# Abstracts 2019

**Niels Kærgård, Københavns Universitet**
**Titel: Læren af den danske modeldebat i sen-1980'erne**

Resume: ADAM (og SMEC) blev taget i brug midt i 1970'erne og den første halve snes år var der tale om en ren keynesiansk konjunkturmodel. Men sidst i 1980'erne begyndte man i finansministeriet at arbejde med mellemfristede "planer". Og det følte budgetdepartementet, krævede justeringer af ADAM; justeringer der ikke var så statistisk velfunderede, at Danmarks Statistiks modelkontor ville lægge navn til. Der var derfor i årene på til 1990 en intens modeldebat med specielle temanumre af både Nationaløkonomisk Tidsskrift og Samfundsøkonomen. Problemstillinger som "økonomisk faglighed contra politiske hensyn", "økonomisk teori contra statistiske data" og "generelle contra specialiserede modeller" blev her diskuteret mere åbent af modelbyggere og modelbrugere end vel på noget andet tidspunkt i den danske fagøkonomiske debat. Denne debat sammenlignes med den aktuelle debat om bl.a. ligevægtsmodeller og dynamiske effekter.

**Jakob Guldbæk Mikkelsen, Danmarks Nationalbank**
**Titel: Assessing household level interest rate risk (with Stine Ludvig Bech, Simon Juul Hviid)**

Extended abstract
In recent years, interest rates have declined, which has supported house price growth and household borrowing. Housing is by far the largest asset of the household sector, and mortgages are similarly the largest liability. A large literature has focused on the interaction between household consumption, wealth, and debt which has shown that household housing wealth and debt may play an important role for macroeconomic and financial stability. Today, nominal house prices are at the levels seen in the years preceding the recent financial crisis and, albeit modest, aggregate household (mortgage) borrowing is rising. Hence, the fall in interest rates has contributed to the inflation of household balance sheets. Though, previous studies have shown that the low interest-rate environment has also aided leveraged household in deleveraging. A reversal of the decline in interest rates in recent years could potentially have severe consequences for parts of the household sector through primarily two channels; the cash flow channel and the balance sheet channel.

The cash-flow channel has been a main focus in previous studies, finding that overall the household sector is robust to a modest interest rate increase. Less is known about how cash flow risk is distributed across individual households. To the best of our knowledge no one has previously addressed the implications of the balance-sheet channel on the distribution of households and furthermore investigated how the cash flow channel and the balance sheet channel interacts with one another.

We use the rich Danish registerdata to assess the implications of a 1 percentage point increase in the entire yield curve on individual household debt-service-to-income (DSTI) and debt-to-assets (DTA), which we argue are the two most appropriate dimensions in which to investigate the cash-flow channel and the balance-sheet channel. Additionally, new data from the Land Registry

(Tingbogen) is used for the first time as it is linked to the existing micro-data registers in an analysis of the house price sensitivity. This will provide new insight into how much households borrow through banks for housing purchases. The rich data in the mortgage registry allows us to assess the effects of in interest rate increase on interest payments, amortizations, and market value of outstanding mortgage debt. In particular it allows us to distinguish between the effects on adjustable rate mortgages (ARMs) and fixed-rate mortgages (FRMs) together with the interest-only (IO) version of the two, which has sizeable implications for the interest rate sensitivity of cash flows and balance sheets.

In an empirical exercise we get closer to identify key characteristics of households that determine household DSTI and DTA. The analysis will look across loan types, loan ratios and geography and focus specifically on the consequences of an interest rate increase for the Copenhagen house buyers who generally have higher debt and more risky borrowing.

Lastly, we investigate whether households with large cash flow and/or balance sheet risks tend to have higher saving rates or precautionary (liquid) savings than other less exposed households.

Our preliminary findings confirm previous results, that overall interest rate risks seem to be modest. However, we also find that there is non-trivial differences between ARM and FRM borrowers, with ARM borrowers being much more exposed to interest rate risks. In particular, we find that risks to the cash flow and the balance sheet complements each other such that a certain type of highly leverage households are severely exposed to increasing interest rates.

In general, we find that cash flow risk is decreasing in income and increasing in debt. When looking at balance sheet risk for house buyers, we find that the risk is centered around the larger cities.

**Peder Andersen, København Universitet**
**Titel: Taxation of resource rent in fisheries, theory and policy relevance**

Taxation of resource rent can reduce the distortion of taxes and have distributional benefit. At the same time, it is important that resource taxes give the right incentives to an efficient use of natural resources.

This paper looks at taxation of resource rent in an optimal taxation policy framework and how taxation of resource rent in fisheries can work in practice.

The empirical part of the paper is related to the Greenlandic shrimp fishery, the most important fishery in Greenland. As more than 10% of the gross value added comes from the fishery in Greenland, it is from a macroeconomic point of view of key interest to have an efficient taxation of resource rent. Model work shows that there is possible to increase resource rent taxation without compromising efficiency and at the same time reduce income inequality.

**Nikolaj Nielsen Københavns Universitet (med Mogens Fosgerau)**
**Titel: Similarity, rational inattention and discrete choice.**

Abstract: This paper introduces a rational inattention discrete choice model in which the cost of information reflects similarity of choice alternatives in a space of characteristics. The substitutability between choice alternatives is controlled by this similarity. Application to individual-level discrete choice data is demonstrated, along with computationally efficient methods for maximum likelihood estimation.

**Ib Hansen, European Central Bank**
**Titel: Model Flow, A library to manage and solve Models**

## 1.1 Why Model flow?

**Specify very large (or small) models** as concise and intuitive equations. The program to calculate/solve
the model is automatic generated. The user don't have to do the household chores.

**Large models**. Models with many banks and granular data can get very large. 1 million equation and
more can be handled.

**Agile model development** Model are specified at a high level of abstraction and are processed fast. Also
solving/calculating models are fast. This makes experiments with model specification agile and fast.

**Get rid of models models implemented in Excel**. Large models in Excel are difficult to maintain, revise
and quality check. Excel is also very slow in calculating models. Moreover Excel don't handle models with
contemporaneous feedback well.

**Onboarding models and combining from different sources**. Creating a Macro prudential model often
entails recycling several models specified in different ways: Excel, Latex, Dynare, Python or other languages.
Python's ecosystem makes it possible to transform many different models into ModelFlow models or to wrap them into functions which can be called from ModelFlow models.

**Onboarding data from different sources**. Pythons Pandas Library and other tools are fast and efficient
for data management.

**A rich set of analytical tools for model and result analytic** helps to understand the model and its results.

**The user can extend and modify the tools** to her or his needs. All code is in Python and the core is quite
small.

**Britt Gyde Sønnichsen, Danmarks Statistik**
**Titel: ADAMs to arbejdsmarkeder**

Det primære fokus for ADAMs arbejdsmarked er at beskrive befolkningens aktivitet på eller uden for arbejdsmarkedet. Dermed får man et billede af hvor tæt befolkningen er på arbejdsmarkedet. Styrken i aktivitetsopdelingen er beskrivelsen af aktiveringsordningerne, og at opdelingen understøtter begreber som brutto- og nettoledighed. Aktivitetsopdelingen er desuden et godt udgangspunkt for at vurdere konjunktur samt et strukturelt arbejdsudbud.

Det aktivitetsfordelte arbejdsmarked giver udfordringer, når udgifter til offentlig forsørgede og de offentlige finanser skal vurderes. I den forbindelse er det mere hensigtsmæssigt at kunne opdele de offentligt forsørgede efter den ydelse de modtager.

En projektgruppe med deltagelse fra Finansministeriet, Beskæftigelsesministeriet og Danmarks Statistik har arbejdet med problemstillingen. Det arbejde har resulteret i, at det nu er muligt at beskrive arbejdsmarkedet i ADAM fra to vinkler. Ændringerne er indarbejdet i ADAMs databank – første gang i forbindelse med modelversionen jul17.

### Nicoline Wiborg Nagel. Danmarks Statistik
### Titel: Arbejdsudbudseffekter af offentlige udgifter til børnepasning og kobling til ADAM

Abstract:
I løbet af de sidste par år er der kommet stor fokus på, om dynamiske effekter af offentlige udgifter skal inddrages i regnemodellerne. Med udgangspunkt i en registerbaseret analyse af dynamiske effekter af børnepasnings pris og kvalitet på forældrenes arbejdsudbud, gives eksempler på, hvordan dynamiske effekter af offentlige udgifter kan inkorporeres i ADAM.

### Dan Knudsen, Danmarks Statistik
### Titel: Ny lønrelation

Abstract: En datarevision af lønrelationens variabel for kompensationsgraden har reduceret koefficienten til ledigheden. Det gør lønrelationen mindre konjunkturfølsom og ændrer ADAM's reaktion på stød.

### Gyrithe Skovbjerg Rosenlund Høeg, Konkurrence- og Forbrugerstyrelsen
### Titel: Transaktionsomkostninger ved EU-udbud.

Hvert år køber den offentlige sektor varer og tjenesteydelser for en værdi af ca. 355 mia. kr. Formålet med at sende opgaver i udbud er at sikre, at det offentlige køber det bedste produkt til den laveste pris. Desuden har udbudsreglerne til formål at skabe gennemsigtighed i indkøbsprocessen og give lige adgang for virksomheder til at deltage i konkurrencen om de offentlige opgaver.

Analysen undersøger niveauerne for transaktionsomkostningerne ved at konkurrenceudsætte offentlige opgaver for både ordregiverne og de vindende virksomheder. Via en fractional logit model undersøges det om der er særlige karakteristika, som driver omkostningerne op eller ned.

### Merete Konnerup, Københavns Professionshøjskole, Stab for Forskning og Udvikling
### Titel:  Et praktisk værktøj og de intuitive åbenbaringer det producerer: Kausal inferens, kausale diagrammer & Judea Pearl (h=126)

Abstract:
En gammel økonomas møde med en populærvidenskabelig introduktion til Judea Pearl's forskning indenfor kausalitet, hvis wiki-entry siger: "His work on causality has "revolutionized the understanding of causality in statistics, psychology, medicine and the social sciences" "