

A Year in Rotterdam
**Check out Giacomo's
favourite places to go**

Meet alumnus
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**Let's put numbers
back where they
belong**

Research in a
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Back to Bone



Preface

The history of Erasmus School of Economics goes back to the year 1913 when the 'Nederlandsche Handelshoogeschool' was established by a group of entrepreneurial Rotterdam businessmen with the aim to bring economics and business to a higher level by way of scientific methods. In 1939 the School changed its name and became known as the 'Nederlandse Economische Hogeschool' (Netherlands School of Economics). By 1973 it became Erasmus University Rotterdam, comprising the medical campus Hoboken and the social sciences campus Woudestein. Even in those days its aim was the establishment of a vigorous and flourishing University with a – nowadays – prominent Erasmus School of Economics, incorporating a wide range of economic expertise, as well as creating and keeping strong ties with the regional and international markets.

These strong ties are in specific the merit of our economics and econometrics students. Among the traits that define them are their high levels of activity and their hardworking mentality. They are involved in all sorts of extracurricular activities and often have side jobs as student assistants to professors or in the administrative departments of our School.

The character of the students is also represented in the presence of a variety of study associations within our School. Take for instance the Economic Faculty Association Rotterdam (EFR) which organizes numerous events like the well-known annual Business Week. Or the Faculty Association Econometrics & Operations Research (FAECTOR) which is the largest study association for econometrics students in the world. FAECTOR offers large, varied projects and events for their aspiring econometricians, such as the Quantitative Finance Tour. And regardless the Master specialization you choose as an economics or econometrics student, you will find a study association that is dedicated to provide excellent professional activities and events for their members. For sure the knowledge and skills gained are undeniably welcomed by the numerous national and international businesses and organizations. You can read about our various study associations in this Backbone edition.

**Prof. Philip Hans Franses,
Dean Erasmus School of Economics**

The power of a bad example

Research in a nutshell by Robert Dur



Study &

Meet 4 students that combine their study with extracurricular activities



Rotterdam, the Next City

Interview with Frank van Oort



Investing since the age of twelve

Meet alumnus Sjoerd Rietberg



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Giacomo Czajkowski

Giacomo's favourite places to go

A year

In order to combine my double degree Economics and Philosophy with my occupation as an ambassador for Erasmus School of Economics it is also important to take time off to relax. Rotterdam has enough to offer, here is a selection of my favorite things to do the whole year round:

JANUARY



International Film Festival Rotterdam (IFFR)

Each year in January, Rotterdam is the stage of one of the largest film festivals in the world. This is where I discovered a range of different films that are extremely enjoyable and I wouldn't have encountered anywhere else. Also, the daily afterparties are worth visiting!

MARCH

Museum Night

I am often too busy to visit museums, even though I'd like to. Therefore I try to clear my schedule for the yearly Museum Night, during which museums in Rotterdam stay open all night, combined with other activities. This way, I combine several museums with some drinks at the Witte de With street!

FEBRUARY



Ice Skating

During the colder months of the year a temporary ice rink opens up just 5 minutes from the campus. Ice skating is embedded in Dutch culture. This is my favorite place for a romantic date or to take my international friends for their first experience on the ice.

APRIL



Rotterdam Marathon

Even for someone who doesn't like to run, the Rotterdam Marathon is a must see. No other marathon in the Netherlands can match the Rotterdam atmosphere, with a beautiful trail over the Erasmus Bridge and more than 950,000 enthusiastic spectators.

in Rotterdam

MAY

Liberation Day

On the 5th of May, The Netherlands celebrates its freedom and independence. In Rotterdam several festivals are organized, but I like to go to the 'Bevrijdingsfestival' (Freedom Festival) in the park by the Euromast because it offers a line-up filled with music, debates and theater.



JUNE

Rotterdam Rooftop Days

Rotterdam is full of high-rise buildings with amazing views. During the Rooftop Days rooftops all across the city are open for public and some even serve as bars and music venues. For me there is no better place to enjoy a cold drink!

AUGUST

Open Air Cinema

During summertime one of the central parks in Rotterdam is transformed into a large open air cinema. This is the perfect spot to end a day together with my friends and a good movie.

JULY

North Sea Jazz Festival

North Sea Jazz is the perfect opportunity to escape my music bubble and discover new sounds. At the largest indoor music festival in the world, it is possible to enjoy a firm base of jazz next to many other genres such as blues, soul, funk, hip hop and much more.



SEPTEMBER



World Port Days

One of the iconic aspects of Rotterdam is the port. During the World Port Days the bond between the port, town and its hinterland is celebrated. It gave me the opportunity to experience the port through behind-the-scenes tours and excursions, quayside parties and various nautical demonstrations.

OKTOBER

The Rotterdam Philharmonic Orchestra

I try to visit a classical concert at the Doelen at least once a year. The Rotterdam Philharmonic Orchestra turns 100 in 2018, which is reason enough for a visit. Their classical pieces blow me away every time I attend.

NOVEMBER

Indoor festivals and clubnights

November is a cold month but nonetheless filled with some good techno and house parties. These take place in different industrial locations and underground clubs, for which Rotterdam is famous.

DECEMBER



Fireworks at Erasmus Bridge

New Year is precluded with amazing fireworks launched in the vicinity of the Erasmus Bridge, where I toast on the New Year with my fellow students. Afterwards we continue celebrating in one of the many clubs that open their doors on the first night of the New Year.

Visit www.uitagendarotterdam.nl or www.rotterdamfestivals.nl for an overview of all events in Rotterdam



Getting High

(Grades)

About the research of Olivier Marie

It has long been suggested that cannabis is a less dangerous drug than alcohol. In 2010 Nutt et al. (the Lancet) found that the harm done to users and others is larger for alcohol than for cannabis. Cannabis does for example not lead to violent behaviour as often as alcohol does. Still, one of them is legally available and the other is not.

'In any case, an important takeaway message from this research is that smoking cannabis before a (statistics) exam might not be such a good idea'



Lately, there has been much pressure for policies to change. Not to ban alcohol, as was tried in the US during the Prohibition era, but to legalize marijuana or cannabis. Some American states have already done so and other jurisdictions have cut down on prosecution and criminalization. Uruguay went the whole nine yards through full legalization of cultivation, wholesale, retail and consumption. But the country that really stands out is the Netherlands: it decriminalised marijuana consumption already some four decades ago and its coffeeshops are now as much of a landmark as its windmills and dikes. This has not gone unnoticed by foreigners. The large cities in the Netherlands increasingly need to deal with drug tourism, with people from all over the world dropping by to smoke a joint or two.

Maastricht, a university city in the far south-east of the Netherlands locked between the German and Belgian border, had enough with the public nuisance that accompanied drug tourism. The city introduced a policy that limited access to its 13 coffee shops based on nationality. Natives, Germans and Belgians were exempted but all other nationals, including those studying in Maastricht, were no longer able to buy cannabis legally. This policy was in place for 7 months after which the cannabis shops went on strike in anticipation of new legislation that, in their eyes, impeded their customers' privacy. This situation created a perfect natural experiment setting for researchers Olivier Marie, Associate Professor at Erasmus School of Economics, and Ulf Zölitz (Briq, Bonn) to investigate the causal effects of a change



Olivier Marie is an endowed professor of Labour Economics at Erasmus School of Economics and a professor of Applied Labour Economics at the Research Centre for Education and the Labour Market (ROA), Maastricht University. His research focuses on economics of crime, education, labour and public economics.

in legal cannabis access on university student performance.

Using data on regular test results over time for all business and economics students, Marie & Zölitz found that the restriction on cannabis access significantly increased performance of individuals from banned nationalities. During the restriction policy, their scores were on average 10.9 percent of a standard deviation higher and their probability of passing a course increased by 5.4 percent. The literature also suggests that cannabis consumption impairs numerical skills proportionally more. In line with this, the effects of restricted access were found to be 3.5 times larger for performance in courses that required statistical and mathematical skills. These findings could be interpreted as an argument for limiting cannabis access as it does suggest that it changes consumption behaviour of certain individuals who in turn have lower productivity. However, the authors stress that their findings are a small part of a multi-dimensional societal cost and benefit analysis and should not be interpreted in isolation from other perspectives. There might be some severe negative consequences of making access illegal – such as increased demand through illegal channels and thereby routing cash flows into the pockets of narcotic gangs. In any case, an important takeaway message from this research is that smoking cannabis before a (statistics) exam might not be such a good idea!

This article is based on the publication "High Achievers? Cannabis Access and Academic Performance" by Olivier Marie and Ulf Zölitz in the Review of Economic Studies.



Catalina Trohin
International Bachelor in Economics and Business Economics

'This is my gateway to intellectual challenges'

Let's put numbers back where they belong

By: Madeleine Kemna

Sanne Blauw is a self-proclaimed 'number nerd' with a refreshing attitude toward quantification. Her motto: "Let's put numbers back where they belong. Not on a pedestal, not with the rubbish, but together with words." She does so for De Correspondent, the fastest growing all-digital news platform in the Netherlands, where she works as a numeracy correspondent. Some of you may recognize Sanne from her TEDx talk 'How to defend yourself against misleading statistics in the news'. Many more will get to know her because De Correspondent is about to go international with an English version. Plenty of reasons to talk to this alumna.

When Sanne describes the path that led her to where she is now, it sounds like a puzzle whose pieces finally fell together neatly into her current position. This is perhaps not surprising, since she is a big fan of logical puzzles and enjoys swapping them with her readers. "After high school, I left for Rome where I wanted to immerse myself in subjects like history and international relations that would not be part of the medicine study I had chosen. During that year I discovered that medicine was not for me. I preferred something that was not only challenging, but would involve writing, public speaking and numbers; three things I really enjoy."

A friend pointed her in the direction of the renowned 'Mr.Drs.-programme' at Erasmus School of Economics, which provided the opportunity to do a double degree in Economics and Law. After the first year she switched to Econometrics because she preferred a study with more math. This satisfied Sanne's thirst for numbers, but she was also still active in public speaking. Toward the end of her study she won a contest on microcredit. The prize was a trip to a microcredit project in Uganda, and Sanne saw this

as an excellent opportunity to do a research project. Studying the effects of mobile phone use on personal income in Uganda led her seamlessly to her PhD where she put this study in a wider context concerning wellbeing.

We shouldn't read too much into the numbers

Sanne: "The title of my dissertation is 'Well to do or doing well'. I asked myself what determines our wellbeing and what role other people play in the process. In order to answer those questions, I set up various research projects, approaching the subject from different angles."

Economists tend to measure wellbeing in financial terms, such as Gross Domestic Product (GDP). However, we shouldn't read too much into the numbers. It is not self-evident that people with high incomes also feel well. Money is no guarantee for a happy relationship, good health or an interesting job. There is a growing interest in alternative measurements of wellbeing. One of those is happiness.

'My ambition is to bring about a realization that we all need a critical attitude'

'Just like numbers, journalism always has a subjective dimension, caused by the people who choose what to write about and how to write about it'

I discovered – in line with previous research – that the amount of happiness people feel is influenced by how they perceive their wellbeing in comparison to peers. The higher the wellbeing versus family members and (former) classmates, the happier people were. The other question I wanted to answer was whether happiness is transferable – ‘contagious’ – or whether happy people simply seek each other out. These two mechanisms are difficult to separate unless you have the right setting. I found it in a surprising location: a student association. Every year new members join the association and form so-called ‘year clubs’, which are groups made up of friends that joined in the same year. By surveying them before they formed year clubs, I could determine whether happy people clustered together. A year later I checked if their happiness had changed. I found that happiness is indeed transferable; the happiness of a friend in the year club increases the chance that fellow members will be happy too. The topic of happiness still fascinates me and I continue to write about it in my current job.”

“One of the biggest lessons I learned during my PhD at Erasmus School of Economics was that collecting data always involves making choices that may influence the results you find. I used to think, like most people, that numbers are facts you cannot argue with. However, this is precisely what you should do: always ask yourself where this number came from and what its limitations are.”

Science and journalism are really not that different

The final piece of Sanne’s puzzle seems to be De Correspondent, an online news platform which distinguishes itself with its philosophy about journalism. “Just like numbers, journalism

always has a subjective dimension, caused by the people who choose what to write about and how to write about it. De Correspondent recognizes that. On top of that, we try to report on the stories that tend to escape the regular news. The misuse of statistics is such a topic.”

A social contract between journalists and members

De Correspondent has started a collaboration with New York University (NYU) with the aim to find a sustainable way to provide news in English to readers who are willing to share knowledge, spread the word and pay for transparent, innovative journalism that provides an antidote to the daily news grind. The idea is to make it a form of membership, but the initiators say membership doesn’t work if all it entails is a request for funding. There has to be a social contract between journalists and members. In order to find out what that contract should say De Correspondent and NYU launched a public research project, called the Membership Puzzle Project. It runs for a year with updates being posted regularly online.

We all need a critical attitude

“My ambition is to bring about a realization that we all need a critical attitude. Last year I wrote an article on control by numbers in the public sector. For me it was shocking to see that in some cases the work of public sector professionals is reduced to quantitative categories. Not only does an oversupply of numbers not tell us how well the professionals are doing their job, it actually prevents these people from doing it properly. I hope the notion that we don’t need to express everything in numbers will gain ground.

Don’t get me wrong, I love numbers. That’s probably why it irritates me when they are misused. A classic example is an opinion poll that is presented as something that can predict the election with great precision. Well, it can’t predict and it’s not accurate. In the run up to the recent Dutch elections we saw some news programmes starting to report margins of error, which is definitely a step forward.”

In her TEDx talk Sanne mentioned several types of common misuses of numbers. She considers the cocky correlation as the most dangerous because it often leads to action. “A graph by Vox.com showed that African Americans were more than two and a half times more likely to be arrested for drug related offences than white Americans. This may lead to more police control in black neighborhoods or the singling out of African Americans. However, statistics show that they are not more likely to use or sell drugs. The more plausible conclusion is that the graph was the result of African Americans being stopped more often by the police. Another serious misuse of data was presented in a recent article in The New York Times with a disturbing graph that suggested millennials attach no importance to democracy. It was based on a survey that asked respondents to place themselves on a 10-point scale where

1 meant that living in a democracy is ‘not at all important’ and 10 ‘absolutely important’. It turns out that the authors only considered those who answered 10 as attaching importance to democracy. The article treated someone who answered 1 as attaching the same importance to democracy as those who gave a 9. Average scores, calculated with the same data, showed that young people still attach a great deal of importance to living in a democracy.”

Sneak preview

Sanne sounds reasonably optimistic about the future. Anecdotal evidence suggests to her that more people are indeed developing a healthy, critical attitude towards numbers. But her job is far from done. Especially with the possibilities of Big Data, the use of large datasets coupled with powerful algorithms, it is more important than ever to understand the limitations of data. Sanne: “Weapons of Math Destruction’ a book by the mathematician Cathy O’Neil makes it abundantly clear such algorithms are a threat, especially to the most vulnerable in society.”

With the increasing reliance on Big Data in all parts of society, vigilance is key. We are lucky to have Sanne on our side in our defense against Weapons of Math Destruction. 



Sanne Blauw (1986) obtained a master’s degree in Econometrics (2010, cum laude) at Erasmus School of Economics. After conducting her doctoral research at the Tinbergen Institute she successfully defended her PhD thesis entitled ‘Well-to-do or doing well? Empirical studies of wellbeing and development’ in December 2014. To share her knowledge about numbers and statistics with a wider audience, Sanne Blauw started working as a journalist for online platform De Correspondent. She writes about bad statistics in the news, number fetishism and anything that makes her heart beats faster.



The power of a bad example

By: Robert Dur

What to do when citizens in residential areas illegally dump garbage and household items on the pavement? Most local governments respond by removing waste quickly, following the idea from psychology and behavioral economics that 'waste attracts waste'. The city of Rotterdam is a case in point. City workers clean up some neighborhoods more than seven times a week. The question is whether, in the end, this policy makes sense. Together with the city of Rotterdam and another economist, I set up a field experiment to answer this question.



'Dirty streets send the message that this is apparently socially acceptable and that it is tolerated by the authorities. That is why waste attracts more waste'



Keeping the streets clean is a joint effort of citizens and city workers. Citizens contribute by not dumping waste and by picking up a broom now and then. However, in large municipalities in the Netherlands, keeping the streets clean has become primarily the task of the municipality. And it is often a massive task. The question is whether this is a sensible policy, as cleaning up by city workers may take away the incentive on the part of citizens to make a contribution – by cleaning up themselves and by refraining from dumping.

It is possible to approach this issue from both a standard economic and a behavioral economic perspective. Standard economic theory predicts that individual citizens may be willing to contribute to keeping the streets clean, but when seen from the perspective of common interest, this contribution falls short of the mark. The reason is that individual citizens do not fully take into account the positive effects of their contribution on other citizens. When the municipality starts keeping the streets clean, standard economic theory predicts that citizens take a step back, because there is less point or necessity for them to take care of this themselves. Insights from psychology and behavioral economics, however, point in the opposite direction. Litterers can set a bad example for others to follow. Dirty streets send the message that this is apparently socially acceptable and that it is tolerated by the authorities. That is why waste attracts more waste. The chosen perspective is crucial for providing an answer to the policy issue. Whereas the standard economic perspective warns against too much government involvement, the behavioral economic perspective actually recommends great government involvement.

Which approach works best in practice? Together with Ben Vollaard (Tilburg University), I have set up a field



Robert Dur is a professor of Economics at Erasmus School of Economics and a research fellow of the Tinbergen Institute, CESifo Munchen, and IZA Bonn. He held visiting positions at Bocconi University, the University of Munich, and the University of Vienna. His research interests include personnel economics, organizational economics, and behavioral economics.

experiment to look into this in collaboration with the city of Rotterdam. In one part of a neighborhood in Rotterdam, the frequency of cleaning carried out by the municipality was drastically reduced to two times per week, whereas in the other part the frequency remained once per day. This was maintained for three months. A detailed record of the amount of waste that was encountered on the streets in both areas, both before and during the experiment, makes it possible to reliably estimate what effect the lower frequency of cleaning has on the behavior of the residents. The results show that after reducing the frequency of cleaning, there was a sharp rise in the amount of waste dumped by residents. A second finding is that the increase in the amount of waste dumped by residents remained about the same during the entire three-month period of the experiment. That is, the 'spontaneous' response of the people is almost identical to the longer-term response. It appears that the behavioral economic perspective is dominant, both in the short term and in the long term.

In short: waste attracts waste, which is why the returns to cleaning regularly are high. On the other hand, it was also found that when the municipality cleaned up less, more residents made appointments for removing their bulky waste. It would appear that for some people this legal alternative to street dumping is more attractive once they learn that the municipality will not turn up every day to remove waste from the street. Further research is required to see whether the results also apply to other neighborhoods and cities.

This article is based on 'The Power of a Bad Example: A Field Experiment in Household Garbage Disposal' by Robert Dur and Ben Vollaard, published in Environment and Behavior. An early exposition in Dutch can be found in ESB, titled 'Slecht voorbeeld doet slecht volgen in de buitenruimte'.



Luuk Teeuwen
Double degree in Economics and Law

'In Rotterdam a lot is happening and even more is possible'

Rotterdam, the Next City

By: Madeleine Kemna

Rotterdam is a dynamic city that has a proud history of **reinventing itself**. Nowadays, it is faced with a new set of challenges and opportunities. On the one hand the ageing society and the need for **more sustainability** poses new requirements. On the other hand digitization and Big Data offer new possibilities for cities that are equipped to take advantage of them. As a result there is a need for a **new economic set up**: the 'Next Economy'. We talk with Frank van Oort, Professor of Urban & Regional Economics at Erasmus School of Economics and academic director of the Institute of Housing and Urban Development Studies, about how Rotterdam can take advantage of its opportunities to meet the challenges head on.

A knowledge powerhouse

There is more: "Of all Dutch regions, Rotterdam has the best and the most ingredients to capitalize on opportunities such as renewable energy and the circular economy. No other area is as surrounded by growers of flowers and vegetables. These producers are all potential suppliers of biomass. The port of Rotterdam can play an important role in the logistics. There is a strong chemical sector with large companies that can make these sustainable initiatives scalable. In order to make optimal use of this combination, we should work together with neighboring universities like Delft, with its focus on technology, and Leiden, which has a lot of expertise in biotechnology. In fact, it is also increasingly common for our students to take some classes at universities in close proximity and vice versa, which underscores that this region could become a cross-fertilizing knowledge powerhouse – for various economic themes that are embedded in the local skill-base of the region."

Achilles' heel

However, the labor market is Rotterdam's Achilles' heel. There is a substantial group of unemployed, low-skilled workers. Most of them used to have a job in the city's port, but technology has made them redundant. Targeted policies may be needed to help these people find suitable work again. Van Oort mentions the so-called 'trickle-down effect'. It refers to the phenomenon where an increase in highly educated workers creates jobs through demand for services. Research conducted in Silicon Valley suggests that 3 low-skilled jobs are created for every new high-skilled job. Van Oort is sceptical:

to such needs. Van Oort: "These students, that often have decades of practical experience, regularly challenge us and I really enjoy that. Some of the younger students come up with intriguing points of view as well; learning should indeed be two-way traffic."

Atlas of municipal happiness

We speak on the day Van Oort and his colleagues present the Dutch 'Atlas of municipal happiness', developed by the Erasmus Happiness Economics Research Organization (EHERO), that specializes in identifying quality of life and life satisfaction as economic drivers. "This is the result of analyzing extensive multi-year surveys that asked people to rate their happiness on a 10-point scale where 10 means 'extremely happy'. If you correct for age, income, marital status and unemployment you can compare happiness between places fairly accurately." Of course we are curious what Rotterdam's score is: "Rotterdam ranks at the bottom of the 50 biggest municipalities. However, if we correct for individual aspects like unemployment and other sorting determinants, it turns out that people have a happy living and consumer environment in the city." The traditional saying 'You make your money in Rotterdam, The Hague decides how much you can keep and you spend it in Amsterdam' is definitely out of date. Rotterdam has become a consumption city with plenty of entertainment, restaurants and shops. Not only is it well on its way to shine in the 'Next Economy'; a growing amount of people are considering to make Rotterdam their next home, making it literally the 'Next City'.



'Of all Dutch regions, Rotterdam has **the best and the most ingredients** to capitalize on opportunities such as renewable energy and the circular economy'



'The Rotterdam region has **unrealized economic potential**, which can result in more productivity and additional employment'



The 'Next Economy' will have an increased focus on sustainability and new business models that involve globalization alongside localization of economic activities and integrated economic value chains, integrating new technologies in production and consumption opportunities, and sharing instead of owning. Van Oort gives an example how smart systems can help Rotterdam to become the 'Next City': "Technology makes it possible to measure the amount of pollution or traffic congestion in different parts of the city and react swiftly where needed. Responsive action may involve regulation, better planning and bottleneck solving, leading to safer and healthier cities". This type of 'Next City Economy' attracts highly skilled labor, which can develop

the potential in new niche markets such as corporate and personal services and small knowledge-intensive production facilities. In order to make these new niches successful there should be facilities such as flexible workplaces and 3D printing. Further development of the housing market and additional investments in infrastructure are also important keys to success. Rotterdam is doing well in this respect, although there is always room for improvement. Van Oort: "The Rotterdam region has unrealized economic potential, which can result in more productivity and additional employment. However, you don't create a regional economy from scratch; these new niches are not enough to unlock this potential. They need to be embedded in existing clusters and skilled production models."

"If there is such an effect, it will be closer to 1 for 1 in Rotterdam." He points out that a lot of the additional highly skilled workers here are self-employed. Those people are reasonably self-sufficient and will be less inclined to pay others to perform some of their tasks. Van Oort advises to seek more cooperation with neighboring cities such as Delft, Den Haag and Leiden. "There is a potential to create more economic mass by pooling resources and labor markets."

Back to school

Dealing with this type of 'Next Economy' challenges asks for special skills. An increasing amount of experienced professionals comes back to the university. The 'Master City Developer' caters



Frank van Oort is a professor of Urban & Regional Economics at Erasmus School of Economics and academic director of the Institute for Housing and Urban Development Studies (IHS). He combines fundamental research with applied and policy-oriented research, for example for ministries, cities and regions.

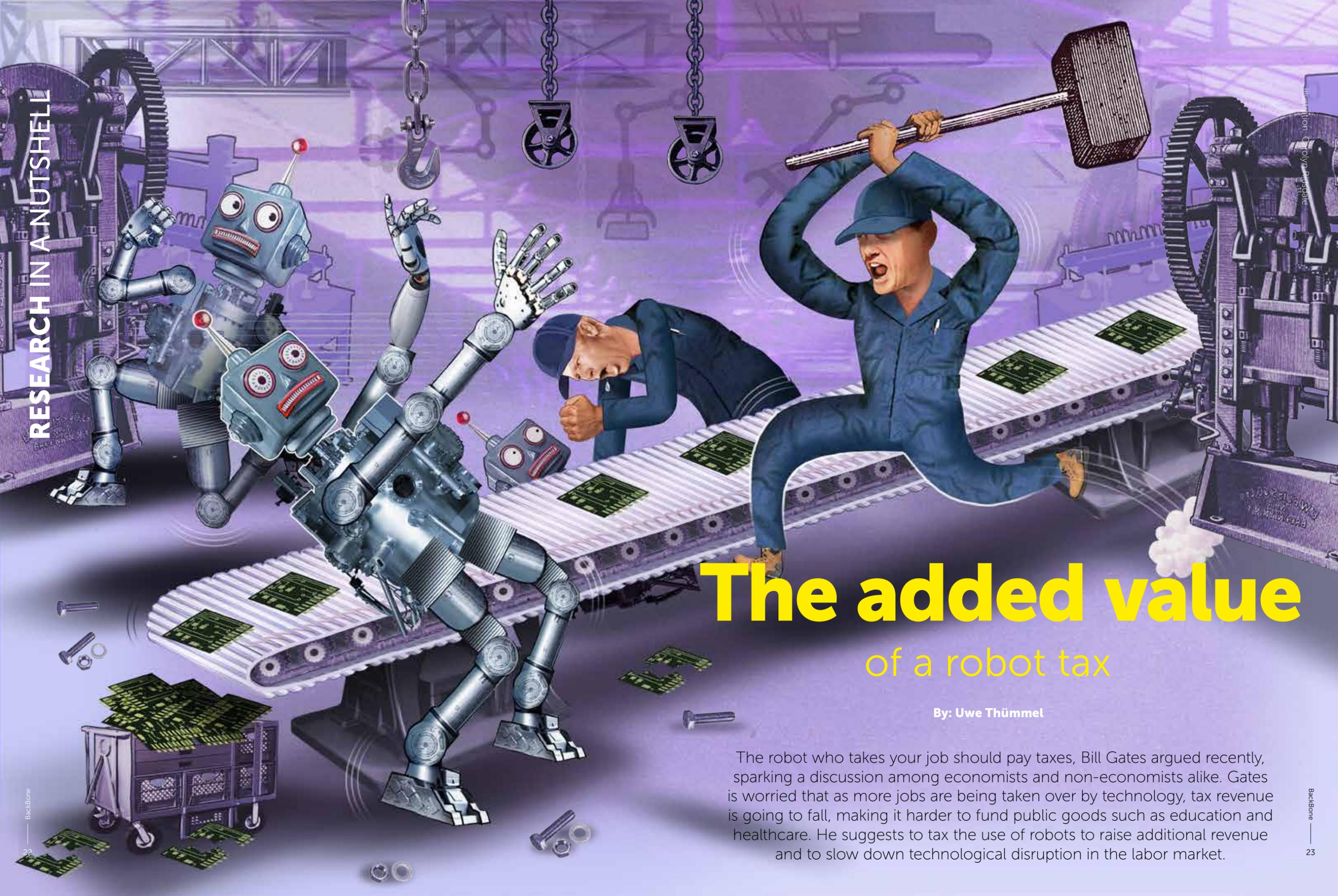


Illustration: Carolyn Prossper

The added value of a robot tax

By: Uwe Thümmel

The robot who takes your job should pay taxes, Bill Gates argued recently, sparking a discussion among economists and non-economists alike. Gates is worried that as more jobs are being taken over by technology, tax revenue is going to fall, making it harder to fund public goods such as education and healthcare. He suggests to tax the use of robots to raise additional revenue and to slow down technological disruption in the labor market.



'A tax on robots can limit the disruptive effects on the labor market and dampen this polarization. It makes it more expensive for firms to replace routine workers by robots'

Bill Gates is not the only one who is worried about workers being replaced by machines. The European Parliament has recently discussed – and rejected – the idea of a robot tax, while the French presidential candidate Benoît Hamon of the Socialist Party has advocated a tax on robots to fund a universal basic income. The topic is also hotly debated in Silicon Valley, one of the regions where technological disruption takes place on a large scale. 'Techno-optimists' hope that technology will eventually make everyone better off, while sceptics are often dismissed as 'Neo-Luddites' who want to slow down progress. Indeed, technological disruption of the labor market dates back at least to the times of the original Luddites; a group of English textile workers who destroyed weaving chairs, fearing for their jobs. Eventually, the weaving chair brought about prosperity and made clothing much more affordable to the common man.

Should we thus just embrace technological change or is this time different? Some economists argue that indeed it is. In the past, machines have primarily substituted for muscle power. These days, technology is used to substitute more and more for routine tasks, both manual and cognitive. Even tasks such as driving a car, which were deemed impossible to be performed by a machine just ten years ago, now seem well in reach. As routine tasks are often associated with middle income jobs, technological change brings about a polarization of the labor market. Employment in middle-income jobs shrinks, while it grows in low-pay service jobs, as well as at the top of the income distribution. As an effect, the distribution of incomes also polarizes, leading to rising inequality. Furthermore, the speed at which technologies change and are adapted is a lot higher than in the past. While it took a generation until the weaving chair was widely used, the adoption of the smartphone took just a few years, with new models appearing every couple of months.



Uwe Thümmel is a PhD candidate who conducts his doctoral research at the Tinbergen Institute. In his research, he studies how technological change affects the labor market and income inequality and how governments should optimally respond with redistributive policies. His work is advised by Prof. Bas Jacobs (Erasmus School of Economics) and Associate Professor Björn Brügemann (VU University Amsterdam).

Might this be the time for a tax on robots? This is one of the questions I study in my own research. To answer it, I use a model of an economy in which robots are a specific form of capital which substitutes for routine work and complements non-routine work. If firms use more robots, workers in routine occupations see their wages fall relative to non-routine occupations. Income inequality increases and the labor market polarizes. A tax on robots can limit the disruptive effects on the labor market and dampen this polarization. It makes it more expensive for firms to replace routine workers by robots. As a result, there is less polarization of wages and the distribution of gross incomes becomes more equal. Now imagine that the government wants to reduce net income inequality to a certain level and wants to do this by increasing the income tax for higher incomes. Since the robot tax already made incomes more equal, the government needs to redistribute less with the income tax. Taxing income distorts peoples' decisions to work, which lowers welfare. Having to tax incomes less is thus welfare improving. However, there is a downside: the robot tax distorts firms' production choices. Without the robot tax, firms would use more robots and less routine workers in order to produce output more efficiently. The robot tax thus leads to a loss in output. At the optimum, the government balances the benefits and costs of the robot tax.

Using simulations in which the government likes equality, I find that if income taxes can also be set optimally, the added value of a robot tax might be small. However, its value increases if governments cannot easily reform income taxation. Still, the practical implementation of a robot tax could be challenging. According to my definition, a computer might also be a robot. I wonder how Bill Gates thinks about that. <

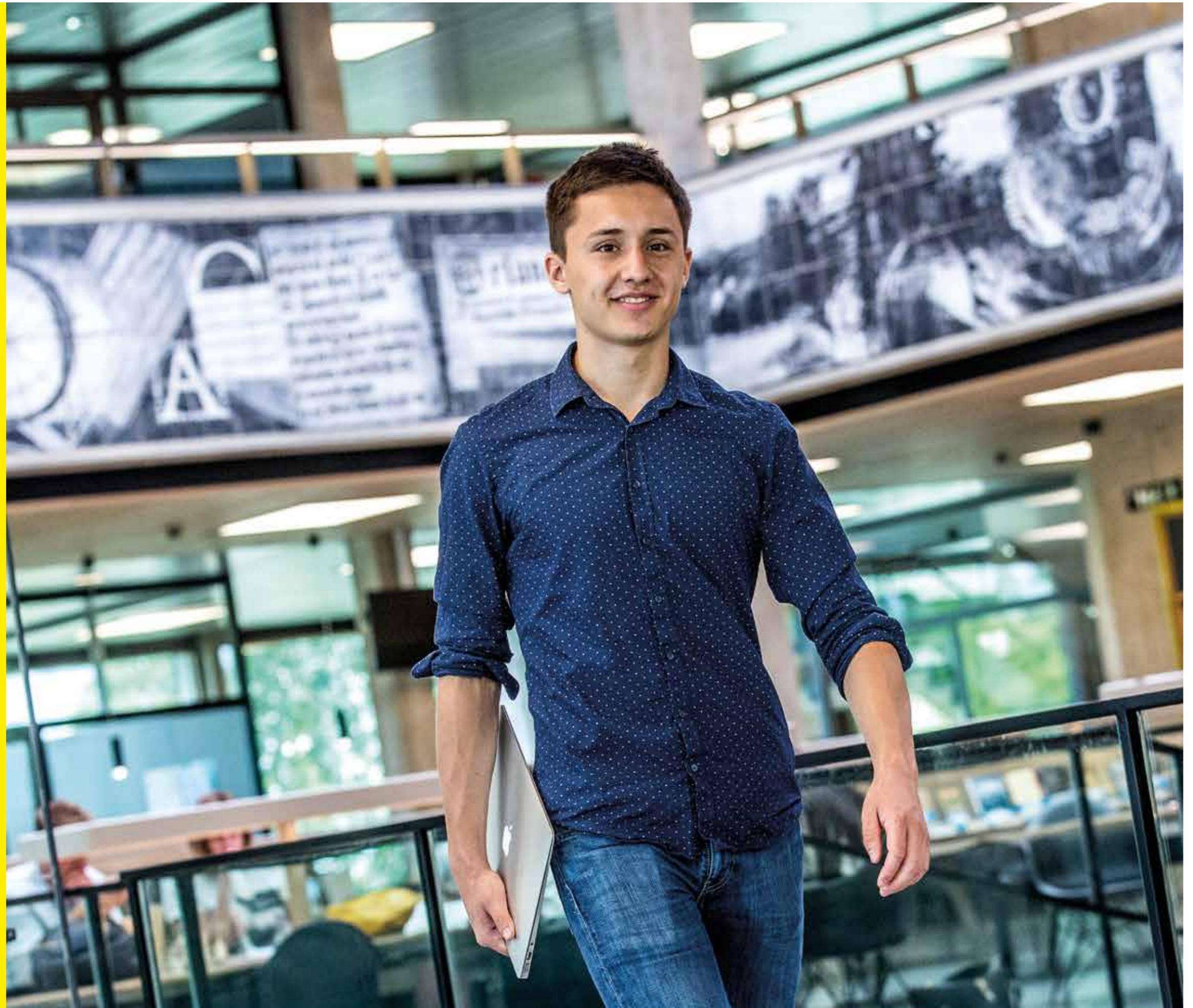


Thao Nguyen
International Bachelor in Economics and Business Economics

'High performance is normal here. I like that'

Study

Our students excel both within and besides their study programmes. **Meet some of the students that combine their study at Erasmus School of Economics with extracurricular activities such as research projects, consultancy, foreign adventures or entrepreneurship.** We sit down with students Fernando Lasso, Jan Radermacher, Atif Parekh and Caroline Liqui Lung to talk about their experience, ambitions and advice for fellow students.



"As part of the curriculum of the Erasmus School of Economics Bachelor Honours Class my partner Sebastian Snijders and I had to write a paper, in which we needed to apply the models we had been hearing and learning about in the last two years and perform a real research. The first challenge with conducting such a research was finding the topic. Since we wanted to use our econometrics skills, and big data was a 'large' topic of conversation, we soon started to think about Google. We discovered that plenty of research has been done around Google Trends, which showed potential for a research topic, but we were also not sure if we could find our own niche. Together with the advice of our supervisor Philip Hans Franses, Dean of Erasmus School of Economics, we came to writing our paper 'The Power of Google search data: an alternative approach to the measurement of unemployment in Brazil'.

Finding our topic was followed with long reads of previous research in the field, struggles in the data collection process and especially many hours in the computer lab. After submitting and presenting our paper in the Bachelor Honours Class, we got the opportunity to send in our paper to the national Student Research Conference of 2017 in Nijmegen. We were invited to give an entire workshop about our research and when we presented it, we were put into the top three of our category. This qualified us for the public award, which we won. A key lesson that I learned out of this success, is to never hold back on grabbing opportunities when they come your way. I also experienced that there are always more new and exciting ways of developing yourself on a range of different levels. What gives the Bachelor Honours Class

its charm is that it is up to the students to choose their own lecture cycle themes, form co-creation groups to organise events, plan trips and organize company and government visits. This means that every year is different and a student can take as much out of it as he or she wants by investing the right amount of effort.

After my third year of the BSc2 programme (double bachelor in Economics and Econometrics), I will take part in the Netherlands Asia Honours Summer School programme, together with 99 university students from all over the Netherlands. Currently I am already in the middle of a business case project for Huawei, which I will finish this summer with 7 other students. From July on I will study at the Chinese University of Hong Kong for five weeks and afterwards I will go on a cultural and business trip in Shanghai. After this long but likely very rewarding summer, I will start my minor at the University Pompeu Fabra in Barcelona.

My advice to students that want to write a successful paper or thesis would be: Do. Not. Hesitate. Many students think about research as an overwhelming mountain and are scared to even begin with it until time forces them to. But it is a process that needs to be approached step by step, which you will only begin to enjoy once you are in the middle of it. To conduct a topic, think about something you like, or particularly dislike, you don't understand or have always wanted to know more about, and think of a question around it that needs answering. After that make a plan of action, write stuff down, talk to experts, collect sample data and think about methods to solve your hypothesis. Make mistakes or get stuck, then you will really start to think about the core of the problem. Dare to try, and it will be very rewarding." ◀

'A key lesson that I learned out of this success, is to never hold back on grabbing opportunities when they come your way'



'I wanted to add value to society through a public institution'

"During the last year of the Double Degree BSc² Economics/Econometrics programme at Erasmus School of Economics I realized that I might want to do something different before continuing with a master. Within this gap year I wanted to work at an international public organization, because I am very enthusiastic about different languages and cultures and I have always been quite idealistic, which means I wanted to add value to society through a public institution. The idea to work at the World Bank in particular was formed during a study trip to India, organized by the Economics Faculty association Rotterdam (EFR) in 2015, where we visited the World Bank in New Delhi. When I finished both studies in July 2016, I started working as a consultant for the World Bank in Washington D.C.

As a consultant I have been working on several projects ranging from macro-economics to finance and markets, but also environmental economics. It depends on the projects whether I do individual research, with which I am contributing to internal and external World Bank reports, or whether I work in a team on more current policy-related issues. With my last team project, in finance and markets, we assessed the impacts of G20 financial regulatory reforms on developing countries, which are not required to impose the same financial standards but which might be affected through reform spillovers. Therefore we conducted a survey with central banks, supervisory agencies, global and local banks in developing countries all around the world and we presented our findings at a roundtable event with finance ministers and central bank governors at the World Bank-IMF Spring Meetings in April 2017. Currently we are summarizing all of our analyses, to present them in a publicly available policy paper.

Working in Washington D.C. as a young person is a great experience, because the city is full of young professionals from all over the world who are eager to learn from each other and to build their careers. The city also offers a very

nice life style, which means that weekends are generally off and working hours are not too long into night such that there is sufficient balance between work and life. In addition, the concentration of political power in the city ensures many interesting events at which you can meet very fascinating people. Compared to Rotterdam, I found that the city is much less inclusive and was quite shocked by the big gaps between rich and poor. I also noticed that things like excellent public transportation throughout the country and an awesome biking infrastructure are easily taken for granted after living in the Netherlands for a while.

The quantitative background I built during my studies at Erasmus School of Economics was certainly helpful, both to get into the World Bank as well as to perform interesting tasks. Being able to meet tight deadlines was certainly something I learnt at Erasmus School of Economics as well. Besides the skills I gained during my studies, I also benefited a lot from the international environment in Rotterdam and at the Erasmus School of Economics, which was a great preparation for an international organization such as the World Bank.

Overall, my education at Erasmus School of Economics has been very helpful and I never had the impression that I was lacking on something. I think it is really important for students that want to work at an organization such as the World Bank, to realize that they will be able to add excellent value to an organization and don't lag behind other students who might have studied at some "more prestigious" university. However, networks and contacts also play a large role and therefore I can only encourage everyone interested to be proactive and to write to employees at the World Bank, asking them if there are internship or consultancy opportunities. Excellent English skills (and ideally also Spanish, French, or Portuguese) and a strong quantitative background are also skills that will contribute to obtaining such opportunities. Programming skills, econometrics, statistics and economics are always welcome." ◀

"Listening to TED speakers who claim that if you follow your passion, you never work a day in your life sometimes somewhat reminds me of my own story. Before I came to Rotterdam to study International Economics and Business Economics at Erasmus School of Economics I started an event management company in Pakistan, together with five of my close friends. As we wanted to create something throughout, that encompasses everything related to event management, we came up with the name 'Events 360'. Since it was only the five of us and none of us was specialized, every one of us had to be every part of the company and exactly that made it so special working together. We worked together in two small rooms, where we even slept and lived together, so one could say we had a 24/7 office. We really did not care about money but just about our company.

During my time in college I discovered that event management is one of my passions. As part of an extra-curricular program, I was the Chief Operating Officer (COO) of an event managing entity. During my time as COO I organized 16 events and that experience was no doubt a key factor in driving me towards this particular field of business.

When I started 'Events 360' together with my friends, we underestimated how much paper work it is when it comes to taxes and accounting. We also discovered that it is difficult for teenagers, who are just stepping into university, to be taken seriously. It was especially difficult to get sponsors at first because many companies want well established agencies instead of a start-up led by students. Nevertheless we were somewhat relentless in contracting possible sponsors and reached out to about 100 companies and successfully got 14 sponsors for our first big event. This would turn out to be the biggest football tournament in Karachi, the largest city in Pakistan, which was quite surprising for a newly founded start-up. Following our initial success we organized two concerts featuring some of Pakistan's most renowned singers. Unfortunately I had to leave 'Events 360' when I started studying at Erasmus School of Economics, but it is still amazing to see the company is growing exponentially every day.

I can recommend trying to start your own company, to anyone who is passionate about event management and has an entrepreneurial mindset. Of course, sometimes it happens that you are so busy that you even forget to drink water or eat during events – but once you look back you know it was worth it." <

'We worked together in two small rooms, where we even slept and lived together, so one could say we had a 24/7 office'

Study
Entrepreneurship



Study
Exchange



'This allowed me to explore all the possibilities the field of economics has to offer and discover what interests me the most'

"After finishing my bachelor and master of Econometrics at Erasmus School of Economics, I was ready for a new experience. Therefore I chose to do a research master abroad at Paris School of Economics. I figured that this would allow me to do something new, expand my horizon, meet new people and learn about other cultures all at the same time. I also wanted to challenge myself by getting used to a new environment, a new way of teaching and new professors."

Paris School of Economics was an attractive choice for me mainly because of the type of Master they offered. When I finished my Master in Econometrics, I wanted to continue with a PhD but I did not want to continue with Econometrics per se. I decided that I wanted to do a research master first. Paris School of Economics offered the option to start in the second year, which meant that I wouldn't have to repeat anything from my master. The second year consisted of 11 subjects that I could choose freely in almost every single area of research that exists in economics. This allowed me to explore all the possibilities the field of economics has to offer and discover what interests me the most. Since Paris School of Economics is also considered a good university with very famous economists, the choice was easy to make. In order to complete my application for the research master and the grants to study in Paris, I got a lot of help from my professors at the Erasmus School of Economics. I am very grateful for all their advice and willingness to write recommendation letters.

Challenge

When I started my research master I had quite a difficult time at first, since starting in the second year

means that everyone else already knows each other. Moreover, the majority of students were French and I barely spoke French on arrival. But thanks to the fact that the school is quite small and personal, I got to know the other 'foreigners' quite fast. The master also helped me a lot in finding my way in economics. I ended up specializing in Behavioral Economics, a field I had never heard of before I came to Paris.

A different approach

Since I am studying something completely different in Paris than I did in Rotterdam, it is difficult to compare both schools with each other. One of the major differences between them is the organization. At Erasmus School of Economics everything is organized into perfection, which means that you know at the beginning of the year when and where your classes and exams are. In Paris everything changes during the year, professors plan exams three or four days in advance and the school runs a lot of improvisation. It was difficult in the beginning, but I now realize it has its charm as well.

Studying at Erasmus School of Economics gave me an excellent background for what I am doing now. In Rotterdam I got taught the basics very thoroughly which provides me the ability to learn new things very quickly. More advanced subjects were also covered in Rotterdam, which allowed me to stand out from my fellow students in Paris relatively easy.

During my time in Rotterdam I acquired the skills and insights I need to pursue an academic career and I would definitely recommend Erasmus School of Economics for anyone with the same ambitions." <



Internationalization involves more than changing the language

'By coming to the Netherlands, foreign students make a huge investment which they do not want to turn sour.'

By: Ivo Arnold

Now and again, commentators complain about the unstoppable advance of the English language in Dutch higher education. They claim that this development has an adverse effect on the quality of education and call upon Dutch scientists to uphold their mother tongue.

It is easy to caricature the increased use of the English language at Dutch universities. It is indeed odd when Dutch students and instructors communicate with each other in Dungleish. And it goes without saying that the switch from the native language to English leads to a loss of information. Attending English lectures will also do little to increase the proficiency of Dutch students in their mother tongue. This is all true. Yet critics of internationalization forget that switching to English may also bring about real quality improvements. These are more likely to occur when a program succeeds in creating an international learning environment, in which the presence of international students and professors adds value to the program. The debate should therefore focus on the circumstances in which internationalization will bring about an improvement in the quality of education. In other words, when do the benefits of switching to English outweigh the costs?

Any answer to this question starts from the observation that English is the lingua franca of science. A straightforward implication is that for most branches of sciences, with few exceptions such as Dutch law, most literature is available in English only. Required readings at universities have internationalized long ago. The benefits clearly outweigh the potential loss of information that occurs when a Dutch student needs to read an English paper.

A second implication is that every ambitious young scientist will invest in reading and writing in the English language. These are essential skills if you want to participate in the scientific discourse. Colorful Dutch will not get you very far. Scientists also prefer to be part



Ivo Arnold is Vice Dean and also a professor of Economic Education at Erasmus School of Economics. This chair focuses on strengthening the educational services offered by Erasmus School of Economics with regard to content, processes and teaching skills, which ties in with Erasmus University Rotterdam's continual effort to develop and optimize educational leadership. Ivo Arnold is also a professor of Monetary Economics at Nyenrode Business University.

of a strong research group, members of which preferably are recruited in the international job market. Recruiting academic staff from the larger international talent pool makes sense if a university wants to increase the quality of its research, but this policy also has implications for education. Foreign scientists cannot easily teach in Dutch-language programs. As the composition of the academic staff gets more international, the internationalization of the educational programmes becomes more obvious.

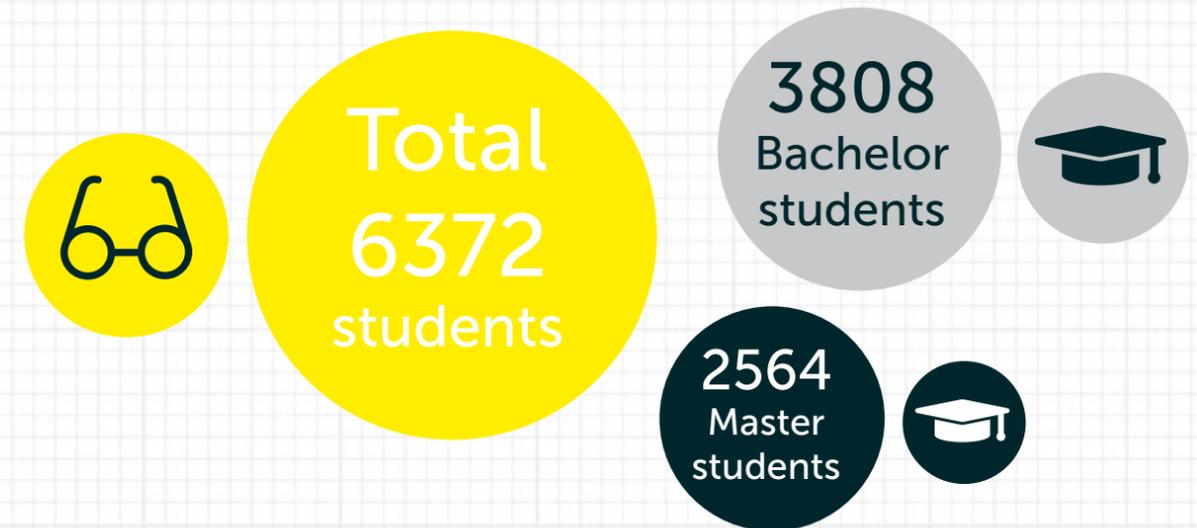
Let me now turn to the demand for higher education in the English language. One of the reasons why foreign students choose to study in the Netherlands is that Dutch universities offer value for money. Tuition fees for Dutch programs are much cheaper than for top universities in Anglo-Saxon countries, while the quality of Dutch education in general is higher than in the rest of continental Europe. Foreign students can have a strong positive effect on the quality of education. By coming to the Netherlands, foreign students make a huge investment which they do not want to turn sour. In general, foreign students work harder, are more motivated and more demanding than their Dutch fellow-students. When bachelor programs are offered in both an international and a Dutch stream, as at Erasmus School of Economics, the international group scores higher grades. Professors like to teach an international class and many ambitious Dutch student prefer to study in an international learning environment. Not just because of the superior study atmosphere, but also because the cultural diversity of an international classroom enriches the student. In short, the quality of education can thrive on the presence of international students.

Changing the language of instruction is a necessary, but not a sufficient condition for successful internationalization in higher education. The latter also requires the presence of international staff and students. In that case, the benefits clearly outweigh the drawback that teachers and students cannot communicate in their native language. ◀

Erasmus School of Economics in numbers

Erasmus School of Economics competes with the best universities in the world. And to provide our students with the best opportunities, we work together with partner universities from all continents. Here are some of the essential facts and figures about Erasmus School of Economics and its partners.

Erasmus School of Economics student numbers 2016



Erasmus School of Economics has **86 partner universities** worldwide, **24 of which are ranked in the Top 100** of the 2017 QS World University Ranking, by subject Economics & Econometrics



Total number of bachelor students per programme:

Bachelor in Economics and Business Economics (Dutch): **1664**

892 International Bachelor in Economics and Business Economics:

Bachelor in Econometrics and Operations Research (Dutch): **629**

302 International Bachelor in Econometrics and Operations Research:

Fiscal Economics (Dutch): **321**

A growing number of our bachelor students follow a **double degree** of Economics, combined with Econometrics, Law or Philosophy.

24% of the **Erasmus School of Economics** student population is international, representing **83 different nationalities**. Of these nationalities, **52 are from outside the EEA** (European Economic Area).



Inequity

in the face of death

About the research of Tom van Ourti, Teresa Bago d'Uva and Pilar Garcia-Gomez

Wealth and health go hand in hand. The phenomenon that health differences are systematically related to income is known as the income health gradient. Although it may strike many as fundamentally unfair, wealthy people live significantly longer than those less affluent. This is not something recent. During the second half of the eighteenth century the British aristocracy lived more than ten years longer than the rest of the British population. Even the most infamous naval disaster in history provides a sad example: aboard the Titanic, those traveling in first and second class were much more likely to survive than those in third class.



Tom Van Ourti speaks with passion when he explains what distinguishes the research project he and his colleagues conducted from others in the field. "We emphasize that researchers and policymakers aiming at reducing health inequalities should be aware that this involves making normative choices. Our aim was not to show how life expectancy varies according to income, but to show how the underlying factors of health differences, such as smoking, diet and exercise, cause this phenomenon. We want to encourage researchers and policymakers to take a conscious decision with regard to the factors they choose to address when tackling unfairness in health. These factors might not only include income."

In order to do this, the team adopted the 'equality of opportunity approach'. The idea is that people can be held responsible for part, but not all, of their health disadvantage. Social concern is then restricted to inequalities that are not the responsibility of the individual. Van Ourti and his colleagues also analyzed why people make certain lifestyle choices. "If someone has a health defect which is genetic, most of us would argue that this person is not to blame for the resulting medical problems. On the other hand, there seems to be a consensus that chain smokers should be held responsible. However, we may come to a different conclusion if we know that the chain smoker was born in a poor family where everybody smoked, as opposed to a rich family where smoking was less common."

The team had access to a very extensive database from the Dutch office for national statistics (CBS). This made it possible to link tax

records to medical data such as mortality records, hospital admissions and the Body Mass Index (which was used as a proxy for diet).

Van Ourti, Bago d'Uva and Garcia-Gomez have been researching various aspects of the relationship between health and income inequality for many years. In most studies, the effects of age and gender are filtered out in a process called standardization. This lowers the extent of health and longevity differences between people that are considered unfair. Standardization is often considered necessary to facilitate comparisons. It puts the spotlight on other factors driving differences in health. However, this implies normative thinking. In particular, it neglects all health differences due to age and gender. Policymakers would do well to take a step back and ask themselves if society really considers biological health differences fair, even when they are unavoidable.

The paper provided a framework that makes it possible to use different normative approaches in a transparent way. In Belgium, the framework is already being used in the health insurance sector. The research project has also led to discussions on the opinion pages of several academic journals. How to compensate for the inequity is up to the policymakers. Van Ourti: "Our goal is to facilitate conscious decision making so that researchers and policymakers are not accidentally misleading or misled."

Note: This article includes some of the contents of Prof. Van Ourti's inaugural speech.



Erasmus School of Economics is home to a group of leading scholars in the field of Health Economics. Three of them, Dr Pilar García Gómez, Dr Teresa Bago d'Uva and Prof. Tom Van Ourti, together with Prof. Erik Schokkaert of the KU Leuven, published a paper called Inequity in the face of death. They provide insight into the underlying causes of this phenomenon and suggest a transparent way to deal with any attempts at compensating people for this inequity.



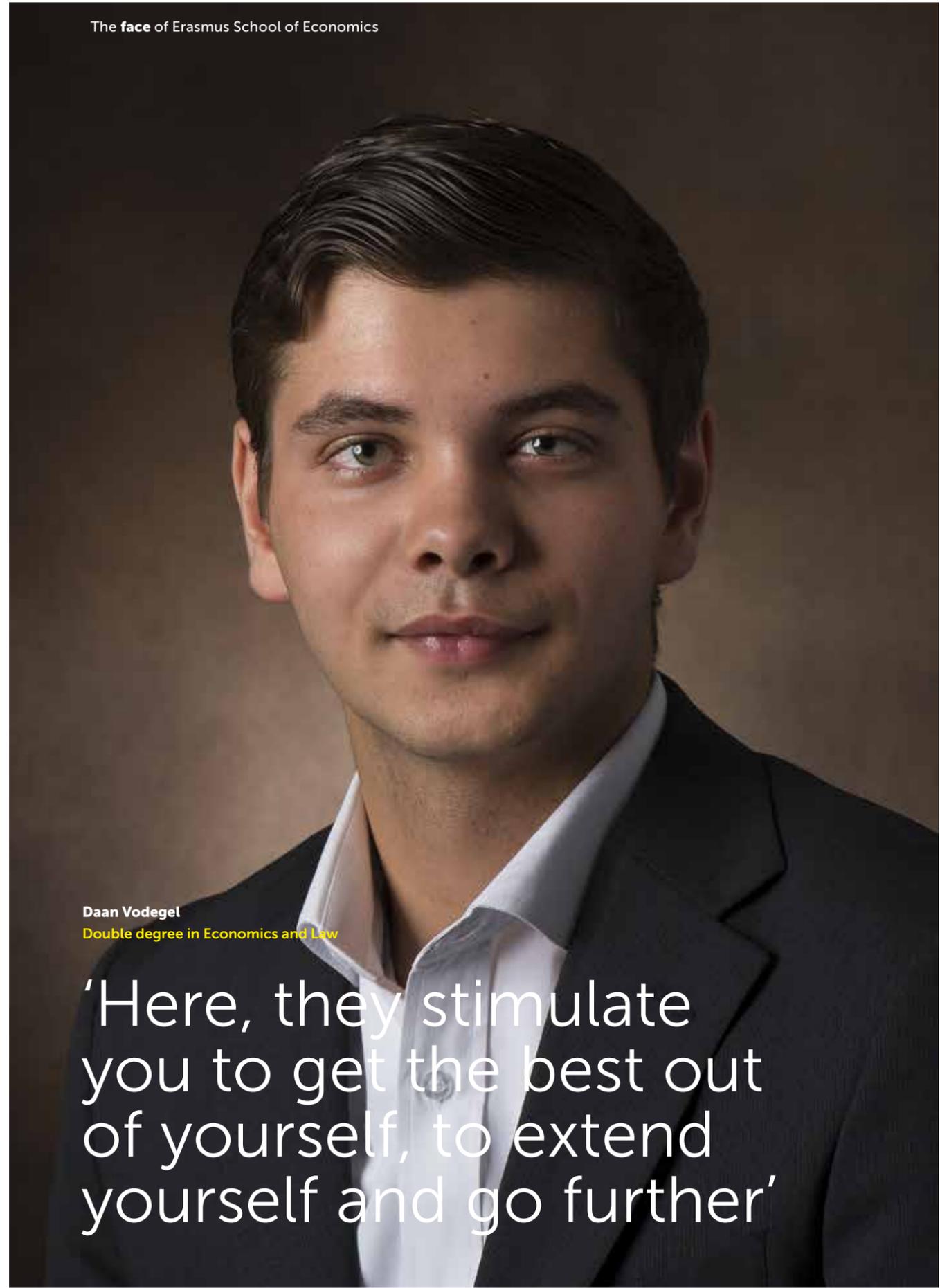
Tom Van Ourti is an endowed professor of Applied Health Economics at Erasmus School of Economics with a focus on health and inequality. His research focuses on the relationship between socioeconomic status and health, including measurement theory of health inequalities and applied work on the drivers of the socioeconomic health gradient in the developed and developing world.



Teresa Bago d'Uva is an associate professor of Health Economics at Erasmus School of Economics. She obtained a PhD in Economics from the University of York. Her main research interests lie in the areas of health economics, microeconometrics, measurement of biases in self-reported health and inequalities in health and health care utilization.



Pilar Garcia-Gomez is an associate professor at the department of Applied Economics at Erasmus School of Economics. She obtained her PhD in Economics from Universitat Pompeu Fabra in Barcelona. Her research interests are on topics in health economics and microeconometrics, such as the causal analysis of the relationship between health and socioeconomic status.



Daan Vodegel
Double degree in Economics and Law

'Here, they stimulate you to get the best out of yourself, to extend yourself and go further'

Historical perspective

1500

'Ignorance is the mother of pride'

Desiderius Erasmus

1913

'May this institution bear the fruit that we have hoped for, and may it bring forth a thriving Dutch trade'

Congratulatory telegram from Queen Wilhelmina on the occasion of the opening of the Nederlandsche Handelshoogeschool

1913

'To me, no place across our globe would appear as suitable for a Handelshoogeschool as Rotterdam. In this city of healthy living, where to live is to toil, one could not imagine students who fiddle or loiter. Everyone here is hard at work, and they too are expected to exert themselves, and learn how to work for life.'

C.A.P. van Stolk, one of the founders of the Nederlandsche Handelshoogeschool

'For some queer and deplorable reason most human beings are more impressed by words than by figures, to the great disadvantage of mankind'

Jan Tinbergen, the first winner of the Nobel Prize in economics

1973

1978

'In his role in society, the academic today is the logical successor to the medicine man, the rainmaker, the wizard and the priest'

Alexander Rinnooy Kan, Lecturer in Operations Research

'People are extremely sensitive to losses – which means that to avoid a loss, they occasionally engage in the strangest antics. When it comes to catastrophes, banks and investors have always been rather myopic. Blinded by massive returns, they completely lost sight of the associated risks. This created a monster in the mortgages industry, which is presently extending its tentacles in every direction.'

Han Bleichrodt, Professor of Behavioral Economics

2008

'At Erasmus School of Economics, we are on a journey to explore how to combine rigor with relevance'

Stefan Stremersch, Professor of Marketing

2016



Political Violence

does not scare all multinationals

By: Caroline Witte

In the period from 2003-2012 multinationals invested over 12 trillion dollar in new subsidiaries in conflict countries. This is 13% of all greenfield investments flowing to developing countries: nearly 5% even went to countries experiencing a war. Examples of such investments include Coca Cola's 26 million dollar investment in Afghanistan in 2006, Shell's investment in oilfields in Iraq in 2008 and Michelin's investment in a car tire manufacturing plant in Colombia in 2005.

'Contrary to common beliefs, we find no evidence that either terrorism, political terror or assassinations influence investments'



Most economists agree that, on average, political violence deters Foreign Direct Investment (FDI). After all, there is a high probability of losses of human and physical capital, disruptions on the supply chain and a reduction in local demand. Yet, our research, forthcoming in the *Journal of International Business Studies*, reveals that the relationship between political violence and greenfield FDI is considerably more nuanced.

Our study shows that violent political conflict has indeed a negative effect on the total amount of greenfield FDI inflows. However, contrary to common beliefs, we find no evidence that either terrorism, political terror or assassinations influence investments. The notion that political violence deters investment hence only applies to one specific type of violence. Moreover, the sector in which the multinational is active and the type of company matter. Only firms that are active in the manufacturing or service industry and that are present in only a small number of countries reduced their investments when conflict erupts or intensifies. Firms active in over 26 countries even seem to increase their investments in the case of a political conflict.

Another interesting finding is that multinationals active in the resource sector do not reduce their investments in the face of political conflict. Investments even seem to increase when the regime represses its citizens. A separate analysis for the oil and gas sector shows that multinationals' willingness to invest subsidiaries



Caroline Witte is a PhD candidate at Erasmus School of Economics. She conducts her research at the Erasmus Research Institute of Management. In her dissertation she examines the strategy of multinational enterprises in conflict countries. Her research takes place on the interface between economics and business, combining the international strategy literature, real options theory and endogenous growth models.

in conflict countries can be explained by the high economic rents obtainable by extraction and the limited number of locations where extraction is possible. During periods of low resource prices and increased resource reserves, due to for example the extraction of shale oil and gas, the willingness of multinationals in the oil and gas sector to invest in conflict countries comes close to that of firms active on the manufacturing and service industry. This shows that the insensitivity of firms in the resource sector to political conflict can be largely explained by fundamental economic mechanisms.

This article is based on the publication "Dodging Bullets: The Heterogeneous Effect of Political Violence on Greenfield FDI" by Caroline Witte, Martijn Burger, Elena Ianchovichina and Enrico Pennings in the Journal of International Business. <



Emma Clemens
Double degree in Economics and Law

'This environment and the level of the other students keeps me on my toes'

Investing

since the age of twelve

By: Madeleine Kemna

A glance into the future of financial markets might reveal a world very different from the one we know today. Technology will increasingly determine which parties stay ahead of the competition and a fast growing share of investments will flow into Exchange Traded Products (ETPs), foresees Alumnus Sjoerd Rietberg, co-CEO of Flow Traders. This technology enabled trading company is one of the major providers of liquidity in ETPs. It is listed on the Amsterdam stock exchange and has trading desks in Europe, the Americas and Asia, providing liquidity across all major exchanges virtually 24 hours a day. Sjoerd studied at Erasmus School of Economics where he obtained a Master's degree in Finance in 2002.

ETPs are listed passive investment funds that track an index, bonds, a commodity or a basket of assets. One of the main advantages is that they enable investors to obtain exposure to a group of assets in one single transaction instead of many individual trades. Consider the example of someone who wants to invest in the Chinese stock market, but is unable or unwilling to undertake stock selection. A theoretical option would be to buy all stocks included in one of the Chinese indices, but this requires opening the necessary local accounts and executing a lot of trades. ETPs make it possible to create the same position in one single transaction. Their stock-like character also enables investors to engage in speculative trading strategies such as short selling. Moreover, this can be done any time, since ETPs are traded continuously during normal exchange trading hours, whereas most investment funds can only be traded once a day or during local market hours.

Investing since the age of twelve

"I always knew I wanted to work in Finance" remembers Sjoerd. "As a twelve-year-old I was already following the markets on Teletekst

(an on-demand information source on Dutch television) and investing a bit of my savings. My knowledge came from reading the newspapers and talking to people around me who worked for banks. Studying Economics seemed a good preparation for a job in Finance and the reputation of Erasmus School of Economics made me choose Rotterdam."

The way to success

Becoming co-CEO of one of the leading trading companies in the world, just over ten years after graduating, is no mean feat. However, Sjoerd comes across as modest and relaxed. When asked to identify the reasons for his successful career, he is quick to point out that luck definitely played a role. Focus, dedication and hard work are also important ingredients. In addition, it helps that Sjoerd really enjoys what he is doing. "As a market maker you have to be pretty resilient. Sometimes you lose several hundreds of thousands in a few seconds, but you cannot let that get to you. You have to do what we call 'a 180': turn around and get on with your work. I have always tried to learn from those situations so that the company gets at least some benefit out of it.

'The time for traders running a business from their own attic is definitely over'

'We want to be a good corporate citizen. No Cayman routes for us. If you work in one of the most successful sectors in the country you should just pay your taxes'

Our business is so competitive that we have to keep developing and improving ourselves non-stop. Anyone who rests on his laurels will be out of business quickly. Our continued development of state of the art technology has been instrumental to our success."

Alumni

Sjoerd is a regular guest lecturer and speaker at Erasmus University and many graduates have found their way to Flow Traders. "Junior Traders get a complete induction, before being allowed to trade. They need to have an analytical mind and be disciplined. Riskiness comes with the job, but we are looking for calculated risks."

"It is our goal to provide liquidity in all existing ETPs. At the moment we are an official liquidity provider in approximately 5000 of them. We use our proprietary technology platform to quote bid and ask prices on 104 exchanges in 35 countries while trading for our own account. This means we don't have clients. Trades can be done by computer, over the phone or through chats. Usually we don't know the party on the other side of the transaction. However, sometimes big institutional counterparties, pension funds for example, contact us if they want to do a very large trade. Transactions of EUR 100 million or more can easily be handled by our trading professionals. We are prepared to provide liquidity off-exchange in order to minimize market impact by those very large trades."

Giving matches to an arsonist?

ETPs are the fastest growing category in financial markets. Five years ago, they counted for only 3% of worldwide investments.

Nowadays this is around 5% and it is estimated that this will increase to almost 10% in 2020. Although most would agree that they have made a valuable contribution to the development of the sector, critics point out that they come with some inherent risks. Referring to the ease with which ETPs can be traded, John Bogle, founder of asset manager Vanguard, once said that they amount to giving an arsonist matches. Sjoerd smiles when confronted with the quote. "The fact that ETPs can be traded around the clock, as opposed to their underlying values, makes it tempting for some to do a lot of transactions that might otherwise not take place, resulting in considerable costs. However, these costs would be even higher if the investor wanted to achieve similar exposure without ETPs, because it would involve a multitude of individual trades." Another criticism often heard is that in the long run there might be some slippage, meaning that the ETP doesn't track the underlying value 100%. Sjoerd: "This is possible, but in general the tracking error will be so low that it is outweighed by the advantage of lower transaction costs and management fees, compared to traditional investment funds. For leveraged ETPs it is true that the performance can differ significantly from the underlying assets over time. These ETPs are less suitable for laymen, but offer an interesting tool for someone with a strong short-term conviction and sufficient expertise."

A level playing field

Flow Traders completed an initial public offering (IPO) in 2015. "The IPO has been good for the company's image. It helps in recruitment and it has also made us a more visible discussion partner for regulators." The sector has undergone a rapid professionalization over the past years. It pleases the Flow Traders

CEO: "We are strong proponents of a level playing field. Recent changes have already led to a great improvement, but we are in a continuous dialogue with the regulators for further clarity and transparency. Ideally, all parties should be subject to the same rules, regardless of their location." Is Brexit going to influence this process? Sjoerd doesn't think so. "The most visible effect could be that British parties have a harder time trading on exchanges in EU countries, but that will depend on the outcome of the negotiations."

Flow Traders is very much aware of its impact on society. It actively aims to engage in debate around regulatory changes through interventions that are usually made public. The company is also proud to play a role in the growth of the transparent and low-cost ETP industry, enabling investors to invest at fair prices and lower costs. This is done with a workforce made up of 36 nationalities across all offices. Key elements in

the Flow Traders culture are equal opportunities, teamwork and developing talent in-house. Perks include an in-house gym and nutritional advice for those who want it. Employee initiatives to help charities are actively supported with money, time and access to the company's network. Sjoerd: "We want to be a good corporate citizen. No Cayman routes for us. If you work in one of the most successful sectors in the country you should just pay your taxes; the countries we operate in also enabled us to be where we are today."

Back to the future

Looking ahead, Sjoerd expects that the most relevant changes in the sector will come from information technology. Scale will become even more vital and Flow Traders is well equipped to keep pace with the fast growing ETP market. The time for traders running a business from their own attic is definitely over. <



Sjoerd Rietberg (1979) obtained his Master's degree in Finance at Erasmus School of Economics in 2002. Right after graduating this ambitious alumnus launched a career at Flow Traders, where he is currently working as Co-CEO.



The lab, the truth and the real world

By: Jan Stoop

Does the lab tell the truth about behavior in the real world? That is a question that concerns economists ever since the lab is used as tool to understand human behavior. The first properly designed experiments were conducted by Vernon Smith, who later was rewarded the Nobel Prize for it. These experiments, using students as subjects, tested behavior in an artificially constructed market game. It turned out that laws of supply and demand held pretty well in the lab, and so the lab proved to be a fruitful area to test economic theories. Critics argued that it is hard to transfer quantitative outcomes of the lab to the real world. After all, the lab is different from the real world in so many dimensions (such as its population: student subjects). Lab enthusiasts replied by pointing out that qualitative predictions should suffice. Why would general laws of behavior differ in the lab and field? Why would the laboratory not tell the truth?

'One way to learn if the lab tells the truth about **pro-social behavior** in the real world is to compare lab to field experiments in stepwise fashion'



Well, one area in which the laboratory may be off in its predictions is when it comes to measuring pro-social behavior. Consider the Dictator Game. In this game, a subject receives 10 euros and can choose to share anything with an anonymous receiver. Classical economic theory, assuming everyone cares only about him or herself, predicts that no money is given by the dictator. It turns out that about sixty percent of the dictators give something more than zero, and these gifts average roughly 2,50 euros. So, despite all the incentives not to give, subjects (students and non-students alike) do sacrifice some of their earnings for someone else. At first sight, this seems like evidence showing the existence of altruism. However, the "general laws of behavior" may not hold in this case. A fundamental problem in the lab is that the subjects know that their behavior is being watched and recorded by a scientist. Could this explain why gifts in the Dictator Game are so high?

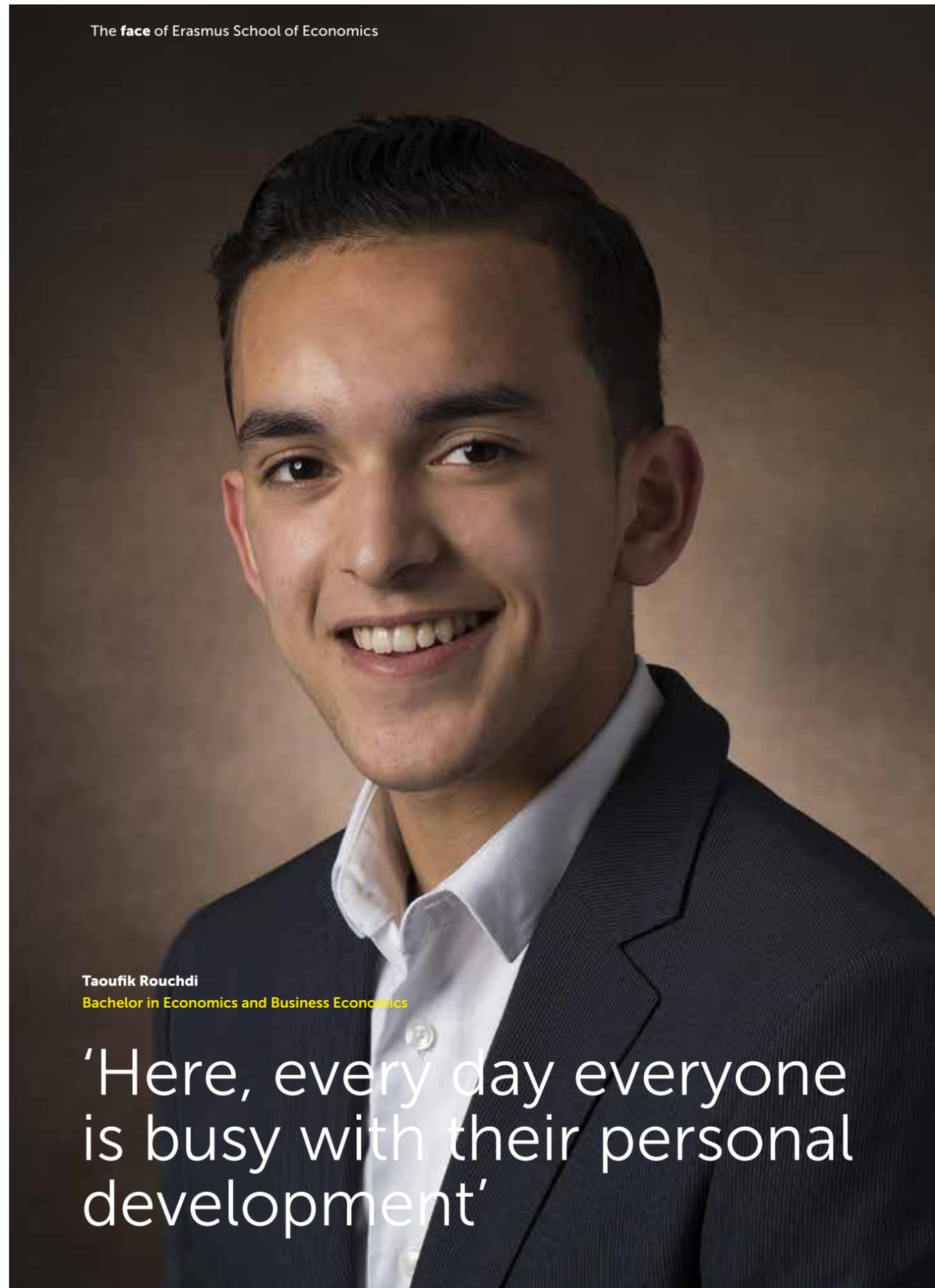
The researcher designs a set of very similar experiments that start in the lab with student subjects, changing one aspect a time, to end in the field with "real people", unaware of the experimenter. This method is new, so the literature offers only a few of these studies. One study has found that students donate as much money to charity in the lab as they do in a real life setup of a charity event. In another study, subjects in the lab could send a thank-you-letter with cash to a volunteer of a university. They returned these



Jan Stoop is an associate professor of Applied Economics at Erasmus School of Economics, specialized in Behavioral Economics. His research focuses on social preferences, which he mainly studies by means of laboratory and field experiments. Jan Stoop has won a Veni grant to study external validity of lab experiments on prosocial behavior. In 2015 he won the Pierson medal, a prize that is awarded every three year to an upcoming scholar.

as often as subjects who "accidentally" got a similar letter in their mailbox. On the other hand, baseball card dealers who are invited in a lab show to be trustworthy in a game that measures trust. These same dealers, however, rip off customers who rely on their trustworthiness when buying baseball cards.

It is too early to tell if the lab systematically overestimates pro-social behavior, because different settings need to be tested. In the meantime, however, it seems as if the experimenter demand effect is not always of big concern. But, as more field experiments are conducted, other challenges are exposed. For example, a popular topic in economics and psychology is to compare altruism between the rich and poor. Lab findings indicate that the poor are more altruistic. But, a recent field experiment that "accidentally" sent letters with and without cash to members of both social classes, showed the rich returned more. This is not to say that the rich are thus more altruistic. It turned out that the poor suffered from stress that hindered them to return envelopes. Such effects can only play a role when subjects have to plan a real activity, and this is typically absent in the lab. To conclude, the debate on whether the lab tells the truth about the real world continues... <



Taoufik Rouchdi
Bachelor in Economics and Business Economics

'Here, every day everyone is busy with their personal development'

'The knowledge and skills gained during university years will undeniably be welcomed by the numerous national and international business and organizations that keep this city moving.'



Ahmed Aboutaleb, Mayor of the City of Rotterdam

'I think Erasmus School of Economics is very well connected to a lot of companies through various study associations and through the institution itself. There are a lot of events, case studies and guest lectures being offered that allow you to get in touch with potential future employers.'

Alumnus Bram Lips, currently working for BNP Paribas

'I have realized that what I really love is learning and helping others to learn. And that is why I am so happy to be at Erasmus School of Economics. My times here have been some of the happiest and most productive. I always look forward to being here and am always sorry when it is time to leave.'

Robin L. Lumsdaine, Professor of Applied Econometrics at Erasmus School of Economics

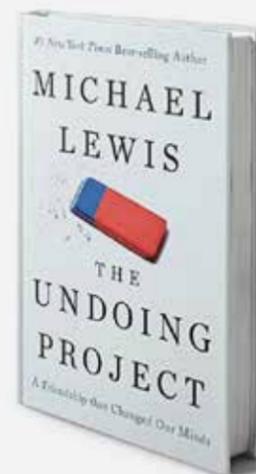
What's on the nightstand of Aurélien Baillon

Professor in behavioral economics at Erasmus School of Economics

The Undoing Project: A Friendship That Changed Our Minds by Michael Lewis, W. W. Norton & Company, 2016

Favourite quote: "The secret to doing good research is always to be a little underemployed. You waste years by not being able to waste hours." (Amos Tversky, quoted in *The Undoing Project*)

Aurélien Baillon: "Kahneman is a top psychologist, with strong insights about how our brain works. Tversky was an admired mathematical psychologist. Together they revolutionized our way of understanding how people make judgments and decisions, setting the ground for a new field: behavioral economics. Michael Lewis, bestselling author of *The Big Short*, recounts what could be called a scientific love story. His book is a page turner. It explains the main concepts of behavioral economics but also reveals the human aspects behind one of the most impressive scientific collaborations."



'Big data is everywhere - it drives web search, web advertising and quantitative finance, to name a few industries. Data Science plays a fundamental role in this new Economy. With its strong history in data modeling, Erasmus School of Economics is well poised to train a new generation of data scientists.'

Reaction of Trevor Hastie, the Overdeck Professor of Statistics at Stanford University, to the news that Erasmus School of Economics has introduced the MSc specialisation Data Science & Marketing Analytics within the Master programme Economics and Business.'



EFR/EenVandaag Election Debate

In the Auditorium of Erasmus University Rotterdam Dutch Prime Minister Mark Rutte, leader of the People's Party for Freedom and Democracy, and Geert Wilders, leader of the Party for Freedom, questioned each other's credibility and integrity as they faced off on live national television for the first time in the country's election campaign. The debate got a lot of international exposure, since journalists of over 20 countries attended a press conference of Mark Rutte on Woudestein Campus in advance of the debate. For many years the Economic Faculty Association (EFR) organizes these kind of debates in anticipation of Dutch general elections. They do this in close cooperation with EenVandaag, a current affairs programme on the Dutch public television network NPO 1.



Your gateway to success

Is to become an active member of one of our study associations

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. The multiple associations offer students opportunities to acquire leadership skills, widen their network and participate in events such as the ones highlighted on the following page.

EFR

Involve Research Project

Each year Economic Faculty Association Rotterdam (EFR) organizes the Involve research project in cooperation with a non-governmental organization (NGO). Since NGOs usually cannot afford professional consultants, 20 students use their academic knowledge to solve a problem for them. The project is an opportunity for Bachelor-3 and master students to experience the different aspects of desk- and field research while contributing to the sustainable development of essential sectors of developing countries.

FAECTOR

Econometric Career Days

The Econometric Career Days (ECD) is the biggest on-campus career event for econometricians in the Netherlands. 24 companies participated in the event, which was held last November. These companies presented themselves by hosting cases or being present at dinners, drinks or informal activities. To close this year's successful edition of the Econometric Career Days all students were invited to join our closing party in Plan C!

In Duplo

In Discussio

In Discussio is the yearly organized conference by In Duplo, the association for students who combine either Economics or Business Administration with Dutch Law. The aim of the conference is to find the best of both fields of studies and is open, and suitable, for all students interested! The In Discussio conference aims to invite students to learn beyond the field of their studies and make them participate in debates with our renowned speakers.

Transito

Recruitment Afternoon

Aiming for a career in the port or logistics? Hosted at the beautiful office of Venturn, the Transito Recruitment Afternoon is a yearly event in which students have the opportunity to speeddate with port and logistics companies. Networking, practicing assessment tests and an informal drink are part of the day. Participating companies are actively looking for students from the Urban, Port and Transport Economics Master, and many students have found their first job here.

FSR

The International Banking Cycle

Every year the Financial Study association Rotterdam (FSR) organizes the International Banking Cycle, which is the largest investment banking recruitment event in the Netherlands. The recruitment event gives students a clear view on the operational practices and career opportunities at the world's leading investment banks, including Barclays, Goldman Sachs, J.P. Morgan, Morgan Stanley, Deutsche Bank and many more. Each bank organizes a workshop with a focus on mergers & acquisitions and some banks offer a case with a focus on sales & trading. The International Banking Cycle is the perfect opportunity for students to get acquainted with the dynamic world of investment banking.

AEclipse

International Research Project

The International Research Project (IRP) is a two-week research trip to a developing country that has made significant strides in its economic development. The IRP has been one of AEclipse's flagship annual events since the association's start 21 years ago, and has been growing larger ever since. Most recently, we have visited Nicaragua, Colombia, India and Indonesia, merging cultural, academic and practical experiences that our participants are unlikely to forget.

MAEUR

The Marketing Conference

The Marketing Conference is a one-day event that takes place in November at the Erasmus University Rotterdam. Throughout the day, students will have the opportunity to learn about several outstanding companies' experience and the way they led their path to success. Moreover, students will be able to demonstrate their skills by solving company related cases during the workshops. Finally, at the Career Fair they will have the chance to get in touch with the participating companies.

Alycia Colijn

President of the 18th Board of In Duplo



"One of the advantages of studying at Erasmus School of Economics is the engagement of students in study associations. Each academic year is filled with interesting congresses, study trips, career events and skills trainings organized by the many different study associations. On top of that, students can develop their social life during social activities like introduction weekends for new students and informal drinks.

Joining a study association really helped me develop my social and professional skills and gain a lot of knowledge. Although participating in activities and joining a committee was already valuable, I learned most during my year as president of the board. I learned how to lead a large organization, communicate with fellow board members, guide committees and overcome many challenges. I can really recommend students to join a study association and consider taking part in a committee or even do a board year."

Study Programmes

6 Bachelor's degree programmes

- Bsc (International) Bachelor in Economics and Business Economics
- BSc International Bachelor in Econometrics and Operations Research
- BSc Fiscale Economie *in Dutch*
- Double Degree BSc² Econometrics and Economics
- Double Degree Economics/Econometrics and Philosophy
- Mr. drs. Programma voor Economie en Rechten *in Dutch*

For more information please visit:
www.eur.nl/ese/english/bachelor/

MSc in Economics and Business

- Behavioural Economics
- Data Science and Marketing Analytics (as from 2018-2019)
- Economics of Management and Organisation
- Financial Economics
- Health Economics
- Industrial Dynamics and Strategy
- International Economics
- Marketing
- Policy Economics
- Urban, Port and Transport Economics

For more information please visit:
www.eur.nl/ese/master

MSc in Econometrics and Management Science

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

For more information please visit:
www.eur.nl/ese/master

MSc in Accounting, Auditing and Control

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

For more information please visit:
www.eur.nl/ese/master

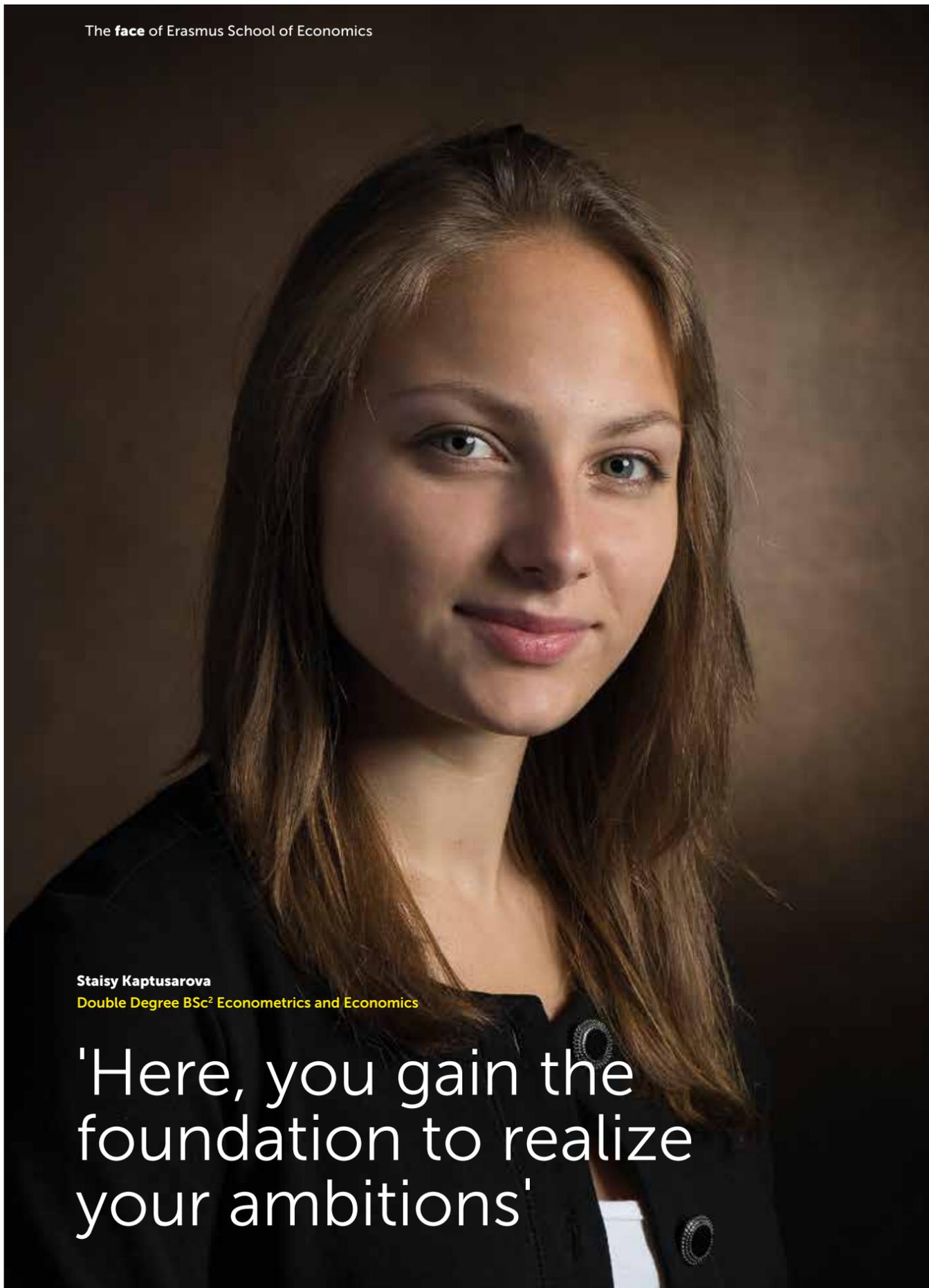
MSc Fiscale Economie *in Dutch*

For more information please visit:
www.eur.nl/ese/master

Research Master programmes

- Research Master in Economics
- Research Master in Business and Management

For more information please visit:
www.eur.nl/ese/master



Staisy Kaptusarova
Double Degree BSc² Econometrics and Economics

'Here, you gain the foundation to realize your ambitions'

Erasmus School of Economics on Youtube

A DAY IN THE LIFE OF AN INTERNATIONAL STUDENT



ERASMUS SCHOOL OF ECONOMICS



RESEARCH IN A NUTSHELL



WHY STUDY A DOUBLE BACHELOR ECONOMETRICS AND ECONOMICS



WHY STUDY ECONOMETRICS AND OPERATIONS RESEARCH IN ROTTERDAM



WHY STUDY ECONOMICS AND BUSINESS ECONOMICS IN ROTTERDAM



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A portrait of Anne Gielen, a woman with short brown hair and blue eyes, smiling slightly. She is wearing a light-colored button-down shirt. The background is a neutral, textured grey. A yellow triangle is in the top right corner.

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.

Anne Gielen:
Associate Professor
Department of Economics

Back Bone

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