Pertti Koistinen, Arja Jolkkonen, Arja Kurvinen, Liudmila Lipiäinen, Tapio Nummi & Pekka Virtanen

Towards understanding of restructuring and employment of displaced workers

A view based on representative longitudinal studies

(Finnish Longitudinal Employer-Employee Data)

Introduction

- We know well that
  - The social security institutions and employment protection systems channel the behavior of employers and employees and the re-employment options of displaced workers.
  - Coordinated policies in terms of ALMP and restructuring polices have buffered the worst consequences of the risks.
- However, the examples of the last years have raised sceptical questions about the sustainability of the restructuring policy:
  - Are the old forms of social and employment protection efficient and sustainable in the long run?
  - How do the employment trajectories of displaced workers develop in the long run?

Laid-off workers in 2008-2014 in Finland
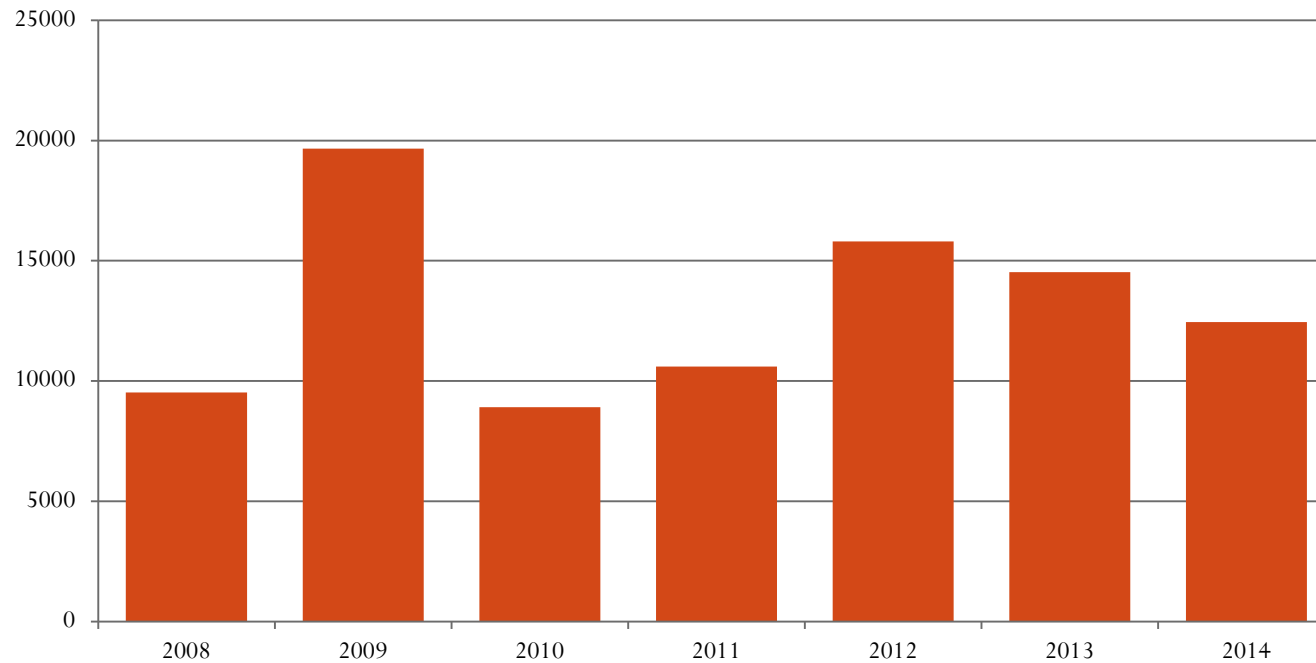
Totally 91 500 workers were laid off during 2008-2014

(source: SAK, irtisanomistilastot: http://www.sak.fi/aineistot/tilastot/yt-ja-irtisanomistilastot)

Open questions

- Based on previous studies we know well that both the displacement and re-employment after displacement are socially selective processes where
  - individuals characteristics (age, gender, education level etc.),
  - organisation level factors (firm size, industry etc.) and
  - macroeconomic factors (economic cycle and competitiveness)
    explain who are at the biggest risk to lose their job.
- We don't know – 4 critical issues
  - How do individual characteristics influence over the time and in various economic preconditions (good times vs. bad times of displacement)? (articleA1, forthcoming)
  - How do the labour market attachment of displaced and retained workers differs from each other in the long run? (acticle A2, forthcoming)
  - Are the early leavers the lucky ones? (heterogeneity, social selection, high risk for careers?) (article A3.forthcoming)
  - How do the institutions and changing precondition of the welfare society influence on labour market attachment? (article A4, forthcoming)

Data

- The Finnish Longitudinal Employer–Employee Data (FLEED, Statistics Finland) consists of a random sample of every third individual aged 15 to 70 living in Finland between 1988 and 2011.

- There is also a variable indicating their main activity during each year, and for those who are employed identity code of the plant.

- Through the code, it is possible to identify from the sample the employees of a given plant, and the plants that had reduced their personnel to check how many years prior to the downsizing an employee had worked in the plant.

- Baseline years A1 = 1992,1997 and 2003; A2=2003; A3=2005.

- We included in the sample A1 and A2 only those who had been employed for at least three years in the same plant and had had no records of unemployment during these years. Sample A3 covers all those who had been in the plant one year before baseline year.

Methods – three statistical solutions

- *Trajectory analysis* was used to identify the heteroneighty of employment

- After producing the trajectory groups, we took the retained as the reference group and used *multinomial logistic regression* analysis to assess if the displaced differed from them with respect to distribution of individuals to the trajectory groups.

- To analyse the reasons of weak labour market attachment, we finally investigated in each trajectory group the transitions of individuals between the early main activity using *sequence analysis*.

A3: Early leavers

- The public debate and previous studies have strong suppositions that the early leavers are a selected group and in terms of re-employment more lucky ones than those who will remain at the same plant and will be displaced later.

- This question has been tackled more than 20 years in academic research but still there are open questions. →the lack of adequate data, →short follow up periods →contextuality of the results.

A3: Results of previous research1

- Schwerd (2011) used Austrian administrative data and made three main conclusions:
  - found that that early leavers separating up to two quarters before plant closure are associated with significantly better post-separation labor market outcomes than separators from non-closing plants.
  - Early leavers suffer significantly less from separating from a closing plant than ultimately displaced workers.
  - When it comes to behavioral roles of workers and employer, the results clearly indicate that both of these factors matter.
- Ormiston (2014) studied the relation between worker displacement and occupation-specific human capital and found that the mismatch between workers pre-displacement and post-displacement occupations significantly mitigates earnings losses following displacement in a new job and this relation were independent of the state of the macro-economy
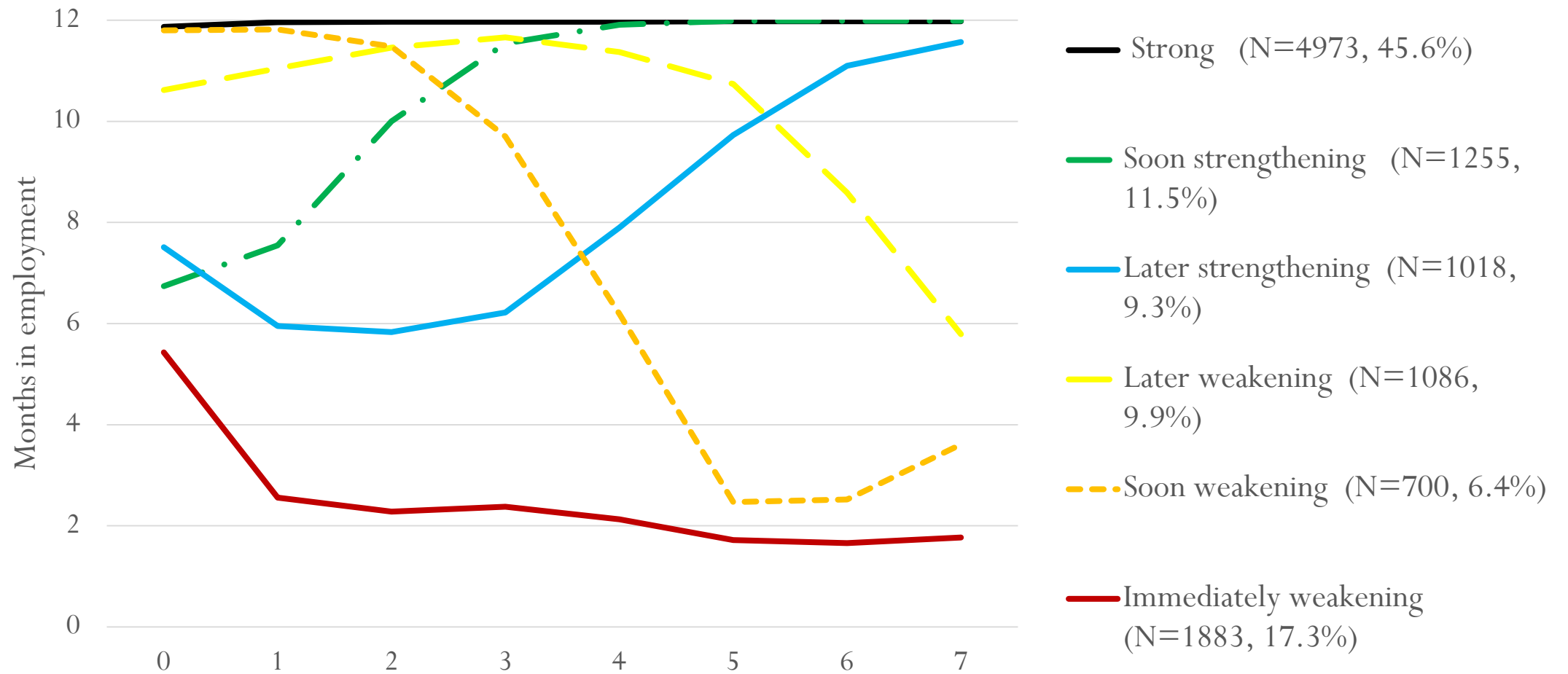
A3: Results of previous research2

- Being displaced increases the probability of occupational change :
  - It particularly increases the probability of taking a job where one is over-skilled. The cost of job displacement varies by the type of skill mismatch.
  - The costs are highest for those who are over-skilled at the new job. The results suggest that skill mismatch is an important mechanism through which the long lasting earnings losses of displaced workers are realized" (Nedelkoska et al 2013, 1)

- According to Waters (2007) voluntarily redundant employees experienced a significant drop in depression upon re-employment while the involuntarily redundant employees reported no significant changes to depression scores from baseline.

Our approach

- We tried to overcome some of the open questions with a administrative longitudinal data that integrates information of employees and employers, and with help of a strict research design.

A3: Results of the trajectory analysis

Strong (N=4973, 45.6%)

Soon strengthening (N=1255, 11.5%)

Later strengthening (N=1018, 9.3%)

Later weakening (N=1086, 9.9%)

Soon weakening (N=700, 6.4%)

Immediately weakening (N=1883, 17.3%)

Descriptive statistics of the sample according to the baseline status and the trajectory group

	Strong	Soon streng-thening	Later streng-thening	Later weak-ening	Soon weak-ening	Immediately weakening
Anticipation leavers	2120	771	629	517	254	1187
- men	57.8%	48.2%	43.2%	53.8%	52%	53%
- women	42.2%	51.8%	56.8%	46.2%	48%	47%
Vocational education						
- none	23.0	37.0	43.7	39.5	38.6	58.5
- secondary level	36.3	34.6	33.1	34.2	34.6	35.2
- lower tertiary level	28.1	21.8	16.9	20.3	18.9	13.1
- higher tertiary level	12.6	6.6	6.4	6.0	7.9	3.1
Age, mean (SD)	36.8(0.2)	32.6(0.3)	32.2(0.4)	37.8(0.5)	43.2(0.8)	43.5(0.4)
Preceding unemployment	7%	18%	25%	18%	16%	33%
Same employer >3 years	26.9	20.8	14.6	19.9	23.2	27.4
Actual leavers	2853	484	389	569	446	696
- men	57.1	52.1	47	56.1	59.6	53.9
- women	42.9	47.9	53	43.9	40.4	46.1
Vocational education						
- none	20.4	34.7	42.9	31.5	33.9	46.3
- secondary level	35	36.6	36	38.5	41.5	35.3
- lower tertiary level	32.6	21.9	15.9	21.3	18.4	14.8
- higher tertiary level	12	6.8	5.1	8.8	6.3	3.6
Age, mean (SD)	39.4(0.2)	33.5(0.4)	32.4(0.5)	40.9(0.5)	46.2(0.6)	46.3(0.5)
Preceding unemployment	5%	16%	20%	11%	12%	22%
Same employer >3 years	42.5	26	22.9	39.4	48.2	38.2

Descriptive statistics

- Strong employment was more *common and immediately weakening employment less common* among the actual than among the anticipation leavers (early leavers)

- Among anticipation leavers the proportions of those with sooner or later strengthening employment were higher than among the actual leavers

- Among anticipation leavers the proportions of soon and later weakening employment were lower than among the actual leavers.

A3: Multinomial regression analysis

	Strong	Soon strengthening	Later strengthening	Later weakening	Soon weakening	Immediately weakening
Anticipation leavers	39 %	14 %	11 %	9 %	5 %	22 %
Actual leavers	53 %	9 %	7 %	11 %	8 %	13 %
Anticipation leavers	Ref	Ref	Ref	Ref	Ref	Ref
- RRR (95% CI) (1)	Ref	**0,47 (0,4-0,5)**	**0,46 (0,4-0,5)**	**0,81 (0,7-0,9)**	**1,28 (1,09-1,5)**	**0,43 (0,4-0,5)**
- RRR (95% CI) (2)	Ref	**0,53 (0,5-0,6)**	**0,53 (0,5-0,6)**	**0,80 (0,7-0,9)**	1,14 (0,96-1,4)	**0,39 (0,4-0,4)**
- RRR (95% CI) (3)	Ref	**0,55 (0,5-0,6)**	**0,55 (0,5-0,6)**	**0,82 (0,7-0,9)**	1,18 (0,997-1,4)	**0,43 (0,4-0,5)**
- RRR (95% CI) (4)	Ref	**0,55 (0,5-0,6)**	**0,57 (0,5-0,7)**	**0,84 (0,7-0,97)**	**1,2 (1,01-1,4)**	**0,43 (0,4-0,5)**

1: unadjusted, 2: gender, age and education, 3: 2 + occurrence of unemployment, 4: 3 + length of employment

A3: Multinomial regression analysis

- According to the multinomial logistic regression analyses the soon and the later strengthening and in particular the immediately weakening trajectories were significantly less common among the actual leavers, whereas the soon weakening trajectory tended to be more common.

- This pattern of associations remained unchanged after controlling for the set of background variables.
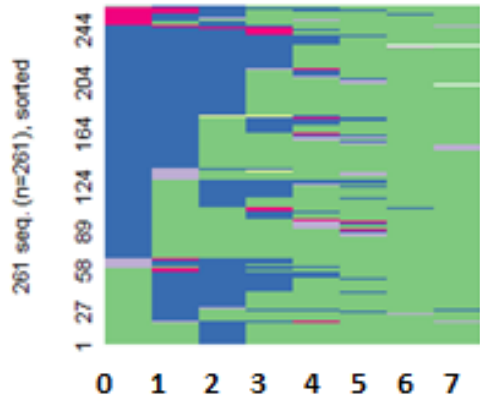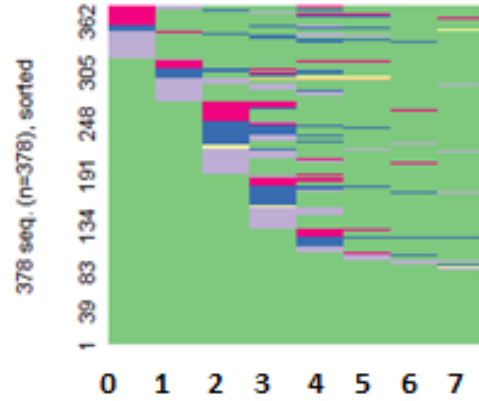
A3: Sequence analysis of group soon weakening
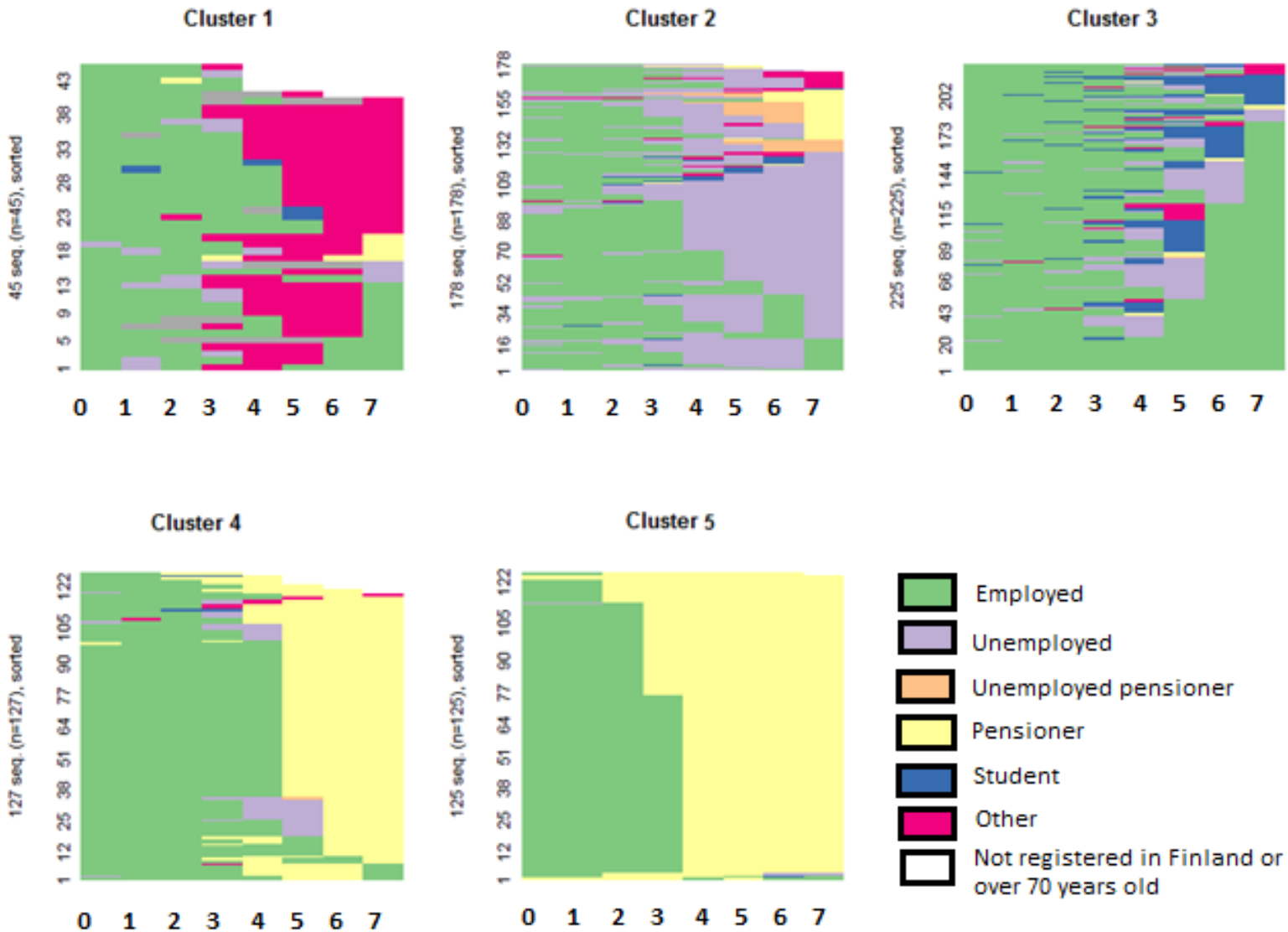
	Anticipation leavers	Actual leavers
Cluster 1 (6.4 %)	42,2	57,8
Cluster 2 (25.4%)	34,3	65,7
Cluster 3 (32.1%)	44,4	55,6
Cluster 4 (18.1%)	32,3	67,7
Cluster 5 (17.9%)	26,4	73,6
Total	36,3	63,7

A3: Sequence analysis of group later strengthening
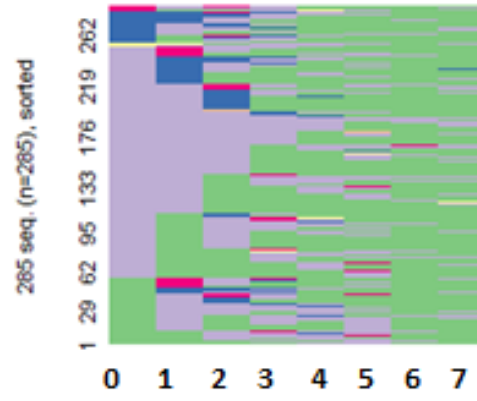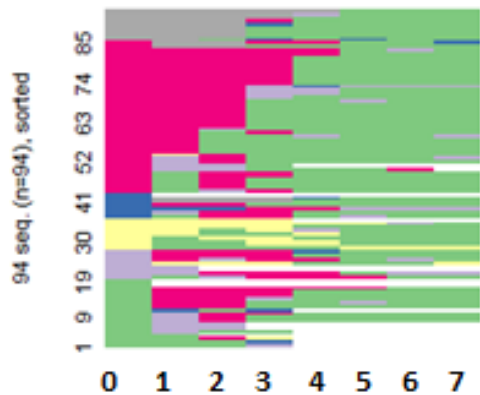
	Anticipation leavers	Actual leavers
Cluster 1 (25.6%)	67,8	32,2
Cluster 2 (37.1%)	55,6	44,4
Cluster 3 (28.0%)	64,6	35,4
Cluster 4 (9.2%)	61,7	38,3
Total	61,8	38,2

Legend:
- Employed
- Unemployed
- Unemployed pensioner
- Pensioner
- Student
- Other
- Not registered in Finland or over 70 years old

A3: Results of sequence analysis (as example two trajectory groups)

- In the trajectory group *soon weakening employment* sequence analysis generated five clusters. The two largest clusters were cluster 3 (*overlapping spells of employment, unemployment and study*) and cluster 2 (*from employment to unemployment*)

- Anticipate leavers were under-represented among those who get retired (cluster 5)

- In the trajectory group *later strengthening employment* sequence analysis generated four clusters, of which the largest were clusters 2 (*re-employed after unemployment*), 3 (*from unemployment to unstable employment*) and 1 (*from student to employed*).

- early leavers are over-represented in the *student-employed* cluster and *from unemployment to unstable employment* cluster

Yearly income of the anticipation and the actual lavers in the trajectory group of strong employment
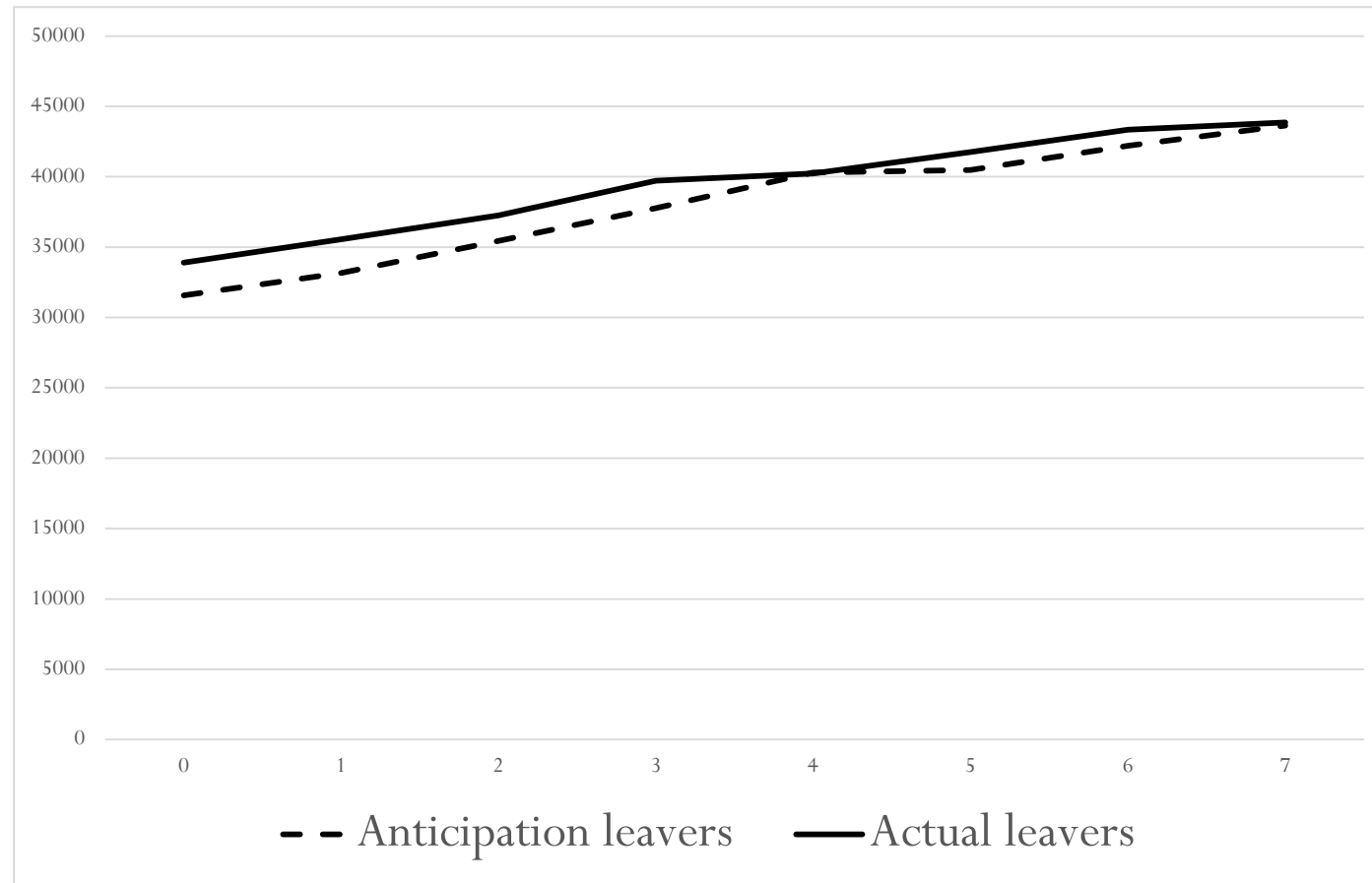
Our findings

- In the previous results the main hypothesis was that early leavers were the lucky ones in terms of re-employment and incomes compared with displaced workers.

- Our results, which are based on register based representative longitudinal employee-employer data, bring caution to previous knowledge at least in the context of Finland.

- Our study gives a clear indication that in a long term employment trajectories between anticipation and actual leavers are small among those who have a strong labour market attachment.

- The anticipation leavers earn slightly less than the actual leavers after loosing their job, however, they later reach almost the same wage level as actual leavers.