

nekst>>

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Event
IBT by ING

>>
**Parents of
the Board**
Sanne & Anouk

>>
Triangle
Henk Keffert

Nekst Arrival:
Eventually

After some enormous setbacks, I am proud to finally present this edition of the Nekst. It would not have been possible without the hard work and dedication of the entire committee, and I would especially like to thank our designers for helping us overcome every obstacle without giving up (which would have been more than fair).

This was originally intended to be our Carnival Edition. However, as you may have noticed when this magazine landed on your doorstep, it is now the middle of summer. You can therefore either see this edition as a nostalgic recap of last Carnival or as an opportunity to get excited for the next one.

In this edition, we are delighted to bring you an interview with Jan from Schrob-
belèr, who talks about the family busi-
ness, his band (Veul Gère), and what
it was like to be Prins Carnaval for two
consecutive years. In addition, you will
find several fun articles exploring the
economics and finance behind Carnival,
because even the biggest party of the
year has a business side.

Please take some time to read the special,
do the puzzle, or at the very least open
the page of the Quatsch section.
Happy reading!

Kind regards,

Hedser van der Wel
Editor-in-Chief

Hm

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COLOPHON

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Dear Members,

We are halfway through the academic year and I hope that you all are still going strong. There have been some changes since the start of this academic year. Wouter and Job have left the board, I wish them all the best with their further career. They are replaced by Hedser and Maik. I want to wish them all the best in their functions as vice-chairman and external affairs.

It is maybe a while ago now, but carnival, the theme of this edition of the Nekst, is one of my favorite parties of the year. This obsession with carnival started already before I was born, my mom signed me up for the carnival association in which she was registered. I was more than 20 years a member of this carnival association and enjoyed every party they organised throughout the years. Nowadays with carnival, I go to the city center without a plan and let me lead to the music and family and friends I meet there. And on top of this obsession, I was born the day after 11-11, so two reasons to party.

During my studies, I found out that an academic year feels the same as a week of carnival. Everyone starts with a lot of energy and motivation to successfully pass their courses, create the best events with their committees and enjoy every moment at the best association of the world. This is the same way that everyone starts carnival, with a lot of energy at the pre-carnaval, a hangover on the friday, but still a lot of energy to party all day.

After this quick start there is a realiza-

tion moment, what did I do last days, weeks, months? At this moment I was thinking of all the wonderful moments I had with you; bouncing at bounce valley, bowling with the sports committee, inhouse-days, road to Yup with all the OG's, the EOR in Practice Day, the drinks of the D&A committee, and all the fun stories that have been told at the weekly lunches.

This moment of looking back to the past is also a moment to look forward to the future, which courses do I want to pass next semester, what do I have to do to achieve this, and when does the summer vacation start? But also to the parade of events that are coming and what unforgettable stories will be created. Some of these events feel like carnival such as dressing up on the Friday of Active Members Weekend, visiting the city of the first pilsener with Europe Trip and doing a lot of drinking games during the Beer Games Drink and Astrics Beer Cantus.

Lastly, I am proud of every member, who organises events, participates at these events and the other boardies. Without you all, we would not have a great start as we had this year. As mentioned, we organised the best events and created unforgettable moments and I am looking forward to make many more in the last part of this academic year.

On behalf of the board,

Luke de Laat

Chairman Asset | Econometrics 2025 - 2026



IBT by ING

For our IBT 2025 trip we went to the US to visit San Francisco, Los Angeles and Las Vegas. Together with my committee I think we organized a beautiful trip!

The first city we visited was San Francisco! We had to use our Tetris skills to travel by bus to our hotel, but we managed to fit all of us in the same bus. Once we arrived at the hotel, we had some free time to freshen up for our dinner together at Kingbob. After a really nice meal, we all returned for an early night after the long travels.

Today we already had our first formal day planned. We started with a visit to the Dutch consulate (with an amazing view). After this, we tried the local cuisine: a quick stop at McDonald's. In the afternoon we had our first company visit, which was located in Silicon Valley. The company we visited was called Marvell (not to be confused with Marvel) and is specialized in data infrastructure technology. The company had a huge campus with different buildings and room for outside activities. After the presentation we sat outside with our Dutch contact person and were served with a lot of tasty food and drinks.

On this day, we had another busy day planned. We as a committee decided we really wanted to visit the Muir Woods, but it was quite difficult to travel there from the city center. That is why we decided to rent bikes. Sadly, the bike ride was still going to take up to two hours, so we decided to split up the group: one group would bike all the way and the other group would take a bus for part of the route. Looking back, I am really glad I chose to take the bus, because it saved us some time to take a walk with an amazing view. Once we arrived at the Muir Woods, we reunited with the other group and explored it together. It was impressive, but most of our group agreed that the walk towards the Muir Woods was more impressive than the Muir Woods itself.

It is time for our second formal day! We started off at the office of Lineage Logistics in the city center of San Francisco with an interesting presentation and a tasty breakfast. After the presentation, they gave us a lunch bag 'to go' and we headed towards their distribution center, where they gave us a tour (in a -25 degrees Celsius building). From there, we traveled to a place I was very excited about visiting: our first



Lina van Ampting

Bachelor EOR

Age: 23

University, namely Berkeley. It was really interesting to set place on the campus of an American University, since we all grew up watching tv shows and movies about it. In the evening we had something else planned that we were looking forward to: we were going roller skating at the "Church of 8 Wheels". Since it was Halloween, we all dressed up for this (the committee decided to dress up as Snow White and the 7 Dwarfs).

Today it was time for one of my favorite activities, namely a visit to the former prison Alcatraz. After taking the ferry, you got the opportunity to explore the island and take a cellhouse audio tour, where you could even see the prison cells from the famous escapees. Once we arrived back on the mainland, we went to Fisherman's Wharf to have a typical seafood lunch. In the evening we extended our Halloween plans for one more day, by doing a themed tour.

Something many participants were a bit nervous about was the research we were going to conduct in the three cities (which involved interviewing some locals), but it turned out to be quite fun. My group decided to go to the Golden Gate Park for this, and we noticed that the locals were



really excited to talk to us about their experiences living there and were also interested in our views. When we finished collecting our data, we used our last hours in San Francisco to visit the last hot spots. First on the list were the Painted Ladies (a row of famous houses) and we ended with a walk on the Golden Gate Bridge, since the weather was more clear than on the day of our cycling tour. After a quick dinner at iHop, it was time to go to the bus station and take the bus to our next city: Los Angeles!

In the early morning, we finally arrived in LA after a tough bus ride. Our first planned activity here was a visit to the campus of UCLA, which (in my opinion) was even more impressive than Berkeley. We did visit UCLA on a Monday and Berkeley on the Friday of Halloween, which could explain why the atmosphere of UCLA seemed a lot more lively. During our tour, our guide also showed us the building that was used in the movie 'Legally Blonde'!

This was our first entirely free day, so we agreed that some (non-committee member) friends planned our day for us. We started off with a beach picnic next to the Santa Monica Pier, where a couple of people rode the (world-famous) GTA rollercoaster. Since there was not as much to do at the pier as we originally thought, we went for an early dinner at Chick-fil-A. This gave us some extra time to explore the Intuit Dome before the NBA game we were going to watch this evening. Since the venue was fairly new, they used a lot of high-end techniques, especially in the stores. The game was amazing to watch, not just for the basketball, but there was a lot of entertainment around it as well.

To make sure nobody missed this city's highlights in the few days we were visiting, we planned a Downtown LA city tour in the morning. We ended it at Grand Central Market, because it gave participants the opportunity to do their research and have a nice lunch afterwards. In the afternoon we went on to the offices of EY



in the city. They gave a nice presentation and a tour afterwards. Now it was time for one of the annual IBT highlights: the legendary IBT Pubquiz! Matthijs and Rein did a really great job (except for choosing the winner...) and we had a nice evening with the entire group.

Finally (for some of us), we arrived at our most active day. After a quick visit to the Griffith Observatory, it was time for our hike towards the famous Hollywood Sign. Even though hiking is very popular in the US, this turned out to be quite an unpopular hike (also noticeable by the small number of other hikers we encountered). It took around two hours to reach the sign, but the view was definitely worth it. Sadly, on our way back, the bus we wanted to take was canceled, because the route was being used as a filming location (we were in Hollywood after all). This meant that by the time we reached the Walk of Fame, most of us were quite exhausted. I did quickly forget about that when we noticed that part of the Walk of Fame was enclosed and it turned out we accidentally arrived at the Stranger Things season 5 premiere! We saw many cars arriving, but sadly we were not able to actually see any of the actors.

Las Vegas was the only one of the three cities that was more impressive in real life than in my head. Looking at the hotels, casinos, even the traffic looked like we



were walking on a film set. There were so many lights and sounds all happening at the same time. For example, they had sound boxes on the street like the ones around the entrance of 'De Efteling'. For today's dinner the committee had arranged a pre-selected menu at Tacos & Beer where we (surprise!) had some nice taco's and nachos. Afterwards we did a night tour, where we visited hot spots like the Bellagio Fountains (with a slightly bad view, since they were already setting up for the Formula 1 Grand Prix two weeks in advance) and Caesar's Palace.

On this free day we decided to further explore The Strip in the daytime, but first it was time to visit another tv classic: the Pawn Shop from the show 'Pawn Stars'. Sadly, the famous employees were not working at the moment, but at least there was a photo opportunity with a cardboard cutout... For dinner that night we decided

to try the 'Never-ending Pasta Bowl' at Olive Garden. It was a bigger challenge than anticipated, with our record only being three plates.

One of the most important must-sees in the US is of course the Grand Canyon, which is why we booked a full-day trip from LV to go see it. On the way there we stopped in a small town called 'Seligman', which was apparently the town that inspired the movie 'Cars'. In the Grand Canyon National Park, we walked around with an impressive view. After a couple of hours we headed back to the bus to return back to LV and have dinner at a 'typical' American diner on the way. It turns out we either had the wrong idea of an American diner and it actually looks like a bingo hall where they serve burnt burgers, or the agency had fun scamming unknowing tourists, but this was definitely our worst dinner.

We ended our last day here with a visit to the third University campus, namely UNLV. I expected it to be quite similar to the other visits, but this time they actually let us enter the buildings and even showed us around (a real life model of) the dorms. As EOR students, we have also learned quite a lot about probability/games, which of course is very present in LV. This is why we arranged a visit to the International Gaming Institute on the UNLV campus, where they gave us some insights into the research they do for the casinos. For the last night in the US, we ended the night walking around the Strip some more, visiting the famous hotels like 'New York New York' to ride their rollercoaster with an amazing night view.

All in all, I had a great time on the IBT 2025 and I want to thank my fellow committee members and all the participants for making it an unforgettable experience!



Max-flow min-cut and the Cold War

In 1999, the Pentagon downgraded a Cold War RAND report to “unclassified”. It had been written in 1955 for the US Air Force by Harris and Ross, and asked a simple question about the Soviet railway network: what is the maximum flow the Soviet rail system could carry, and where was its bottleneck?

Mathematically, the railways are represented as a network with nodes and links. Each link has a capacity: so many trains, or so many tons per day. A flow is a stream from a source to a destination, respecting all capacities.

Two questions arise. First: how large can the flow be? The maximum flow problem asks for the largest amount that can be sent from source to destination without exceeding any capacity. Second: how little capacity do you need to break to stop all flow? Harris and Ross were explicitly interested in “interdiction” (or sabotage): disrupting the rail system of the Soviet Union. In the same network, you want to separate source from destination by breaking/removing links. Such a separation is called a cut. The size of a cut is the total capacity you remove. The minimum cut problem asks for the smallest cut capacity that blocks all transport.

At first sight this is transport versus sabotage. But surprisingly, both problems coincide. Any cut is a barrier: whatever reaches the destination must cross it somewhere, so no flow can exceed the capacity of any cut. Hence max flow $\leq$ min cut. The theorem says that you can always find a cut that is as tight as the best possible flow. The maximum amount you can transport equals the minimum capacity you need to destroy.

This is the max-flow min-cut theorem, one of the central results in combina-

torial optimization. It became widely known through Ford and Fulkerson, who describe the Soviet railway story as motivation and developed an algorithmic theory of maximal flows in the mid-1950s.

The report does not stay abstract. Harris and Ross built a simplified model of the railways of the Western Soviet Union and Eastern Europe. Their network has 44 vertices and 105 undirected edges. They compute a flow of value 163,000 tons from Russia to Eastern European “satellite” countries, and they indicate a cut of capacity 163,000 tons as “the bottleneck”. In other words, they exhibit a flow and a cut with the same value, so both are optimal.

In 1930, A.N. Tolstoï studied a different railway optimization problem in the Soviet Union: not how much flow could be pushed through, but how to ship goods from multiple sources to multiple destinations with minimum total transport cost. The same railway world thus led to different optimization problems, in different eras and for different purposes.

I learned the max-flow min-cut Cold War history years ago from my PhD supervisor, Lex Schrijver. He wrote a compelling historical account on this and requested declassification of the RAND report. Recently the story came back to my mind during a lunch conversation with René Peeters. What I like is not only the mathematics but also the history. Two viewpoints, transport and interdiction, lead to the same number. People may take sides; mathematics doesn't.

Sven Polak

Dr. Sven Polak is an Assistant Professor at Tilburg University in the field of Econometrics and Operations Research. His research focuses on mathematical optimization, particularly convex and combinatorial optimization techniques. He is interested in developing theoretical methods to solve complex optimization problems more efficiently.



Mega Mindy and a Lost Child in the Apres-Ski Bar

On a Tuesday evening, we call in with Aggie Manders and Peter-Paul van Duren, the parents of Sanne. Both 61, they live in Best and speak openly about their daughter, her path to Tilburg, and a carnival tradition that took a while to get started.

Aggie studied in Amsterdam and later completed two Masters, one in IT audit, one in Operational Audit, and has spent the last twelve and a half years at the Ministry of Finance. It is a role she is clearly proud of combining law, finance and investigation in a way that ticked every box. "A kind of childhood dream that came true," she says. Peter-Paul also studied in Tilburg, followed a similar finance and accounting route, and now works at Raxtar, a company that produces and rents hoists for personnel and material for high-rise and mid-rise building construction projects.

Neither of them had the classic student association experience. Peter-Paul lived in Tilburg during his studies, had a solid group of friends, and was active in sport, but never joined a study or student association. Aggie commuted for most of her studies, carpooling with fellow students to keep costs manageable. "When I see what Sanne gets to experience," she says, "I realise I missed quite a bit." She pauses, then adds: "But I lived well without it."

Sanne is the younger of two children. Her brother Tim is two years older. Growing up first in Breukelen and later in Best, Sanne was, by both parents' accounts, always the

one doing the organising. Hockey outings, friend trips, group plans, somehow, they all passed through her. "She was always arranging something," Aggie says. Peter-Paul nods: "You see exactly the same thing now in her board year." It is not that she is pushy about it; it is more that people seem to naturally end up looking to her. Whether that is a talent or just a habit, even her parents are not entirely sure.

The maths ability was obvious early on. Sanne was always drawn to exact subjects, though she took her time settling on econometrics. The tipping point came at a family Christmas gathering when she was in her fifth year of secondary school. Her cousin Jim, fresh into his first year of econometrics, spent half an hour walking her through his books. Afterwards she was convinced and knew she wanted to study econometrics. A card game called SET was perhaps an earlier sign: Sanne would spot the combinations before anyone else had even started looking, which, depending on who you ask, was either impressive or deeply annoying to play against.

She is not without a stubborn streak. As a child she knew what she wanted and was not shy about making that clear. "Difficult is not the right word," Peter-Paul says carefully. "She was present, and she knew what she wanted." Aggie is more direct: "She asked for a lot of attention." Both agree, though, that once Sanne sets her sights on something she tends to see it through. The half marathon she ran in Eindhoven last year is a good example: she had signed up, bought the shoes, started training, and then the board year arrived and training slipped. She ran it anyway.

Carnaval was not something the family grew up with. The children were born in Breukelen, where it simply was not part of life, so during carnival the family went skiing instead. Aggie, who grew up in Deurne and celebrated carnival properly, Friday through Wednesday, "and then sick on Thursday and Friday", did not push it on the children. It was Tim who eventually broke ranks, around age twelve or thirteen, declaring he would rather celebrate carnival than go to the mountains. Sanne followed. The ski trips stopped.



Before that transition, there was one memorable moment from those winter sports years. At a Dutch Week trip in Val Thorens, when Sanne was around four or five, the family ended up in a packed apres-ski bar where singer Ellen ten Damme was performing. Sanne, lost somewhere in a crowd of adult legs, could not find her parents. Ellen ten Damme spotted her, lifted her up above the crowd, and held her there until Sanne could locate them. "It does say something about us as parents," Aggie laughs, "that we managed to lose our child in there." Peter-Paul is quick to point out that Sanne had insisted on going inside herself, a detail that fits the pattern rather well.

Her favourite carnival costume from those early years: Mega Mindy, the Belgian superhero well known on this side of the border too.

When Sanne told them she wanted to do a board year, the first reaction from both was something close to hesitation: a year out of the study rhythm, a year to make up. It did not take long to come around. They could see it suited her: the organising, the responsibility, the people. "If she says she wants to do something," Peter-Paul says, "you give her the chance." By now, halfway through the year, the reports coming home are positive. It is tiring, occasionally very early in the morning, but she has not once said she regrets it.

What comes next is still open. But knowing Sanne, her parents suspect she already has a few ideas.



Growing Up Above the Rivers

written by **Niels Hultermans** and **Dylan Koenders**

Evelien and Raimond Wets, the parents of Anouk, join us from their home in Huizen. They speak about their daughter, her path to Tilburg, and a carnival tradition that came to them from unexpected directions.

Evelien studied a law and economics programme in Amsterdam, commuting daily from Hilversum. She was a fanatical handball player at the time, which made staying at home an easy choice. She now works at Rabobank in risk management. Raimond took a more indirect route: HTS electrical engineering and computer science in Hilversum, then informatica at Twente University, graduating into a tough job market before building a long career in IT consultancy. He too ended up at Rabobank, where he now focuses on IT & security risks. The two did not meet through their studies but through going out and a dance school in Hilversum, back when that was still a thing.

Both took a different path through their student years, without the classic associations and societies that Anouk has embraced. Evelien commuted, Raimond studied hard and spent weekends back in Hilversum. What strikes them most about Anouk's student life is not just the associations and the board year, but something simpler: the fact that she chose Tilburg at all. She could have done econometrics in Amsterdam, closer to home. She didn't. Once on her own in Tilburg, she quickly built a life there. Her parents visit often, sometimes stopping by on camper trips toward Belgium, and are clearly glad she landed somewhere that suits her.



Anouk is the youngest of two. Her brother was born on Evelien's birthday, which led to a memorable remark from a young Anouk: "Mom, when can I celebrate my birthday with you?" She was around three or four at the time, and she always loved birthdays, so the question made perfect sense.

As a child, Anouk was on the quiet side, part of a close group of friends at primary school, but more in the background than upfront. Her primary school flagged early that she combined things easily and might get bored without enough challenge, so she ended up in a class with a less classical teaching style, more focused on projects and open assignments. She needs to feel trust first, and once she does, she opens up. That trajectory has been visible ever since: through secondary school, through her exchange semester in Oslo where she passed every course and made trips to Bergen and Stockholm, and now through the board year. The contrast with the quiet girl in the background is not unnoticed on her parents.

The maths ability was always there. Evelien helped her through her final exam year, up to VWO level she could still follow along, and there were a few occasions where they looked at a practice exam together and concluded it was not she who had made the mistake, but the answer booklet. Econometrics did not come out of nowhere either: a study aptitude test pointed clearly toward econometrics and business analytics, and her grandfather on Evelien's side had worked as an actuary. "The numbers run in the family a bit," as they put it.

She has always set high standards for herself. An eight is fine on paper, but not always in her own head. The work she put into the board room decorations for the association left a real impression, the care and detail that went into them made clear that for Anouk, good enough is rarely good enough. It is a quality her parents clearly recognise and admire, even if they occasionally suggest that a nine can be just as good as a ten.

Outside of her studies, Anouk kept herself



busy long before the board year. She did gymnastics three times a week, had guitar lessons, and worked part-time, first at Scapino, then at Jumbo, and later at Spar in Tilburg. She also delivered supermarket and drugstore folders door to door. "She has never really sat still," her parents say.

Friendship is something she takes seriously. She still sees a friend from primary school, maintains contact with two friends from secondary school, and kept ties with people from Oslo. When those friendships demand more effort from her side than the other, it can sting a little. But she keeps trying.

On carnival: the family is from above the rivers, which usually means the tradition passed them by. But it is not quite that simple. Evelien's grandfather grew up in Maastricht, and her mother's sister lived in Hoogland, a small carnival village near Amersfoort with its own parade, which the family visited regularly. Carnival was also celebrated through a handball association. Anouk did dress up at primary school in Huizen, and her costume of choice was Mega Mindy, a clear favourite among Dutch kids at the time.

The board year took a year longer to arrive than it might have. Anouk had considered it a year earlier but was already committed to her exchange in Oslo. The exchange won. When the board year came up again, the first reaction from her parents was measured. They wanted to understand what she would get out of it, but she had clearly already thought it through before bringing it to them, which is how she tends to work. By now the verdict is straightforward: she is enjoying it, she is learning, and she is glad she did it •

The Economics Behind Carnival

written by **Anne Verbeek**

Just like every year, carnival came to the south of the Netherlands – a long weekend full of festivities, dressing up, local music, meeting friends and having a drink and a laugh together. This year was a cold edition. Carnival arrived early in the season and temperatures dropped below zero at times; even on the Sunday of the parade in Tilburg there was snowfall (Omroep Brabant, 2026).

For most students in Tilburg, carnival needs no introduction. For a couple of days every February, Tilburg transforms into Kruikenstad – a city of costumes, local bands and Schrobbeleer. Streets that are normally quiet were now filled with tens of thousands of people. Every café is packed. Every square is a stage. And behind all of the chaos and colour, something fascinating is happening: a small but intense economic experiment.

Carnival is not just a party. It is a concentrated injection of spending into a local economy – one that raises real questions about how much money actually flows in, where it goes, and whether the benefits are as large as they appear. These are questions economists have studied not just for Dutch carnival, but for major festivals around the world. And the answers turn out to be more complicated, and more interesting, than you might expect.

The Scale of Money

To appreciate what carnival does economically, it helps to look at the numbers first. According to research by the CBS, commissioned for the television programme *Stand van Nederland*, the roughly 1.5 million carnival celebrants in the Netherlands spend an average of €180 per day – mostly on eight million litres of beer (Stand van Nederland, 2019). Adjusting for inflation, a pair of Dutch economists writing in *ESB* calculated total carnival spending at around €1.4 billion over four days (Jongen & Van Vuuren, 2025). For comparison, the Boston Consulting Group estimated that the Cologne carnival generated €600 million in economic value added in 2020 – and Dutch carnival, in those calculations, comes out ahead.

Hotels fill up. Restaurants and bars turn over their highest revenue of the year. Costume shops, which in the Netherlands do a significant share of their annual business in the weeks before carnival, see a predictable seasonal surge. In Den Bosch alone, cafés turn over nine times their normal weekly revenue during carnival week – around €25,000 in five days versus €2,800 in a normal week (Stand van Nederland, 2019). The city itself also faces a spike in costs: additional policing, waste collection, crowd management, and infrastructure. The question for economists is not whether money moves – which it obviously does – but whether that movement represents a genuine gain for the local economy.

The Multiplier Effect

When a visitor from Amsterdam buys a round of drinks in a Tilburg café during carnival, the story does not end with that transaction. The café owner uses the revenue to pay wages to staff, who in turn spend their income at other local businesses. The bar restocks its supplies from a local distributor. The distributor pays a driver. That driver buys groceries nearby. Each euro circulates and generates additional activity well beyond the initial purchase – a phenomenon economists call the multiplier effect.

Frechtling and Horváth (1999) were among the first to rigorously quantify

tourism multipliers, finding that in many local economies, one euro of visitor spending generates between €1.50 and €2.00 in total economic output once all rounds of circulation are counted. Cela et al. (2010), applying the widely-used IMPLAN input-output model to festival spending in the United States, found an output multiplier of 1.61 – meaning every dollar spent at a festival produced \$1.61 of total economic activity in the surrounding region.

The size of the multiplier depends heavily on how locally embedded the spending is. As the *ESB* authors point out, because most carnival money goes to locally poured beer, a larger share of the added value stays within the Netherlands than with purchases like televisions or laptops (Jongen & Van Vuuren, 2025). A euro spent at a family-run café in de Heuvelstraat stays in the local economy longer than the same euro spent at a hotel chain, where profits flow to a head office elsewhere. So maybe next time, when getting a late-night snack, try to spend your money at a local place instead of a big franchise – and support the city's economy while you are at it.

Who Is Actually Spending?

Not all carnival spending is created equal – at least not from an economist's perspective. Crompton et al. (2001) made an argument that fundamentally changed how economists evaluate event impacts: only spending by visitors from outside the





region should count as genuine new economic activity. Local residents who attend carnival would have spent their money somewhere in the city anyway. Their carnival spending is largely a reshuffling of existing local demand, not an injection of new money.

This distinction has significant implications. If a large share of the people filling Tilburg's streets during carnival are Tilburgers themselves – which, given the deeply local nature of Dutch carnival culture, is almost certainly true – then the headline economic impact figures are flattering. The real gain comes from the visitors who travel specifically because of carnival: people from Breda, Den Bosch, or further who bring money that would not otherwise have entered the local economy. Crompton called this the "new money" criterion, and it remains the standard approach in academic event economics.

You could therefore argue that we should welcome visitors from other cities with open arms, rather than looking sideways at them for not wearing the local costume – at least from an economic perspective. Though perhaps not from a cultural one. A survey of over 5,300 people from Noord-Brabant and Limburg found that 65 percent of southern carnival enthusiasts feel that visitors from above the rivers detract from the experience (EenVandaag, 2026). Locals describe busloads of northerners who "don't know what carnival is about and think anything goes." The

tension is real, but from the perspective of the multiplier, those visitors are exactly what the local economy needs.

There is also a subtler issue: displacement. Some regular visitors to Tilburg actually avoid the city during carnival precisely because of the crowds. Business travellers, shoppers, and tourists who would have come anyway may stay home instead, offsetting part of the carnival-driven boost. And it is not just outsiders who leave: around one in five Brabanders and Limburgers deliberately choose to leave their own province during carnival, citing crowds, noise, and the sense that the festival atmosphere has taken over (EenVandaag, 2026). A complete economic analysis must account for these absent visitors, not just the ones who arrive in costume.

The Cost Nobody Talks About

Every economic analysis of a festival must reckon with the other side of the ledger. Carnival is expensive to run. The municipality of Breda spent €750,000 on carnival in 2025 alone – including €94,000 on enforcement, plus costs for taxi stewards, first aid, crowd managers, camera surveillance, and removing 35,000 kilos of litter (Jongen & Van Vuuren, 2025). Scaling Breda's figures to all of Noord-Brabant and Limburg, the total municipal bill is estimated at around €15 million. And those are just the public costs.

The NS figures from carnival 2026 give a vivid sense of what the cleanup actually involves. The national railway deployed

over 250 extra cleaning staff across the weekend and removed around 10,000 rubbish bags from trains – roughly 25 to 50 percent more waste than in previous years, with more than ten trains pulled from service due to extreme soiling (Marcelis, 2026). The bars and restaurants near the main carnival streets thrive; the shops selling furniture or electronics quietly close for the weekend, because their customers do not come – or they are carnivaling themselves. For a proper cost-benefit analysis, all of this belongs in the calculation.

Then there is the Monday morning effect. Around 15 percent of carnival revellers call in sick after the festivities, amounting to an estimated 1.95 million sick days at a total cost of roughly €780 million – making absenteeism by far the largest single cost item (Jongen & Van Vuuren, 2025). Interestingly, however, the same ESB authors looked at eredivisie football results over fifteen seasons and found that clubs from Noord-Brabant and Limburg actually averaged slightly more points in the round directly after carnival than in the rest of the season. Tentative evidence, they caution – a few balls hitting the post instead of going in and the difference vanishes – but at the very least no sign of a post-carnival productivity slump.

The main takeaway

So what is carnival actually worth? The honest answer is: it depends on how you count. The ESB analysis puts it bluntly: €1.4 billion in spending, minus roughly €780



million in sick leave costs, €15 million in municipal expenses, and a few million in emergency care, leaves a net financial surplus of over €600 million (Jongen & Van Vuuren, 2025). Gross spending figures are impressive, and the multiplier effect means the true economic impact is even larger than the direct transactions suggest. But once you strip out the spending of locals who would have been in the city anyway, account for displaced visitors and businesses, and factor in the public costs of running the event, the picture becomes more nuanced.

It is also worth noting that the visitor landscape is shifting. According to the

Nationale Bezoekers Index, overall carnival visitor growth in 2026 came in at just +1.9 percent – a sharp slowdown after the +14 percent growth recorded in 2025. Tilburg itself saw a 20 percent drop in visitors compared to the previous year, partly attributed to the cold and snowy weather, but also reflecting broader trends of visitors spreading out to smaller towns and cities outside the traditional carnival heartland (Pretwerk, 2026).

None of this is a reason not to continue celebrating carnival. The essence of the celebration was never to generate economic impact, but to give people a brief release before the fasting period leading

up to Easter. Much of the value of carnival is social and cultural rather than economic – the sense of collective identity, the temporary suspension of normal life, the very particular pleasure of seeing your city transformed. But it is a reminder that behind every street party, there is an economic story worth reading carefully. The next time you are standing in the Kruikenstad crowd, Schrobbeleer in hand, you are not only celebrating – you are, in a small way, participating in a natural economic experiment.

Jazz dance, horse riding, ice skating or a swimming workout: which sport do you enjoy the most?

written by **Mattijs Vernooij**

A busy life filled with studying, friends, work, cooking with your housemates, and then somehow also finding time to exercise. Many students find it hard to make time and motivation for sports. In this edition of *Nekst Advice*, we highlight some tips to help you lower the threshold to actually get moving.

Sports are not only good for your physical health, but they also have a big impact on your mind. Regular activity helps reduce stress, especially during busy weeks with assignments and exams. It improves your concentration, so you can study more efficiently, and it also gives you more energy throughout the day. On top of that, exercise often improves sleep and mood, making even long study days more manageable. All in all, staying active is one of the easiest ways to feel better both mentally and physically while juggling a busy student life.

The moment arrives. You were planning to work out, but suddenly you don't feel like going anymore. Then you remember that you're already signed up, and that pushes you to grab your gear and head to the gym. During and after your workout, you feel great, and you immediately sign up for the next session. This example shows a clear phenomenon: having an appointment you cannot easily break helps you follow through. This can be as simple as signing up beforehand, but there are also other ways to motivate yourself. For instance, going to the gym with a friend is much more fun, and it boosts your motivation to go. So, make sure you don't only plan to work out, but also set up some incentive that makes you actually go.

Besides the extra push, working out with others is also much more fun. Of course, you can go with different friends from time to time, but having a regular gym buddy

makes it even easier. This helped me a lot in going to the gym more consistently. Another great option is to join your friends in whatever sport they do. Most people are enthusiastic about their own sport and enjoy introducing someone new to it. A small extra tip is to plan to eat together before or after your workout. That way, you are not only being active together, but you also have another fun activity around it. This lowers the barrier even more and makes working out feel a lot more appealing.

In Tilburg, especially with a student sports membership, there are hundreds of sports and classes you can sign up for. Did you know you can join Aqua Bootcamp, Jiu Jitsu, all kinds of boxing and dance classes, or even Jumping Fitness? Make use of this and try something new. For example, try one new sport every month and bring a friend along again. If you eventually find something you truly enjoy, it becomes much easier to go more regularly.

In the end, the goal is to keep up your good intentions, which is why the main tip is to not start too fast and to build up slowly. Two weeks of intense training followed by quitting, obviously, has less effect than slowly building a routine and consistently working out twice a week.



There are lots of things you can try to keep yourself motivated to work out. But everyone is different, so do whatever fits you. Maybe you prefer working out alone, or maybe you are already dedicated to one sport and know you do not want anything else. To summarise, get yourself a bit of accountability by signing up beforehand. Go work out with friends and plan to eat together. Join one of your friends' sports at least once. Take a look at the many classes offered, but most importantly, do not push too hard right away •

EXTRA TIP: track your workouts in data! Seeing your progress is the best motivation boost!

The Carnival Stockpiling Paradox

written by **Niels Hultermans**

Carnival is, in many ways, an economic anomaly. Not because it is irrational, but because it reliably demonstrates how human behavior deviates from standard economic predictions. Consider the weeks leading up to carnival. Supermarkets transform into staging ground of future regret. Beer crates leave shelves in bulk. Shelves of wine thin out. Someone buys a bottle of peach schnapps they would never touch in November.

Standard economic intuition suggests a simple consequence: if households stock up heavily beforehand, they should spend less in bars. After all, if you already purchased four crates of beer, why pay €3.80 for a lukewarm plastic cup in a crowded pub? In a textbook consumption model, drinks consumed at home and drinks purchased in bars are substitutes. More stockpiling means less outside consumption. Yet behavioral research suggests something quite different. Under certain conditions, stockpiling may not reduce bar consumption at all, and might even increase it.

The Textbook Prediction

To see why this is surprising, start with the benchmark economic model. Consumers face a budget constraint and choose between different sources of consumption. Beverages purchased for home use and alcohol purchased in bars provide similar utility, but one is dramatically cheaper. If a household has already purchased alcohol in advance, the marginal benefit of buying another drink in a bar should fall.

In that framework, stockpiling leads naturally to substitution. More alcohol at home should mean fewer drinks purchased outside. From a purely financial perspective, the logic is straightforward: if you have already paid for the weekend's supply, there is less reason to buy more.

But this prediction relies on a quiet assumption: that drinking decisions are made independently of the social environment in which they occur. Carnival quickly reveals the limits of that assumption.

Mental Accounting en Prepaid Consumption

Part of the explanation lies in how people mentally categorize spending. Richard Thaler's theory of mental accounting suggests that consumers treat prepaid goods differently from goods that still require payment [1]. Once something has been purchased, using it no longer feels like spending.

Drinks already sitting in the fridge therefore have a perceived marginal cost close to zero. A round ordered in a bar, by contrast, still carries a visible price. At first glance this seems to reinforce the substitution logic: free-feeling drinks at home should crowd out expensive drinks outside.

Yet behavioral evidence points in the opposite direction. Prepaid goods often increase engagement with an activity rather than replace future consumption. People with gym memberships go more often than those paying per visit. Students with meal plans visit cafeterias more frequently than those paying per meal. Prepayment does not merely shift where consumption occurs; it often intensifies participation in the activity itself [2].

The Participation Margin

The key is that social consumption decisions are often not about quantity but about participation. The relevant question

on a carnival evening is rarely "How much should I drink?" but rather "Are we going out tonight?"

Stockpiling shifts that decision. A fridge full of beer lowers the barrier to starting the evening. The group gathers, someone opens the first bottle, and the night begins. Behavioral research repeatedly shows that initiation is the hardest step in many activities. Once the first step has been taken, continuation becomes much more likely [2].

This helps explain a pattern documented in the nightlife and student-behavior literature: drinking at home frequently precedes going out rather than replacing it. Pre-drinking lowers inhibitions, strengthens group cohesion, and creates the festive momentum that makes continuing the night attractive [3]. The result is two opposing effects. Individuals who pre-drink may consume fewer drinks once inside a bar, but they are also more likely to attend the bar in the first place.

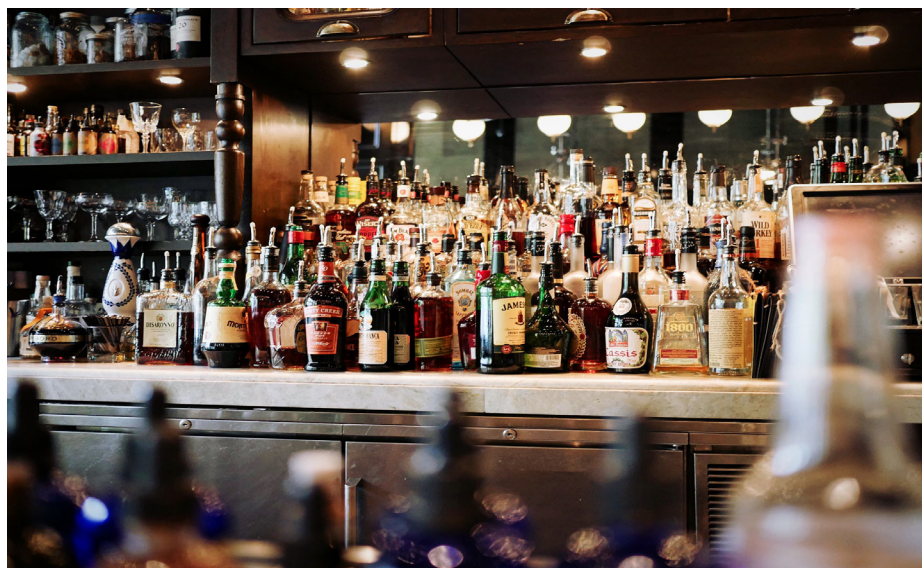
Two Margins of Bar Consumption

From an econometric perspective, the key insight is that bar consumption depends on two distinct margins:

$$E[\text{Bar Drinks}] = P(\text{Attend Bar}) \times E[\text{Drinks} | \text{Attend}]$$

Stockpiling can affect both terms in opposite directions.

Attendance margin: Pre-drinking increases





the probability that people go out.

Intensity margin: Individuals who pre-drink may buy fewer drinks once inside the bar.

Standard substitution logic focuses almost entirely on the second term. But in social environments, the first term, the participation decision, can dominate.

The Sunk Cost Nudge

Stockpiling can also create a subtle commitment to participation. When a group has already invested in drinks for the weekend, the idea of celebrating becomes more natural. No one explicitly declares that the money must be “justified,” but decades of research on sunk costs show that prior expenditures often increase engagement with related activities [4].

People attend concerts they already paid for, go skiing after renting equipment, and use services they purchased in advance. In a similar way, preparing for celebration can make celebration more likely. Stockpiling signals intent.

A Coordination Problem

Carnival is also fundamentally social. Going out is rarely an individual optimization problem; it is a coordination problem among friends. Small behavioral nudges can therefore produce large collective effects. Stockpiling makes hosting easier, hosting creates gatherings, and gatherings generate the group momentum that pushes an evening outward; from the living room to the street and eventually to the bar.

Even if each individual ultimately purchases fewer drinks at the bar, more groups may arrive there. From the perspective of total demand, attendance can matter as much as individual consumption. Economists sometimes refer to this amplification mechanism as a social multiplier, where individual decisions reinforce each other within groups [4].

Seen this way, drinks at home do not simply compete with drinks in bars. They can function as a launchpad. The early phase of the evening moves into a prepaid environment where financial friction is low and participation is easy. Once the night has started, continuing it often requires less effort than ending it. Bars benefit less from initial thirst than from the fact that people decided to go out at all.

The Net Effect

The classical model focuses on quantity: how many drinks will be consumed? Carnival highlights a different margin: the participation margin. Stockpiling influences the likelihood that people join the celebration, and that participation strongly affects bar demand.

Taken together, stockpiling may simultaneously reduce drinks purchased per person while increasing attendance and extending the duration of nights out. The clean substitution predicted by standard models therefore breaks down. Instead of a simple shift from bar consumption to home consumption, behavior moves from

quantity-driven decisions to participation-driven ones.

Carnival magnifies these mechanisms because participation carries symbolic value, group coordination is central, and preparation itself becomes part of the ritual. Buying drinks in advance is not merely an economic decision; it is part of preparing for the celebration. And rituals tend to reinforce participation rather than replace it.

Conclusion

From a classical perspective, stockpiling should reduce bar consumption. Behavioral insights suggest a more nuanced outcome. By lowering the barrier to starting the evening, strengthening group coordination, and nudging participation, stockpiling may actually increase the likelihood that people show up in bars, even if they buy slightly fewer drinks once inside.

Carnival thus illustrates a broader lesson for economists: in social environments, consumption is not governed solely by substitution. It is shaped by participation. And sometimes, the beer in the fridge is precisely what gets people out the door.

Familiar faces: Bob

written by **Bob Suijkerbuijk**

For those who have never heard of me: my name is Bob Suijkerbuijk, 29 years old, and I have been a member of Asset | Econometrics since 2017. If that sounds like a ridiculously long time for one study, well, you would be right.

My whole student story started back in 2014 when I moved to Tilburg and began studying for a Bachelor's in Psychology. Unlike my fellow students, I found exactly one thing genuinely fun and interesting about the whole course program: statistics. I am talking about real, non-sarcastic excitement for subjects such as regression analysis, while everyone else was talking about Freud among other famous psychologists. It was then I realised my heart may belong to a different field of studies. Switching from Psychology to the EOR programme was therefore one of the best decisions I made.

I finally managed to earn my Master degree in Business Analytics and Opera-

tions Research (BAOR) in late 2023, after what felt like a neverending Bachelor's period (a solid five and a half years) and a quite average Master period ('just' one and a half years). This long road through Tilburg's academic world is why I was always a bit older than other students, and definitely the reason for the target of non-stop jokes, with www.heeftbobzijnBachelor.sal.nl ('www.doesbobhavehisBachelor'sdegreetyet'), which is still in the WhatsApp group description by the way, being the most infamous one (thanks to Stephan). Although being the target of this never-ending running gag, I have always found it amusing.

Speaking of things I really enjoyed, I quickly want to mention my Master thesis. After years of enjoying distractions, it was time to focus and prove I actually learned something. I was lucky enough to write my final dissertation at Zero Hunger Lab, with guidance from the now-retired, well-known, and amazing professor Hein Fleuren. I got to research the complicated

global distribution of food: a complex, important and rewarding topic. Honestly, I suggest everyone who wants to finish their student life feeling good to write their thesis at the Zero Hunger Lab. It lets you use your attained skills for something that - to some extent - truly matters.

A look-back at my student life

My first year of EOR was not exactly going the way I had planned it. After failing to meet the binding study advice, attaining six ECTS in the first semester, I had to take a step back and deregister from the EOR programme. Luckily, I had way more confidence in my 'second' first year. That is when I felt ready to become an active member of Asset | Econometrics, starting off my committee career with the Freshmen committee, followed by organizing the first (and only successful) Freshmen Weekend later that year. One year later holds my best committee memories, where I had the honor of organizing the Active Member Weekend. Thanks to a close-knit group consisting of Bram, Mylan, Nienke, Juliëtte



and Tjum, we put together what I still think was one of the best Active Member Weekends of recent years.

I also have a secret soft spot for the Nekst committee, where I put in hard work designing this magazine. I was really proud to be in charge of capturing the association's best (and worst) times in print. And to prove I was not completely useless for the association in my final year of studying in Tilburg, I was part of the 2022-2023 Yearbook committee. Eventually, I even ended up getting chartered for the KOALA committee, where I had the honor to organize just two activities for those who miss the association and its good old times – exactly like I did. If there is one thing I learned, it's that once you are in the Astrics family, you are never really getting out.

If talking about highlights, there are a few things that immediately come to mind. Firstly, I joined the Europe Trips to Prague and Athens, and even later, as a graduate, I went along to Florence and Bologna in the Lustrum Trip of 2024. Especially the first and last one are memories I am extremely fond of. Other absolute highlights include the Active Member Weekends, the countless cantuses (Tilburg University Cantus, CodE), but also hanging out in the committee rooms and after-exam drinking sessions with my best Astrics friends (if you know, you know).



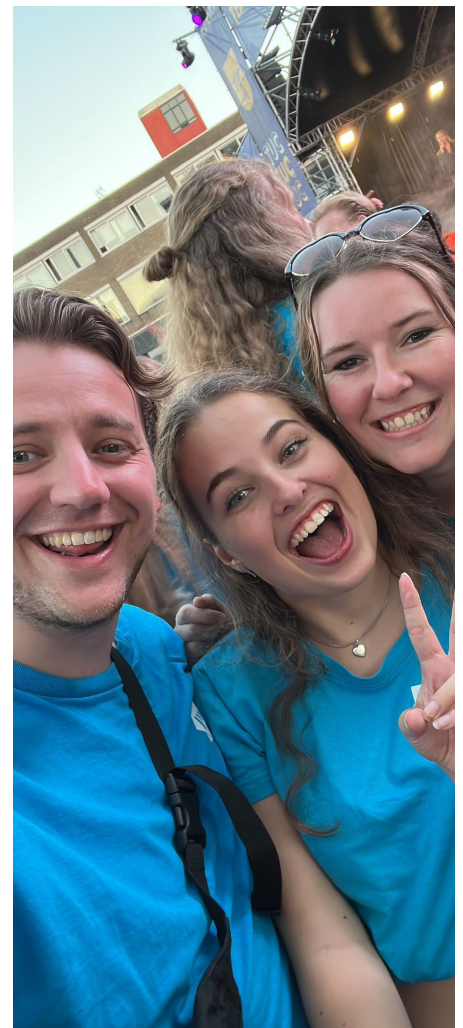
Post-graduation life

Now that the infamous 'heeftbobjijnBachelorsal.nl' site is officially useless, I am busy using my Econometrics knowledge in the real world. Life after the association is different, but just as good, just in a different way.

I am currently working as a data analyst at Synaxion in Eindhoven. We are a Business Intelligence company that aids companies with their data, mainly in the semi-public sector, such as schools, health care institutions and municipal organizations. Basically, I spend my days setting up data streams, visualizing the obtained data for the client to use for a variety of purposes, and utilizing these data for numerous analyses and prediction models. A good example of the latter is the prediction of student numbers on primary and secondary education schools using a time series model.

To be honest, even though the working life seemed stressful at first, it is definitely a lot less stressful than handling two committees, three Astrics activities, and studying for four retakes at a time. One of the best parts of this working job is that I get to do this with one of my best friends, who I am sure most of you will know: Emma Segers. We have been friends since our early Econometrics days, and the fact that we now get to work together every day in a small and lively team, is just wonderful. It has made the change from the Astrics committee room to the office feel much smoother, and just as fun! Our working days still involve drinking too much (coffee), chattering about just anything, being okay with a healthy amount of chaos, and, most important of all, making the best out of any situation. It feels less like a job and more like a very professional, well-paid committee meeting.

With the now-existing predictability of a 9-to-5 job, I find myself in new hobbies. You will often find me walking, as it is the perfect way to clear my head after staring at a monitor screen all day. Of course, the weekends are still reserved for fun: I love going out and, crucially, catching up with friends. This brings me to a downside of the post-student life: there is less time for quality time with your friends, who also happen to be working full-time. No more casually bumping into someone in the association rooms or seeing everyone at the monthly drink. Catching up now requires actual planning, and a sober commitment to show up. It, however, makes the weekends even more valuable, and



the memories that are made even more wonderful. It is different, but the core Astrics friendships definitely last!

Last words

It took me seven years, a big change in my study choices, a lot of beer, and a lot of endless nights studying retakes to get to the point I find myself in nowadays, but I would not change a thing. In hindsight, there is not a single feeling of regret looking back at my Astrics times. To the current group of members: enjoy the ride. Value the long days in the University Library and the short nights in the Boekanier (or vice versa). Go on trips, even if you are poor. Enjoy the fact that you are part of this amazing family!

Column: Joris Wagenaar

Every two years, the Olympics remind us that sport is not just about talent and grit, but also about margins. Take the Winter Olympics (going on at the moment of writing), where hundredths of a second is the difference between winning and losing. A slightly cleaner line through a corner. A ski that glides just a bit longer before friction wins. As someone who enjoys sports not only as a spectator but also as a participant, I find that immensely interesting, because those margins are exactly where Operations Research and Econometrics live.

Take speed skating, our national obsession. To the casual viewer, it's brute power and rhythm. To an OR-minded observer, it's a dynamic optimisation problem. Skaters constantly trade off speed against fatigue, choosing pacing strategies lap by lap. Push too hard early and lactate ruins the final laps, while if you hold back and you may never recover the lost time. In essence, every race is a real-time control problem under uncertainty, with the athlete acting as both system and decision-maker.

Ski jumping offers a different flavour of OR. Wind conditions vary by second, and jumpers must decide whether to start immediately or wait. That's classic stochastic decision-making: stop now or wait for better conditions, knowing that waiting carries its own risks. The best teams model wind patterns and optimise take-off timing, turning meteorological uncertainty into competitive advantage.

Econometrics enters the picture when we step back from individual races. Which training methods actually work? Which equipment changes genuinely improve performance, and which just feel faster? Elite teams now rely heavily on data: athlete data over a season, or deeper data in session by session, or sometimes even deeper with lap-by-lap data. Difference-in-differences designs compare athletes before and after changes in technique, coaching, or gear, while controlling

for age, injury, and competition level. The myth of "this worked for me" is often outperformed with properly analysed data.

One provocative thought: talent identification itself is already an optimisation problem. Countries don't just train athletes, they select them. Should a young skater focus on sprint or long distance? Switch from cycling to bobsleigh? From athletics to skeleton? These decisions are often driven by intuition and tradition, but they could just as well be framed as assignment problems under uncertainty. Great Britain famously pushed this logic in the run-up to the London 2012 Olympics, actively scouting talent in school settings and using physical profiles to identify children who might excel in specific Olympic sports later on. It was controversial, but highly effective: limited resources were channeled to athletes with the highest expected medal returns. For small countries like the Netherlands, which cannot dominate every sport, the uncomfortable question is whether similar data-driven selection could (or should) play a larger role.

There's also a darker side where OR thinking is unavoidable: injury risk. Training harder increases performance, up to a certain point. Beyond that, the probability of injury rises sharply. Balancing training load is essentially preventive maintenance on a biological system. Push too aggressively and the system fails; too cautiously and you underperform. Good coaches already think this way, OR just gives the language and tools to formalise it.

For students of Econometrics and OR, sport is a perfect playground. The data are rich, the incentives clear, and the feedback immediate. So next time you watch the Olympics, don't just admire the medals. Think about the models behind them. Somewhere between the ice, the snow, and the stopwatch, optimisation is happening, whether athletes realise it or not. ●

Joris Wagenaar

Dr. Joris Wagenaar is an Associate Professor at Tilburg University, affiliated with the Tilburg School of Economics and Management. His expertise lies in Operations Research and Business Analytics, with a research focus on logistics, transportation, and optimization models for complex supply chains. His work often addresses real-world challenges in sustainable and humanitarian logistics



Meet the Board



Vice-Chairman

Hello everyone! My name is Hedser van der Wel, and I am the candidate Vice-Chairman. I grew up in Middelburg, but moved to Tilburg 3 and a half years ago. Last year, I started the Master's program in Business Analytics and Operations Research. I have been a loyal member of Asset | Econometrics for three years, two of which I served as Editor-in-Chief of the Nekst. Additionally, I have been the treasurer of both the Drink & Activities and Europe Trip committees, as well as the secretary of the Olden Goaldies committee. The fun activities and great connections with our members have made me truly enjoy my time within the association over the past few years. This year, I am excited to get to know even more members and to keep building that great atmosphere together!

External Affairs Officer

Hi everyone, my name is Maik, and I will be the External Affairs Officer of Asset | Econometrics for the coming year. I was born and raised in the beautiful town of Etten-Leur, near Breda. Two and a half years ago, I moved to Tilburg and became increasingly involved in the association.

When I am not at the Library or in the rooms, I enjoy having a drink, going for a run, making pasta salad, or going on another trip. I am looking forward to continuing my student life as a board member







Optimising Partner Pensions

Henk Keffert

Introduction

Most readers will know me for my enthusiasm for quantitative finance and actuarial science. In this project, we combine techniques from both fields to explore a part of the pension system: partner pensions. Partner pension provides a surviving spouse with income after their partner's death. It plays an important role in retirement planning for couples, as a large drop in income after the death of a partner can lead to substantial welfare losses.

During one's working life, contributions are made to a pension fund that invests on the individual's behalf with the goal of providing income during retirement. This built-up pension incorporates income for a partner. If the individual passes away, their partner receives part of their pension payments (partner pension). In the Netherlands, partner pension is divided into two parts: before retirement and during retirement. We focus on partner pension during the retirement phase.

We develop a mathematical model for retired couples and calibrate its parameters using data on retired Dutch couples. We then solve the resulting problem numerically to determine the optimal partner pension. Our analysis highlights how an appropriately chosen partner pension can reduce welfare losses for couples and identifies the key parameters that affect this decision.

In the remainder of this article, I focus on the model we use, make a connection to related courses in the EOR bachelor's and master's programs, and briefly discuss some of our results. This article is based on one of the chapters in my PhD thesis, which is joint work with Anja De Waegenaere and Nikolaus Schweizer.

The model

We consider a retired couple with lifetime uncertainty who receive pension income via fixed annuity payments. In line with the Dutch pension system, these lifelong annuity payments are generated through two pension sources: a state pension and an occupational pension. At the start of retirement, the couple chooses the partner pension and optimises consumption, investment, and insurance decisions during the remaining life-cycle.

At its core, our life-cycle investing model is similar to the ones discussed in the Asset and Liability Management (ALM) course in the QFAS Master but with some different 'bells and whistles'. Next, we discuss the main components of the model, which are family dynamics, financial/insurance market, pension payments, wealth dynamics, and utility.

Family Dynamics

We model a couple that consists of two people: person x and person y . They both have uncertain remaining lifetime, which we assume to be independent. This results in four different family states for each time t : $S_t \in \{s^{xy}, s^x, s^y, s^0\}$, where in state s^{xy} both members of the couple are alive, in state s^z person z is alive and person $z' = \{x, y\} \setminus \{z\}$ is dead, and s^0 is the state where both members are no longer alive. Time can be thought of as yearly units, starting at retirement $t = 0$. As is done in the Life Insurance course in the EOR Bachelor program, we use life tables from the Dutch Actuarial Institute to model the survival probabilities of each member, allowing them to be age-and gender-specific.

Financial and Insurance Market

The couple can invest in a risk-free and a risky asset, as well as purchase life insurance. The return on the risk-free asset is constant and equal to R^f . The random return on the risky asset from time t to $t + 1$, denoted by R_{t+1} , is log-normally distributed with mean μ and standard deviation σ .

During retirement, the couple has a pension in the form of single life annuities and joint and survivor life annuities. The amount of each is decided at the start of the retirement phase and kept constant. A single life annuity for person z pays off a constant amount each year if person z is alive, while a joint and survivor annuity pays off a constant amount as long as at least one member is alive. Calculating the expected net present value, as discussed in the Life Insurance course, the prices at time t of the normalised single and the normalised joint and survivor annuities are given by

$$a_t^z = (1 + \lambda^A) \sum_{\tau=1}^{\infty} \frac{p_{\tau,t}^z}{(R^f)^\tau}, \quad (1)$$

$$a_t^{xy} = (1 + \lambda^A) \sum_{\tau=1}^{\infty} \frac{p_{\tau,t}^{xy}}{(R^f)^\tau}, \quad (2)$$

where λ^A is the safety loading, $p_{\tau,t}^z$ the probability at time t that individual z lives at least τ more years, and $p_{\tau,t}^{xy}$ is the time t probability that at least one of the members is alive in τ years. Partner pension payments that pay off 1 when z is alive, and K when z is dead and $z' = \{x, y\} \setminus \{z\}$ is alive can be created using a combination of single annuities for person z and joint and survivor annuities. The price of a unit of partner pension is given by

$$a^{PP,z}(K) = a_0^z(1 - K) + a_0^{xy}K. \quad (3)$$

The total number of normalised annuities held in each type is given by $\mathbf{A} = (A^x, A^y, A^{xy})$, where A^x denotes the number of single annuities for person x , A^y the number of single annuities for person y , and A^{xy} the number of joint and survivor annuities. The initial value of the pension wealth is equal to $a_0^x A^x + a_0^y A^y + a_0^{xy} A^{xy}$.

At each time point (until a maximum age), a 1-year term life insurance product can be purchased

for each member currently alive, which pays 1 if the insured member z passes away in the next year and 0 otherwise. The price of one unit of the life insurance for insured z is equal to the expected present value times a safety loading

$$LP_t^z = (1 + \lambda_t^{LI,z}) \frac{q_t^z}{R^f}, \quad (4)$$

where $\lambda_t^{LI,z}$ is the life insurance safety loading for individual z at time t , and $q_t^z = 1 - p_t^z$ is the one-year death probability.

Pension Payments

At the start of the retirement problem ($t = 0$), the couple's total wealth (W_0^{tot}) consists of liquid wealth (W_0) and pension wealth in the form of annuities ($\mathbf{A}$). In Figure 1, we present a graphical representation in the form of a tree diagram that illustrates how wealth is distributed. The annuity holding is constructed as follows: a fraction α of total wealth is converted into annuities. The amount αW_0^{tot} represents the total pension wealth, which is composed of both state pension and an occupational pension. A fraction ζ of the pension wealth is from the state pension and the remainder is from the occupational pension.

The Dutch state pension payment, called the AOW, is linked to the legal minimum wage and depends on the number of years an individual lived in the Netherlands before the statutory retirement age. For every year an individual lived in the Netherlands (within 50 years of the statutory retirement age), they build up two percent of the state pension. The full monthly AOW (pre-tax and including the holiday allowance) is currently €1744 for singles and €1198 for couples. Couples receive a smaller payment to account for shared living expenses (economies of scale). This setup effectively creates a partner pension with $K_1 = 0.46$.

The occupational pension can have an asymmetric distribution, where a fraction η of occupational pension wealth is assigned to person x and $1 - \eta$ to person y . The parameter η represents the degree of occupational pension asymmetry. If $\eta = 0.5$, we are in the symmetric case. The closer η is to 1 (or 0), the more asymmetric

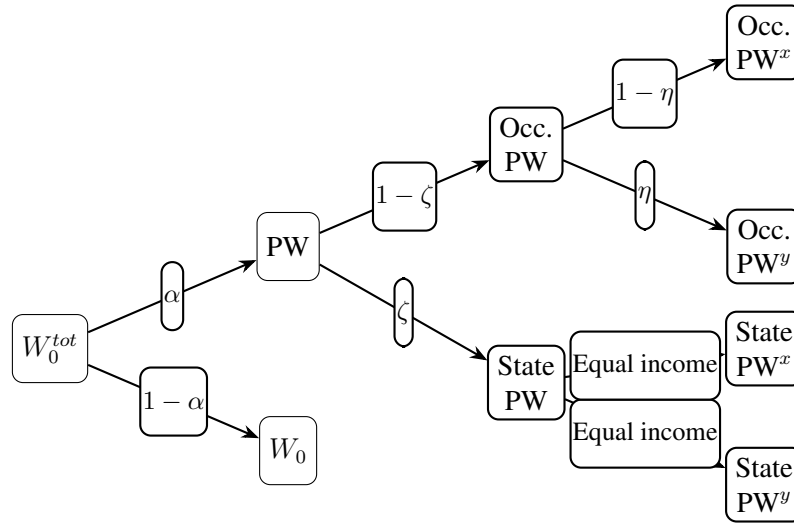


Figure 1: Distribution of a couple's total wealth. PW = pension wealth. Occ. PW = occupational pension wealth.

the setting. For each of the couple's occupational pensions, the annuity holding is determined such that if the corresponding individual passes away, the surviving spouse receives a fraction K_2 of the deceased's income.

Note that both the state and the occupational pension include a partner pension, which do not necessarily need to be the same amount. In the Netherlands, the value K_1 is set by the government, while a default option for K_2 is selected by the pension provider. This default value is often 70%, which is also the maximum amount that can legally be chosen. In the remainder, we consider K_1 as fixed and K_2 as a decision variable chosen at retirement.

Wealth Dynamics

At the start of each period, after receiving their pension and any life insurance payments, the couple consume C_t from their liquid wealth W_t and can purchase life insurance. The remaining wealth, after consumption and insurance purchase, is then invested in the financial market. The uncertainty in the next period wealth is due to the uncertain investment returns and the survival of each member. The wealth dynamics are given by

$$W_{t+1} = (W_t - C_t - \theta_t^x LP_t^x - \theta_t^y LP_t^y) (R^f + \pi_t(R_{t+1} - R^f)) + Y_{t+1}(K_2), \quad (5)$$

where $Y_{t+1}(K_2)$ is the income at time $t + 1$, π_t is the fraction invested in the risky asset at time t , and θ_t^x and θ_t^y the number of (normalised) one-year life insurance contracts purchased on x and y , respectively. The initial liquid wealth is equal to $W_0 = (1 - \alpha)W_0^{tot}$. The income at time t is the sum of the annuity and life insurance payments,

$$Y_t(K_2) = A^x(K_2)\mathbb{I}_t^x + A^y(K_2)\mathbb{I}_t^y + A^{xy}(K_2)(\mathbb{I}_t^x + \mathbb{I}_t^y - \mathbb{I}_t^x\mathbb{I}_t^y) + \theta_t^x(1 - \mathbb{I}_t^x) + \theta_t^y(1 - \mathbb{I}_t^y), \quad (6)$$

where $\mathbb{I}_t^z$ is 1 if person z is alive and 0 otherwise.

The investment and consumption decisions made by the couple must satisfy a budget constraint and short-selling constraints at each time point.

Couple's Utility

In this article, we focus on CRRA/power utility, which is already introduced in the first-year EOR course Introduction Finance and Actuarial Science. In our paper, we more generally incorporate preferences based on habit formation (see the Empirical Finance course in the QFAS Master). The couple's utility at time t is given by

$$u(C_t, S_t) = \begin{cases} \frac{2}{1-\gamma} \left(\frac{C_t}{\phi} \right)^{1-\gamma} & \text{if } S_t = s^{xy}, \\ \frac{1}{1-\gamma} C_t^{1-\gamma} & \text{if } S_t \in \{s^x, s^y\}, \end{cases}$$

where γ is the couple's risk aversion and C_t is the couple's joint consumption. The scaling factor ϕ represents economies of scale and is between 1 and 2. When both are alive, C_t/ϕ can be interpreted as the per person consumption. A higher ϕ means that the economical benefits of living in a couple are smaller. Utility from bequest is given by

$$\bar{u}(w) = \begin{cases} \frac{(w/B)^{1-\gamma}}{1-\gamma} & \text{if } B > 0, \\ 0 & \text{if } B = 0, \end{cases}$$

where B represents the strength of the bequest motive.

The couple's objective is to maximise the expected remaining lifetime household utility, subject to the trading constraints and state dynamics. The final time point T is determined by subtracting the initial age of the younger member from the maximum age. As taught in the ALM course, the optimisation problem is solved recursively using the Bellman equation

$$J_t^{K_2}(W_t, S_t) = \max_{\pi_t, C_t, \theta_t^x, \theta_t^y} u(C_t, S_t) + \beta \mathbb{E}_t [J_{t+1}^{K_2}(W_{t+1}, S_{t+1})] \quad (7)$$

$t \in \{0, 1, \dots, T\} = \mathcal{T}_0$, subject to the previously mentioned dynamics and constraints. The terminal condition is given by $J_{T+1}^{K_2}(w, s^0) = \bar{u}(w)$, for all $w \in \mathbb{R}^+$. β reflects the couple's time preferences, and $\mathbb{E}_t$ represents the conditional expectation at time t . If both members have died, we have that

$$J_t^{K_2}(w, s^0) = \bar{u}(w) \quad \forall t \in \mathcal{T}_0, w \in \mathbb{R}^+. \quad (8)$$

We use K_2 in the superscript to emphasise the dependence on the occupational partner pension, which is chosen at time 0 and determines the annuity holdings. The optimal partner pension is equal to

$$K_2^* = \arg \max_{K_2 \in [0, 1]} J_0^{K_2}(W_0, s^{xy}). \quad (9)$$

We solve the problem numerically using Gaussian quadrature to approximate the conditional expectation and a variation of Newton's method, which is discussed in the Optimisation course in the BAOR Master.

Results

We calibrate the parameters in our model using data from the LISS panel (Longitudinal Internet studies for the Social Sciences), which is based on a representative sample of the Dutch population. This data includes retired couples and information on their wealth, pension, income, housing, and other background information. After calibrating the model and performing the numerical optimisation, we analyse how different parameters affect the optimal partner pension and quantify the welfare losses from using a suboptimal amount.

We begin our analysis by comparing welfare losses resulting from using a suboptimal partner pension for different occupational pension asymmetries. We consider three different degrees of asymmetry corresponding to the 25%, 50%, and 75% quantiles from our empirical calibration ($\eta = 0.55, 0.74$, and 0.99). We calculate the welfare loss for a given K_2 by determining the additional amount of wealth needed to make a couple indifferent between this K_2 and their optimal K_2 . The additional wealth is calculated by finding $\tilde{w}$ such that

$$J_0^{K_2^*}(W_0, s^{xy}) = J_0^{K_2}(W_0 + \tilde{w}(K_2), s^{xy}). \quad (10)$$

To interpret the welfare loss as a percentage, we divide the extra wealth needed by the initial wealth to obtain

$$\text{WL}(K_2) = \frac{\tilde{w}(K_2)}{W_0^{\text{tot}}} \cdot 100. \quad (11)$$

In Figure 2, we plot the welfare loss as a function of K_2 for occupational pension asymmetries: $\eta=0.55, 0.74$, and 0.99 . The dots in the figure represent the partner pension levels that lead to the highest expected life time utility for the corresponding η . The optimal K_2 is lower for more symmetric couples compared to couples with more asymmetric pension wealth, keeping all other parameters equal. For the most symmetric case $\eta = 0.55$, the optimal K_2 is 0.42. As the asymmetry increases to 0.74 and 0.99, the optimal K_2 increases to 0.60 and 0.75, respectively.

The magnitude of the welfare loss from deviating from the optimal partner pension depends on the asymmetry. The welfare loss is largest for the

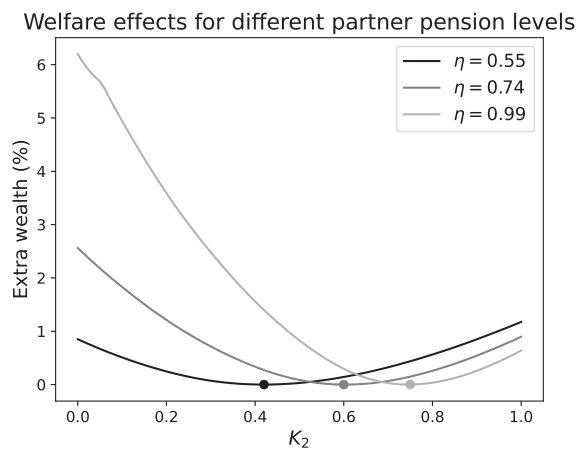


Figure 2: Additional wealth required to make a couple indifferent between a given K_2 and their optimal K_2 for three different asymmetries (η).

most asymmetric case when $K_2 = 0$, which results in a welfare loss of 6.2%. Intuitively, low values of K_2 lead to larger income drops after the death of the husband, which results in lower consumption and a larger welfare loss. By increasing the amount of partner pension, the income drop after the death of a spouse becomes smaller. However, increasing K_2 too much also leads to welfare losses. A larger K_2 exchanges some of the single annuities for the relatively more expensive joint and survivor annuities, resulting in a lower income when both are alive.

We finish by discussing the parameter sensitivity of the risk aversion and economies of scale. In Table 1, we provide the optimal K_2 's for each asymmetry in our base case, changing one parameter at a time. Beginning with the risk aversion, γ , we find that more risk averse couples have a higher optimal K_2 . Intuitively, there is a larger aversion to consumption drops, and increasing the partner pension reduces the drop in income after the death of a spouse and helps maintain consumption. For the economies of scale parameter, ϕ , we find that the larger the economical benefits of being in a couple (smaller ϕ), the higher the optimal partner pension. After the death of a spouse, the survivor loses the economies of scale benefit, which becomes more pronounced when ϕ is smaller. To compensate for this larger loss, the couple increases the partner pension to provide a higher income to prevent larger drops in consumption.

	$\eta = 0.55$	$\eta = 0.77$	$\eta = 0.99$
Base	0.42	0.60	0.75
$\gamma = 2$	0.00	0.30	0.53
$\gamma = 8$	0.52	0.68	0.79
$\phi = 1.1$	0.82	0.89	0.94
$\phi = 1.5$	0.16	0.40	0.59

Table 1: Optimal partner pension (K_2^*) for couple specific parameters. γ : risk aversion, ϕ : economies of scale. Base case: $\gamma = 5, \phi = 1.3$

The analysis in our paper goes much further, studying different parts of the model and the impact of several modelling choices. For those of you looking for a topic to dive into, partner pensions and life-cycle investing offer more than enough material for a future master's thesis (see references below for inspiration). The changing pension landscape raises new questions all the time. In that sense, there is still plenty to discover!

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Day in the Life of a Sjaars

written by Theo Janssen

Starting out at university can be a confusing time for many first-year students: the irregular hours and total freedom can turn out to be a blessing, or a curse. Now that the school year is well underway and we first-years have had some time to settle into university life, however, non-students and seniors might wonder: what does a freshman do with all of his time? To answer that, here is a not quite random but rather very specific day in the life of me, a first-year econometrics student at Tilburg University.

I woke up at 8:00 in the morning, as I do almost every morning, regardless of whether or not I have an early class; I use the time to make pancakes for breakfast. On this particular day though, I did not have time for that. This is because at 9:30 I had a meeting with my committee - the one that writes and publishes this magazine! In that meeting we did not get very much done, other than unanimously agreeing that 9:30 was too early for a meeting and deciding on what to do for our committee outing.

After the committee meeting I also had a lecture. Today on the agenda: Linear Optimization. As of writing this I (to my

great regret) cannot remember what we learned. Something to do with numbers, I am sure. The lecture ended at 14:30, after which my friends and I walked to the nearest grocery store to get a coffee, as we always do. Now, normally we would all hang out on campus for a bit or I would go home and do some school-work, but on this day I had something else to do: prepare my cycling dinner dish!

If you do not know what a cycling dinner is: you are paired up with someone and tasked with preparing a dish and then cycle to other pairs who have also prepared dishes. For example you first cycle to a pair that has prepared an entree, then to a pair that has prepared a main course, and then back to where you prepared your dessert, and by the end of the evening you have had a three course meal.

I was paired up with Sanne, from the Asset | Econometrics board, and had been tasked with preparing a dessert in the theme 'James Bond in Shanghai'. Now that is very specific, and we could not really get the James Bond aspect of it worked out, so we just decided to make mango pudding. This turned out to be very simple, and after having got all the ingredients it only took us at most 25 minutes of actual 'cooking'.

We then headed to where we'd been assigned to eat an entree, and the duo there had prepared caprese. Simple, refreshing, tasted very nice. Solid 7.5/10. After this, the main course, which had been prepared by my TOP mentors. It was very nice to be able to catch up with them, and the food was also there. They had made DIY pokebowls. Having eaten the main course we headed back to Sanne's place to host people for dessert, one of whom was actually Hedser, EiC of our Nekst committee! Our mango pudding had turned out fine, I personally just did not really like the



coconut flavour it had. Besides the mango pudding, we had also bought a bottle of lychee wine, keeping with our Asian theme. The lychee wine was absolutely awful. After everyone had finished dessert, all groups headed to the Nachtwacht, a local bar where loads of asset activities often end. At the bar were many more Asset | Econometrica members, not just the ones that had taken part in the cycling dinner, and here was where the night really kicked off for many; when people started leaving from the Nachtwacht and going to clubs, I instead went home as at this time I did not yet live in Tilburg, and had to cycle home about twelve kilometres. I arrived home at about 2:00 in the morning and went straight to bed.

This was a day in the life of a first-year student. While studying and working hard is an important part of university, we also must not forget to enjoy ourselves and connect with our fellow students, and this day was a perfect balance of both aspects of university life. It is important to remember that these experiences, no matter how big or small, are what truly shape our time at university •



From Econometrics to Entrepreneurship

brought by **Datavore**

For many students in our Bachelor's and Master's programmes, the path after graduating in econometrics is clear-cut. Maybe you will join a consultancy, a bank, or, for those who dream of being rich, a trading firm. Chris Noordhoek, however, took a different approach. Instead of doing a job interview, he started building his own company.

A short while after graduating, he officially launched Datavore, a small consultancy focused on helping companies make better use of their data. A very ambitious idea, but according to Chris, it didn't start with some grand scheme. "It started over a beer."

Starting at Econometrics

During his Master's thesis and while working with Quantum Leben, he looked at ways to combine traditional actuarial models with machine learning techniques. Insurance companies rely on well-known

statistical methods to estimate future claims and reserves. For example, they use the Chain Ladder method, which has been an industry standard for multiple decades. Instead of replacing that method entirely with a neural network, Chris applied a hybrid approach. The traditional model produces an initial estimate, and the neural network adjusts that estimate by learning patterns in the data. The main advantage is that it builds on an existing structure, which makes the results more stable and easier to interpret.

"If a neural network completely replaces the model," he explains, "you can sometimes get results that don't make much sense in practice." This combination gives the flexibility of machine learning and the logic of the traditional model. This idea of interpretability is an important part of Datavore.

How the idea of Datavore materialized

The idea for Datavore took shape during conversations with his brother-in-law, Dennis van der Heijden, a business controller with several years of corporate experience. Around April 2024, they started discussing whether they could combine their skills and build something together.

They started talking about what kind of problems companies struggle with and where their skills might be useful. Gradually, those conversations became a bit more concrete. They designed a logo; if you look closely, you can see a mouth incorporated into it. It reflects their hunger for data (herbivore, carnivore). You get it? Besides creating the logo and name, they built a website and considered which services they actually wanted to offer. They decided to go all in. On May 23, 2025, Datavore was officially registered.

Chris tells us entrepreneurship has interested him since he was young. Even in



primary school, he set up small businesses, such as buying and selling items to classmates. For a long time, he thought he might end up in trading instead. That career path is quite common among econometrics students and initially appealed to him as well.

Starting from scratch

Launching a company right after graduating sounds exciting, but Chris quickly pointed out that the start-up phase was not exactly what you might expect. "When you start a company, you basically start with nothing," he says. "No reputation, no clients, or any track record. Only the things you did during your studies and the people you know."

In the first few months, there was no cash flow at all. Most of their time went into preparing presentations, reaching out to people, and finding opportunities. This involved talking to many people.

They were not trying to oversell anything immediately, but just hearing each other out and trying to figure out what kinds of challenges companies were facing. It might take three or four conversations before anything comes out of it. But slowly, those conversations started turning into projects.

Gaining track

Their first assignment came through Chris's own network. During his studies, he was a working student at the insurance



Transforming Complex Data Into Tangible Solutions

At Datavore, we believe data is only powerful when it's understood, trusted, and actionable. Our mission is to help organizations unlock the full potential of their data — by making it clear, usable, and a driver of impactful decisions.

Let's Talk!

company Quantum Leben. When someone at the company temporarily dropped out, they asked him to step in for a short-term project.

The assignment involved analysing the company's data processes and identifying ways to improve them. The company had plenty of data, and even a data specialist, but the processes surrounding it were far from streamlined. Data quality was inconsistent, systems did not always communicate well with each other, and some of the models they had tried to build simply did not run properly.

"So before you even think about machine learning," Chris explains, "you first need to understand what data you actually have and whether it is usable." The project focused on mapping the current situation and identifying practical steps to improve it, which is exactly the kind of project Datavore works on.

A golden combination

Both Chris and his brother-in-law have fairly different roles within the company. Chris mainly focuses on the technical side of projects. That means working with data, building models, and implementing analytical solutions. His co-founder approaches things from a business perspective, figuring out how solutions will actually be used within the client's organisation.

As it turns out, this is a golden combination. "You can build the most sophisticated model in the world," Chris says, "but if nobody understands it or trusts it, it is useless." Making models understandable

and practical is an important part of their work and what they try to achieve. Clients need to be able to see how a model works and why it produces certain results.

That is why Datavore starts projects by taking a step back and looking at the bigger picture: to get an overview of how data is collected, stored, and used within the company.

Beyond the model

Of course, running a company at that scale involves plenty of tasks that have nothing to do with econometrics or programming, but more with the business side. Besides working on data projects, he spends quite some time on tasks like preparing presentations, handling administrative work, and designing promotional materials, such as playing cards he hands out at networking events.

Naturally, some tasks are less enticing, such as filing tax returns or organising the company's finances. His workweek usually ranges between forty and fifty hours, not McKinsey-like as some might expect. The main difference compared to a regular job, he says, is that everything contributes directly to building something of your own.

Since starting Datavore, the founders have worked on a mix of projects. Some are relatively small assignments that may take only a few days. Others take over a hundred hours. One example was a project involving inventory management for a company renting hard plastic festival glasses.

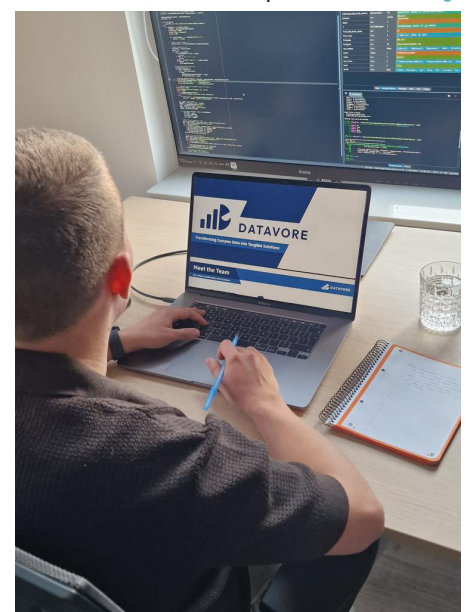
The importance of your network

Chris repeatedly emphasises the importance of networking. Datavore rarely approaches companies through cold calls or cold emails; most opportunities come through people they have already connected with. Maybe it is a former colleague, maybe a family connection, or maybe someone they met at an event.

He adds that a connection is easily made, and can take just 10 seconds, but you never know when that connection might become valuable later. These connections played a key role in the company's start, both in creating opportunities and in driving learning.

Before the conversation ended, Chris shared one piece of advice for our student readers, gain experience outside the classroom. Working-student positions, internships, or thesis projects at companies can give you a much better understanding of the internal workings and day-to-day operations of organisations. "You learn a lot from just being inside a company and seeing how things work." Chris' own working-student position is a great example: it is both a product and a driver of building a network.

If you are interested in the types of projects Datavore works on and you want to find an internship or write your thesis at a company, Datavore is always open to a conversation. Although the company is still relatively small, they are always interested in meeting motivated students. After all, that is exactly how many opportunities start, with a simple conversation.



How Jan and Schrobbeleer Became Part of Kruikenstad's Culture

written by **Mattijs Vernooij**

What started as a personal experiment in a home bar has grown into a defining symbol of Tilburg's gezelligheid and carnaval culture. More than 50 years ago, enthusiastic carnaval celebrant Jan Wassing began mixing his own drink because he simply could not tolerate alcohol very well. Driven by curiosity rather than commercial ambition, he experimented with existing spirits, herbs, spices, and even homeopathic ingredients. The result was the herbal liqueur now known as Schrobbeleer.

In this interview, we speak with Jan Eijssermans, current commercial director of Schrobbeleer and grandson of its creator, who explains how the drink evolved alongside Tilburg's carnaval traditions. In the early days, his grandfather was actively involved in a then-young carnival foundation (carnavalsstichting). Schrobbeleer was sold during festivities, with part of the proceeds supporting the foundation. As people started to enjoy the drink more, demand increased steadily. After confirming its popularity in Tilburg through research, the family expanded outward, introducing the liqueur in nearby cities by personally visiting bars and sharing its story. This hands-on, story-driven approach remains central to Schrobbeleer's growth strategy.

Jan himself grew up in an entrepreneurial family and developed a strong

affinity for marketing early on. He went on to study business administration and marketing management in Rotterdam. During his studies, he conducted a case study on the collaboration between Guus Meeuwis and Schrobbeleer, back when the latter were not yet nationally known. After graduating, he began working on various projects within the company under the guidance of his uncle, the then-director. One project led to another, across different branches of the business, eventually leading him to the role of marketing manager, closely aligned with his studies, and later to his current position as commercial director.

Schrobbeleer's unique story and focus on a single, self-owned product allow for playful and creative marketing ideas. Jan shares an example of an April Fools' joke, where the company announced it would launch its own beer. Thousands of people and hospitality venues signed up to receive a test version, including, me, the writer of this interview. In the end, the "product" turned out to be the idea of mixing Schrobbeleer into your beer. According to Jan, this kind of light-hearted, playful approach is exactly what defines the brand. While many ideas are implemented based on gut feeling, he acknowledges that data-driven approaches could add value. Still, the company's long-standing success shows that fully backing a good idea often works best.



The family business has continued to grow over the years, particularly within Brabant, where it enjoys strong brand recognition. Outside the region, however, there is still room for expansion. While Schrobbeleer is available in many liquor stores, awareness is not yet as widespread. The drink is also gaining popularity in Belgium. Jan firmly believes in the brand's growth potential, though he emphasizes the importance of taking steady, measured steps.

At its core, Schrobbeleer aims to radiate warmth (gezelligheid), and a sense of togetherness (saamhorigheid). This is reflected in how people experience the product: during tastings and tours, customers often mention drinking it at reunions, family gatherings, or, of course, during carnaval, moments shared with friends and loved ones.

If you think of Schrobbeleer, you think of carnaval, and if you think of carnaval, you think of the Carnival Prince (Prins Carnaval). That brings us to Jan d'n Derde, the title Jan held in 2023 when he became Prins Carnaval of Kruikenstad (Tilburg) for the first time. As Prins, you lead the festivities and act as a connecting figure, as Jan describes it. You visit a wide range of places, from schools and care homes to bars and carnival associations (carnavalsverenigingen). Each appearance is a spectacle, as the Prins arrives with a large entourage, including the musical groups (hofkapellen), bringing energy and noise wherever they go. Jan describes the experience as enjoyable and well-organized, though it requires constant enthusiasm, alertness, and a genuine love for the celebration, qualities he clearly embodies.

Remarkably, Jan served as Prins Carnaval for two consecutive years. While the first year was filled with excitement and nerves, the second was more predictable and relaxed. Being Prins is no small commitment: starting from 11 November, weekends are fully booked, with activities increasing as carnaval approaches, eventually spilling into weekdays. Jan notes that both his role at Schrobbeleer and his time as Prins share a common goal, bringing people together and contributing to gezelligheid, something he finds deeply fulfilling.



After two years as Prins, it is standard to step down, allowing Jan to return to celebrating carnaval with his association, Veul Gere. This group has become well-known for its carnival hits, including their most popular track, "Un Lekker Delleke". Veul Gere was founded during Jan's student days with a group of friends. After celebrating carnaval together for a week, they decided, on the less crowded Tuesday, when some had already dropped out (lamme takken), to motivate each other to keep going until the very end. That spirit became the foundation of the group.

Soon after its founding, Veul Gere began making music. Their first collaborations included working with Peter Smulders for several years. Later, they re-released the song "Onze auto rijdt op alcohol" with Clown Bassie, adding their own humorous twist, complete with Bassie's high-pitched voice and a caravan driving through Tilburg in the music video. Their breakthrough came with "De Gròzzie van Mèn Buurvrouw," which even earned them an award from 3FM radio station. From that point on, performance requests started pouring in, marking the group's rise.

Their first booking came as a surprise. Unsure whether they even wanted to perform, since they thought preferring celebrating themselves, they quoted what they considered a very high fee. To

their surprise, it was accepted, and from there, the momentum grew rapidly. Each year brought new songs and increasing demand, eventually establishing them as one of the biggest carnival acts.

The years that followed included hits like "Speciaole Friekendèl," and later, fully self-written songs that further boosted their popularity. Performing remains one of their favorite aspects. As Jan puts it, it is "fantastic": spending the day partying with friends, both on stage in front of thousands and on the road in their party bus. Since most members have careers outside the group, performances are mainly concentrated between 11 November and carnaval. In recent years, they have performed at 013 (a major Tilburg venue) for thousands of visitors and are planning a large concert in 2027 at the Spoorpark with 22,000 attendees. They have also performed outside the traditional carnaval season at major festivals such as Zwarte Cross and Paaspop.

Creating new music is still a challenge. Typically, part of the group comes together to brainstorm ideas, drawing from overheard phrases and double meanings. Humor is essential, and the lyrics must always carry a playful twist. Even after years of experience, it remains difficult to predict whether a song will go viral like previous hits, but they appreciate that their music is consistently well received.

Memories worth longing for

written by [Anouk Wets](#) and [Stijn Latenstijn](#)

The previous edition of the Nekst had one central theme: skiing & snowboarding. Snowy mountains, après-ski and endless slopes were the setting for stories and expectations. In January, the Asset Skitrip made those stories and expectations a reality. With a big and diverse group of students (with, of course, a bunch of econometricians, but in contrast to past years, also a lot of members of other Asset departments), we headed off to Tignes (France) for a week that soon turned out to be a lot more than just skiing & snowboarding. We look back at a week full of sun, snow, chaos and memories from the perspective of a member and a committee member. These moments are difficult to capture in two pages; however, we are going to try our best!

The big, amazing Tignes pubquizzzzz

Before we were on the slopes, or before we were even in the bus, the tone had been set. The committee organized a pre-Skitrip borrel so that all the different Asset departments could get to know each other. Different teams, which all contained members of different departments, fought

it out to be the smartest in the room during the big, amazing Tignes pubquiz. A lot of questions, headscratches, drinks and a lot of laughter later, there was a winner. However, the most important win of that evening was the bonding of the group.

Everyone decided to hang around after the pubquiz, and people, friends or lesser-knowns decided to chat the entire evening. Everyone has already made plans for the Ski Trip. By the time we headed into the city, it already felt as if the trip had begun.

The first of many rides this week

On Saturday evening, January 26, we departed for France. What followed was a bus ride that was anything but restful for most people. There was plenty of talking (a large part of which consisted of fun facts about penguins, a topic that somehow continued throughout the rest of the week), laughing, and, not surprisingly for econometricians, enthusiastic solving of Swedish puzzles. Sleeping turned out to be optional for many, but despite that, the energy levels stayed high.

On Sunday morning, we arrived in Tignes: tired, but above all, excited. The first few hours were all about settling in: having breakfast, picking up ski equipment, and getting comfortable in the rooms. After that, it was time to hit the slopes.

The conditions were not ideal yet, as it was cloudy and icy in some places, but that did not dampen the enthusiasm. For some it was their first time skiing, while for others it took a bit of time to adjust to different skis, but the first runs were all about trial and error. Fortunately, by the end of the day, everyone was slowly starting to find their rhythm.

The evening ended quietly in the hotel's recreation room. After a night without sleep, that was certainly no unnecessary luxury. However, it did not remain just a calm evening: people chatted, played games, and looked back on the first day, while the committee was busy organizing a pub golf.

The week gets going: sunshine, speed, and après-ski

Monday was the first real "full" day of skiing, and immediately one of the best. In larger groups, we explored the ski area during a day tour, skiing with new people and having spontaneous encounters on the slopes. With packed lunches in our bags and the sun finally breaking through, we eventually found a spot overlooking the mountains where we could have lunch together.

One of the more memorable parts of the day was the famous ski lift that carries you over the mountain ridge. Many of us had already seen this spot on TikTok before, but now we finally got to experience the lift in real life.

In the evening, a pub golf was on the schedule. What started at the hotel quickly moved to an Irish pub and eventually ended at Ranga Bar, with a snowball fight somewhere in between. As is often the case with a pubgolf, the evening became more and more chaotic as it went on, but in a good way. People played ping pong, various other games, and at one point, part of the group even became part of a band, together with a local trumpet player.

Peaking on the peaks

Tuesday was all about exploring the highest points of the area. With 3,455 meters as the literal peak of the day, plenty



of photos were taken. Fortunately, everything about this day was just right: good weather, good snow, and a group that by now was fully in sync.

Throughout the day, an unofficial competition emerged: who could stay on the slopes the longest? People were determined to be among the very last skiers in the group, making sure they also caught the final lifts of the day.

As if the day was not complete enough already, it ended with a live performance by Afrojack, providing an energetic finish to a long day on the slopes.

One particularly notable moment was the creative method that some people found to transport their pizza: instead of walking around and taking the stairs, they used a snow-covered shortcut, where a group slid down a hill in normal clothes and without a sled.

Dressing up to go down the slopes

Wednesday brought perhaps the most iconic moment of the week: Midweek Madness. While in the morning the group was still somewhat spread out, headed onto the slopes, that quickly changed once the first striking outfits appeared.

Minions, Teletubbies, and other creations showed up on the piste, and what started as separate small groups grew into a kind of skiing parade. This was a moment that was not only special to experience but was fortunately also captured on a GoPro. The evening was all about the cantus,

where even the bar owner joined in during the polonaise of "Jan Klaassen de trompetter." It created a unique atmosphere in which the boundaries between participants and locals blurred. After dinner at the hotel, the group headed back to the bar, where the night continued for a long time.

Ranking the rooms

Thursday revolved around the room ranking. Throughout the week, points could be earned by completing various challenges, and this day was dedicated to carrying them out.

Teams got to work enthusiastically, leading to creative, sometimes slightly absurd, but above all entertaining situations. The competitive element added an extra dimension to the trip and kept everyone engaged (including competition between skiers and snowboarders, which occasionally even got physical, with skis being "borrowed").

With good weather again and a successful après-ski, the day ended with games in the hotel's recreation room, which by now had become a regular gathering place for the group.

(The) Last Friday night

Friday was the last full day on the slopes, and it showed. Fatigue had definitely set in, but that did not stop anyone from making it a great day.

With multiple stops along the way, there was still plenty of skiing, lunches on the slopes, and enjoying the views. One of the

more remarkable moments was undoubtedly a game of rock-paper-scissors between four people sharing the same room, to decide who would go down the slopes in a bikini for points (in the hope of securing enough to win the room ranking). A large group watched this beautiful moment unfold, perfectly capturing the absurdity and spontaneity of the week.

People kept going until the very last lift. After that, the final evening followed, filled with karaoke, a return visit to Ranga Bar, and games of pool with a group of Brits. It felt like a fitting farewell to a week.

The final ride

What made this trip special was not only the location or the activities, but above all, the group. The mix of people, the open atmosphere, and the balance between organised activities and spontaneous moments turned the week into more than just a ski trip.

From a committee perspective, it was remarkable to see how a group that beforehand largely consisted of separate clusters from different study programmes grew into a close-knit group in a short time. From a participant's perspective, it was exactly that same atmosphere that made the trip so valuable.

Where the previous edition of this magazine described winter sports as a theme, we were now able to experience it ourselves. If this week made one thing clear, it is that some stories only truly come to life when you are right in the middle of them.



Quatsch!



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

Eva

"Hij heet Alexander"

Hedser

"Heet hij Alex en dan als achternaam Sander?"

Thomas

"Wie heeft er ooit bedacht om aan een koe te gaan lopen trekken?"

Niels

"Als het 16 graden is, en je pakt je long-sleeve en een bodywarmer, dan kan je gewoon heel de wereld aan."

Siebe (over de benzineprijzen)

"Ik schrik er toch van, als ik er langsrijd"

Wouter

"Ze hebben geen 2/3e van de zetels, ze hebben ongeveer 66%."

Emma

"Als ik burgemeester was, zou het OV gratis zijn."

Puzzle Time

Story Time - Carnival Confusion!

written by **Anne Verbeek**

This year's Carnival in Tilburg was one for the books. EIC Hedser danced through packed streets, hopping from pub to pub, laughing, singing, and celebrating long into the night.

But the morning after tells a different story. Hedser wakes up with sore feet, a hoarse voice... and a sinking feeling. His bag, containing his phone wallet, and keys... is gone.

Determined to recover his belongings, Hedser retraces his steps through the city. The map in front of you shows the buildings he visited as islands, separated by winding streets. Somewhere along this route lies the answer, but the details are hazy.

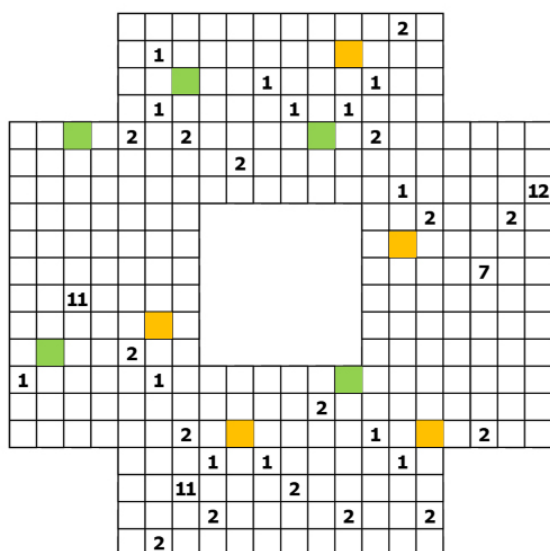
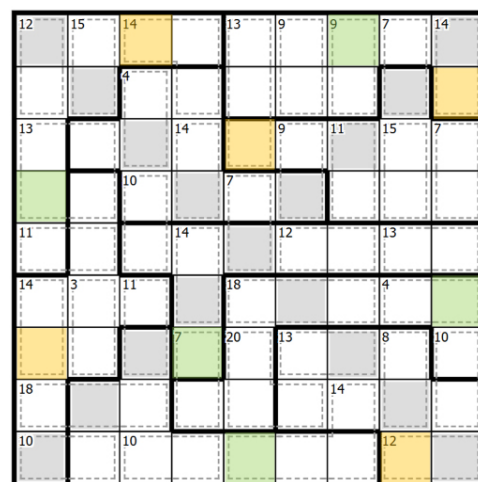
Luckily, Hedser remembers fragments: house numbers, glimpses of doors, flashes of color. By reconstructing the correct house numbers from the puzzle and matching them to the right locations, you can help him piece together where he went, and where his belongings must be.

Can you guide Bram though the maze of memories and bring his Carnival adventure full circle?

Killer Sudoku

Fill the 9x9 grid so that:

- Each row, column, main diagonals, and box contains the digits 1 through 9 exactly once.
- The grid is divided into cages (outlined groups of cells). Each cage has a given sum. The digits in the cage must add up to that sum.
- Digits may not repeat within a cage.



Nurikabe

Shade cells to create a valid Nurikabe solution:

- The grid contains numbered cells. Each number represents an island.
- Each island consists of exactly as many connected (orthogonally adjacent) cells as its number.
- Each island must contain exactly one numbered cell.
- Islands may not touch each other orthogonally (they may touch diagonally).
- All cells not part of islands are water (rivers), which must form one continuous connected area.
- Water may not form any 2x2 square.

Additional Rules (Colored Cells):

- Some cells are shaded orange or green, hiding their numbers.
- The hidden numbers come from the corresponding colored sets in the Killer Sudoku
- Each colored cell must be assigned a number consistent with Nurikabe rules.
- Determining which number goes in which colored cell is part of the puzzle

Asset | Econometrics congratulates...

Name **Che Boelaars**

Title Using passenger ticket change data to create customer segments for the new Chang & Fly ancillary

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Name **Vivian Chow**

Title Modeling Prepayment Behaviour in the Dutch Mortgage Market: A Survival Analysis Approach

MSc EME

Supervisors Dr. B.M. Siflinger, Prof.dr. M. Salm

Name **Boris Boiarchuck**

Title Does the inclusion of systemic risk and market uncertainty indicators in the family of GARCH-X models improve modelling of tail risk measures for the banking industry

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Name **Luuk Reinders**

Title The Dynamic Nurse Rostering Problem: A framework to determine how and when to roster.

MSc EME

Supervisors Prof.dr. J.H. Abbring, Dr. S. Sadikoglu

From Student to Teacher

written by **Andy Huynh**

Alongside the professors who teach the main lectures, many people help support courses in the Econometrics and Operations Research program. These are the people who teach tutorials, run instruction lectures, or assist with grading. Often these are PhD students at the department, but some courses also rely on undergraduate or Master’s students as teaching assistants.

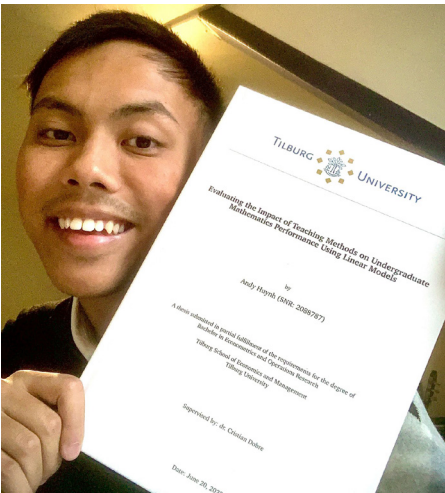
After taking Advanced Linear Algebra in my second year, I unexpectedly ended up on the other side of the classroom myself. Not long after the course ended, I was contacted by dr. Cristian Dobre, who later became both my supervisor and closest collaborator at Tilburg University. He invited me to join his teaching team as a Teaching Assistant. Since then, I have been supporting two courses: Advanced Linear Algebra and Decision Making with Business Analytics in the IBA program.

In both courses, I teach the weekly tutorials, guide students through their homework, and help them turn the theory from

the lectures into something they can actually work with. Outside the tutorials, I also help develop course materials: exercises and even exam questions. Working on both the teaching and the content side has given me a much clearer picture of how courses are built and continuously improved behind the scenes.

My collaboration with dr. Dobre has played a big role in this experience. Working with him has always been open, constructive, and genuinely enjoyable. He involves me in discussions about course design, asks for my input, and treats the process as a shared effort rather than a one-directional task. Because of that, the role has felt less like simply assisting and more like contributing to a joint educational project, one where the goal is to help students connect with the material as effectively as possible.

This cooperation eventually led to another opportunity: in my third year, I was invited to write my Bachelor thesis under his supervision. Building on what I had seen as a TA, my thesis examined how different instructional methods influence student



performance in university-level mathematics. Without going into too much detail, the project allowed me to explore questions I had repeatedly encountered in the classroom, that is why some students respond better to active learning, how prior preparation affects learning outcomes, and what teaching formats work best for different groups of learners. Using ANOVA and linear models, I compared approaches such as traditional lectures, flipped classrooms, and asynchronous learning. The project not only strengthened my research skills, it also made me a more thoughtful and deliberate teacher.

Being a Teaching Assistant has shaped my academic experience far more than I expected when I first enrolled in the program. It has shown me how much work goes into good teaching, how course materials evolve through collaboration, and how rewarding it is to help students reach those “aha” moments. Above all, it made me realize how powerful good instruction can be, not only for improving performance, but also for influencing how students experience and appreciate mathematics.



Evaluating the Impact of Teaching Methods on Undergraduate Mathematics Performance Using Linear Models

by

Andy Huynh (SNR: 2088787)

A thesis submitted in partial fulfillment of the requirements for the degree of Bachelor in Econometrics and Operations Research
Tilburg School of Economics and Management
Tilburg University

Supervised by: dr. Cristian Dobre

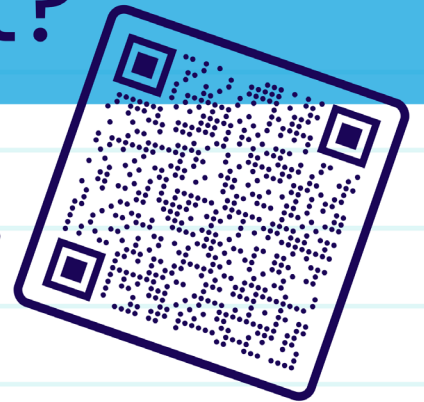
Date: June 20, 2025

Abstract

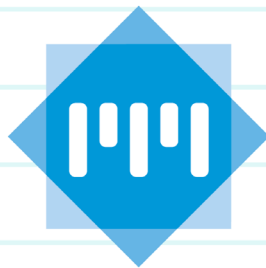
This thesis investigates the effect of different teaching methods on student performance in undergraduate mathematics, using classroom data from Tilburg University. Employing ANOVA, ANCOVA and GLM models, the study compares traditional lectures, flipped classroom, and asynchronous formats, while controlling for prior academic achievement. The analysis explores how instructional format interacts with student in the field of mathematics learning outcomes, across different types of assessment tasks. The findings highlight the pedagogical implications of adopting active learning models in technical subjects and underscore the importance of aligning teaching methods with student needs. Methodologically, the thesis contributes to educational research by illustrating the connection between ANOVA and linear regression frameworks and applying the Frisch-Waugh-Lovell theorem to derive adjusted treatment effects. The results offer insights for the design of effective, data-informed instructional strategies in undergraduate mathematics education.

In need of some extra study support?

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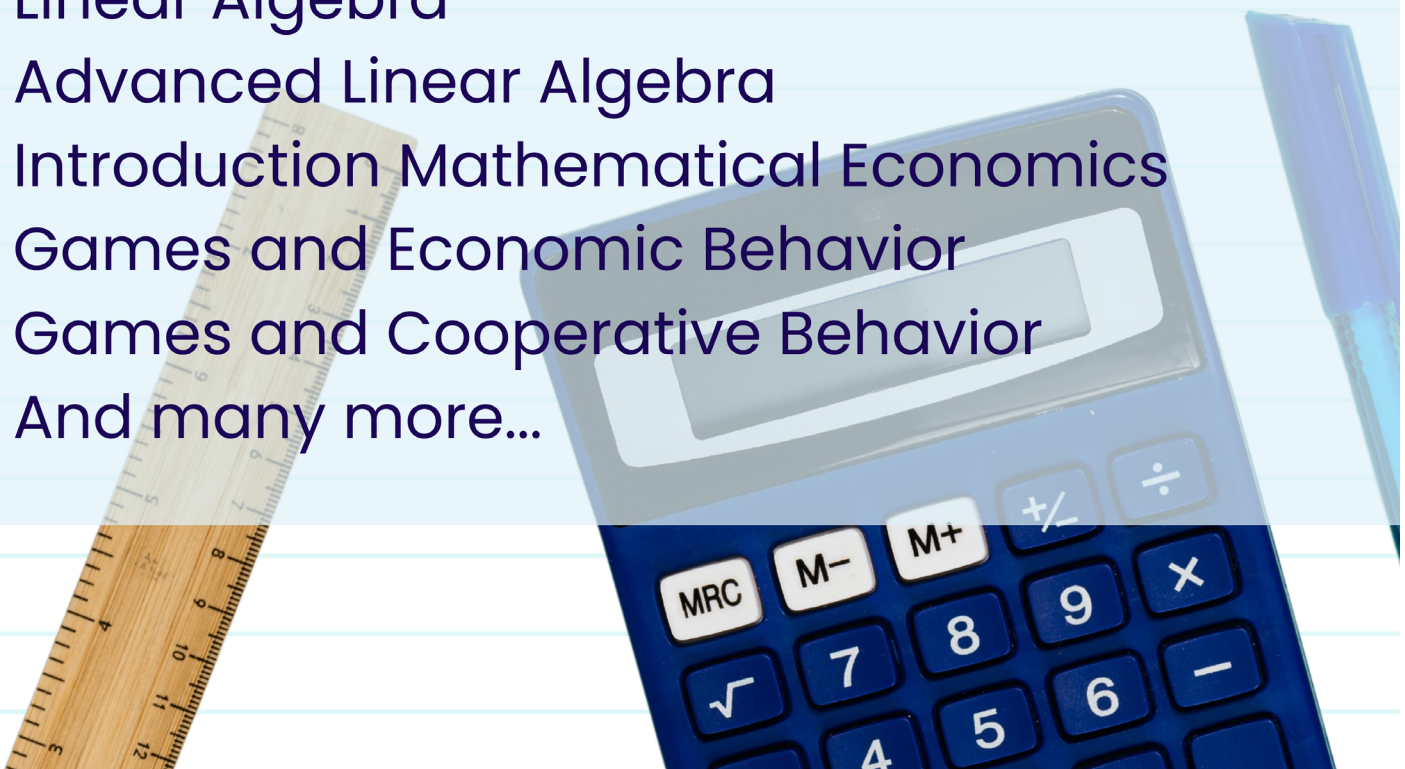


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Finance Expedition 2026

written by **Isabel de Man**

The Finance Expedition is an engaging and educational formal activity organised jointly by Asset|Econometrics and Asset|Financials. During three days, a selected group of students will visit several leading companies and explore three different sectors of the financial world: Corporate Finance, Asset Management and Risk Management.

The committee of this year's Finance Expedition consists of seven members: Matthijs, Sanne, Samuel, Kars, Timo, Bram and myself, Isabel. Together we are responsible for all preparations, communication and practical coordination required to organise a multi day event. Although each member has a specific role, we work together to ensure that the event becomes a success.

I am writing this article as someone who joined the Finance Expedition last year. At that time, I did not know many people within the study association. I was asked if I wanted to participate, and although I had some doubts at first, I eventually decided to join. Looking back, I am glad I made that choice. The visits were informative, and I enjoyed the combination of presentations, cases and informal conversations. I also met people with whom I later became friends. The event made me feel more connected to the association and encouraged me to become more

active within Asset Econometrics. This eventually led to my decision to join the committee this year, so that I can help organise an event that had a positive influence on my own experience.

Our first committee meeting took place recently. It was not our most productive meeting. The study association had organised a "huifkar" activity the night before, which resulted in almost everyone arriving tired and low on energy. On top of that, Matthijs had scheduled the meeting at nine o'clock in the morning, which we all agreed afterwards was not ideal. We introduced ourselves, briefly discussed the outline of the event and then headed home again. Even though the meeting was short, it allowed us to meet one another.

The Finance Expedition will take place from the twenty fourth to the twenty sixth of February. The first day focuses on Corporate Finance with visits to BDO and Marktlinc. These companies introduce students to topics such as business valuations, strategic advisory work and mergers and acquisitions. The second day is centred around Asset Management. The exact companies for this day have not yet been confirmed, but students can expect to learn about portfolio management, investment strategies and market developments. The final day concentrates on Risk Management with visits to Van Lan-

schot and Highberg, where participants will gain insight into how financial institutions evaluate and manage risk.

A company visit usually consists of three parts. First, employees give a presentation about the firm and the department relevant to the theme of the day. After that, students work on a case in small groups. These cases often reflect questions or situations that arise in practice. Last year one of the companies even shaped their case as an escape room activity, which made the day more interactive. Finally, groups present their solutions and are able to ask additional questions to the employees.

Students who participate in multiple days stay overnight in a hotel, which adds a social element to the event. Previous editions included relaxed drinks in the evening and the opportunity to get to know fellow participants outside the formal programme. These informal moments really contribute to the overall experience.

For many students, the Finance Expedition is an accessible introduction to the world of finance. Whether someone is interested in corporate finance, curious about investing or exploring risk consulting, the event provides a clear and practical overview of different career paths. As a committee, we aim to organise an event that is informative, approachable and enjoyable, just as it was for me last year.

We look forward to welcoming a new group of students in February. Keep an eye on the promotion, prepare your CV and hopefully we will see you at one or more of the Finance Expedition days ●





Agenda

THU 13 AUG **Midsummer BBQ**
On August 13, the yearly Midsummer BBQ takes place. Meet up with all your favorite fellow members to talk about your holiday!

WED 19 AUG **TOP Week Asset Party**
Want to have a last party before the academic year begins? Join us at the Asset TOP Party, together with all new freshmen and their TOP parents!

MON 31 AUG **Tilburg University Cantus**
Suprise, you can also come celebrate the start of the year with us on August 31 during one of the biggest cantusses of the year.

TUE 01 SEP **Department Members Meeting**
The new board of Asset | Econometrics will be officially constituted. The current board will discuss all ins and outs of the past half year, and there will be an update on the financial matters. The new board will also discuss its plans for the upcoming year. Before the DMM, you can join us for dinner for free!

WED 02 SEP **Constitution Drink**
On September 2, the CoBo of Luke, Anouk, Gijs, and Sanne will take place at De Heuvel Gallery. Be sure to join us to watch them get roasted and thank them for their year of hard work and dedication to our association!

WED 09 SEP **Freshmen Introduction BBQ**
This event on September 9 is organized exclusively for new first-year students. Join us for a barbeque at Feestcafé de Prins and some drinks, and get to know your fellow freshmen!

THU 17 SEP **Members Day**
Save the date! It is still a surprise what this year's Members Day will look like, but you can already add it to your calendar to look forward to this day.

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

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