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The Double-Edged Sword That Is Social Media

Social media has transformed the way we communicate, connect and share information. Platforms like Instagram, Facebook and Youtube have changed the landscape. It allows us to communicate directly and gives us an enormous amount of insight into eachothers lives. While social media is an outlet for creativity, networking and information, it also raises concern about privacy, misinformation and mental health.

Read more about the pros and cons of using social media and its impact on our well-being in the health rubric, or the use of social media amongst our own association in the "Let's Talk". Check out the Special about how the algorithms of these platforms work.

If you want to broaden your horizon when it comes to your career, you can find an interview with Capgemini. If your interests lie with mathematical theory, read about the effect of location on the use of healthcare by refugees in the "Triangle" rubric.

This edition also includes a piece on the International Business Tour committee and the amazing trip to Thailand they organized. There is also an exciting puzzle. There is plenty more to explore too!

Happy reading!

Kind regards,

Hedser van der Wel

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COLOPHON

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Correspondence
Asset | Econometrics
Tilburg University
Room E 1.02
P.O.Box 90153
5000 LE Tilburg
Telephone: 013 466 27 47
info@Asset-Econometrics.nl
www.Asset-Econometrics.nl

Editorial staff
Sara Darwinkel
Laurentien Diepenhorst
Timo Klabbers
Maik Maas
Lucas Mejic
Floris van de Moosdijk
Timo van Oorschot
Marvin Priem
Stans Sonderkamp

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Editor-In-Chief
Hedser van der Wel

Lay-out editor
Lina van Ampting
Anne Verbeek

Coordinator
Rebecca Beijk

Contributions
Cilia Beijk
Mylène Broekhuizen
Meike Goedschalk
Johan Graafland
Kiki Hengst
Henk Keffert
Shobhit Kulshreshtha
Ailina Naguib
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Dear Members,

When I asked what the theme of this edition of the Nekst was, I was delighted to hear that it was social media. For those of you who do not know, I was not an econometrician from the beginning of my studies. I have a Bachelor's Degree in Online Culture, a study in which one explores the influence of social media on society. This origin story quickly earned me the nickname of "social media girl" within the association, but I like to think that I have integrated into the clique of econometricians pretty well now.

As both a member and boardie of the association, I love seeing pictures of our events and members being posted on social media. Just recently, people have often shared group pictures taken at activities much like the one that was just organized by the Drinks & Activities committee. We competed for a medal, which was awarded to the person who answered questions in different sports categories in the fastest time. A great activity, which was attended by a very large crowd.

Where on Instagram we often place the more curated, pretty pictures, Snapchat is the place where we share in-the-moment, raw content. When the Olden Goldies committee took the older members of our association on a tour through the city, the Snapchat groups were filled with videos, showing the fraternity-themed outfits and the activities at each stop of the tour. Definitely an activity for in the books!

The last platform I want to touch upon is LinkedIn, the most formal one in this series. We share our search for new jobs and professional milestones we achieved. After the EOR in Practice Day, the committee can update their LinkedIn profiles with a post about the successful event they organized. With an attendance of over 60 students and six companies, our members were able explore possible future careers through company presentations, speeddates, a business lunch, a company case and a networking drink. A great success!

Overall, social media is a great place to share the things we do and to continue connecting with the friends we have made, both while studying and after we have graduated. I am curious to see what posts appear from our members this year, hopefully showcasing the many memories and friendships that were made because of our beautiful association.

On behalf of the board,

Emma Wieringa
Chairman Asset | Econometrics 2024-2025

The Effects of Social Media on Mental Health

written by **Stans Sonderkamp**

When people think of health, their attention often first goes to physical health. But mental health is just as important. In recent years, attention to mental health has increased significantly, and part of this growth seems to be influenced by the rise of social media. Anyone reading this has likely encountered social media in their daily life: social media is used for communication, entertainment, education, and much more. Nowadays, it seems almost impossible to go through life without it. But how does social media impact our mental health?

Positive Effects

Social media has both positive and negative effects on mental health. One of the most important functions of social media is communication. Because communicating has become easier, it is simpler to talk about personal concerns and ask for help when things are not going well. Social media makes it possible to find people who have similar experiences and can understand you, making it easier to find support. This can help you feel better and may result in more self-confidence.

In addition to addressing problems, social media also offers a platform for self-expression, which can lead to feelings of pride or may even inspire others. Social media connects people not only with each other but also with experts and organizations that bring attention to the importance of mental health. Seeing others take mental health seriously may inspire you to be more mindful of your well-being.

Negative effects

At the same time, social media also has many negative aspects. Because you have constant access to information about what others are doing and how they feel, people are unconsciously encouraged to compare themselves to those people. When you constantly see the "perfect" lives of others, it can make you feel like you are not good enough. This can ultimately lead to a lower self-esteem and, in some cases, even eating disorders.

Additionally, cyberbullying is a big problem. It is much easier to leave nasty comments online than to insult someone in person because you can hide behind the anonymity of a screen. Unfortunately, this happens very often. The anonymous messages can cause deep psychological damage. What makes it even harder is that it is almost impossible to fully remove something that has been posted online. This makes it more difficult for victims to move on.

Another important disadvantage of social media is its addictive nature. Many platforms are designed to keep users active for as long as possible by continuously stimulating the dopamine system. As a result, young people often stay up later, leading to sleep deprivation and reduced concentration. This is especially harmful to adolescents, as their brains are still in a crucial developmental phase. In the long term, this can contribute to reduced social interaction, feelings of loneliness, and an increased risk of mental health issues such as depression.

At the same time, excessive use of social media often brings negative feelings such as jealousy or insecurity. But it does not stop there. Prolonged exposure can even lead to more serious problems, such as depression and chronic sleep problems, which affect both mental and physical well-being.

Who is most affected?

Social media does not have the same effect on everyone. Some groups appear to be more vulnerable to its negative effects. Younger teens, for example, who struggle with regulating their emotions, are particularly sensitive. These young people are often more prone to issues such as body image insecurity and an increased risk of anxiety. They are more easily influenced by what they see online.

There is also a difference between young people of varying educational levels. University students, for example, often seem to handle social media more consciously. They use platforms like LinkedIn and Twitter to network, share knowledge, and develop themselves professionally. However, they too experience negative effects. For example, the pressure to always be online or the stress of social comparison can weigh heavily on them.

On the other hand, young people with lower levels of education often struggle more with consciously using social media. They are more likely to be exposed to harmful content, such as cyberbullying, which increases the negative effects. The lack of interaction and the ability to compare themselves to others makes these young people more likely to experience negative emotions.

Conscious usage

Social media has both positive and negative effects on mental health. While it can contribute to connection, support, and information, constant comparisons, cyberbullying, and addiction can lead to insecurity, anxiety, and stress. To experience the positive effects, it is important to use social media consciously: set boundaries for usage, seek active interactions with positive content, and build a strong offline network. By finding this balance, you can harness the benefits of social media while minimizing its negative impact.

Shell Wins Appeal Against Milieudefensie

This week Shell won its appeal against the environmental NGO Milieudefensie in court. Three years ago, the court had upheld Milieudefensie's claim that Shell's emissions must be reduced by 45 percent by 2030. It was the first time that a court legally obliged an individual company to take responsibility for a public good (the environment), without such an obligation being (or could be) imposed on comparable companies or consumers.

In business ethics, there has long been a moral obligation for every individual company to take care of the environment. But if companies collectively do not sufficiently comply with this obligation, it is primarily the government's responsibility to enforce this. For example, through an internationally coordinated increase in the CO2 tax. Then all companies are affected equally, so that competitive conditions are not disrupted and a level playing field is maintained. By imposing a heavy obligation on one single company, this company is treated unequally.

Another reason for reversing the previous decision of the lower court is that one may wonder how effective it was in moving the sustainability agenda forward. The argument that Shell has a lot of market power and therefore the freedom to realize the imposed transition is perhaps too optimistic. Even though the oil market is controlled by a small number of large companies, competition is fierce. If Shell loses market share and ExxonMobil, ChevronTexaco and a handful of Russian companies are given free rein, the transition to sustainability will actually be damaged. Because, compared to most other oil companies, Shell invests more in energy transition. This danger of perverse consequences has even increased with the reelection of Trump who plans to give more freedom to American oil companies.

Still, Shell's appeal and the arguments it used can also be criticized. First, Shell places all responsibility for reducing oil consumption with the customer. If the customer continues to fill up with oil, Shell says there is little it can do because other oil companies will then take over the market. In doing so, Shell fails to recognize that it does have room to maneuver because of its market power. Furthermore, Shell's tendency to look exclusively to the government when it comes to regulating the energy market is also inadequate. After all, the entire phenomenon of corporate social responsibility arose because it is generally recognized that the government is also limited in steering the economic process, especially when it comes to global environmental problems.

In the recent ruling, the judge confirms that oil companies such as Shell, which actively helped cause the climate crisis, have a major responsibility to limit its negative consequences. This responsibility can be based both on rights ethics (respect of human rights), justice ethics (compensate for past harm) and consequential ethics (contribute to happiness of future generations). Shell should not hide behind other oil companies to minimize its responsibility. It should reconsider its current policy to aim at maximizing shareholder value and not lean back now that it has won its appeal against Milieudefensie.

After all, the environmental problems are immense. It remains of utmost importance that all parties involved, governments, companies and consumers, take their responsibility together. ●

Johan Graafland

Prof. dr. Johan Graafland is a Full Professor at Tilburg University, specializing in Economics, Business, and Ethics. His research focuses on the intersection of economics, corporate social responsibility, and moral values. He has published extensively on topics such as sustainability, ethical behavior in business, and the relationship between religion and economic development.

Studies and Social Media

written by **Marvin Priem** and **Mattijs Vernooij**

"Familiar Faces" takes a slight detour for this Nekst edition, as we are going to talk to someone who has never been a member of Asset | Econometrics, and did not even study at Tilburg University. Your question might be:, how are you supposed to be familiar with someone that was never a student at Tilburg University? It will all become clear in the following article.

Meet Lotte Witké, who introduces herself as a Master's student in Econometrics and Operations Research at the Vrije Universiteit Amsterdam, but we know her better as the social media presence "Lotte Leert". When we knew we had the opportunity to get an interview with her, we of course were excited to get to know her better. With the knowledge about Google Meet we learned during COVID-times we called Lotte, and soon we discovered that our internet connection was not up to par, so the video was not always as clear. However, that did not stop us from getting a fun and exciting interview!

Firstly, we got into the personal life of Lotte: what she does outside of university, how she got into social media and how she came to study Econometrics. She also told us about how she did a board year at Kraket, the study association of Econometrics and Operations Research of the Vrije Universiteit Amsterdam. The board year was refreshing for her, as she was always very focused on her studies. She wanted to know how the student life really is, and she felt like a board year was the perfect way to do this. During her board year she learned a lot of soft skills, did lots of presentations and met new people that taught her a lot of new things.

Besides her studies Lotte plays hockey, but she is also working at KLM, so her schedule is pretty full. When we asked her about this, she gave us the following tip: "good planning will get you everywhere." At KLM, where Lotte now works for almost a year, she worked on her favorite project she has encountered so far, trying to set up an optimization program. The program ensures that more planes are able to fly, by optimally allocating motors to airplanes. She likes this side of Econometrics because it is more about solving 'puzzles' than looking at p-values et cetera.

We know Lotte better as the social media presence, Lotte Leert, as she is active under this name on Tiktok and Instagram. She posts content about studying, and provides tips and tricks to improve students' plannings, and ultimately on how to get higher marks. As the conversation continued, we got more of an inside of Lotte's journey as "Lotte Leert." Her social media platforms, TikTok and Instagram, have grown into spaces where she shares valuable advice on studying effectively, managing time, and ultimately achieving more success academically. Lotte revealed that she started making videos in a rather peculiar way: "It happened in a random way. I knew I had a good niche, but I needed the first video idea." She got the first idea when she went studying with a friend of hers, when there were notebooks flying around and she wondered why she did not just use a multomap. Thus, she made her first video about the use of a multomap, which immediately gained 7 thousand views. After that video she got 20 thousand views, but this time it was about the use of an iPad for studying. From then on, it was smooth sailing up until every video got around 100 thousand views, and because she still had enough video ideas, staying consistent was not very hard. After the milestone of 100 thousand views, the growth stagnated, but she kept coming up with new videos. After posting the first video with the title, 'Nooit meer een onvoldoende' (never get a failing grade again), she gained 5 thousand new followers in one day, as she went from 20 thousand followers to 25 thousand followers. Now her account has grown to over 110 thousand followers, and she is already active now for more than 3 years.

Some readers may also know that Lotte has published a book. We wanted to know more about what kind of book it is, and how she came to write one. When she was active for about a year on social media, her account grew at a fast rate. At that time a publisher, called Kosmos Uitgevers, asked the question whether she had ever thought about writing a book. "This was something I secretly always wanted to do", she told us. So when this opportunity arised she immediately jumped on

Lotte Witké

the idea. The ideas of the publisher and Lotte about the contents of the book were immediately roughly the same, so she got the official offer for writing the book very quickly. After a year, the book 'Nooit meer een onvoldoende', was published. The book is, simply said, the same as what she teaches on Tiktok, but explained in more detail in a more organized way. Therefore, it contains the themes of motivation, planning, learning methods, productivity and mental health.

We wanted to know if, when she is done studying, she would continue making videos for Lotte Leert. "I honestly do not know yet. Maybe it will become Lotte Works," she said. She has not made a decision about what direction she wants to pursue. When Lotte is done with studying she would become more distant with her audience, she tells us. But on the other hand, she sees that her audience is growing with her, so maybe when she makes a switch to different type of content she will keep her audience.

When we asked her about how social media affects her daily life she said: "During the VU intro days, some people came up to me and told me that they came to the VU because of my videos", which she finds a lot of fun, but there is also a less fun part to it. "I need to make sure I do not do weird things when I go out", she told us. When she goes on nights out, a lot of people come up to her, which she likes, although it can be annoying at times. Lotte feels that overall, social media does improve her quality of life. On the one hand it is very distracting, but on the other hand it can be very helpful and, especially for her, it is an extra income stream. She does feel like taking a break from social media would not be a bad thing, but it would cause her to be less involved with trends which may cause her to lose followers.

At the end of the conversation, we asked if she could give any tips for Econometrics students. She told us to go back to the basics, focussing more on practicing the exercises and perfecting that, instead of knowing every piece of theoretical material. How do we know this is good advice? Lotte graduated cum laude in secondary school, and she just missed out on cum laude when graduating for the Bachelor. So, maybe when you listen to her advice, you will get higher grades as well.

We had a great time talking to Lotte, hearing her stories and how she came to be a social media presence. We would like to thank her for her time in between school, work, hockey and of course maintaining her social media accounts. She told us she will be going to the next LED, so maybe some of you can meet her there.

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How location influences healthcare utilization of refugees in their early years after migrating to the Netherlands?

Place of residence influences an individual's health and healthcare utilization due to various characteristics which are specific to the region, such as high pollution or limited access to healthcare services. While the native Dutch population and voluntary migrants have the autonomy to decide where they live, refugees do not have this choice. In this article, we examine how the location to which refugees are assigned influences their healthcare utilization, with a focus on their initial years of immigration to the Netherlands.

Introduction

Regional or local characteristics, such as better access to healthcare infrastructure, lower pollution levels, and healthier peers, can positively influence the health and longevity of residents. In contrast, factors like higher crime rates or limited economic opportunities in a region may have a detrimental effect on an individual's health and healthcare utilization (Deryugina & Molitor, 2021). These place-based drivers of health, or "place effects," account for nearly 50% of geographical variation in healthcare costs in the United States and 30% of the variation in healthcare costs in the Netherlands (Finkelstein et al., 2016; Moura et al., 2019). While voluntary migrants or locals can choose where they want to live within a country, refugees are typically assigned to different regions based on government policies, commonly referred to as dispersal policies. Due to these policies and the provision of subsidized housing, refugees do not choose their place of residence and often have less incentive to relocate in the future. Refugees are a vulnerable group, as they frequently experience traumatic events before and during migration, leading to both physical and mental health challenges. Thus, it is essential to understand whether the location to which refugees are assigned can influence their healthcare utilization. In this study, we quantify the impact of location on healthcare utilization of refugees by answering two research questions: First, what is the effect of the assigned municipality on healthcare utilization of refugees and how much of the variation can it explain? Second, provide suggestive evidence on plausible mechanisms that can explain these effects.

Econometric Challenge

While we expect that living in a region with poor health infrastructure and high pollution would have a detrimental effect on an individual's health and healthcare utilization, demonstrating this effect econometrically is challenging. A major econometric issue in estimating this effect for the general population is that individuals choose where to live, leading to selection bias. For example, a young and healthy person with a university degree might prefer to live in a large metropolitan city like Amsterdam (North Holland), whereas an older person with poor health might move to a smaller city like Heerlen (Limburg) or the countryside. This pattern of migration creates a bias, as healthier individuals tend to move to larger cities, while those with poorer health are more likely to move to smaller towns.

If we conduct a simple linear regression by regressing individuals' healthcare utilization on municipality dummies and assume no bias, we would find that living in smaller cities appears worse for individuals, as residing there is associated with higher healthcare utilization, while the opposite effect is found for larger cities. However, this result only indicates an association between healthcare utilization and municipality; we cannot conclude that the municipality itself causes higher or lower healthcare utilization.

An ideal solution to correct for this bias would involve randomly allocating all individuals to various municipalities without considering their age, gender, health, education, or any other observed characteristics—this scenario would be perfect randomization. Another plausible solution would be to reallocate individuals to various municipalities randomly based on observed characteristics, such as the

demographic characteristics—this scenario would be conditional randomization. However, these solutions are not feasible for the whole population.

Random Assignment of Refugees

Random assignment of the entire population to different municipalities may be unfeasible, but for refugees, the assignment is effectively conditionally random—that is, conditional on their demographic characteristics, refugees are assigned to various municipalities randomly, depending on the availability of housing.

Many developed countries have implemented dispersal policies in which local authorities, in coordination with central organizations, assign refugees to specific locations. These policies provide the necessary exogenous variation to estimate the effect of location on healthcare utilization from the selective sorting of individuals into residences. The Dutch dispersal policy, for example, aims to distribute the burden evenly across municipalities, ensuring that no single municipality is overburdened with financial strain and accommodation costs.
A key identifying assumption for this analysis is that refugees are assigned to municipalities independently of their healthcare utilization, conditional on their observed characteristics. We test this assumption using refugees' demographic characteristics and healthcare utilization data from the time of their arrival. Before being assigned to a municipality, refugees stay in a reception centre (COA reception centres) until a decision is made on their application. By analysing hospital visit data from their time in the reception centre, we can test whether their healthcare utilization before assignment is predictive of their eventual municipality assignment. This test can be performed in two ways.

First, we regress the number of hospital visits of refugee i during their time at reception centre ($HospitalVisits_i$) on the assigned municipality dummies (γ_j), controlling for demographic and reception centre-related characteristics. We then conduct a joint significance test for the municipality dummies. For the assignment to be conditionally random, we should fail to reject the null hypothesis that the assigned municipalities jointly explain the healthcare utilization of refugees during their time at the reception centre. A second test is to estimate association between hospital visits of refugees during COA reception centres ($HospitalVisits_i$) and rate of hospital visits among non-refugees ($RateHospital_{j\tau}$) in the assigned municipality j, in the year of assignment τ. For the assignment to be conditionally random, the association between these two variables should be economically and statistically insignificant.

Empirically, we test these two assumptions using Dutch administrative data provided by Statistics Netherlands (CBS). We have a sample of 51,861 refugees who were granted residence status between 2013 and 2016. We have detailed information on the demographics of refugees, including age, gender, place of residence, migration motive, country of origin, and year of immigration, as well as their healthcare utilization. For healthcare utilization, we focus on hospital visits, general practitioner costs, and use of depression medication. To test the random assignment of refugees, we focus on hospital visits, as this data is available at a daily level, whereas the other two healthcare measures are only available annually. The results of these tests show that, regardless of how hospital visits are defined, refugees were assigned randomly to municipalities, conditional on their observed characteristics.

Place Effects and Plausible Mechanisms

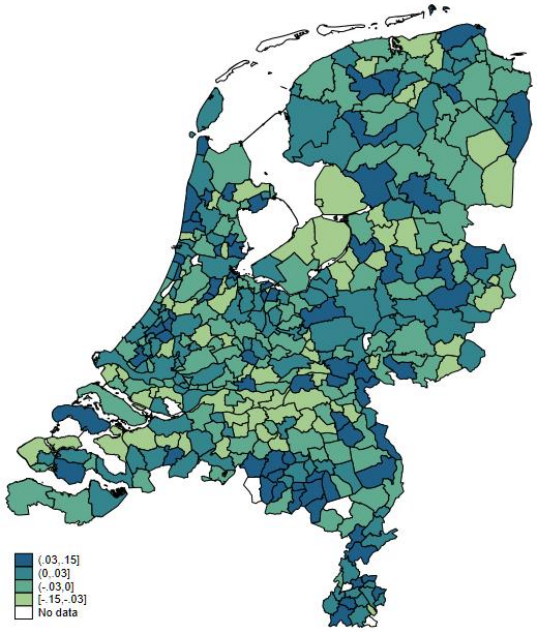
Given the conditional random assignment of refugees to various municipalities, a simple linear regression model can be used to estimate the effect of assigned municipalities on healthcare utilization of refugees. To answer the first research question, we regress healthcare utilization of refugee i in year t (Y_{it}), after her assignment to municipality j, on the assigned municipality dummy as indicated by γ_j, controlling for demographic characteristics of refugee i in the year of immigration m (D_{im}), year of immigration (λ_m), relative year since assignment ($\rho_r, r \in \{t+1, t+2 \dots\}$), calendar time fixed effects (μ_t) and the last municipality of reception centre fixed effects (δ_{COA}).

$$Y_{it} = \gamma_j + \lambda_m + \delta_{COA} + \rho_r + \mu_t + \beta D_{im} + v_{it}$$

Here, Y_{it} can be hospital visits, depression medication usage and logarithm of general practitioner's cost of refugee i in year t. After estimating this regression, we get 368 **place effects (or municipality effects)** for three healthcare utilization measures of refugees. The

place effects for hospital visits are shown in Figure 1. A positive place effect suggests that healthcare utilization among refugees in a given municipality is higher compared to the base category, while a negative place effect indicates lower healthcare utilization. The standard deviation of place effects for hospital visits is estimated to be 0.04. Compared to the total variation in hospital visits among refugees, which has a standard deviation of 0.39, this indicates that approximately 10.26 percent of the total variation in hospital visits can be attributed solely to place effects, with a 95% confidence interval between 9.6% to 11.4%. The corresponding contribution of place effects in explaining the variation in depression medication usage is 14.21 percent, and for GP costs, it is 19.63 percent.

Figure 1: Place effects for hospital visits



Different mechanisms may account for the heterogeneity in healthcare utilization among refugees across various measures. The absence of an exogenous shock makes it challenging to identify these mechanisms distinctly. However, suggestive evidence for these mechanisms can be provided by examining the association between various municipality characteristics and the estimated place effects. Following the framework outlined by Deryugina & Molitor (2021), these location-based characteristics can be classified into five broad and interrelated categories: healthcare access, socio-economic status, network effects, local environment, and public policy.

Figure 2 presents the association between selected municipality characteristics and the estimated place effects. The results show that municipalities with better healthcare access—measured by a higher number of hospitals within a 10-kilometer radius or a greater number of general practitioners (GPs)—tend to have higher place effects for hospital visits among refugees. In contrast, municipalities with more limited healthcare access, particularly those located farther from major train stations, exhibit weaker place effects for hospital visits.

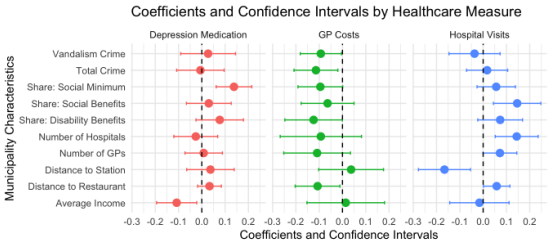
Additionally, municipalities with lower socio-economic status, indicated by a higher proportion of the population relying on social benefits, are associated with an increased likelihood of hospital visits among refugees. However, municipalities with lower average socio-economic status, reflected by a higher rate of individuals receiving disability allowances and a greater proportion living below the social minimum, are linked to lower place effects for GP costs. Interestingly, municipalities with higher crime rates, including vandalism-related crimes, show a negative association with place effects for GP costs.

The analysis also reveals that refugees assigned to municipalities with poorer socio-economic conditions, such as those with a higher proportion of individuals living below the social minimum, tend to exhibit stronger place effects for depression medication usage. In contrast, municipalities with higher average incomes are associated with lower place effects for depression medication usage. A plausible explanation for this association could be that general practitioners in municipalities with a higher share of lower socio-economic status individuals may be more attuned to the healthcare needs of refugees compared to those in wealthier, often suburban areas surrounding large cities, who may be less familiar with the needs of individuals from lower socio-economic backgrounds and, therefore, prescribe fewer depression medications.

The findings of this study have significant policy implications for the health and healthcare utilization of immigrants. We find that a significant share of the variation in healthcare usage among refugees can be attributed to place-based characteristics. This suggests that the current assignment mechanisms may exacerbate regional healthcare utilization disparities among refugees. Furthermore, the study highlights the role of healthcare access and the socio-economic status of a municipality's inhabitants by providing suggestive evidence. These insights contribute to

the policy debate that aim to provide separate and more targeted healthcare services to this vulnerable population.

Figure 2: Municipality Characteristics and Place Effects



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Shobhit Kulshreshtha

Launching Your Data Career at Capgemini

written by **Floris van de Moosdijk** and **Maik Maas**

For over 50 years, Capgemini has partnered with organizations worldwide to use the power of technology for transformation and growth. The company offers a wide range of services for businesses and organizations, focusing on three key areas: Customer First, Intelligent Industry, and Enterprise Management, all driven by digital transformation in data and cloud technologies. We spoke with Data Consultants Janne Vos and Ailina Naguib, who shared their professional journey at Capgemini and how their background in econometrics prepared them for their current roles. Could Capgemini be the right step for you as well? Read on to learn more about their experiences at this globally recognized company.

Janne Vos

Janne graduated with a Master's in Econometrics and Mathematical Economics from Tilburg University in February 2024. Interestingly, she was an active member of Asset | Econometrics in her first two years, having participated in the Drinks & Activities and Nekst committee. After spending a few months traveling, she was ready to take the next step. Despite previously completing a thesis internship, Janne felt she had not yet explored enough to confidently commit to a specific sector. Her eyes fell on Capgemini as a large consulting company with its broad range of opportunities across various industries and projects. Since joining Capgemini, Janne has been working at one of the Ministries in The Hague, where she is involved in a data warehousing project. She enjoys her role, as it allows her to apply and further develop her data skills in a meaningful way.

Ailina completed her Bachelor's in Econometrics at Maastricht University, followed by a Master's in Econometrics and Data Science at VU Amsterdam, graduating in 2022. Shortly after finishing her studies, she joined Capgemini in September 2022. One of Ailina's most valuable experiences so far has been her project for one of The Netherland's largest retailers, where she was involved in optimizing the production processes of their factories to reduce energy, gas, and water consumption. The partnership was a success, with an especially great impact in terms of reducing water usage. She also gained valuable insight into factory layouts and the experience of working with real-world data from a production environment. In addition to the impact achieved, visits to various factories in the Netherlands and abroad made this one of her most interesting projects to date.

Janne and Ailina agree that Capgemini stands out for its opportunities for personal growth. After completing your studies, you join as a Young Professional and begin with a week-long training program called the Data Intelligence Track, which lays the foundation for your career in data consultancy. Afterward, you have the opportunity to participate in a broad range of training programs

throughout your first and a half year, covering both soft skills and hard skills. Upon joining the team, the project you will work on greatly depends on your own background and preferences. The variety of assignments is one of the strongest appeals of Capgemini. Whether you prefer technical tasks like data engineering or lean more toward data visualization and business analysis, there is an assignment at Capgemini that aligns with your interests and goals. The same diversity applies to the range of industries you can work for. Capgemini is active in a great range of sectors, giving you the freedom to gain experience across many of them. There are also opportunities to work on internal assignments, for instance for Capgemini's Applied Innovation Exchange (AIE), where you can work on innovation projects. Besides the AIE, there are also other opportunities to broaden your knowledge. Within the Insights & Data department, there are distinct clusters, namely Data Engineering, Data Powered Industry & Domain, and (Gen) AI & Analytics & Data Science.

Each cluster is divided into specialized groups, where consultants share and deepen their expertise. Of course, there is flexibility to join or switch within clusters and expertise groups. This structure aligns perfectly with the company's warm and collaborative culture. Everyone is dedicated to supporting one another. With such a diverse range and depth of expertise within the company, there is always someone available to help you move forward, and they are eager to do so. Janne mentions that she has never felt uncomfortable asking a colleague for help. This atmosphere extends beyond work, as there is also a strong bond between colleagues outside of the work environment. One benefit Janne highlights is the number of young people working at the company. As Capgemini is a large company, there are also many colleagues of her own age, which played a role in her decision to choose Capgemini. She enjoys having coffee with her colleagues and attending the drinks often organized on Fridays. Further improving the team spirit, a team weekend is organized annually. It is a weekend where teams stay at an accommodation somewhere in the Netherlands, with several fun activities planned during the stay.

In the interview, Janne and Ailina reflected on their studies and how the knowledge they gained now applies to their work. During her Master's program, Janne discovered her passion for working in data science. One course during her Master's program proved to be an eye-opener: Data Science Methods. In this course, she especially liked the assignments. She recalls an assignment involving COVID-19 infection data. By analyzing this data, she could, for example, detect when holidays took place in a particular country. In another assignment, she predicted the expected value of football transfers using a dataset from EA Sports' FIFA franchise. These assignments helped her better understand her interest in applying data science to real-world challenges and gave her a clearer sense of the type of work she wanted to pursue professionally. She recommends the course to anyone wondering if a career in data consultancy is right for them, as it gives a good idea of the possibilities within the field.

Ailina Naguib

Janne and Ailina's stories give an insight into how Capgemini offers a unique environment for young professionals to grow, learn, and explore their interests. With its wide range of career opportunities, collaborative culture, and great focus on personal development, the company can be a great place for graduates to start their professional careers. Whether you are interested in technical roles like data engineering or prefer focusing on data visualization and business analysis, Capgemini provides opportunities that fit with the career you want to build. A big thank you to Janne and Ailina for sharing their experiences with us!

IBT by Allianz

The International Business Tour (IBT) annually organizes a two week trip to an intercontinental destination. The committee is one of the biggest committees within Asset | Econometrics. At the beginning the committee gets to pick the location. After the location is determined, informal and formal activities need to be organized, and we need to create scientific research. This is the unique thing about the IBT committee: because it includes both informal and formal activities as well as educational aspects, it is all sorts of committees in one.

Preparations for IBT 2024 began in October 2023. Unlike other years, not many people were interested in joining the committee. Therefore, we started the committee with Mart, Koen, Joep and the two coordinators, which were Selina and me. We were three less than usual… Even though the committee was understaffed, everyone was excited and we already started the search for a location, it just took everyone a little more time.

Since there was still a lot of work ahead of us, and a larger committee is always a lot more sociable anyway, we still really wanted some additional committee members. Therefore, Selina had thought of a master plan: she was not going to the Lustrum Theme Announcement to party, but to recruit. After some negotiations, Guus wanted to join the committee under certain conditions, but it did not stop there. Selina's eye fell on a big fish. Someone who had been on IBT several times and had organized the IBT multiple times. Some people know him as Mister IBT, others as Pierre Verhulst. Selina also managed to convince Pierre. With this addition the committee consisted of seven people. After Selina finished her board year she decided to stay in the committee as well, and so the committee was filled!

With the complete committee we continued our search for a suitable location, we looked for a location with enough nice tourist spots and innovative companies, in a safe country. In addition, we also preferred that we could offer the trip for less than 1000 euros. Canada was too expensive, we had doubts about the safety of Kenya and exactly one year before the trip there was so much smog in India that even the schools were closed. But one country satisfied all constraints; and that was Thailand.

After we chose a location, we gradually had to start working on promotion. At the Dies Drink, we finally got to announce the destination. Before going to the drink, we all had dinner at a Thai restaurant. Of course, this had to remain a strict secret, so everyone had to check if their snapchat location was off. Immediately after announcing the location, we noticed that there was a lot of enthusiasm about the location. After two information sessions and promotion via instagram, we eventually had 34 people who wanted to go with us to Thailand, unfortunately only 24 people could go so we had to draw names.

During the summer we continued booking all the activities, keeping in touch with the companies, and preparing each day to the finest detail. We also had our committee activity during the summer. We traveled to Gouda to go on a boat. It started out as a sunny day, but we walked around in a village a little too long and ended up in a heavy downpour with wind gusts on the way back, which made it almost impossible to steer the boat, luckily Koen proved himself a true sailor. This adventure was a good test for the trip itself!

Siebe Verbeek

Bachelor EOR

Age: 22

After a year of preparation, it was time to get on a plane to Thailand at the end of October! We had a lot of budget to do fun trips, such as a bike tour and a cooking class. The companies and universities were varied and welcomed us enthusiastically. The planning also went pretty much as we had planned in advance, except that public transportation turned out to be even less reliable than we had thought, so we ended up upgrading many rides to one cab ride. In addition, the committee was not always lucky; no less than five committee members spent at least one day in bed with food poisoning. Fortunately, the rest of the committee was able to take care of everything and the participants suffered very little. Even with these bumps we had one participant who described the trip as follows: I found it truly remarkable to experience the level of dedication and professionalism the committee put into organizing this trip!

If you want to know more about the trip, read the event page, because there will be an article in there about the trip written by a participant. All in all it was a super fun committee with many different facets, so I would recommend every 'Trist' to organize the IBT once! ●

>> 15

... Lisbon!

Olá! Greetings from Lisbon! My name is Bram, I am 21 years old and currently studying abroad in Lisbon. When I started my Bachelor's in Econometrics and Operations Research two years ago, I would never have guessed that I would get the opportunity to study abroad, and yet here I am!

Bram Stultjens

Bachelor EOR

Age: 21

On September 1 I arrived in Lisbon, even though the first week was very busy and sometimes stressful, it felt like home quite fast. After this first week, my schedule made room for getting to know the nightlife in Lisbon, as well as walk-tours and beach days. After all, the weather was really nice and comfortable. One of the things that both local and international students like to do here is surfing. It is quite common to just go surfing before or after class and to make sure that you get your daily dose of sunlight. Currently, it is halfway through November and people are still surfing because it is still around 20 degrees Celsius! Last week, the first Christmas lights were installed and that was the moment I realized that time is moving so quickly here. For everyone who likes a very moderate climate and wishes to escape the cold days in the Netherlands, just visit Lisbon. You get to see a beautiful city as well and you will discover that Portuguese people are very kind and open, so asking for directions or just making new friends here is no problem at all. However, compared to the Netherlands, I have to say that some things are organized poorly here. When one has the idea to get something done quickly, think twice because that is probably not going to happen. For instance, requesting a public transport card (Navegante) will be two full days of work and the process still requires everything with pen, paper and printed photos. Buying tickets for the bus is still not possible by card here and in that sense it does kind of feel like you are going back in time. On the bright side, the same can be said about expenses. Going out for dinner, or enjoying nightlife? Much cheaper here!

Other reasons to go to Portugal are all the travel options and great landscape that Portugal has to offer. From Lisbon it is relatively cheap and fast to go to places like Porto, Algarve, Madeira, Azores, Morocco, Spain and much more! For international students, there are two big student associations who will also plan many trips: Erasmus Life Lisboa and Erasmus Student Network Lisboa. Erasmus Life Lisboa is my favorite as they organize many events and offer deals that are very handy. Personally, I met many new friends here and we met up for our own activities as well as joining the activities of Erasmus Life

Lisboa together. Fun fact: in the Metropolitan Area of Lisbon, there are 79 universities with a total of 147,066 students last year! So one can imagine that everywhere you go, you will find students. The university that provided me this opportunity, along with Tilburg University, is ISEG (Instituto Superior de Economia e Gestão). I have to admit that, certainly for Portuguese definitions, everything has been well-arranged at this university. So for anyone interested in going to Lisbon, ISEG is highly recommended! I would say that the classes here are somewhat different from what we have in Tilburg, here it is more like a "high school" setup where the classes are 30 people at max and the professor will give more personal help during the lessons. Examples or exercises are also discussed during class and one of the only things that you would have to do outside of class is making a group assignment and studying if the exam or midterm is up, no homework! This results in having more spare time during the week I would say.

I am very lucky to be here and I am enjoying every second of it, nonetheless I still miss my friends and family at home sometimes but since time is moving so quickly, I do not have problems with that. And for everyone who is not yet convinced to go on exchange, do not hold back and enjoy life!

IBT: Mylènes View

On October 23, 2024, I was one of 24 students who took off on an amazing adventure. Together, we travelled to Thailand to explore two big cities in roughly two weeks. We were thrilled to begin this journey, as we had been waiting for months since the announcement of our participation for this year's International Business Tour.

While the majority of our group was experiencing Asia for the first time, I was not. Nearly two years ago I spent five months on exchange to Hong Kong, followed by a month of travelling through Thailand. As I had already seen Thailand before, I was very curious about how the International Business Trip would unfold, and whether my experience would be different from 1.5 years ago.

After a long flight, we arrived at Bangkok's international airport. The organizing committee arranged minivans to take us to our first hostel in Bangkok. As we left the airport, we enjoyed the view of skyscrapers against the skyline and the bustling streets filled with people and traffic. Our adventure officially began!

The cities we were visiting were Bangkok and Chiang Mai, both offered countless highlights to explore, making for a busy schedule. As a result, we had little time to adapt to the new culture entirely, as we had to quickly prepare ourselves for our first activity. We kicked this years' International Business Tour off with a visit to the Dutch Embassy and the NTCC (Netherlands-Thai Chamber of Commerce), where we learned about Thai culture, reasons why Dutch people would want to move to Thailand and much more.

During this tour we found a great balance between business-related, cultural, and fun activities. This was established right from the first day, which we ended with an exciting pub crawl. With a group of 90(!) travelers we explored Bangkok's nightlife at Khao San Road. We had a lot of fun, which brought us closer together as a group.

Each morning, we started our day early so that we could make the most of our time here. Like our visit to the Dutch Embassy and NTCC, we visited even more businesses. Together we got to know Ascend (a Thai FinTech company), Property Scout (a platform to buy, sell & rent real estate in Thailand) and Agoda (an online travel agency specialized in hotel bookings) and all stories they told about their company and goals. It was fascinating to gain insights into working in a

country like Thailand and to learn about different businesses there.

In addition to the company visits, we got taken along the life of a Thai student. Two different universities welcomed us on their campus for a tour and some interesting insights. We got an idea of what it is like studying in Thailand and in what ways this differs from being a student in the Netherlands. A remarkable difference between the two Thai universities and our university in Tilburg, was the campus and its buildings. Both campuses were much bigger than what we are used to, with more buildings and great nature. The buildings themselves were true works of art. As shown in the picture, one of the buildings looked exactly like a temple, which Thailand is known for.

Our journey in Thailand was about more than visiting business and universities. There was plenty of time to experience Thai culture and explore both cities. The organizing committee arranged a variety of activities to help us make the most of our time. In Bangkok, for example, we enjoyed a walking tour that took us to numerous temples, historical monuments, and fascinating museums. We also had the opportunity to participate in the Co van Kessel biking tour, which is famous for its yellow bikes. Founded by the Dutchman, Co van Kessel, who initiated this bicycle tour in Bangkok more than 30 years ago. This cycling tour allowed us to experience Bangkok from a unique perspective. Together with three local guides, we cycled through the vibrant streets of Bangkok, discovering amazing hidden gems while enjoying the nature around us.

Besides visiting Bangkok, we were excited to explore Chiang Mai. With a thirteen-and-a-half-hour journey aboard the night train we travelled to Chiang Mai. We shared a train compartment with the entire group, enjoying each other's company and the views along the journey.

Our time in Chiang Mai was all about discovering Thai culture and its traditions, such as the numerous monuments and Muay Thai, the traditional martial art and combat sport from Thailand. We had the opportunity to take a Muay Thai class led by local fighters, which was truly a special experience.

One of my favorite activities was following a traditional Thai cooking class. We began by visiting a local market to gather fresh ingredients. Afterward, we traveled to a beautiful cooking school where we learned to prepare a delicious four-course meal from classic Thai dishes, including Pad Thai. The cooking techniques we learned were much simpler than expected and the dishes were very tasteful.

To learn even more about Thailand and its culture, we did field research on Thai norms and values in both Bangkok and Chiang Mai. We handed out surveys and engaged in conversations with Thai people about what they value most: money or being close to friends and family. We did this at the Chatuchak market in Bangkok and at the Chiang Mai Night Bazaar, both of which are enormous markets offering everything you could imagine and more. It was fascinating to discover the diverse perspectives on this topic. We talked to locals at both extremes of this matter, which provided valuable insights into their views and priorities. After processing our research results, the committee members concluded that Thai people derive more satisfaction from friendship and family than from income and no significant difference was observed between citizens of Bangkok and Chiang Mai.

Just like this article our amazing trip came to an end. This year's International Business Trip to Thailand was an unforgettable experience that deepened our understanding of Thai culture. Compared to my first visit to Thailand a year and a half ago, I gained new insights into another aspect of Thai culture: its business and education system. With all the memories that we made and the valuable lessons that we have learned, I look back on a journey which I will never forget! ●


IBT 2024
THAILAND

Getting to Know Rebecca's Parents

written by **Stans Sonderkamp** and **Floris van de Moosdijk**

For this edition of the Nekst, we interviewed Rebecca's parents, who chose a path quite different from econometrics. Both of her parents have strong expertise in the world of communication, hearing, and speech. Rebecca's mother, Cilia Beijk, is a speech therapist who is especially experienced in working with cochlear implants (CI). Her father, Nic van Son, has had a dynamic career journey. He began working in phonetics and hearing pathology, later developing tools and methods to assist with hearing, and even starting his own business. Their careers are rooted at the intersection of communication and technology, offering a unique perspective on this specialized field.

Cilia's Work Experience

Cilia is a speech therapist specialized in language and speech. She studied speech therapy in Eindhoven before working in Rotterdam. Later, she pursued a Master's degree at the University of Nijmegen, focusing on speech and hearing. After completing her studies, she began working at an institute for the deaf, where she stayed for many years. Her graduate research focused on how deaf individuals learn to speak.

Currently, she works in a department that helps people who are deaf receive cochlear implants, enabling them to hear again. In her role, she coaches adults through the process of learning to hear with their new implants. Cochlear implants have been around for 30 to 35 years. Initially, they were only available to adults, but as the technology improved, they were also available to young children. Today, children as young as one year old can receive an implant if they are born deaf. With early implantation, many of these children can develop excellent hearing, attend regular schools, and fully participate in society. This is something that would have been unimaginable in the past when these children often had to attend special schools for the deaf.

Cilia notes the difference in speech development between children implanted at one year old versus those implanted at two years old. The earlier the implant, the better the results in terms of learning to speak clearly. This is why she believes it is crucial to provide cochlear implants to children as early as possible. Her team performs around 130 implants per year, with approximately 500 implants done annually across the Netherlands. However, cochlear implants are only for people who are completely deaf. People with severe hearing loss can often still benefit from hearing aids. Cochlear implants are considered when someone can no longer function effectively, even with hearing aids.

Her work is highly rewarding. She helps people regain their hearing and reintegrate into society. For adults, this process often involves intensive auditory training, adjusting to a new way of hearing, and gradually learning how to interpret sounds.

Nic's Work Experience

Nic recently retired after a career closely related to hearing and communication, though not directly within the medical field. He initially studied English, earning a Bachelor's degree, but later switched to phonetics, the study of speech. This sparked his interest in speech perception, particularly in hearing pathology, which deals with hearing impairments. He graduated in 1985, during the early stages of cochlear implantation in the Netherlands. At that time, preparations were being made to introduce the technology at two centers, Nijmegen and Utrecht. His work involved helping people with partial hearing loss who did not fully qualify for cochlear implants. At the time, technology was limited for individuals with residual hearing, but advancements eventually overtook many of these early efforts.

After earning his PhD, he dedicated his career to developing innovative tools and methods to aid those with hearing difficulties. He worked on projects at the Institute for the Deaf, where he met Cilia. They both engaged in research and developed practical applications to support people with hearing impairments. His work involved evaluating training programs, advancing hearing aid technology, and integrating emerging tools, including early computer-based applications.

In his work as a researcher and developer, Nic gradually shifted his focus from 'the material' to 'the human being', that is to say, the hearing impaired for whom all these new developments were intended. He began writing accessible articles and information guides about often complicated technical and medical matters, thus informing hearing impaired patients about new hearing aids, the causes of hearing loss and tinnitus and the ways in which patients themselves could gain more control over their hearing loss. Eventually, he started working for himself as a committed copywriter.

In the later years of his professional career, he worked for the Dutch audiology centers as a policy advisor, focusing on knowledge development, bundling and transfer. Despite his unconventional career path, he thrived in niche areas, blending technical knowledge with communication skills.

The Deaf Community and Cochlear Implants (CI)

When speaking with Nic and Cilia, their passion for the advancements in hearing impairment technology is clear. They have much to share about the progress made over the years, but one topic that stands out is the struggle within the Deaf community regarding cochlear implants (CIs). The introduction of cochlear implants (CI) sparked intense debate within the Deaf community. For context, the Deaf community is a linguistic and cultural group with its own language, sign language, and a rich shared heritage. Historically, sign language was not officially recognized as a legitimate language, but over time, the community gained recognition and fought for their language to be seen as equal to spoken languages. This struggle created a strong sense of identity and pride, making sign language central to the community's independence and culture.

When cochlear implants became widely available, they were seen as a way to integrate deaf individuals into the hearing world by enabling spoken communication. Initially, implants were available only to adults, but as the technology proved successful, they were extended to children, even as young as one year old. This shift led to significant changes in how deaf children were raised and educated, with many transitioning from specialized schools for the deaf to mainstream schools and societies.

According to Nic and Cilia, this shift caused significant tension. Some in the Deaf community viewed cochlear implants as a threat to their culture, arguing that they were not just a medical solution but an attack on their identity. For many in the community, deafness is not viewed as a disability, but as a unique condition that can be embraced and accommodated in ways that preserve their cultural and linguistic identity. Demonstrations were held at conferences, with some labeling cochlear implants (CIs) as a form of child abuse, arguing that they robbed children of their rightful place in the "Deaf world". For deaf children born to hearing parents (90% of cases), cochlear implants (CIs) provided an alternative to learning sign language. However, this also meant these children were less likely to become part of the Deaf community.

Over time, attitudes have softened. Today, young people with cochlear implants often stay connected to the Deaf community while also participating in the hearing world. While a CI aids in hearing, it does not restore perfect hearing, and many still face communication challenges. The balance between these two worlds continues to evolve.

Hobbies & Vacations

Outside of her professional work, Cilia enjoys a variety of hobbies that reflect her interest in sounds and acoustics. She likes singing and plays several musical instruments, such as the piano, guitar, and saxophone. Her interest mainly lies in Spanish and Latin-American music. In addition to making and listening to music, she loves spending time in the woods. She cares (and is worried) about biodiversity and also likes to sport and hike in nature. Being in nature offers her the opportunity to disconnect from the busy world and recharge. Her hobbies also include reading, particularly books about history and stories about other cultures.

Nic also enjoys a range of hobbies that allow him to relax and unwind after his career. One of his favorite pastimes is cooking and baking, a passion that

Rebecca shares with him. The annual highlight is New Year's Eve, when Nic bakes about a hundred and twenty "oliebollen" for all the neighbors. A second passion is reading: mainly novels, but in recent years also increasingly non-fiction. At the moment, he is fascinated by books about the turbulent history of Northwestern Europe. Finally, sports are important to Nic. For years, he played football himself (at what he claims to be the lowest level possible), and after that, he guided many young footballers as a youth leader and trainer. One of them was Rebecca, and she still enjoys the game at TSVV Merlijn. Nic now mainly plays tennis and enjoys walking, from daily walks with the dog to walking holidays with Cilia and the children.

Cilia and Nic enjoy active vacations, therefore often choosing hiking trips. Rebecca is a fan of hiking vacations too, and likes to join them. They especially enjoy hiking in challenging terrain, such as hills. Hiking during vacations has been a trend for them over the past few years, starting with their trip to Costa Rica. That was a particularly special journey, as they had been together for fiteen years and celebrated it with an adventurous trip full of guided tours and discovering much of the country. Since then, they have stayed active with both hiking and cycling vacations, for instance, in Spain. In the past, they often stayed in a vacation rental and went on occasional walks, but as the children grew older, they came to appreciate active vacations even more.

Conclusion

In conclusion, the careers of Rebecca's parents offer an interesting insight into the world of hearing and communication. Outside of their professional lives, they also have a range of hobbies that reflect their creativity and passion. And, of course, they are proud parents of Rebecca. "She is a fun and enthusiastic young woman who tackles everything with confidence. We are proud of her."●

From Statistics to Strategy: My Path to Accountancy and Control

During my board year in 2022-2023, where I served as External Affairs Officer, I began to realize that the typical career paths for econometrics graduates did not resonate with me. Despite enjoying the problem-solving aspects of my studies, I often found myself uninspired by the jobs that seemed to naturally follow an econometrics degree. I had one more year left to complete my Bachelor's and had planned to continue with a Master's in Econometrics and Mathematical Economics (EME).

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Looking back, I always appreciated the mathematical aspects of my econometrics studies, but when it came to programming and building algorithms, my enthusiasm would drop. I realized this was a fundamental part of most econometrics jobs after graduation. It felt like a turning point. I decided to explore other options and came across the Master's program in Accountancy and Control. It caught my attention because it still allowed me to use my analytical skills but without the heavy focus on algorithms and programming. Instead, it leaned more toward strategic thinking and practical applications—something I found exciting.

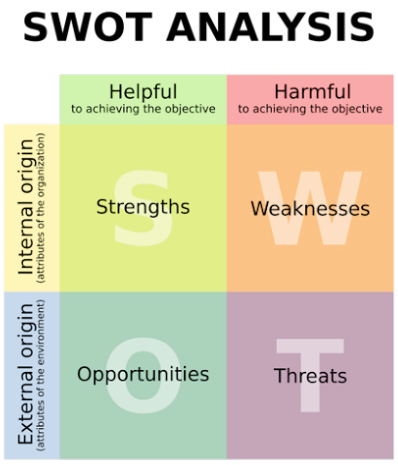
The transition to this Master's program felt like a leap of faith. Accountancy and Control is completely different from econometrics in both content and approach. Econometrics is deeply rooted in mathematical theory, statistical modeling, and programming. As you progress, the work focuses more on proving mathematical concepts and coding complex models. In contrast, the Accountancy and Control Master's program is much more practical. It is not just about crunching numbers but also about applying theories to real-world situations. We spend a lot of time analyzing actual business cases, discussing what worked or did not work for companies, and exploring strategies from a managerial perspective.

The program is divided into two tracks: Auditing and Business Analysis & Control. Auditing is the traditional path, where students are prepared to become accountants and pursue the post-master to become a Register Accountant. The Business Analysis & Control track, which I chose, focuses on using data and insights to help organizations achieve their strategic goals. This track felt more aligned with my interests and aspirations. It allows me to apply analytical thinking in a way that is directly impactful for businesses.

Meike Goedschalk

One of the standout features of this Master's program is its focus on real-life applications. For example, in the Budgeting and Forecasting course (part of the control-track), we do not just study theories; we analyze complex business scenarios and propose strategic solutions. A highlight for me was working on a case study where we had to assess a company's financial performance and recommend strategies for improvement. My team and I used tools such as variance analysis, risk assessments, and SWOT analyses to evaluate the company's strengths and weaknesses and develop actionable strategies to optimize its budgeting process.

A SWOT analysis, a strategic planning tool, is central to these cases. It helps businesses evaluate both internal factors—like strengths and weaknesses—and external factors, such as opportunities and threats. Strengths and weaknesses are resources, capabilities, and experiences readily available to the company. Opportunities and threats, on the other hand, involve factors beyond the company's control, including market trends, technological advancements, and political or economic regulations. Conducting a SWOT analysis before making significant business decisions ensures that strategies are well-informed and aligned with the organization's goals. [1] Below, the four components of the SWOT analysis are represented in matrix form.



For this particular case, we had to persuade our classmates that an automobile parts manufacturers should only invest in one specific type of face mask during the COVID-19 pandemic. Meanwhile, another group had to convince the class that the company should invest in both the face mask and face shields. Since both groups were working with the same financial data and case context, it was fascinating to see how different perspectives could lead to unique conclusions. Preparing for these presentations required collaboration, analytical thinking, and clear communication. It was especially rewarding to see how our work mirrored the challenges businesses face in reality, giving me a glimpse of how impactful the role of a business controller can be.

What makes this course particularly unique is its examination structure. Before the exam, we receive a case study 48 hours in advance, giving us time to strategically prepare by analyzing the situation and brainstorming potential solutions. However, the actual calculations and deeper financial analyses are only revealed during the exam itself. This setup creates a dynamic blend of preparation and in-the-moment problem-solving, mirroring real-world scenarios where foresight and adaptability are essential. This experience has been a great example of how this Master's program bridges theory and practice, helping me develop both technical and strategic skills essential for driving business success.

Another aspect I appreciate about this program is its approach to the final project. Instead of a single, overwhelming Master's thesis, the program breaks it into four smaller assignments that together form a Master File. This structure makes the workload more manageable and provides a well-rounded experience. For instance, in the Business Application project, I identified an accountancy-related problem within a company and solved it using academic literature. Currently, I am working on a replication study, where I replicate the empirical section of a published academic paper. This involves collecting and analyzing data while making critical assumptions. Later, I will move on to the Research Note project, where I will design a research study, develop hypotheses, and outline methodologies—essentially creating a master's thesis, but without the stress of data analysis. The final assignment is a reflection report on the entire process, tying everything together.

The program is also helping me develop skills I had not expected to focus on. For example, there is a significant emphasis on soft skills like presenting and collaborating—things I did not do as much during my Bachelor's. While I do not naturally enjoy presenting, I recognize how valuable these skills will be in my career. It is a practical, forward-looking approach to education that is preparing me not just for my first job but for long-term success in the field.

In terms of difficulty, I find this Master's program easier to manage than my econometrics Bachelor's. That might be partly because I am more interested in the material, which keeps me motivated. The work feels more relevant to real-world challenges, and I enjoy the balance between theory and practice. I also like that we are encouraged to think from a managerial perspective, which aligns with my aspiration to work in strategic roles.

Looking ahead, I hope to pursue a finance traineeship after graduation. This will give me the chance to explore different financial departments within a company and gain a broad understanding of the field. I feel confident that this program has set me on a path that aligns with my skills and interests. The clarity I have gained about my career aspirations is something I did not have during my Bachelor's. Back then, I often struggled to see how my studies would translate into a fulfilling career. Now, I get genuinely excited about the job opportunities I come across. I am eager to apply the skills I have learned and make a real impact in the workplace.

For anyone considering a Master's program outside the typical econometrics track, my advice is simple: take the time to explore your options. Talk to people who are already in the program or working in the field. I had conversations with alumni and even reviewed slides from the courses to get a sense of what to expect. Academic directors are often happy to connect you with the right people or answer your questions. Do not let fear of the unknown hold you back. The worst-case scenario is that you realize it is not the right fit and switch back, but at least you will have no regrets about trying something new. And remember, your analytical skills from econometrics will always be valuable. They are a foundation you can build on, no matter which path you choose ;) ●

[1] https://www.businessnewsdaily.com/4245-swot-analysis.html

Stickers to Statistics

written by **Timo van Oorschot**

Henk Keffert

If you have been an econometrics student in Tilburg over the years, chances are you have seen Henk Keffert in either the K-building on campus or as a teacher, teaching tutorials of several courses of the program (or even as a student). For this edition of the Nekst, we had the pleasure to meet the current teacher of the tutorials for the Quantitative Finance and Introduction to Finance and Actuarial Science courses. We asked him several questions about his career path so far, his hobbies and the PhD-program in which he participates.

Road to Tilburg

Henk grew up in England and lived there for thirteen years before moving to the Netherlands, where he followed Dutch international school for two years, before he could join the Dutch education system in a VWO-class. The fact that eventually, Henk would graduate from the Master's program Quantitative Finance and Actuarial Science (QFAS), he knew from an early age. He quickly developed a great interest in finance, which could have been influenced by the fact that finance runs in his family. His father owned a printing shop where Henk, at a young age, used to count the amounts of money in the cash drawer at the end of the day. Moreover, his grandfather was an avid investor, encouraging Henk to keep on studying such topics. He attempted building interest in the medical sector at first, but quickly realized that his preference always was to study QFAS. He actually knew he wanted to graduate from the QFAS Master's program before studying econometrics, which is the reason he chose the Bachelor's (and Master's) program at Tilburg University.

Extracurriculars and Hobbies

During Henk's years as a student in Tilburg, he has been quite active concerning extracurricular activities. At Asset | Econometrics, he participated in the Quantitative Investment Group (QIG), which he was very enthusiastic about because he could work on several problems that had to do with QFAS-related topics. As a third-year Bachelor's student, he also began teaching as a student assistant, teaching several mathematical and economics courses, besides working on his thesis. Therefore, teaching as a part of the PhD-program was nothing new for him. Besides these on-campus occupations, he liked, and still likes, to help his family's company that produces stickers in Venlo, working on software and applying his programming skills. He even already achieved some successes there, involving building a software prototype for the production process that really fit the company. Additionally, he achieved the ability to outline stickers in computer language, which is very useful for cutting backgrounds from images used as a sticker. What he likes the most about this are the results he can bring about in terms of added value, using the mathematical material learned by studying econometrics. Henk likes to spend his spare time upgrading his programming skills and cycling, as he finds this a great escape from the mental load that doing research and teaching can cause.

The Life of a PhD-Student

Next, we were curious about Henk's PhD-trajectory as you cannot suddenly become one of them. He was part of the last group of students that participated in a research Master's in Business, prior to the PhD-program, following the Operations Research track. This research Master's program solely consisted of taking courses and writing a thesis. These courses were offered to students via the LNMB-network, offering very specialist, complex subjects at only one specific location in the Netherlands. Henk eventually became a PhD-student at Tilburg University after passing these courses and his thesis during the research Master's program.

After asking what a PhD-program looks like, Henk explains that it mainly consists of two different tasks: a teaching task, which covers about 25% of the full program, and a research task, where he works on several research projects together with supervisors. These research topics entail very specific topics within the field of QFAS. Brainstorming research ideas is a collaborative process with supervisors, whereafter Henk, together with the supervisors, spends a lot of time going through literature in order to gain new insights or so-called 'research gaps'. However, he also likes to visit conferences, to read and to talk with

a lot of people as a source of new ideas. A big plus of this research task is that you have lots of freedom considering topics to conduct research on, as well as the time you spend on it, as a PhD-program does not work with many strict deadlines, he explains. Only at the end of the 4-year program, several projects need to be finished, and sometimes the progress of a research needs to be presented at, for example, a conference. What he likes the most about the research part of the program is the collaboration with his supervisors, as brainstorming together about ideas gives him lots of energy to work on these projects, and it ensures that he keeps learning new things.

Henk currently fulfills his teaching task by teaching the tutorials of the courses Quantitative Finance and Introduction to Finance and Actuarial Science, combined with being one of the supervisors for Master's students writing their thesis. Noticing that the penny drops for students studying tough topics, is what he likes the most about teaching. He likes to interact with his students and gets energy from his ability to explain difficult topics in such a way that students can still understand them. Interaction is one of the most important things during lectures and tutorials, he thinks, especially because the covered material in econometrics courses can be very technical and detailed. What he mainly tries to do is to dwell a lot on the intuition and applications behind the covered material, because students sometimes struggle with visualizing what they are studying a certain topic for. In this way, he not only trains the students' way of thinking, but also encourages students to think creatively about certain applications.

Bert & Ernie Questions

Coffee or Tea	**Coffee**
Summer or Winter Forever	**Summer Forever**
Research or Teaching	**Research**
Ten Small or One Big Research Topic	**Ten Small Topics**
Never Liking or Never Posting Something Again	**Never Posting Again**

Current and Future Research

After reading what Henk's PhD-trajectory looks like, you might ask yourself what topics Henk conducts research on. He explained two of them to us. The first topic considers partner pensions, where he tries to investigate the effects of changing the pension system for couples. This might give relevant insights into tackling the system's problems, especially for couples where a large drop in income can occur after death of the high earner within the couple. Secondly, he conducts research on robo-advising, entailing automated financial advice adjusted to the investor's amount of money that he wants to invest. The advantage of such robo-advisors is that personalized advice can be provided easily for every invested amount, combined with the investor's risk preferences. The research is mainly about how a robo-advisor can deal with such different risk preferences. These risk preferences form an interesting topic that Henk would like to perform some more research on in the future. Nowadays, these are mostly estimated through the answers of surveys, without taking into account several factors that might influence the answers in a survey response, such as the length of such a survey. Therefore, perhaps, Henk will conduct groundbreaking research in the future that tackles these issues, measuring risk preferences as fast and as accurately as possible!

Hidden Features

written by **Timo van Oorschot**

Social media platforms like Facebook, Instagram, TikTok, and Twitter use algorithms to decide what content each user sees. These algorithms analyze your behavior and preferences to show you posts, videos, and ads that you are most likely to engage with. Understanding the math behind these algorithms helps us see how they work and affect our online experiences.

Introduction

Algorithms are sets of rules or instructions that computers follow to solve problems or make decisions. In social media, algorithms determine the order of posts in your feed, suggest new friends or followers, and recommend content you might like. They aim to keep you engaged by showing content tailored to your interests, which is crucial for platforms that rely on user interaction.

Core Algorithms

Every time you open Facebook, its algorithm follows a four-step process to determine which content is most relevant to you. First, it identifies all available content from your friends and the pages you follow, including posts, photos, and videos. Then, the algorithm analyzes various signals to assess the content's relevance, such as who posted it, when it was shared, and contextual factors like the time of day and your internet connection speed. Next, the algorithm predicts how likely you are to engage with each post, considering actions like liking, commenting, sharing, or how long you will spend viewing it. Finally, it assigns a relevance score to each piece of content based on these predictions, helping determine which posts are shown to you. This process is repeated each time you access Facebook, ensuring that the content displayed in your feed is tailored to your interests and engagement patterns.

Instagram's ranking system is designed to personalize your experience and show you the content that matters most to you. Rather than using a single algorithm, Instagram employs a combination of algorithms, classifiers, and processes to rank posts in different sections of the app, including Feed, Stories, Explore, Reels, and Search. Each part of the app has its own algorithm tailored to how people use it, taking into account signals such as past interactions, content popularity, and even how you engage with posts. For example, in the Feed, Instagram ranks posts based on your activity, information about the post, and the person who posted. It predicts how likely you are to interact with a post and adjusts accordingly, considering factors like whether you will comment, like, or share it. Similarly, Stories are ranked based on viewing and engagement history, while Explore prioritizes content from accounts you do not follow, relying on activity signals and post popularity. Reels, which are focused on entertainment, use a similar approach, emphasizing how likely you are to engage with or reshare a reel.

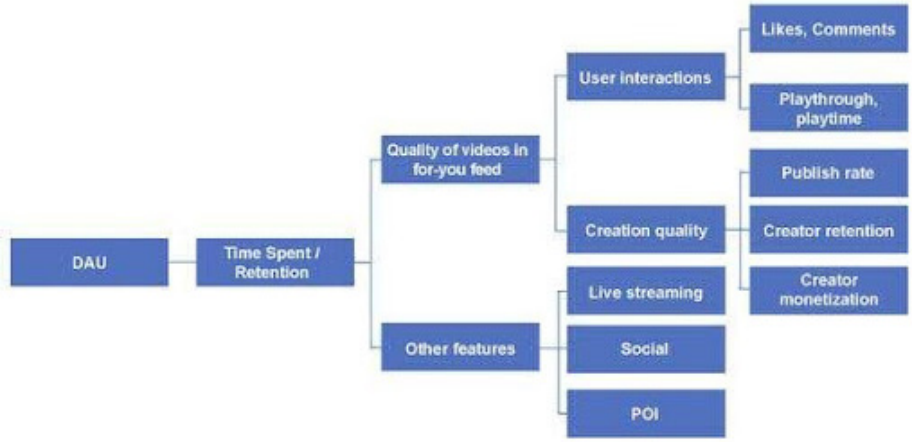


Figure 1: Leaked features in TikTok algorithms (The New York Times, 2021)

TikTok's algorithm is designed to optimize for user retention and time spent on the app, with the goal of increasing daily active users. It uses machine learning to predict and recommend videos based on user behavior such as likes, comments, and watch time. The system scores videos through a formula that weighs these factors and suppresses content designed to manipulate the algorithm. TikTok also takes into account video elements like captions, sounds, and hashtags. While the app aims to keep users engaged, it also seeks to avoid repetitiveness, boredom, and video over-saturation. Additionally, TikTok's algorithm includes a focus on creator monetization and personalized recommendations to enhance both user and creator value.

Mathematical Foundations

Graph theory provides a mathematical framework for analyzing social networks by representing users as nodes and their relationships—such as friendships or follows—as edges connecting these nodes. This representation allows for the application of various graph-theoretic concepts to understand the structure and dynamics of social networks. For instance, centrality measures help identify influen-

tial users within the network, while community detection algorithms uncover clusters of users with dense interconnections, shedding light on how information or trends propagate through these communities.

Machine learning algorithms are integral to personalizing user experiences on social media platforms. By analyzing vast amounts of data, these algorithms can predict user preferences and behaviors. A prominent example is collaborative filtering, which operates on the principle that users who have agreed in the past are likely to agree in the future. This method involves analyzing the preferences of multiple users to recommend items based on their similarities. For instance, if two users have historically liked similar posts, collaborative filtering can predict that one user may like a new post that the other user has liked.

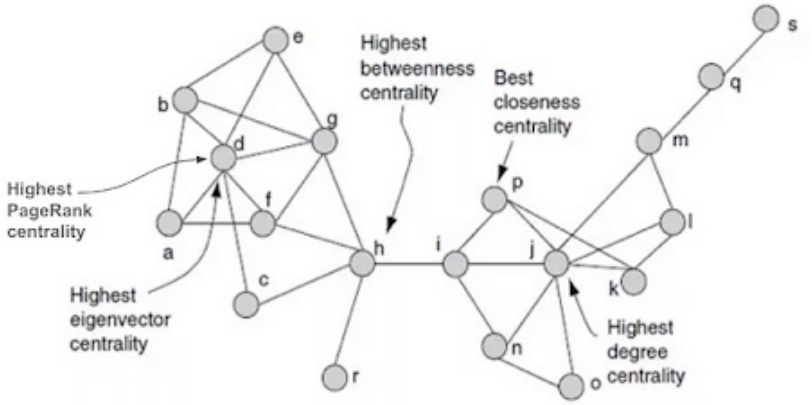
Deep learning, a subset of machine learning, employs neural networks to recognize complex patterns within data. In the context of social media, deep learning models can analyze various features of content—such as text, images, and user interactions—to improve content recommendations. By learning intricate representations of user preferences and content characteristics, these models can deliver more accurate and personalized recommendations, thereby enhancing user engagement and satisfaction.

Biases and Ethical Concerns

Social media platforms use algorithms to show you content that matches your interests, but this can lead to echo chambers. This means you keep seeing similar information, which strengthens your current beliefs and limits your exposure to different viewpoints. As a result, you might become more isolated in your thinking and miss out on understanding other perspectives.

Another issue is algorithmic bias. If the data used to train these algorithms has biases, the algorithms can continue or even worsen these unfair patterns. For example, if certain groups are underrepresented in the data, the algorithm might unfairly disadvantage them in its recommendations or content display, contributing to broader social inequalities. Algorithms also tend to promote engaging content, which can lead to the rapid spread of sensational or false information. Content that triggers strong emotions often gets more attention, causing algorithms to highlight it more. This can result in misinformation spreading quickly, misleading users, and distorting public discussions.

Figure 2: Diverse centrality measures (Ortiz-Arroyo, D. 2010.)



Privacy is another major concern. To personalize your experience, these algorithms collect and analyze a lot of your personal data, like your preferences, behaviors, and interactions. While this helps tailor content to you, it also raises questions about your consent, data security, and how your information might be misused. You might not be fully aware of how much data is collected or how it's used, leading to worries about surveillance and loss of personal privacy.

Future of Social Media Algorithms

Looking ahead, social media algorithms are poised to become more advanced, with significant developments in several key areas. Advancements in artificial intelligence (AI) have led to better recommendation systems capable of understanding nuanced user preferences. These AI-driven systems analyze vast amounts of data to deliver content that aligns closely with individual interests, thereby enhancing user engagement and satisfaction.

In response to growing concerns about the influence of algorithms on user experience, there is an increasing demand for platforms to be more transparent about how their algorithms work and to give users more control over their content feeds. This push for transparency aims to empower users to understand and manage the content they see, with a more informed and autonomous interaction with social media.

Recognizing the impact of algorithms, the European Union has taken steps to regulate social media platforms and their AI applications. The EU's Artificial Intelligence Act, which entered into force in August 2024, establishes rules for the development and use of AI within the EU, aiming to promote trustworthy AI while ensuring fundamental rights.

Conclusion

In summary, social media algorithms use mathematical principles to personalize your online experience, showing you content that aligns with your interests. While this personalization enhances engagement, it is important to be aware of the potential ethical issues, such as echo chambers and algorithmic bias. As these algorithms continue to evolve, balancing technological innovation with responsible design will be crucial for the benefit of users and society ●

Predicting Three-Dimensional Shape Transformations

Three-dimensional scanning has become increasingly relevant across various sectors, including healthcare. These scans are widely used for visualization and communication with patients, and there even are advancements in printing silicone hearts to assist in preparing for heart surgeries [1]. Beyond healthcare, three-dimensional scanning has numerous other applications, showcasing its versatility and potential. Despite its widespread use, a notable gap exists in the literature regarding the prediction of shape transformations. Current research involving three-dimensional scans often focuses on approximating specific measurements rather than predicting the complete shape. Alternatively, some studies incorporate additional information into their models rather than relying solely on shape data. For example, the intriguing research behind 3DFaceGAN [2] predicts alternate facial expressions from a single facial scan including labels of the facial expression alongside the scan data.

Can we bridge this gap by developing methods to predict entire three-dimensional shapes based solely on the shapes? Moreover, is it possible to predict transformations in datasets that include diverse types of transformations?

Internship

My thesis was written on behalf of a client of Pipple, an A.I. and consultancy company based in Eindhoven. The problem addressed in my thesis aligned closely with a challenge faced by Pipple's client. During my time at Pipple, I experienced a welcoming and inclusive company culture. I had the opportunity to participate in various fun activities with my colleagues such as winter sports, carnival celebrations, padel and more.

In addition to my thesis internship, I also worked as an intern. This dual internship allowed me to contribute to various projects of Pipple while developing both my technical and professional skills. It provided me with valuable experience in shifting from purely academic solutions to practical, real-world applications. Furthermore, I gained insights into the diverse range of projects within the company.

Problem Introduction

Whenever a person gets personalized shoe soles, a measurement is performed. You make a print in a foam box with your feet. It would be efficient if next time you need new personalized shoe soles, this measurement does not have to be done again. In *Figure 1* the shoe sole transformation is visualized, where one can observe characteristic bumps on the shoe sole before the transformation. Then after the transformation, these bumps have grown. How they grow depends on their location. For example, the right one increases in radius while the left and middle bump do not have a radius increase. Is it possible to predict the new three-dimensional print, based on the previous print? And how would this prediction be made?

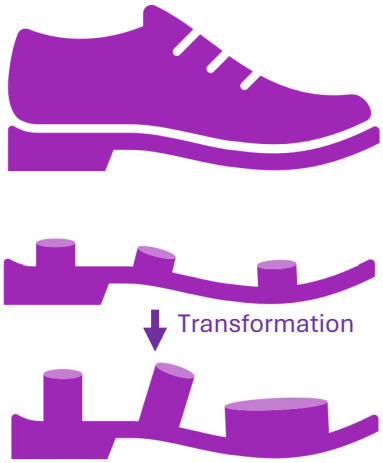


Figure 1 Shoe sole transformation

The transformation we aim to predict is a single-period prediction within three-dimensional shapes, specifically for non-isometric transformations.

Non-isometric transformations involve changes in distance within the shape. For instance, this excludes transformations such as rotation, where distances within the shape are preserved, and instead focuses on phenomena like growth.

Several limitations were considered in this research. The first limitation is the presence of significant uncertainties in the data. To address this, we constructed an abstract dataset ourselves. This dataset does not encompass all possible types of transformations, so we limited the scope of our study to four specific types.

Another important limitation is the group alignment constraint, which pertains to aligning three-dimensional shapes between different individuals. The alignment performed is restricted to a single period, meaning we can compare measurements for one person across different transformations, but not between individuals. This constraint influenced the selection of models.

A further limitation lies in the choice of data representation. There are several ways to represent three-dimensional data, and for this research, we used a point cloud. A point cloud consists of points distributed over the surface of the object. An example is shown in *Figure 2*, where the blue point cloud represents a cylindrical shape with a bulb, while the green point cloud represents the same cylinder after growth in the bulb region.

The point cloud representation was selected for its ability to support end-to-end networks and its capacity to capture fine details. However, it comes with the limitation that the points are randomly distributed over the surface. As a result, corresponding points on the two shapes (e.g., the blue and green cylinders) may not overlap, even when there is no actual deviation in shape. This can affect the error calculation.

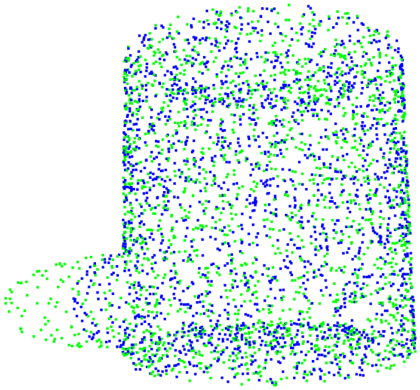


Figure 2 Point Clouds, before the transformation (blue) and after the transformation (green)

Loss function

In *Figure 2*, we determine combinations between the blue and green points, allowing us to describe the transformation for each blue point to its corresponding green point. This transformation is represented in *Figure 3* as the offset vector. If we can predict this offset vector for each point, we can also calculate the loss for each point.

The point loss represents the error we aim to minimize. As illustrated in *Figure 3*, this loss is calculated as the squared difference between the predicted and actual point. The point loss is then obtained by summing the losses across all points in the point cloud.

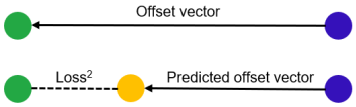


Figure 3 Minimizing Loss

Model

The prediction of the offset vector is achieved through a specific framework, which will be described here.

The framework used in the thesis leverages neural networks. Neural networks operate by minimizing a loss function that quantifies the difference between predicted and actual results. However, applying a neural network directly to a point cloud presents challenges. Neural networks typically require ordered input and output data, but a point cloud is unordered. One approach could involve training a model to make per-point predictions. However, this method lacks context about the overall shape and the relative location of each point within it. Alternatively, features could be extracted based on the entire shape, capturing its global structure. The prediction framework used in the thesis combines both approaches to leverage the strengths of each.

The prediction framework [3] consists of three components: a feature extractor, a forecaster, and a decoder.

Feature Extractor: This component extracts features independently of the order of points. It first calculates features for each point and then makes the representation order-independent by applying a maximum operation across all points for each feature.
Forecaster: This module combines the extracted features and models higher-order interactions to capture relationships across the shape.

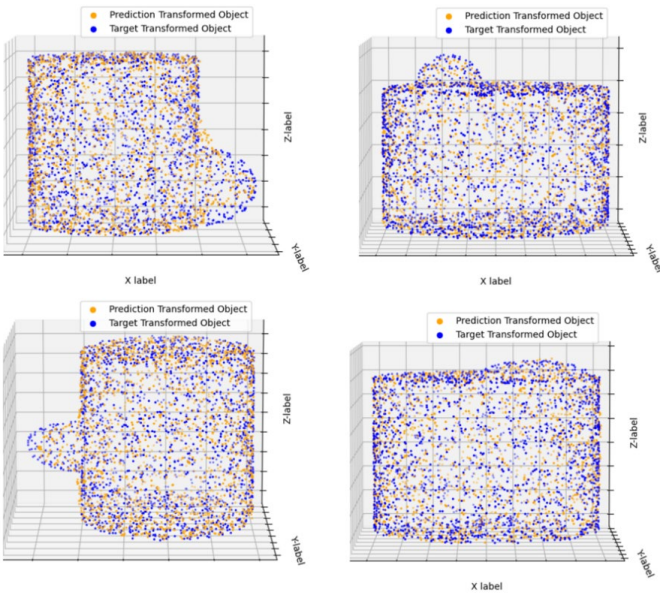
Decoder: Finally, the decoder makes per-point predictions by combining information about individual points in the point cloud with the global features generated by the forecaster.
This structure allows the model to effectively process the unordered point cloud while retaining both local and global context about the shape.

Results

The research evaluates the results using the point loss and an additional loss function described in the thesis. Three types of feature extractors were evaluated, with the model with a PointNet-based feature extractor outperforming the others. The other two other feature extractors were based on PointNet++. The PointNet++ incorporates more local information than PointNet, by applying PointNet locally [4].

The models were trained on datasets containing a single type of transformation as well as on a dataset combining with combined transformation types. These approaches are referred to as independent transformation training and combined transformation training, respectively. The results suggest that combined transformation predictions are feasible, meaning the model can be trained on a dataset with various transformation types and accurately predict the corresponding transformation type.

For instance, in our dataset, four types of transformations were included. *Figure 4* illustrates a visualization of a prediction made by the PointNet-based model after combined transformation training.



Conclusion

The PointNet-based model outperformed the other models, and results suggest that combined transformation training is possible. However, to fully explore the potential of all models, further research should focus on parameter tuning to optimize their performance.

Additionally, future research could explore scenarios with multiple simultaneous transformations, like the shoe sole example. Evaluating a model trained to predict a single transformation on a dataset where individuals experience multiple transformations could yield valuable insights. Understanding whether such a model can handle varying numbers of transformations in the same dataset is important for future applications.

During my internship at Pipple, I prioritized not only the technical aspects of my thesis but also building connections and exploring the company culture. My advice to future interns is to engage in activities beyond work, such as team events or getting to know colleagues. These experiences not only make your internship more enjoyable but also turn it into a memorable learning experience.

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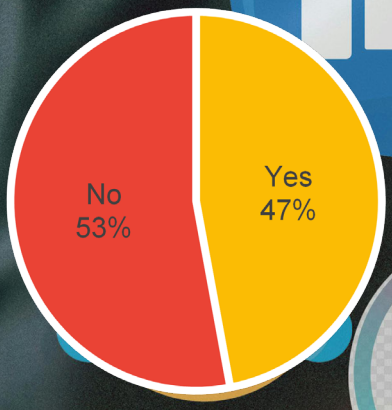
Kiki Hengst
Master BAOR Graduate

Let's Talk!

... About social media. It plays a significant role in our daily lives, influencing how we connect, share, and unwind. But how does it affect our quality of life, or does it distract us from studying? To explore this, we asked active members of Asset | Econometrics about their social media habits—how much time they spend online and what platforms they enjoy the most. The results provide an insight into the use of social media amongst our active members. We also added a couple of social media accounts that could help with studying or student related activities.

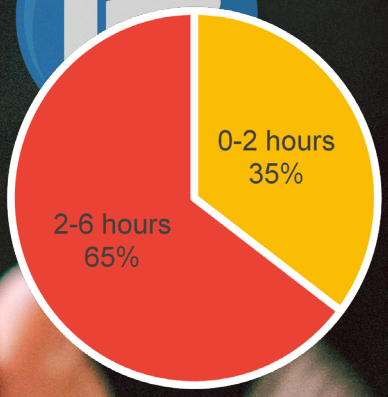
We also wanted to share some helpful social media accounts and websites that could help you in your studies. For more explanations of the concepts of Econometrics, you could search for Econometrics Academy on YouTube, they have a free site as well. 3Blue1Brown has several videos on Linear Algebra, as well as a website with visual explanations of the topics. For more help with Statistics you could visit the Stat Trek website, or the website of Khan Academy.

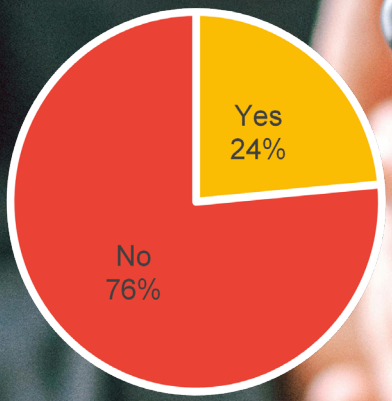
written by **Marvin Priem**



Do you feel social media improves your quality of life?

How much time do you spend on social media per day?





Have you ever taken a break from social media?

Do you think social media distracts you from studying?

Quatsch!

¯_(ツ)_/¯

Quatsch?

Over the past few months, the editorial staff of Nekst received many quotes that relate to the study of Econometrics and to the activities organized by Asset | Econometrics.
Hereby, we present to you a selection of some striking and funny quotes!
Please send in your quotes at:
www.Asset-Econometrics.nl/more/nekst/Quatsch

Prof. Dr. Bertrand Melenberg
"Het opvallende was dat de mensen die vaak bij de mensa aten niet ziek werden van het eten in Istanbul maar de mensen die er niet zo vaak waren wel."

Jeroen
"Was dat in Tsjchië?"

Mylène
"Nee dat was in Praag."

Anoniem
"Wat is de achternaam van Dobre?"

Marvin
"Snellende renners zijn doodlopers."

Peter
"Ik wil ook wel naar Zeeland, kan ik de Afsluitdijk een keer zien."

Niels
"Ik lig daarvan wakker in mijn slaap."

Mylene die vertelt over waarom Robin van Persie de bijnaam "the flying Dutchman" heeft.

Tillie
"En dat was Ronald van Persie?"

Puzzle Time

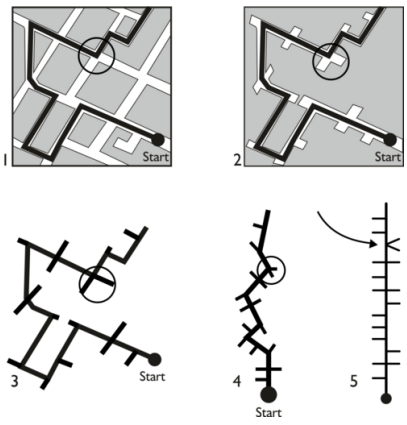
written by Timo Klabbers

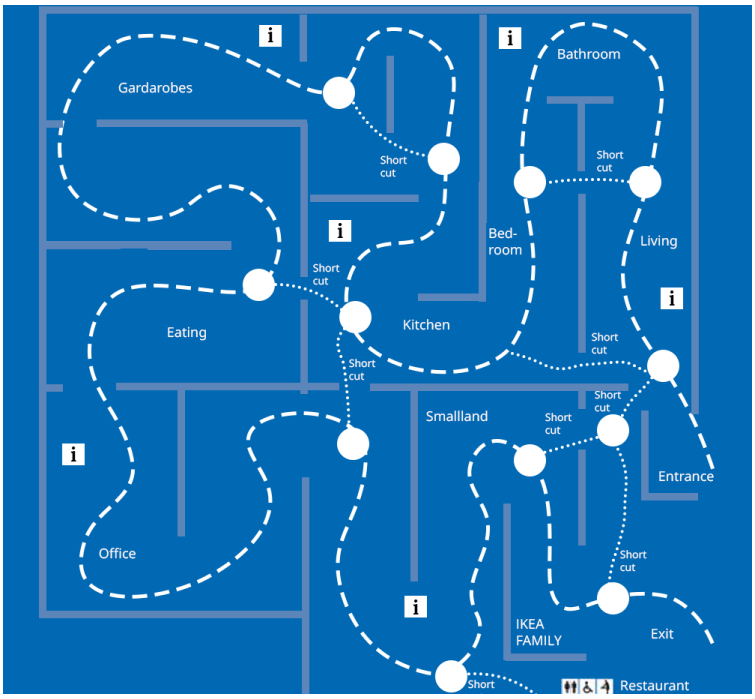
Encoded Route

A "strippenkaart" is a routing technique where we encode the route by drawing the lines we do not want to take. Using this route is sometimes a puzzle. But in this puzzle we take it a step futher.

On this page there is a map drawn from a big blue home furnishing store with yellow letters. There is also a receipt drawn. With the receipt and the map it is possible to make your own "strippenkaart". Then you can use this strippenkaart on the map on the right page to decide the route in the real world.

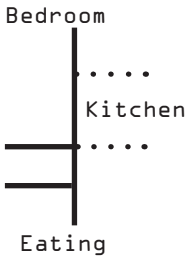
Start at the entrance of the store. At every big dot, make a decicion so you take the shortest route, but you visit all the categories on the receipt. Draw down the "strippenkaart". The route is finished when you are at the exit.





Example:
Below a receipt with the resulting "strippenkaart"

Item	Category	Price
Table	Eating	399,00
Oven	Kitchen	139,00
Pillow	Bedroom	49,00



On the left side, the evolution of the "strippenkaart" is shown. You can also use this to understand how to choose your route in the real world, or on a map.

Use the "strippenkaart" you have drawn on from the part above to decide where you have to go on the map of the campus on the right side.

Start at the arrow and find the finish!

STORE DELFT
Olof Palmestraat 1
2616 LN Delft

Mo...Sa 10.00 21.00
Su 10.00 18.00

Item	Category	Price
Bank	Living	399,00
Bed	Bedroom	139,00
Tap	Kitchen	49,00
Chair	Eating	129,00
Desk	Office	79,00
Teddy	Small land	9,00
PASS	FAMILY CARD	0,00
Total		804,00

Exit 19.56 hours

Cashier 6
St.28.12.332.345.321.CH2024

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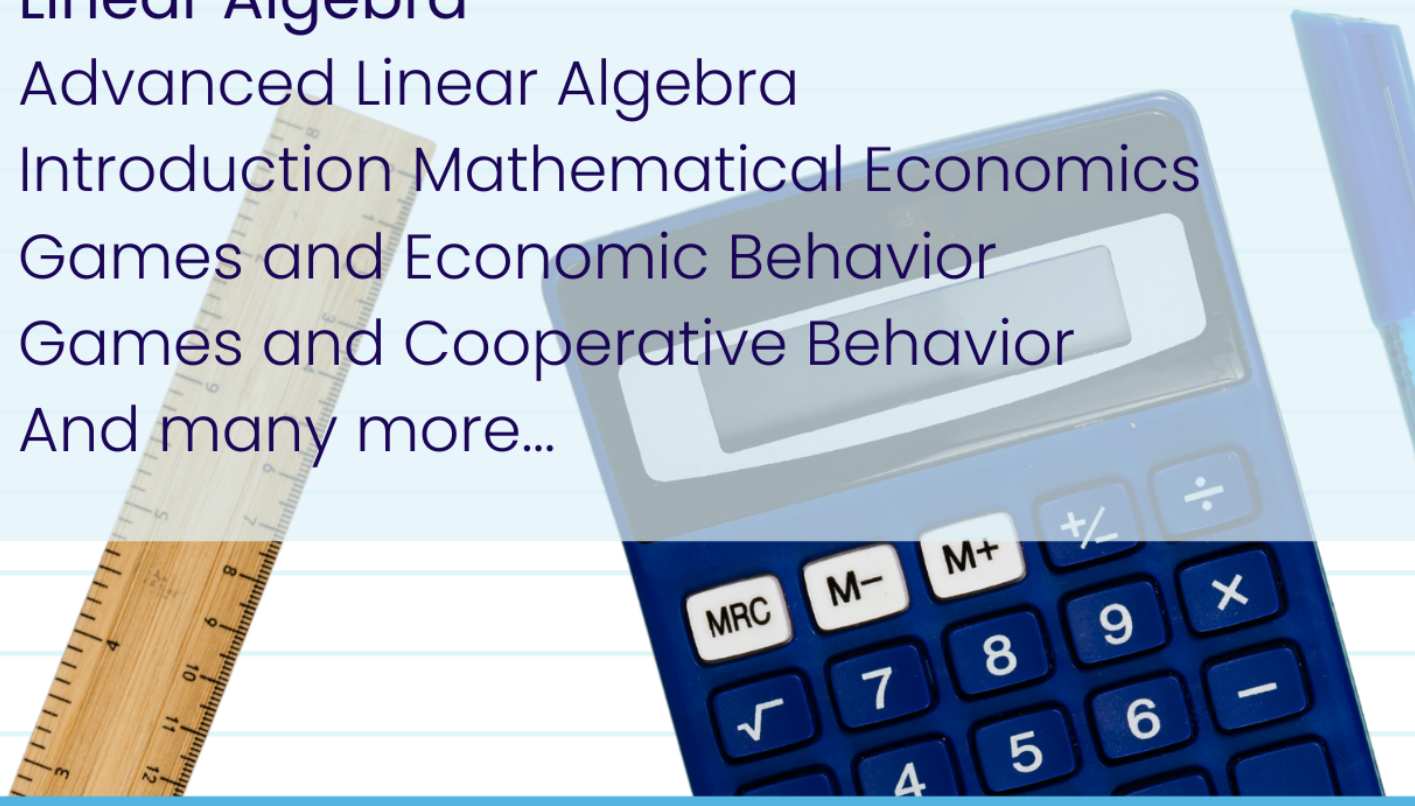
Buy a guideline!

ASSET Econometrics

- Introduction Analysis and Probability Theory
- Linear Algebra
- Advanced Linear Algebra
- Introduction Mathematical Economics
- Games and Economic Behavior
- Games and Cooperative Behavior
- And many more...



www.Asset-Econometrics.nl/Students/Study/Guidelines

Agenda

TUE **15** APR
Freshmen Activity
Experience a fun night out with your fellow freshmen! We will start out with a good portion of fries to fill your stomach, after which we will have a unique drink on a covered wagon, driving through Tilburg and surroundings!

WED **16** APR
Master Experience Day
Are you not sure yet what econometrics master you want to do? Join the Master Experience Day! The academic directors of the three different masters and the research master coordinator will provide all the practical information of the masters, after which alumni will talk about their jobs and how they got there.

TUE **22** APR
SAP Workshop
SAP (Systems, Applications, and Products) is a leading enterprise resource planning (ERP) software used by companies to manage business operations and customer relations. During this training, you will get hands-on experience on how to work with this software! All you need to bring is a laptop!

THU **24** APR
Beer Games Drink
At the Beer Games Drink, we will have lots of free beer and different beer games to play, but most importantly: the beer relay tournament, where you can compete for the title of Adtleet again. Register on your own or in a duo, and you might become the winning team…

WED **07** MAY
Connection Day
Get to know your future employer at Connection Day! In the morning, you can follow one of the three different cases, each focused on a different master. In the afternoon, we will move to the Harmonie to follow a cooking workshop with 3 different companies.

THU **15** MAY
Econometricians for the Elder
Do you want to help out the community in Tilburg? Join us at De Wever to walk with their elderly inhabitants and converse with the earlier generations! Note: By joining this activity, you get priority for the Tilburg University Cantus tickets.

Register and find more information about our events at
www.Asset-Econometrics.nl/events

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