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closing gaps in European social citizenship

Cross-national differences in in-work poverty among young adults in EU

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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 project website (euroship-research.eu), or by following us on Twitter: @EUROSHIP_EU.

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1. Introduction

Successful integration of youth in the labour market is an essential part of leaving parental home and becoming a financially independent adult. Youth transitions to quality jobs that provide sufficient incomes to avoid the risks of poverty is important not only from an individual point of view, but also from a macro-economic perspective. European societies are ageing, and welfare states are under heavy pressure to uphold and increase the social citizenship of all groups while buffering the increasing volatility of European labour markets. The inclusion of youth in the labour market and the consequences of labour market vulnerability has received a lot of attention (O'Reilly et al., 2019; Unt et al., 2021). However, it is not only integration in the labour market but also the work quality, which needs to be addressed on the political agenda. For this report, we define the work quality as the ability for a person to pursue the minimum standard of living in their residing country. Therefore, we adopt the in-work poverty concept which encompasses those who work, but still live in a household facing poverty risks which hinders the possibility for being a full member of a society and make longer life plans.

Before we proceed, we must analytically locate our definition of 'working' and 'poor'. Who is working? We first look at labour market trajectories over a two-year period to distinguish pathways which are prone to in-work poverty. We adopt the common classification of work used typically in research on youth in-work poverty transitions. We consider a youth to be working if they have left education and have worked for at least 6 months during the last year (Lohmann & Marx, 2019). Who is poor? Firstly, we look at 'objective' poverty which means that working youth lives in household which income level is clearly below the median in their country[1]. Secondly, we want to take on board also youth' own perception of poverty and therefore we look at subjective poverty, which is their perceived (in)ability to make ends meet.

In this report, we will - first - examine cross-national differences and developments over time in the objective and subjective dimension of quality of work (in-work objective and subjective poverty) before, during and after the Great Recession in the 28 EU Member States and Norway (EU- SILC). As part of this mapping, secondly, we assess if youth are locked in in-work poverty and how it differs across Europe over time. Thirdly, we concentrate on youth who are in the labour market to study the relationship between typical labour-market trajectories, socio-demographic characteristics and in-work poverty (IWP) probabilities. Additionally, we provide new insights about how objective and subjective outcome dimensions of job quality relate across countries with different labour market regulations, particularly in-work poverty and minimum salary levels.

[1] Household with a lower income than 60% of the national median income is defined as 'at risk of poverty'. See 2. Data and methodology section for definitions.

2. 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 sub-samples. Based on first sample, we firstly describe the overall incidence and development of IWP for young people and then we study the relationship between typical labour-market trajectories, socio-demographic characteristics and IWP poverty probabilities.

For the analysis of IWP, we constrain our data to 2005-2019 and differentiate between three periods: 1) 2005-2008 as pre-crisis period, 2) 2009-2011 as the period of economic crisis, and 3) 2014-2019 as the post-crisis period. We choose the latter period as of 2014 because by that time European economies should have by and large recovered from the 2008 economic and financial crisis while the COVID19 pandemic and related labour market disruptions had not started yet in 2019.

Our analysis contains information and data from 28 European countries (see Table 2 in the Appendix). Some countries had to be excluded from the analysis due to the lack of data for some years observed in this study (Croatia, Switzerland, Serbia) or because lack of retrospective data (Germany). 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. This leaves us for the analysis 294,255 cases. 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, which leaves us in total with 178,674 cases.

For the analysis of IWP, in turn, the sample was reduced to those who were in the labour market. As income is available only as an annual indicator, the common definition requires that an individual must work more than 6 months in a calendar year to count as working and thus potentially working poor. This results in an effective sample of 130,929 cases.

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' and refer to this here as **"objective" poverty measure**. To adjust for household composition, we use the OECD equivalence scale. In addition to relative poverty indicator, we also use a **"subjective" poverty measure**, where the individual must agree with the statement "Have great difficulties to make ends meet". To be categorized as in-work poor, an individual must be both working and fall into to the category of being poor.

To analyse transitions out of IWP, employment and poverty status of an individual are compared in two consecutive years (t – t+1). After selecting only those young adults who were in IWP, we were left for further analysis with 10,245 cases for objective measure and with 12,611 cases for subjective measure[2].

To analyse the impact of labour market situation on IWP risk, we created a labour market trajectories variable. For this we identify "typical" labour market trajectories of the young adults based on their employment statuses. For the purpose of the analysis, labour market statuses are "quantified" as the strength of attachment to the labour market: full-time

[2] For number of cases across periods and countries, please see the Appendix.

employment (3), part-time employment (2), unemployment (1) and inactivity (0). The statuses are measured and respectively trajectories are constructed over a period of 24 calendar months (starting in January). We apply **group-based trajectory** modelling (Nagin, 2005). According to this method, a trajectory is "the evolution of an outcome over age or time"(Nagin, 2005). The conceptual aim of this analysis is to identify clusters of individuals with similar trajectories. Still, the aim is to identify rather than assume groups of distinctive developmental trajectories. Group-based-trajectory modelling is an application of finite mixture models. The estimated parameters are not the result of a cluster analysis, they are rather a product of maximum likelihood estimation.

Group-based methodology firstly allows us to detect distinct pathways to in-work poverty among young adults in European countries and subsequently estimate the effect of these trajectories on IWP risk. For this analysis, a multi-level-modelling approach (Hox, 2018) is taken using individuals from 18 different countries (for details, please consult Table 2 in the Appendix). The reduction of the number of countries is because we have only included countries where it was possible to indicate the share of minimum wage relative to median wage of full-time workers.

In order to measure the impact and mediating effect of institutional context on the effect of employment trajectories on poverty risk, we included an indicator of minimum relative to median wage of full-time workers in the analysis. The data for the measure was derived from the EOCD statistics website (OECD, 2022).

In the multi-level regression models, we control for gender (a binary measure that distinguishes men and women), age and education. Our education measure groups educational attainment into three categories (ISCED0-2 = low, ISCED3-4 = medium, ISCED5-6 = high education). We also include various variables that capture the composition of the household a young person lives in. For this we use a measure of the number of children in the household with children younger than 18 years old; presence of other adults in the household; and the indicator if any other household member has paid work.

3. Results

Cross-national differences in in-work poverty

To understand national differences, we examine both objective (relative poverty) and subjective (self-assessment of having great difficulties to make ends meet) IWP measures. To show the multidimensionality of IWP and, the importance of using several measures, we present the two indicators together.

As can be seen in Figure 1, for youth who have worked at least 6 months, the share that live in households at risk of poverty vary from 2.5% in Czech Republic up to 18.6% in Romania during the 2005-2008 time period. In Slovenia (SI), the Netherlands (NL), Belgium (BE), Israel (IS), Ireland (IE) where the objective in-work poverty level was below or on average level, the difference between the two measures was marginal and respectively low as well. However, in Eastern and Southern European countries, working youth face considerably higher risk of subjective poverty than relative objective poverty. Therefore, indicating that youth are experiencing difficulties to proceed with their everyday activities and needs, which are not well captured by the objective measure.

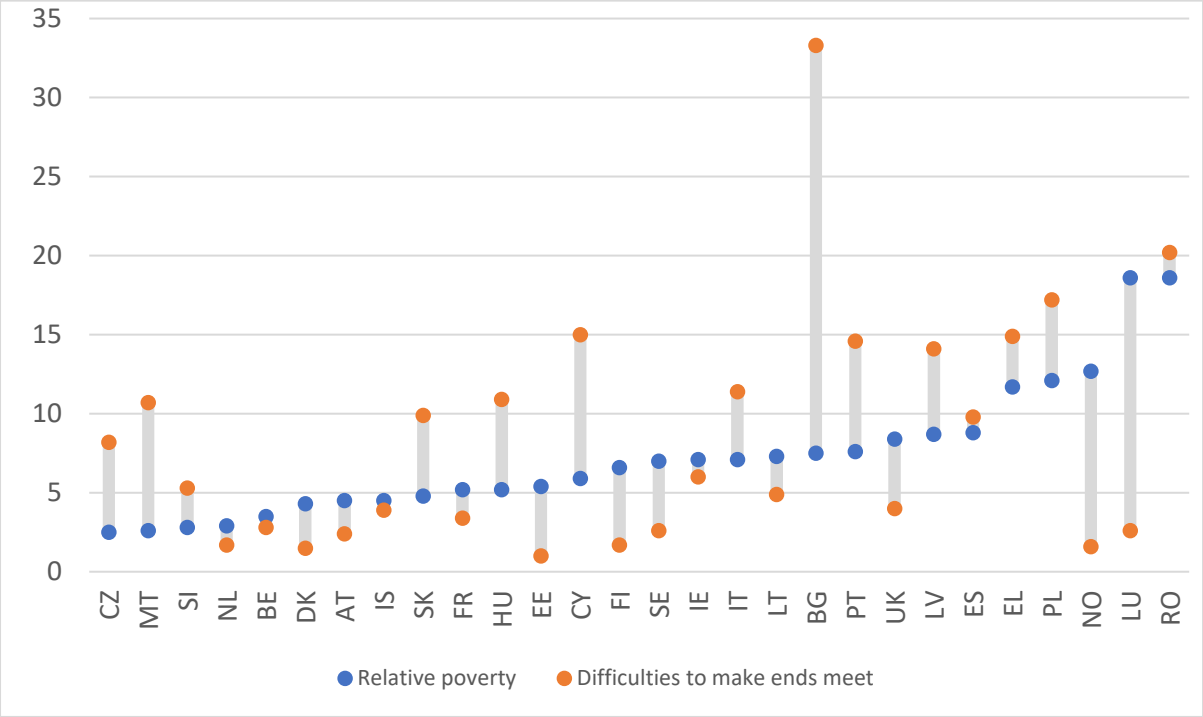

Figure 1 In-work poverty among youth, 2005-2008

This was characteristic mostly of less affluent countries such as Bulgaria (BG), Cyprus (CY), Malta (MT), Slovakia (SK), Hungary (HU), Portugal (PT), Latvia (LV), Czech Republic (CZ) or Poland (PL). The opposite trend – subjectively perceived in-work poverty level being considerably lower than the objectively measured IWP level – was characteristic of more affluent countries such as Luxemburg (LU) and Norway (NO), which were located among the "top" countries in terms of low (objective) IWP levels. Subjectively perceived lower poverty levels could also be observed in the case of other affluent countries such as United Kingdom (UK), Sweden (SE), Finland (FI) and Denmark (DK), but also Estonia (EE) and Lithuania (LT).

The differences grew even bigger in the situation of economic crisis 2009-2011 (see Figure 2). While on average the youth IWP levels grew both in objective and subjective terms,

especially in case of the less affluent countries such as Malta (MT), Hungary (HU), Cyprus (CY), Portugal (PT), Bulgaria (BG), Latvia (LV) and Greece (EL), the discrepancies between objectively measured and subjectively perceived IWP grew considerably. In these countries, nearly one fifth of young adults who were in employment felt that they have great difficulties to make ends meet. Among the more affluent countries such as Sweden (SE), United Kingdom (UK), Luxemburg (LU), Norway (NO), Austria (AT), Denmark (DK), Finland (FI) and the Netherlands (NL), the levels of subjectively perceived difficulties to make ends meet remained close to previous levels.

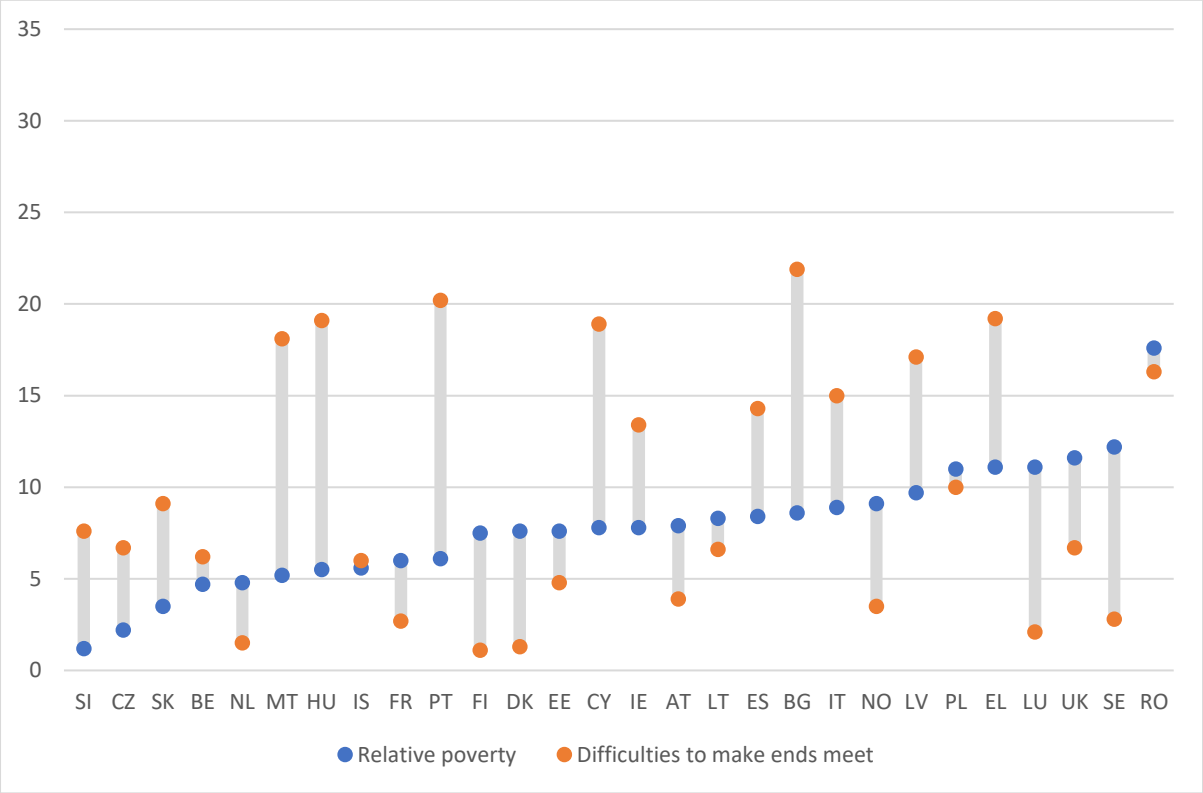

Figure 2 In-work poverty among youth, 2009-2011

After the economic crisis, the years 2014-2019, the average IWP level in terms of objective measure remained pretty much the same, thus, the relative position of youth in society did not change (see **Error! Reference source not found.**). The countries that reported the h ighest levels of (objective) IWP levels were Romania (RO), which has been the "leader" in terms of poverty level throughout the three observed periods, but also Spain (ES), Portugal (PT) and Greece (EL). It is important to note they are all countries hit rather hard by the economic crisis.

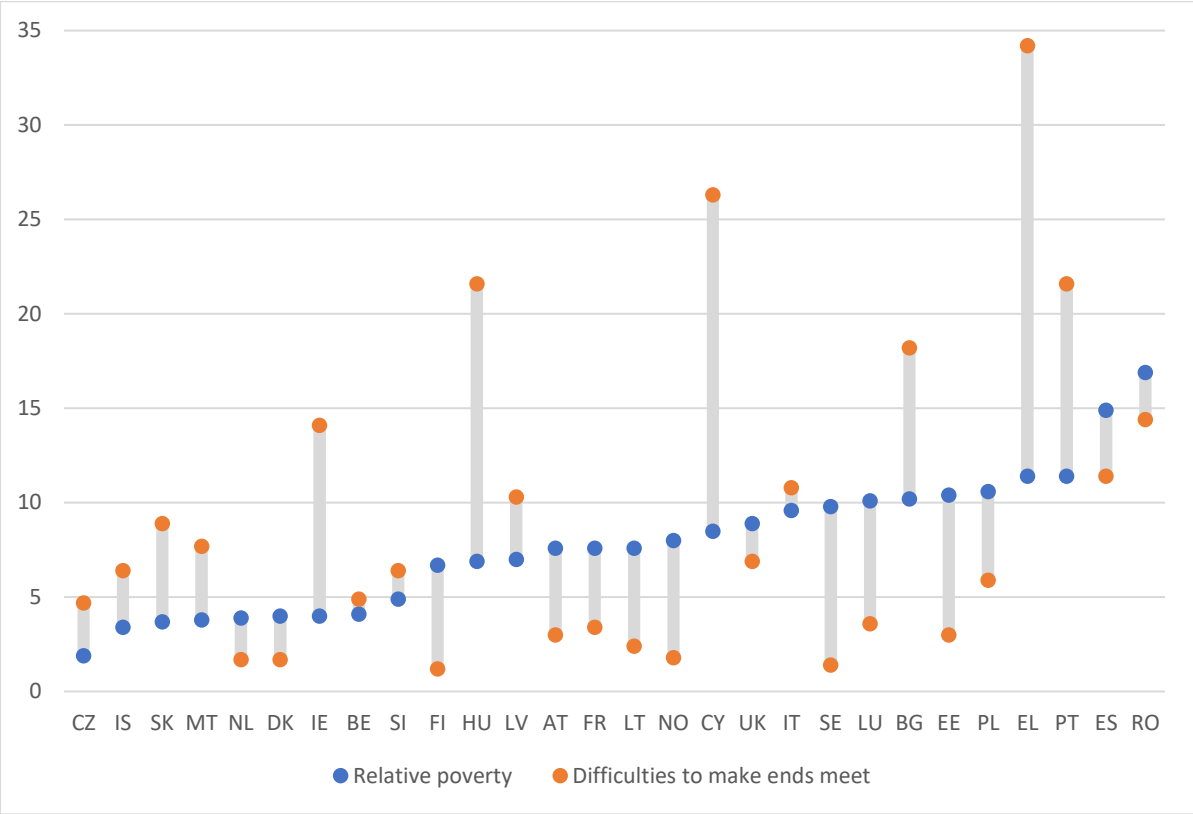

Figure 3 In-work poverty among youth, 20014-2019

In general, the discrepancy between objective and subjective IWP levels has been reduced during the 2014-2019 period. Still, for young adults in some countries – Greece (EL), Cyprus (CY), Hungary (HU), Ireland (IE), but also Portugal (PT) and Bulgaria (BG) – the subjectively perceived IWP level (i.e. experience of great difficulties to make ends meet) were considerably higher than the objective poverty level. While In the cases of more affluent countries, such as Sweden (SE), Luxembourg (LU), Norway (NO), the IWP rate has decreased compared to the economic crisis period, both in objective and subjective terms.

In sum, we can see that estimating the IWP level when using an objective measure (relative poverty) or when using a subjective measure (great difficulties to make ends meet) will capture a slightly different evaluation of youth poverty levels. In general, in more affluent countries when objective measure shows on average higher levels of IWP among young adults, subjectively perceived levels of difficulties to make ends meet remain rather low. For less affluent countries it's often the opposite – even when the relative poverty level is on average low, then in subjective terms these young adults feel often that they have difficulties to make ends meet. Still, there are some countries such as Romania (RO), Bulgaria (BG), Greece (EL), where IWP of young adults has remained high throughout the observed period in terms of both measures. In the situation of economic crisis, IWP poverty risks for young adults went up, meaning on average more young adults experienced more IWP risks. However, also the differences between the countries grew and especially less affluent countries suffered from higher levels of discrepancies and subjectively measured IWP. The subjective IWP level came down after the crisis but remained higher than pre-crisis levels. Indicating that even though the employment situation of young adults recovered after the stabilization of the labour market. Their economic recovery may have been not as efficient as for the rest of working population. This assumption is supported by the relative poverty level which for the most part remained on the same level as during the economic

crisis. Overall, there exists considerable cross-country differences both in terms of IWP levels as well as risk and recovery trends over the observed time periods.

Transitions out of in-work poverty

In-work poverty can be used as a sign of quality of work. However, if in-work poverty is a short period in youth lives, its potential for lasting consequences is low. The IWP phenomenon is especially worrisome if youth are locked in IWP. Therefore, we adopt a dynamic view and look at opportunities to escape from IWP risk, one year later across Europe.

Similarly, the risks to be in IWP vary across countries. The risk to remain in the IWP differ considerably when we look at single country cases. Figure 4 shows the employment and financial situation of young adults in IWP (measured by relative poverty level in year t) one year later (year t+1) in the period of 2005-2008.

The findings show that *young adults in IWP have 15-60% of chances to be in the same situation one year later depending on their country of residence*. The risks were the lowest (up to 20%) in Slovakia (SK), Belgium (BE), Norway (NO), Austria (AT) and highest (50 and more %) in Greece (EL), Luxemburg (LU), Cyprus (CY), Romania (RO) and Bulgaria (BG).

In most of the countries observed*, the most common "transition" for young adults in IWP was 'positive'; 44-55% remained employed and moved out of poverty*. The most worrisome transition is those who remained out of employment and still lived in poverty: Youth are more likely to remain poor and completely unattached to the labour market for the full two-year duration in Romania (RO), Hungary (HU) and Latvia (LV), and Norway (NO). In total, in 12 countries out of the 28 observed here, most young adults in IWP in year t were still living in poverty (in work or out of work) one year later.

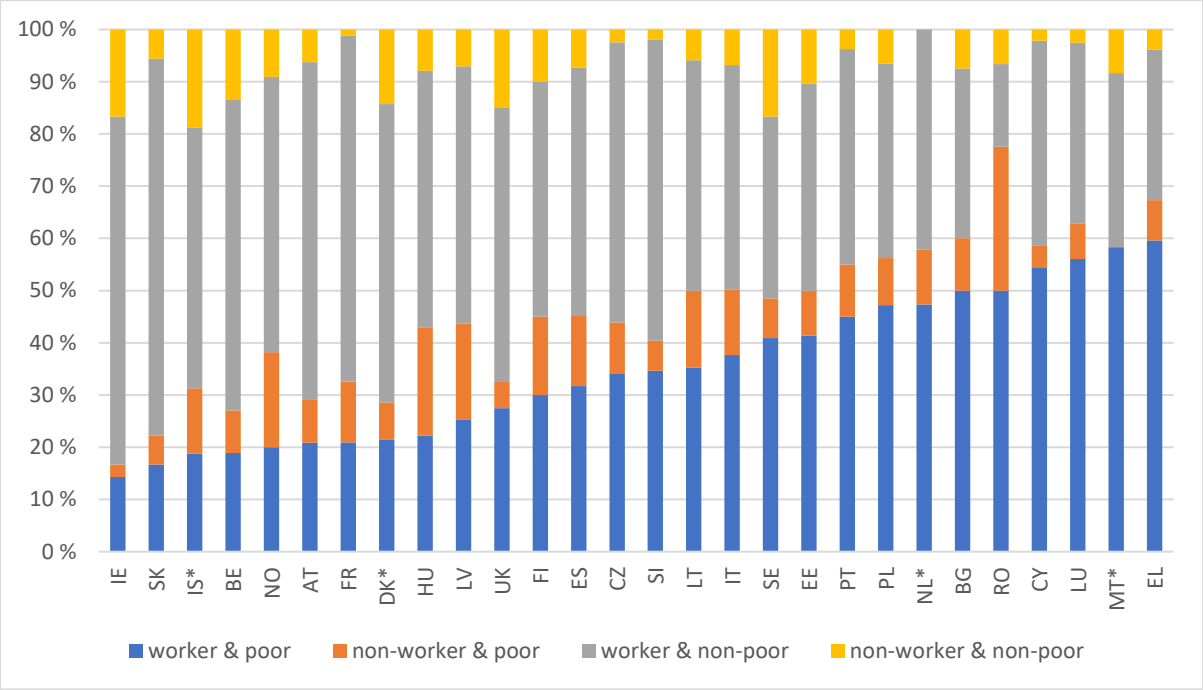

Figure 4 Trajectories from in-work-poverty (t – t+1), objective measure, by countries, 2005-2008
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

In the years of the economic crisis (see Figure 4), the average risk to be in the IWP category one year later has grown from 35% to 39%. Meaning that not only had young adults experienced higher risks of falling into the IWP category during the crisis (see **Error! R eference source not found.**), but they also had on average *more difficulties moving of poverty*. Correspondingly, there was an increase in the *not working and poor category* – in the period of *2005-2008. On average 10% of young adults in IWP moved to this category by the following year, whereas in 2009-2011 it was already 15%* of young adults). This can be interpreted to mean that there is a substantial increase in the risk of continued poverty for IWP youth after the 2008 crisis. The countries with highest percentage (50% or more) to be in the IWP category one year later were Romania (RO), Cyprus (CY), Poland (PL) and Bulgaria (BG). The countries with highest percentage (30% or more) of young adults falling out of employment and remaining in poverty were Ireland (IE), Spain (ES) and Finland (FI).

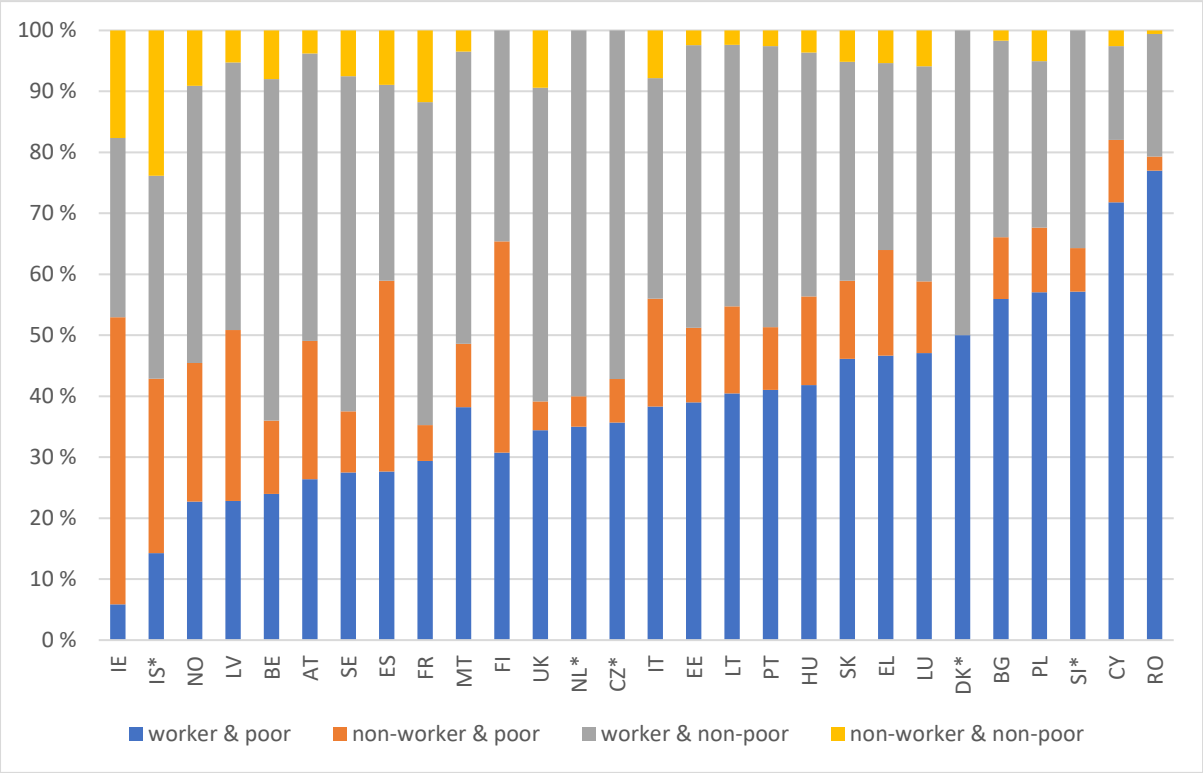

Figure 5 Trajectories from in-work-poverty (t – t+1), objective measure, by countries, 2009-2011
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

The labour market situation in terms of IWP risks of young adults improved in 2014-2019 but maintained levels higher than the pre-crisis period (see Figure 6). On average, 37% of young adults in IWP are in the same category the following year, which is slightly less than during the period of economic crisis, but higher than during the pre-crisis period. The average share of these IWP young adults who fall out of employment and remain in poverty is approx. 11%, which is less than in economic crisis period, but more than in the pre-crisis period. The highest share (more than 50%) of those remaining in IWP was in Romania (RO), followed by Cyprus (CY).

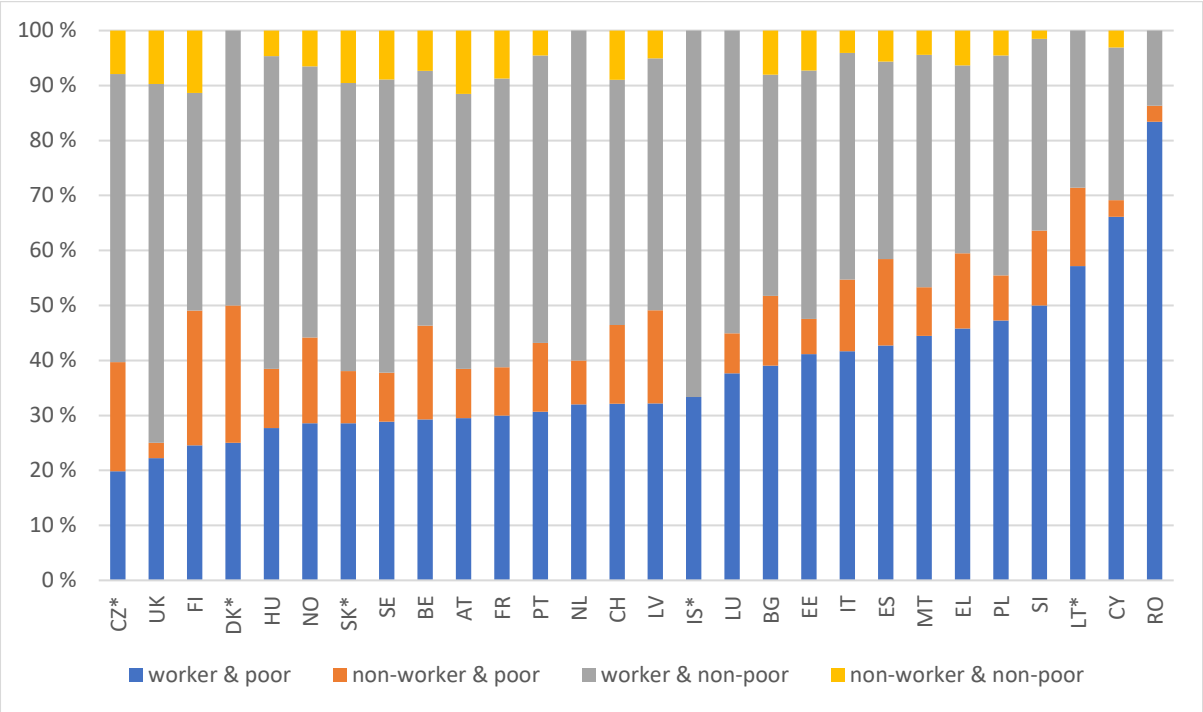

Figure 6 Trajectories from in-work-poverty (t – t+1), objective measure, by countries, 2014-2019
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

Although a considerable number of young adults in IWP remain in this status a year later, on average 45% made the transition out of poverty while remaining in employment. For example, in the UK, 65% of young adults in IWP managed to escape by next year.

According to the subjective measure, the picture looks a little bit more "optimistic". In 2005-2008, on average 55% of the young adults observed here, one year after being working poor they remained in employment and moved out of the poverty category (see Figure 7). On average, 29% of young adult in IWP reported one year later to be in the same situation. It should be noted though, that the number of country samples become very small in this analysis, and one should be careful in drawing any substantial conclusions. Still, like the objective measure, among the "leaders" in being trapped in the IWP were in this pre-crisis period Greece (EL), Cyprus (CY), Bulgaria (BG), Romania (RO) and Portugal (PT). Higher than average levels of persistent IWP can also be observed for Czech Republic (CZ), which was not the case when using objective measure.

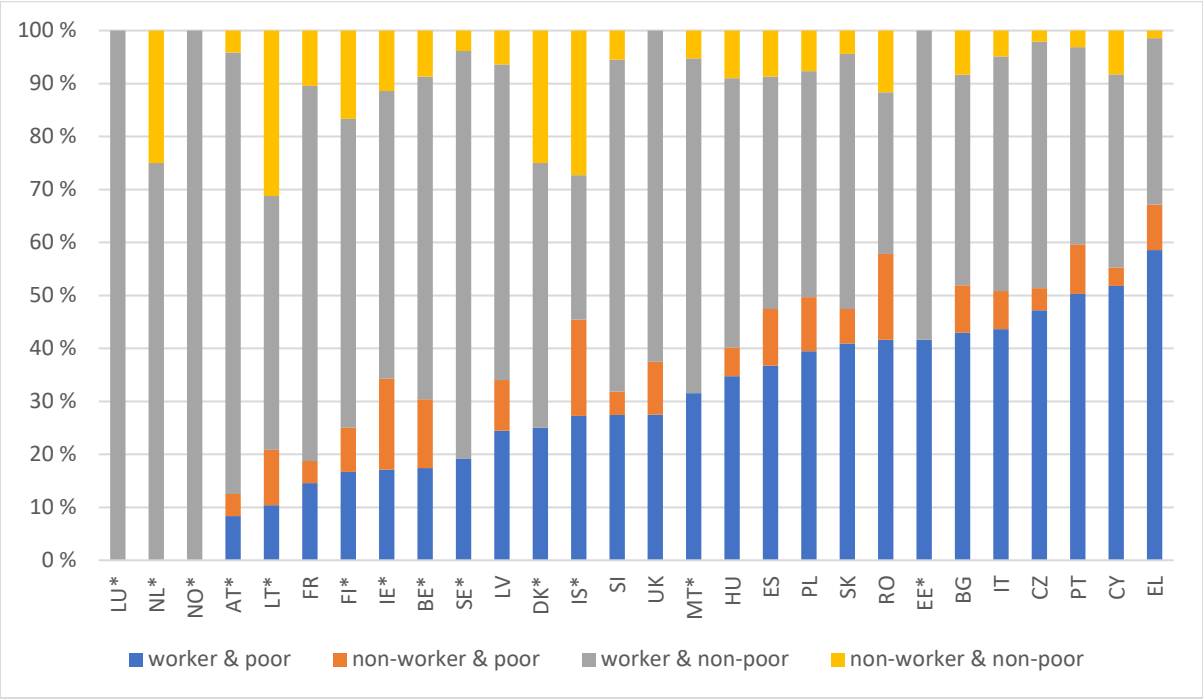

Figure 7 Trajectories from in-work-poverty (t – t+1), subjective measure, by countries, 2005-2008
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

Familiar patterns can be observed also when looking at the period of economic crisis (see Figure 8), when the average share of young adults remaining trapped in IWP one year after observation increased somewhat compared to pre-crisis period. When in case of the objective measure the countries where the incidence of "repeated" IWP were Romania (RO) and Cyprus (CY), but also Bulgaria (BG) and Poland (PL), when measured by the other (subjective) indicator, it was Greece (EL) followed familiarly by Romania (RO) and Bulgaria (BG), but also Slovakia (SK) and Hungary (HU).

The IWP situation of young adults improved somewhat after the economic crisis when we measured IWP using relative poverty measure (see Figure 6). However, when looking at the perceived level of poverty (having great difficulties to make ends meet), the average share of young adults who remained in IWP also one year later increased even more compared to the crisis period (see Figure 9). On average 38% of young adults in IWP in year t were in the same category in the year t+1. The average share of those who remained in employment but moved out of poverty decreased compared to the objective poverty measure. Again, the countries where the risk to remain in the IWP was the highest were Romania (RO), Bulgaria (BG) and Greece (EL). The countries where the transitions into "employed, not poor" category were most common in Belgium (BE), Estonia (EE) and Malta (MT).

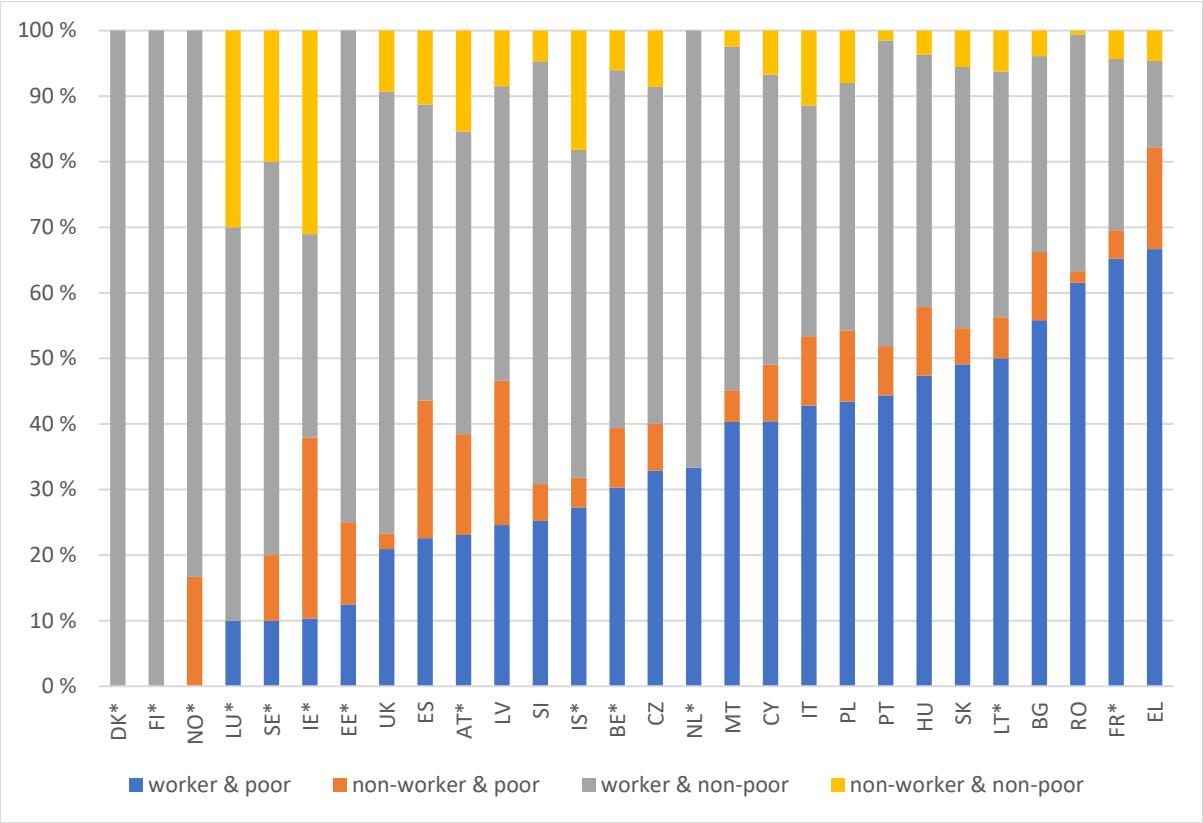

Figure 8 Trajectories from in-work-poverty (t – t+1), subjective measure, by countries, 2009-2011
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

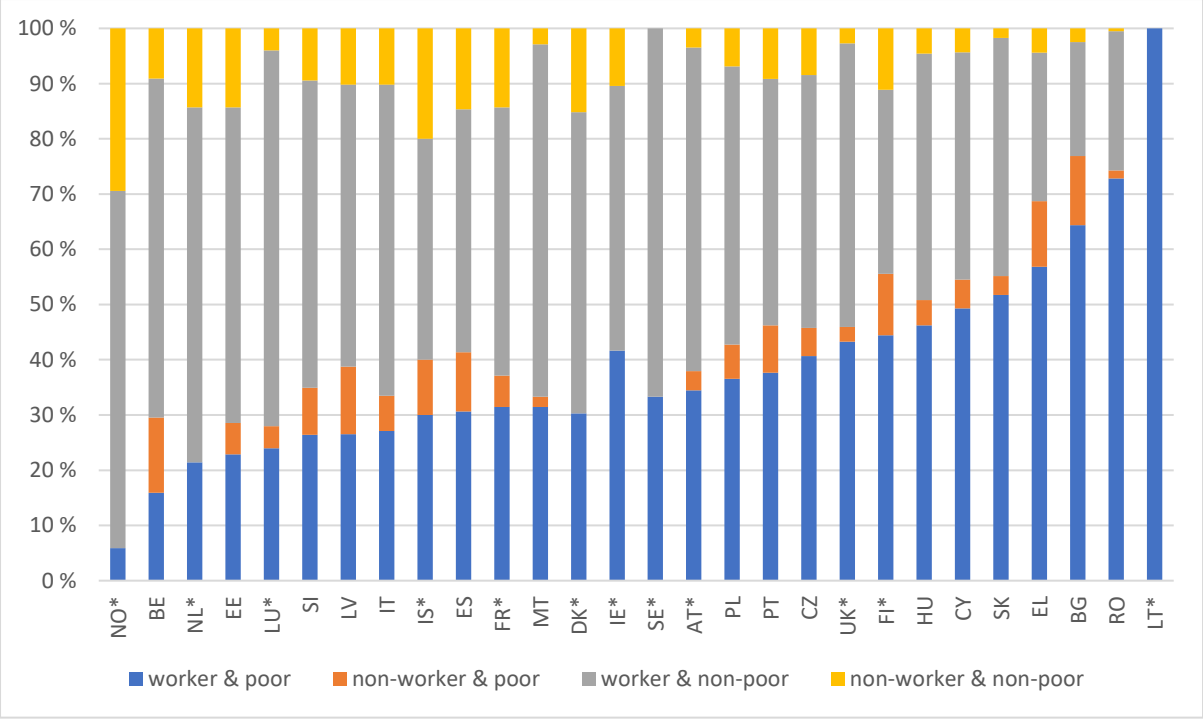

Figure 9 Trajectories from in-work-poverty (t – t+1), subjective measure, by countries, 2014-2019
Source: EU-SILC, authors' calculations
*Note: * - country case with small N, i.e. less than 40 cases*

To sum it up, the transitions from IWP show that most young adults manage to escape the poverty category while remaining in employment one year later. However, depending on

the country and the observed period, a considerable number of individuals remain trapped in poverty. Both in objective and subjective terms – Romania (RO), Bulgaria (BG), Greece (EL), but also Cyprus (CY) and Poland (PL) stand out as "high risk" countries.

Although the objective and subjective measure give somewhat different results (mostly in terms of share of youth in poverty?), the general trends were rather similar. The most striking difference in the findings occurred when comparing the economic crisis and post-crisis period – while in terms of objective measure, on average the IWP situation of young adults improved after the crisis (although the IWP did not return entirely to the levels of the pre-crisis period). In the case of the subjective measure (great difficulties to make ends meet) the situation in the post-crisis period was worse. The effective samples to draw these conclusions form was in some country cases rather low (see also Table 2 in Appendix). We should be cautious by these conclusions, but it looks like a trend worth further research in the future.

In-work poverty risk by employment trajectories and buffering effect of minimum wage levels

With the help of group-based trajectory modelling we singled out six labour market trajectory groups for young adults out of education and in employment (meaning more than six months employed) in the second year. The most common trajectory (see trajectory 6 on **Error! Reference source not found.**) could be summarized as "full-time" as the work i ntensity of young adults in this trajectory group remained throughout the observed 2-year period on the highest attachment level (indicating full-time employment). 68.9% of young adults in employment fell into this category. The next most common employment trajectory (11.2% of cases well into this category) was "part-time" (trajectory group 1), where the young adults in this group remained throughout the observed period around the level of part-time employment. Third, the biggest trajectory group (group no 4 on **Error! Reference s ource not found.**) could be characterized by transition from employment insecurity (unemployment or marginal employment) to full-time employment and we all it in our analysis "unemployment – full-time". 7.7% of the observed young adults fell into this employment trajectory group. The Fifth biggest trajectory group (6.1% of cases fell into this category) can be characterised by a transition from full-time employment to part-time employment and therefore in the rest of the analysis it is referred to as "full-time – part-time". The smallest detected trajectory group in the current analysis was the one characterized by a transition from inactivity to full-time employment. Although a small trajectory group, still about 5% of the cases fell into this category. Our earlier analysis (Unt, Täht & Biegert, 2022) on single country cases showed that in this trajectory group is mostly made up of women and the mean number of children in the household is higher, suggesting an entry or return to employment after (child)care break.

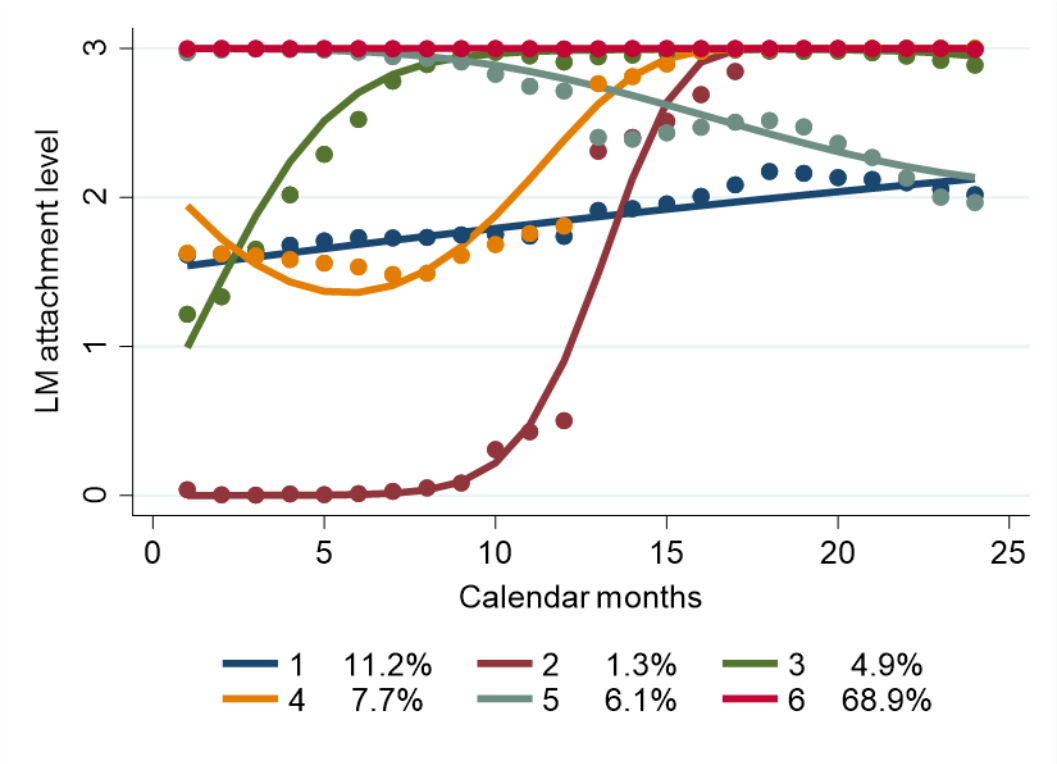

Figure 10 Employment trajectories of young adults in Europe
Source: EU-SILC, authors' calculations

In the multi-level analysis, we estimated the effect of these employment trajectories on in-work poverty risk (measured both by objective and subjective indicator) in Europe. The zero model (see ICC in Table 1) shows that there exists a considerable amount of variability between the countries in terms of poverty levels – in case of objective measure, about 9% of the variability is on country level; in case of subjective measure, about 19% of variability is on country level.

When comparing the trajectory groups that include some type of employment insecurity or weaker attachment to "full-time" trajectory group Model 0.1 and S.1, we see that in all of them the risk for IWP is significantly higher. The IWP risk is the biggest for "part-time" trajectory group compared to "full-time" trajectory group, measured by objective indicator.

The main effects of trajectory groups weaken somewhat when including controls to the model (Model O2 and S2 in Table 1), but in general the effects remain unchanged. The effects displayed by controls are in expected directions and by and large consistent across both measures. Still, the risk for IWP is significantly lower for females (other characteristics kept constant) in case of the objective poverty measure and significantly higher for subjective measure. For the time-period effect, the economic crisis (compared to pre-crisis period) significantly increased the subjectively measured IWP risk, while the objectively measured IWP risk showed an opposite effect.

In the last models (models O3 and S3), we also included an (macro-level) indicator of official minimum wage levels relative to median income and the interaction effects of employment trajectories with the macro-level minimum wage policy indicator. The findings showed a statistically significant relationship between IWP level and minimum wage policy for the case of subjective measure – the closer the minimum wage is to median wage level in the country, the less likely young adults are to be working poor. For the objective measure, the

direction of the effect is the same, however the observed relationship was statistically not significant.

The interaction effect of country policy measure and typical employment trajectory on IWP risk showed in general no significant mediating effects, except for the trajectory group of "inactive – full-time" in case of the objective measure. These findings suggest that in the country context where minimum wages are closer to or above the median wage, the otherwise significantly higher IWP risk of "inactive – full-time" employment group becomes significantly reduced. The latter suggests that in more regulated and protected labour markets (in terms of minimum wage), young adults (mostly women) returning to employment from inactivity face less risks of being IWP. The interaction effects were statistically marginally (on $p < .10$) significant also for the "part-time" and "full-time – part-time" trajectory groups, but the effect was reduced once country wealth level control (GDP per capita) was introduced to the model.

Table 1 Multi-level regression model for in-work poverty

	In-work poverty: objective				In-work poverty: subjective			
	Model O0 Empty model	Model O1 Main effects	Model O2 + controls	Model O3 + cross-level interactions	Model S0 Empty model	Model S1 Main effects	Model S2 + controls	Model S3 + cross-level interactions
Intercept	-2.702**	-3.168**	-1.263**	-1.198**	-2.546**	-2.823**	2.170**	2.199**
Individual level								
Trajectories (ref: full-time)								
Part-time		1.528**	1.350**	0.837**		0.856**	0.577**	0.642*
Inactive – full-time		0.915**	0.733**	3.278**		0.756**	0.508**	-0.265
Unemployment – full-time		0.638**	0.508**	0.980		0.516**	0.424**	0.111
Part-time – full-time		0.809**	0.599**	0.679		0.818**	0.621**	0.827*
Full-time – part-time		0.836**	0.689**	-0.075		0.478**	0.358**	-0.297
Female			-0.134**	-0.137**			0.088**	0.089**
Age			-0.034**	-0.034**			-0.043**	-0.043**
Education (ref: low)			0.000	0.000			0.000	0.000
Medium			-0.642**	-0.639**			-0.571**	-0.570**
High			-1.563**	-1.557**			-1.327**	-1.327**
No of children			0.480**	0.480**			0.239**	0.240**
Adults in working age in HH			0.057**	0.057**			0.160**	0.160**
Other HH member employed			-1.379**	-1.380**			-0.922**	-0.922**
Time period (ref: 2005-2008)			0.000	0.000			0.000	0.000
2009-2011			-0.127**	-0.128**			0.160**	0.160**
2014-2019			0.097	0.102			0.303**	0.302**
Country level								
Minimum relative to median wage			-0.344	-0.477			-1.397*	-1.483*
GDP per capita			0.000	0.000			-0.000**	-0.000**

Interactions with: *minimum relative to median wage								
Part-time				1.066				-0.137
Inactive – full-time				-5.444**				1.630
Unemployment – full-time				-0.998				0.659
Part-time – full-time				-0.182				-0.444
Full-time – part-time				1.608				1.390
ICC	0,097				0,198			
N	65,442	65,442	55,013	55,013	65,392	65,392	54,971	54,971
Countries	18	18	18	18	18	18	18	18

Source: EU-SILC, authors' calculations

4. Conclusions

In this report, we *firstly* examined the cross-national differences and developments over time in the objective and subjective dimension of quality of work before, during and after the Great Recession in the 28 EU Member States and Norway using EU- SILC.

We can see that estimating the IWP level when using an objective measure (relative poverty) or when using a subjective measure (great difficulties to make ends meet) gives a somewhat different picture indicating the multidimensionality of the poverty in youth lives. In general, in more affluent countries when objective measure shows on average higher levels of IWP among young adults, subjectively perceived levels of difficulties to make ends meet remain rather low. For less affluent countries it is often the opposite – even when the relative poverty level is on average low, many young adults still subjectively feel that they have difficulties to making ends meet. Also, there are some countries such as Romania (RO), Bulgaria (BG), Greece (EL), where IWP of young adults has remained high throughout the observed period in terms of both measures. In the situation of economic crisis, IWP poverty risks for young adults went up, meaning on average more young adults lost more of their relative position in income distribution and experienced more IWP risks. However, the differences between the countries grew and especially less affluent countries suffered from higher levels of discrepancies and subjectively measured IWP. The subjective IWP level came down somewhat after the crisis, but remained higher than before the crisis, indicating that while on average the situation of young adults in the LM recovered after the stabilization of the labour market, still their economic recovery may have been not as efficient as for the rest of working population. This assumption is supported also by the relative poverty level, which on average remained on the same level as during the economic crisis. Still, there do exist considerable country differences both in terms of IWP levels as well as risk and recovery trends over the observed time periods.

Secondly, we assessed whether youth remained locked in in-work poverty across Europe over the three time periods. Many young adults managed to escape the poverty category while remaining in employment one year later. However, depending on the country and the observed period, a considerable amount remains trapped in poverty. Both in objective and subjective terms – were Romania (RO), Bulgaria (BG), Greece (EL), but also Cyprus (CY) and Poland (PL) stand out as “high risk” countries in this regard.

Thirdly, we provided new insights about how objective and subjective outcome dimensions of job quality for different employment trajectories relate in countries with different labour market regulations, namely with minimum salary levels. The IWP risk is the biggest for “part-time” trajectory group compared to the “full-time” trajectory group, which has the lowest IWP risk. The risk for IWP is significantly lower for females (other characteristics kept constant) in case of the objective poverty measure and significantly higher for subjective measure. For the time-period effect, the economic crisis (compared to pre-crisis period) increased significantly the subjectively measured IWP risk, while the objectively measured IWP risk showed just an opposite effect. Interestingly, the findings showed a buffering effect of minimum wage policy on IWP for the case of subjective measure – the closer is the minimum wage to median wage level in the country, the less likely are young adults in these countries working poor. For objective measure, the direction of the effect is the same, however the observed relationship was statistically not significant.

Does the minimum wage level compared to median wage level affect employment trajectories risks of IWP differently? Yes, the group of “inactive – full-time “, in case of the objective measure was especially buffered if minimum wage levels were higher compared to wage median. These findings suggest that in the country context where minimum wages are closer to or above the median wage, the otherwise significantly higher IWP risk of “inactive – full-time” employment group becomes significantly reduced. The latter suggests that in more regulated and protected LM (in terms of minimum wage), young adults (mostly women) returning to employment from inactivity face less risks of ending up being IW

Reference

Frazer, H., & Marlier, E. (2010). *In-work poverty and labour market segmentation in the EU*. (European Network of Independent Experts on Social Inclusion; No. 2010-02). CEPS/INSTEAD.

Hox, J.J. (2010). *Multilevel Analysis. Techniques and Applications. 2nd edition*. Routledge, Hove.

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

OECD (2022). *Minimum relative to average wages of full-time workers*. Derived from: https://stats.oecd.org/Index.aspx?DataSetCode=MIN2AVE on *[date]*

O'Reilly, J., Leschke, J., Ortlieb, R., Seeleib-Kaiser, M., & Villa, P. (Eds.) (2019). *Youth labor in transition: Inequalities, mobility, and policies in Europe*. Oxford University Press.

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.

Unt, M., Täht, K., & Biegert, T. (2022). An assessment of in-work poverty among female and male youth in Europe. *EUROSHIP Working Paper No. 16.* Oslo Metropolitan University. DOI: 10.6084/m9.figshare.19803559. Available at: https://euroshipresearch.eu/publications

APPENDIX

Table 2 Sample size by country and time period

Country		Young adults aged 18-30, out of education in t			Young adults aged 18-30, out of education and in employment in t			Young adults aged 18-30, in IWP in t					
								by objective measure			by subjective measure		
		2005-2008	2009-2011	2014-2019	2005-2008	2009-2011	2014-2019	2005-2008	2009-2011	2014-2019	2005-2008	2009-2011	2014-2019
AT	Austria	2,359	1,296	2,184	1,883	1,061	1,797	85	80	136	46	40	53
BE	Belgium*	2,163	1,156	2,264	1,650	893	1,656	57	42	68	47	55	81
BG	Bulgaria	1,305	1,509	2,084	758	929	1,211	57	80	123	249	203	221
CY	Cyprus	1,483	920	1,837	1,242	756	1,257	73	59	107	186	143	330
CZ	Czech Republic*	2,968	1,734	2,564	2,242	1,295	2,034	56	28	39	183	87	95
DK	Denmark	466	169	728	394	157	630	17	12	25	6	2	11
EE	Estonia*	2,097	1,151	2,606	1,520	794	1,919	82	60	199	15	38	58
EL	Greece*	834	1,499	5,840	565	974	2,855	66	108	325	84	187	975
ES	Spain*	5,588	3,217	4,010	4,342	2,195	2,365	384	184	353	426	314	269
FI	Finland	1,228	713	1,668	919	547	1,215	61	41	82	16	6	15
FR	France*	4,401	1,445	2,435	3,351	1,092	1,725	174	65	131	115	29	59
HU	Hungary*	3,159	2,183	2,470	2,244	1,434	1,721	116	79	119	245	274	372
IE	Ireland*	1,442	884	744	1,109	612	476	79	48	19	66	82	67
IS	Iceland	518	758	628	493	674	563	22	38	19	19	40	35
IT	Italy	9,262	3,824	5,932	6,310	2,452	3,842	447	219	368	720	368	414
LT	Lithuania*	1,214	912	440	937	649	330	68	54	25	46	43	8
LU	Luxemburg*	2,473	1,051	1,790	1,975	876	1,500	368	97	151	52	18	54
LV	Latvia*	1,499	1,521	2,008	1,186	984	1,447	103	95	101	167	168	149
MT	Malta	715	1,120	2,166	573	869	1,848	15	45	70	61	157	142
NL	Netherlands*	1,217	834	1,409	1,099	776	1,286	32	37	50	19	12	22
NO	Norway	632	607	2,818	551	539	2,479	70	49	199	9	19	44

PL	Poland*	6,470	3,359	5,153	4,378	2,411	3,764	528	266	398	754	240	221
PT	Portugal*	1,820	1,053	2,377	1,465	808	1,620	112	49	185	214	163	350
RO	Romania*	1,717	1,931	3,328	1,534	1,168	1,866	285	206	315	310	190	269
SE	Sweden	1,455	628	1,054	1,282	526	946	90	64	93	33	14	13
SI	Slovenia*	4,482	2,692	3,885	3,587	2,282	2,929	99	28	144	191	174	186
SK	Slovakia*	2,740	1,702	1,439	2,168	1,300	1,020	103	45	38	214	118	91
UK	United Kingdom*	2,886	1,371	2,981	2,350	1,081	2,387	198	125	213	93	72	165

Source: EU-SILC 2005-2019, authors' calculations

Notes: * - countries that are included in the multi-level analysis