



**James Heckman** is a Professor of Economics at the University of Chicago. He has devoted his professional life to understanding the origins of major social and economic questions related to inequality, social mobility, discrimination, and the formation of skills and regulation in labour markets, as well as to devising and applying rigorous empirical methods for understanding and addressing these questions. He is the recipient of the 2000 Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.



**Laura van Geest** has been director of CPB Netherlands Bureau for Economic Policy Analysis since 2013. She has degrees in economics and in public administration from Erasmus University and started her career as policy advisor at the Ministry of Finance. Following her position as policy advisor to the Dutch Executive Director of the IMF, she worked on a variety of domestic policy areas at the Ministry of Finance. Ms. van Geest held the position of General Treasurer and Director General for the Budget during the financial crisis.

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# A master class in policy research

*A conversation between  
James Heckman and Laura van Geest  
in memory of Jan Tinbergen*

Laura van Geest and James Heckman both carry on Jan Tinbergen's work into the future. Van Geest is the successor of Jan Tinbergen at CPB Netherlands Bureau for Economic Policy Analysis and Heckman has built upon his econometric legacy and applies it to today's societal challenges. Both economists do so with great pride, though their styles differ. The Chicago economist is outspoken in his praise "My God, I think of Tinbergen as one of the master synthesizers" while the CPB-Director is more deliberate "Using big data, data analytics, I think that would be Tinbergen today. That is also one of the reasons for us to take that on now."

A much greater difference is the current willingness and ability of both politics and policy in their respective countries to benefit from academic insights and evidence. This will turn out to be a recurring theme in most of our conversations, which feature Nobel Laureates based in the US and policy makers in Europe.

**Heckman:** "The immediate structure is poor. The current administration is very unsupportive of using basic research for anything. We have members of the oversight committee for the National Institute of Health who do not believe in the theory of evolution. The whole policy making area, the politics, has become so intense. And the political bickering has gotten so passionate that in much decision making, evidence does not play a very big role. And I

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think that is now true at all levels of government. This point of departure is a little bit different, I would bet, from what is going on in Holland.

When evidence plays a role, it is usually something that an advocate who already favours a position picks up to defend that position. I think we are far away from the time that people like Walter Heller, Bob Solow and others were on the Council of Economic Advisors. And Milton Friedman too, I would guess, who in the early 1960s convinced Kennedy of the benefits of the tax cut. They talked about the incentive effects. They talked about things called ‘fiscal drag.’ A whole group of economists influenced government policy to an extent that is not present today at all.

It is not just the Republicans. In the US there are a lot of people like Elizabeth Warren and Bernie Sanders who are touting visions of a welfare state that the Dutch gave up on a long time ago. In the name of reform, they refer to some fantasy world.”

**Van Geest:** “The Netherlands is quite a different country. Most policy makers take note of the research that is being undertaken and use it to come up with policy measures. But that is also due to the political system in the Netherlands where we have a full representative parliamentary democracy system with coalition governments instead of a first-past-the-post system. This makes sure policy making is still being undertaken across the middle and the middle is still interested in evidence as a means to reach a compromise and in policy that provides results.

Also, in the Netherlands we have this tradition that economic analysis is being undertaken by an independent body like the CPB. Most political parties hand in their election platform to the CPB and the environmental agency in order to have it assessed in terms of effects. That means that some type of evidence-based policy, at least to the extent that it is incorporated in our models, is still being observed.”

*Bartelsman: “How important and relevant are academics to the work of CPB, Laura?”*

**Van Geest:** “We see our task as translating the results that academics produce into things that Dutch policy makers can use. I think that is different

than, for instance, in the US where you see very high brow academic economists also participating as policy makers themselves. Like Larry Summers for instance, or Alan Krueger in the past.

Most of the academic research is done on larger countries like the US, the UK or Germany and we have to be careful about translating one-to-one whatever is happening in the US to what is happening in the Dutch context. And finally, if academics are really into being a top academics they sometimes need to be very narrow in their research; more specific than might be of interest to a policy maker.”

*Bartelsman: “Professor, when you set your research agenda, to what extent is it actually driven by questions from policy makers?”*

**Heckman:** “There is coexistence. Most people who are sincere go into academic life in economics because they have genuinely deep interest in a certain societal question. Some people might go into it because they like the math, and there are plenty of those. But put that to the side. There are a lot of people who go in because of intellectual curiosity and also because they are seriously interested and concerned about the questions.

However, funding and support are critically based on convincing people that what you are doing is socially important and will have implications. And following suggestions about what is important and working on topics that are considered, quote, ‘policy relevant’ topics clearly shapes the way that a lot of economists will do research.

This was true for people like Saez and Zucman, even though their initial research has been shown to be flawed and misleading. I do believe they got into this question looking at new data sources – first IRS data and then later other sources – to examine and witness an increase in wage and income inequality. That really did fuel a broad discussion when it was picked up in the mainstream of politics and economics.

The structure goes in that direction: it is a flow from ideas to policy. But, having said that, there is a huge amount of policy advocacy and that is what drives the money. Nowadays most of the research funds will go towards people who are promising some billionaire, or some government agency that they are going to do some spectacular intervention. Most of this research is

short term in nature and long-term research is just not valued. Bill Gates and Warren Buffett and these people . . . Yeah ...”

**Van Geest:** “Researchers at CPB are on the one hand driven by our mandate, what people expect and require us to undertake. We are supposed to make forecasts on the economy and look at the labour market and so on. But of course, within these broad themes, researchers can still take their pick and there I think we benefit from the ideas that the young researchers have. For instance, driven by the inclinations of young researchers, we recently started to look into the use of big data or data analytics.

Inspired by the Tinbergen year we recently did research to see whether inequality increases or decreases among migrant groups and the disappointing result was that inequality does not diminish over time. Now we are going to look into what the drivers are of this finding. In a way, this was inspired by Professor Heckman’s example of not just looking at children at a higher age, but also at young children and not only looking at cognitive elements but also at the non-cognitive.”

*Bartelsman: “Laura, if you could channel the spirit of Tinbergen and if he were still director of CPB, what do you think he would find the single most important topic on which CPB should now work?”*

**Van Geest:** “It depends on the way you look at Tinbergen. On the one hand you could say that Tinbergen was at the root of doing more econometric research and using data. Using big data, data analytics, I think that would be Tinbergen today. That is also one of the reasons we will take that on.

On the other hand, Tinbergen also made more normative statements. To make sure that everyone wants to listen to our research, we let our analysis speak for itself as opposed to having our own normative statements. Tinbergen is well known for topics like inequality and our recent look at this data points to the need for more research. Tinbergen was also in favour of work on development aid, but that is beyond our mandate.”

**Heckman:** “Tinbergen was a social democrat, he was very interested in maximizing social welfare. Ragnar Frisch in Norway, with whom

Tinbergen shared his Nobel Prize, literally talks about trying to use survey methods to elicit what the welfare functions of societies in Western Europe are. Tinbergen was to feed this into this notion of social planning.

Tinbergen moved, you can see it in his work. He moved with the times, he moved to questions that were basically very topical, highly relevant, and he even moved into areas that were not yet topical. I mean income inequality, if anything, was declining in the 1960s in most Western countries.

What he did though, is provide an analytical framework for thinking about inequality. He was driven by an ability to put big factors together in a fairly simple model, a tractable model, and then go off and do the welfare calculations based on the data.

I think Tinbergen would still continue with that emphasis. But he would rather be more acutely aware of what has been learned since then. About tax policy, about the role of investment, understanding the life-cycle of skill formation better, and understanding the role of the family which really did not play a prominent role in his work.”

*Bartelsman: “Both of you have mentioned the availability of data and CPB is trying to gear up for big data analysis. In a way, this is a hype, but ...”*

**Heckman:** “Not in a way, it is totally a hype! Raj Chetty at Harvard is claiming that with big data you do not need to even worry about causality.

But anybody who says that getting more data of the same type is going to prove causality is just . . . crazy. It is basically believing that sample size determines causality. I honestly thought that we got away from that eighty years ago. When you read the first issue of *Econometrica*, the opening statement – and this is ironic, because it is 1933 when the first macro data was just becoming available – tells us ‘Right now we are getting more and more, quote effects. We are getting swamped by these effects. Yet, we do not know how to interpret those facts and we need a framework.’”

**Van Geest:** “We use big data for forecasting and sometimes you have very big samples and then everything seems to be specifically significant. Using big data techniques is a way to find which factor is more important than others. That is what people use the data analytic methods for.

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Yet, we are still of the classic causality school. These observational results are more an inspiration to undertake experiments than to say ‘well let us go for this type of a policy for the whole nation.’ It may seem very attractive, but if we do not really know how it works, it might bring counterproductive results. That being said, you can use big data and still come up with a causal effect.”

*Bartelsman: “Professor Heckman, your work generally uses observational data in combination with theory that allows policy counter-factuals. What is your opinion of using results from small-scale experiments for policy?”*

**Heckman:** “I am currently conducting a whole series of experiments out in western China, so I am certainly not opposed to experiments. They are a good source of information. But we can also learn about important social problems without running experiments.

The prime example of this is from 65 years ago now, by Doll and Hill, on the statistical association between smoking and cancer. Nobody ran an experiment! I guess, indirectly Hitler was the first experimentalist in this area as he forbade German women to smoke and in the aftermath of that German women had less lung cancer. But the fact is that the body of statistical evidence became overwhelming.

There are a lot of interesting economic questions that are simply not answerable, at least using current techniques, with experiments. For macro tax effects we can design a little experiment and then say ‘yes, Joe Blow worked more when his taxes were cut.’ But that is a lot different from saying what happens at the macro-economic level when all Joe Blows from the entire country get a tax cut and all labour and capital markets adjust, migration occurs and so forth.

We must remain sober about what can and cannot be learned from an experiment and when other methods are preferable. This is where I think Tinbergen, and Frisch, and most good economists would realize that it is not just a specific kind of the exogenous variation, it is not just ‘experimental variation’. It is putting all the data together and telling a coherent story.”

**Van Geest:** “At CPB, we take a pragmatic approach. Take our new labour supply model, Micsim. We designed a structural model, using economic

theory. We then fitted it to actual data, using a very large data set. And finally, we took advantage of ‘natural’ policy experiments to check the validity of the model. The results of the model and reality were well aligned. We now use the model to simulate all kinds of policy proposals.”

**Heckman:** “Exactly. I am very happy with what you just said. What you just described is the process of what economic science should be.

In the philosophy of science, there is a concept called abduction. What abduction really means is searching for the best explanation. It means, you have a question and you want to bring the best evidence to bear on it, from theory, from natural experiments and so forth. It means *not* saying ‘I have an experiment, it must be an RCT and it must do ...’ That is methodologically driven. You are describing what is very commendable. You are describing what economic science really should be which is putting it all together and not privileging one kind of information over another. I am sure Tinbergen, were he in on this conversation, would agree with that. He put together little bits of snippets here and there. Even in his books on inequality, but certainly in macroeconomics he drew on a bunch of natural experiments. He was quite the scientist.

The example I give is that if we ever saw a deceased person in our vicinity come back to life, this one event would be far more powerful than a hundred million big data regressions on living people. That is the point. It is the surprise of the evidence against the hypothesis. It is not the quantity of numbers that decides the issue or whether it comes from a randomized controlled trial.

My God, I think of Tinbergen as one of the master synthesizers using every piece of information, putting it all together, developing frameworks to put it together, and listening to the evidence. I mean, he changed his mind as his paper was written; he was always in a learning process. That is what scientists are.”

**Van Geest:** “I would like to ask you of what result of your research are you really proud of?”

**Heckman:** “Two things: the importance of the first few years of child development and a better understanding the role of family. Initial



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experiments on early childhood education did not show an immediate effect on IQ, while longer period follow-up studies showed a positive impact of early intervention. This contrast brought to the fore the importance of social and emotional non-cognitive skills. That has now found its way into the lexicon of economics and policy. We no longer just evaluate programmes by their impact on IQ or on achievement test scores. There are richer skills than IQ. There is dynamic complementarity between multiple dimensions of development. I am most proud of this work and the influence it has had on creating opportunities for everybody. If we reach people at the beginning we are going to get a much better end.”

**Van Geest:** “How did you manage to get this message taken up by policy makers?”

**Heckman:** “Let me be very blunt. It is not that politicians were reading my papers at night ... although Obama lives two blocks down south of my house in Chicago. I have no powers of persuasion. I wish I did. I wish that when I open my mouth to the world, when I Twitter, the market would jitter or something. But I am not like Trump.

The way it was, is that there were policy advocates who promoted these ideas. These people did know in their heart of hearts that evidence-based policy was the correct path. They kind of forced the work under the noses of politicians who were indifferent and who were maybe even hostile. But they sold it by telling the politicians that it supports their case.

It really had impact because the advocates liked what I had to say. They really started moving away from just looking at IQ and achievement scores to non-cognitive skills. In convincing them about the value of early education, I also helped convince them to think about the structure of how skills develop. I do believe that was partly a result of my writing and other research as well.

Then, to be honest, it did not hurt that I also just happened to have a Nobel Prize. No, it mattered. Maybe uncritically so. I think I was favoured in that, so I am not going to attribute to myself any great power of communication.”

**Van Geest:** “Your story underscores that building bridges between academics and policy makers is necessary to ensure that useful research gets taken

on. I think it confirms the roles of an institution like CPB, or having people who take on this role. Well, thank you.”

**Heckman:** “Let me paraphrase John Von Neumann. ‘Any science that becomes so inbred that it does not look at data, does not look at the world and does not regenerate itself turns into something very degenerate and will hit a wall.’ Even though basic research may not have an immediate payoff, I think getting these ideas out there makes a big difference. Remember Keynes’s famous quote on the defunct academic scribbler influencing the madman politician.”