EUROSHIP

closing gaps in European social citizenship

An assessment of in-work poverty among female and male youth in Europe

EUROSHIP Working Paper No. 16

May 2022

Marge Unt

Kadri Täht

Thomas Biegert

EUROSHIP Working Papers are scientific outputs from the <u>EUROSHIP project</u>. The series is edited by the project coordinator Professor Rune Halvorsen. The working papers are intended to meet the European Commission's expected impact from the project:

i) to advance the knowledge base that underpins the formulation and implementation of relevant policies in Europe with the aim of exercising the EU social rights as an integral part of EU citizenship and promoting upward convergence, and

ii) to engage with relevant communities, stakeholders and practitioners in the research with a view to supporting social protection policies in Europe. Contributions to a dialogue about these results can be made through the <u>project website (euroship-research.eu)</u>, or by following us on Twitter: @EUROSHIP_EU.

To cite this report:

Authors

Marge Unt, Tallinn University, Estonia
Kadri Täht, Tallinn University, Estonia
Thomas Biegert, Tallinn University, Estonia

Abstract

In this paper we concentrate on the security dimension of social citizenship, i.e. 'living a decent life in accordance with the prevailing standards in society' according to Andersen and Halvorsen (2002, pp. 12–13). Labour market integration is typically the main aim of active labour market policies and a main strategy to alleviate poverty risk. In the current report, we use EUSILC data to present the incidence of in-work poverty in the EU and examine the trajectories leading to in-work poverty in different institutional settings.

First, in all the observed countries*, the most prevalent employment trajectory was "full-time employment".* While in Spain only slightly more than half of the young adults enjoyed this type of labour market security, in Norway it reached to almost 3/4 of the observed cases. Next to it, all country cases included a so-called "employment insecurity" path. In Estonia and Hungary, the share of this trajectory group was rather low (around 8-9%), while in case of the UK, Spain and Italy it included around one fifth of all the cases.

Second, in all the observed countries, we find *the lowest levels of in-work poverty risks among the "full-time employed" trajectory group*, the lowest being in Norway (3%) and highest in Spain (7%). Higher risks of in-work poverty related to employment trajectories that includes episodes or periods of part-time work, unemployment or inactivity. However, overall there is *the low incidence and prevalence of unemployment-impacted trajectories.* Thus, *unemployment seems rather not to be the (main) cause of in-work-poverty, but it elevates the poverty risks once present*.

Third, the analysis revealed considerable *gender differences across trajectory groups.* The dominant *"full-time employment" trajectory was in all the country-cases clearly male-dominated, whereas women tended to be over-represented in trajectory groups with higher labour market vulnerability and in-work poverty risks.*

Contents

Introduction

Becoming adult is a multifaceted process, reaching financial independence being one of the crucial markers of transitions to adulthood. Comparative research has shown that, across Europe, youth often face labour market exclusion in terms of periods of unemployment and not being in education nor training (O'Reilly et al., 2015, Rokicka et al., 2018). Moreover, if young people succeed in find a job, they often experience labour market insecurities. At the same time, the impact of labour market insecurities on the individual life course can be related to differences in the structural, institutional and cultural contexts across Europe (Unt et al., 2021).

In this working paper, we focus on youth who have entered the labour market. Labour market integration is typically the main aim of active labour market policies and a main strategy to alleviate poverty risk. However, for many young people participation in paid work is not sufficient to achieve the minimum standard of living in the country and not fall into poverty. In the EUROSHIP project we do not define an income above the relative poverty threshold as an objective in itself. In the EUROSHIP project the normative aim is conceptualised as full social citizenship, which is considered the basis for being a full and equal citizen. In this paper we concentrate on the security dimension of social citizenship, i.e. 'living a decent life in accordance with the prevailing standards in society' according to Andersen and Halvorsen (2002, pp. 12–13). Thus, a relatively low income reflects foremost the deprivation of youth of the positive freedom to develop and exercise their capabilities that average earners have access to.

We adopt the standard indicator of *in-work poverty* which has been included into EU social reporting since 2005 (Bardone & Guio, 2005). We need to note that it is a hybrid concept defining an in-work poor person *as a working person who lives in a poor household after social transfers*. A person is considered working if s/he works most of the time during the last year (>6 months). Household poverty is defined as a relative concept with reference to the living standard in a given society (<60% of median equivalized income). Thus, this concept brings together important dimensions: firstly, the fact that young person is working and secondly, accounts for potential buffering role of household and social protection system.

Due to this definition, it is not clear if in-work poverty is also experienced by persons who work full time and in a full year in the labour market or if it is driven by time spells of unemployment. Thus, the aim of this working paper is to examine more closely the labour market trajectories of youth to detect *if in-work poverty is foremost a low-wage or an unemployment problem.* Given the gendered nature of labour markets, we pay special attention to *gender differences.*

In the current report, we present the incidence of in-work poverty in the EU and examine the trajectories leading to in-work poverty. We identify *which youth labour market trajectories are most likely related to in-work poverty.* For this purpose, we present country level analysis for Estonia, Norway, the United Kingdom, Spain, Italy and Hungary to reveal

the labour market trajectories of working youth and their risks of in-work poverty in different social protection systems and labour market structures.

Data and methodology

Our data is derived from EU-SILC. In order to follow young people's labour market trajectories, we use the panel data version of EU-SILC. To compile the panels, we use a modified and extended version of the "ado eusilcpanel" (Borst, 2018). We use two separate datasets to first describe the overall incidence and development of in-work poverty for young people and second to study the relationship between typical labour-market trajectories, socio-demographic characteristics and in-work poverty probabilities. For the description of the incidence of in-work poverty and its development since before the Great Recession, we use data from the years 2007 to 2020. For the analysis of youth labour market trajectories, we constrain our data to 2014-2019. We chose this period because European economies should have by and large recovered from the 2008 economic and financial crisis by 2014 while the start of the COVID19 pandemic and related labour market disruptions have not started yet in 2019. Thus, this 5-year window provides us with a view of relatively undisturbed labour market trajectories.

Labour market status is defined as the self-described main activity in a given month. We merge some of the categories given in the original data and distinguish five distinct states: *full-time employment, part-time employment, unemployment, inactivity, and education.* Due to data limitations, we are only able to distinguish between full-time and part-time work. We are not able to detect the exact number of working hours. Based on labour market status, we construct labour market trajectories. We refer to part-time employment as non-standard employment or as status with higher labour market insecurity. We refer to periods of unemployment as labour market exclusion.

We use the standard poverty definition, which has every household with a lower income than 60% of the national median income as 'at risk of poverty'. To adjust for household composition, we use the OECD equivalence scale. To count as in-work poor, an individual has to be at work but live in a poor household. As income is available only as an annual indicator, the common definition requires that an individual has to work more than 6 months in a year to count as working and thus potentially working poor.

In our data, we define youth as 18 or older at the start of our observation period. We only keep persons who are not older than 30 years of age at the end of our observation period. As we are interested in young people who have entered the labour market already, we exclude individuals who indicate more than 3 months of education in a calendar year.

We use a binary measure of gender that distinguishes men and women. Our education measure groups educational attainment into three categories (ISCED0-2 = low, ISCED3-4 = medium, ISCED5-6 = high education). From employment characteristics we include a measure of being employed in service sector. We create additional variables that capture the composition of the household a young person lives in. We use a measure of the number of children in the household with children being defined as being younger than 18. We create a dummy that indicates if there is at least one other household member who works.

We use the information on labour market trajectories in different ways. First, to reveal the importance of unemployment spells among youth at in-work poverty, we calculate **the**

average duration of youth in each status during the previous reference year. Secondly, we identify "typical" labour market trajectories of the young adults based on these four statuses. For this group-based trajectory modelling (Nagin, 1995; 2005) is applied. For the purpose of the analysis, labour market statuses are "quantified" as **the strength of attachment to the labour market**: full-time employment (3), part-time employment (2), unemployment (1) and inactivity (0). The statuses are measured and respectively trajectories constructed over a period of 24 calendar months (starting in January). It should be noted that due to two restrictions (out-of-education in both years and in-employment for more than 6 months in the second year), we exclude to great extent from the analysis the group of (long-term) inactive youth, which would comprise otherwise approximately 8-12% of cases depending on country case.

The group-based methodology firstly allows to detect distinct pathways to in-work poverty and enables to measure the in-work poverty risk of each trajectory. It also allows to create the profiles of each trajectory to describe the typical characteristics of each of the trajectory groups. To create the profiles, individuals were assigned to the trajectory group to which they most likely belonged based on their measured history of labour market attachment.

Findings

Before turning to the labour market trajectories related to higher in-work poverty, we provide a snapshot of the incidence of in-work poverty: *How many young people across Europe work and live in relative poverty?* On average, 10% of working youth are at risk of poverty in 2020. The figure has risen only marginally compared to pre-COVID period and does not differ substantially from the in-work poverty risk of the overall working population[1]. However, the risks are distributed unevenly even within the age group of young adults. Figure 1 shows the in work-poverty rate over the last fourteen years by three age groups: 16-19, 20-24 and 25-29 years old. Those in age 16-19, leaving education early, are clearly facing the highest poverty risks even when integrated into the labour market. Every sixth of 16-19 years old is at an in-work poverty risk. For age group 20-24, the in-work-poverty risk increased after the so-called Great Recession but did not recover in following years. In 2020, it has made it further increase, reaching 15%. The 25-29 age group is most shielded from an in-work-poverty risk – around 8% of working youth in this age live in households below the relative poverty line.
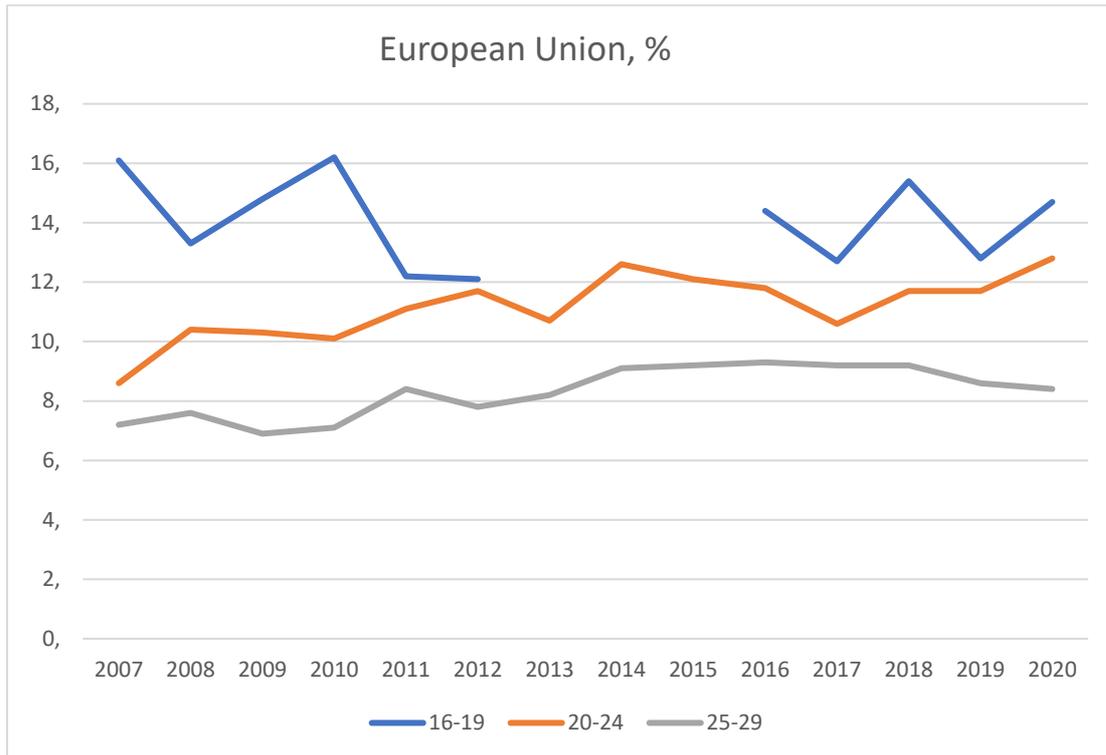
Figure 1 In-work poverty by age groups 2007-2020, %

Source: Eurostat, [ilc_iw01], 29-03-2022

Our central concern here is the effect of employment on in-work-poverty risk, i.e. *whether being in risk of poverty while actually working is related more to youth' low wage or rather to higher risks of unemployment*. As we mentioned earlier, in order to be considered as working poor, one needs to work at least 7 months either full-time or part-time. Therefore, by definition those who are at risk of in-work poverty, are most of the time in the labour market. However, perhaps only those who are mostly out of employment the rest of the (five) months are prone to poverty? This can be answered by EUSILC data presented in Figure 2 where we present the incidence and count of different employment statuses (full-time, part-time, unemployment, inactivity, education) among young adults during one calendar year.

As can be seen in Figure 2 below, young people are employed the majority of time. Although we cannot assess the exact working hours based on EUSILC data, we can see that comparing working poor youth with working non-poor youth (see Annex 1, Table A1), there is a considerably higher share of part-timers among working poor youth than among working not-poor youth within the same country. Moreover, in all European countries, *average time in unemployment for working poor youth is below 1 month*, except for women in Cyprus, where it is on average 1.6 month. Thus, based on this descriptive evidence, we may conclude that *in work at risk of poverty is NOT foremost driven by a person's unemployment,* but those working in part-time positions are more likely to be at risk of poverty.
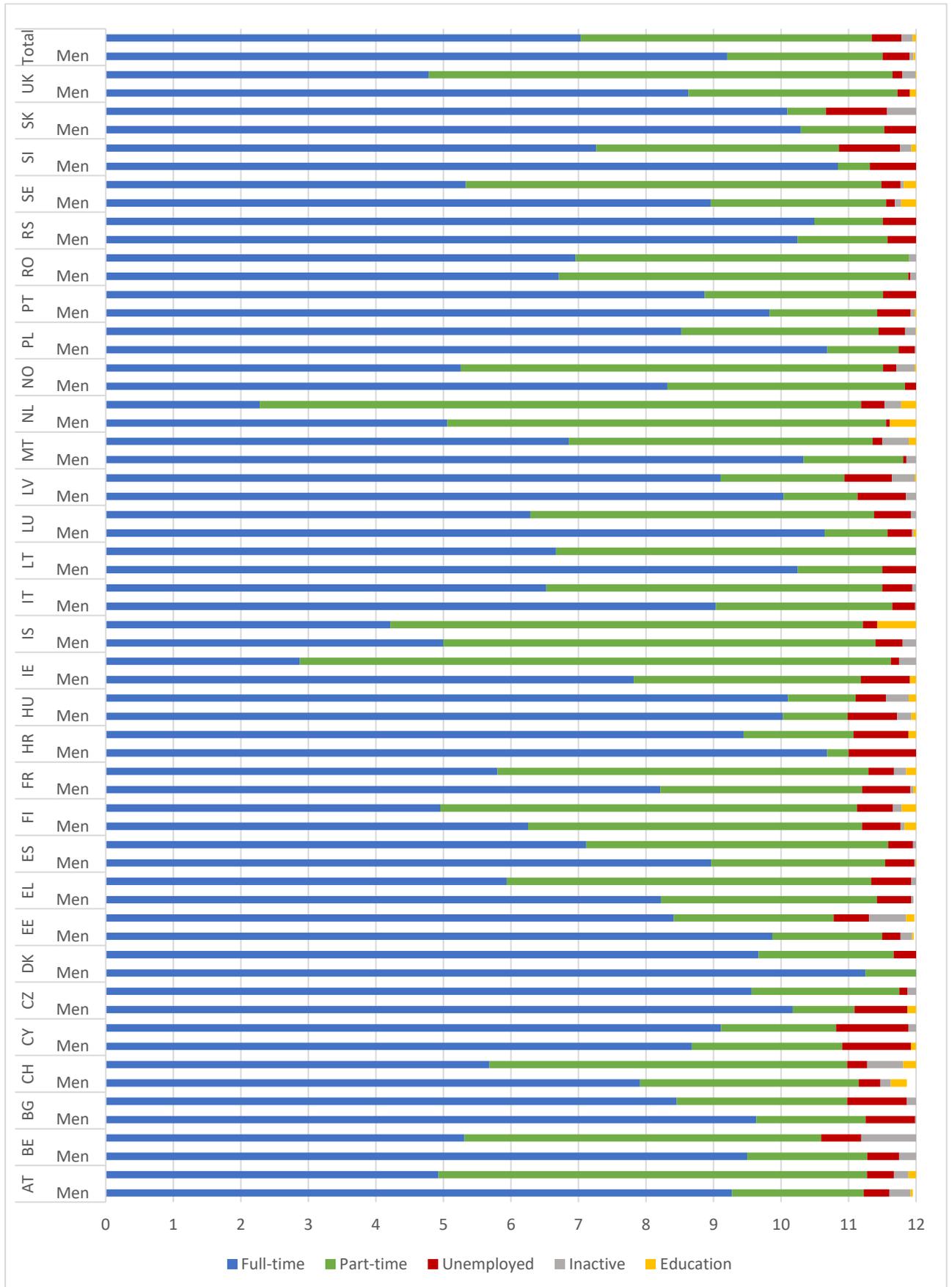
Figure 2 The labour status of youth at in-work poverty over 12 months, years 2016-18

Labour market trajectories and in-work poverty of youth in individual countries

Next, we focus on *the youth labour market trajectories for all working* youth, and detect which are *the most vulnerable trajectories* and what are the characteristics of different trajectories. In order to account for different social protection systems and labour market structures, we present country level analysis for different welfare cases, namely, Estonia, Norway, the United Kingdom, Spain, Italy and Hungary.

THE UNITED KINGDOM

Based on group-based trajectory modelling results, *five trajectory groups* for young adults' labour market participation were identified in the case of the UK (see Figure 3). The y-axis of the figure indicates the average labour market attachment level (3 for working full-time and 0 for being inactive), the x-axis the calendar months (24 consecutive months, starting from January). The most dominant trajectory group (61.6% of youth fall into this) is the **"*full-time employment*"** trajectory (trajectory group 5), where young adults stay at the level of full employment throughout the observed 24-month period. At the same time, this group (together with the trajectory group 4) is characterised by significantly lower poverty risk compared to other trajectory groups – on average only 3% of youth in the "full-time employment" group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 4). The second lowest average poverty risk trajectory group, the group number 4, can be summarized by a transition *"from full-time to part-time".* It is a relatively small group – only 5.5% of cases fall into this category.

The highest poverty risk level – 17.6% of cases within this employment trajectory group are at risk of poverty – can be observed for the trajectory group 2, which could be summarised due to the persistence in labour market attachment around the level of part-time work or less as **"*labour market insecurity*"** trajectory. *About every fifth young adult (21.6%) in the UK* belongs to that group.
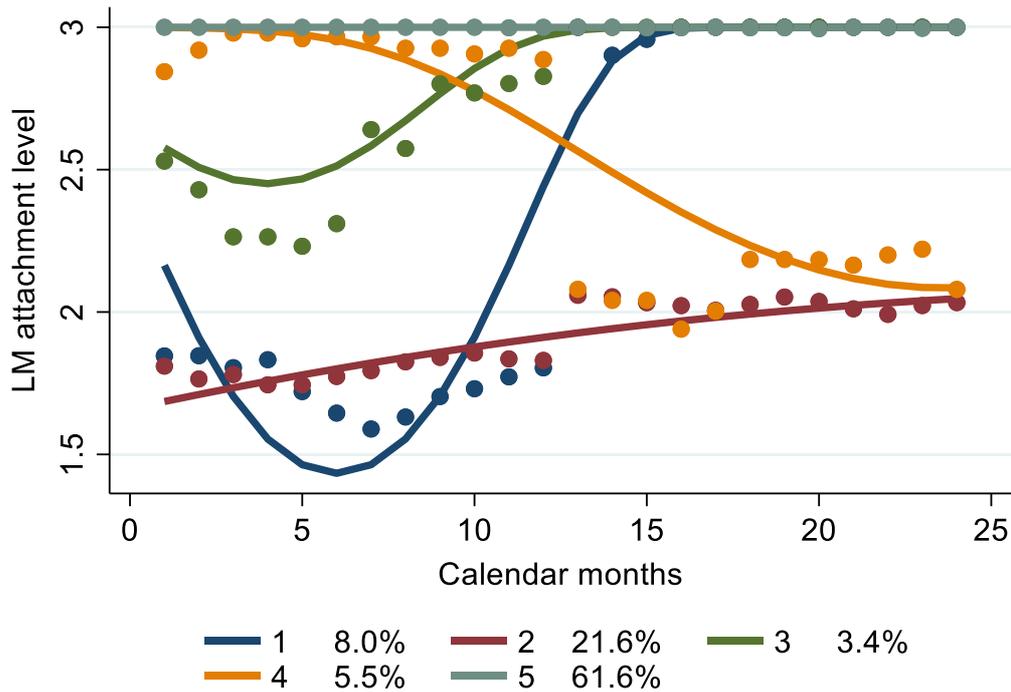
Figure 3 Labour market trajectories (24 months) for youth (18-30) in UK, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

Also the remaining employment trajectories that contain periods of labour market insecurity or exclusion show rather high levels of poverty, especially compared to the "full-time employment" group. Group trajectory 1 that represents about 8% of the observed young adults consists of a transition *"from insecurity* (part-time work and/or unemployment) *to full employment"*. Despite the fact that on average the members of that trajectory group remain economically active throughout the observed period, about every seventh of them (12.6%) experiences the risk of being in-work poor, which is about four times more than among the "full-time employed" group. Group trajectory 3 indicates a similar pattern, i.e. *"from part-time to full-time"* and shows similar levels of in-work poverty risk – about 13% of young adults in this group experience household poverty.

These findings indicate that in terms of poverty levels, we can observe two rather distinct set of trajectories. The first group (trajectory 5), with very low poverty risk levels consists of young adults who experience almost no labour market insecurity (remain in full-time employment) or reduce somewhat their labour market attachment over the observed period while shifting from full time work to part-time work (trajectory 4). The set of trajectories, with considerably higher poverty risks are those whose labour market statuses have been more dynamic. These trajectories tend to include shorter or extended periods of part-time work. Unemployment as the potential cause for in-work-poverty does not dominate in any of the observed employment trajectories.
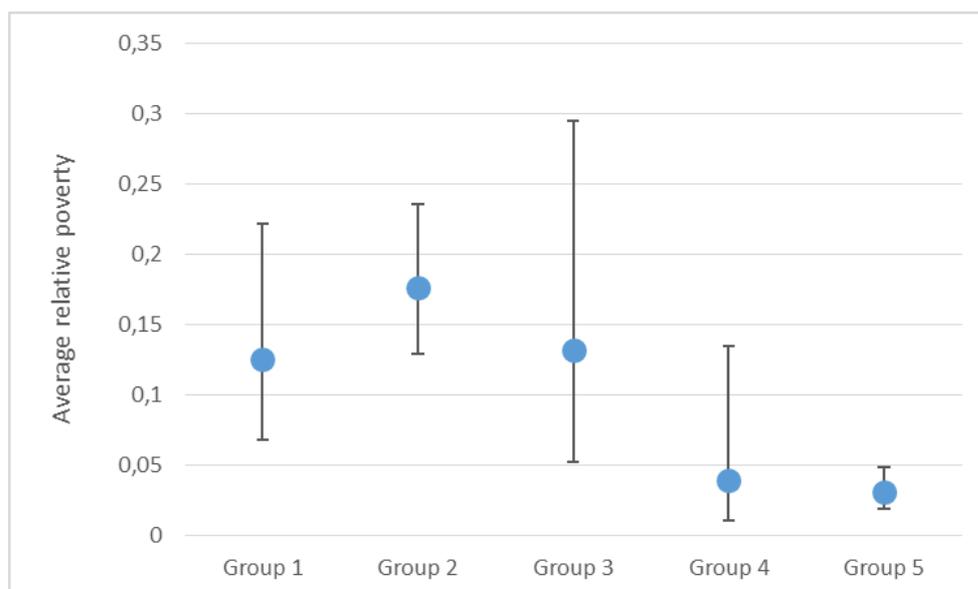
Figure 4 Average in-work poverty risk of young adults across different trajectory groups in UK

Source: EU-SILC 2014-2018, authors' calculations

When comparing the trajectory groups in terms of socio-economic characteristics, we can note (Table 1) some variability. The mean age of youth in the most dominant, "full-time employment" trajectory group is somewhat higher (25.1 years) compared to the rest of the trajectory groups where is remains between 23.5 and 23.9 years. However, we notice the gender 'segregation' where *females are overrepresented in less secure pathways*– while in the "full-time employment" group, about 39% are women, in trajectory groups of "labour market insecurity" and transition "from full-time to part-time" it reaches 70-71%. The latter two groups also contain above the average share of low-educated labour market participants. Also, the share of employment in service sector varies considerably across trajectory groups: while in the "full-time work" trajectory group the share of service work is 17%, it is about three times more prevalent in more vulnerable pathways: (55%) among those who transit "from insecurity to full-time" or experience stable "labour market insecurity".

Table 1 Socio-economic characteristics of employment trajectory groups in the UK

| | GR TRAJ 1 | | GR TRAJ 2 | | GR TRAJ 3 | | GR TRAJ 4 | | GR TRAJ 5 | |
| | N = 71 | | N = 193 | | N = 31 | | N = 50 | | N = 553 | |
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d
Age (18-29)	**23.69**	3.51	**23.7**	3.89	**23.50**	3.37	**23.9**	3.34	**25.1**	3.14
Female (0/1)	**0.56**	0.49	**0.71**	0.46	**0.52**	0.51	**0.7**	0.46	**0.39**	0.49

Lower education (0/1)	**0.18**	0.39	**0.27**	0.45	**0.1**	0.31	**0.23**	0.43	**0.15**	0.36
Working in service sector (0/1)	**0.55**	0.5	**0.55**	0.49	**0.29**	0.46	**0.35**	0.48	**0.17**	0.37
Other members employed (0/1)	**0.83**	0.38	**0.76**	0.42	**0.84**	0.37	**0.88**	0.33	**0.83**	0.37
Mean no of children in the HH	**0.58**	0.82	**0.93**	0.84	**0.23**	0.49	**0.5**	0.81	**0.35**	0.7

Source: EU-SILC 2014-2018, authors' calculations

To sum up, in case of the UK, different employment trajectories of young adults tend to relate to different levels of in-work poverty risk. Employment trajectories that include episodes or periods of labour-market insecurity or exclusion tend to relate to higher poverty risks despite high labour market participation of young people in general. Meanwhile, unemployment status does not show up as the main pathway to in-work poverty risk. Gender dimensions appears to be rather important here as well – the share of women is higher among trajectories with more labour market insecurity and respectively higher poverty levels.

NORWAY

Based on group-based trajectory modelling results, *six trajectory groups* for young adults' labour market participation were identified (see Figure 5) in the case of Norway. The most dominant trajectory group (*73.4%* of youth fall into this) is the *"full-time employment"* trajectory (trajectory group 6), where young adults stay at the level of full employment throughout the observed period. At the same time, this group is characterised by significantly lower poverty risk compared to other trajectory groups – on average only 3% of youth in this trajectory group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 6).
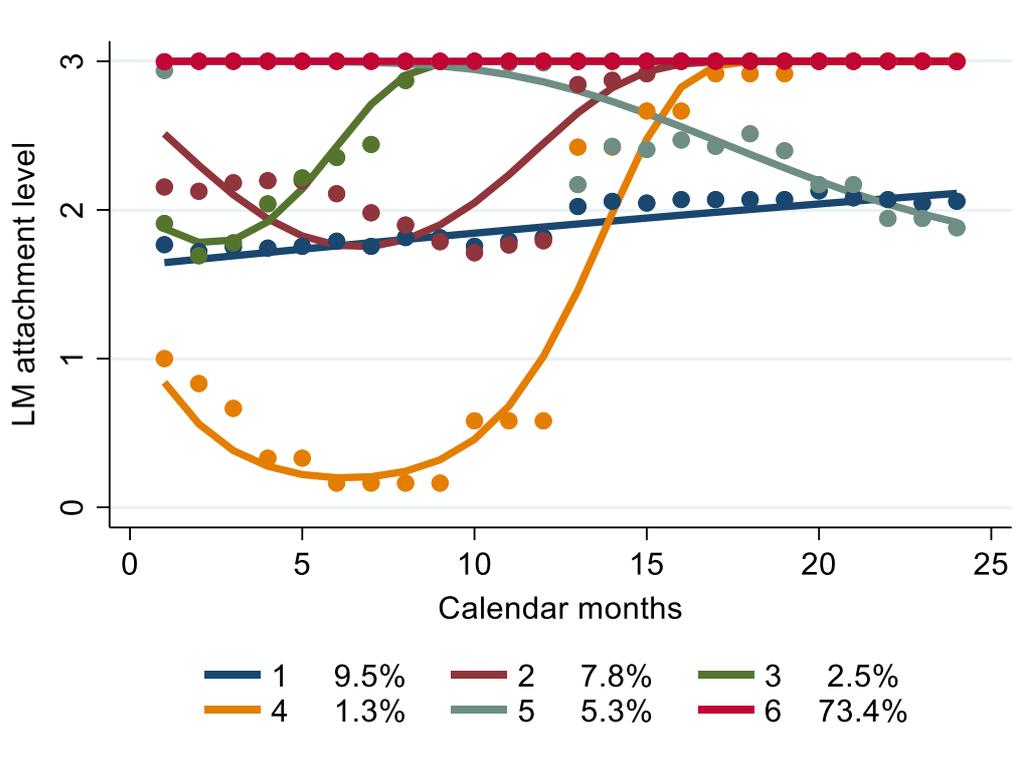
Figure 5 Labour market (LM) trajectories (24 months) for youth (18-30) in Norway, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

Very low poverty risk (1%) and very similar trajectory pattern of "full-time employment with part-time start" is also a characteristic of trajectory group 3. Yet, this is a very small trajectory group of only 2.5% of cases belonging to it.

Somewhat higher poverty risk level (8%) characterizes trajectory group 5, which consists of employment trajectories of transitioning from *"full-time employment to part-time employment"*. Also, this is a rather small group making up 5.3% of the cases.

The three remaining trajectory groups – trajectory group 1 of mainly *"part-time employment",* trajectory group 2 of *"part-time to full-time"* and trajectory group 4 of *"labour market exclusion to full-time"* – that include periods or permanent lower attachment to employment show respectively higher levels of poverty risk, reaching up to 19% for the "part-time to full-time" trajectory group.

Thus, in the case of Norway there exists variability in in-work-poverty levels depending on employment trajectories. *On the one hand there is the group of "full-time employment" trajectories with almost non-existent poverty levels, and on the other hand there are the trajectories with longer periods of lower attachment and labour market insecurity with respectively elevated levels of poverty risk.*
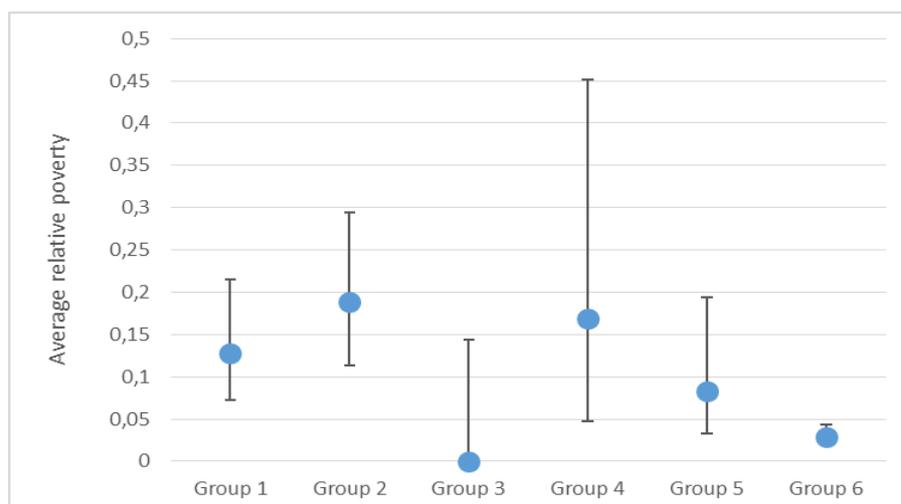
Figure 6 Average in-work poverty risk of young adults across different trajectory groups in Norway

When comparing the trajectory groups in terms of socio-economic characteristics, we can note (Table 2) some variability as well. The mean age of youth in the most dominant, "full-time employment" trajectory group is somewhat higher (25.3 years) compared to the "part-time" (trajectory group 1) and "part-time to full-time" (trajectory group 2) groups where the mean age is 23.8 years. The share of women varies also between the trajectory groups – while in the "full-time employment" group about 38% are women, in the rest of trajectory groups the share of women is somewhat higher, reaching up to 65% for the permanent "part-time" trajectory group. Even greater variability can be observed in terms of share of workers in services – while in the main group of "full-time employment" it is only 11%, than for example in the permanent "part-time" (trajectory group 1) and from "part-time to full-time" (trajectory group 3) the share is almost five times higher, reaching up to 56-58%.

Table 2 Socio-economic characteristics of employment trajectory groups in Norway

	GR TRAJ 1 N = 86		GR TRAJ 2 N = 71		GR TRAJ 3 N = 23		GR TRAJ 4 N = 12		GR TRAJ 5 N = 48		GR TRAJ 6 N=664	
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d
Age (18-29)	**23,8**	3,59	**23,8**	3,25	**24,6**	2,69	**24,5**	3,44	**24,4**	3,53	**25,3**	3,13
Female (0/1)	**0,65**	0,48	**0,59**	0,49	**0,52**	0,51	**0,5**	0,52	**0,56**	0,5	**0,38**	0,48
Lower education (0/1)	**0,38**	0,49	**0,29**	0,45	**0,19**	0,4	**0,33**	0,49	**0,34**	0,48	**0,22**	0,41
Working in service sector (0/1)	**0,56**	0,49	**0,41**	0,49	**0,58**	0,51	**0,27**	0,46	**0,27**	0,45	**0,11**	0,31

Other members employed (0/1)	**0,71**	0,46	**0,75**	0,43	**0,56**	0,51	**0,67**	0,49	**0,65**	0,48	**0,61**	0,49
Mean no of children in the HH	**0,62**	0,99	**0,66**	1,07	**0,17**	0,49	**0,58**	0,66	**0,58**	0,84	**0,42**	0,76

Source: EU-SILC 2014-2018, authors' calculations

Thus, also in case of Norway, there can considerable variability in in-work-poverty levels depending on employment trajectories of young adults. However, in most of the trajectories – both with low and high in-work-poverty-risk – the main employment status of the young adults is full-time or part-time employment. Unemployment status is centric only in case of one trajectory (with above average high in-work-risk, though), but it remains rather marginal with its prevalence of 1.3 of the cases. *Also gender dimension appears to be relevant – women are disproportionally represented in trajectory groups of temporary or permanent part-time employment and within trajectory groups with higher in-work-poverty risk.*

ITALY

Based on group-based trajectory modelling results, *five trajectory groups* for young adults' labour market participation were identified (see Figure 7) in the case of Italy. The most dominant trajectory group (62.4% of youth fall into this) is the **"*full-time employment*"** trajectory (trajectory group 5), where young adults stay in the level of full employment throughout the observed period. At the same time, this group (together with trajectory group 3) is characterised by lowest poverty risk among the detected trajectory groups – on average 6% of youth in this trajectory group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 8). The second trajectory group with lowest poverty rate (5.6% of youth within this group are in poverty risk) is trajectory group 3 that can be characterized by transition *"from part-time to full-time"* employment. This type of trajectory is characteristic to 8.6% of the cases.

Trajectory group 4 represents a reverse transition, i.e. from *"full-time to part-time".* Although the young adults following this trajectory could be considered having rather strong labour market attachment, the mean in-work-poverty risk among this groups is somewhat higher, reaching to 11%.

The two remaining trajectory groups with highest poverty risks – respectively 17.5% and 15.7% - are trajectory groups 1 and 2. The first includes young adults who remain in the position of *"labour market insecurity",* i.e. unemployment and/or part-time employment, throughout the observed period. It is at the same time the second biggest group, comprising of 17.8% of young adults under observation. The second trajectory group includes transitions from *"labour market insecurity to full-employment"*, where about 6.8% of cases belong to this trajectory group.
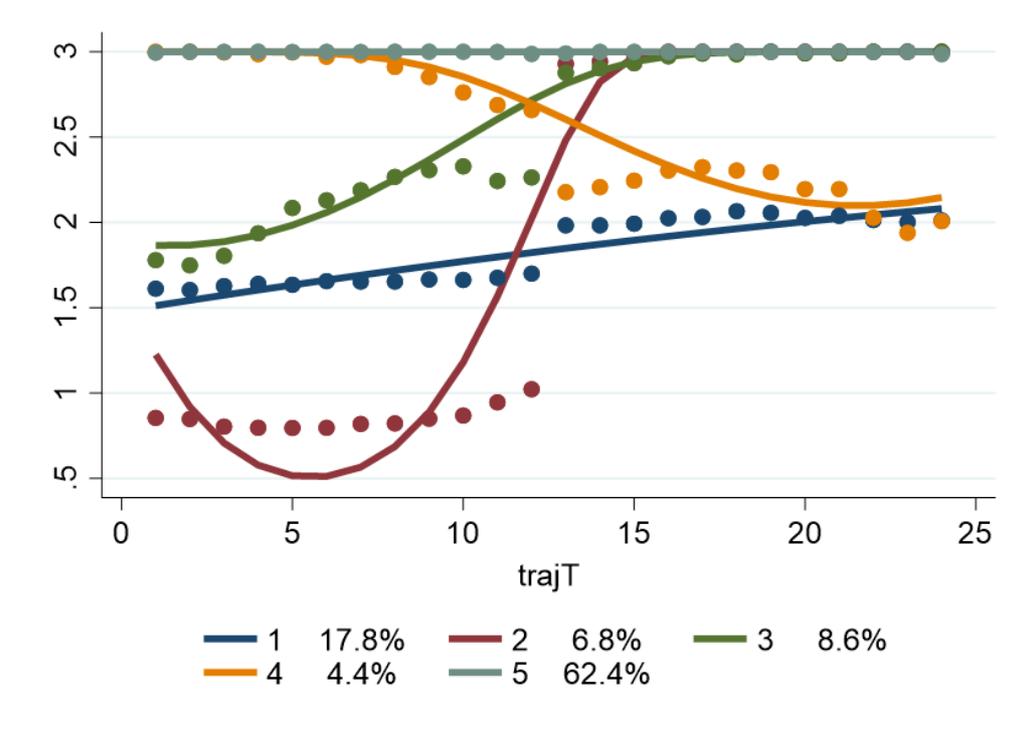
Figure 7 Labour market trajectories (24 months) for youth (18-30) in Italy, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

Thus, as can be seen also in case of Italy there seems to exist a relationship between in-work-poverty risk and employment trajectories – while these groups with relatively stable full-time employment experience low in-work-poverty risks, those whose employment trajectories include or consist of employment insecurity episodes are much more likely to also be in poverty despite their active participation in the labour market.

Figure 8 Average in-work poverty risk of young adults across different trajectory groups in Italy

Considerable variability can be observed also when looking at the socio-economic characteristics of the observed trajectory groups (Table 3). While there is little variation regarding mean age, trajectory groups tend to differ in terms of share of female workers. In the most dominant "full-time employment" trajectory group the share of females is 33%, whereas in the trajectory group of "labour market insecurity" (which has also highest in-work-poverty risk) the share is twice as high, reaching 66%. Also, the share of service sector jobs is the highest (37% compared to the 20% of "full-time employment" trajectory) in that employment trajectory group. Share of female workers is high (56%) also within the "full-time to part-time" trajectory group. The share of low-educated people is highest (25%) in the trajectory group of transition from "labour market insecurity to full-time employment" and lowest among trajectory group characterised by transition from "part-time to full time employment".
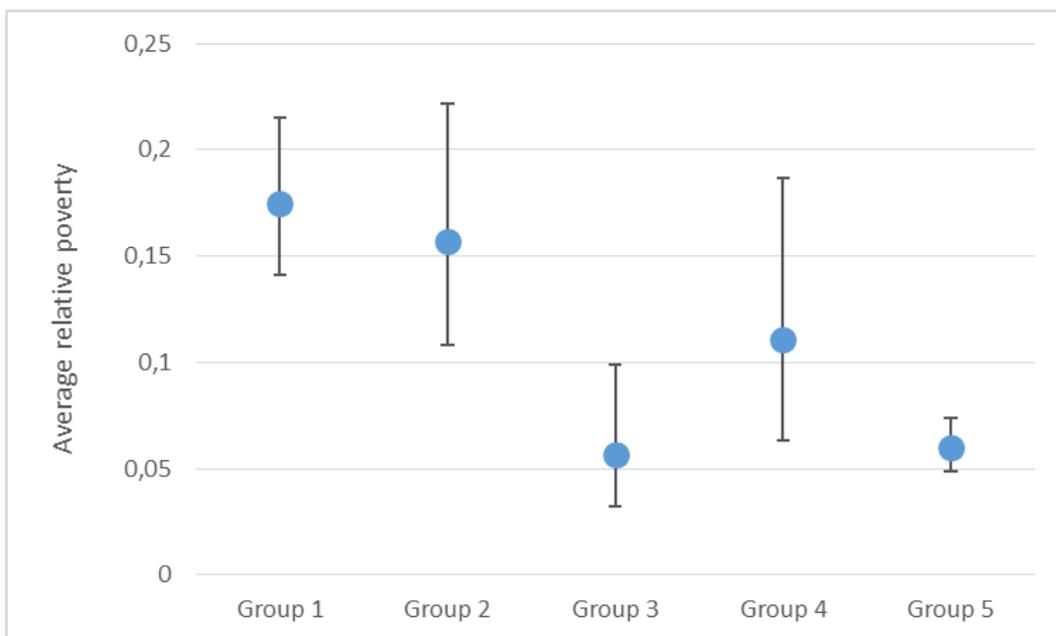
Table 3 Socio-economic characteristics of employment trajectory groups in Italy

	GR TRAJ 1 N = 406		GR TRAJ 2 N = 153		GR TRAJ 3 N = 200		GR TRAJ 4 N = 100		GR TRAJ 5 N = 1422	
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d
Age (18-29)	**24,4**	3,14	**23,8**	3,25	**24,4**	3,15	**24,9**	3,25	**25,5**	2,78
Female (0/1)	**0,66**	0,48	**0,47**	0,5	**0,43**	0,49	**0,56**	0,49	**0,33**	0,47
Lower education (0/1)	**0,22**	0,42	**0,25**	0,43	**0,13**	0,33	**0,15**	0,36	**0,18**	0,39
Working in service sector (0/1)	**0,37**	0,48	**0,28**	0,45	**0,28**	0,45	**0,33**	0,47	**0,2**	0,4
Other members employed (0/1)	**0,75**	0,43	**0,76**	0,43	**0,75**	0,43	**0,74**	0,44	**0,65**	0,48
Mean no of children in the HH	**0,37**	0,68	**0,41**	0,76	**0,26**	0,61	**0,28**	0,53	**0,23**	0,51

Source: EU-SILC 2014-2018, authors' calculations

To sum it up, also in case of Italy can considerable variability be observed in in-work-poverty levels depending on employment trajectories of young adults. Although lowest in-work-poverty risks relate to more stable and secure employment situations, also in the case of employment trajectories leading to higher in-work-risk the dominating activity status is employment, more precisely the presence of insecure job episodes/periods. *Unemployment*

status also seems to play some role, but it could be considered rather modest as it is more present only in the case of one employment trajectory group. Also gender dimensions appears to be present when it comes to in-work poverty risk – *women are disproportionally represented in the trajectory groups that include episodes or periods of labour market insecurity and respectively higher in-work-poverty risks.*

SPAIN

Based on group-based trajectory modelling results, *five trajectory groups for* young adults' labour market participation were identified (see Figure 9) in the case of Spain. The most dominant trajectory group (51.2% of youth fall into this) is the **"*full-time employment"*** trajectory (trajectory group 5), where young adults stay in the level of full employment throughout the observed period. At the same time, this group is characterised by lowest poverty risk among all the detected trajectory groups – on average 7% of youth in this trajectory group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 10).
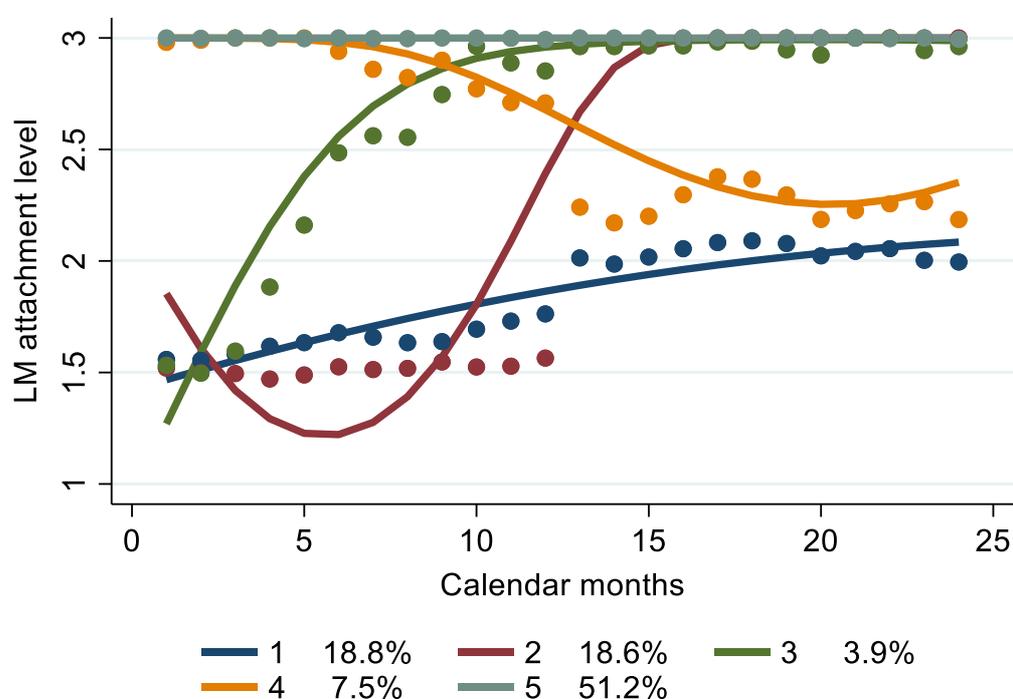

Figure 9 Labour market trajectories (24 months) for youth (18-30) in Spain, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

Almost half of the economically active youth population experienced over the observed period less stable trajectories and respectively are representatives of these groups faced with higher poverty risks. Highest in-work-poverty risks are among trajectory groups 1 (21.6%) and 2 (20%). First of could be summarised as **"*labour market insecurity trap"*** trajectory where young adults stay in/between part-time employment and unemployment trough the observed period. This type of trajectory characterises about 1/5 (18.8%) of economically active young adults in Spain. Second trajectory groups includes also considerable amount of labour market insecurity and exclusion episodes/periods, but

different from the first group as it includes the transition *"from labour market insecurity to full-time employment"*. However, even in the case of "successful" transition to labour market, these young adults still suffer from high in-work-poverty risk. Also this is a rather dominant group in Spanish youth labour market – 18.6% of the observed cases fall into this trajectory category.

The less dominant and least in-work-poverty risk groups are the remaining two trajectories – 3 and 4. Trajectory group 3 represents trajectories of transitions from *"part-time to full-time"* and trajectory group with reverse transition, i.e. from *"full-time to part-time".* These two groups together characterize 11.4% of the cases and the mean poverty risk level is around 13-14%.
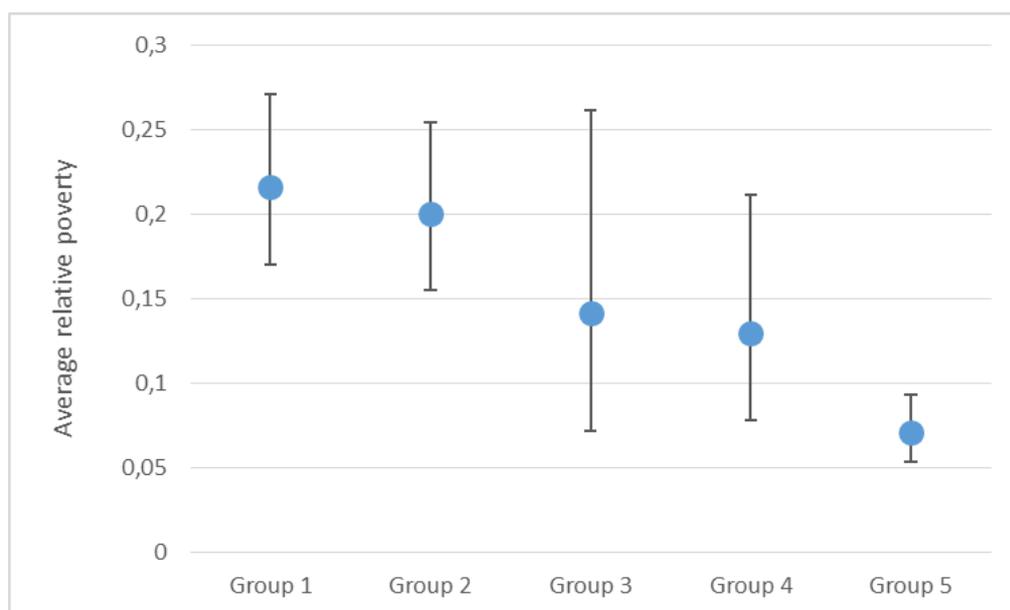

Figure 10 Average in-work poverty risk of young adults across different trajectory groups in Spain

Thus, as can be seen, also in case of Spain, there exists considerable variability for in-work-poverty risks among young economically active adults. While for those who are most established in the labour market in-work-poverty risks remain low, for young adults whose employment trajectories include episodes or periods of insecurity and/or exclusion are faced with high in-work-poverty risks even when remaining active in the labour market. Moreover, the share of these groups is considerably high, consisting of 2 out of 5 young adults.

Considerable variability can be observed also when looking at the socio-economic characteristics of the observed trajectory groups (Table 4). While there is little variation regarding mean age, trajectory groups tend to differ in terms of share of female workers. In the most dominant "full-time employment" trajectory group the share of females is 40% (as it is also in the trajectory groups of "labour market insecurity to full-time" and "part-time to full-time"). In the group of stable "labour market insecurity" (which has also highest in-work-poverty risk) the share is 1.7 times higher, reaching to 69%. Another striking characteristic of the "labour market insecurity" trajectory is the high share of work in service sector (42% compared to the "full-time employment" trajectory).

Table 4 Socio-economic characteristics of employment trajectory groups in Spain

	GR TRAJ 1		GR TRAJ 2		GR TRAJ 3		GR TRAJ 4		G TRAJ 5	
	N = 250		N = 245		N = 52		N = 100		N = 679	
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d
Age (18-29)	**24,82**	3,02	**24,8**	3,03	**24,8**	2,24	**25,5**	2,72	**25,8**	2,71
Female (0/1)	**0,69**	0,46	**0,41**	0,49	**0,40**	0,49	**0,5**	0,5	**0,41**	0,49
Lower education (0/1)	**0,34**	0,47	**0,40**	0,49	**0,32**	0,47	**0,31**	0,47	**0,29**	0,45
Working in service sector (0/1)	**0,42**	0,49	**0,28**	0,45	**0,22**	0,41	**0,24**	0,43	**0,22**	0,41
Other members employed (0/1)	**0,70**	0,46	**0,76**	0,42	**0,76**	0,42	**0,71**	0,46	**0,74**	0,44
Mean no of children in the HH	**0,42**	0,77	**0,33**	0,58	**0,21**	0,46	**0,41**	0,75	**0,31**	0,63

Source: EU-SILC 2014-2018, authors' calculations

To sum up, also in case of Spain we observe considerable variability in in-work-poverty levels depending on the employment trajectories of young adults. However for the trajectories with highest in-work-poverty risk the dominant employment status of the young adults is full-time or part-time employment. Unemployment status also seems to play a role, especially for the trajectory of "labour market insecurity", but it is not a very clear and visible pathway into in-work-poverty. Also gender dimension appears to be relevant. Women are disproportionally represented in the trajectory group that could be considered as most vulnerable in terms of labour market chances and outcomes.

ESTONIA

Based on group-based trajectory modelling results, *six trajectory groups* for young adults' labour market participation were identified (see Figure 11).

The most dominant trajectory group (66% of youth fall into this) is the one of **"full-time employment"** (trajectory group 4), where young adults stay in the level full employment throughout the observed period. At the same time, this group is characterised by the lowest in-work poverty risk among the observed young adults in the labour market in Estonia – on

average 7% of youth in this trajectory group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 12).

In the rest of the group trajectories (characterizing approx. 1/3 of the observed cases), there exists more variability within the trajectory in terms of labour market insecurity and/or labour market exclusion, and respectively in poverty risks. Trajectory group 1 could be summarised as *"from inactivity to full-time".* Although it could be considered a successful "transition" – the young adults end up being employed full-time . We can observe here the highest poverty risk: among 16% of young adults in this trajectory group are at risk of poverty in the second observed year. Still, this is the least common pattern among the six trajectory groups. Only 4.1% of observations fall into this category.
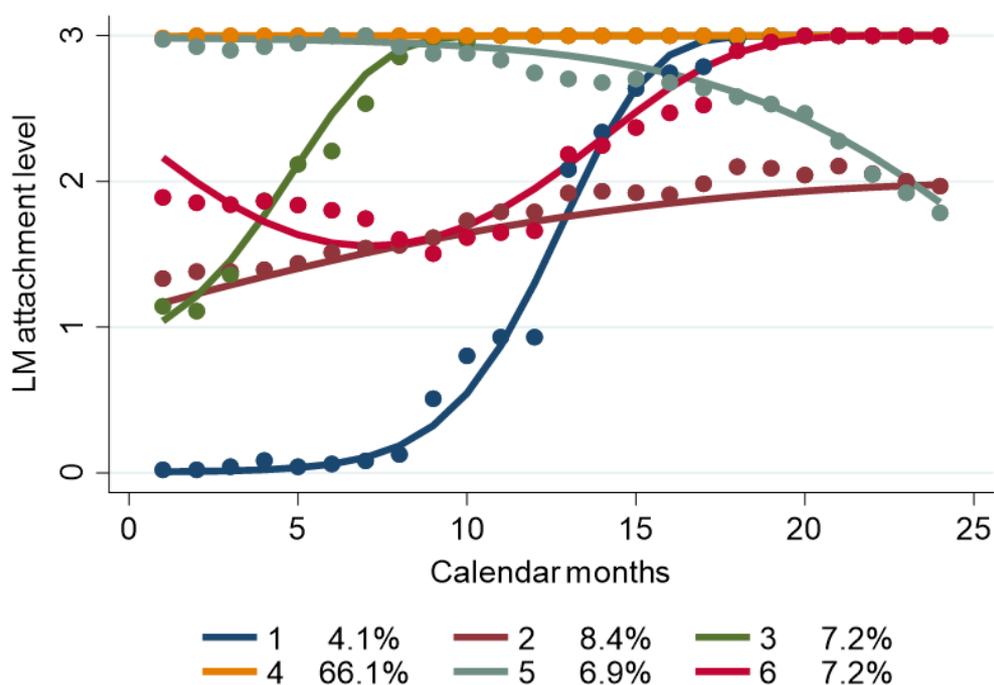

Figure 11 Labour market trajectories (24 months) for youth (18-30) in Estonia, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

A similar trajectory group is group number 3, where young adults also reach full employment, but rather from the level of unemployment meaning they have some labour market experience/attachment beforehand. There are about 7.2% of young adults who are likely to follow the **"unemployment to full-employment"** trajectory. Although the experienced poverty among this group is slightly lower (14%), it is still double of the "full-time employment" group.

A very similar high poverty risk characterizes group trajectory 6 also(7.2% of the cases), where the initial labour market attachment before full-time employment has been even higher than unemployment level (on average on level of part-time employment). Still, for the trajectory group of **"from part-time to full-time"** the poverty risk is among the highest of the observed six trajectory groups.
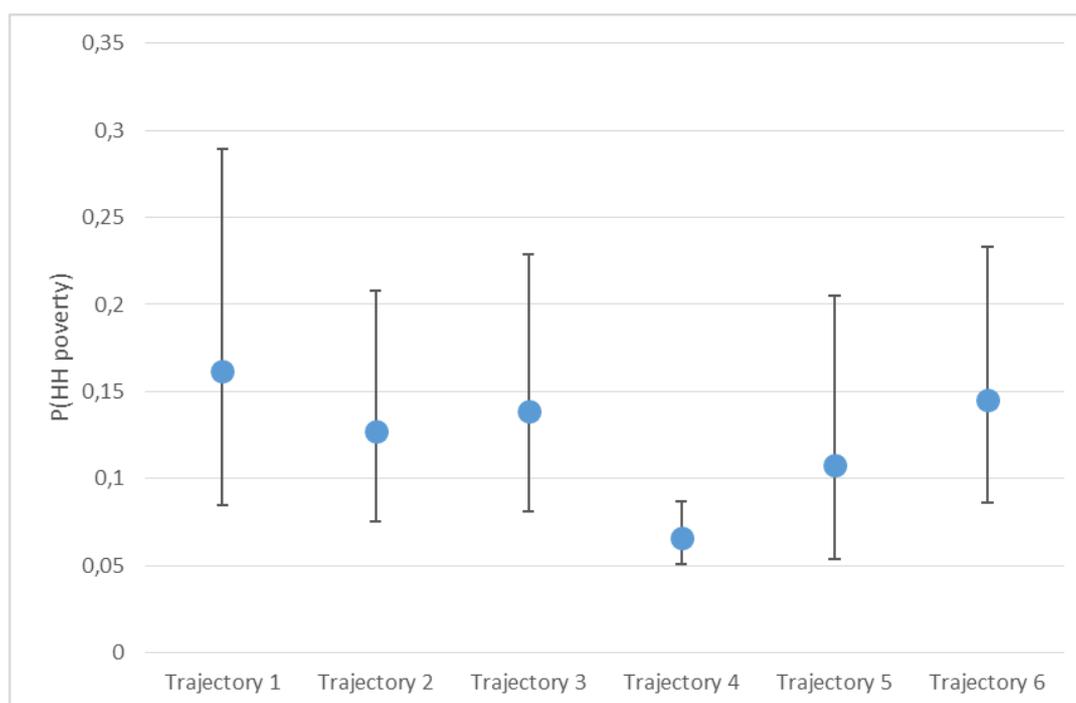
Figure 12 Average in-work poverty risk of young adults across different trajectory groups in Estonia.

A somewhat lower poverty risk (11-12%) can be observed among trajectory groups 2 and 5, although due to small sample sizes the differences between these groups are not statistically significant. Trajectory group 5 indicates a labour market trajectory *"from full-time to part-time"* employment, i.e. of weakening labour market attachment. This trajectory is characteristic to about 6.9% of observed cases. Trajectory group 2 indicates a rather permanent *"labour market insecurity"* situation where the labour market attachment increases on average over time, yet remains within the range of marginal employment.

These findings suggest that there exists considerable variability among poverty levels (varying between 6-17%) among the young adults in the labour market in Estonia and the variability tends to relate to different employment trajectories. While for those in "full-time employment" the in-work poverty risk is the lowest, those who gain full-time employment only by the end of the period , the poverty levels are more than double the high. Moreover, the in-work-poverty risk tends to be on average higher even when compared to those who have either remained in lower attachment levels (part-time employment) or ended up in this during the observed period[2].

When comparing the trajectory groups in terms of socio-economic characteristics, we can note (Table 1) some considerable differences. While there is rather little variation in terms of mean age of trajectory group representatives, the share of women varies between 32% in "full-time employment" trajectory group 4 and 64% in "labour market insecurity" trajectory group. The share of female workers is on average higher also in trajectory groups of "inactivity to full-time" (58%) and "from full-time to part-time" (58%). In these latter two

---

[2] One needs to be cautious to draw clear conclusions as the sample is small and the confidence intervals overlap between different groups despite of big difference in average in-work poverty risk.

trajectory groups the mean number of children is higher than the average, pointing to these as possible care-work related trajectories.

Table 5 Socio-economic characteristics of employment trajectory groups in Estonia

| | GR TRAJ 1 | | GR TRAJ 2 | | GR TRAJ 3 | | GR TRAJ 4 | | GR TRAJ 5 | | GR TRAJ 6 | |
| | N = 50 | | N = 95 | | N = 85 | | N = 751 | | N = 66 | | N=89 | |
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d
Age (18-29)	**24,5**	3,47	**23,9**	3,35	**24,1**	3,08	**25**	2,9	**24,9**	3,36	**23,7**	3,15
Female (0/1)	**0,58**	0,49	**0,64**	0,48	**0,43**	0,5	**0,32**	0,47	**0,58**	0,5	**0,43**	0,49
Lower education (0/1)	**0,32**	0,47	**0,2**	0,41	**0,19**	0,39	**0,18**	0,38	**0,18**	0,39	**0,23**	0,42
Working in service sector (0/1)	**0,3**	0,46	**0,24**	0,43	**0,14**	0,45	**0,14**	0,35	**0,21**	0,41	**0,25**	0,43
Other members employed (0/1)	**0,8**	0,4	**0,79**	0,41	**0,82**	0,38	**0,71**	0,46	**0,65**	0,48	**0,85**	0,36
Mean no of children in the HH	**1,18**	0,92	**0,79**	0,86	**0,66**	0,93	**0,6**	0,94	**0,61**	1,04	**0,76**	0,87

Source: EU-SILC 2014-2018, authors' calculations

Regarding educational attainment, the share of low-educated youth is the highest (32%) in "inactivity to full-time" trajectory group, and lowest (18%) in "full-time employment" and "full-time to part-time" trajectory groups. The share of those working in service sector is also highest in the "inactivity to full-time" trajectory group 1 (30%), but also in trajectory groups "part-time to full-time" (25%) and 2 "labour market insecurity" (24%).

Thus, as we have seen, not only does the different employment trajectories of young adults relate to different levels of in-work poverty risk in Estonia, the employment trajectories are also characterize by different socioeconomic groups . *Highest in-work poverty risks relate to labour-market trajectories that are dominated by women,* and include higher proportions than the average of low-educated people and those employed in service sector.

HUNGARY

Based on group-based trajectory modelling results, *six trajectory groups* for young adults' labour market participation were identified (see Figure 13) in the case of Hungary. The most dominant trajectory group (71.5% of youth fall into this) is the **"*full-time employment"***

trajectory (trajectory group 6), where young adults stay in the level of full employment throughout the observed period. At the same time, this group (together with trajectory group 5) is characterized by lowest poverty risk among the detected trajectory groups – on average 4.5% of youth in this trajectory group fall into the category of relative poverty based on household earnings in the second observed year (see Figure 14). The second trajectory group with the lowest poverty rate (5.1% of youth within this group are at risk of poverty) is trajectory group 5 that can be characterized by the transition *"from full-time to part-time"* employment. This type of trajectory is, however, characteristic to 3.76% of the cases only.
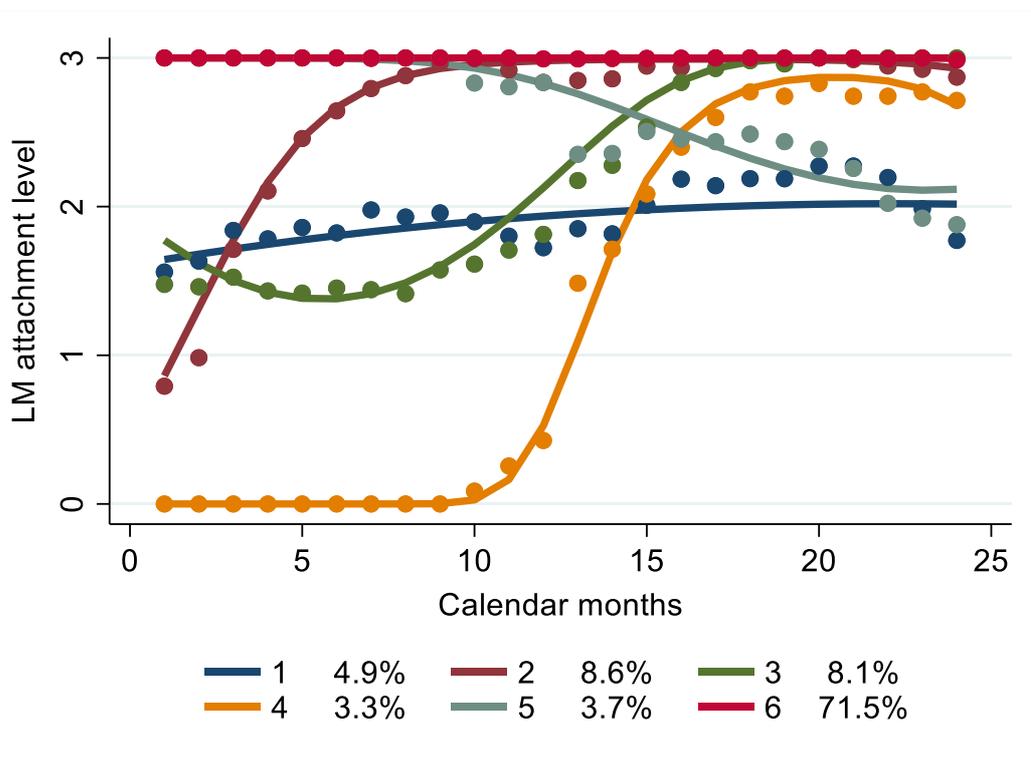

Figure 13 Labour market trajectories (24 months) for youth (18-30) in Hungary, 2014-2019

LM attachment scale: 0 – inactivity, 1 – unemployment, 2 – part-time, 3 – full-time

The highest poverty risk (19%) can be found within the trajectory group of stable **"*labour market insecurity*"**. This trajectory group is not very common though – only about 4.9% of cases belong to that group. Somewhat lower are the poverty risks – respectively 10%, 11% and 8.6% - in the remaining three trajectory groups. The first being trajectory group 2, which can be characterized by the transition from **"*unemployment to full-time employment*"**, to which 8.6% of the cases belong. The second is trajectory group 3, which can be characterized by the transition *"from part-time to full-time employment"* and contains 8.1% of the cases. Thirdly, the trajectory group 4 can be characterized by transition from "inactivity to employment" and contains 3.3% of the cases. All these trajectories have in common the transition from labour market exclusion or insecurity to rather secure employment or at least on the level of full-time employment.
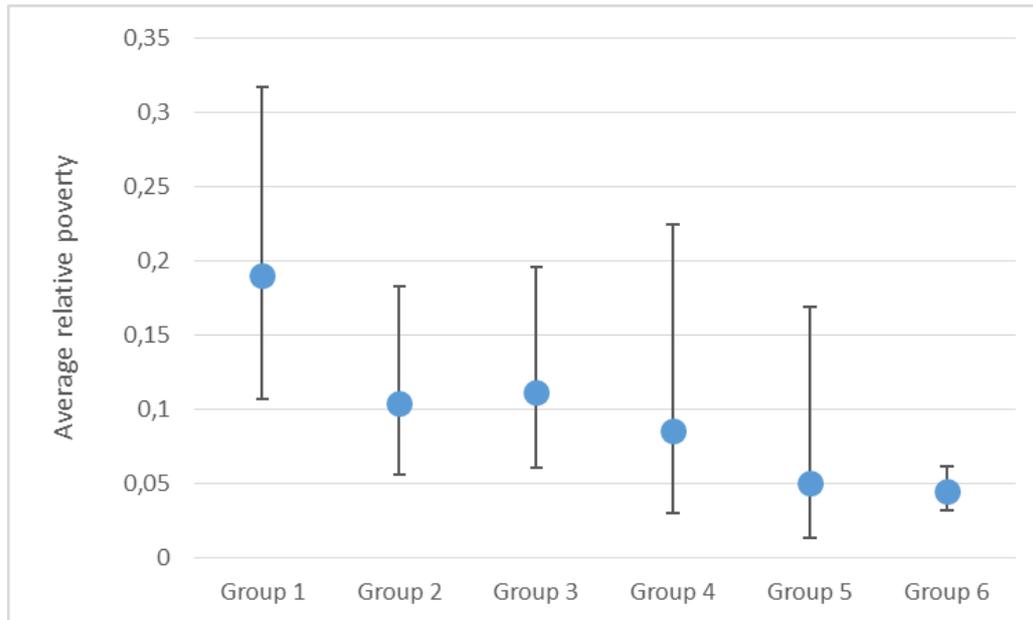
Figure 14 Average in-work poverty risk of young adults across different trajectory groups in Hungary

Thus, as can be seen, also in Hungary there exists a relationship between employment trajectory and in-work-poverty risk. The risks (and trajectories) can be summarised in three groups: the low-risk "full-time employment group", the medium-risk "some labour market insecurity trajectory group" and the high-risk "labour market insecurity group".

Considerable variability can be observed also when looking at the socio-economic characteristics of the observed trajectory groups (Table 6). We do find some variability in terms of age. The mean age tends to be higher among the more stable and secure and respectively lower in-work-poverty risk groups, and lower for labour market trajectories with higher levels of labour market insecurity. Also, in terms of the share of female workers within the employment trajectory group there is some variability: In the "full-time employment group" the share of female workers was 38% while in the trajectory group marking the "transition from inactivity to employment" the share is more than twice as high, reaching 83%. The latter refers to a "female trajectory" most likely related to care work, as within this group also the mean number of children is higher than in any other group. We find also some striking differences in terms of share of lowest education: In the dominant group of "full-time employment" the share is only 9%, in all other trajectory groups it is between 23 and 40%. Less variability can be observed in terms of work in service sector. Still, in the "full-time employment" trajectory group the figure is 18%, while in the highly feminized "inactivity to employment" trajectory group it reaches up to 29%.

Table 6 Socio-economic characteristics of employment trajectory groups in Hungary

	GR TRAJ 1		GR TRAJ 2		GR TRAJ 3		GR TRAJ 4		GR TRAJ 5		GR TRAJ 6	
	N = 52		N = 90		N = 87		N = 35		N = 39		N=761	
	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d	Mean	St.d

Age (18-29)	**23,9**	2,61	**23,5**	3,16	**23,6**	3,31	**24,6**	3,93	**24,4**	3,38	**25,0**	2,89
Female (0/1)	**0,40**	0,49	**0,38**	0,49	**0,41**	0,49	**0,83**	0,38	**0,51**	0,51	**0,38**	0,49
Lower education (0/1)	**0,27**	0,45	**0,28**	0,45	**0,31**	0,47	**0,4**	0,49	**0,23**	0,43	**0,09**	0,29
Working in service sector (0/1)	**0,26**	0,45	**0,18**	0,39	**0,17**	0,38	**0,29**	0,46	**0,16**	0,37	**0,18**	0,38
Other members employed (0/1)	**0,77**	0,42	**0,77**	0,42	**0,78**	0,41	**0,82**	0,38	**0,69**	0,47	**0,76**	0,43
Mean no of children in the HH	**0,56**	1,07	**0,78**	1,23	**0,67**	1,05	**1,74**	1,4	**0,79**	1,12	**0,39**	0,77

Source: EU-SILC 2014-2018, authors' calculations

To sum up, also in case of Hungary we find considerable variability in in-work-poverty levels depending on the employment trajectories of young adults. Unsurprisingly we find the lowest in-work-poverty risks among those with more stable and secure employment situations. In the case of employment trajectories leading to higher in-work-risk the dominating activity status is employment but with more presence of insecure job episodes/periods. Unemployment seems to play a modest role: There exists a trajectory group for "transition from unemployment to employment" and almost every tenth of the young adults active in the labour market fall into this category, but it relates to medium-level risk of in-work-poverty. Still, remaining in the situation of labour market insecurity (part-time) and/or exclusion (unemployment) poses even higher in-work-poverty risks. *Also gender dimensions appears to be present, however not as strong as in other observe countries.* There seem to exist more feminized employment trajectories, which also relate to elevated in-work-poverty risk. However, the share of females was also among the highest within the trajectory group of "full-time to part-time" with rather low in-work-poverty risk.

Conclusions – three main findings

The findings from the current study indicate that *in-work poverty risk tended to vary across different employment trajectories.* Comparison of different country cases has revealed some common trends and patterns.

First, in all the observed countries*, the most prevalent employment trajectory was "full-time employment" where observed young adults remained on the level of full-time work throughout the observed period.* Still, the share of that trajectory group across countries varied considerably. While in Spain only slightly more than half of the young adults enjoyed

this type of labour market security, in Norway it reached to almost 3/4 of the observed cases. The share of more stable trajectories tended to be lower in more liberal labour markets such as Estonia or the UK or Southern Europe such as Italy (next to already mentioned Spain). All country cases included a so-called "employment insecurity" path. In these cases the young labour-market participants' worked part-time or were unemployed throughout the observation period. Again, the share of this type of trajectories varied across countries: In Estonia and Hungary the share of this trajectory group was rather low (around 8-9%), while in case of the UK, Spain and Italy it included around one fifth of all the cases. Different from other countries, Estonia and Hungary included a (small) trajectory group of "inactivity to employment", which related to a higher share of women in it and a higher mean number of children, indicating a care-to-work transition.

Second, in all the observed countries, we find *the lowest levels of in-work poverty risks among the "full-time employed" trajectory group*, the lowest being in Norway (3%) and highest in Spain (7%). Higher risks of in-work poverty related to employment trajectories that includes episodes or periods of part-time work, unemployment or inactivity. Still, the share of in-work-poverty risk varied considerably across these trajectory types within countries. In some countries (e.g. Italy, Spain, but also UK) a somewhat clearer distinction can be observed between different employment trajectories in terms of in-work poverty risk. In other countries (e.g. Estonia, Norway, Hungary) the grouping and differences were not as clear. Of course, we have to keep in mind the small number of cases and respectively wide confidence intervals for some trajectory types, which did not allow to properly test the differences. However, what seems to be the case for all observed country cases is *the low incidence and prevalence of unemployment-impacted trajectories.* While in most countries there existed also a trajectory group that referred to transition from unemployment to part-time work, and in most of these cases the in-work-poverty risk was rather high, this type of trajectory was rather minor. Thus, coming back to our research question, according to the employment trajectory analysis, *unemployment seems rather not to be the (main) cause of in-work-poverty. However, it seems to elevate the poverty risks once unemployment experience is present*.

Third, the analysis revealed considerable *gender differences across trajectory groups.* The dominant *"full-time employment" trajectory was in all the country-cases clearly male-dominated, whereas women tended to be over-represented in trajectory groups with higher labour market vulnerability and in-work poverty risks.* Still, in some country cases the gender-related trends were more clear-cut than in others.

References

Andersen, J. G., & Halvorsen, K. (2002). Changing labour markets unemployment and unemployment policies in a citizenship perspective. In J. G. Andersen, J. Clasen, W.V. Oorschot & K. Halvorsen (Eds.). *Europe's new state of welfare: Unemployment, employment policies and citizenship*. Policy Press.

Bardone, L., & Guio, A. C. (2005). In work poverty. *Statistics in Focus – Population and Social Conditions, 2005*(5), 1-11.

Borst, M. (2018). EU-SILC Tools: eusilcpanel - first computational steps towards a cumulative sample based on the EU-SILC longitudinal datasets. *GESIS Papers, 2018/11*. GESIS - Leibniz-Institut für Sozialwissenschaften. https://doi.org/10.21241/ssoar.57347

Nagin, D.S. (1999). Analyzing developmental trajectories: a semiparametric, group-based approach. *Psychol Methods, 42*(2), 139-157.

Nagin, D.S. (2005). *Group-based modeling of development.* Harvard University Press.

O'Reilly, J., Eichhorst, W., Gábos, A., Hadjivassiliou, K., Lain, D., Leschke, J., McGuinness, S., Kureková, M.L., Nazio, T., Ortlieb, R., Russell, H. , & Villa, P. (2015). Five characteristics of youth unemployment in Europe: flexibility, education, migration, family legacies, and EU policy. *SAGE Open, 5*(1), 1– 19.

Rokicka, M., Unt, M., Täht, K., & Nizalova, O. (2018). Youth labour market in Central and Eastern Europe. In M.A. Malo & A. Moreno Mínguez (Eds.), *European youth labour markets: Problems and policies* (pp. 61-78). Springer.

Unt, M., Gebel, M., Bertolini, S., Deliyanni-Kouimtzi, V., & Hofäcker, D. (2021). Social exclusion of youth in Europe: The multifaceted consequences of labour market insecurity. Policy press.