powerfood buddhabowl. The afternoon activity requires sunny weather as you will be spending your afternoon on your own boat which you can rent at **Bootje Varen Breda.** Make sure to bring some wine and lunch. Still hungry afterwards? Visit **ZWART Breda** for an unforgettable experience. Here, you will have dinner in the dark, while being served by people with a visual impairment, meaning you'll have no idea what you will be eating and that's what makes it even more fun! Afterwards, you will find out what you have been eating and how reliable your senses are.

Day 5: **Utrecht**

In the heart of the Netherlands you find Utrecht, a city famous for its little streets and beautiful canals. Start your day with a tasty Mimosa or Champagne brunch at **TEDS.** For the ones who prefer to stay sober, there are also tons of options. From basic cereal to tasty sandwiches to veggie burgers and waffle fries, a visit to TEDS is definitely worth it. After having walked through the historical streets of the city centre, pay a visit to **JEU de boules bar.** This is a new bar in the centre of the city where they have given the classic game a new image. Besides being able to play the game with your friends, you can order cocktails, beers and food at the bar.

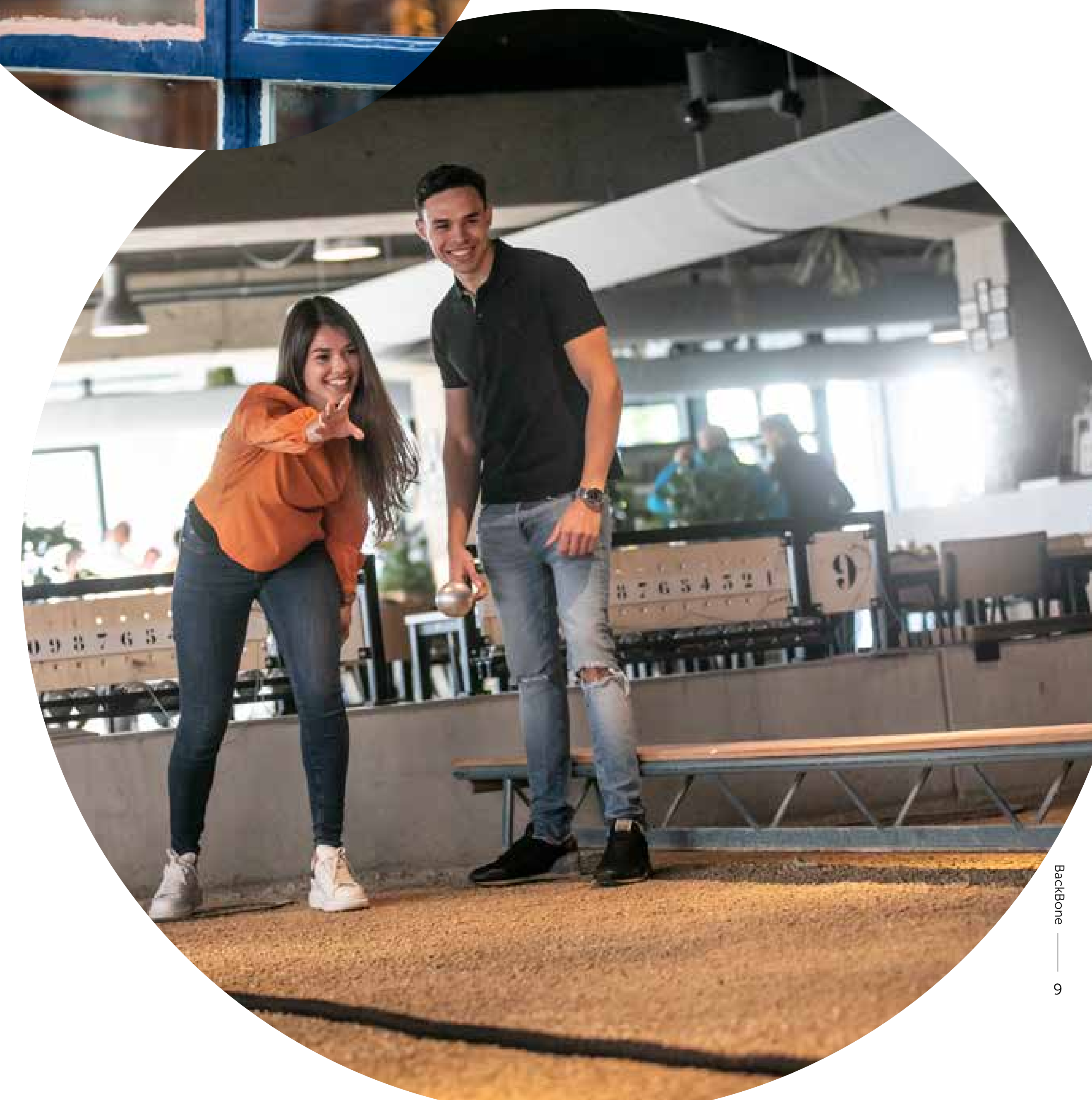


Illustration: Carolyn Ridsdale

Are computers better lie detectors than humans?

By: Sophie van der Zee

Although Dutch people are regarded as quite direct and honest when compared to people from many other countries, a little white lie here and there smoothens even the Dutch interactions. The majority of people tells lies every day. Most of those lies are relatively harmless and can even serve as a social glue. Diary research on lie frequency consistently shows that some people lie more than others and that some lies are more harmful than others. To identify those harmful lies, which often concern lies told in a police-, intelligence-, or courtroom context, researchers have developed new methods to detect deceit.

'People are terrible at lie detection. There is no human equivalent of Pinocchio's nose'

Both lay people and professionals tend to think solely of the polygraph when asked about lie detection, even though many more detection techniques are now available. The polygraph is a machine that measures physiological stress responses caused by lying such as pulse, blood pressure, skin conductance (sweatiness of fingers), and respiration. Over the years, the polygraph has been used for real-life lie detection, preferably by dramatically revealing deceit in romantic relationships. These practices have made the polygraph famous amongst a broad audience, but it also led to much critique.

For example, there is a large gap between the performance claims of commercial companies and of the media on the one hand, who often claim that the accuracy rates are 95-99.9% and of the scientific community on the other hand, who find accuracy rates of 74-82% for guilty suspects and 61-83% for innocent suspects in lab experiments when using the Control Question Technique. Those lab experiments also show that the percentage of innocent people being judged as liars is 10-29%, which is very high. Other polygraph issues are the subjectivity of judging the data output, the ability to fool the machine by applying countermeasures, and the problem that some people – for example people who score high on psychopathy – do not display signs of nervousness when lying.

In a series of interviews with Dutch practitioners I found that they tend to prefer relying on their own judgements rather than using technology to detect deceit. Relying on human judgements to detect deception is problematic, because people are terrible at lie detection. There is no human equivalent of Pinocchio's nose or some clear and stable indicator that someone is lying. Clues to deceit are often subtle and their effect sizes are small, making them difficult to spot. Research systematically shows that people do not perform much better than chance levels when attempting to detect deceit. Years of experience or training sessions tend to improve confidence levels much more than they improve detection accuracy, leading to strong but wrong opinions.

Sophie van der Zee is Assistant Professor at Erasmus School of Economics. She combines her background in Psychology and Computer Science to conduct security related research, from automatically detecting deception and promoting honest behaviour to investigating the tactics of rental and developing research paradigms to promote more secure digital behaviour.

Together with my colleague Ronald Poppe from Utrecht University, I have developed several technological deception detection methods, with the aim to overcome the issues related to the polygraph and human judgements. One of the main issues of the polygraph is that it solely measures physiological stress responses, whilst lying can also cause increased cognitive load and behavioural control, which can subsequently affect a liar's behaviour. We developed an automated lie detection method based on people's body movement. We measured movement using full-body motion capture suits, recording the liar's movement 120 times per second. Analyses of 90 interviews revealed that most people move more when lying compared to when telling the truth and this finding was consistent across all body parts. In this study, our algorithm (82% accuracy) could detect deceit almost 30% better than humans (53% accuracy).

Lying also affects our verbal behaviour; people phrase and frame their lies differently than their truths. Using linguistic analysis software, we developed the first personalised deception model based on the fact-checked tweets of US President Donald Trump. Trump uses much more cognitive processing-, tentative-, and comparison words when lying, and more emotional words when telling the truth. With this model, we could correctly classify (out-of-sample) almost three quarters of his factually incorrect tweets, solely based on the types of words he uses when tweeting.

We are currently developing and testing a multimodal deception detection technique, which measures changes in language use, body movement, and facial expressions when lying. Our first real-world multimodal deception detection test was covered in the BBC Horizon documentary 'A week without lying: the honesty experiment.' And recently we gathered a large dataset with lying children, adolescents, adults, and elderly, who took part in our deception experiment recorded in Nemo Science Museum Amsterdam. With this data, we aim to further refine our automated multimodal deception detection method and continue to improve detection accuracies and robustness.

Alumna
scores hattrick

By: Madeleine Kemna

Imagine being a keen football player, looking for a topic for a thesis to conclude your Master in Econometrics. You figure that with your skills, you should be able to come up with a model that increases the level of sophistication in the analysis of the game by measuring each player's effective contribution to the outcome of the match. The model turns out to be so successful that your thesis is published in a scientific journal and you are offered a job at a company that provides data intelligence for professional football. This is exactly what happened to alumna **Lotte Bransen**.

'It's a dream come true,' admits Lotte. 'After obtaining my Bachelor's degree in Mathematics at the University of Utrecht, I decided to do a Master in Econometrics, specialising in Quantitative Logistics and Operations Research. I chose Erasmus School of Economics because there you learn methods to solve real-life problems. In these cases data are never perfect; they are incomplete, contaminated or both. The techniques presented during my premaster and my master were indispensable for the kind of research I did.'

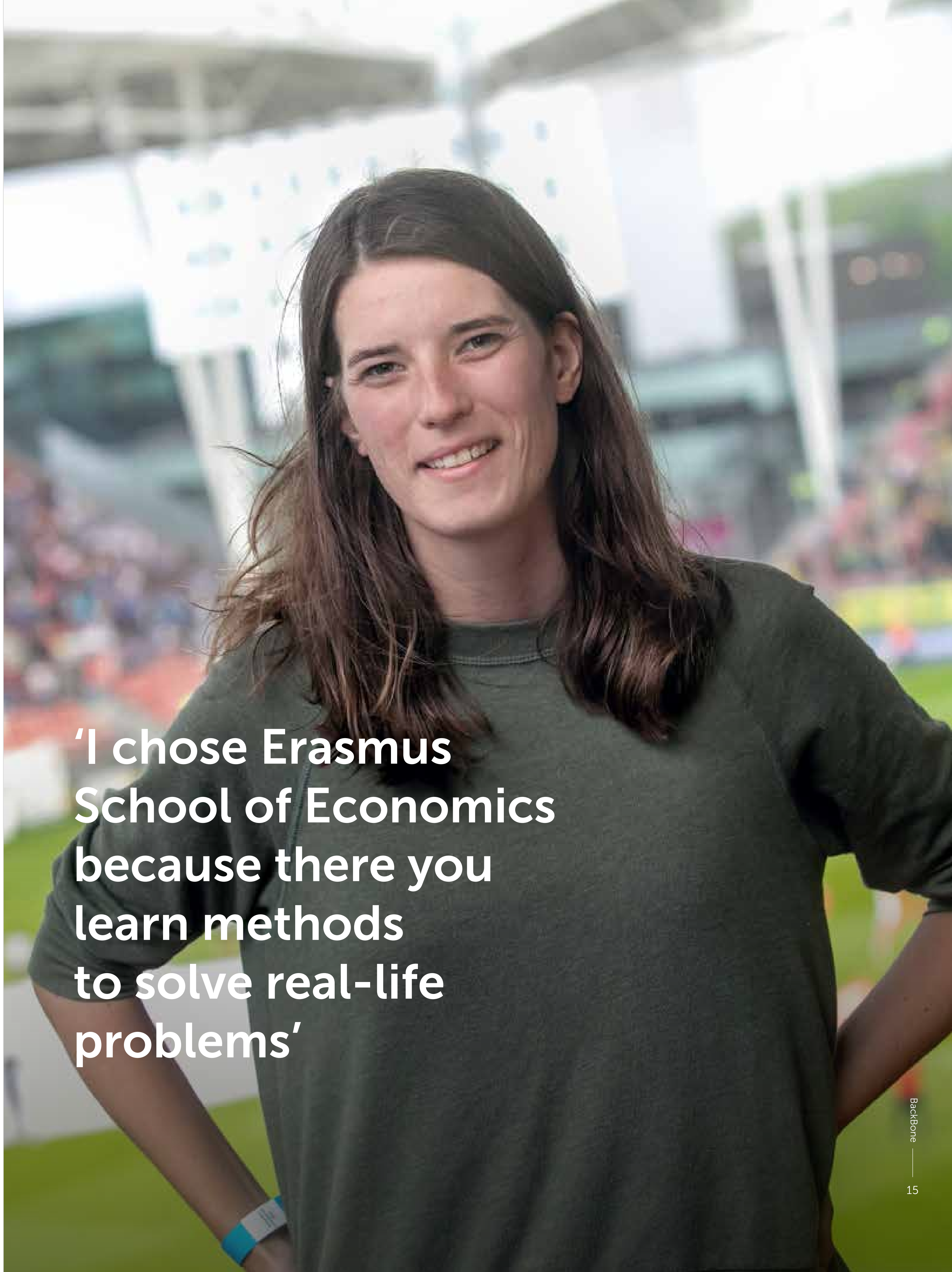
She conducted her research in cooperation with SciSports, the company that hired her after graduation. How did she manage to land such a coveted job? 'I knew SciSports from the days when I was a bachelor student. Back then they were just starting and didn't employ any paid staff yet. It all fell into place when it became time to work on my Master's thesis. Originally located in the East of the country, they were by now one of the fastest growing sports analytics companies in the world and planned to open a second office somewhere central. That made the commute more doable for me. I knew Giels Brouwer, one of the founders and in a joint effort with Jan Van Haaren, Head of Data Analytics at SciSports, we came up with the idea for my research project, which Jan agreed to supervise together with professor Michel van de Velden at Erasmus School of Economics.'

In the footsteps of baseball

'Statistical analysis in sports has received more attention since 2003 when Michael Lewis wrote Moneyball, a book that was also the basis for a movie. It tells the story of the efforts of the Oakland Athletics baseball club to bring together a successful team despite modest means by using statistical analysis.' How come basketball and baseball were so much quicker to adopt these techniques? 'Initially, it was an American phenomenon, limited to sports that are popular in the states. Baseball lends itself especially well to this type of analysis because the actions are to a large extent predictable: someone pitches and the opponent hits the ball. That's easier to measure than football, where scoring doesn't happen as often as in many other sports and is usually preceded by a series of passes.'

Not all passes are equal

What made your research different from other projects that analyse football? 'First of all, our research distinguishes itself by the use of a large dataset. We used input from over 9000 matches. Other researchers focused on general data about whether a pass reached a team mate for example, but we have taken into account the circumstances in which a pass was given. A pass between two defenders is not the same as a pass from a midfielder to an attacker in the penalty area. We have compared each pass to a historical database of passes that were given in the same part of



‘Females are still a minority in the world of data science’

Lotte Bransen (1993) is Scientific Researcher at SciSports. After obtaining her Bachelor’s degree in Mathematics at Utrecht University, she started her study at Erasmus School of Economics. In 2017 she obtained her Master’s degree in Econometrics & Management Science, specialisation Quantitative Logistics and Operations Research. Lotte is an active football player at USVV Odysseus ’91, a big fan of FC Utrecht and of course the ‘Orange Lionesses’ (Netherlands women's national football team).

the pitch covering a similar distance, using a domain-specific distance function. This enabled us to determine how good the pass really is. By aggregating such data for each player over 90 minutes, we can conclude what the Expected Contribution to the Outcome of the Match (ECOM) is for each individual.

To give a few examples: based on these data we have calculated that during the 2017/2018 season Mesut Özil of Arsenal was the most impactful player in terms of passes. David Silva (Manchester City) came second and Lionel Messi (FC Barcelona) third. We had also identified that Frenkie de Jong would be the most suitable replacement for Barcelona’s Andres Iniesta who left for Japan. De Jong was indeed signed by Barcelona (after our research was published), but we were not involved. They had probably been following him for a long time already.

It’s also possible that a player will take the initiative to ask us for input. When Dutch international Memphis Depay was leaving Manchester United he asked us to analyse for which clubs he would be best suited. Our advice was part of his decision to accept an offer from Olympique Lyonnais.’

Focus on midfielders

It appears the research is most valuable for the assessment of midfielders. Attackers pass relatively seldom and defenders are not often involved in setting up a goal. ‘That’s correct. We are working on models that would be suitable for these other groups as well. Developing a new model takes several months. We like to come up with a beta version in a few weeks, so that we can show others what the idea is and get feedback to improve it.’

Computer game

Lotte’s research has been incorporated in SciSports’ platform, called Insight, where clubs can keep track of players around the world that interest them. The algorithm calculates the so-called SciSkill, making it possible to quantify a player’s current quality and potential. Clients pay a monthly fee to use Insight. Forbes Magazine recently quoted Giels Brouwer as saying that the company has taken inspiration from computer games such as Football Manager and FIFA. ‘The idea was to build a real-life Football Manager using data by helping football clubs build an index on all players to aid the recruitment process.’

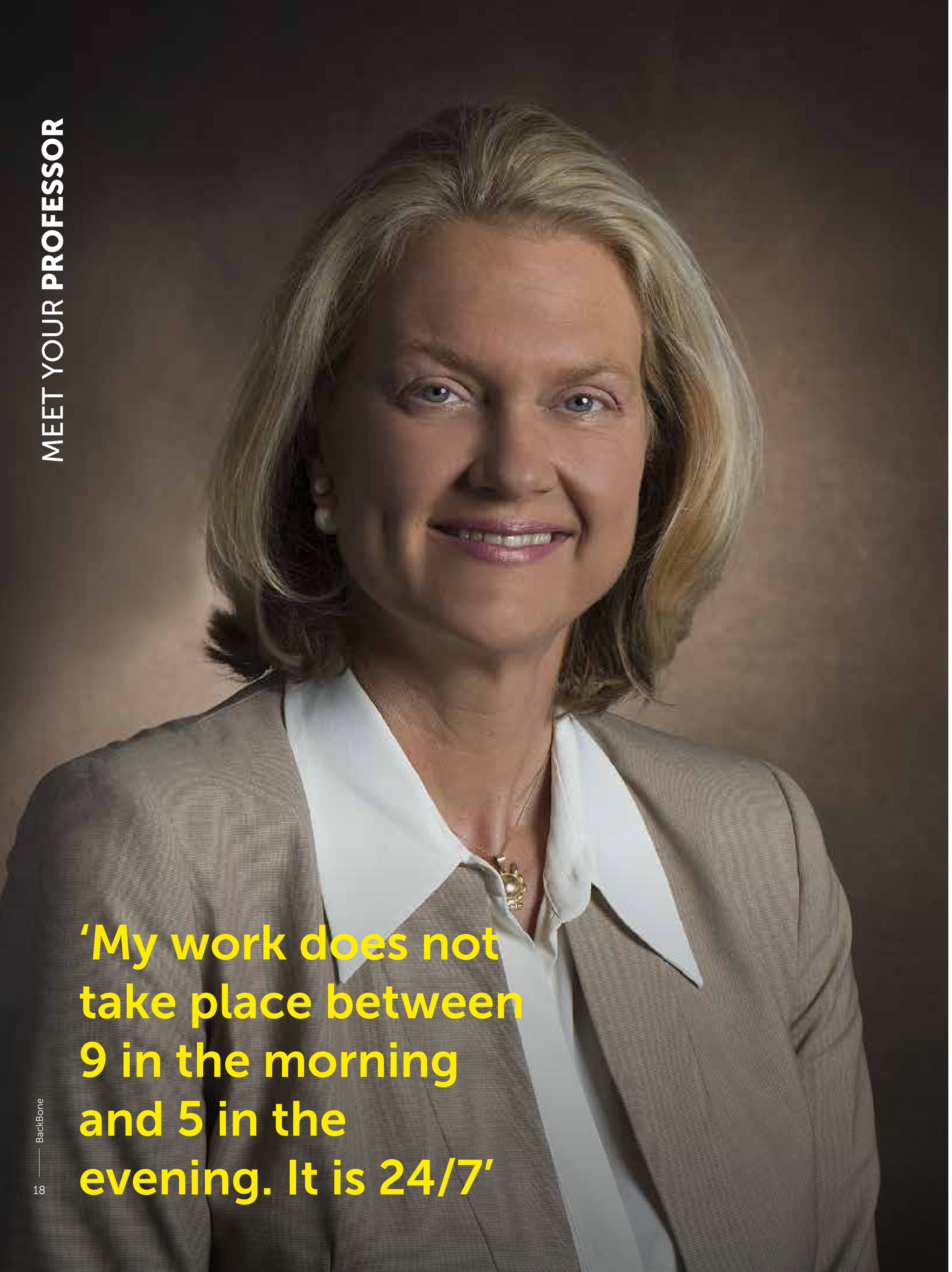
Attainment gap

Football is increasingly dominated by big money, making it harder for less affluent clubs to keep up. Will this type of service increase that gap? Lotte doesn’t think so: ‘Our website shows that the packages start at 750 euros a month, that is cheaper than having a player on the bench. Among our clients you will find names like Ajax, Vitesse, Heracles, SC Heerenveen, Wigan Athletic, Olympique Lyonnais, Club Brugge, but also the KNVB. Some of the giants like Liverpool and Barcelona have their own departments where they employ teams of data scientists. Most of these clubs are quite secretive about their methods, although Barcelona recently presented at a conference in Boston where I also showed our work.’ When asked if she encounters many women at such events, she laughs. ‘Sports professionals and researchers are predominantly male. Females are also still a minority in the world of data science, so if you combine these two it’s not surprising that the answer is no. However, the number of girls that study econometrics nowadays makes me think that this is about to change.’

Women’s football

Is data science also used to analyse the qualities of female players? ‘It’s still very rare, but data from the European championships in 2017 have been used for a collaborative project by several universities. However, the comparatively small amounts of money going around in women’s football hamper a further roll out. A lack of historical data might also play a role.’

Does she still enjoy watching the game or is it difficult to switch off the analytical mode? ‘I’m a fan who isn’t actively thinking about work when watching football, but it does happen that an idea pops up in my head when I see something occurring in the game or when I’m playing myself.’ It sounds like Lotte has scored a special hattrick, being successful as an attacker on the field, coming up with interesting research and maintaining her love of the game.



'My work does not take place between 9 in the morning and 5 in the evening. It is 24/7'

Meet
Mary Pieterse-Bloem

'My name is Mary Pieterse-Bloem and I have two professions, actually. I am Professor in Financial Markets at Erasmus School of Economics. My other profession is with the private bank of ABN AMRO, where I am the Global Head of Fixed Income and a member of the Global Investment Committee, where we decide on the tactical asset allocation of 210 billion euros.

I was born in Hoorn, which is a small village in the Netherlands. Even though I come from a small Dutch village, I consider myself a European citizen instead of merely a Dutch citizen. This is because I have spent a large part of my life in other European cities: I lived in the UK for 18 years and spent time in Frankfurt and Barcelona.

I started my studies at the University of Amsterdam in Economics, where I was a very studious student you could say. I was very broadly interested in the topic of economics, so I studied a lot of different courses in macroeconomics, microeconomics, econometrics, but also some odd courses such as centrally planned economies and women economics. You name it, and I did it. I continued my studies in London, at the London School of Economics. I completed my MSc in Economics there and decided to stay in London for a few more years. I started to work as a Euro Bond Strategist and Debt Capital Market Professional in the dealing rooms of Paribas, DrKW and Lehman Brothers. However, because I felt attracted to the academic world, I took time out to start a PhD. After finishing my dissertation on the integration of European corporate bond markets, I obtained my doctorate and I became Assistant Professor at Erasmus School of Economics.

I actually admired the professors the most that were combining their sort of academic pursuits with activities in society in whichever way, shape or form. For that reason, I resumed my career in asset management. As Global Head of Fixed Income of the ABN AMRO Private Banking, I lead a global team of fixed income specialists, which is responsible for delivering high performing portfolios and investment recommendations to the private clients of ABN AMRO. I bring the knowledge of the practice in financial markets that I obtain at ABN AMRO into practice at Erasmus School of Economics in two different ways. One is in the course that I teach, which is Fixed Income Securities and Portfolio Management, a master course in the specialisation Financial Economics. There, I talk a lot about the topics that I see in practice.

Secondly, I bring my knowledge into Erasmus School of Economics with my own research, which also has a very practical angle. For example, one of my research subjects is on liquidity in the European government bond market. My work does not take place between 9 in the morning and 5 in the evening. It is 24/7, basically. The ultimate driver of my passion is influence and impact. I am not interested in the sort of research that goes into the fourth derivative of some equation. I am very much interested in what is going around in the world and how we can interpret that, potentially influence that part of the debate on what really matters these days.

I am interested in the very big questions that go around in this particular arena and I have always been interested in that. So for example, the European Monetary Union, is that a good idea or not? Where does this bring us? Where will it lead to? What's happening with China at the moment and its influence on the world? I look at the very, very big picture, that's what's driving me.

In terms of new research, what I see in the industry is that sustainable investing is coming up very strongly and it is necessary if we look at what planet Earth needs. Also at ABN AMRO, our clients really want to invest in sustainable products but there is very little knowledge out there, specifically for fixed income: How you do that in an optimal way so that clients can still generate a decent return or have a decent and well diversified portfolio in this market. So, I think there is a vast opportunity there.'

Netherlands School of Economics

The history of Erasmus School of Economics goes back to 1913, when the Netherlands School of Commerce was founded through a private initiative with broad support from the Rotterdam business community. The statutory recognition of higher education in commerce and economics as an academic discipline resulted in 1939 into the Netherlands School of Economics. The predecessor of Erasmus University Rotterdam gained world fame with its education and research in the field of (business-) economics and econometrics and with its renowned professors, such as Johannes Witteveen, who became the first Managing Director of the International Monetary Fund, and Jan Tinbergen, who won the Nobel Prize in Economics in 1969.

Due to a large influx of students, the School building at the Pieter de Hoochweg became too small. As a result, the Netherlands School of Economics moved to the current campus in 1968, in Rotterdam-Kralingen.

The Sentiment
engine

By: Flavius Frasincar & Kim Schouten

Some time ago the Economist published an article entitled "Sentiment Analysis – The Difference Engine: The Wisdom of Crowds. Mining the Web for opinions could be a boon for business, politics and consumer affairs". In the past, we used to seek advice from people close to us like family and friends about what to buy, where to buy, and when to buy. We also read newspapers and magazines to form opinions on events, books, politicians. We individuals act on the basis of this information and businesses rely on extensive surveys, focus groups, and consultant services. However, with the rise of the social Web, this all changed.

'Aspect-based sentiment analysis is the new frontier for the field of sentiment analysis'

Due to the Web, we are flooded with information from millions of opinionated users that we have never met and provide information that is difficult to assess. This phenomenon has been labeled as crowd sourcing. Finding the true facts is difficult, but this is not problematic for many application domains. On the markets, for example, it is not the facts, but the emotions that matter, as long as these emotions are shared by a large crowd. Finding the crowd's opinions underlying emotions is a hot research topic.

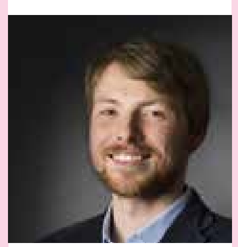
Currently, there is a lot of work done on natural language processing, as it provides techniques that can be used to mine the crowds' opinions. These techniques have been embraced not just by social scientists, but also by entrepreneurs who see opportunity in building tools that provide information on what customers really think. One such example is Clarabridge of Reston Virginia that produces opinion mining tools used by large companies as AOL, Marriott, Nissan, Wal-Mart, Wendy's and United Airlines.

Sentiment analysis aims to identify the sentiment from an emotionally charged content in an automatic manner. The sentiment is often hidden in blogs, tweets, forums, and manually extracting this information and subsequently annotating it with sentiment is hard to achieve. As Professor Bing Liu from University of Illinois at Chicago points out: 'Sentiment mining is a very complex process aiming to identify 'quintuples' composed of the target object, the aspect of the target object that is evaluated, the sentiment value, the person expressing the sentiment, and the time when the sentiment was expressed'.

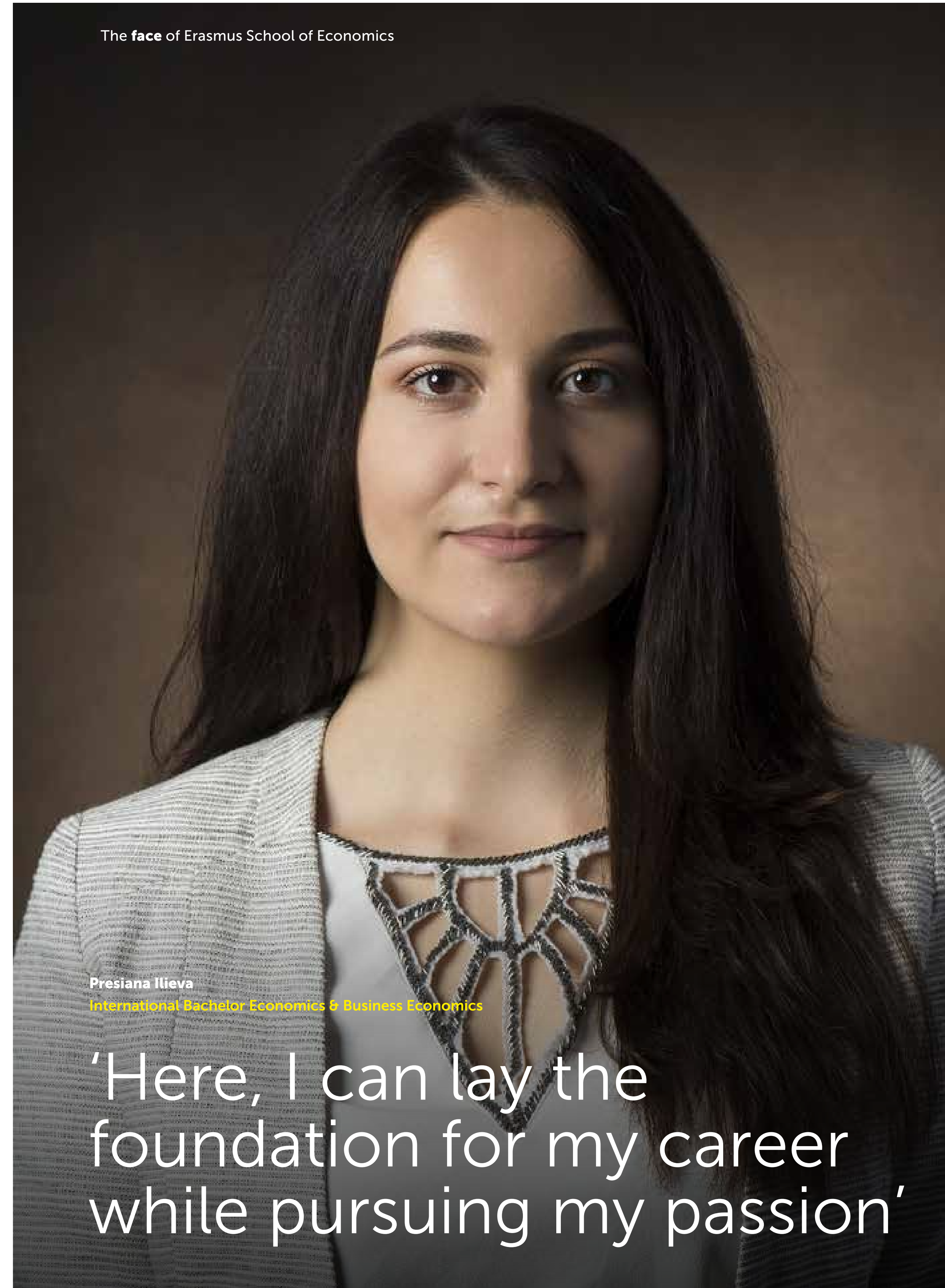
Aspect-based sentiment analysis is the new frontier for the field of sentiment analysis. While many research groups have focused on pure machine learning approaches, other schools, including ours, have focused on blending state-of-the-art machine learning solutions, like deep learning, with expert knowledge, often expressed in domain ontologies, obtaining competitive results. Combining a data-driven solution with expert information allows one to obtain and reuse better quality data patterns for sentiment analysis.

In the future, we foresee the rise of sentiment engines that will be able to extract sentiment information in a real-time fashion from various online sources. Such engines will not only help average users to seek the desired information, but also companies to gather signals on people's sentiment about their brands and products. This information will help customers make more informed decisions and companies develop products that better suit customer needs, contributing thus to the efficiency of our economies.

Flavius Frasincar is Assistant Professor Economics & Informatics at the Econometric Institute of Erasmus School of Economics. In particular he studies the application of information systems and artificial intelligence for the development of intelligent decision support systems.



Kim Schouten is Data Scientist at Erasmus Q-Intelligence. For his PhD-research, Schouten explored the use of different signals for aspect-based sentiment analysis, both from within and outside of the text.



Study &

Meet our Students

By: Madeleine Kemna

Our students excel both within and outside of their study programmes. Meet some of the students that combine their study at Erasmus School of Economics with extracurricular activities, such as top sport, politics and voluntary work. We sit down with students **Yorick de Groot, Tom Janssen** and **Ying Ying Chen** to talk about their experience, ambitions and advice for fellow students.

Study & Top Sport

MEET YORICK DE GROOT

'I started playing volleyball for Sliedrecht Sport when I was six years old and since 2015 I am part of the first team, which is now competing in the highest league. To fill the summer lull, I started with beach volleyball when I was 14. A year later I was invited to join the Dutch selection. For the last three years I have lived in The Hague during the summer where I train twice a day with the squad. At the 2018 Youth Olympic Games in Argentina I won a silver medal with my partner Matthew Immers.

My choice to study Fiscale Economie was influenced by one of the sponsors of Sliedrecht Sport. He was able to explain the differences between various studies to me and help me assess what would be feasible in combination with my volleyball schedule. People who perform at a high level in sports are used to discipline. Perhaps this explains why so many of them manage to complete a demanding study as well.

It is quite challenging to combine my studies with volleyball. When I participated in the Youth Olympic Games, I missed the last three weeks of classes in the block. I did take my books with me to Argentina, but didn't manage to pass all exams. Since my return I have had no further problems. Sometimes when my friends tell me how much they enjoy student life with all the parties and fun, I feel that I am missing something, but a rigid schedule is the only way to realise my ambitions. During the winter I still live at home with my parents, which also helps me to juggle all the demands on my time. I can make free use of the gym at Erasmus Sport, which has helped me several times when my study schedule made it impossible to attend volleyball training.

The university signed up to the FLOT contract, which is supposed to regulate how elite athletes are supported in their education. However the rules are vague. There is an agreement which states that I have a good reason in case I can't meet the 70% attendance requirement, but I still have to finish my first year with 60 study points like everyone else. This leaves me with quite a bit of uncertainty because the resits in the summer coincide with beach volleyball's peak season.

We are now in the run up towards the 2020 Olympic Games in Tokyo. I would love to go of course, but only the 16 best teams in the world qualify. There are several more experienced players in the Dutch selection and it will be tough. After 2020 the teams may be reshuffled, so who knows what the future brings. Since volleyball is so demanding physically, a professional player usually stops around 35. You can make good money, but it doesn't make you financially independent, so I definitely want to work hard for my Economics degree to keep my options open.'

'It doesn't make you financially independent, so I definitely want to work hard for my Economics degree to keep my options open'

Study & Politics

MEET TOM JANSSEN

'Since high school I have enjoyed discussing politics with friends and teachers. At a conference I approached a member of the VVD (the conservative liberal party) who was an alderman in my hometown of Schiedam. I asked her if I could help out and from then on everything went very fast. After campaigning for my party in the 2017 general election and observing lots of council meetings, I was ready to join the list of candidates for the municipal elections in March 2018. For the first time in history the VVD became the biggest party in our city and I joined the council.

All big national parties organise classes for new local politicians. I learned about municipal finances, presentation and debating techniques, how a council works and liberalism for example. One of the things I like about being a council member is that it is not a full time occupation. On average it takes me about 15 to 20 hours a week. I am in the third year of my studies Econometrics and Economics (BSc2) and the combined workload is substantial. All council members have other responsibilities as well, so time management is important for each of us. In my case it means that I don't have time to be actively involved in study associations, but I do enjoy attending their events occasionally.

An example of something that is important for young people in local politics was the planning of new municipal sports facilities. The challenge was to create multifunctional facilities that could house various clubs and activities, so as to make optimal use of public space in the urban area. Another project that will appeal to my peers is the planned construction of student housing as part of new high-rise buildings right next to Schiedam Central Station in a project called Schieveste. This specific location is in the middle of the triangle between the universities of Rotterdam, Leiden and Delft.

Schiedam is an attractive city for students because it only takes 18 minutes to travel to Erasmus University Rotterdam by underground. International travel magazines have described a visit to the historic centre with its beautiful canals as the icing on the cake for anyone who comes to this area. Recently, we have started to give students preferential treatment in the allocation of social housing in areas close to public transport. We find it important to give them a place in our community.

In politics I experienced that people are not always rational although economic theory supposes otherwise. A good example was the discussion about the intended sale of shares in energy company Eneco of which Schiedam holds about 1%. Many bigger shareholders had already expressed their willingness to sell and we were approaching the threshold where other owners can be forced to sell by law. Some council members did not want to divest for ideological reasons, although it was very clear that as a municipality there was no way we would be able to exert any influence in the company.

It has been valuable to learn to work together with people whose opinions are different from mine. This will definitely help me, no matter where my career might take me in the future.'

'In politics I experienced that people are not always rational although economic theory supposes otherwise'

Study & Voluntary work

MEET YING YING CHEN

'I was born in the Netherlands as the eldest child of Chinese parents who emigrated when they were about 18. Despite the fact that they integrated really well and speak the language fluently, I was asked from a very young age to assist them with things that required a better command of Dutch or insights into the culture and customs here. Although my parents had not gone to university themselves, they instilled in me the notion that a good education is vital. I am grateful for the opportunities I have and feel that everyone deserves such a chance.

Originally, I chose to study Economics & Business Economics. During the course of the second year, I realised that I would like to broaden my curriculum, so I followed two extra subjects: Income Tax and Value Added Tax. This worked so well that I decided to study Fiscale Economie as a second bachelor.

While in high school I had been doing volunteer work for children with mental and physical disabilities. It is important for me to stay in touch with society at large. Therefore it felt good to help refugee students. Initially, I was a 'taalbuddy' when I helped one of these students to learn the Dutch language at our university. Signing up for the Student @ Campus programme, organised by the Foundation for Refugee Students (UAF), felt like a logical follow up. This initiative aimed to get 500 Dutch students to be a mentor for a refugee student to help him / her settle into student life here. By now 500 couples have indeed been formed.

I was partnered with a 22-year-old Syrian student called Dalya. The hardest part was at the start, when I was unsure about potentially sensitive issues. You don't know what someone has been through and the effect that may have had, so I asked her to tell me if there was something she would rather not discuss. Together we followed a course in intercultural communication, organised by UAF.

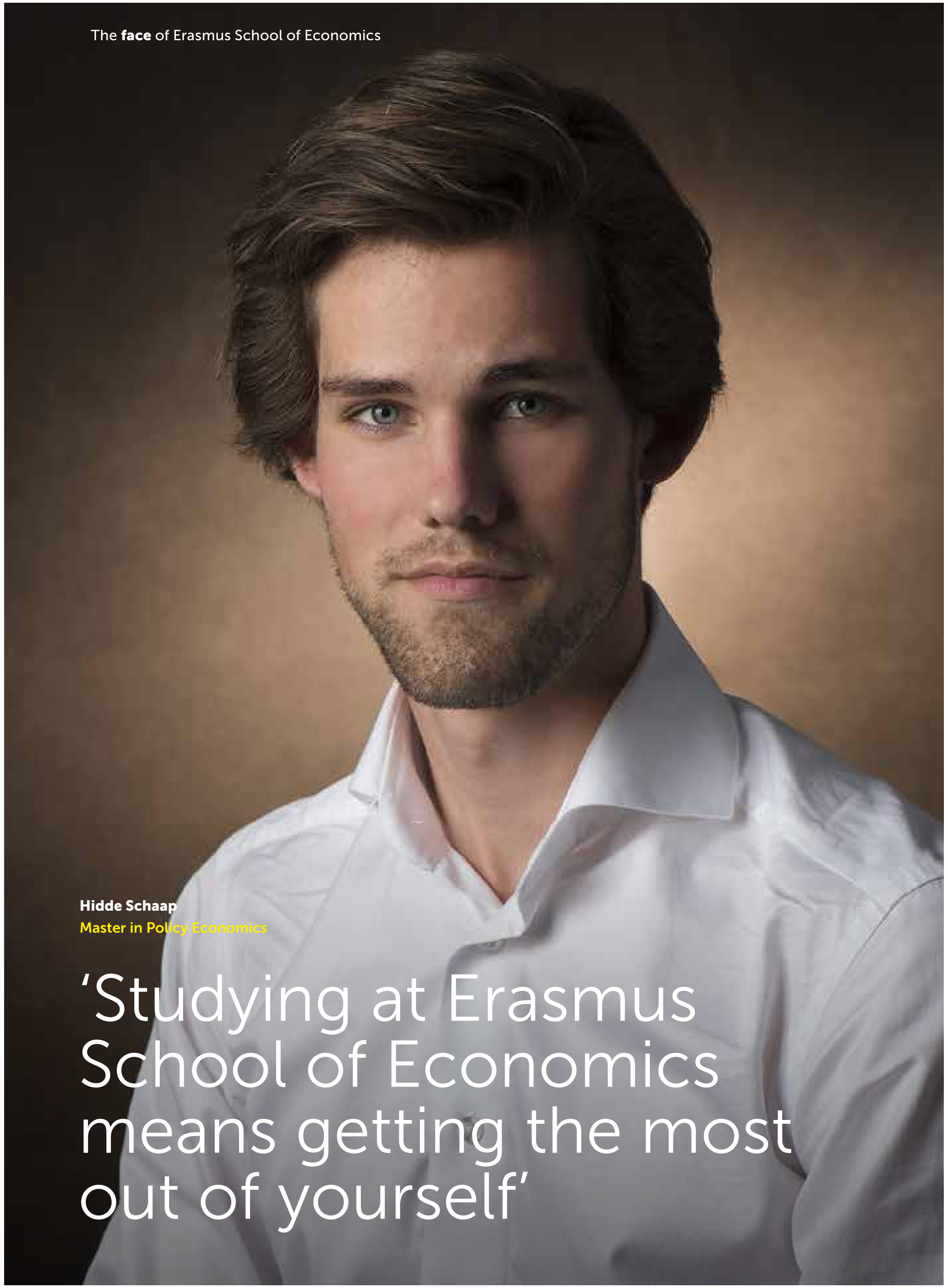
Dalya was keen to practice her Dutch with me, but we also searched for a suitable study she could do. She is currently finishing a transition programme in which she focuses on learning Dutch, English, studying skills and math. In Syria she had started a pharmacy study and she is hoping to enrol in Pharmaceutical Science or Management and Medical Science next year. I also helped her to write a CV when she was looking for a side job to make some extra money.

Officially the mentoring programme has ended, but we have agreed to stay in touch. After Dalya's exams I would like to prepare a Chinese meal for her and she is going to introduce me to the Syrian kitchen.

What I have learned from this experience is that refugee students are really not that different from us. My feeling is that we share the same interests and are able to find common ground when discussing topics like gay marriage, piercings or ways to express yourself.'

'It is important for me to stay in touch with society at large'

The **face** of Erasmus School of Economics



Hidde Schaap
Master in Policy Economics

'Studying at Erasmus School of Economics means getting the most out of yourself'

MEET ROTTERDAM

Work, live, enjoy: why Rotterdam keeps growing

By: Loes Singeling

Good news: Rotterdam is doing well. In fact, Rotterdam is doing better and better. The city is finally riding the wave of positive national economic developments and going full steam ahead: the housing market is looking up, the unemployment rate is decreasing and new restaurants and bars are popping up all over the city. Urban economist Jeroen van Haaren explains how this balance between structural developments in living, working and consumption is making Rotterdam more attractive to a range of groups – including students.

Working

5% is the annual growth rate of jobs in the restaurant industry, offering many students a nice temporary job during their studies

Many students choose Erasmus University because of the programmes it has to offer; the quality of life in Rotterdam will probably play a part as well. But some students, especially those approaching the end of their studies, might also be wondering: will I find a job here?

Well, the chance you will quickly find a job is high and improving. The average Erasmus School of Economics' alumnus, depending on the programme, finds a job within 3 to 6 months. Because Rotterdam is catching up: the number of jobs for professionals is growing strongly, rivalling other major cities, and the unemployment rate is low and close to the national average. And what's more: Rotterdam's economy is not only improving, it is also changing. 'Rotterdam has shifted from just a port city to a business city with a major port', says Van Haaren. Although the port remains important, the strongest employment growth is now found in highly qualified labour in the corporate service sector, the creative sector and IT. These jobs mostly concentrate within the city centre, where we see a combination of large, growing companies, start-ups and self-employed people.

Especially this last group is increasing in Rotterdam. While this is true for the entire country, Rotterdam has quite some advantages for starting freelancers: working space in and around the city centre is still available and relatively affordable, which is also true for housing. Outside of the centre, Rotterdam still has some rough edges that offer space to experiment, something which has become scarce in other large cities.

The increasing number of freelancers may also have to do with the city culture as well as policy. 'Historically, Rotterdam is a city of doing, of creating' van Haaren says. 'The City of Rotterdam stimulates the small-scale manufacturing industry, and relatively many start-ups are involved with inventing or making products.' Freelancers give a strong pulse to the city centre, because they spend about 3 times as much compared to regular employees: the city is their office, coffee places or lunch spots are their meeting rooms. In between meetings, they can easily pop into town for some personal shopping.

Another fast growing sector is the hospitality industry, which is good news for those who are still studying: the increasing number of bars and restaurants offer interesting and diverse places to relax as well as many flexible jobs suitable for students.

A key question is: will Rotterdam be able to sustain its improved position in a changing global economy? 'I can't look into the future and of course, Rotterdam will be affected by economic setbacks like any other city. But because of the diversified, structurally strengthened economy and the improved balance between education levels and incomes, the city now has a much better position to pull through such a crisis.'

Living

€ 113 is what you save on student housing in Rotterdam compared to Amsterdam

There is a general rule to cities: as the number of jobs and quality of life increase, so do the costs of living. Meanwhile, the population in Rotterdam expands due to natural growth and national and international migration. Unique to Rotterdam is the growing group of young people, whereas in most cities, populations are ageing. Young professionals are increasingly choosing to live in the city and the number of students, Dutch as well as international, is growing.

While Rotterdam is becoming a hotspot, there is no need to fear that finding a place to live will be impossible: housing is still relatively affordable compared to the strong economy and attractive city centre. A house goes for 85% of the national average, whereas in other large Dutch cities prices have already exceeded this average.

'There are some local exceptions, especially in the centre and in the North', says Van Haaren. 'But the South is still affordable for highly educated starters.' An increasing number of them, especially those who are not familiar with Rotterdam, choose neighbourhoods that used to have bad reputations, such as Charlois and the Afrikaanderwijk. 'They don't have a preconception of those areas and just look at the positive dynamics, the relatively nice real estate and the reasonable prices.'

For students, too, Rotterdam keeps getting more accessible. Their mental map of the city is getting bigger and bigger. 'Because of the revitalisation of places like the Nieuwe Binnenweg, students are no longer confined to the East as they were a decade ago. Clubs, beer cafes and alternative music venues are now located all over the city, which adds to the attraction of other areas: a recent trend is that this includes the south.'

The nation's capital is still very appealing to Erasmus alumni, especially because the job supply remains strong there. However, the increased accessibility of Rotterdam because of, for example, the Intercity Direct, has made it easier and more common to live in Rotterdam while working in Amsterdam. About a third of alumni remain in Rotterdam, even if not all of them work here. And for the first time in this century, more people from Utrecht, Amsterdam and The Hague move to Rotterdam than vice versa. Van Haaren: 'The combination of a strong economy, high quality of life and a relatively affordable housing market are contributing to this positive migration rate.'

Rotterdam is investing strongly in keeping the city affordable to young professionals. Many apartment buildings are being constructed, also in the more expensive segment. While most major cities struggle with the combination of economic success and offering affordable housing to young professionals, Rotterdam has the relative advantage that there are still parts of the city that are underpriced. 'Students are often the first pioneers to move into these areas', Van Haaren says.

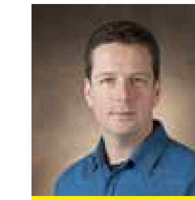
Leisure

€ 23,28 will buy you and 7 friends a round of drinks - in The Hague you need €1,10 more (let's face it: for most students, every euro counts)

A city needs jobs and inhabitants, but without ways to spend your free time, there's little to stick around for. In recent years, quality of life in Rotterdam has increased a great deal. All throughout the city, especially in the North but also in neighbourhoods in the South, restaurants, bars and clubs are popping up. Empty stores are converted into places to eat, and the multicultural character of Rotterdam is shining through in the menus: 'Rotterdam's best value-for-money restaurant in my view, is located in the South, and serves authentic Thai food'. The number of 'urban wastelands', areas that are deserted after 5 pm, has decreased all over the city. Van Haaren: 'Weather permitting, the streets are lively.'

Another part of Rotterdam that has become very lively is our own university campus: what used to be an all-business-like place now has bars, restaurants, a supermarket, services and student housing. As soon as the sun is out, the green patches of grass around the pond are full of students having a drink and relaxing after class.

The increased quality of life also shows in tourism. As highly enthusiastic articles in the Rough Guide, Lonely Planet and The New York Times have illustrated, tourists increasingly find their way to Rotterdam. The growing number of amenities have certainly contributed to the popularity of the city: whereas tourists used to travel quickly between the several scattered points of interest (the Euromast, the Central Station, Blaak) without paying much attention to the surrounding areas, Rotterdam now has become a destination in itself. Both Dutch people and international visitors take a day or more to see what the city has to offer.



Jeroen van Haaren is an urban economist at the Erasmus Centre for Urban, Port and Transport Economics. He specialises in quantitative spatial analysis of among others labor markets, housing and commercial real estate markets, and urban amenities.

Balance

So, as Rotterdam's economy picks up, more and more people find their way to the city to live, work, study and spend their free time. How can the city sustain this growth? Van Haaren and his colleagues have contributed to the most recent editions of the Economic Outlook Rotterdam, a yearly outlook commissioned by the City of Rotterdam containing core data of Rotterdam's economy. In it, they conclude that Rotterdam should maintain the balance it has found between living, working and leisure. Exclusively building new houses will make the housing market more accessible, but leaves little room for economic activity and amenities. A solitary focus on economic activity increases the pressure on the housing market. And just adding new amenities will make Rotterdam more attractive, but unaffordable. Van Haaren: 'Only a focus on further structural reinforcement of the economy can sustain a growth from which everyone in Rotterdam can benefit. Currently, Rotterdam is still fairly affordable, and in my view, offers a bargain in terms of the prices you pay for the quality of life and opportunities this city offers.'

How can firms increase their odds of success when crowdsourcing innovation ideas?

By: Nuno Camacho and Stefan Stremersch

Innovation tournaments are an increasingly popular way for companies to source new ideas. Many companies gauge the success of innovation tournaments by the number of ideas they attract. For example, Dell's crowdsourcing initiative, IdeaStorm, received more than 10,000 ideas from customers around the globe, a tremendous success. At the same time, processing such an enormous volume of ideas to develop them and to select the best ones also leads to tremendous costs. We were wondering whether firms may be better off stimulating the engagement of ideators with a smaller number of ideas and, if so, how they can achieve that?

‘Negative feedback early in the tournament is more effective than no feedback but also than positive feedback’

To answer our research questions, we compared the effects of ideation volume – the number of ideas and ideators – and of participation intensity – how frequently ideators view and update their ideas in the platform – on the quality of ideas generated in an innovation tournament. We ran a large managerial survey among innovation executives at 1,519 firms, out of which 516 (33.95%) had already run an innovation tournament on an online platform. The results were unequivocal: participation intensity is a critical driver of idea quality in innovation tournaments, well above the effect of number of ideas and number of ideators. In other words, participation intensity influences the financial success of innovation tournaments.

But how to stimulate participation intensity?

To help ideators revise and improve their ideas, firms hosting an innovation tournament often interact with and provide feedback to ideators. Unfortunately, most firms seem to lack a clear moderator feedback strategy and decide their moderator feedback strategy based on “widespread and accepted practices” rather than evidence-based guidelines. For instance, many firms seem to rely on positive feedback or at least use a “sandwich approach” – in which they sandwich the negative feedback between two pieces of positive feedback – to keep ideators engaged in the tournament. Which type of feedback is better able to drive ideators’ participation intensity: positive, negative, or mixed feedback? In addition, how should moderators time feedback: is it better to give ideators some breathing time and provide feedback late in the tournament, or better to act quickly and provide feedback early in the tournament?

To answer these questions, we conducted two longitudinal experiments using a commercial innovation tournament platform at Erasmus School of Economics. These longitudinal experiments allow us to examine the causal effect of feedback type and timing on participation intensity. In each of the experiments we organised a tournament called “ESE Innovation Tournament” where we invited students of Erasmus School of Economics to contribute ideas that would have an impact on the School by 2030. Over several rounds, we then experimentally manipulated the type of moderator feedback given to each idea to measure the impact of feedback type and timing on ideators’ participation intensity.

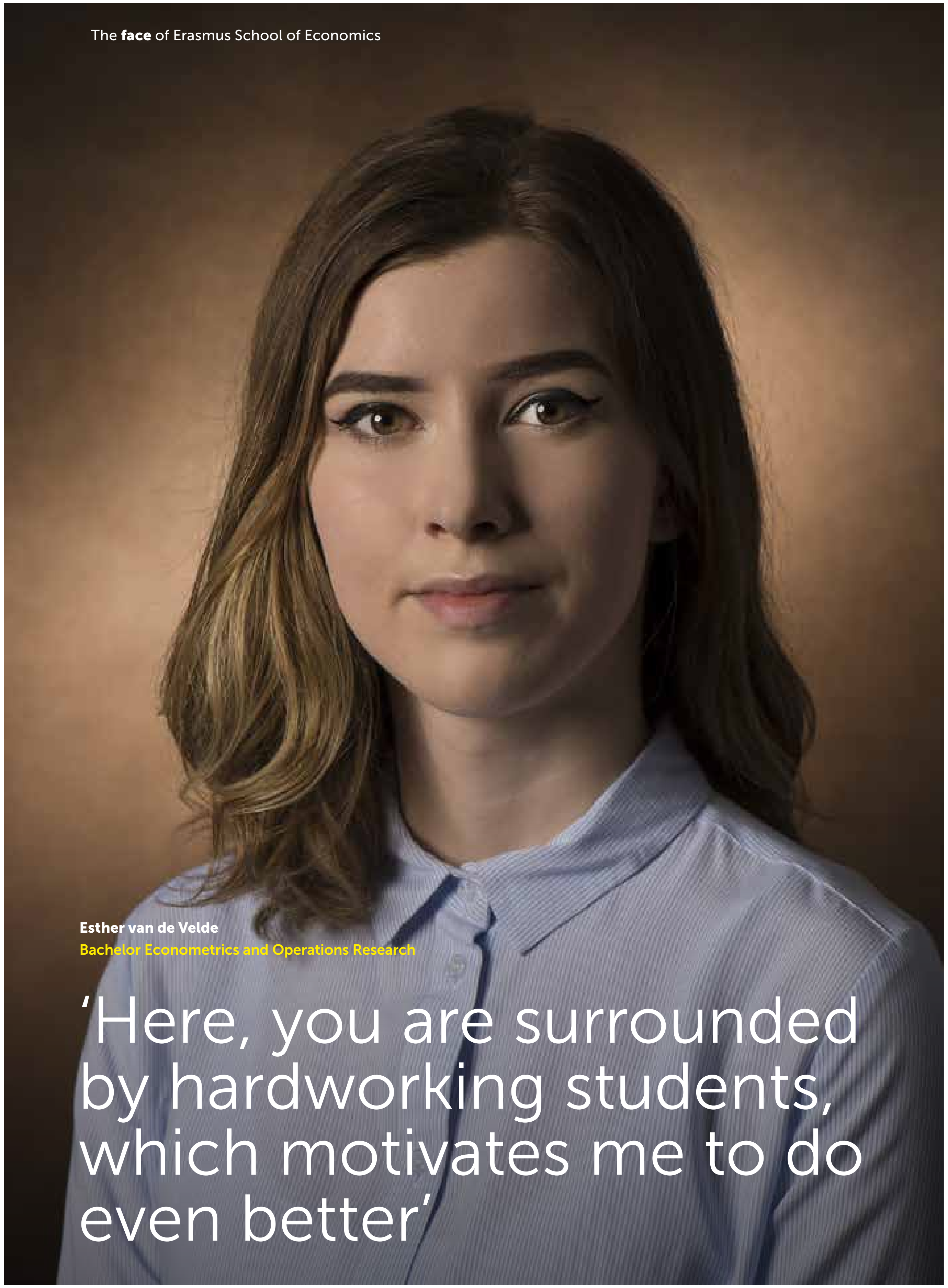
Nuno Camacho
is Associate Professor at Erasmus School of Economics. His main fields of research are marketing, innovation, health marketing and behavioural modelling.

Stefan Stremersch
is Professor of Marketing at Erasmus School of Economics and at the IESE Business School (Spain). His main fields of research are, among others innovation, pharmaceutical marketing and marketing of high technology.

What we found went against prevailing wisdom. Negative feedback (i.e. constructive criticism) was more effective in sustaining participation intensity than positive feedback and the “sandwich approach” was not helpful. For instance, in one of our two experiments we found that, on average, 10.43% of participants who received negative feedback updated their ideas while only 2.3% of participants who received positive feedback did so. In terms of timing, we found that early negative feedback increased participation intensity but late negative feedback did not. For instance, in one of our empirical studies we found that the percentage of participants who update their ideas when they receive negative feedback close to the end of a tournament is 20% lower than the percentage of participants who update their ideas when they receive negative feedback during the early stages of the tournament.

Implications for firms organising innovation tournaments

Even though data on ideators’ participation intensity (repeated viewing and updating behaviour) can be readily obtained from online idea generation platforms, most firms only monitor ideation volume. We propose that firms should shift their attention from volume to engagement, and monitor and stimulate participation intensity. Moreover, we show that firms can use moderator feedback to do so. Specifically, to achieve the best results, firms should offer direct and open feedback (negative criticism), rather than praise or mixed feedback, and do so early in an innovation tournament.



The **face** of Erasmus School of Economics

Esther van de Velde
Bachelor Econometrics and Operations Research

‘Here, you are surrounded by hardworking students, which motivates me to do even better’

Sustainability on Campus

Econometrics student at Erasmus School of Economics, **Esmee Tanis,** felt the urge to really do something with her passion for sustainability and to make an impact. For that reason, she has become active at the Erasmus Sustainability Hub, an organisation run by students who are connected by their devotion to sustainability and their goal to make a meaningful difference in their university community.

Initiatives of the Erasmus Sustainability Hub

The Erasmus Sustainability Hub is run by an enthusiastic team of Erasmus University students. Their projects evolve from local issues that are observed on campus, as well as global issues they are passionate about. Furthermore, students and staff members who have an idea are always welcome. Given these multiple sources of inspiration, the Erasmus Sustainability Hub's projects and events are diverse and tackle various issues of environmental sustainability. The Hub's team brings initiatives to the Erasmus University community to showcase the many forms that sustainable thinking and behaviour can take.

Erasmus Food Lab

The Erasmus Food Lab is an initiative of the Erasmus Sustainability Hub. Its aim is to promote sustainable food and raise awareness about the environmental impact of food consumption. The Food Lab does so by helping students doing research, providing information and sustainable recipes on its website and social media, and by organising events and workshops. Every Wednesday, the Erasmus Food Lab organises after-class cooking sessions. During those sessions, students get the opportunity to cook and eat plant-based meals.

EURWardrobe

EURWardrobe is an initiative that seeks to combat the non-use of clothes in students' wardrobes. The idea is simple: by sharing unwanted clothes, a big united wardrobe can be created on campus! This initiative raises awareness concerning clothing consumption and the great potential of second-hand shopping and sharing. EURWardrobe shows that clothes swapping and second-hand shopping do not mean dusty cramped stores, but are a valuable alternative to buying new clothes. Their collection consists entirely of donated clothing from and for students and the donated money goes to charity.

Campus gardens & Bee yard

Edible EUR's vision is to use the green space on campus to grow food, as growing food plays a key role in a wide range of issues around sustainability. In the past a temporary campus garden emerged, because Erasmus Sport made a location available. Now, the university has given permission to develop a permanent campus garden, located on the east side of the tennis courts. Besides vegetable beds and composting bins, the garden also features a bee yard. The garden is open for all students and staff. In weekly gardening sessions, you are welcome to get your hands dirty and grow some vegetables!

Erasmus Sustainability Days

The Erasmus Sustainability Days is an event that is organised on campus every year by the Erasmus Sustainability Hub. Its goal is to inspire students to become familiar with sustainability, and to empower them to be part of our changing world. During the Erasmus Sustainability Days, students can sign up for various events such as workshops, business cases, roundtable sessions, speeches, movie screenings and vegan cooking workshops.

A unique concept applied at the Erasmus Sustainability Days is the ECOcoin Living Lab. Members of the Erasmus University community could earn and spend ECOcoins for completing environmentally and socially conscious actions such as attending conference events, choosing sustainable meal options and more. This concept strives to rethink the role of money in our society and to contribute to the ECOcoin movement and the development of a sustainable currency for planet earth.

During the 4-day event, each day has its own theme. The first day focusses on the UN Sustainability Development Goals. Attendees have the chance to learn more about the 17 goals while enjoying fun and interesting activities. The following three days focus on the three main pillars of sustainability: environmental, social and economic.

Initiatives of Erasmus School of Economics

CO_2 compensation for foreign flights

Erasmus School of Economics has expanded its sustainability policy with CO_2 compensation for foreign flights by international and exchange students. Staff are also requested to purchase CO_2 compensation on every business trip with the airline or travel agency. With this policy Erasmus School of Economics is taking a leading role within the university.

Vitam and Erasmus School of Economics choose for 100% plant-based

All lunch services and banqueting catered by Vitam and ordered by personnel of Erasmus School of Economics are 100% plant based. This new standard, which is meant as a 'nudge' to steer behaviour 'in the right direction' without being paternalistic and infringing on freedom of choice. By changing the default option, Erasmus School of Economics plans to significantly decrease meat and dairy consumption and to reduce the carbon footprint of Erasmus School of Economics.

Minor New Economic Thinking & Social Entrepreneurship

Originated from the initiative of two former EFR-board members, Emma Clemens and Dunvel Délias, Erasmus School of Economics has introduced the minor New Economic Thinking & Social Entrepreneurship. In this minor, students focus on understanding why and how transformative business models emerge and how they can contribute by developing business models themselves. The aim of this course is to explore new economic futures by critically engaging with innovative entrepreneurs and following academic debates around economic transition.

Erasmus School of Economics in numbers

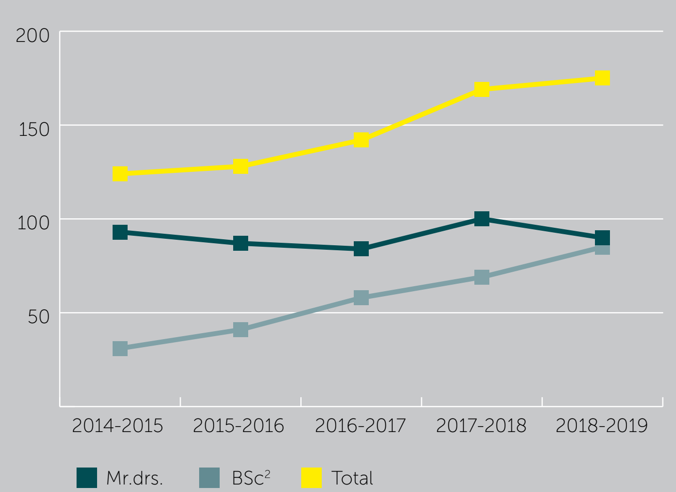
Erasmus School of Economics competes with the best universities in the world. To provide our students with the best opportunities we offer our students a variety of study programmes and lectures by top researchers. Here are some of the essential facts & figures about Erasmus School of Economics.

Bachelor

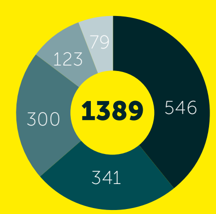
We offer the following Bachelor's degree programmes

- (International) Bachelor Economics and Business Economics
- (International) Bachelor Econometrics and Operations Research
- Bachelor Fiscale Economie
- Double Degree BSc2 in Econometrics and Economics
- Double Degree Economics/Econometrics and Philosophy
- Double Degree in Economics and Law (in Dutch) (Mr.drs. programma)

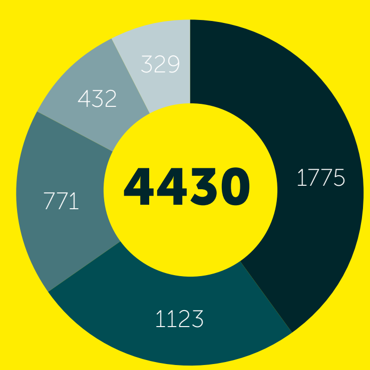
Number of students following a double degree



Total number of first year students



Total number of Bachelor students



Economie, IBEB*, Econometrie, Econometrics*, Fiscale Economie

* including BSc2

Nine Rotterdam based researchers are ranked in the **Top 40 Economists list of ESB,** making Erasmus University Rotterdam the institution with the most renowned economists in the Netherlands.

Master

59% of the students who obtained their Bachelor's degree at Erasmus School of Economics in 2017-2018 have started the subsequent academic year with a Master's programme at Erasmus School of Economics.

€ **Accounting** and **Econometrics** are listed as respectively **number 1 and 2** on the list of university degrees with the best job prospects in the Netherlands. Together with Fiscale Economie they are labelled as *very good* and Economics as *good*.

Erasmus School of Economics offers **5 Master's degree programmes**, with a variety of specialisations

MSc in Economics and Business

- Behavioural Economics
- Data Science and Marketing Analytics
- Economics of Markets and Organisations
- Financial Economics
- Health Economics
- Strategy Economics
- International Economics
- Marketing
- Policy Economics
- Urban, Port and Transport Economics

Research Master programmes

- Research Master in Economics
- Research Master in Business Data Science

MSc in Econometrics and Management Science

- Business Analytics and Quantitative Marketing
- Econometrics
- Operations Research and Quantitative Logistics
- Quantitative Finance

MSc in Accounting, Auditing and Control

- Accounting and Auditing
- Accounting and Control
- Accounting and Finance

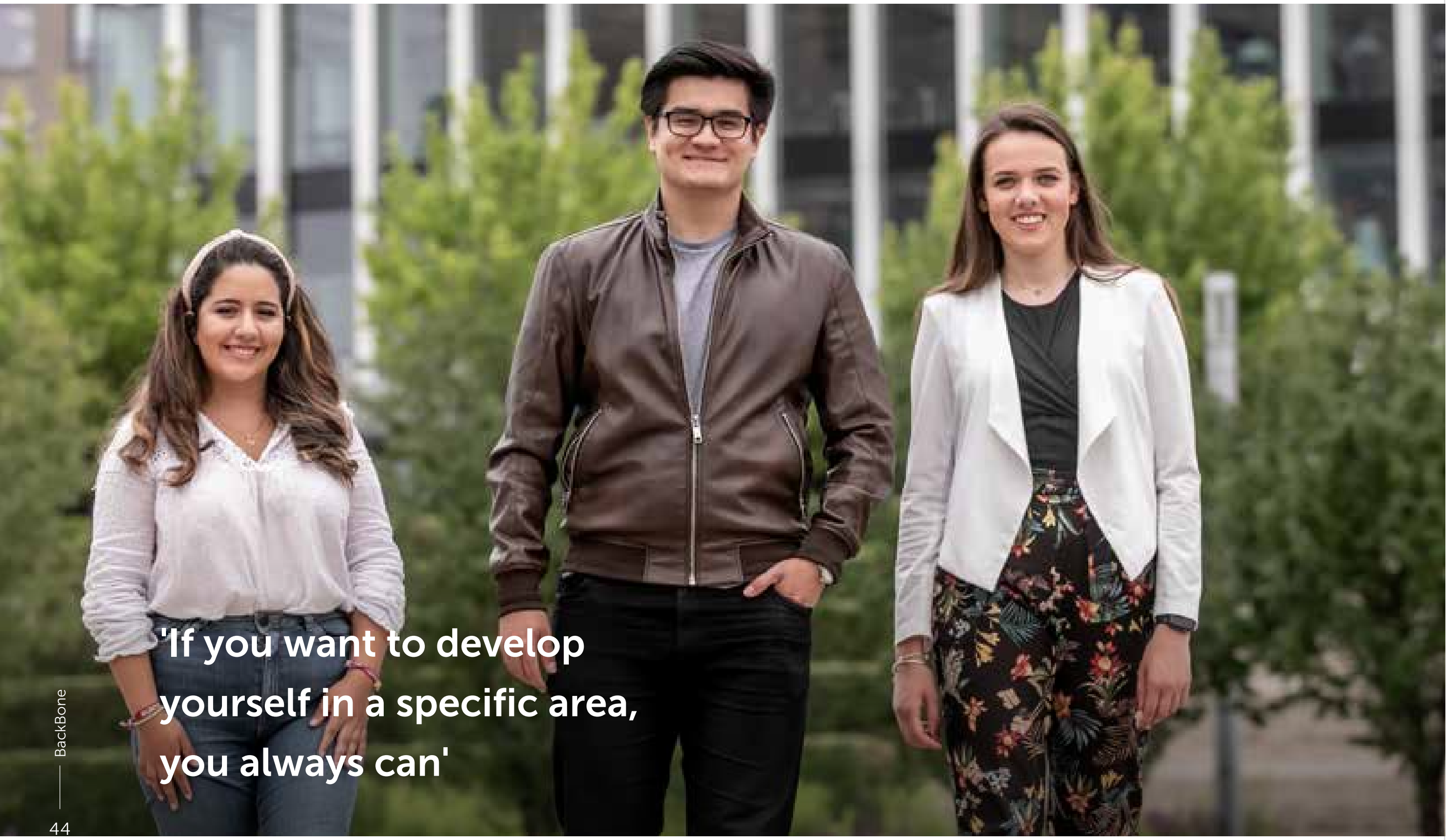
MSc Fiscale Economie

For more information about our study programmes please visit: **ese.eur.nl/education**

You can't go wrong with Erasmus University Rotterdam

By: Loes Singeling

'Bikes were coming from everywhere!' 'everyone speaks English' and 'be prepared for the workload': what is it like to pack up your belongings and move to the Netherlands to study? We asked three international students and active committee members of EFR (the school association of Erasmus School of Economics) about their experiences: **Anahi Corrales, Rhys McKenna**, and **Georgia Kirilova.**



'If you want to develop yourself in a specific area, you always can'

What do you like most about studying here?
Georgia: 'The combination of cheap education and high standards is what attracted me in the first place.' Anahi and Rhys agree that the good rankings informed their choice for Erasmus University Rotterdam. **Rhys:** 'I also like that there are many opportunities for students to participate: very active student associations and an active alumni network.' **Georgia:** 'And if you want to develop yourself in a specific area, you always can. You just need to the find the right means.'

The students all felt welcome in Rotterdam from the start. **Georgia:** 'The city has an international vibe, I feel it is the right place for me.' **Anahi:** 'Everyone speaks English, including older people, and is helpful. I feel both Erasmus University Rotterdam and the city are very open to internationals.' Rhys feels the Dutch are quite straightforward and easy to get to know. Georgia agrees, but adds: 'They can be a little closed, so at first I mainly hung out with international students. But now I have four Dutch roommates with whom I am very close.'

What was the most difficult when you first arrived?
Georgia: 'Bikes were coming from everywhere! I was not used to that. But other than that, I had no real culture shock. It was very easy to meet people and make friends.' Anahi and Rhys agree, but encountered their own challenges. **Anahi:** 'The hardest part was going everywhere on my own and getting to know the public transport. I'm not used to doing that alone.' **Rhys:** 'I had to get used to the shops closing early. If I want to buy something around 7pm, I'm too late.' **Anahi:** 'Yes, that too!'

What is the main difference between studying and living in the Netherlands and your country?
Rhys: 'The weather. It is so odd: single digits in May!' 'Haha, yes', Anahi says. 'And Nicaragua is very, eh, chilled. No organisation whatsoever. I like that everything is arranged and clear here.' Including the public transportation, Rhys adds. 'Well, when a train malfunctions, the system does too. But usually, everything is on schedule and you can get everywhere.'

Georgia: 'Erasmus University Rotterdam cares about delivering successful specialists who proudly show their Erasmus diplomas after their studies. The university is behind you the entire way. In Bulgarian universities, that is not always the case.'

What advice do you have for students abroad who are considering the Netherlands?
Rhys: 'If you are in doubt: this is a good choice. You can't go wrong with Erasmus University Rotterdam.' However, he adds: 'Getting into Dutch universities is relatively easy, staying is the hard part.' The women agree. **Georgia:** 'Prepare yourself for a big workload and a fast pace, especially if you are considering an intense programme like the International Bachelor Economics & Business Economics. It is getting serious now, your future starts here.' If you have the opportunity, check out the city and the university before making your final decision, Anahi recommends, or ask advice from people who have been here. **Rhys:** 'And make sure to arrange accommodation early, Rotterdam is quite competitive.'

But don't worry, it is not all work and no play. **Rhys:** 'Go to all the student events at the beginning, such as Eurekaweek. It is the easiest way to make friends.' **Georgia:** 'I became a committee member at EFR, which also helped me a lot to meet new people.' **Rhys:** 'And get a bike! It is the cheapest way to get around.'

Anahi Corrales (1999) is Peruvian/ Paraguayan and lived in Nicaragua. She moved to Rotterdam to start her studies at Erasmus University College. Besides her studies she is a committee member of EFR, where she co-organised the Model United Nations Rotterdam.

Rhys McKenna (1997) is half Australian and half Taiwanese and before moving to Rotterdam he lived in Dubai. Besides studying the International Bachelor Economics and Business Economics, he takes part in the EFR's Acquisition Committee.

Georgia Kirilova (1999) moved from Bulgaria to Rotterdam, where she started the International Bachelor Economics and Business Economics. Besides her studies she takes part in EFR's IBEB Committee.

Illustration: Carolyn Ridsdale

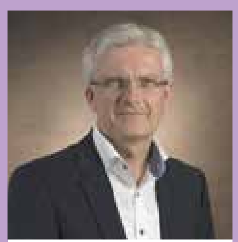
Are boys better at economics than girls?

By: Ivo Arnold

Economics is known as a discipline that lacks gender diversity. Women are underrepresented among academic economists, both compared to the population and to other disciplines. Progress in making the profession more diverse and inclusive has been slow. Recent data show that in top economics departments at European universities, the share of females among full professors is just 13%. Are male students better at economics than female students or do we need to look for other explanations?

'The challenge is now to persuade this female econometric talent to pursue a PhD and choose an academic career path'

Gender diversity in the economics profession can be negatively affected by study choice, study success and the career path that students take after graduation. There is plenty of evidence that the diversity problem starts at an early stage. To begin with, female students are much less likely to choose economics. Until recently, it was also assumed that males outperform females during the study. Various explanations have been suggested for this, such as the absence of female role models within the academic staff and the supposedly better math skills of male students. In recent years, however, the evidence supporting this gender gap has dwindled. This raises the question what the data from our own school tell us.



Ivo Arnold is Vice Dean of Education and Professor of Economic Education at Erasmus School of Economics. His research mainly focuses on the effectiveness and efficiency of the educational structure and the identification of the best practices in education.

I have collected data for the Dutch-language bachelor programmes in Economics & Business and Econometrics & Operations Research, offered at Erasmus School of Economics. The data cover the period from 2009 to 2015. During that period, the female share of enrolment increased slightly from 25.8 to 28.5 percent in the economics programme. For econometrics, the increase is much larger, from 17.9 to 28.5 percent. These numbers show that female interest in studying economics or econometrics, while on the rise, is still disappointingly low.

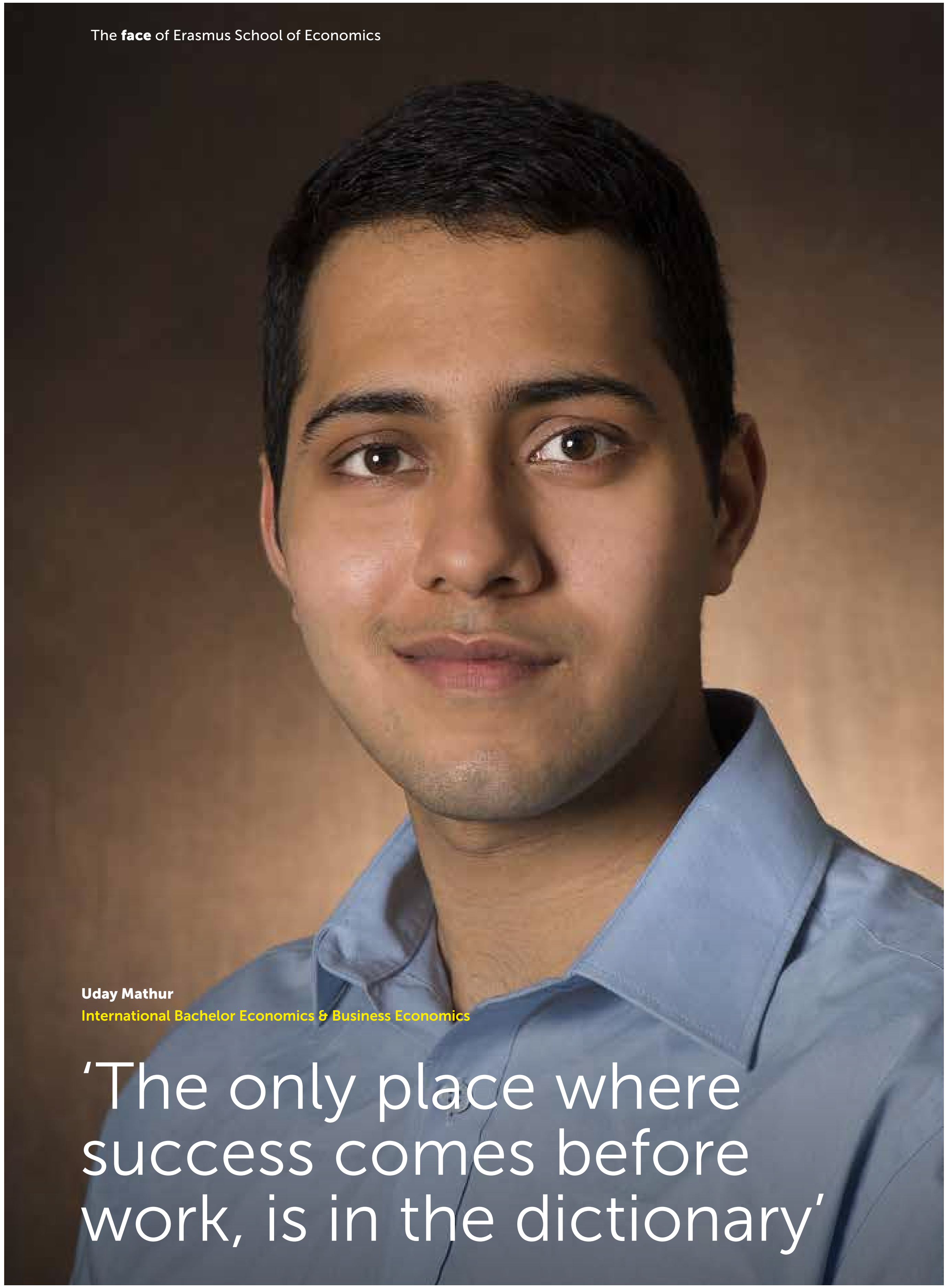
Any analysis of gender differences in study success needs to take into account students' background characteristics. We know that high grades in secondary education increase study success in economics. The track choice at high school is also relevant. The Science & Engineering track attracts analytically adept students and provides students with a better preparation for studying economics than the Economics & Society track. The gender difference in track choice is large: 21.5% of our male economic students has done the Science & Engineering track, compared to 15.8% of our female students. This may reflect the fact that girls are still underrepresented in this track. I also find that our female students have obtained significantly higher grades at high school.

How do female students perform in our bachelor programmes? When students fail, they usually fail in the first year. Therefore, I have first looked at the effect of gender on first-year survival. Students are allowed to continue their study programme when they receive a positive binding study advice after their first year. A negative binding study advice implies that a student cannot re-register for the programme. I have estimated the effect of gender on the probability of receiving a positive binding study advice, taking into account a host of background variables, such as age, high school grades, track choice and ethnicity. I find that gender has no effect on first-year survival.

Next I have looked at the effect of gender on the time it takes students to complete their programme. A common measure is the four-year graduation rate, which measures the share of students completing their programme within four years. I find that female students have a higher four-year graduation rate than their male colleagues. This gender effect is particularly strong in econometrics: for a female econometric student, the probability of obtaining a bachelor's degree within four years is 0.113 higher than for a male student, again taking into account all the relevant background characteristics.

The gender gap in economic education has been closed. At Erasmus School of Economics, female students have a better graduation rate and do not drop out more often than their male colleagues. We can thus safely discard the notion that boys are better at economics than girls. Women are also increasingly interested in econometrics and perform well in this programme. Since many academics in the economics discipline have an econometric background, this bodes well for the ability to tackle the academic staff's lack of diversity. The challenge is now to persuade this female econometric talent to pursue a PhD and choose an academic career path. ❮

The **face** of Erasmus School of Economics



Uday Mathur
International Bachelor Economics & Business Economics

'The only place where success comes before work, is in the dictionary'

MEET YOUR **PROFESSOR**

> **'I think the one thing that keeps me going, is the love of learning'**

Meet
Robin L. Lumsdaine

'My name is Robin Lumsdaine. I come from the United States and work at Erasmus School of Economics as a professor of Applied Econometrics. If I could pass on wisdom to students, I would tell them to be open to opportunities. Every new challenge is an opportunity to learn new things, to try new things and to learn about yourself. I think people should always embrace new ideas and be interested in learning.

My first visit to Erasmus School of Economics was back in 1997, when I had just finished my PhD at Harvard University and became Assistant Professor. I remember thinking of Erasmus School of Economics as a time series heaven, because there was a very skilled time series econometrician. When I arrived, I discovered that there was a large collection of faculty members and students that were interested in time series and in econometrics in general.

Over the years, I came back to Erasmus School of Economics often, almost every year. Over time, some of the faculty members asked if I would be interested in hosting students from Erasmus School of Economics to do research internships within various institutions. So I started doing that roughly once per semester. To date, I've hosted a total of 11 students. Through working with students, I discovered I really liked the education at Erasmus School of Economics.

I think the one thing that keeps me going, is the love for learning. I always like taking on new things, learning new things and that's what keeps me active, both in my career and in life. I am most proud of the work that I have done with students, all the different papers that we have written together. I work on a wide variety of topics and actually, one of the things that got me interested and one of the reasons why I like doing econometrics, was because I could take all of the mathematical tools and skills I knew and apply them to a wide variety of topics and real world issues.

When asked how to describe my research, the answer I always give is that I am interested in how people's perceptions are related to reality as described by evidence and data. For example, if a person thinks he is healthy, he may not go to the doctor. However, if they postpone going to the doctor, then some disease or some illness that they have, will be diagnosed later. That will affect the likelihood that they recover from the disease, whereas if somebody is worried that they are not healthy they are more likely to go to the doctor more often and they will probably get diagnosed earlier, and that will also affect their outcome.

In my research I tend to use survey data, collected from surveys in which people are asked about the chances that things will happen. For instance, a typical question would be something like 'on a scale of zero to 100 – where zero means absolutely no chance and 100 means absolute certainty – what are the chances you'll live past age 75?' Typically, surveys that ask questions like this are called subjective response questions. Surveys will often ask a variety of questions of this type. If we both answered 70 to the question, this does not necessarily mean we think the same. 70 could mean different things to us, so it's important to adjust people's responses to take into account the range that they're comfortable with in answering the questions.

My second area of research relates to, or focusses on financial crises and banking. A lot of the ideas of that research stem from my time at the Federal Reserve. The financial stability board defines a systemically important financial institution as one which, because of its size, level of interconnectedness or complexity would cause a problem for the greater financial system if it were to get into trouble.

Most of the regulations that exist are focused on a firm's size and in effect, that focus on size often gives rise to the idea of too big to fail. I think that is where the moniker of 'too big to fail' came from. Moreover, when it comes to interconnectedness, that was exactly what was at the heart of the Lehman Brothers crisis: Lehman Brothers had a lot of exposure to other firms and it took the regulators a long time to determine where those connections were. Finally, I have tried to work in the area of complexity to come up with a definition for complexity and to define measures to help regulators measure complexity. The definition we came up with, was that an organisation will be classified as complex if its organisational structure poses coordination challenges.'

Your gateway to success

Some of the character traits that define Erasmus School of Economics' students are their high level of activity and their work ethic. The character of the students is reflected in the presence of several active study associations. These associations offer students opportunities to acquire leadership skills, widen their network and participate in events such as the ones highlighted on the following page.

Highlights of events

EFR
Erasmus Recruitment Days

Every year, EFR organises – in collaboration with STAR – the Erasmus Recruitment Days. The Erasmus Recruitment Days is the largest student-organised on-campus recruitment event in Europe, with over 100 companies and 2500 students participating every year. The Erasmus Recruitment Days is open for students from all study backgrounds and for both Dutch and international students. It is the perfect way to get in touch with a wide range of companies. Whether you are looking for a job, internship, or just want to know more about your future career possibilities. Everything is possible!

FAECTOR
Econometric Career Days

Each year, FAECTOR organises the Econometric Career Days, the largest on-campus recruitment event for econometrics students in the Netherlands. During this event, hundreds of students get familiar with econometrics in practice and job opportunities through a number of formal events, such as cases and company presentations, and informal events hosted by many different companies. Traditionally, the Econometric Career Days kick off with a symposium, which is accessible to all students, where inspiring speakers demonstrate the use of data analytics in society and businesses.

FSR
International Banking Cycle

Every year, the Financial Study association Rotterdam organises the International Banking Cycle, which is the largest investment banking recruitment event in the Netherlands. This recruitment event gives students a clear view on the operational practices and career opportunities of the world's leading investment banks, including Barclays, J.P. Morgan, Deutsche Bank. Each bank organises a M&A workshop and some banks also offer a case with a focus on sales & trading. As such, the International Banking Cycle is the perfect opportunity for students to get acquainted with the dynamic world of investment banking.

FINANCIAL STUDY ASSOCIATION ROTTERDAM

AEclipse
National Economics Olympiad

The National Economics Olympiad is a problem-solving competition that brings the brightest bachelor-3 and master students in Economics from all over the Netherlands together. During the Olympiad, participants will solve a total of eight questions within three hours in teams of three, each of a different economic subject, such as game theory, microeconomics, macroeconomics, policy economics, econometrics, health economics and more. The Olympiad is concluded with a panel discussion.

aeclipse

CT
Tax Business day

CT annually organises a Tax Business Day. This day offers a varied programme with a plenary part in which a hot topic is discussed. Moreover, there are also a lot of opportunities for students to meet their future employer during a lunch, workshops, individual meetings and the networking reception. With approximately 250 students and over 20 companies participating, this day is one of the largest on-campus tax-events and is always a great success!

CHRISTIAANSE-TAXATEUR

In Duplo
In Discussio

In Discussio is the most prominent conference of study association In Duplo. It aims to make a meaningful contribution to the social debate about a current issue, which lies on the interface of economics, law and business. Politicians, businessmen, scientists and journalists are invited to speak about the topic. After, the speakers and debaters will engage in a debate. Students take part in this discussion.

IN DUPLO

MAEUR
Commercial Break

Every year, MAEUR welcomes the new marketing master students to their study with the Commercial Break. This event, which is hosted in a movie theater at Pathé and is based on the Cannes Film Festival, highlights the finest advertising campaigns from the year before. Companies on the forefront of marketing are invited to share their marketing campaign success stories. In addition, some of the best commercials from the past year are showed to inspire the new students for their study in marketing!

maeur

ECE Students
24 Hour Business Game

At the 24 Hour Business Game participants conceptualise a complete business plan with the guidance of experienced executives from corporates and startups and help from marketing, IT and financial consultants. Apart from taking part in the brainstorming sessions and interactive workshops, the participants also have a chance to engage in other entertaining activities such as group yoga sessions. At the end of the game, the young entrepreneurs pitch their business plans to the judges and the winning ideas take home prizes, including a cheque from the sponsors and a trip to Portugal.

SABER
Pub lectures

Every two months, SABER organises a lecture in a pub given by a professor or expert in the field of behavioural economics. During these pub lectures, the guest speaker tells the students about the results of one of his/her experiments or about the application of a certain topic in behavioural economics in his/her work. As such, these pub lectures allow the students to gain insight into the application of behavioural economics in practice in an informative setting. Each pub lecture is a fun, educational and social activity!

Transito
Urban Trip

For its Urban, Port and Transport Economics students, Transito organises an urban trip in order to give them insights in the urban sector, which is rapidly evolving. During this day Transito visits a city in the Netherlands, where they study the radical transformation design of a transport location. In support of this study, the students receive a guided tour and a presentation on the design of the location. The day is concluded with a discussion about incentives in the urban sector.

Transito
Gateway to a moving world

'You basically run a business together'

By: Loes Singeling

Completely modifying the existing EFR Business Week into the brand new EFR Master Career Week, organising the first Model United Nations in Rotterdam, dealing with the last-minute cancellation of a big political debate: the Economic Faculty association Rotterdam (EFR) can certainly look back on a busy and eventful year. President Robert Nieuwenhuis and Commercial Officer Fleur Jongma reflect on what they have learned during their year as members of the 55th board of EFR and talk about their biggest accomplishments and challenges.

How do you look back on this year? What did you learn?

Robert: 'It is hard to predict what a year outside the classroom will be like, but I really enjoyed it. It is completely different from studying: you basically run a business together, which is quite intense. I learned to manage, to work together with other board members, to take responsibility and to adjust in working with different parties. These are skills you cannot learn in the classroom.'

Fleur: 'To me, working so closely together with people I did not know before has been a very special experience. The connection we have within the board, with previous boards and with committee members is unique.'

'As Commercial Officer, I got the opportunity to work with many different parties while maintaining, improving and expanding the network of EFR. I was pleasantly surprised to find it was a very strategic function as well. I have been able to help building long-term relationships from which we can benefit in the future.'

'It is not all about the events you organise and how much impact you make. A board year is also about this close group of friends you become together. That is one of the most valuable experiences you will gain'

What were the highlights for EFR?

Robert: 'While organising our usual events, in the background we have been busy with some major changes. For example, we decided we wanted to change the current EFR Business Week into the EFR Master Career Week.'

Fleur: 'Research showed that November is a better moment for recruitment than April. Therefore, we decided to split the EFR Business Week into a recruitment part and an inspirational part, for which April actually is a good time. Similar choices have been made for the Master Orientation Days, which were previously scattered over the year but are now concentrated in March.'

'I am proud of the EFR Master Career Week committee that started this year. Another highlight was organising the first Model United Nations in Rotterdam. About 20 nationalities participated, it was very well arranged and a lot of fun. The response was unanimously positive.'

Robert: 'And because of the new Master Career Week committee, we now had the opportunity to work with three fulltime committees, which was a great experience.'

What were the biggest challenges?

Robert: 'Our major highlight was supposed to be the EFR/EenVandaag Erasmusdebat, a television debate between the chairmen of our biggest political parties. Everything was set up, lights and sound had been checked, security was in place. And then, the director called through the aula that the event had been cancelled. That morning, a shooting had taken place in Utrecht, which had made the political parties decide to pause their campaigns. Within a few hours, we had completely dismantled what had taken us months to prepare. A major setback, but it was beyond our control.'

Fleur: 'A more general challenge was organising many events in the same period. That takes a lot of time besides your day-to-day activities.'

Robert: 'In those weeks you have too little hours in a day and see each other less, everyone is busy with their own work.'

Fleur, you did your bachelor in Utrecht before starting a master in Rotterdam. What is the biggest difference?

Fleur: 'Halfway through my master I felt I wanted to do more than studying before my working life would start. Leaving behind my life in Utrecht was scary, but allowed me to become part of an entrepreneurial association that is able to really make an impact for students. I value the ambitious character of Erasmus School of Economics, it is really common practice for students to be active in associations. I feel that is different in Utrecht.'

What are your plans for next year?

Fleur: 'Completing my Master in Behavioural Economics and I plan on doing a second Master here as well.'

Robert: 'I am starting the Master in Financial Economics. I look forward to being in the lecture halls again, but it will be quite a switch.'

Fleur: 'We have got used to this hands-on, practical approach, now we will be spending our days in the library again. But having some more spare time will be a nice change.'

No struggles letting go as a board member?

Fleur: 'I think all board members struggle with that. Many of them stay involved with EFR by joining advisory bodies, I am considering that too. However, I feel I achieved my full potential this year, and it is great to be able to transfer our knowledge and experience to the next board. For us, it is time for the next challenge.'

Robert: 'We are ready to pass the torch.'

Any last advice to your successors?

Robert: 'It is not all about the events you organise and how much impact you make. A board year is also about this close group of friends you become together. That is one of the most valuable experiences you will gain.'

Fleur: 'And don't forget to enjoy it: it is over before you know it.'

What happens when parents receive less social benefits?

Research by: Anne Gielen,

In 1969, two years after the introduction of disability insurance in the Netherlands, 4 percent of the Dutch working age population was receiving social benefits. By the late 1980s, that had risen to 12 percent. Prompted by rising costs, the government took a series of steps to reduce benefits, stiffen eligibility requirements, and transfer responsibility to individual employers. Together with Professor Gordon B. Dahl (University of California), Associate Professor Anne Gielen exploited the 1993 disability insurance changes to explore how a parent's loss of some or all disability insurance benefits affects their children's future choices and outcomes.

'Every € 1,000 decline in disability benefits to parents translated into a boost of around € 5,700 in their children's future earnings'

Individuals in the Netherlands receive disability insurance based on the income lost from their disability. The changes that were made in disability policy in 1993 affected the calculation of a potential beneficiary's "earnings capacity", resulting in fewer individuals qualifying for insurance and lower benefits for those who did. The changes affected some individuals but not others. On November 12, 1996, the Dutch parliament passed a motion grandfathering anyone between the ages of 45 and 50 into the old, more generous rules for claiming disability insurance benefits, before the re-examinations for that age group took place. This grandfathering created a cutoff in the generosity of disability insurance based on a person's age. It is exactly this change that Anne Gielen and Gordon Dahl exploited to examine how disability income receipt affects children.

Anne Gielen is Associate Professor at the Department of Economics at Erasmus School of Economics. Her research interests are on topics in labor economics, health economics and applied microeconometrics.

Relative to the children of parents who received generous disability benefits through the 1990s, the children of parents who were no longer eligible for benefits or who received diminished benefits are less likely to make disability claims when they became adults. In 2014, nearly 20 years after the changes, the children of parents who were subject to the tougher qualification regime were 1.1 percentage points less likely to be disability insurance claimants. Consistent with an anticipated future with less reliance on disability insurance, the children of affected parents are 2.2 percentage points more likely to finish upper secondary school.

Parental disability income receipt also affects their children's future earnings and taxes paid. Every €1,000 decline in disability benefits to parents translated into a boost of around €5,700 in their children's future earnings. Tax payments by these children between 1999 and 2014 rose by roughly €2,000 — 2 percent of the mean taxes paid. 'The combination of reduced government transfers and increased tax revenue results in a fiscal gain of €5,900 per treated parent due to child spillovers by 2014,' the researchers report.

In 2016, Dr Gielen was invited to present her findings at the directors-meeting at the Ministry of Social Affairs and Employment. One of the directors mentioned that policy-makers had been suspecting some trickle-down effect of social benefit claims on next generations, but so far lacked any causal evidence. This had thus far prevented any policymaking in this direction. A few months later, a group of policy-makers from the Ministry came to Erasmus School of Economics for a follow up meeting. The findings of Anne Gielen and Gordon Dahl's study were eventually taken into the official intergovernmental report on Disability (IBO Arbeidsongeschiktheid).

MEET OUR **ALUMNI**

Media
matters

By: Madeleine Kemna

Alumnus **Pim Schmitz** has given a whole new meaning to the word job sharing. Instead of doing one job together with a colleague, he was until recently CEO of two fast-growing media companies: Talpa Media and Talpa Network. His role at the latter has now changed to non-executive director. Who better to give us insights into the media world of the future and provide some important tips for those who want to work in it?

After graduating in macroeconomics at Erasmus School of Economics, Pim entered the trainee programme at ABN AMRO bank, where he started in the economic research department and ended up in corporate finance. Would he recommend working for a bank before joining a corporate? 'Yes, I received a broad training in my first few years and got the chance to get to know a wide range of companies while working in corporate finance. It was a very good learning environment.'

Two Talpas

When John De Mol, creator of blockbusters like Big brother and The Voice, offered him a job, Pim was already quite familiar with De Mol's approach to business. As a banker he had been advising De Mol when he sold his company Endemol to Telefonica in 2000. Since 2003 the two have worked together in various private equity activities, culminating in a successful bid to buy back Endemol (for a substantially lower amount than the price that was received seven years before) as part of a consortium. In 2012 they sold it again, but by now they had started Talpa Media (referring to the founder's family name in Latin), which creates and produces content that it licenses all over the world.

Meanwhile Pim Schmitz had firmly established himself as De Mol's business partner. Small wonder he was asked to stay on for five years, based on an executive pay schedule linked to the company's performance, when Talpa Media was sold to British media company ITV in 2015. How did he manage to do so while also working as the CEO of the new company Talpa Network? 'The team at Talpa Media has been together for a long time. That makes it possible to work very efficiently; you don't have to invent the wheel together. However, you do have to be a good planner and make some choices. It helps for example that I live in Hilversum, close to the office. My wife has a demanding job as well and we have five children, but by organising the right support we make it work.'

John De Mol is the sole owner of Talpa Network. What does that mean for your way of working? 'You can act quicker and work more efficiently. Lines of communication are very short. This is vital in a fast changing sector such as media. Sometimes we only need 15 minutes to decide on a new venture. That is unthinkable in a more traditional company.'

Innovations and consumer behaviour drive change

'The media landscape used to consist of companies that focused mostly on producing content, others that specialised in distribution and those active in monetisation of content. Those distinctions are disappearing. Successful players are no longer limiting themselves to one platform like radio or newspaper. Technological innovations and shifting consumer behaviour are the drivers of these changes. The incumbent media companies are constantly looking for ways to reposition themselves to stay

'The incumbent media companies are constantly looking for ways to reposition themselves to stay in the game'

'Graduates will have obtained the skills to create a good starting position. It is up to them to decide what to do with it. This may take some experimenting'

in the game. That is made even more difficult by the arrival of challengers such as Amazon, Google and Facebook. These new kids on the block are definitely ahead of the pack.

Amazon lures you into their platforms by offering their Prime entertainment service. By combining analysis of what you watch with data from other sources you may use, such as their voice controlled application Alexa, they are able to build a detailed profile that enables them to sell their wares to you more effectively. They know more about you than you think!

In my view it is impossible for stand-alone media outlets to survive. You will have to operate across all platforms and content will be increasingly important. In order to distribute and monetise this content, media companies will have to adapt to a consumer that is making use of technological possibilities to enjoy the content where, when and how he/she wants.

Talpa Network was founded in 2017. It focuses on the Netherlands and combines two core activities: creating content and distributing this across its platforms. By making intelligent use of the data this provides, we can offer advertisers a more effective reach of their target audience. Take diapers, a clear example of a good that is only of interest to consumers in a certain period of their life. In the near future we can offer advertising on addressable TV where we show the commercial only to viewers with a profile that fits the potential pamper user. In addition, we are a one-stop-shop where you can easily organise a cross media campaign. All this means that we can ask a higher price per consumer reached.'

Advantage is in the eye of the beholder. Do clients understand the potential of these new developments? 'Some of them definitely do, others need to be guided to catch up in several steps. By the way, I should say that we continue to learn ourselves. The increasing availability of artificial intelligence is going to open up new vistas. We have people in-house who are in the know and the challenge is to disseminate their knowledge in the rest of the company so that we can make optimal use of it. Our strength is that we have invested in proprietary technology and have the skills to build on that. We can translate that to implementation in a business model. If we are the first to do so in a Dutch context then I am happy.

Streaming your own football match

Our technological know-how provides us the opportunity to come up with innovative projects that are good fun. A case in point is VoetbalTV, our joint venture with Dutch football association KNVB, which makes it possible to offer streaming of amateur football. For EUR 2000,- clubs can ask us to place a camera post next to the pitch. Our proprietary technology allows us to film both sides simultaneously and merge the two into one image. Tracking technology makes it possible to follow the ball and let viewers zoom in. The benefits are endless. Streaming games makes it possible for players to make their own clips and post them online, for grandparents to watch kids play no matter how far away they live and for trainers to analyse their team's achievements. There are various tools to accommodate the latter for a small premium on top of the monthly fee that clubs pay. We are still experimenting with the monetisation of this concept, but the streaming itself is free if you have a KNVB account. There is also a lot of interest from abroad to license the system.'

Pim Schmitz (1968) is Chief Executive Officer of Talpa Media Holding NV and Talpa Holding N.V. He studied Economics and Business Economics at Erasmus School of Economics. After his studies he first worked at ABN AMRO, and later on joined John De Mol's company Talpa Capital.

Tips for students

Today's students will enter a rapidly changing work environment. What does it take to be successful in such circumstances? 'Flexibility is the name of the game. I always look at the energy people are emanating. Are they eager to continue to invest in themselves? Graduates will have obtained the skills to create a good starting position. It is up to them to decide what to do with it. This may take some experimenting. Don't be afraid to take one step back to put two forward later.

Talpa offers great opportunities for data scientists, but we also have many roles that are less specific. People with a background in law or finance for instance will certainly have a chance to participate in a very dynamic working environment with us. What is important is that they are able to think in fast changing business models and new markets. We look at the person behind the degree.'

International Research Projects

Each year many of the study associations affiliated with Erasmus School of Economics organise a trip, where students, through desk research, carry out a project that, for example, improve the local society. Here, you can read more about the various projects that these associations have organised in recent years.

In Duplo

Every year, In Duplo organises a study trip to an exciting destination outside Europe. Students conduct research in collaboration with a company. It starts with desk research on a topic that lies on the interface between law and economics. During a 10-day study trip, the students explore business life, the culture, nature and nightlife of the destination. After the trip, the students finish their research. The project ends with a presentation of the results at the company.

Past locations: Taipei, New York & Seoul

FAECTOR

The FAECTOR Research Project consists of two parts. During the first part students do a research internship at a company for eight weeks. This offers students the opportunity to apply econometrics in practice and experience working at a company. During the second part of the project the students go on a study trip in the following summer. The trip allows them to experience a new culture from a business, educational and cultural point of view.

Past locations: São Paulo, Japan & Toronto

FSR

Every year, FSR organises a two-week international consultancy trip. This research project starts in the Netherlands with training, company visits, masterclasses and desk research. Subsequently a team of 20 students travels to the destination to conduct research in smaller teams and to provide professional consultancy services to international companies. Besides work, there is also time to explore the cultural aspects of the destination. The research project concludes with a final presentation in the Netherlands.

Past locations: Brazil, Vietnam & Colombia

AEclipse

The International Research Project of AEclipse gives students the chance to apply the knowledge from their economics master courses to a real-life issue in a developing country. A group of 20 students start with desk research. They do a literature review, analyse data and construct econometric models. During the weeks of field research in the selected developing country, students collect all the necessary information.

Past locations: Columbia, Zambia & Peru

In the context of their International Research, AEclipse recently undertook a journey to Peru. Students worked together with the Inter-American Development Bank and analysed the effect of Venezuelan refugees on the Peruvian labour market. They interviewed relevant parties from the public, private and non-profit sector in Lima and the surrounding regions. Except for the research, the students also explored the country, from the desert in Huacachina to the mountains in Huaraz, including adventurous activities like hiking, sandboarding, boat tours and a race through the desert. The project ended with the publication of a report, which combined both the field and desk research outcomes.

EFR

EFR Involve is a social and research focused programme, in which twenty students apply their academic knowledge to make a sustainable impact on communities that need it the most. EFR Involve is executed in partnership with a NGO or social enterprise that will offer guidance and assistance in setting up the research. The project consists of four months of desk research, two to three weeks of field research abroad and a final presentation.

Past locations: Nepal, Indonesia & Tanzania

MAEUR

Each year, the International Consultancy Project offers 25 students the possibility to put theory into practice by conducting market research, while gaining international and consultancy experience. The students are divided into smaller consulting teams and are in charge of the acquisition of a research project. After choosing a project, the desk research starts. Then, the students go abroad for 3 to 6 weeks to conduct field research. The project ends with a presentation at the company.

Past locations: Australia ,India & China

The long-term effects

of migration on attitudes towards migrants

By: Anna Baiardi

Recent migration waves around the world have brought immigration at the centre of the political discourse. Studies show that immigration can affect attitudes of natives towards immigrants and voting outcomes in the destination countries. However, little is known about the persistence of these effects in the long run. In this project, we study the long-term consequences of immigration by studying how natives perceive immigrants, and by studying the mechanisms through which immigration affects attitudes of natives. Moreover, we plan to study whether attitudes of natives towards migration have long-term economic consequences, particularly on the ability of immigrants to integrate.

'Historical events can have persistent effects on economic and cultural variables until today'

Recent studies establish a link between immigration and right-wing and far-right and populist voting; this implies that immigration can have consequences on attitudes of natives towards immigrants, at least in the short run. Immigration can affect natives' attitudes in two opposite ways. On the one hand, by increasing contact with different cultures, immigration can reduce prejudice and induce more favourable attitudes towards immigrants among natives. On the other hand, immigrants can be considered as a threat by natives; this generates negative views about migration. Studies find evidence for both effects.

However, little is known about whether the effects of immigration on natives' attitudes towards immigrants persist in the long run. Studying long-run effects is important, since historical events can have persistent effects on economic and cultural variables until today. Additionally, recent research shows that collective memory of historical events can be "activated" by political campaigning, even after the events are long-gone.

In a joint project with colleague Andrea Naghi, we examine the above questions in the context of the United States, focusing on the historical migration wave at the beginning of the 20th century. The U.S. is an interesting setting to study, since it has seen large inflows of immigrants in the course of history, as well as numerous changes to immigration policy which can be used for identification. Natives' attitudes are measured with votes for parties which propose anti-immigration policies, as well as survey data about attitudes towards immigration.

An important innovative aspect of this project is to combine the use of traditional econometric methods for causal inference, such as instrumental variables (IV), with newly developed machine learning (ML) methods for causal inference. ML methods can be used as a complement of traditional techniques for the estimation of treatment effects (for instance, IV, difference-in-difference and regression discontinuity design). These methods use the data to select functional forms flexibly, enabling them to estimate complex, nonlinear confounding relationships.

Anna Baiardi is Assistant Professor in the Department of Economics at Erasmus School of Economics. She obtained her PhD from the University of Warwick in 2017. Her research interests are development economics, economic history, economics of migration and applied econometrics.

There are several reasons why the features of ML methods are useful for causal inference and are well-suited for this research. Firstly, ML methods allow to flexibly control for a large number of covariates and therefore to appropriately account for confounding effects. This is particularly helpful when the researcher needs to rely on observational studies to answer policy-relevant questions. Moreover, ML can be used for the estimation of heterogeneous treatment effects, which helps to shed light on mechanisms through which immigration affects attitudes of natives. In fact, there might be significant heterogeneity in attitudes towards migration: the average effects might be driven by some areas of the country only, and understanding the characteristics of those areas where immigration sentiments are stronger is very important for understanding the channels through which these effects might be taking place, which is of interest for policymakers. Whereas standard techniques can also be used to estimate heterogenous treatment effects, the advantage of machine learning methods is that they can estimate heterogeneity systematically, allowing for a data-driven approach to select variables.

This article is based on the ongoing project "Long-Term Effects of Migration on Attitudes Towards Migrants: A Machine Learning Approach", joint with Andrea Naghi.

NOTED & QUOTED

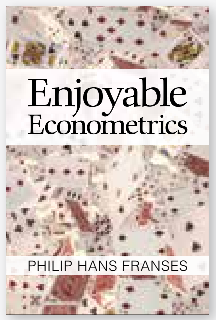
'MOOCs are a great way to enliven a course. Proving mathematical theorems is not ideal in front of a class with hundreds of students. If I use a MOOC to show students how it is done, I free up time to spend on something more engaging to create interaction in class. However, instruments such as MOOCs can never be a substitute for coming to class.'

Philip Hans Franses, Professor of Applied Econometrics and Professor of Marketing Research at Erasmus School of Economics on MOOCs*.

*A MOOC is a massive open online course, of which the course material can be accessed via the web.

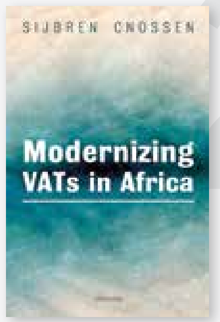
Books for on your nightstand

1



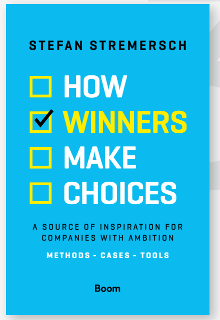
Enjoyable Econometrics
by Philip Hans Franses

2



Modernizing VATs in Africa
by Sijbren Cnossen

3



How Winners Make Choices
by Stefan Stremersch

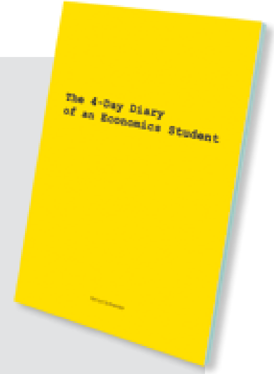
' I was looking for a rigorous programme in an international and diverse environment that equips students with both the deep economic insights and the quantitative skills necessary to tackle many real-world challenges. I found that at Erasmus School of Economics. In addition to the academic curriculum, there are many opportunities for students to develop as independent thinkers, challenge themselves, and excel in their passions.'

Thomas T. Wiemann, PhD Candidate at University of Chicago and former double degree BSc2 student at Erasmus School of Economics.

Students give a presentation for the Central Government Audit Service (ADR) at the Ministry of Finance

For their seminar Applied Behavioural Economics, students from Erasmus School of Economics got the assignment to propose a plan for the ADR to increase its impact. The best team, with Maria Russy, Maria Georgieva, Joris Adolfsen, Andrea Zijlstra, and Sander Kraaij, was invited to present their ideas to the general director, deputy director, and all the Lead Financial Auditors of the ADR, at the Ministry of Finance.

'The 4-Day Diary of an Economics Student



is an engaging and originally formatted story of the author's life as an economics student at Erasmus School of Economics. Its author, Luc Schneider, takes the reader on a journey—Luc's personal journey—through university life. From the exciting but also scary first moments to the nostalgic last moments of university life, The 4-Day Diary of an Economics Student is a lively and very readable personal account of new experiences, setting (and changing) personal goals, meeting and bonding with new friends, and dealing with difficulties. Above all, however, it is a story of personal development, learning, and growth.'

Anne Albert van der Galiën, alumnus of Erasmus School of Economics and Erasmus Institute for Philosophy and Economics (EIPE)

'I am very happy with this honour. Some of my best work was done while I was at the Econometric Institute and I formed close research collaborations that have lasted until now. It is with great pleasure that I look back at that period.'

Sanjeev Goyal, Professor of Economics at the University of Cambridge and former Professor of Mathematical Economics at the Econometric Institute of Erasmus School of Economics, on the occasion of his election as Fellow of the Econometric Society.

'I really enjoyed that the Econometrics study was so small and that there were many professors who were extremely committed to the programme and almost devoted their entire life to this study becoming a success'

Alumnus Jan Radermacher,
PhD Candidate in Economics at the Goethe University in Frankfurt and Data Scientist in International Advanced Analytics Team at ING DiBa.

Research experiment of Behavioural Economics students leads to waste reduction

In an attempt to reduce waste from advertising folders, Wendelien Bakelaar, Iris Böhm, Niek de Neijs and Tijmen Mulder, four students from the Master specialisation in Behavioural Economics at Erasmus School of Economics, performed an experiment using no-no stickers (also known as "nee-nee" stickers). Their research led to a waste reduction of more than 2 tons in Rotterdam.

Jitte Dingenouts
Master in Business Analytics & Quantitative Marketing

‘Here, you are given the tools to seize opportunities and to bring your ambitions to fruition ‘

COLOPHON **Publication** Erasmus School of Economics, Erasmus University Rotterdam **Editors** Ronald de Groot, Babette den Daas, Larissa van Boxem, Linde Hasker, Yasmine van der Straten, Loes Singeling, Madeleine Kemna, Sandra Phlippen **Concept, design and realisation** Kris Kras context, content and design **Print** Drukkerij De Bondt **Illustrations** Carolyn Ridsdale **Photography** Aysha Gasanova, Chris Gorzeman, Gerhard van Roon, Guido Pijper, Hester Blankenstijn, Hollandse Hoogte, Iris van den Broek, Ka-Chun Lo, Kees Stuip Fotografie, Lieke van den Oord, Marc Nolte, Ming Chao Photography, Mirjam Lems, Peter Strelitski, Roel Dijkstra, Rotterdam Imagebank, Wessel de Groot, Rudy Driessen, Ramses Singeling. **Circulation** 4,000 copies

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Erasmus School of Economics is defined by its groundbreaking research and excellence in education. We are leaders in our field. The founders of econometrics. Strong in behavioural economics. We are committed to finding solutions for today's and tomorrow's economic issues by challenging yesterday's economic theories as well as building from and valorising existing models and methods. We know our ambitions are as bold as our opinions, but our performances and publications show: we make it happen. Just like the countless leaders in business, research and politics did, who started their careers in Rotterdam. Just like our students will do, as they are taught and inspired by the best.
Hans van Kippersluis
Professor of Applied Economics with focus on Health Behaviour and Human Capital
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