

THE IMPACT OF THE ESTABLISHMENT OF A UNIVERSITY ON THE REGIONAL LABOUR MARKET FOR GRADUATES

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RUNIN project

CONTEXT

- Universities role in a knowledge based economy
- Universities in peripheral regions
- Peripheral regions
 - Organizational thinness
 - Small and non-knowledge intensive companies
 - Low availability of high skilled workers...
.....but also limited demand
- University as fast growing supplier of graduates

MAIN QUESTION

What impact does the establishment of a peripheral university have on the regional graduate labour market?

THEORY

- Labour market
 - Not a perfect market: Low elasticity of supply and demand
- Early cohorts
 - Low supply and initial demand
 - Strong labour market position

Hypotheses 1: The early graduate cohorts earn relative high wages

- Over time
 - New universities tend to experience a rapid growth
 - Increasing the knowledge intensity of the local economy is a more gradual process

Hypotheses 2: Wage premium is weakening over time

Hypotheses 3: Mobility is increasing over time

EMPIRICAL CONTEXT

- The North Denmark region
 - Population wise smallest of Denmark
 - Main city Aalborg
 - Traditional industry structure...

.....but also development of some knowledge intensive sectors

- Aalborg university
 - Founded in 1974 as successor of existing higher education institutions
 - Last region to receive its first university
 - Technical oriented university, but with a large social sciences faculty



METHODS

- Register data
 - Micro-level data of all Danes
 - Wide variety of variables
- Data availability restricts analyses to 1987-2007

DATA ANALYSES WAGES(1)

- Controlling for
 - Degree
 - Labour market experience
 - Cost of living
- Calculate weighted average per year
- Comparing to control group

DATA ANALYSES WAGES(2)

- Wages for a group of graduates from Aalborg University living in North Denmark

Degree	Experience	Number of people	Wage
Bachelor Psychology	2 year	10	200kr
Bachelor Astronomy	5 year	5	300kr
Master Computer Science	25 year	5	500kr
Master Biotechnology	9 year	20	400kr
Weighted average wage		$(2000+1500+2500+8000)/40$	350kr

DATA ANALYSES WAGES(3)

- Wages for the control group from other universities living in other regions

Degree	Experience	Number of people(in NDK)	Wage
Bachelor Psychology	2 year	10	300kr
Bachelor Astronomy	5 year	5	400kr
Master Computer Science	25 year	5	600kr
Master Biotechnology	9 year	20	500kr
Weighted average wage		$(3000+2000+3000+10000)/40$	450kr

DATA ANALYSES WAGES(4)

- Calculate cost of living index based on average wage of people in North Denmark and....

Degree	Experience	Number of people(in NDK)	Wage
Primary school	10 year	500	100kr
Carpenter	25 year	100	200kr
Bachelor communication	10 year	20	300kr
Master Criminology	15 year	10	300kr
Weighted average wage		$(50000+20000+6000+3000)/630$	125kr

DATA ANALYSES WAGES(5)

-average wage for control group of people living in other regions

Degree	Experience	Number of people(in NDK)	Wage
Primary school	10 year	500	150kr
Carpenter	25 year	100	250kr
Bachelor communication	10 year	20	350kr
Master Criminology	15 year	10	350kr
Weighted average wage		$(75000+25000+7000+3500)/630$	175kr

DATA ANALYSES WAGES(6)

- Average wage North Denmark: 125kr
- Average wage control group: 175kr
- Cost of living index: $175/125=1.4$
- Wages of control group will be divided by the cost of living index, before comparing

DATA ANALYSES MOBILITY

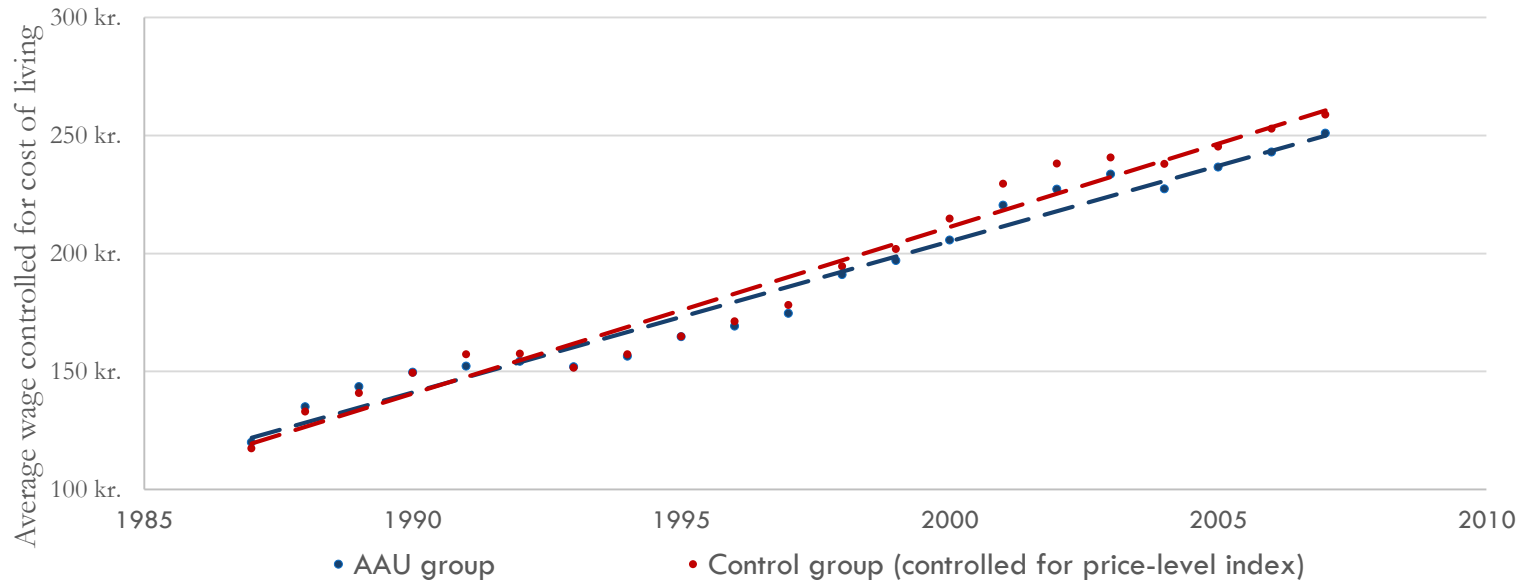
- Mobility
 - Grouping based on place of residence prior and after studying:

		Residence after graduation	
Residence prior to study		North Denmark	Outside
	North Denmark	Locals	Leavers
	Outside	Stayers	Visitors

- Development of the (relative) size of groups over time

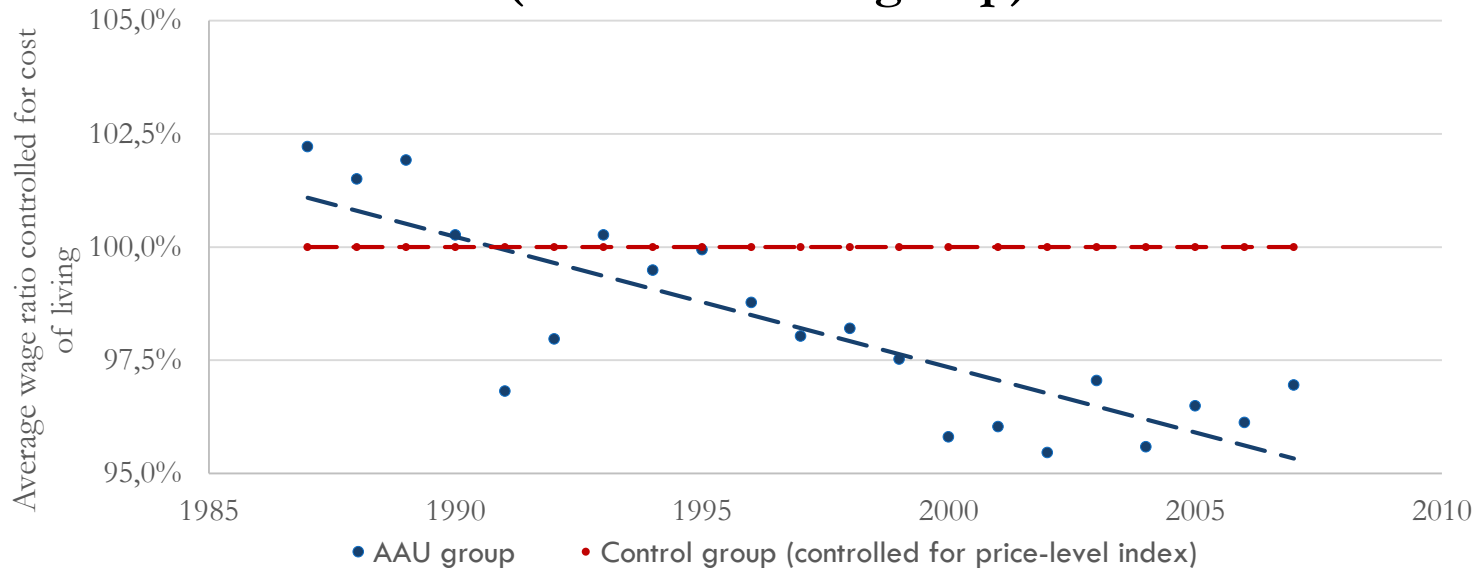
PRELIMINARY RESULTS WAGES(1)

Figure 1: Development of wages between 1987-2007



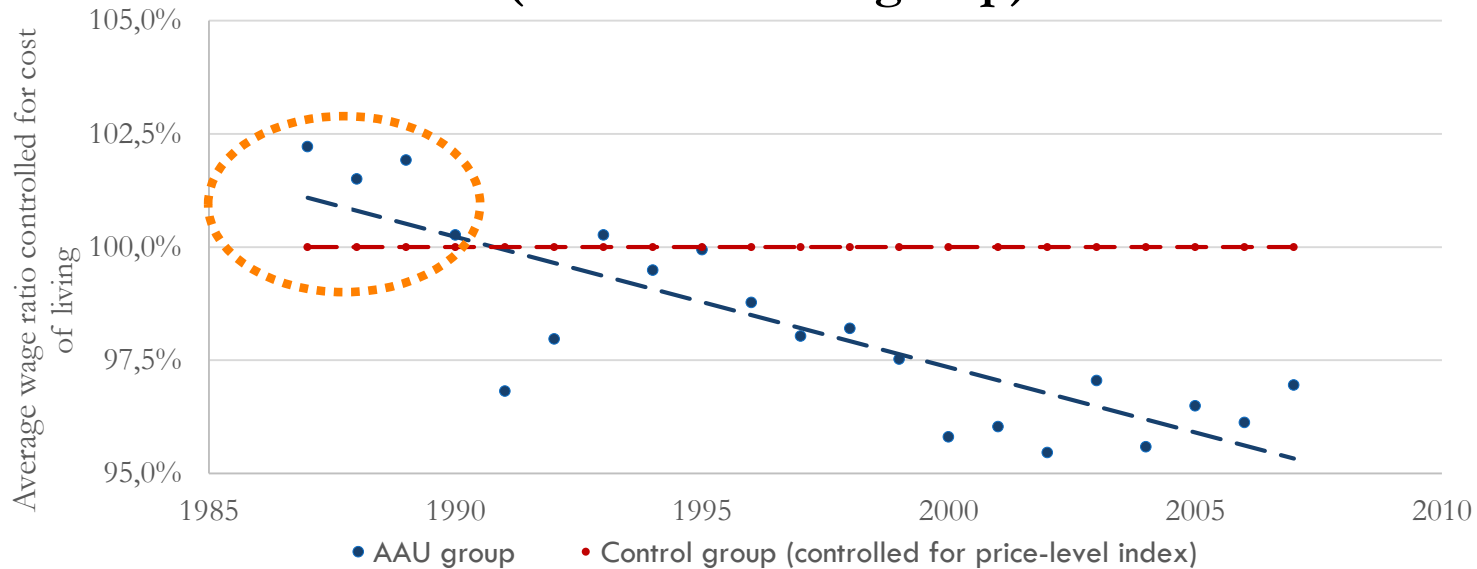
PRELIMINARY RESULTS WAGES(2)

Figure 2: Development of wages between 1987-2007
(Index=Control group)



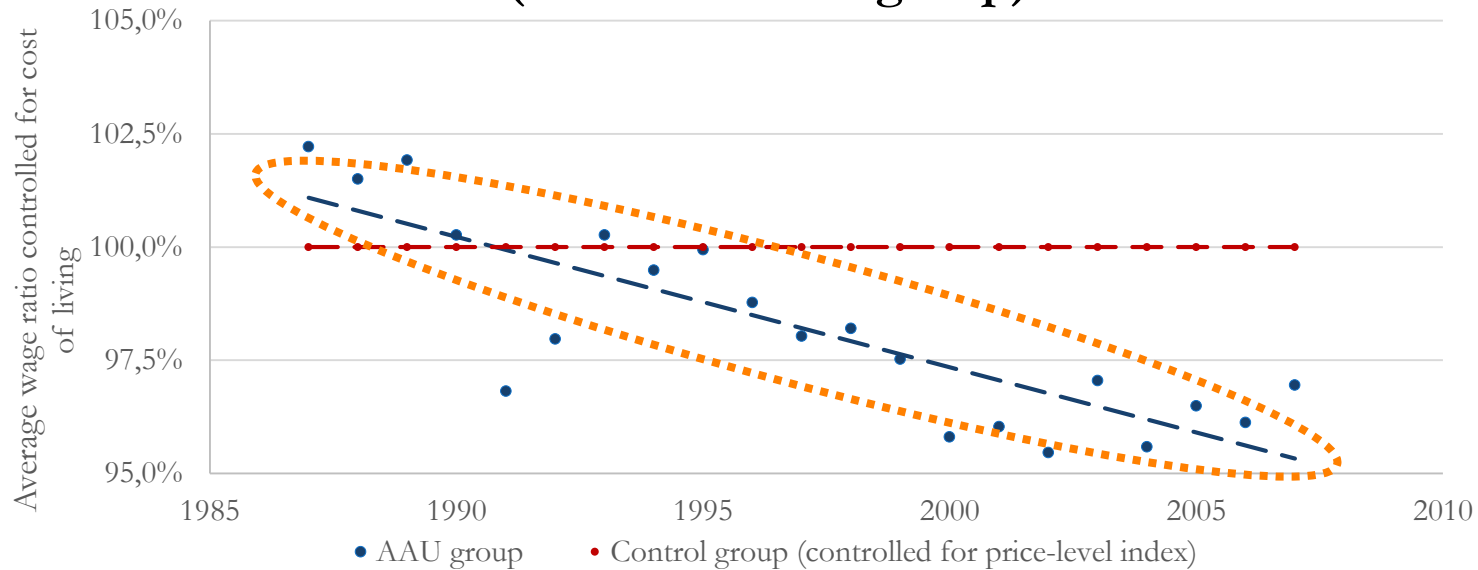
PRELIMINARY RESULTS WAGES(2)

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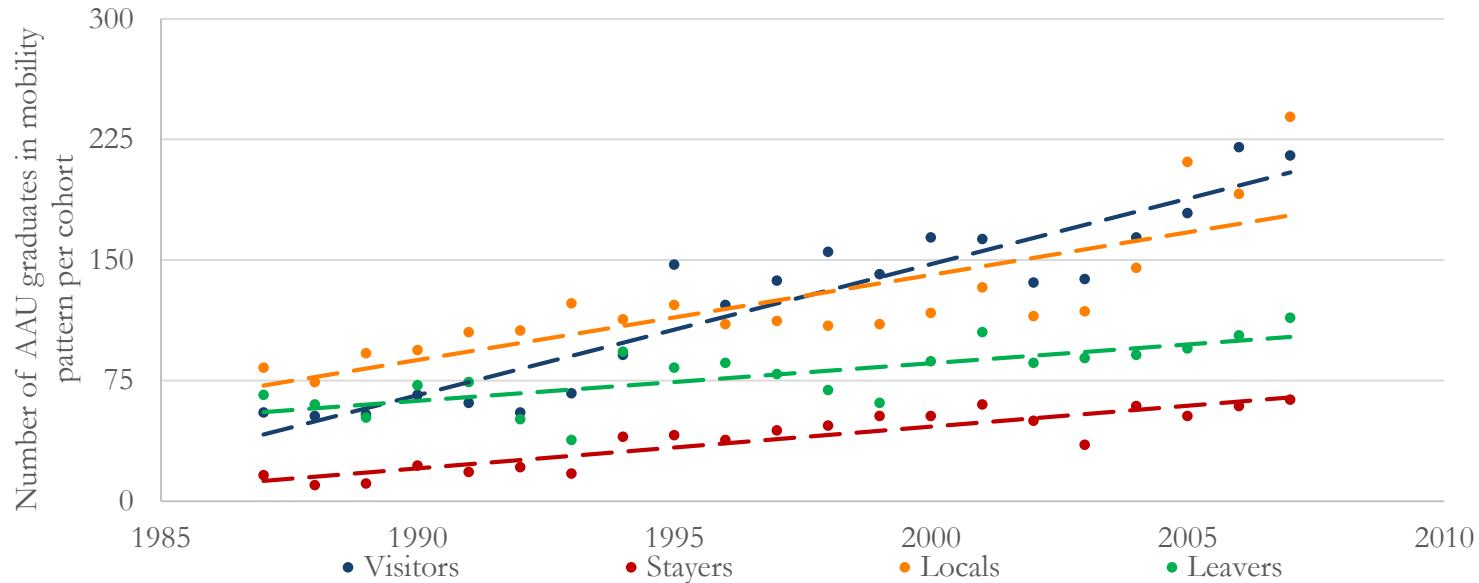
PRELIMINARY RESULTS WAGES(2)

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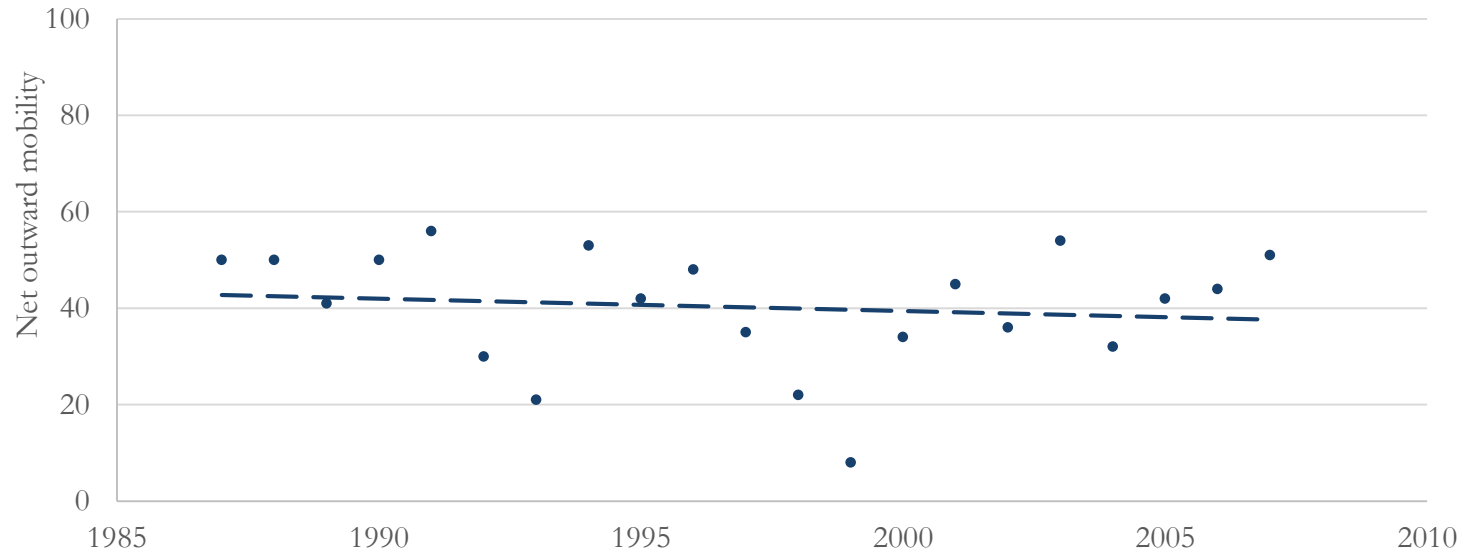
PRELIMINARY RESULTS MOBILITY(1)

Figure 3: Mobility AAU graduates between 1987-2007



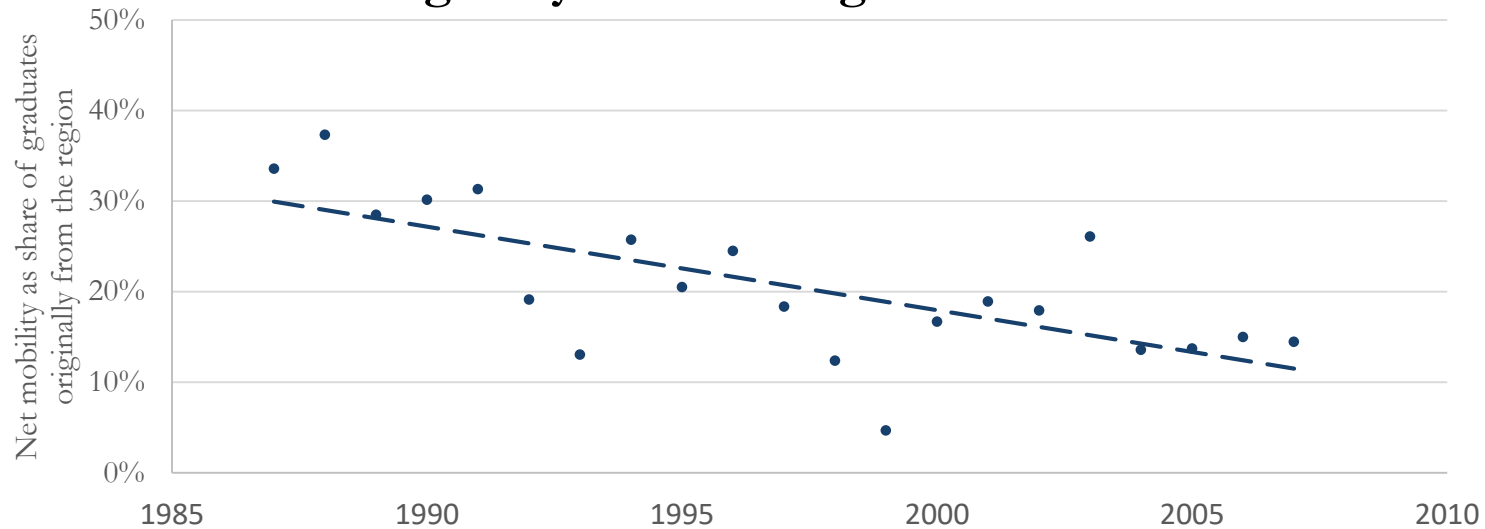
PRELIMINARY RESULTS MOBILITY(2)

Figure 4: Net outward mobility 1987-2007



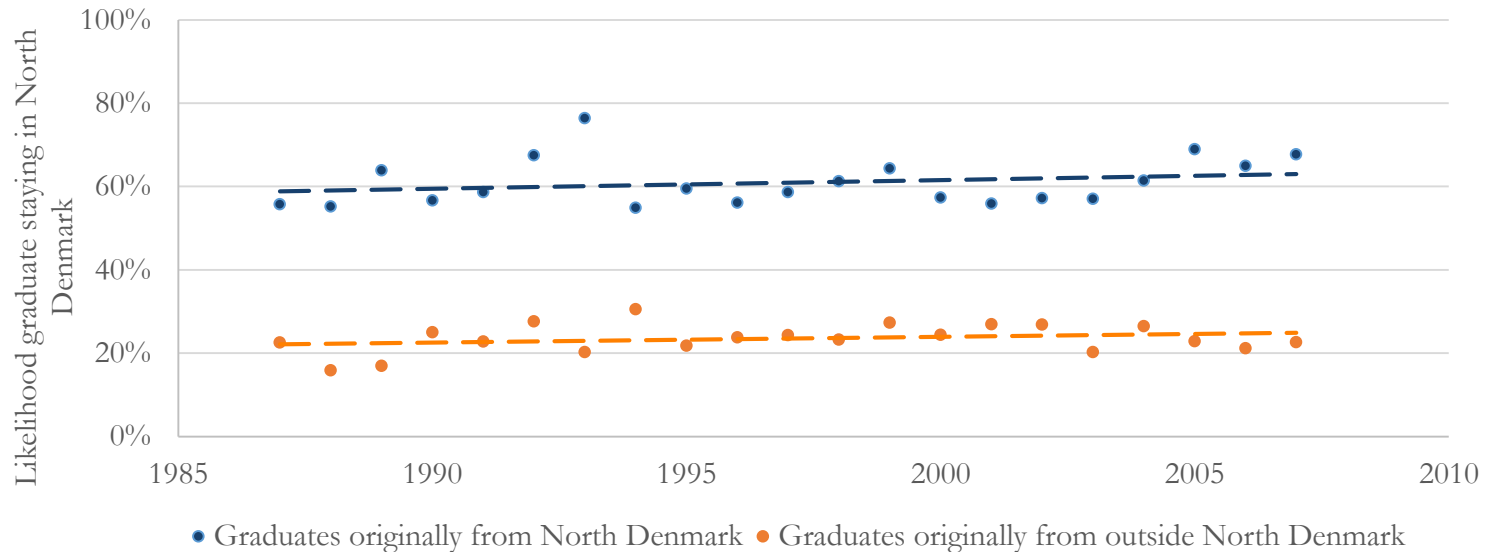
PRELIMINARY RESULTS MOBILITY(3)

Figure 5: Net mobility as share of graduates originally from the region 1987-2010



PRELIMINARY RESULTS MOBILITY(4)

Figure 6: Likelihood staying in the region, by origin, 1987-2007



RESEARCH AGENDA

- Look at other Danish universities
- Look at yearly cohorts
- Look at differences between degrees (engineers vs social sciences)
- Look at gender differences
- Calculate cost-of-living index on municipality level

WRAP UP

- Above average labour market position....
...but wage premium disappears over time
- Net mobility is constant....
....but relative mobility is declining

TAKEAWAYS

- Peripheral universities can play an important role in increasing the human capital in the region....
 - ...but the regional economy does not develop in the same pace
- Mobility is not the norm for graduates.....
 -and peripheral universities have the potential to develop into an important educational institution at the national level

Thank you for your attention!
Questions?

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