



# Medium-term socio-economic consequences of insecure labour market positions

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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 enhancing the employment of young people and improving the social situation of young people who face labour market insecurities, and
- ii. to engage with relevant communities, stakeholders and practitioners in the research with a view to supporting relevant policies in Europe. Contributions to a dialogue about these results can be made through the project website <http://www.except-project.eu/>, or by following us on twitter [@except\\_eu](#) or Facebook [@excepteu](#).

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# I Introduction:

## Why Analysing Medium-Term Socio-Economic Consequences of Employment Uncertainty?

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This report looks at the *medium-term* socio-economic consequences of unemployment and employment uncertainty among youth in Europe, i.e. it focuses on the question in how far unemployment and atypical employment negatively impacts upon the socio-economic situation of youth within a five-year time span. In doing so, it complements earlier work in the EXCEPT project that has looked at the *immediate* consequences of unemployment and atypical work for youth: As Rokicka & Kłobuszewska (2016) have demonstrated based on EU-SILC data, unemployment among European youth instantaneously increases their risk to be affected by income poverty, material deprivation and feelings of social exclusion. Likewise, they could show that fixed-term contracts often are related to lower wages, thereby increasing the risk of both objective and subjective poverty for youth affected by such types of jobs.

Supplementing these analyses by a medium-term perspective is based on the assumption that both the affectedness by labour market uncertainty as well as their socio-economic consequences are dynamic phenomena. On the one hand, it has been shown that early career uncertainty can have cumulative effects. Young individuals initially affected by atypical employment or unemployment will carry a “scar” from this experience, i.e. will also be more likely to be affected by these negative states in the future. They thus likely will remain in unemployment/atypical employment and not make the transition into a safe



labour market position. Even in the case of re-employment, scarring effects may be at work, resulting in lower wages or lesser employment security as compared to those people who started their career in stable jobs. Following the “scarring” argument, socio-economic consequences of employment uncertainty hence are not stationary but may even deteriorate over time, thus making youth in these states more vulnerable to poverty and/or deprivation in the future.

Alternatively, it may be argued that the vulnerability to labour market uncertainty may only be a temporary phenomenon. Youth affected by unemployment may use this time as a job search period after which they will be able to enter a safe labour market position, maybe even more stable or better paid than those positions available “at first glance”. Applying a similar argument, youths in atypical employment may use this period as an “extended internship” to better display their qualifications and capabilities to their employers and thereby increase their chances to enter into a permanent, continuous contract. In addition, youth in atypical employment may use this as an opportunity to gain better access to broader social networks that may help to find better jobs (e.g. through colleagues, customers or supplier firm contacts etc.). Following this so-called “stepping stone” argument, socio-economic outcomes of employment uncertainty may not be stationary, but may improve over time.

In the following, we will investigate in how far early employment uncertainty acts either as a trap implying cumulative disadvantage or as a stepping-stone into the safe, primary labour market. We also investigate in how far chances and risks differ between different groups of youth, i.e. identify those groups of youth that are harmed disproportionately by employment uncertainty in the medium-term and those for whom it may act as only a temporary disadvantage. We first apply a pan-European perspective, taking data from the EU Survey of Income and Living Conditions (EU-SILC) in order to identify the consequences for European youth in general. We then supplement this comparative analysis with selected country case studies, using available longitudinal data from Germany, Italy, the United Kingdom and Estonia to investigate the medium-term consequences of employment uncertainty for poverty and deprivation under given nation-specific conditions.

This introductory chapter is structured as follows. The following section will establish the theoretical groundwork for the upcoming analyses. It will first define the basic concepts used, namely the dimensions of socio-economic uncertainty examined in this report (Section 1.1). In a further step, based on existing literature, it links socio-economic consequences to different types of employment uncertainty, particularly looking at the consequences of unemployment and fixed-term employment. Particular attention in this respect will be paid to the effect of intermediary individual-level factors that may determine socio-economic outcomes (Section 1.2). Previous comparative research on youth unemployment and atypical employment has shown that the effects of employment uncertainty (and its distribution across social groups) may not be uniform within European countries. Section 1.3 thus will discuss possible institutional characteristics at the nation-state level that buffer or aggravate the effects of employment uncertainty for youth. In this respect, we discuss potential effects of education systems, active and passive labour market policies as well as labour market regulation. We conclude each section by deriving hypotheses for the subsequent analyses, relying on the previous theoretical discussions.



Sections 2 and 3 will then be devoted to introducing the details of the subsequent analyses. Following the justification of the choice of countries we outline the general design of our analysis and the methods applied as well as provide a short synopsis of key characteristics of the data sets under study.

## 1. Theoretical background

### 1.1 Measuring socio-economic consequences

Without much doubt, the socio-economic situation of a person is a multi-dimensional phenomenon. Accordingly, despite a long history of related research, the question how to best describe and measure it is still contested in contemporary research. As Tang and colleagues state: “Rich or poor is a state of mind. People may be financially poor but psychologically rich and vice versa” (Tang et al. 2004: 119). Building on earlier work in the EXCEPT project (Hofäcker and Neumann 2016), we will try to provide an overview of key concepts that have been applied to measure socio-economic situation in the following section, namely the concept of income-based poverty, deprivation in everyday goods and the subjective feeling of material dissatisfaction.

Most often, socio-economic disadvantage is described using measures of **income poverty**, assuming that individuals can be considered poor when falling below an income threshold considered to reflect a level necessary to satisfy basic everyday needs (e.g. Sen 1983). There has been a long debate on how this threshold may be defined, resulting in the development of two alternative concepts: *relative income poverty* and *absolute income poverty*. *Relative income poverty* refers to the amount of income an individual or a household has available relative to that available to a specific group of comparison (usually within the same country). The relative income poverty rate thus reflects the percentage of the population with income less than some fixed proportion of a country's median income. The most widely used concept at the European level is the at-risk-of-poverty rate referring to an income below 60% of the national median equivalised disposable income after social transfers (Eurostat 2016). The concept of relative income poverty apparently has both advantages and disadvantages. On the one hand, relative poverty is easy to measure and ensures comparability at household and country level. On the other hand, the threshold set (in the EU case 60 per cent) is arbitrary and can be adapted to meet political interest. Besides, it is criticised that relative poverty measures inequality (and not poverty) and it is a bad indicator of the command over resources (Bradshaw 2001). People that fall below a relative poverty line still may be able to access all necessary goods for everyday life and thus may not be “poor” in a sense of material subsistence. An alternative concept often mentioned in poverty research that addresses this potential weakness is the concept of *absolute poverty* which considers people to be in poverty if their income is not sufficient to afford a predefined bundle of goods in a given year (Bradshaw et al. 1987). Nation-specific poverty lines are often calculated by national statistical offices, based on pre-defined bundles of goods considered necessary in a given country. Given that the composition of this bundle of goods as well as the relative weights assigned to single items may vary across countries, absolute poverty lines are frequently more difficult to compare cross-nationally. For the following analyses, we thus refer to the standard EU measure of relative income poverty at 60% of the median income.



The concept of **material deprivation** provides an alternative approach for the measurement of socio-economic status. According to Townsend (1979: 31), people are in poverty when “their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities”. Halleröd and Westberg (2006) point out that many young people may have a low income but this does not necessarily mean that they actually suffer from economic hardship and a low economic standard, i.e. having to forgo vital consumption or having problems making ends meet and living in economic insecurity. In order to better approximate this notion of most basic needs, deprivation rates have been developed that express the inability to afford some items considered by most people to be desirable or even necessary to lead an adequate life. The respective indicator adopted by Eurostat (2016) – which also the single country studies in this report are aiming to replicate - measures the percentage of the population that cannot afford at least three of the following nine items:

- i. to pay their rent, mortgage or utility bills;
- ii. to keep their home adequately warm;
- iii. to face unexpected expenses;
- iv. to eat meat or proteins regularly;
- v. to go on holiday;
- vi. a television set;
- vii. a washing machine;
- viii. a car;
- ix. a telephone.

In contrast to general material deprivation, the *severe* material deprivation rate is defined as the enforced inability to pay for at least four of the above-mentioned items.

It needs to be noted that in comparatively affluent societies (such as most European countries), the described measures of deprivation are a more “strict measure” of socio-economic disadvantage than the income poverty lines. In other words: People can be income-poor in relation to a rich society’s median, but may still be able to afford most of the afore mentioned necessary items.

Both measures of objective poverty – income poverty and material deprivation – are based on the assumption that it is possible to externally define a threshold below which individuals can be considered as poor. In contrast, indicators of **subjective poverty** measure how people perceive their situation; i.e. whether they consider themselves as being poor. Bourguignon (2006) highlights that a persistent “feeling” of poverty is often reported within some population subgroups. Beneficiaries of minimum income guarantee programmes (who objectively surpass an objective income threshold) may still feel stigmatized receiving social assistance, which provokes a feeling of being poor. At the same time, not all households classified as 'poor' according to the objective definition of poverty perceive themselves as being poor (Van Praag and Ferrer-i-Carbonell 2007). Various indicators have been suggested how to measure subjective poverty. In the EU-SILC, for



example, subjective poverty often has been operationalized in terms of economic strain.<sup>1</sup> In the following country-specific analyses, we shall not use one measure of subjective poverty, but draw back to varying indicators that were available in the respective data sets.

## 1.2 Linking employment uncertainty and medium-term consequences: Theoretical considerations

How is the occurrence of the aforementioned types of socio-economic disadvantage related to employment uncertainty in the medium-term? To answer this question, we will look at two major types of labour market risks that have been discussed frequently in the literature: *unemployment* and *temporary employment*.

### 1.2.1 Unemployment

It seems intuitively evident that being in **unemployment** should have negative consequences for the socio-economic situation of youth, given the lack of an own wage income and the dependency on public subsistence benefits. Indeed, within earlier analyses of the EXCEPT project (Rokicka & Kłobuszewska 2016), it has been shown that young people in unemployment are faced with a significantly higher immediate risk of poverty (in various dimensions). Negative effects of unemployment, however, may go beyond short-term economic disadvantage. As shown earlier, beyond its immediate effects, unemployment may also have negative “scarring” effects on later career (e.g. Arulampalam et al. 2001, Steijn et al. 2006, Schmillen and Umkehrer 2013). Following this line of argument, unemployment not only negatively affects the immediate situation of an individual, but also harms its future chances of labour market security and income. According to Arulampalam (2001), different mechanisms can be held responsible for this effect of “permanent scars” (Ellwood 1982): First, having experienced unemployment may have a negative “signalling” effect (Spence 1973), suggesting that potential future employers associate this experience with lower individual capabilities and thus statistically discriminate against the unemployed. Second, the fact that the unemployed do not collect further work experience may foster a depreciation of their skills and thus hamper their future labour market chances.

Various studies have confirmed the significance of scarring effect empirically. Based on data from the German Socio-Economic Panel, Manzoni and Mooi-Reci (2011) show that frequently, early unemployment “breeds” future unemployment, i.e. increases the risk of future unemployment and thus hampers the progression of future *employment careers*. Furthermore, unemployment often also increases the risk of entering less secure jobs, thus promoting unstable careers and the emergence of “low-pay-no-pay” cycles. Schmillen and Umkehrer (2013) arrive at similar results using German administrative data when demonstrating that early career unemployment among youth raises the likelihood of later unemployment significantly. Yet, there are also signs that youth may react strategically to the experience of unemployment: Mroz and Savage (2006) find that after experiencing unemployment, youth “seek out training and work activities to mitigate possible setbacks

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<sup>1</sup> EU-SILC respondents are asked to rate the degree of financial difficulty their household experiences in ‘making ends meet’. Households which answer with ‘difficulty’ or ‘great difficulty’ in doing so are considered as subjectively poor.





in their planned human capital profiles” (ibid.: 290). However, even after this “catch-up” response, the “scars” for future career remain.

The experience of unemployment does not only harm future employment prospects but also impacts negatively on *wages*. Various studies have confirmed that early career unemployment is related to lower future wages, even when entering employment, encompassing both country-specific evidence (e.g. from Germany (Möller and Umkehrer 2014) Switzerland (Helbling and Sacchi 2014) or the US (Gregg and Tominey 2005)) as well as findings from comparative pan-European assessments (Gangl 2006). Justifications for the lower wages are often found in the fact that – if unemployed do not receive active labour market support – their skills and qualifications depreciate, which makes them more prone to be hired in lower-qualified or precarious jobs. There are, however, some hints that suggest that this “downward wage spiral” may not necessarily apply to all groups of youth. Kahn and Low (1982) argue that for some individuals, remaining in unemployment offers better opportunities for a longer and optimized job search than directly searching from a current job. Individuals that remain in unemployment for some time thus may be able to achieve higher wages thereafter.

Considering results for both employment and wage scars, it appears that the socio-economic consequences of unemployment are at least partly ambiguous. While it may impose scars on future careers, for some groups of workers, it may also provide a chance for further qualification and job search. Burgess and others (2003) suggest that the question whether unemployment has a scarring effect or not strongly depends on the degree of human capital endowment and educational attainment. While it is detrimental for the lower qualified, it may have effects that are more positive for those with medium or higher qualifications.

Negative effects of unemployment are not restricted to the material dimension of career progression and wages. Empirical evidence shows that also on a more psychological level, unemployment may leave “scarring effects”. Based on German GSOEP Data, Knabe and Rätzl (2011) show that the experience of unemployment promotes negative expectations of future employment prospects, thereby lowering people’s life satisfaction, an effect that persists even after a successful re-entry into the labour market. The authors thus conclude that “past unemployment ‘scars’ because it ‘scares’” (ibid.: 292). Other studies report similarly negative effects of unemployment on life satisfaction (Wulfgramm 2014 for 21 European countries based on ESS data), career dissatisfaction (Helbling and Sacchi 2014 for Switzerland), subjective psychological well-being (Korpi 1997 for Sweden; Alvaro and Garrido 2003 for Europe), and self-esteem (Sheeran et al 1995 for the US). It thus seems fair to assume that scars from unemployment do not only affect the objective monetary or material dimension but also have detrimental subjective effects.

Irrespective of the dimension of socio-economic disadvantage considered, previous research has highlighted that the scarring effect of unemployment is cumulative; i.e. the effect increases as the duration of unemployment increases. Young persons with a short period of unemployment thus may be better able to overcome a scarring effect than those



that have been in long-term or permanent unemployment. This effect has been highlighted for employment chances (e.g. Steijn et al 2006) as well as wage levels (e.g. Gregg and Tominey 2005) and life satisfaction (e.g. Knabe and Rätzel 2011).

Summing up the previous discussions, we can hypothesize the following for the effects of unemployment:

- H1a: it can be inferred that the effect of early career unemployment for youth will be detrimental for their socio-economic situation irrespective of the dimension considered. It will increase the risk of income poverty, material deprivation as well as subjectively perceived disadvantage.
- H1b: This effect is cumulative, i.e., on the one hand, it will increase with the duration of unemployment, i.e. the longer individuals stay in unemployment, the higher their risks for future socio-economic disadvantage will be. On the other hand, this effect may also apply for repeated spells of unemployment, which may create similar scarring effects.
- H1c: Finally, it can be assumed that both the existence as well as the strength of scarring effects will be dependent on the human capital of youth, with the highly-skilled/-educated being least affected and those with lower/no skills being most affected.

### *1.2.2 Fixed-term employment*

While in existing literature, the expected effects of unemployment for the socio-economic situation of youth has been predominantly negative, the professional discourse about the respective effects of fixed-term employment has been more ambiguous. By and large, there is a consensus that the effects of fixed-term employment tend to be more favourable than that of unemployment. As, for example, Gebel (2013) has shown, fixed-term employees fare better in terms of permanent employment chances and wages than the unemployed in Germany and the United Kingdom after a five-year time span (no such effect was found for Switzerland). Despite this comparative advantage to the unemployed, fixed-term employees earn lower wages (Pfeifer 2012; Gebel 2009), particularly when comparing temporary and permanent workers in the lower earnings segment (Mertens et al. 2007, Comi & Grasseni 2011).

A controversial debate has evolved around the question, whether such disadvantages are of a permanent nature or whether they diminish over time – a discussion often referred to as that of “traps” versus “bridges” or “stepping stones” (Gash 2008, Scherer 2004). Advocates of the “trap” argument refer to segmentation theory, arguing that individuals with fixed-term contracts have a high likelihood to maintain such contracts, thus becoming part of a secondary, marginalized labour market with lower wages and employment security. Furthermore, they often face a higher risk of becoming unemployed than those in permanent contracts (Giesecke and Groß 2003, Scherer 2004).

In contrast, proponents of the “bridge” or “stepping stone” argument put forward that fixed-term employment may not necessarily lead into a secondary labour market but can also act as an “entry port” into safe and permanent employment (Scherer 2004, Steijn et



al. 2006). Even though there remains a risk of future unemployment for fixed-term employees, those who remain in employment have higher chances to be upwardly mobile and to arrive in similar occupational positions as those in permanent employment (op.cit.). Based on data from West Germany, France, the UK and Denmark, Gash (2008) shows that the number of those entering into employment after a fixed-term contract surpasses that of falling into unemployment afterwards, highlighting its potentially positive effects. In the medium-term perspective of around five years, initial disadvantages for fixed-term employees diminish over time in terms of both employment chances and wages (Gebel 2010 for Germany and the UK, McGinnity et al 2005 for Germany). Reasons for the comparatively positive performance of fixed-term employees are often based on the idea that, from a supply-side perspective, employers often use fixed-term employment as a sort of a “prolonged internship” during which they can better assess the employees’ qualifications and skills. Upon their approval, fixed-term contracts are then later transformed into permanent contracts (Schmelzer et al. 2015). Furthermore, taking a supply-side perspective, fixed-term employees also often use their employment as an opportunity for further education, thus enhancing their future chances of permanent employment and future upward mobility (e.g. McGinnity et al. 2005).

There is evidence that the question whether fixed-term contracts may act as traps or stepping stones/bridges is closely related to the human capital of respective employees. For Germany, Giesecke and Groß (2003) show that high education protects fixed-term employees from future unemployment, a finding that has been confirmed for the UK by Gash (2008). In a similar vein, Schmelzer et al. (2015) show for Germany that the higher educated more often use fixed-term employment as an extended internship after which they enter into permanent employment while for the lower educated, it more often turns into permanent flexibilisation on a secondary labour market. Finally, Gebel (2010) shows that higher educated suffer from a high initial wage penalty when entering employment. Yet, they are also best able to catch up in subsequent years.

Summing up the previous discussions, we can hypothesize the following for the effects of fixed-term employment:

- H2a: As compared to those in permanent employment, fixed-term employees may initially suffer from disadvantages in wage and career outcomes. Yet, in contrast to the unemployed, these disadvantages will be less pronounced and within a medium-term perspective, young individuals will better be able to catch up. In terms of its socio-economic consequences, fixed-term employment thus may take an intermediate position between unemployment and permanent employment.
- H2b: Considering that income drops resulting from fixed-term employment may be not as high as for unemployment, we assume that this relative disadvantage does not suffice to result in material deprivation. However, negative consequences for subjective poverty may be expected as well, given that young individuals may more likely perceive them as “outsiders” on secondary labour markets.
- H2c: Individuals that only spend a limited amount of time in fixed-term employment and use it as a stepping-stone more likely will be able to “make up” for initial



disadvantages than those that more permanently remain in this state. As for unemployment, we thus can assume that detrimental effects of fixed-term employment may also be cumulative.

- H2d: Finally, the use of fixed-term employment as either traps or stepping stones (and the related socio-economic consequences) will differ between youth with different human capital attainment, with the highly-skilled/-educated experiencing less severe consequences of fixed-term employment than those with lower/no skills.

### **1.3 Linking employment uncertainty and medium-term consequences: Exploring the relevance of context**

The previous section has discussed the effects of unemployment and fixed-term employment as if they were generalizable effects across countries. Yet, it can be argued that the above types of employment uncertainty are “filtered” by nation specific institutions which determine how far the employment uncertainty leads to negative (or positive) outcomes at the individual level (Hofäcker et al. 2010). In a cross-national comparison of unemployment outcomes for youth, Dietrich and Möller (2016), for example, highlight that “country-specific factors – institutions, traditions and characteristic structures – are of high importance in explaining the huge disparities between European countries”. In the following, we look at selected contextual factors that can be expected to “mediate” the relationship between employment uncertainty and socio-economic disadvantage.

#### *1.3.1 General economic situation*

A most obvious institutional factor affecting individual labour market chances and the associated poverty outcomes is the overall economic situation respectively the demand on national labour markets (e.g. Russell and O’Connell 2001, Breen 2005). This should be particularly so for young labour market entrants, who often have acquired least employment rights and thus frequently are the first ones made redundant in times of economic downturns (Caliendo and Schmidl 2016). It can be assumed that young people in an economy experiencing economic growth and low overall unemployment have lower unemployment risks and may find it easier to transit from unemployment to employment than in countries where economic downturns and high overall unemployment restrict the availability of jobs and promote unemployment and joblessness (e.g. Dietrich and Möller 2016). Previous research (e.g. Gangl 2002) has shown that this may be particularly so for the lowest qualified whose employment chances may be most negatively affected by a deterioration in economic conditions (H3a).

Yet, as has been shown earlier (e.g. Russel and O’Connell 2001), cross-national variations in employment uncertainty among youth cannot be reduced to mere differences in cyclical conditions. Previous literature has pointed to the additional significance of various institutional factors that impact on the employment chances of youth and associated socio-economic risks. We will look at these institutional factors below.

#### *1.3.2 Education systems & labour market regulation*

Education systems are of central importance in determining youth outcomes on the labour market and related socio-economic outcomes. In the ideal case, they equip young individuals with qualifications and capabilities needed in the national labour markets. By



linking different educational attainment levels to specific degree certificates, they also provide signals for employers that may facilitate or impede an individual's job search.

In labour market literature, usually two opposite types of educational systems are being differentiated (e.g. Allmendinger 1989, Breen 2005, Müller and Shavit 1998): The one extreme is often illustrated using the case of Germany which education system has been described as exhibiting a high degree of both standardization and stratification (Allmendinger 1989, Müller and Shavit 1998). Stratification refers to the fact that selection in the educational system into different educational tracks takes place at a comparatively early stage. Educational degrees themselves are highly standardized, i.e. the rules governing the attainment of the different educational degrees are the same nationwide. Based on the attainment of different degrees, employers receive reliable signals about the qualifications that students possess. In other words, there exists a "tight coupling" between educational attainment and labour market outcome" (Allmendinger 1989: 239). While this coupling is beneficial for the adequate job placement for those with higher degrees, it simultaneously discriminates against those with lower degrees. In a similar way, the German system of vocational education and training, the so-called "dual model" (Blossfeld and Stockmann 1999) provides certificates to successful young individuals upon completion of their traineeship that are highly standardized and thus contain a high informative value for job search. This system may help to lower youth unemployment at the aggregate level (Cahuc et al. 2013). At the same time, it discriminates against those not able to acquire such degrees, who then become stigmatized as labour market outsiders, not possessing adequate degrees and qualifications.

The opposite model is often embodied by liberal countries such as the United Kingdom or the United States (e.g. Allmendinger 1989, Müller and Shavit 1998). In these countries, a comprehensive education is highly general, so that the degree of stratification is low. Similar observations can be made for the system of education and training in which occupational degrees are only weakly standardized. The signalling value of both educational certificates and vocational training degrees thus is low, as they do not provide adequate information about specific knowledge and capabilities. The link between educational degrees and labour market demands is less strong. Job-specific qualification is often attained during on-the-job training in enterprises. Following this, it can be expected that unemployment may occur more often as a consequence of longer job search processes or more frequent "job-shopping". At the same time, the relative "scar" associated with unemployment may be less pronounced.

As Breen (2005) argues, there are complementarities between educational systems and "institutional relationships that ensure a close link between job seekers and employers" (ibid.: 126). These relationships are recorded in *employment regulation*. In countries like Germany, employment regulation is developed considerably, allowing labour market insiders – i.e. those with continuous and permanent employment contracts – a strong protection against both dismissal and the flexibilisation of their employment contract. The flipside of this strong "insider protection mechanism" is that those outside this "core labour market" often find it hard to enter, and thus often end up in more flexible, atypical employment (Van der Velden and Wolbers 2003). Particularly when the regulation of permanent employment is disproportionately higher than that of fixed-term employees,



young labour market entrants have low transition probabilities into safe permanent employment and often remain permanently marginalized (Passaretta and Wolbers 2016, Gebel and Giesecke 2016). In Germany, this is reflected in a comparatively high share of fixed-term employment that has been particularly imposed on young labour market entrants (Buchholz 2008). By restricting opportunities for labour market mobility in general, strict regulation also reduces transition probabilities from unemployment to employment among youth (Russell and O’Connell 2001). Indeed in Germany, youth unemployment – if it occurs – is characterised by long spell duration (Gangl 2004, 2006). Yet for those few individuals who make the transition, employment protection enhances post-unemployment careers and thus reduces the scarring effect, as compared to more liberal economies (Gangl 2006).

In the counterexample of weakly regulated, flexible labour markets, it is easier to set foot in employment and to find a labour market position (Van der Velden et al 2003, Breen 2005). At the same time, the weak level of employment protection also increases the chances of becoming unemployed. However, given high labour market flexibility, unemployment spells are shorter and even more it also promotes early re-entries. Human capital depreciation during periods of unemployment is not as high as in more regulated regimes (Helbling & Sacchi 2014). Nonetheless, the lesser protection of employment relationships per se often promotes considerable wage scars among those that exit from unemployment (Gangl 2006).

Drawing on earlier literature (Breen 2005, Passarella and Wolbers 2016), the combined consequences of educational signalling and labour market regulation on the employment situation of youth can be summarized as follows (H3b):

- Most unfavourable conditions exist in contexts where educational signalling is low, but labour market regulation – particularly for permanent contracts – is high. In such countries, entries into safe employment are not smooth; yet, those who do not manage to enter are often marginalized in either atypical work forms or (mostly long-term) unemployment. Experiences of these states of labour market exclusion are very likely to scar young individuals permanently as outsiders on the labour market. We thus hypothesise that their risks of experiencing negative socio economic consequences are high. Typical countries representing this type of configuration are those of Southern Europe.
- Countries like Germany combine high levels of regulation with high levels of educational signalling. The latter will promote a smooth labour market entry for those successful in the educational system and thus reduce the prevalence of youth unemployment. For them “high signalling will offset the negative impact of high regulation” (Breen 2005: 127). Yet, those less successful may also bear high risks of permanent labour market exclusion, and the experience of either unemployment or atypical employment will have strong scarring effects.
- Liberal countries with low employment protection and low educational signalling will make it easy for youth to enter the labour market, even though entry positions will often not be stable. Unemployment thus may become a common experience, yet it will often not be of long duration and will not leave strong scarring effects. Atypical employment in these countries will be a rather rare phenomenon given



that the low level of labour market regulation already provides good opportunities for flexibilisation.

- Most favourable conditions should exist in countries where high levels of educational signalling are combined with weak employment regulation. Switzerland may be regarded as an approximate example for such a (rare) constellation.

### *1.3.3 General welfare state protection*

The socio-economic situation of youth not only depends on institutions that influence the mere occurrence and duration of labour market uncertainty, but also on how the welfare states treat such periods and “buffer” negative socio-economic outcomes, e.g. through public benefits and transfers. This may relate to the general level of welfare state protection and generosity, as described through Esping-Andersen’s concept of “de-commodification” (see Esping-Andersen 1990).

Of particular relevance for youth will be in how far public benefits buffer the negative effects of unemployment. Earlier research has highlighted, that a developed system of unemployment insurance is able to reduce the negative effects of unemployment which may be due to the immediate effect of public transfers. At the same time, generous unemployment benefits may allow individuals a longer job search period by which they can optimize their search results. Gangl (2004), for example, has shown for both Germany and the US that unemployment insurance reduces workers’ risks of severe earning losses and entering unstable job arrangements. In a later paper, Gangl shows based on both US and European data that unemployment protection can mitigate the negative effect of unemployment on wages, particularly in rather regulated economies (Gangl 2006). In contrast, the absence of adequate unemployment benefits for youth – as often prevalent in Southern European countries – has severe negative consequences for their income situation (Ferrera 1996). We thus assume that generous public benefits may reduce the risks of both income poverty and material deprivation.

This effect may also extend to subjective forms of poverty and exclusion. As Wulfgramm (2014) shows, countries with generous unemployment insurance are able to reduce the drop in life satisfaction associated with becoming unemployed significantly better than those countries where unemployment benefits are short or meagre. Hence, we assume that welfare state protection will have a positively mediating impact on all types of socio-economic disadvantage among youth (H3c).

### *1.3.4 Active labour market policies*

Another mechanism by which governmental action positively impacts on the medium-term socio-economic situation of youth are active labour market policies (hereafter: ALMP). They do not necessarily affect the situation of youth immediately; yet, by investing into youths’ human capital and employment chances, they may have positive effects in the medium-term. Furthermore, by avoiding skill depreciation, they reduce the scarring effects of temporary employment uncertainty (Van der Velden and Wolbers 2003).

Positive effects of ALMPs on the situation of youth have been confirmed by a number of studies. For Sweden, Strandh and Nordlund (2008) demonstrate positive effect for the previously unemployed participating in such measures to reach pre-unemployment income and to avoid labour market exit. Sage (2015) highlights positive effects of ALMP



participation on the well-being of participants. Yet, empirical evidence also warrants that the effect of ALMPs will be dependent on the type of programme. Frequently, it has been found that the educational programs, qualification and retraining measures are more effective than direct employment measures, particularly when looking at their long-term effects (Strandh and Nordlund 2008 for Sweden, Caliendo and Schmidl 2016 for Germany). Consequently, we hypothesise that the effects of active labour market policies on the socio-economic situation of youth will be positive, particularly when taking the form of educational programs rather than job creation (H3d).

## 2. Overview of Reports and Analytical strategy

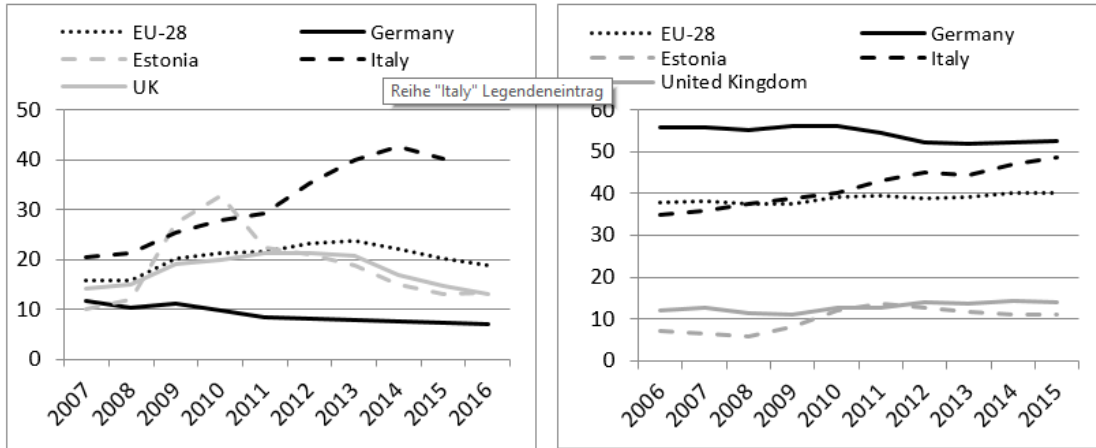
In the following parts of this report, analyses will be presented that empirically investigate the effects of early employment uncertainty on different dimensions of socio-economic consequences among European youth, applying a medium-term perspective of around five years. To begin with, two studies will apply a pan-European perspective, aiming to identify general trends across Europe: Rokicka first uses data from the European Survey of Household and Living Conditions (EU-SILC) to investigate, in how far unemployment and fixed-term employment lead to persistent socio-economic disadvantage for youth after five years, and which groups among youth are most severely affected. Using the same data set, Strandh and Högberg (in this report) subsequently analyse the factors that allow youth to transit from fixed-term employment into a safe permanent job, and thus to likely evade socio-economic hardship. Particular attention in this chapter is attributed to the institutional mechanism that promote such successful transitions.

Following these two comparative overviews, four country studies use nation-specific longitudinal data to investigate the medium-term socio-economic consequences of employment uncertainty for youth in Germany (Hofäcker et al.), Italy (Bertolini et al.), Estonia (Unt and Täht) and the United Kingdom (Nizalova et al.). Even though the choice of these four countries was partly driven by data availability, they represent different institutional constellations, reflecting different welfare and labour market regimes in Europe. In the following, we provide a short stylized overview of the key institutional characteristics of these four countries. This will allow for a better classification of these case studies, particularly concerning the institutional factors discussed earlier (see section 2.3). In doing so, we first present an overview of the incidence of both unemployment and fixed-term employment in the four countries. We then turn to a stylized classification of institutional patterns.





FIGURE I: UNEMPLOYMENT RATE (LEFT) AND INCIDENCE OF FIXED-TERM EMPLOYMENT (RIGHT) 2006/7-2015, YOUTH UNDER-25 YEARS



Source: Eurostat 2017

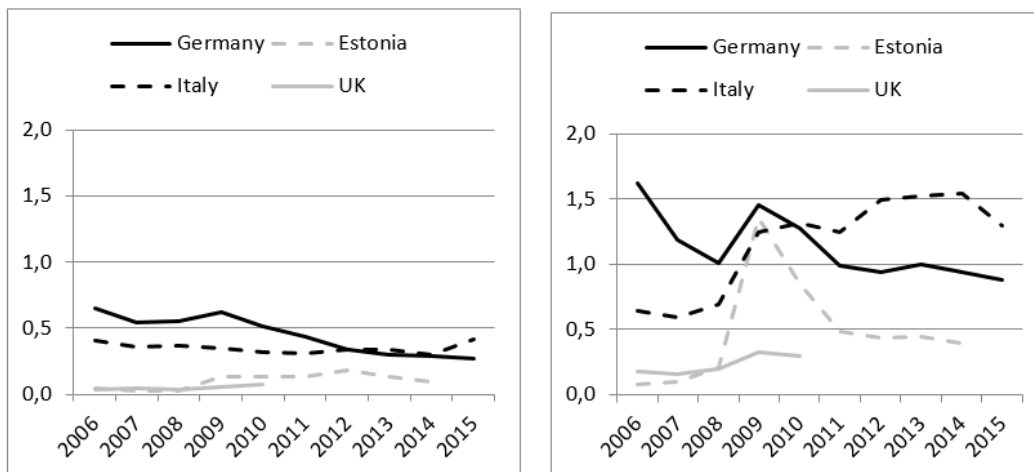
Figure I displays the **unemployment** rates respectively **fixed-term employment** shares among youths under the age of 25. Substantial cross-national differences are clearly observable. *Germany* stands out as the country with the lowest youth unemployment rate that has remained persistently below the 10 per cent margin throughout the 2010s. At the same time, *Germany* ranks highest among the four selected countries with regard to the incidence of fixed-term employment with consistently more than 50 per cent of young employees experiencing it. Entry into the German labour market thus appears to be rather smooth, yet it often means entering through atypical employment forms, particularly for the younger. The situation appears to be clearly worse in *Italy* where fixed-term employment rates recently have approached that of *Germany*. At the same time, though, youth unemployment looms large in *Italy*, particularly since the onset of the 2010s, nowadays affecting 40 per cent of the labour force. Both countries are examples of an insider-outsider labour market, whereas the status of being an outsider in *Italy* not only means being in atypical employment, but often is also related to a high risk of being (or becoming) unemployed. Both the United Kingdom and Estonia exhibit low rates of fixed-term employment – a typical feature of countries with flexible labour market regulation (see below). In the United Kingdom, unemployment has largely followed the EU-28 average throughout the observed timeframe. In contrast, Estonia apparently was hit by an economic downturn around the 2008 crisis, reflected in a tripling of youth unemployment rates from 10 to 30 per cent between 2008 and 2010, and a return to EU-average levels in the subsequent years (see also the contribution by Unt and Täht in this report).

The pronounced differences in the incidence of unemployment and fixed-term employment likely can be traced back to institutional differences between countries. Regarding the interplay between **educational systems and employment regulations**, it seems reasonable to argue that the German pattern of low youth unemployment likely can be traced back to the strong signalling properties of the *German* educational and vocational training system (see the discussion above). At the same time, the deregulation of temporary contracts coupled with a still stringent regulation of permanent employment in *Germany* has led to a concentration of atypical employment forms particularly among



youth (Buchholz 2008). The high *Italian* rates of fixed-term employment may equally be traced back to high levels of employment regulation, which makes it attractive for employers to hire young labour market entrants in more flexible work. Yet, unlike in Germany, the education and vocational training systems are only weakly standardized, thus providing only poor labour market signals and thus making the “school-to-work transition problematic and very long” (Bernardi and Nazio 2005: 353). The high rate of youth unemployment is a reflection of this “decoupling of the educational vocational system from the labour market” (op.cit.). The *United Kingdom* has traditionally been described by a weak labour market regulation and high labour market flexibility. This structure makes the use of temporary employment as a flexibilisation tool obsolete, reflected in its low share among youth. At the same time, the link between educational degrees attained in the British school system and labour market demands is weak (Gebel 2010), thus making labour market entry more difficult and search-intensive. Yet, the flexible labour market structure facilitates employment entries and unemployment does not turn into a permanent outsider status. Consequently, the British youth unemployment rates lies between that of Germany and Italy, approximating the EU average. In terms of labour market regulation, Estonia also resembles a rather liberal model with weak employment protection and high levels of flexibility (Helemäe and Saar 2011). The Estonian system of education and training has been described also as exhibiting a strongly standardized component, yet rather based on status than on qualifications. Entry into employment is further facilitated by an initially high demand for labour since the 2000s (Katus et al. 2005). This process, however, was halted throughout the economic crisis of 2008, reflected in the drastic rise of youth unemployment throughout these years.

**FIGURE II: EXPENDITURE FOR ACTIVE (LEFT) RESPECTIVELY PASSIVE LABOUR MARKET POLICIES (RIGHT) AS % OF GDP, 2006-2015**



Source: Eurostat 2017

How do public policies actively (through the promotion of employment) or passively (through direct income transfers) support youth in the four countries under study? To measure this, Figure II presents the dynamics in **active and passive labour market policies** spending as a percentage of GDP. Naturally, these figures provide only a rough approximation of the policy engagement for youth, given that they count expenditures for every active or passive measures; yet, a more detailed breakdown of figures to reflect



youth policies is not available. Still the figures nicely illustrate notable differences between the countries in a stylised fashion.

Generally, in all four countries passive policy expenditure surpasses active expenditure. Both Estonia and the United Kingdom stand out as low-spending countries that invest less than 0.5 per cent of their GDP into either active or passive measures. The only exception is the afore mentioned economic crisis in Estonia 2008-2010 when expenditures for passive measures – i.e. unemployment benefits – increased substantially to more than one per cent; yet figures normalized at around half a percent in the following years. Among the countries observed here, Germany ranks among the highest spenders, with 1.0-1.5 percent spending on passive labour market policies and a declining share of around 0.5 per cent for active policies. These figures confirm the frequent classification of Germany exhibiting a rather generous, conservative welfare state – in contrast to the rather residual liberal approach of countries such as the UK and Estonia. Italy approximates the German figures in active policy expenditure, yet surpasses the German passive expenditure rates after 2010, following a steep increase of expenditures from around half a percent to around 1.5 per cent in 2015. This trend is in line with the simultaneous sharp increase in unemployment shown in Figure I, necessitating higher investments into unemployment benefits. For youth, the Italian figures, however, need to be treated with care, as previous research has shown that in contrast to many other countries, youth – particularly those with no previous work experience - have only little access to unemployment benefits (Ferrara 1996). Taking this into account, it can be assumed that public benefits in Italy – as in the UK and Estonia – only weakly shelter youth from socio-economic risks, and that employment uncertainties thus may quickly translate into poverty or deprivation, particularly throughout the times of economic crisis. In contrast, protection in Germany is relatively generous.

### 3. Data Sets & Methodology

In the following, empirical results from the longitudinal data analysis are presented on both a European-wide as well as a nations-specific scale. Comparative analyses use data from the European Survey of Income and Living Conditions (EU-SILC). These data are supplemented by the data from nation specific longitudinal social surveys (Germany, UK, and Italy) and administrative data (Estonia). While the comparative analyses allow for a cross-national assessment of European trends and between-country differences, the national analyses are aimed to allow a better consideration of country-specific peculiarities, such as specific work forms or types of poverty. The use of data sets of a different type (survey and register data) and origin imply that the analyses cannot be treated as harmonized in a strict sense, i.e. using exactly identical indicators. Yet, analyses were performed in a way that the results can be compared qualitatively by using the same dimensions regarding both the dependent and the key independent variables.

Logistic regressions were estimated in order to empirically test whether employment uncertainty negatively affects youth's socio-economic situation in the medium-term. For the measurement of socio-economic consequences, where applicable, all three dimensions discussed earlier – relative income poverty, material deprivation and subjective poverty – were analysed. This was possible for both the European as well as the German and UK data. Given the available longitudinal data, the other two country studies needed to



restrict themselves to an analysis of subjective poverty (Italy) and objective income poverty (Estonia).

Employment uncertainty was operationalised using unemployment and/or fixed-term employment as indicators. Where possible and nationally relevant, other flexible work forms – such as mini-jobs in Germany or part-time employment in the UK – were considered. As we assumed that the effects of employment uncertainty may be group-specific, interactions with further individual-level variables such as educational degree were added into the analyses. Durations of unemployment respectively atypical work spells were included to account for the assumed cumulative effects of experiencing employment uncertainty. In addition to these main explanatory variables, control variables at the individual level were added reflecting basic socio-demographic characteristics (age, gender, ethnicity, place of residence, marital and family status) as well as the status of residence (household composition, household work intensity, parental home vs. own household).

Medium-term consequences were identified applying a time-frame of four to five years, depending on data availability. The consistent use of longer time-periods was abandoned, given that some available data sets have a young history or a rotating sample design, allowing for no longer observations; yet reference to additional analyses with longer time horizons was made where applicable. As the interest of analyses was in the overall development across this interval rather than wave-to-wave changes, two time points were considered. Independent variables (employment uncertainty, control variables) were measured at the onset (t), while the dependent variable (socio-economic consequences) was measured four/five years later. Count variables for employment uncertainty were added that measured the length and/or number of unemployment/fixed-term employment spells respectively the accumulated length within the time window. Reported results largely stem from the application of pooled regressions. Alternative fixed-term effects / first difference models have the disadvantage that they may exclude cases from the models where relevant variables are time-constant, thus often critically reducing the number of cases for the analyses. Yet, where possible, such models were calculated as robustness checks.

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## II Results from EU-SILC Longitudinal analysis: Medium-Term Effects of Labour Market Exclusion and Insecurity on the Material and Financial Situation of Youth

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### 1. Introduction

As we know from previous studies, incidence of unemployment are more widespread among youth than prime age workers (Rokicka et al. 2015). This might be a result of transition from education into job market, whereas unemployment incidences are more widespread due to higher jobs turnover. Searching for a better job match among school leavers might be related to higher incidence of unemployment, and should be just a temporary occurrence. However, the majority of empirical studies show that there is a scarring effect of youth unemployment on prospective earnings, employment conditions, and labour market situation (Ellwood 1982, Beadry and DiNardo 1991, Arulampalam et al. 2001).

Gregg and Tominey (2005) found that the scarring effect of male youth unemployment on prospective wages 20 years later, yet they argue that the effect is much stronger for those with higher intensity of unemployment incidence. Similar results were reported for the US (Mroz and Savage 2006), Germany (Muhleisen and Zimmerman, 1994), and other European countries (Belgium: Cockx and Picchio 2013, Finland: Hämäläinen 2003).

Unemployment at young age is also associated with higher likelihood of being unemployed later in life (Kawaguchi and Murao 2014, Nordstrom 2011). However, people with certain personal characteristics (low educational attainment, childhood poverty) are more likely to be unemployed, therefore there is certain selection based in the personal characteristics (Arulampalam et al. 2001). While the effect of early career unemployment on further job prospects is well documented, there are slightly less studies focusing on the impact of youth unemployment on subsequent economic and material situation (Saunders 2002). Some empirical studies which use a macro approach, based on aggregated data, show that poverty can be reduced if unemployment of household heads is eliminated (Corcoran and Hill 1980), others report that poverty increases with unemployment



duration of household head (Nicols 2012). In micro studies often the direction of the causality is questioned: Does unemployment lead to poverty, or does poverty lead to unemployment? One of the possibilities to tackle this issue is the use of longitudinal data in which the economic outcomes of unemployment is observed few year after it occurred, and thus the risk of inverse causality is reduced. In this chapter, we look at the consequences of labour market exclusion of young people from EU countries on their prospect economic situation.

Our main research question is related to the following issue:

- **Does unemployment at early career stage translate into less favourable socio-economic situation of youth in medium-term?**

Several more detailed research questions were also tested:

- **Does the length of unemployment translate into less favourable socio-economic situation of youth in medium-term?**
- **Is the incidence of unemployment incidence experienced at different ages is associated with the different socio-economic outcomes?**
- **Does experience of unemployment for youth with different education attainment lead to the same socio-economic situation in medium-term?**

The best source of data, which allows us to address these topics, is a longitudinal version of EU-SILC (The European Union Statistics on Income and Living Conditions). First, it is the only longitudinal survey harmonized within EU. Second, it covers indicators related to the financial and material situation of the household. One of the drawbacks of this dataset is that the individual/household remains in the panel only for four years, and then is replaced according to the rotation scheme (European Commission 2014). Therefore, we can only observe the medium-term effects within a four-years-period. Another issue is related to geographical mobility of young people, those respondents who changed the living place, are not followed up<sup>1</sup>, which can contribute to attrition problems.

For this analysis, we use the most recent wave (UDB 2014-1) which consists of yearly interviews done between 2011 and 2014. We limited our sample to young individuals, which in the first wave were at least 18 years old and no more than 29 years old. As we are interested in the impact of the labour market situation, we excluded students and those who were in education in the first wave of the survey. However, we included in the sample those who returned to full-time education after having gained some labour market experience.

Due to attrition and rotating design, the panel is not balanced, thus we used information only about individuals who were present in at least three waves. Although the longitudinal EU-SILC is designed for EU comparative studies, the *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* covers only 24 out of 28 EU countries, with no data released for Germany, Denmark, Slovakia and Croatia.

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<sup>1</sup>The rule differs by country, although in the majority of countries they are not followed-up, more details can be found in European Commission (2014).



Consistent with definitions adopted in the research framework for this work package (see the introduction chapter in this report), we focus on two objective and one subjective measures of youth socio-economic situation<sup>2</sup>. As a result our dependent variables are as follows:

- an indicator for being at the risk of poverty,
- an indicator of living in a materially deprived household,
- and an indicator of subjective perception of living in the household which is unable to make ends meet.

We have used several estimation techniques to find answers to our main research questions. We first used descriptive statistics to provide a simple summary of the association between our main independent variable of interest: indicators of unemployment and dependent variables describing the socio-economic status of youth. We use three different definitions of unemployment to distinguish between: incidence of unemployment at the beginning of the observation period, length of unemployment during the observation period, and incidence of unemployment at a given year – used in fixed effect models. Our main independent variable is binary, and equal to one for an individual who was unemployed in the first wave of the panel, and zero for an individual who was employed. Length of the unemployment is depicted by five binary indicators, and no unemployment incidence is a base, comparison category. Incidence of unemployment in a given year is also a binary variable, equal to one for an individual who was unemployed in the given year, and zero for an employed individual.

In our main analysis, we used a logit regression to investigate the association between unemployment and risk of poverty, material deprivation and difficulty to meet ends meet. Our dependent variable is equal to one if an individual in 2014 lives in a household at risk of poverty (materially deprived household/ or household which make ends meet with difficulty or huge difficulty) and zero otherwise. Due to the use of pooled data from 24 EU countries we applied a country fixed effect model to account for country specific unobservable characteristics. We also included several control variables such as: age (within the age brackets: 18-29), gender, an indicator of educational attainment, an indicator of living arrangement (with parents or without), and household work intensity (share of person/months spent at work to overall number of person/months of all members at working age at a given year). In few models we also tested several interactions effects, which are described in more details in the text.

## 2. Empirical analysis

First, we investigate if there are differences in socio-economic outcomes in 2014, while taking into account the labour market situation at the beginning of the study. Table I.I shows that those young people who were unemployed in the 2011 are more likely to be at risk of poverty, to live in materially deprived households and to report more financial difficulties in 2014 than their working counterparts. Interestingly, their relative financial situation slightly improved between 2011 and 2014. Yet, we do not control in this cross-

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<sup>2</sup> Definitions are described in details in the previous report by Rokicka and Kłobuszewska (2016).



tabulation for the change of labour market status, which could lead to this improvement (Table I.I).

Furthermore, this cross-tabulation does not control for some personal, family or country specific characteristics which might be associated with higher risk of material distress such as: age, gender, education, household composition etc., therefore we should be very cautious drawing the conclusions. We thus decided to conduct more detailed analyses that follow below.

**TABLE I.I: DESCRIPTIVE STATISTICS (%)**

	At the risk of poverty		Material deprivation		Difficulty in making ends meet	
	2011	2014	2011	2014	2011	2014
Employed at 2011	10.25	11.18	8.97	7.67	26.65	27.36
Unemployed at 2011	33.58	33.26	25.38	22.50	55.49	54.19
Difference between unemployed and employed	23.33	22.08	16.41	14.83	28.84	26.83

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24: due to lack of information and insufficient sample size, excluded countries: Germany, Denmark, Slovakia, and Croatia.

In Table I.II we report the average marginal effects after a logit estimation. As shown in the table, a young person unemployed in 2011 has on average 6% higher probability of being at the risk of poverty in 2014 than a person employed in 2011. This result varies slightly between analysed outcomes, but in general it holds for all analysed indicators of economic situation: both objective and subjective ones: unemployment incidence increases the probability to live in a materially deprived, and financially disadvantaged household. It is noteworthy that we also control in this regression for basic socio-economic characteristics of the person, and his/her household. The experience of unemployment thus has detrimental effects even while age, gender, education and household work intensity are accounted for. It is important to mention that those factors are also associated with the financial situation. Being female, or having no more than lower secondary education also increases the probability of being at higher risk of poverty, living in materially deprived households, and having more problems in making ends meet. Protective factors include age, tertiary education, and proportion of working members of household in the number of household members eligible for work (excluding students, disabled, retired etc.). As we could expect, older youth, youth with tertiary education, and living in a household with more working members are less likely to live in financially, and materially deprived household. Interestingly the indicator of household work intensity has the on average much higher impact on financial situation of the household than the labour market status of the young person. This is an important finding, which indicates that we cannot assess the association between an individual's labour market status and poverty in isolation from his/ her household and living arrangements.

**TABLE I.II: RESULTS OF A LOGIT REGRESSION (AVERAGE MARGINAL EFFECTS): UNEMPLOYMENT IN THE FIRST WAVE AND SOCIO-ECONOMIC SITUATION IN THE LAST WAVE.**

VARIABLES	Model 1 At the risk of poverty	Model 2 Material deprivation	Model 3 Difficulty in making ends meet
<b>Unemployed in the first wave</b>	<b>0.061</b> <b>(0.009)**</b>	<b>0.039</b> <b>(0.007)**</b>	<b>0.059</b> <b>(0.011)**</b>
Female	0.015 (0.006)*	0.021 (0.005)**	0.034 (0.008)**
Age	-0.004 (0.001)**	-0.002 (0.001)**	-0.004 (0.001)**
Lower secondary education	0.070 (0.007)**	0.070 (0.006)**	0.107 (0.010)**
Tertiary education	-0.097 (0.009)**	-0.071 (0.008)**	-0.143 (0.009)**
Living with parents	-0.039 (0.007)**	0.001 (0.006)	0.001 (0.009)
Household's work intensity	-0.207 (0.010)**	-0.119 (0.009)**	-0.230 (0.013)**
Observations	12.999	12.999	12.999

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. Standard errors in parentheses, \*  $p < 0.05$ ; \*\*  $p < 0.01$

As mentioned in the introduction, we are also interested if there is any cumulative impact of unemployment duration, so in the next specification we are checking if the length of out of work experience is related to the subsequent economic situation of youth's household.

Descriptive statistics are in line with our expectations, the longer unemployment experience of youth, the higher chances to live in poorer households, with lower material equipment and higher subjective poverty.

This evidence is also present, while we control for specific individual and household characteristics, and country specific characteristics in the logit regression (table below). The detrimental effect of labour market exclusion is the smallest for those who experienced up to six months of unemployment between 2011 and 2014 in comparison to those who work for the entire period. Interestingly such a short unemployment period is not associated with a higher probability of living in a materially deprived household, while longer incidences of unemployment are. The effect is the strongest for those who remain unemployed for more than 24 months: on average the probability of being at the risk of poverty is 10% higher for a respondent, who spent more than 24 months in unemployment than for someone who worked for the entire period of four years.

The size and direction of coefficients for the control variables are very similar to those in the previous specification, so that they were excluded from the table for the clarity of the presentation.

**TABLE II.I: DESCRIPTIVE STATISTICS (IN %)**

Length of unemployment	At the risk of poverty	Material deprivation	Difficulty in making ends meet
No incidence	12.70	7.90	27.10
1-6 months	15.21	10.53	34.77
7-12 months	25.04	16.23	45.45
13-24 months	32.58	20.79	52.96
25-48 months	41.55	28.85	63.70
Total	18.11	11.71	34.66

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia.

**TABLE II.II: RESULTS OF A LOGIT REGRESSION (AVERAGE MARGINAL EFFECTS): LENGTH OF UNEMPLOYMENT IN MONTHS AND SOCIO-ECONOMIC SITUATION IN THE LAST WAVE.**

VARIABLES	At the risk of poverty	Material deprivation	Difficulty in making ends meet
Unemployed for 1-6 months	0.028 (0.010)**	0.016 (0.009)	0.039 (0.013)**
Unemployed for 7-12 months	0.046 (0.011)**	0.025 (0.009)**	0.044 (0.013)**
Unemployed for 13-24 months	0.101 (0.012)**	0.057 (0.009)**	0.084 (0.014)**
Unemployed for >24 months	0.107 (0.013)**	0.078 (0.011)**	0.108 (0.016)**
Observations	12.999	12.999	12.999

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. Comparison category for unemployed: never unemployed. We also control for gender, age, education, household composition and household work intensity. Standard errors in parentheses, \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

Our results indicate that unemployment of youth is associated with medium-term persistence of their socio-economic situation. Incidence of unemployment at the age 18-29 translates into a less favourable financial situation in the subsequent years, i.e. higher risk of living in poor household, a higher probability of living in materially deprived household and higher subjective poverty. Yet not all of unemployed young people are affected in the same way. We know from previous empirical studies that there are certain groups that are more likely to experience financial consequences of labour market exclusion (Gregg and Tominey 2005).



We thus decided to extend our analysis and check if there is any association between age at which the unemployment incidence happened and the subsequent socio-economic outcomes. To the first model reported in Table I.II, we thus have added an interaction effect between age and the unemployment indicator. According to our results, age is a protecting factor against poverty, and the older the youth person (within the age group 18-29) the lower the chance to live in the poor or materially deprived household. However, as shown in the table below the interaction term between age and incidence of unemployment indicates that the effect of being unemployed is more negative for old than for young persons. On Figure I, which shows the marginal effect of being unemployed over different ages, we see an upward trend in the change in probability for a change in unemployment status as age increases. One possible explanation is that unemployment for school leavers might be just a temporary occurrence related to finding the best match in the labour market, while unemployment for older youth can be more of a permanent phenomenon, which -as we know - leads to more cumulative disadvantages.

**TABLE III: RISK OF POVERTY WHILE BEING UNEMPLOYED IN THE FIRST WAVE INTER-ACTED WITH AGE (LOGIT COEFFICIENTS).**

<b>VARIABLES</b>	<b>At risk of poverty</b>
Unemployed in the first wave	-0.476 (0.419)
Age	-0.051** (0.011)
Unemployed in first wave X Age	0.042* (0.018)
Observations	12.999

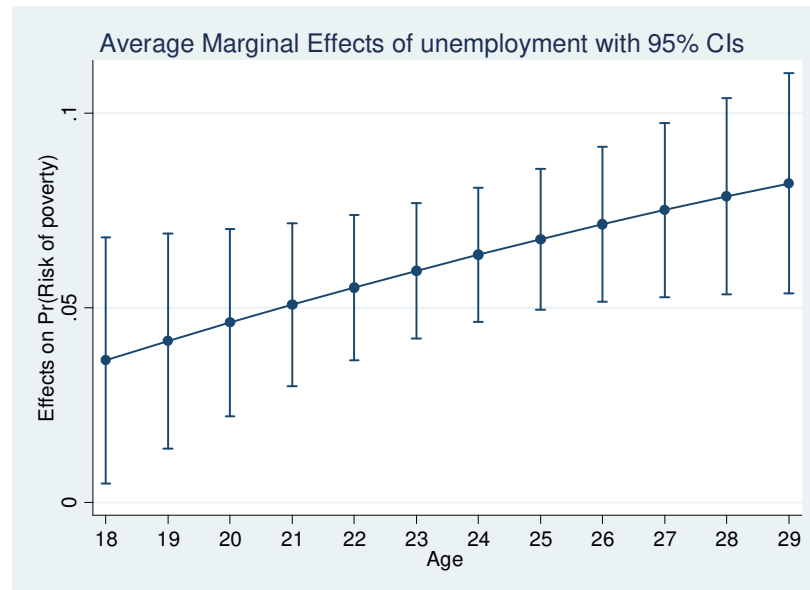
Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. We also control for gender, age, education, household composition and household work intensity. Standard errors in parentheses, \*  $p < 0.05$ ; \*\*  $p < 0.01$ .

We also checked if the financial situation of those who have no previous working experience is affected in the same way by unemployment spells, as compared to those who lost a job. Similar to the previous specification, we added an interaction term between unemployment experience in the first way and no previous employment records in the same time. However both: The interaction term, and the indicator of previous employment records are statistically insignificant, so that we decided not to present the results, as no conclusions can be drawn.

In the line with previous empirical studies we also examine if the effect of unemployment on risk of poverty is the same for people with lower and higher educational attainment. We also tested a similar specification as above with interaction terms for different educational groups, but the coefficients of all interaction terms are statistically insignificant, so again no conclusive and clear evidence can be shown.



FIGURE I: MARGINAL EFFECT OF BEING UNEMPLOYED OVER DIFFERENT AGE



Sources: EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016 (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. Marginal effects from the regression presented in the Table III.

### Fixed effect models

One of the main drawbacks of our medium-term analysis presented above is the potential endogeneity issue. While analysing our outcomes in four years after the occurrence of unemployment we are able to avoid a problem of recursive causality, although there remains an issue of omitted variables. If there are certain personal characteristics which are not available in our dataset, but we believe are related to the socio-economic situation and our outcomes: poverty, material deprivation and subjective financial situation indicators, then our estimates can be biased, and might not show the causality but only the association. One of the possible ways to overcome this endogeneity problem is the use of fixed effect estimators, which is presented below (individual fixed effect). Yet fixed effect models have also side effects, as they cannot be used to examine time-invariant causes of the dependent variables (such as gender, education, place of living), being designed to study the cause of changes within a person even while we expect that differences between people (in regards to education and gender) influence our dependent variables: poverty, and material status.

We thus use this estimator as additional evidence to those presented above. As we are interested in the medium-term effect, we use the FE estimator to compare the situation at the beginning of the study in 2011 ( $t=0$ ) and at the end in 2014 ( $t=4$ ). The sample size diminished, as only those individuals in which the change of outcome occurred were taken into account. Our dependent variables is defined as the poverty status in  $t$  (Model 1), material deprivation in  $t$  (Model 2) and an indicator of having difficulty in making ends meet in  $t$  (Model 3). Our independent variables are the personal/ household characteristics at  $t$ . Our main independent variables – unemployment - is defined by labour market





status at  $t$ , so it varies between  $t=0$  and  $t=4$ , and depicts the labour market situation of an individual at  $t$ .

**TABLE IV: LOGIT FIXED EFFECT: BETWEEN (T0) AND (T+4)**

	<b>At the risk of poverty</b>	<b>Material deprivation</b>	<b>Difficulty in making ends meet</b>
<b>Unemployed</b>	<b>0.131</b> <b>(0.126)</b>	<b>0.267*</b> <b>(0.131)</b>	<b>0.511***</b> <b>(0.099)</b>
Living with parents	-2.039*** (0.344)	0.650 (0.449)	-0.299 (0.269)
Household work intensity	-2.990*** (0.206)	-1.307*** (0.207)	-1.042*** (0.142)
Household size	0.136 (0.072)	-0.129 (0.080)	0.051 (0.056)
Log likelihood	-927.864	-812.425	-1872.450
N	3288	2512	5570

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. Standard errors in parentheses, \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Results presented above only partially confirm our previous findings. We do not see the statistically significant impact of the change of unemployment status on the change of poverty status. On the contrary, in the case of two other specifications, there is a statistically significant impact of youth unemployment on material deprivation and financial distress of his/her household. The direction of this association is the same as in our previous results: the unemployed are having a higher probability of living in materially deprived, and financially distressed households. Among other time-variant explanatory variables, only household work intensity is a statistically significant factor associated with lower probability of poverty, material deprivation, and subjective evaluation of household financial situation.

**Summary:** Our findings confirm the scaring medium-term effect of unemployment experienced by youth on their subsequent economic situation. Young people who experienced unemployment at the age 18-29 are more likely in four years' time to be at the risk of poverty, to live in a materially deprived household, and to live in a household which reports more financial distress, as compared those who worked.

Moreover, for the older youth, the detrimental effect of unemployment is stronger, as they are more likely to be at the risk of poverty, in both objective and subjective terms. The impact of unemployment experience on subsequent financial situation also varies depending on the length of unemployment spells. A longer period of unemployment in youth translates into a higher probability of being poor, to live in a materially deprived household and to express greater household financial distress. We haven't found significant evidence that the unemployment for schools leavers without previous job experience leads to worst financial situation compared to those who worked and lost the job. Neither had we found evidence that unemployment among different educational groups leads to



different outcomes. While controlling for personal unobservable characteristics in a person fixed effect model, we found that unemployment only deteriorates the material situation, and perceived difficulty to making end meet whilst there was no impact on objective poverty, depicted by the poverty line.

Our findings suggest that experience and length of unemployment at young age have considerable implications for future precarious economic situation; the financial consequences of unemployment persist even after four years of its occurrence. This finding has considerable importance for policy-makers, requiring policy attention and more intensive inclusive policy for youth excluded from the labour market.

### 3. Labour market insecurity and material situation of youth in the EU-24

There is an ongoing discussion on whether temporary employment of young people is rather their first step into the labour market, which gives them more flexibility to find a perfect job match, and to gain first experiences, or it is a potential trap, translating into future disadvantages (Booth et al. 2002, Scherer 2009; see also the discussion in the introduction chapter). Previous empirical studies provide inconclusive findings. Gash and McGinnity (2007) - using the European Community Household Panel - found that especially in France, temporary job holders earn less and have a higher risk of becoming unemployed. Similar conclusions were drawn by Amuedo-Dorantes and Serrano-Padial for Spain (2005). Holding a fixed term contract in Spain is associated with an increased risk of poverty for both men and women. While for Germany and the UK, Gebel (2010) shows that country labour market regulations are important mediators of the future career path of youth in temporary jobs, an essential difference between Germany and the UK exists, indicating that in Germany temporary workers - while starting a job – experience a higher wage penalty in comparison to permanent workers, while in the UK these disadvantages are smaller. However according to these findings, most of the disadvantages of fixed-term contracts seem to vanish within a few years after the labour market entry. To our knowledge, the association between holding a temporary job in youth and the prospective financial situation later in life was not explicitly studied before. Therefore, in our approach we try to fill this gap, investigating in this part:

- **whether those with temporary employment are economically disadvantaged after four years of having a fixed term contract in comparison to those having a permanent position, and**
- **whether young temporary workers with different educational attainment experience the same socio-economic outcomes in the medium-term?**

As in the previous part, we look at indicators of subjective and objective poverty and material deprivation on the household level, using EU-SILC longitudinal data.

We start with descriptive statistics, comparing the incidence of poverty among the group of workers with temporary job to the permanent jobholders. Those who have fixed-term contracts at the beginning of the study are more likely to live in a household at the risk of poverty, to be materially deprived or assessing the financial capacity of the household



as difficult both in 2011 and also in 2014. However the gap in poverty indicators between temporary and permanent workers is declining over time.

**TABLE V.I: DESCRIPTIVE STATISTICS (IN %)**

	At the risk of poverty		Material deprivation		Difficulty in making ends meet	
	2011	2014	2011	2014	2011	2014
Temporary at 2011	15.87	15.07	10.29	8.87	29.76	31.01
Permanent at 2011	6.84	8.57	8.12	6.91	25.30	26.02
Difference between temporary and permanent	9.03	6.5	2.17	1.96	4.46	4.99

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia.

To control also for certain personal characteristics, as well as country specific features we apply a logit regression, in which our dependent variable is equal to one if a young person lives in a household at the risk of poverty (first specification), a materially deprived household (second specification) or in a household which difficulties in making ends meet (third specification). Our main independent variable of interest is binary and equal to one if a young person had a fixed-term job in 2011, and zero if he or she had a permanent position.

**TABLE V.II: TYPE OF JOB IN THE FIRST WAVE AND MATERIAL SITUATION IN THE LAST WAVE (AVERAGE MARGINAL EFFECTS).**

	At the risk of poverty	Material deprivation	Difficulty in making ends meet
<b>Temporary contract at t=1</b>	0.034 (0.007)**	0.007 (0.006)	0.010 (0.010)
Female	0.018 (0.006)**	0.023 (0.005)**	0.038 (0.009)**
Age	-0.002 (0.001)*	-0.001 (0.001)	-0.003 (0.002)
Lower secondary education	0.062 (0.011)**	0.078 (0.011)**	0.114 (0.014)**
Tertiary education	-0.060 (0.006)**	-0.047 (0.005)**	-0.134 (0.009)**
Living with parents	-0.017 (0.007)*	0.009 (0.006)	0.002 (0.010)
Household work intensity	-0.155 (0.010)**	-0.094 (0.009)**	-0.226 (0.016)**
Observations	9,719	9,719	9,719

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. Standard errors in parentheses, \*  $p < 0.05$ ; \*\*  $p < 0.01$

According to our results, the detrimental effect of temporary jobs (while controlling for certain personal, household and country features) exists only in the first specification,



which measures the risk of being under the poverty line. Four years after the incidence of a temporary job, those who held it have on average a 5% higher probability of being at the risk of poverty, than their counterparts with a permanent job. However, no association is found with regards to material deprivation, and the subjective indicator relating to the economic situation of the household.

As some previous empirical studies indicate, temporary jobs are very heterogeneous. Within this group, we can find jobs offered by temporary agents in low-paid and low-skilled positions, as well as well-paid temporary contracts for a probation period in upper labour market segments. Due to the lack of data availability, we cannot make such distinctions directly, but we can still verify if the young people with different educational attainment are affected by job insecurity in the same way. Thus we introduce to our first model an interaction term between temporary job incidence and the indicator of having no more than lower secondary education. Results of this estimation are presented in the table and graph below, where we control for the same characteristics as before, using a logit specification.

**TABLE VI: INTERACTION BETWEEN INSECURE JOB IN THE FIRST WAVE AND LOWER SECONDARY EDUCATION (LOGIT COEFFICIENTS).**

VARIABLES	At risk of poverty
Temporary contract at t=1	0.472 (0.106) **
Lower secondary education	0.532 (0.110) **
Tertiary education	-0.765 (0.118) **
Temporary contract x lower secondary education	0.075 (0.186)
Temporary contract x tertiary education	-0.436 (0.217) *
Observations	9,719

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. We also control for gender, age, education, household composition and household work intensity. Standard errors in parentheses, \*  $p < 0.05$ ; \*\*  $p < 0.01$ . Figure II: Marginal effect of having temporary job over different level of education

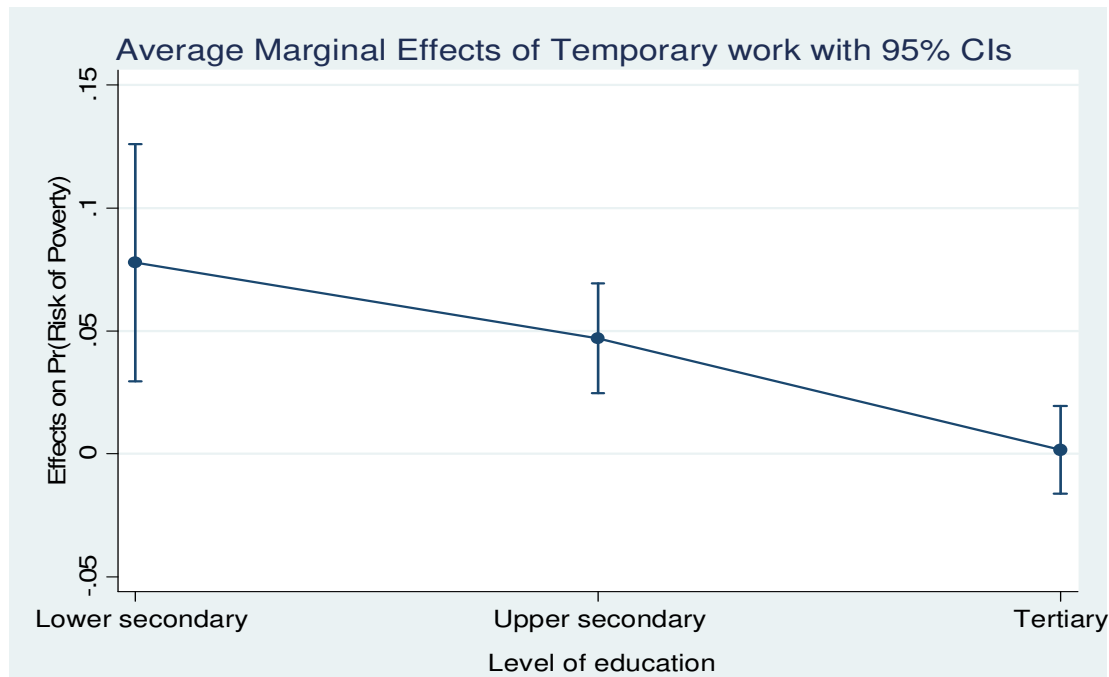
According to the results presented above, a young person with university degree who has a temporary contract has on average almost the same risk of poverty as compared to an average young person with a permanent contract. The detrimental effect of holding a temporary job<sup>3</sup> is counterbalanced by the protective impact of holding a university degree for those with tertiary level of education. This finding is in line with the previous empirical studies, indicating that there is labour market segmentation with regards to

<sup>3</sup> A note for the proper understanding of the association: the coefficient is positive, but our outcome is undesirable – so the positive value is associated with higher probability of being at risk of poverty, while negative value is associated with lower risk of poverty.



fixed-term contracts, and individual heterogeneity is essential in sorting the workers into the contracts (Berton et al. 2007). The detrimental effect of temporary employment is especially strong for those with lower skills, and low levels of education, while the financial situation of young people with university degree is not affected by their type of contract to the same extent.

**FIGURE II: MARGINAL EFFECT OF HAVING TEMPORARY JOB OVER DIFFERENT LEVEL OF EDUCATION**



**Summary:** Our results do not confirm the existence of a large material disadvantage for holders of temporary jobs versus those holding the permanent one. Neither had we found that temporary job holders are in a worse subjective financial situation as compared to those with permanent employment. Moreover, we haven't found no such association also in the fixed term effect models, not presented here due to lack of statistically significant results.

Only one of the indicators of material situation (risk of poverty) indicates in both descriptive statistics and the logistic model indicates that those who have temporary job at 2011 have higher probability to be socio-economically disadvantaged in 2014.

Yet, our results confirm that the impact of temporary contracts on career of youth varies depending on their educational achievements. For those with higher skills, temporary jobs seem to be more a stepping stone than a trap, being associated with similar financial gratifications as in permanent contract. This finding supports the previous evidence of the heterogeneity of temporary employment (Berton et al. 2007). Some authors distinguish between workers who are directly hired by the company and those whose employment arrangements are market mediated by a third agent. Furthermore, European countries have different employment regulations and diverse levels of protections for tempo-



rary employment, which could also result in the lack of the clear EU pattern in our analysis of the medium-term economic consequences of labour market insecurity, depicted by temporary job contracts (see the subsequent study by Strandh, in this volume).

## Appendix

**Table I.I: Descriptive statistics by country: poverty indicators for 2011 and 2014 by unemployment status in 2011**

		N	At the risk of poverty (%)		Material deprivation (%)		Difficulty in making ends meet (%)	
			2011	2014	2011	2014	2011	2014
AT	EMPL	421	14,25	10,21	2,14	1,66	11,16	13,30
	UNEMPL	<i>*b</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
BE	EMPL	390	6,41	4,62	4,36	3,08	13,85	12,56
	UNEMPL	56	35,71	23,21	19,64	12,50	39,29	39,29
BG	EMPL	361	13,30	14,68	33,24	22,16	52,08	50,97
	UNEMPL	114	36,84	35,09	69,30	47,37	81,58	78,07
CY	EMPL	484	10,33	11,98	14,88	19,01	51,45	64,67
	UNEMPL	144	16,67	19,44	22,22	26,39	70,14	79,17
CZ	EMPL	586	5,63	1,88	5,63	3,41	23,21	28,67
	UNEMPL	83	25,30	14,46	15,66	16,87	49,40	46,99
EE	EMPL	461	9,98	10,63	8,24	3,69	16,27	11,28
	UNEMPL	97	38,14	30,93	19,59	15,46	45,36	42,27
EL	EMPL	219	17,81	21,46	16,44	15,98	66,21	79,00
	UNEMPL	211	46,45	43,13	35,07	35,07	74,41	89,10
ES	EMPL	615	13,17	20,65	3,58	4,88	27,64	37,89
	UNEMPL	361	37,12	42,66	11,91	14,96	48,20	54,29
FI	EMPL	751	9,99	9,72	2,13	1,33	2,66	3,73
	UNEMPL	75	41,33	37,33	14,67	10,67	22,67	18,67
FR	EMPL	1380	9,93	10,43	2,83	2,25	13,33	99,36
	UNEMPL	221	28,51	29,41	12,22	8,60	35,75	36,20
HU	EMPL	811	7,89	11,22	21,82	19,98	52,90	45,01
	UNEMPL	249	37,75	38,96	52,21	47,39	79,52	70,28
IE	EMPL	126	5,56	7,94	4,76	4,76	29,37	33,33
	UNEMPL	64	35,94	35,94	21,88	15,63	54,69	45,31
IT	EMPL	1027	12,07	12,85	7,79	6,52	31,84	33,59
	UNEMPL	341	29,91	30,21	19,65	16,42	55,13	50,73
LT	EMPL	259	10,42	8,88	13,51	10,04	23,94	26,25
	UNEMPL	82	39,02	32,93	34,15	28,05	47,56	50,00
LU	EMPL	318	9,75	11,01	0,00	0,94	7,23	9,12
	UNEMPL	<i>*b</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>
LV	EMPL	447	9,62	13,20	19,91	10,51	44,52	38,26
	UNEMPL	98	35,71	39,80	45,92	32,65	74,49	64,29



*Table I.I continued*

MT	EMPL	577	4,85	7,80	9,01	6,93	33,10	28,60
	UNEMPL	*b	n/a	n/a	n/a	n/a	n/a	n/a
NL	EMPL	700	4,86	3,86	0,57	0,57	6,00	7,43
	UNEMPL	*b	n/a	n/a	n/a	n/a	n/a	n/a
PL	EMPL	1268	12,85	12,78	11,51	8,60	28,23	24,76
	UNEMPL	237	35,44	30,38	27,85	20,25	56,12	47,68
PT	EMPL	427	12,65	13,58	7,26	9,84	43,56	44,73
	UNEMPL	150	40,00	43,33	21,33	23,33	63,33	65,33
RO	EMPL	521	24,95	21,11	27,26	26,49	40,31	42,42
	UNEMPL	55	50,91	38,18	45,45	38,18	67,27	70,91
SE	EMPL	318	10,06	12,89	0,00	0,31	2,52	3,46
	UNEMPL	56	16,07	25,00	7,14	3,57	14,29	16,07
SI	EMPL	678	4,42	9,59	3,24	6,05	31,27	27,43
	UNEMPL	189	18,52	23,81	12,70	13,23	51,85	42,33
UK	EMPL	562	7,83	9,25	7,65	5,52	17,97	18,33
	UNEMPL	58	36,21	24,14	25,86	27,59	41,38	32,76

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014). Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia. EMPL: employed in 2011, UNEMPL: unemployed in 2011; \* b: '20-49' observations; n/a: results are not published due to small number of cases below reliability limits.

**Table I.II: Descriptive statistics by country: poverty indicators for 2011 and 2014 by type of contract in 2011**

		N	At the risk of poverty (%)		Material deprivation (%)		Difficulty in making ends meet (%)	
			2011	2014	2011	2014	2011	2014
AT	PERM	359	13,09	8,64	2,51	1,95	10,58	13,09
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
BE	PERM	278	5,04	2,88	2,88	1,08	10,79	11,15
	TEMP	84	8,33	5,95	10,71	9,52	23,81	19,05
BG	PERM	290	9,31	13,79	31,38	19,66	48,62	48,28
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
CY	PERM	357	10,08	11,48	17,09	21,29	55,46	68,91
	TEMP	101	11,88	13,86	5,94	9,90	34,65	49,50
CZ	PERM	409	2,93	1,96	4,89	2,69	21,27	28,36
	TEMP	132	14,39	1,52	9,09	5,30	31,06	33,33
EE	PERM	421	9,26	8,79	7,60	3,33	15,91	10,69
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
EL	PERM	131	16,79	22,90	16,79	16,03	70,23	80,92
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
ES	PERM	341	7,33	16,72	3,52	3,81	23,75	35,48
	TEMP	236	19,49	25,42	3,81	6,36	33,05	42,80
FI	PERM	550	6,73	7,45	1,64	1,09	2,73	3,09



Table I.II continued

	TEMP	132	21,21	17,42	4,55	2,27	2,27	6,06
FR	PERM	870	6,44	7,01	2,76	1,72	12,07	14,83
	TEMP	430	16,28	15,81	3,26	3,49	16,05	20,47
HU	PERM	659	5,92	9,86	19,42	18,36	51,14	42,19
	TEMP	132	16,67	17,42	36,36	29,55	65,15	59,85
IE	PERM	103	3,88	6,80	4,85	4,85	28,16	31,07
	TEMP	*a	n/a	n/a	n/a	n/a	n/a	n/a
IT	PERM	555	8,65	10,63	6,85	7,21	32,43	36,22
	TEMP	271	14,76	15,50	11,07	5,54	35,79	33,58
LT	PERM	226	10,62	7,08	13,72	10,18	23,01	26,55
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
LU	PERM	225	8,00	9,33	0,00	0,44	6,67	7,11
	TEMP	80	16,25	16,25	0,00	2,50	7,50	13,75
LV	PERM	399	8,77	12,78	18,80	11,28	43,11	39,10
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
MT	PERM	500	4,00	7,80	8,60	6,60	32,60	29,40
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
NL	PERM	582	3,44	3,26	0,69	0,69	5,15	7,73
	TEMP	65	13,85	10,77	0,00	n/a	9,23	6,15
PL	PERM	499	5,61	8,22	8,22	5,81	24,85	19,44
	TEMP	618	14,89	12,62	13,75	11,33	31,55	30,74
PT	PERM	233	6,87	9,01	6,87	8,15	45,06	44,21
	TEMP	171	18,13	15,79	8,77	12,28	42,11	46,20
RO	PERM	352	6,82	4,83	16,48	18,47	31,82	35,51
	TEMP	*a	n/a	n/a	n/a	n/a	n/a	n/a
SE	PERM	266	8,65	10,15	0,00	n/a	2,26	3,01
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a
SI	PERM	555	1,80	7,21	3,24	5,59	31,71	26,67
	TEMP	72	12,50	18,06	4,17	9,72	31,94	29,17
UK	PERM	488	7,38	10,25	7,79	5,74	17,62	19,67
	TEMP	*b	n/a	n/a	n/a	n/a	n/a	n/a

Sources: *EU-SILC LONGITUDINAL UDB 2014 – version 4 of August 2016* (years: 2011-2014).  
 Based on the EU-24, excluded countries: Germany, Denmark, Slovakia, and Croatia.  
 PERM: permanent contract in 2011, TEMP: temporary contract in 2011; \*a: less than 20 observations, \* b: '20-49' observations; n/a: results are not published due to small number of cases below reliability limits.





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# III Results from EU-SILC Longitudinal Analysis: The relationship between Labour Law, Education Systems and the Transition Probability from Temporary Employment to Permanent Employment among Youth

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## 1. Introduction

Insecure employment conditions in the form of temporary contracts are more common among youths than among adults. The proportion of youths in temporary contracts have also been on the increase long before the labour market challenges represented by the great recession. In 2012, the average proportion of youths in temporary contracts across the EU was 42% (Eurofound 2013). That youth have a higher incidence of temporary jobs than adults does not in itself have to be problematic. The route from leaving school to being established with a regular contract on the labour market could be a process most often passing a temporary contract. Temporary contracts could fill functions of necessary try-out periods for both employers and youths allowing for better matching from the perspective of both (see for instance Belous 1989, Polivka and Nardone 1989).

The increase in temporary contracts over time has however given rise to an academic discussion about if they do fill this kind of stepping stone function for the youths, or if they (increasingly) represent dead ends. In the empirical literature, findings from the U.S generally have found temporary employment to be a gateway to permanent contracts, while findings from Europe have been weaker (Bruno et al. 2012). Research has however found a great deal of variation in the prevalence of temporary contracts among youths across Europe (see for instance Gebel and Baranowska 2010) and single- or few- country studies have found differing transition rates in different countries (see for instance Scherer 2004).

This European variation has resulted in a substantial comparative research interest in institutional level factors that could explain the differences, where in particular the role of



differences in labour market regimes have been investigated while the role of the educational systems has received little interest. The research that has been conducted has also mainly used cross-sectional comparative data or repeated cross-sectional data, while comparative studies of actual transitions have been uncommon.

The aim of this chapter is building on previous research to investigate the following main research question:

- Are the national employment protection legislation and education system related to the probability of transiting from temporary employment to permanent employment among youth in Europe?

## 2. Previous research

As noted above, the main explanations for the differences across Europe have been sought in differences in labour market regimes, where in particular differences in Employment Protection Legislation (hereafter: EPL) has been singled out. Theoretically, this builds on the assumption that the relationship can be understood from the perspective of micro-level behaviour of firms and employees being shaped in relation to institutions (Müller and Gangl 2003). In relation to EPL in particular, stricter EPL leads to higher potential costs of hiring and firing for employers (Bentolila and Bertola 1990). This should lead to a higher incidence of temporary jobs among in particular youths through two main mechanisms. Firstly, it should lead to higher proportions of temporary contracts because of an increased need for firms to ensure numerical flexibility in relation to market demands. Secondly, the higher costs of hiring and firing should increase the need for, and prolong, temporary contracts among youths as firms need stronger signals of productivity as later termination of contracts due to low productivity is more difficult (see for instance Polavieja 2003, Baranowska and Gebel 2010). Youth should here be particularly sensitive as their productivity is relatively unknown to potential employers as compared with workers with more experience (Kahn 2007).

It is however not sufficient to only analyse the overall strictness of EPL. Theoretically it is important to distinguish between EPL for regular (EPL-regular) contracts and EPL for temporary contracts (EPL-temporary) as they may have different implications for youth labour market outcomes (Gebel and Giesecke 2016). While the strictness of EPL for regular contracts should be related to higher prevalence of temporary contracts through the mechanism discussed above, the strictness of EPL-temporary could actually be expected to have the opposite effect. Given that EPL-temporary is largely related to limitations on the use of temporary contracts, strict EPL-temporary should by making the use of temporary contracts harder for employers actually lower the incidence of temporary contracts. It has also become widely accepted that the strictness of the two types of EPL should be considered separately, but that the central factor might be the gap between the two. In a situation where EPL-regular is very strict as compared to EPL-temporary there will theoretically be an added incentive for firms to use temporary contracts to regulate numerical flexibility in relation to the market (Passaretta and Wolbers 2016).

The comparative empirical literature dealing with the relationship between EPL and temporary employment is mainly built on cross sectional or repeated cross-sectional designs that look at the risk for youth of being in temporary employment. This research mainly



supports the theoretical assumptions: Less strictness in EPL-temporary has been found to be related to higher relative temporary employment rates while less strictness in EPL-regular has been found to be related to lower temporary employment rates (see for instance de Lange et al. 2014). These conclusions have also been supported in analyses of changes in EPL (Gebel and Giesecke 2016). Findings on the relationship between the gap and temporary employment among youth have been less clear but appear to conform to theory. Whereas Baranowska and Gebel (2010) find no relationship between the EPL-temporary and EPL-regular gap in a cross-sectional analysis of youth temporary employment rates, Passaretta and Wolbers (2016) in an analyses of retrospective transitions across countries and time find it to be of importance for transitions from temporary employment to permanent employment or unemployment.

While, as can be seen above, there has been a great deal of interest in the relationship between the strictness of EPL and temporary contracts, there has been relatively little interest in the role of educational systems for the incidence of temporary employment among youth. This is relatively surprising given that the educational system has been found to be a central factor for the probabilities for and patterns of school-to-work transitions. Findings indicate that in particular the vocational specificity of upper secondary education is of importance, where labour market integration of youth run more smoothly in countries where vocational education is more clearly tied to the labour market, something that theoretically is assumed to be related to clearer signals to firms about the skill set of young vocationally educated job seekers (see for instance Müller and Gangl 2003, Breen 2005, Wolbers 2007, de Lange et al. 2014, and the discussion in the introduction chapter of this report).

There is good reason to expect that the theoretical assumptions about the importance of signalling effects from the educational system also should be of importance for the transition probabilities from temporary employment to permanent employment among youth. Lower vocational specificity in the education system should lead to higher potential costs of hiring somebody on a permanent basis. The lack of educational signalling should here increase the need for, and prolong, temporary contracts in order to properly signal the productivity of the youth to the firm. This assumption has also been supported in cross-sectional research that has looked at the relationship between vocational specificity and incidence of temporary employment, where higher vocational specificity was found to be related to lower temporary employment rates among youth (de Lange et al. 2014).

This chapter has the ambition to add to the previous research on the relationship between the institutional setting and temporary employment in three ways. Firstly, most previous studies have only looked at the relationship between the institutional setting and the risk of being in temporary employment. In this chapter, we will look at the probability for transiting from temporary employment to permanent employment. Even though it is likely that the relative rate of temporary employment is related to transition probabilities, this is in no way certain. Secondly, very few studies have looked in particular at the role of the educational system for the transition from temporary employment to permanent employment. In this chapter, this will be a central focus. Thirdly, previous research looking at the transition from school to work find that both less strict EPL and the highly vocationally specific educational systems to be of importance for smooth transitions (see for instance Müller and Gangl 2003). As these two factors do tend to be represented in



different countries, the role of the interaction between these, as noted by Breen (2005) in relation to youth unemployment rates, becomes very interesting. This not least in our case as a few country studies have suggested that the transition probabilities from temporary employment in contexts that from the perspective of labour law is similar can be very different (see for instance Scherer 2004). In this chapter, we will specifically look at how EPL and vocational specificity interact in relation to transition probabilities where the issue if EPL will have the same effect in different context is central.

### 3. Data and variables

In order to investigate this question there is firstly a need for data that is longitudinal on the individual level in order to allow the observation of transitions from temporary employment to permanent employment. Additionally there is also a need for the data to cover many European country contexts in order to allow institutional analysis.

As was the case in the analysis of the effects of LM exclusion and insecurity on the material and financial situation of youth (see the chapter by Rokicka, in this report), the longitudinal version of EU-SILC here fits both the requirements. It is a longitudinal survey harmonized within the EU, which allows the analysis of labour market transitions for the great majority of EU and associated countries.

There are a couple of data limitations in relation to the research question that will constrain the analyses. Even though the individual/household remains in the panel for four years before being replaced, the analyses will be based on one-year transitions. This means that the probability for a transition is observed for all youth who in a wave are in a temporary contract and observed the year after.

The reason for this limitation is to maximize the number of observations as the number of youths 18-29 in the data are limited, and of them only a limited number are observed in temporary employment. This need to maximize the number of observations is accentuated by the comparative focus of the research question, where the number of observation on country level is varied. Youth also have a somewhat higher incidence of leaving the panel early through leaving the parental household, which could create stronger selection effects through attrition if analysed in longer panels.

The dependent variable is type of contract - contractual status. Contractual status is in the EU-SILC measured by a dummy variable indicating whether the respondent's employment contract is of limited (temporary) or permanent (unlimited) duration. Only employees (current or former), but not self-employed, are covered. If the respondent holds more than one job, the variable refers to the main job, as defined as the job with most hours worked. It should also be noted that if the respondent is unemployed, the variable refer to his/her last main job. In addition to the central individual level variable, transition to permanent employment or not, a number of additional variables that previously have been found to be of relevance for transitions to permanent employment and that could be of importance for differential selectivity of temporary workers across countries are used as controls. These are gender, age in years and education (ISCED level). These variables are not in focus for the analyses, and thus not presented in the table, but are included in the models in order to control for possible compositional differences in the temporary employed group between countries.



For the analyses, we have utilized the EU-SILC waves 2006-2013 where all individuals who were at least 18 years old and no more than 29 years, in temporary employment and observed in two consecutive waves were included. This provided a micro level data set with observations of the one-year transition probabilities of youth from 29 EU or associated countries.

The second data requirement in relation to the research question is access to relevant comparative country level indicators of labour law and school systems. In line with previous comparative research, we use indicators developed by the OECD on the strictness of the Employment Protection Legislation (EPL). These indicators measure procedures and costs involved in the dismissing and hiring workers and in the chapter we use the indicators averaged for 2006-2013. The indicators were constructed based on statutory laws, collective bargaining agreements and case law as well as contributions from country experts (OECD 2017). The chapter uses two OECD version 1<sup>1</sup> indicators of the strictness of EPL. EPL for regular contracts and EPL for temporary contracts where both variables are coded on a scale of 0-6 (where higher scores represent stricter EPL). In addition, we also use an indicator of the difference between EPL for regular contracts and EPL for temporary contracts (higher scores representing greater strictness of regular EPL in relation to temporary EPL).

One indicator is used in order to measure features of the educational systems that potentially could be related to the transition probabilities from temporary employment to permanent employment. This indicator, vocational specificity, was picked to be in line with the findings within the school-to-work transitions literature that have emphasized these traits as important features for transitions. Vocational specificity represents the extent to which education provides students with vocational skills, and the specificity of these skills. Educational systems can provide vocational education in the form of broad vocational programs or provide students with specific skills in dual systems where education and working in firms or organizations are combined (Bol & van de Werfhorst 2013). The indicator used to measure the strength of the dual system in the chapter is based on the percentage of students in upper secondary education who are in a dual system in respective country (OECD 2007).

In addition to the indicators of labour law and school systems, one country level control variable, GDP (USD) collected from the OECD database, is included. GDP is included as a control as it theoretically could be a factor that is related both to the institutional settings of interest and the transition rates and thus could be a confounder. As the variable is not in focus for the analyses it is not presented in the table, but included in all models as controls.

A limitation of the country level approach used in the chapter is that the analyses are based on set or averaged indicators of labour law and school systems. In order to get closer to investigating causal relationships between institutional settings and transition probabilities, a fixed effects approach would have been preferable. The relative short

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<sup>1</sup> Version 1 of the indicator of strictness of employment protection incorporates less data items than the current version 3, but only version 1 was available for all years studied.



time span however limits the level of variation, for in particular the school system variables, but to some extent also of the indicators of EPL. This means that current results should be interpreted as relationships, and that future analyses should expand both micro and macro level data in order to provide further information on the relationships.

#### 4. Method

Given the hierarchical structure of the data, the research question is investigated using linear multilevel regression models, with occasions (level 1), nested in individuals (level two) nested within countries (level three). By taking the nested structure of the data into account, and introducing random intercepts to the models, multilevel techniques provide more reliable estimates of standard errors (Rabe-Hesketh & Skrondal 2012). A linear approach was chosen despite the binary nature of the dependent variable. This in order to take into account that comparisons of odds or odds ratios across different models with different covariates are problematic (Mood 2010). All analyses were however also re-made using multilevel logistic regression models and all results were found to be substantially similar.

As there are relatively few country-level observations, including all country level variables in the model at the same time would risk over-specifying the model, which could lead to volatile and imprecise results (Stegmueller 2013). For this reason, all policy variables are introduced in separate models (model 1-4) together with the country level control variable (GDP) and individual level control variables. This is followed by three models (model 5-7) where each EPL variable is added together with vocational specificity in order to investigate how they interact.

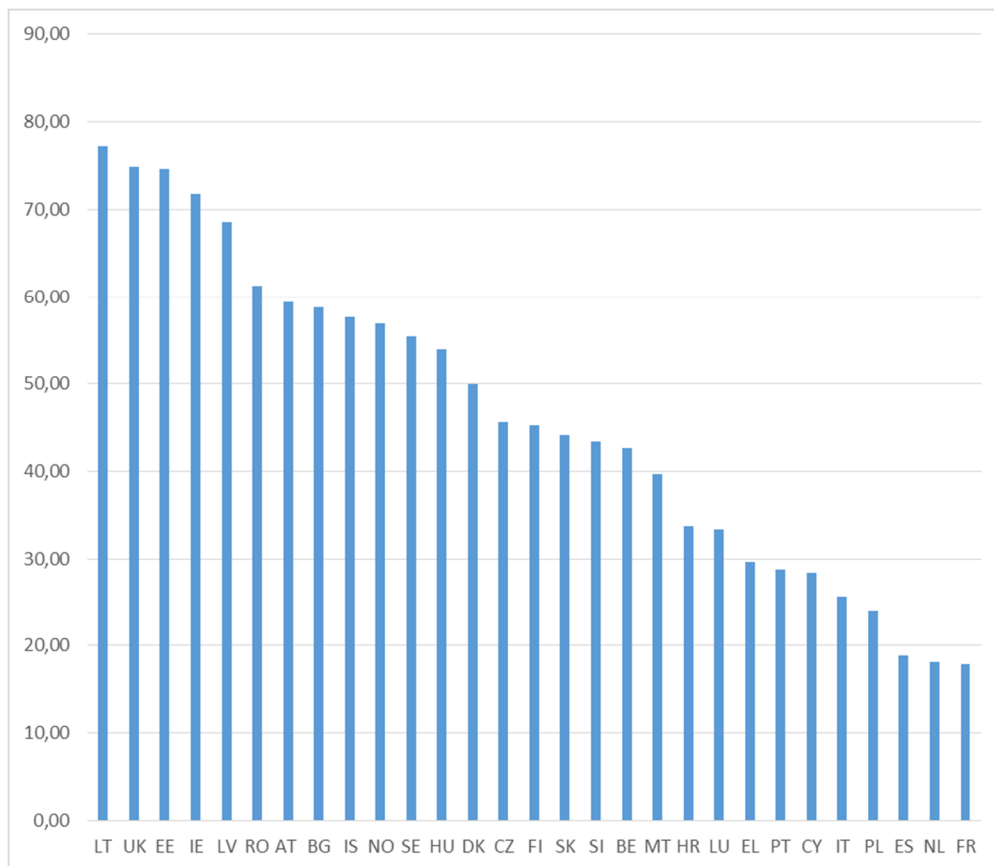




## 5. Results of the empirical analysis

Starting the analyses, we in Figure I look at the overall one-year transition rates to permanent employment for the youth observed in temporary employment in the data. In the longitudinal EU-SILC waves 2006-2013, there are 25.595 observed possible transitions nested within 18.945 individuals in 29 countries. In line with previous research on the relative rate of temporary employment among youth, Figure I shows that there is also great variation in the transition rate from temporary employment to permanent employment between European countries. The one-year transition rate varies from over 75% in Lithuania to only 18% in France, indicating that being in temporary employment means very different prospects for establishing oneself on the labour market across Europe.

**FIGURE I. ONE YEAR TRANSITION RATES FROM TEMPORARY TO PERMANENT EMPLOYMENT AMONG YOUTH IN OBSERVED COUNTRIES (AVERAGE 2006 – 2013)**



Source: EU-SILC, waves 2006-2013

It is also interesting to note in the figure that – as compared with findings on the relative rate of temporary employment among youth across Europe (see for instance Eurofound 2013) – there are similarities but there are also differences. There are countries such as Sweden, Austria and Ireland that have high or relatively high temporary unemployment rates among youth, but where the transition rates to permanent employment are also relatively high. Low rates of temporary employment does thus not per definition mean



high transition rates, and reversely, high rates of temporary employment does not automatically mean low transition rates. The relative rates of temporary employment are thus probably not always a good measure of if temporary employment functions as a stepping-stone for youth or is a dead end. In a country like Poland, which combines temporary employment rates for youth over 60% with transition probabilities slightly over 20%, this is probably the case, but in a country like Sweden, that combines temporary employment rates over 55% with transition rates of 55% this is probably less the case.

We have now seen that there is great variation between European countries in transition rates from temporary employment to permanent employment. In Table I, this analysis is taken further in multi-level analyses where the relationship between EPL and vocational specificity and the transition probability is investigated. Starting with looking at model 1, we can see that EPL-regular, in line with theory and previous research on relative rates of temporary employment, is negatively related with the transition rate. The transition rates from temporary to permanent employment is thus lower in countries with strict EPL-regular.

In model 2, we can see that the relationship between EPL-temporary and the transition probability also is negative. The transition rate is thus lower in countries with stricter EPL-temporary. This is interesting in relation to previous research, as it has pointed to stricter EPL-temporary being related to lower rates of temporary employment. EPL-temporary thus appears to have opposite relationships with the incidence of temporary employment and the probability of transferring to permanent employment. It is here possible that the relationships theoretically should be understood quite differently. While the relationship between EPL-temporary and the temporary employment rights could be understood from firms incentives for numerical flexibility, the relationship between EPL-temporary and temporary employment could perhaps rather be understood from the additional rights that stricter EPL-temporary mean for temporary employed. If the rights of temporary employed are stronger, and the durations of temporary contracts are mandated to be longer, both the need and opportunity for transition to permanent employment could be reduced.

In model 3, the final indicator of EPL, the difference between EPL-temporary and EPL-regular, shows no statistically significant relationship with the transition probability.



**TABLE I. THREE LEVEL LINEAR MULTILEVEL REGRESSION ANALYSIS OF COUNTRY LEVEL FACTORS ASSOCIATED WITH THE PROBABILITY OF MOVING FROM TEMPORARY TO PERMANENT EMPLOYMENT, 2006-2013. HAVING PERMANENT EMPLOYMENT AS DEPENDENT VARIABLE.**

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
EPL regular contracts	-0.124* (0.057)				-.212 (.078)**		
EPL temporary contracts		-.094 (.036)**				-.218 (.048)***	
Difference EPL regular – EPL temporary			.039 (.040)				.159 (.060)**
Vocational specificity				.005 (.003)(*)	.006 (.011)	-.018(.006)**	.013 (.004) **
Vocational specificity * EPL regular contracts					.000 (.005)		
Vocational specificity * EPL temporary contracts						.015 (.004)***	
Vocational specificity * Difference EPL regular – EPL temporary							-.010 (.004) **
Constant	.644 (.173)	.406 (.092)	.255 (.117)	.207 (.104)	.672 (.196)	.570 (.114)	.104 (.102)
N level 1 (occasion)	23,422	23,422	23,422	21,539	21,539	21,539	21,539
N level 2 (individual)	17,202	17,202	17,202	15,719	15,719	15,719	15,719
N level 3 (country)	23	23	23	21	21	21	21

Source: EPL data from OECD (2017), tracking data from OECD (2007), data on vocational specificity from Bol & van de Werfhorst (2013). Individual level-data from EU-SILC.

Note: All models controlled for GDP, gender, age and education (ISCED level). EPL ranging from 0 to 6; Vocational specificity ranging from 0 to 1; Age of tracking ranging from 10 to 16; Youth unemployment ranging from 0 to 100. (\*) p<0.1 \* p < 0.05 \*\* p < 0.01 \*\*\* p < 0.001. Standard errors in parenthesis.

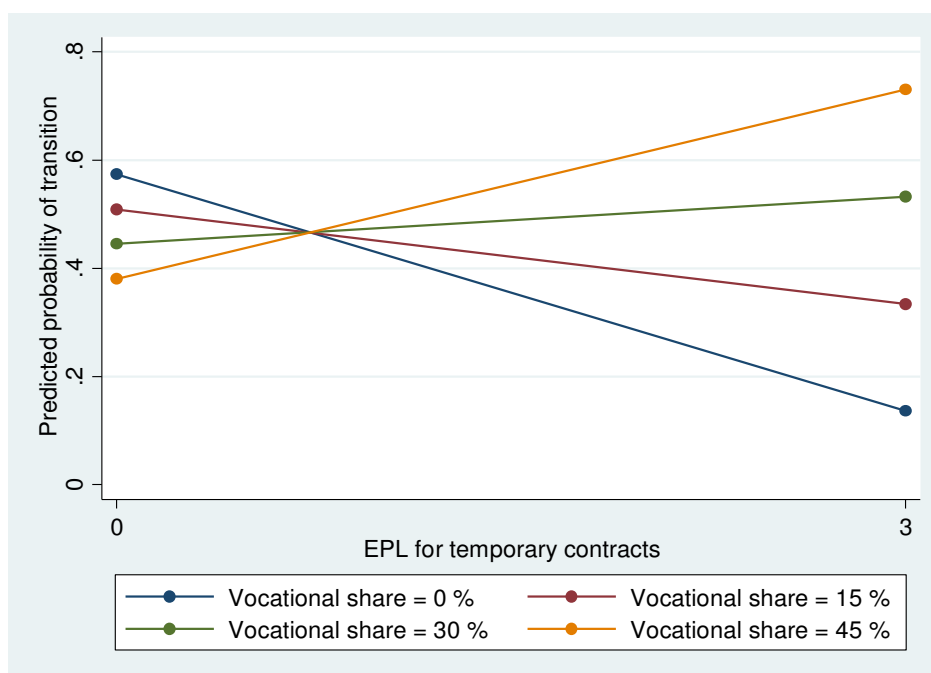


Turning to the indicators of the education we can in model 4 see that the vocational specificity has a borderline significant positive relationship with the transition probability. There is thus a tendency of countries with more vocationally specific education systems being connected with higher transition probabilities to permanent employment, which would appear to fit both the theoretical assumptions and previous findings on the rate of temporary employment.

Having looked at the direct effects of the EPL and education systems, model 5-7 show how respective EPL variable interacts with vocational specificity. Model 5 shows no significant interaction effect between EPL-regular and vocational specificity. Both model 6 and model 7, however, show strongly significant interaction effects when EPL-temporary and the difference between EPL-temporary and EPL-regular are tested. In both cases, the introduction of vocational specificity and its interaction with the EPL variable also have implications for the direct coefficients which makes the interpretation of overall effects somewhat difficult to make. For this reason, we have estimated the predicted probabilities for transitions from temporary employment to permanent employment in respective models, and present them graphically in Figure II and Figure III.

In model 6, both vocational specificity and EPL-temporary are added together with their interaction term. Doing this produces a strongly significant positive interaction effect of the two variables. The implication of this interaction effect becomes clear when looking at Figure II where the predicted probability of a transition from temporary to permanent employment at different levels of strictness of EPL-temporary has been calculated for an individual in four different hypothetical contexts of vocational specificity, where the proportion in a dual system is 0%, 15%, 30% and 45%. What can clearly be seen here is that when educational systems becomes more vocationally specific the effects of EPL-temporary (i.e. comparing high EPL-temporary with low EPL-temporary) on the transition rates changes sign from negative to positive.

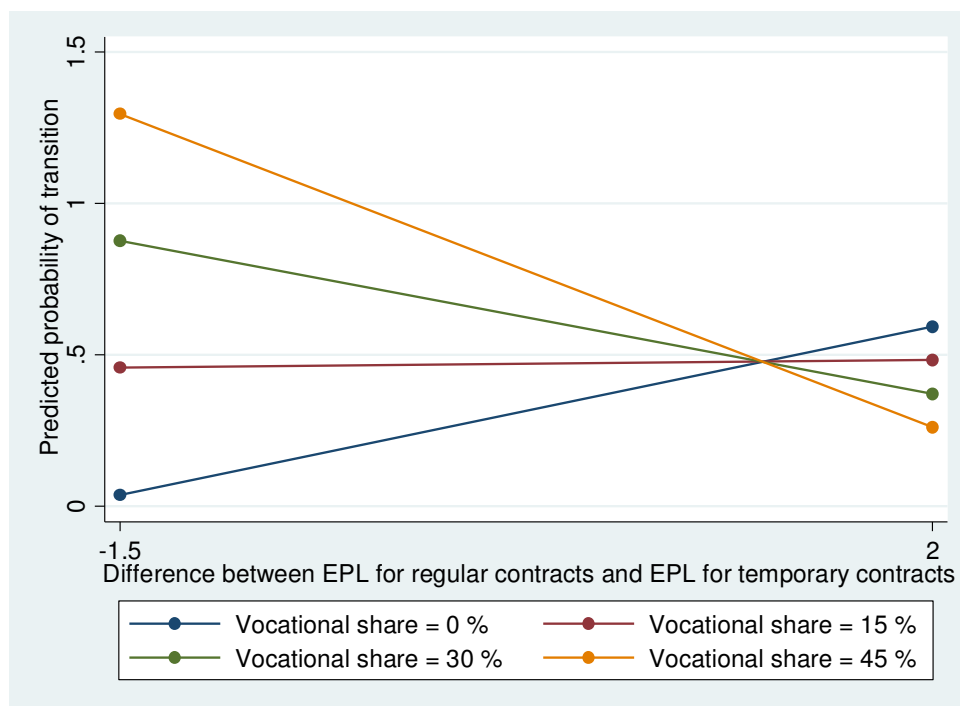
**FIGURE II. PREDICTED PROBABILITIES OF TRANSITIONS FROM TEMPORARY TO PERMANENT EMPLOYMENT. INTERACTIONS BETWEEN VOCATIONAL SPECIFICITY AND EPL FOR TEMPORARY CONTRACTS.**





In the final model, model 7, vocational specificity and the difference between EPL-temporary and EPL-regular are added together with their interaction term. This produces a significant positive direct effect of vocational specificity, as was found in the original analysis in model 4, but it also produces a strong significant positive direct effect of the difference between EPL-temporary and EPL regular. This would appear to be directly contrary to theory and previous findings, but should be related to the significant negative interaction term between the two variables. Figure III shows the implications of the relationship by looking at the predicted probabilities of transitions given the four vocational specificity levels at different levels of difference between EPL-temporary and EPL-regular. The figure shows that, as the educational system becomes more vocationally specific, the effect of the difference between EPL-temporary and EPL-regular (i.e. comparing a low degree of difference with a high degree of difference) change sign from positive to negative.

**FIGURE III. PREDICTED PROBABILITIES OF TRANSITIONS FROM TEMPORARY TO PERMANENT EMPLOYMENT. INTERACTIONS BETWEEN VOCATIONAL SPECIFICITY AND DIFFERENCE BETWEEN EPL FOR REGULAR CONTRACTS AND EPL FOR TEMPORARY CONTRACTS.**



## 6. Summary

This chapter had one main research question: Are the employment protection legislation and the education systems related to the probability of transiting from temporary employment to permanent employment among youth in Europe? The conclusion which can be drawn from the empirical analyses of longitudinal EU-SILC data is that they clearly are. The analyses to a large extent provide support to previous findings on the relationship between EPL and the relative rate of temporary employment. Yet, they also provide some new evidence on the difference between looking at temporary employment rates and the transitional probabilities from temporary employment to permanent employment, the role of the educational system for these transition probabilities and the role of the interplay between the EPL and the vocational specificity for transition probabilities.



The chapter did show that, although there is similarity between the relative rate of temporary employment and the transition probability into permanent employment, there are differences. Low rates of temporary employment do thus not per definition mean high transition rates, and reversely, high rates of temporary employment do not automatically mean low transition rates. The conclusion from this is that comparative analyses of temporary employment rates probably are less than perfect for analysing if temporary employment functions as a stepping-stone for youth or as dead ends between countries. In order to understand the role of temporary employment on the labour market, both the relative rate as well as transition probabilities need to be taken into account.

In line with previous research on relative rates of temporary employment, the chapter further showed that strong EPL-regular is related to lower transition probabilities. It, however, also found that strong EPL-temporary was related to lower transition rates, which on the surface would seem to contradict previous findings. In line with the conclusion above, this indicates that it is important to separate relative rates of temporary employment from the transition probabilities, and that EPL-temporary could theoretically have different effects on these outcomes. The findings on the role of the difference in strictness of EPL-temporary and EPL-regular showed no direct effects, but it appeared to be of importance when analysed in conjunction with vocational specificity.

The chapter did show that the signalling effects created by the vocational specificity of the education system appear to be related to the transition probabilities from temporary employment to permanent employment. This was less strong when it came to the separately analysed direct effect, but very clear when analysed in conjunction to EPL-temporary and the difference between EPL-temporary and EPL-regular.

The chapter finally showed that in order to understand the role of temporary employment on different labour markets, it appears to be important to not only analyse EPL and educational systems variables separately. There were strong interactions between two of our EPL variables, EPL-temporary and the difference between EPL-temporary and EPL-regular, and vocational specifications. This indicates that the impact of EPL and, given that, probably also changes in EPL on the transition probability from temporary employment are related to the level of vocational specificity in the education system.

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## IV Youth Unemployment and Medium-term Poverty Outcomes in the UK

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### 1. Background

Given the significant reliance of modern societies on labour income, there is a straightforward link between unemployment and poverty. Job loss has been named a key poverty trigger followed by decreases in earnings, so that the two combined account for 60% of poverty entries (Smith and Middleton 2007). Although most of the people considered poor at any single period of time will exit poverty within a relatively short period after entry, the incidence of unemployment can trigger other issues, such as mental and physical health problems, which can later lead a person back to poverty.

When considering episodes of labour market exclusion or job insecurity which happen at the very start of the career, their impact could be quite different compared to similar experiences at older ages. On the one hand, there is a number of reasons to think that their effect would be smaller: (i) episodes of unemployment while young may result in a better job match and/or further investment in human capital, both of which are likely to result in a better employment outcome, and, thus, lower risk of poverty; (ii) having occurred earlier in life, when people do not yet have their own families to take care of and are more likely to have access to parental support, youth unemployment may be less likely to trigger a vicious cycle of poverty and labour market exclusion. On the other hand, it is possible that this effect would be larger: (i) young people are living through an important forming stage, when learning by doing is critical and work habits are developed, and losing a job or becoming unemployed straight after finishing education may set a young person on a downward path leading to lower employability and/or



jobs with worse conditions, and, as a result, to lower income and poverty; (ii) losing a stable source of income leads to dissaving for some, delays the start of savings for others, or even pushes people into debt, increasing the risk of future poverty in instances of certain unexpected life events (like, child birth, injury or serious health problems, etc.). Therefore, it is not clear whether there is a more negative, or less negative, if at all, effect of youth unemployment on poverty. Moreover, it may be very short-lived, quickly dissipating with time or once the individual improves his or her labour market position. Yet, a better understanding of the relationship between youth unemployment and poverty can provide important insights into the design of relevant policies and improve their targeting.

In the UK in 2010-2013, 30% of young people (14-24 years old) were living in poverty (measured as living in a household with income below 60% of median income), which is higher than the poverty rate among any other age group. At the time of the survey, many of the young people still lived with their parents, and for them the poverty rate was 25%, while it was 43% among those living without parents (NPI 2015). The same report documents that the poverty rate for 20-24 year olds had grown by 6 percentage points over the preceding decade. In support of earlier theoretical considerations, the highest rates of poverty were observed among young adults who were either inactive or unemployed (57% and 54% respectively), followed by that among students (43%), part-time employed (25%) and full-time employed (12%), clearly reflecting a steep gradient in employment status. As of December 2016, the youth unemployment rate in the UK favourably compared to many countries in Europe and it was at a six-year low at 12.6% vs. 18.6% which is the EU average.<sup>1</sup> However, the current situation with regards to poverty and unemployment only documents a short-term relationship, leaving the medium term and long term perspective outside of focus.

In addition to income based poverty measures which are discussed above, this study also considers poverty in the form of bill arrears, material deprivation and one's perception of their current financial situation. Turning first to arrears, data collected by the DWP suggests that while only 5% of working families are behind with their bills, some 21% of workless families are in arrears<sup>2</sup> (poverty.org.uk).

In 2011, 5.1% of UK households were classified as being severely materially deprived<sup>3</sup>, this is significantly below the EU average for the same year which is 8.7% (ONS 2013). With regards to the subjective measure of poverty, Evans, Macrory and Randall [ONS] (2015) analyse national well-being in the UK and find that in the financial year ending 2013 10.1% of the UK population find it difficult to get by financially. This figure constitutes a decline from when the data was first collected in 2010 when the figure was 12.3%<sup>4</sup>. The authors highlight that in 2013 9.7% of those aged 16 to 24 and 12.6% of those aged 25 to 44 report that they are finding it quite or very difficult to get by financially.

In the UK, around 40% of those who are unemployed are under 25. While across all developed countries the youth labour market is more sensitive to prevailing conditions, the UK is one of the worst in this respect, as the youth unemployment rate disparity runs at nearly four times

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<sup>1</sup> <https://www.statista.com/statistics/266228/youth-unemployment-rate-in-eu-countries/>

<sup>2</sup> Data comes from the Family Resources Survey and is the three-year average over the period 2006/07 to 2008/09.

<sup>3</sup> An individual is classified as being materially deprived if they cannot afford at least four of the following: 1) to pay their rent, mortgage, utility bills or loan repayments, 2) to keep their home adequately warm, 3) to face unexpected financial expenses, 4) to eat meat or protein regularly, 5) to go on holiday for a week once a year, 6) a television set, 7) a washing machine, 8) a car, 9) a telephone.

<sup>4</sup> Data from Understanding Society, The UK Household Longitudinal Study.



that of those aged 25+. Furthermore, young people have been the ones hit the hardest by the recent recession, and have benefited disproportionately less in the recovery: the employment rates of those aged 18 to 24 falling by nearly 10 percentage points in the last decade, yet from the 1 million jobs the UK economy has added over the last two years just 40,000 have been among the under 25s (Gregg 2014).

A broader measure of labour market exclusion, in addition to unemployment, contains other categories and is referred in the literature as NEET – those not in employment, education, training. While the UK has avoided the dramatically high NEET rates of 20 per cent or more among youth - that characterise countries such as Italy, Greece and Spain - it still remains unacceptably high with nearly one million young people (963,000), 16.5 per cent classified as NEET in 2015. This rate is notably higher than in other Northern and Western European countries (e.g. Netherlands: 7.8 %, Denmark 8.4 % and Germany: 9.5%). Noting that most youth unemployment occurs between leaving full-time education and finding sustained work, the UK government has not only sought to extend education and training participation, but also to accelerate the recruitment of young people into jobs and give some work experience to those not making successful transitions quickly (Gregg 2014). From this there has been a marked drop in the number of 16 and 17 years old classified as NEET (down to just 4.5% in Q4 2013). Yet, the NEET numbers have changed very little for those aged between 18 and 19 (Rokicka et al 2016).

Even though the labour market exclusion of youth in the UK is about average compared to the rest of the EU, job insecurity may trigger a similar, albeit smaller, impact on poverty outcomes in later life, and in this regard the situation in the UK is quite serious. From just over 15 % of employees being low paid workers in 1975, their proportion peaked at 23% in 1996 (Corlett and Whittaker 2014: 6). Since then, the proportion has changed little – as one in five employees (22%, or just over five million individuals) in the UK earned less than the low-pay threshold in 2013 (Ibid) . According to the OECD Statistics (2015), the proportion of low-paid work in the UK has been greater than in the other Western European countries over the past two decades and has remained rather stable over time. Furthermore, the number of workers earning less than a living wage – the amount that is supposed to provide a full-time worker (average across household types) with the means to achieve a minimum standard of living as defined by members of the UK public – has increased from 3.4 million (14% of all employees) in 2009 to 4.9 million (20%) in April 2013 (Whittaker and Hurrell 2013). Moreover, the proportion of young people who are defined as low-paid has more than tripled over the past four decades (Pennycook, 2012). This means that many workers, particularly young people, have found that gains from work have not kept pace with the increase in overall economic output and productivity over time. (Dynan et al. 2007). Furthermore, women, ethnic minorities, long-term disabled people, part-time workers, lone parents, seasonal workers, casual workers, and temporary agency workers have been disproportionately affected by low pay (Clegg 2016). The job characteristics associated with low-pay were manual work, work in private/voluntary sectors and retail and wholesale trade, work in establishments with no trade union recognition and work in small establishments (under 25 employees) (Ibid). In addition, Pennycook et al. (2013) argue that those who are in low pay employment are more likely to have a zero-hours contract than those who are not. Since a zero-hours contract is a type of employment contract under which an employer is not required to offer an employee any defined number of working hours, those low-paid workers are at a higher risk of being in vulnerable positions in the labour market with income insecurity, job instability and poor working conditions (Dynan et al. 2007, Pennycook et al. 2013)



As low pay continues to be one of the important features of employment in the UK, the phenomenon of the 'working poor' has been attracting greater attention in the recent years. An individual is defined as being a member of the working poor if they are in employment but remain below a defined poverty threshold. The Office for National Statistics indicates that in 2013 the proportion of all paid employees (working at least 15 hours per week) who are 'poor' (below a low-income threshold of 60% of the national median equivalised income) is 8% of people in employment, equivalent to around 3 million people. In this paper, we focus on the United Kingdom as a country which has some important differences to other countries which may have an effect on the relationship between labour market exclusion and insecurity and later poverty outcomes. The main difference in the legal system (common law in the UK versus civil law in the continental Europe), is the employment protection legislation (EPL) and educational system, the differences in which can help shed some light on the strength of the relationship between labour market exclusion and insecurity and poverty outcomes in the medium term. Compared to the rest of the European Union the employment regulation in the UK is the least restrictive<sup>5</sup> scoring only 1.6 for permanent workers and 0.5 for temporary workers on a scale ranging from 0 (least restrictive) to 6 (most restrictive) for the OECD EPL indicator. For a comparison, the most restrictive EPL is in Belgium (2.99 for permanent workers) followed by Germany (2.84), and the least restrictive after the UK are Estonia, Hungary and Ireland (both at 2.1), albeit the EPL for temporary workers in these countries is much higher than in the UK (Ireland 1.2, Hungary 2.0, Estonia 3.0).

Yet, the UK scores well in terms of workplace related characteristics when workers are surveyed about various aspects of their jobs, suggesting that both the common law system and actual workplace practices may compensate for weaker regulations (CIPD 2015). However, the same report indicates that where the UK scores badly compared to the EU-28 is in terms of productivity, low pay and integration of young people into the labour market (ibid.). For the latter the literature highlights the importance of the features of the educational system such as stratification and standardisation. The first one is best represented by the case of Germany where a high degree of stratification enables the country to equip young people with skills and knowledge which closer match the demands of the labour market. At the same time, the high degree of standardisation sends clear signals about job candidates' abilities which facilitate the most beneficial job match. The education system in the UK is more liberal, i.e. exhibiting low levels of stratification and weak standardisation. Furthermore, once a labour market exclusion episode occurs, what is important is the availability of both active and passive labour market policies which can mitigate the consequences of the labour market shock and facilitate re-integration. Yet, on this count the UK again stands out compared to the EU-28 with total expenditure on both active and passive labour market policies being amongst the lowest at 0.68% of GDP (last available data from 2010) compared to 2.13% for EU-28 in the same year.<sup>6</sup>

This paper uses a unique opportunity offered by the new longitudinal study "Understanding Society" (2009-2014) and its life history module to analyse medium-term consequences of youth unemployment in terms of poverty. Using a number of both subjective and objective poverty measures, as well as job-related intermediate outcomes, we test the following hypothesis:

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<sup>5</sup> <http://www.oecd.org/els/emp/oecdindicatorsofemploymentprotection.htm>

<sup>6</sup> <http://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tps00076&language=en>



**Hypothesis 1:**

Past accumulated unemployment experience at the start of the working life (16-34 y.o.) undermines one's socio-economic position irrespective of measure (relative poverty, persistent poverty, current bill arrears, degree of material deprivation, or subjective evaluation of current financial situation) in the medium term (at age 35-45).

**Hypothesis 2:**

Part of the medium-term effect of past accumulated unemployment experience is explained by undermined employment prospects, lower future personal income, and downward occupational mobility.

**Hypothesis 3:**

Individual socio-economic position is undermined not only by the length of past unemployment experience but also by the number of unemployment spells.

**Hypothesis 4:**

The effect of past accumulated unemployment experience is non-linear with the duration in excess of 1 year having most detrimental impact on the individual socio-economic position in the medium term.

**Hypothesis 5:**

The medium-term effects of the past unemployment experience are particularly detrimental for men relative to women.

**Hypothesis 6:**

Labour market exclusion and/or insecurity (measured in terms of temporary or part-time employment) is associated with higher poverty outcomes even four years into the future and this effect is not entirely explained by individual heterogeneity.

## 2. Research Design

### 2.1 Data

The data is constructed from the six waves of the Understanding Society dataset, the UK Household Longitudinal Study (UKHLS), which has been built on the success of the British Household Panel Survey (BHPS). This is a new longitudinal prospective survey following up annually all members aged 16+ from around 40,000 household interviewed in wave 1. The panel started in 2009 and data runs until 2014 for six waves. Individuals (aged 16+) are re-interviewed annually and are followed up even when they leave the original households to form new ones. The survey covers a significant number of topics to enable interdisciplinary research on such aspects of life as health, wellbeing, and a range of specific behaviours, supplemented by biomarkers for a sub-sample of individuals.



## 2.2 Methods

The analysis relies on three methodological approaches<sup>7</sup>:

- i. Probit for binary outcomes and OLS for continuous dependent variables to examine the impact of employment history between the ages of sixteen and thirty-four on poverty related outcomes between the ages of thirty-five and forty-five. The sample for this approach consists of those aged between 35 and 45 in waves one and five of Understanding Society who are present in the employment history module.
- ii. Probit for binary outcomes and OLS for continuous dependant variables to examine the impact of unemployment and job insecurity today (wave one) on measures of poverty five years hence (wave six). The data used for approach two consists solely of those aged between 16 and 35 in wave one who are also observed in wave six.
- iii. First-difference estimator to uncover the impact of unemployment and job insecurity today on poverty outcomes in four years' time taking into account time invariant unobserved heterogeneity based on the linear probability model. The data used for this approach consists of those aged between 16 and 35 in wave one who are also observed in wave five and similarly those aged between 16 and 35 in wave two who are also observed in wave six. Ideally, one would have liked to have repeated observations for a five year gap, but due to the limitations imposed by data we are using a four year gap for the first-difference type estimator in approach three.

As with all studies in this volume, we are concerned with the impact of adverse labour market outcomes when young on poverty in the medium term and therefore model this directly as described in approaches two and three. However, due to the unique nature of the data available for the UK in Understanding Society an additional approach one is adopted. We exploit the fact that in the first and fifth wave of the study the full employment history of a subset of the sample is collected.

For the first approach we follow Nizalova et al. (2016) and use the following specification to estimate the impact of unemployment on poverty:

$$Y_i = \beta_0 + \beta_1 YouthUnemp_i + \beta_2 YouthEduc_i + \beta_3 YouthOther_i + \gamma' X_i + \gamma \tau_t + \epsilon_i, \quad (1)$$

where  $Y_i$  represents a poverty measure (discussed in the next sub-section) for individual  $i$ ,  $YouthUnemp_i$  is a vector of variables representing experience of unemployment when young,  $YouthEduc_i$  is the number of months for which the individual has been in education,  $YouthOther_i$  is the number of months for which the individual has had a labour market status that is not education, employment or unemployment,  $X_i$  is a vector of key controls (including the accumulated number of months in education and economically inactive between ages 16 and 34),  $\tau_t$  controls for the year effect (since we pool together individuals from two waves when the life history data has been collected) and  $\epsilon_i$  is the error term.

The vector of variables representing unemployment experience from 16 to 34 takes three forms: (i) overall accumulated experience of unemployment over the period (converted into years for the sake of convenience with reporting the estimates), (ii) the same measure as in (i) supplemented by a number of indicator variables describing the number of spells of

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<sup>7</sup> In each case the analysis is supplemented by a multinomial probit (logit for the first-difference type estimator) to uncover the impact of one's employment status today (or employment history) on one's employment status in the future (today).



unemployment experienced in the past (one, two, three, four and more) to allow for capturing the effect not only of length of unemployment experience but that of churning in an out of employment, and (iii) a vector of indicator variables splitting the duration of accumulated unemployment into three categories – 0 months<sup>8</sup>, 1 to 12 months, 13 months and above – to allow for potential non-linearities in the effect.

Acknowledging the criticism related to the use of one-time current poverty measure (Jenkins and Van Kern 2014), we construct two measures of persistent poverty and analyse how they are affected by the experience of youth unemployment while young: whether over the course of six waves of the survey the individual was in poverty for three or more consecutive waves, and the number of waves in which the individual was observed below the poverty line.

The analysis is performed for the overall sample and separately by gender. When the outcome is binary, a probit model is used and rather than reporting the coefficient values the marginal effects are calculated<sup>9</sup>. In all specifications, we apply robust standard errors clustered at the household level.

The second group of estimates approach two:

$$Y_{i,t+5} = \beta_0 + \beta_1 Unemployed_{i,t} + \beta_2 Educ_{i,t} + \beta_3 Inactive_{i,t} + \beta_4 PTJob_{i,t} + \beta_5 TempJob_{i,t} + \gamma' X_{i,t} + \epsilon_{i,t} \quad (2)$$

In this equation,  $Y_{i,t+5}$  is the measure of poverty for individual  $i$  five periods after the observation of the current labour market status. The current labour status can fall into one of six categories:  $Unemployed_{i,t}$  which is represented by a binary variable taking the value of one if individual  $i$  is unemployed at time  $t$ .  $Educ_{i,t}$  which takes the value of one if the respondent reports that they are in education at time  $t$ .  $Inactive_{i,t}$  which indicates that an individual is economically inactive.  $PTJob_{i,t}$  which captures those in employment on a part-time basis.  $TempJob_{i,t}$  which takes the value of one if the respondent is employed on a temporary contract, and finally, the omitted category which is those employed on a full-time basis with a permanent contract. Given this definition the coefficients  $\beta_1$  to  $\beta_5$  report the impact of the respective labour market status at time  $t$  on the poverty measure at time  $t + 5$  relative to those who were employed on full-time basis with a permanent contract.  $X_{i,t}$  is the vector of controls for individual  $i$  at time  $t$ .

Even though we are analysing the poverty status as a function of past unemployment and job insecurity, there is still a possibility that such a relationship is spurious, being determined by an unobserved third factor, such as family background. People coming from poor families may be lacking work-related habits which make them less employable in the labour market and also being more likely to continue on the path of poverty. Such an omitted variable would lead to an overestimation of the impact of unemployment on poverty (as low socio-economic family background would have a positive effect on poverty status and positive effect on probability of being unemployed). Yet, the socio-economic family background is pre-determined before the survey takes place and, therefore, can be treated as time invariant unobserved effect  $c_i$ . Given the data limitations, in this set-up we are only able to estimate the effect of current labour market status on poverty outcomes in four years' time (rather than in five as discussed before). Therefore, the corresponding equation takes the following form:

<sup>8</sup> This category includes people who have been unemployed but for a time period less than 1 month.

<sup>9</sup> The marginal effects are computed using the margins, `dydx(*)` command in Stata.



$$Y_{it+4} = \beta_0 + \beta_1 Unemployed_{it} + \beta_2 Educ_{it} + \beta_3 Inactive_{it} + \beta_4 PTJob_{it} + \beta_5 TempJob_{it} + \gamma' X_{it} + \gamma\tau_t + c_i + \epsilon_{it}, t = 1, 2 \quad (3)$$

Applying first difference to equation (3) results in the following:

$$\Delta Y_{it+4} = Y_{i,t+5} - Y_{i,t+4} = \vartheta_1 \Delta Unemployed_{it} + \vartheta_2 \Delta Educ_{it} + \vartheta_3 \Delta Inactive_{it} + \vartheta_4 \Delta PTJob_{it} + \vartheta_5 \Delta TempJob_{it} + \theta \Delta X'_{it} + \gamma\tau_t + \Delta u_{it} \quad (4)$$

In words, this equation analyses the change in poverty status between wave five and wave six as a function of the one period change in employment status between wave one and wave two. This allows for differencing out the time invariant unobserved characteristics which may be correlated with the unemployment history and poverty simultaneously (Wooldridge 2010).

### 3. Measures

#### 3.1 Dependent variables

In this paper poverty is measured in four ways. Firstly, a binary variable which takes the value of one if the respondent's household equivalised income is less than 50% of the median for the relevant period<sup>10</sup>.

The second measure of poverty used is a binary variable taking the value of one if the respondent reports that they are behind with paying their bills. The question states that *"Sometimes people are not able to pay every household bill when it falls due."* Then asks *"...are you up to date with all your household bills such as electricity, gas, water rates, telephone and other bills or are you behind with any of them?"*

The third measure is that of material deprivation which is a simple count of the number of items from a standard list which a respondent fails to report ownership of<sup>11</sup>. The items which feed in to this measure are as follows: colour television, video recorder/DVD player, satellite dish/sky TV, cable TV, deep freeze or fridge freezer, washing machine, tumble drier, dish washer, microwave oven, home PC, CD player, landline telephone, and mobile telephone. This differs from the Eurostat definition since we are unable to identify the reason for a lack of ownership.

The final measure is subjective, a binary variable taking the value of one if individuals report that they are currently just about managing (or better) given their current financial situation. Individuals are asked how well would you say you yourself are managing financially these days? Responses fall into the following categories: would you say you are... a) living comfortably, b) doing alright, c) just getting by, d) finding it quite difficult, e) finding it very difficult.

To supplement these core measures of poverty and try to understand causal pathways, two other intermediate outcome variables are considered: the log of total personal income and the probability of having one of the considered labour market statuses. To estimate the impact of youth unemployment on the latter, the multinomial logit models are used as described in the previous section and the average marginal effects are reported only for the one category: those

<sup>10</sup> Estimates based on the poverty line of 60% of the equivalised household median income do not differ significantly and are available upon request. The poverty line is estimated using the Understanding Society sample and the weights to ensure that it is representative of the national population.

<sup>11</sup> This is a limitation to the analysis of material deprivation, as we cannot distinguish the cases when the person has preferences for not possessing one of the listed items. Specifically for each item respondents are asked: *Could you please tell me which of the following items you have in your (part of the) accommodation.*





who are unemployed as compared to those employed on a full-time basis with a permanent contract.<sup>12</sup>

### 3.2 Variables of interest

The data used to construct a measure of past unemployment comes from the employment history modules present in waves one and five of the Understanding Society dataset. In these modules, each individual provides a complete history of his/her employment from entering the labour market until the day of the interview. This paper exploits this information to calculate two key variables: a count of the number of times that the individual has been unemployed, and the sum of the number of months that the individual has been unemployed.

Since the focus of this study is on youth unemployment, these calculations are restricted accordingly. Only employment spells that start between the ages of 16 and 34 are included for the purpose of this study. Each total number of months is the sum of three constituent parts. Firstly, the number of months between two adjacent employment spells if the employment status in the first is unemployed and the second is not. Secondly, the number of months between the individual's current job start month, and the previous status start month if this previous spell was a period of unemployment. Also, a variable capturing the number of months since the respondent completed full-time education is computed, this measure replaces the duration of unemployment if the respondent reports that they have never had a job since the completion of their studies.

As a control, the number of months that the individual was in education over this time or having a labour market status other than employment, education or unemployment is also calculated.

For two other approaches, which involve current employment status, we use a set of indicator variables to describe individual's status at wave  $t$  such as unemployment, economically inactive, education, temporary employed, or part-time employed, so that the impact on poverty outcomes at a later time is estimated relative to full-time permanent employment.

### 3.3 Control variables

The richness of the data available allows for a comprehensive vector of controls contained in  $X$  to be added to the model. These controls are: age and its square, a categorical variable for the region of residence, a dummy variable taking the value of one if the respondent has children aged under sixteen, a dummy variable taking the value of one if the respondents father was unemployed when the respondent was fourteen years old and a similar variable for the mother, a binary variable taking the value of one if the respondent had a degree level qualification by the time they are aged thirty-five, a binary variable taking the value of one if the respondent is female (for the combined sample only), a categorical variable for ethnicity, a binary variable taking the value of one if the respondent lives in a rural area (defined as a settlement with a population of less than 10,000 people), an indicator variable for whether the respondent had been married prior to age thirty-five and a categorical variable for the individual's occupational class. The final variable in this list is not always present and as such it will be made clear when the specification includes this control.

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<sup>12</sup> Estimates for other categories are available upon request.



## 4. Results

### 4.1 Analysis based on employment history data

Table I provides summary statistics for the key variables used in the analysis based on the employment history data for the individuals aged 35 to 45 observed in waves one and five. As can be seen, 9.3% of the sample live in households with equivalised income which is less than 50% of median equivalised household income. The number of items individuals report not having in their possession is close to three, while their monthly personal income is on average 2,253 pounds in 2015/16 constant prices, with females being slightly less likely to be poor based on the household income measure and that of material deprivation, while being more likely to report being behind with paying bills and less likely to view their financial situation as manageable or better. 79% of individuals in the sample experienced unemployment while being young (16-34 years old), with a considerable higher proportion found amongst females (82.5% vs. 74.3% amongst males). On average, the accumulated experience of unemployment is almost six months (7.6 for males and 4.8 for females), while experience with not being economically active is 19.3 months (5.1 months for males and 29.6 months for females, reflecting withdrawal from the labour market related to childbearing). Most of the unemployment experience comes from one spell (15.5% of the sample) with 3.7% experiencing two spells of unemployment, 1.2% - three spells, and only 0.5% having four or more spells of unemployment while young (women experience fewer spells of unemployment). Most of the individuals in the sample have accumulated unemployment experience of one to twelve months 9.1% compared to the 6.5% with an accumulated unemployment experience in excess of one year. At the time of the survey respondents are approximately 40 years old, 42% are male, 18.9% live in rural areas, 69% have children, 32% have obtained at least a bachelors' degree and been married prior to age 35. 7.6% had their father unemployed and 36.2% had their mother unemployed when being 14 years old. The overall sample consists of 6,864 individuals – 2,890 males and 3,974 females.

Table II presents results of the analysis for four measures of poverty, total personal income and the probability of unemployed compared to full-time permanent employment at the time of the survey for individuals in the 35-45 age group. Positive coefficients imply detrimental effects of unemployment for the measures of relative poverty, arrears with bills and material deprivation, while for the probability of managing well or better with the current financial situation the negative effect means that people are feeling poorer. Odd-numbered columns present results without controlling for occupation, while the even numbered columns add occupation class to the vector of controls. This approach allows one to test whether the effect of youth unemployment is partially explained by downward occupational mobility. Panels (A), (B) and (C) correspond to different specifications of past unemployment experience. Considering odd numbered columns in the first panel (A), we see that the impact of past unemployment is quite consistent across all measures of poverty: longer accumulated unemployment prior to age 35 results in a higher probability of being poor and being behind in paying the bills, higher material deprivation and lower probability of reporting that they are just about managing (or better) given their current financial situation, confirming Hypothesis 1.

This effect is partially explained by lower personal income and higher probability of landing into unemployment at age 35 or later. Odd numbered columns show that the estimated effect is partially explained by downward occupational mobility as controlling for current occupation



at least halves the magnitude of the effect, and it becomes almost zero when the probability of having arrears is considered. These three findings confirm Hypothesis 2.

Panel B of Table II provides a test for Hypothesis 3 by investigating whether the number of spells contributes anything to the detrimental effect on poverty above that from accumulated length of unemployment experience. Indeed, as column (1) suggests, having 12 months of unemployment experience in one go increases an individual's likelihood of being poor by 2.3 percentage points ( $0.004+0.019$ ), while if the same 12 months experience of unemployment was accumulated from two spells, the effect is 6.3 percentage points higher likelihood of being poor ( $0.004+0.059$ ), and having four or more spells leads to 10.3 percentage points effect ( $0.004+0.099$ ). A similar situation is observed for other measures of poverty, with the exception that for reporting manageable or better financial situation when having three, four or more spells does not have any more detrimental effect. At the same time, the analysis of personal income and unemployment status shows that the negative effect of the accumulated duration of unemployment is exacerbated by churning in and out of employment. Similar to the basic case, the estimated effects become smaller once current occupational controls are added or completely disappear as in the case for personal income.

Panel C defines past unemployment experience as a vector of indicators for the duration of unemployment 1-12 months, and 13 months and over, to allow for a non-linear impact and testing Hypothesis 4. This specification clearly shows that mostly the impact of long accumulated unemployment experience (in excess of one year) is preserved in the medium term perspective.

Table III and Table IV repeat the analysis presented in Table II for men and women separately. Similarly to the earlier EXCEPT research on health<sup>13</sup>, the impact of accumulated unemployment experience on poverty outcomes is somewhat weaker for women than it is for men, but the difference is not statistically significant. Thus, the evidence does not support Hypothesis 5. This holds for both findings on the impact of the duration of unemployment and the number of spells.

Figure I through Figure IV summarise the findings for one measure of poverty – relative poverty – across the specifications following approach one.

## 4.2 Poverty Persistence Analysis

Table V portrays the results from the estimation of the impact of youth unemployment and job insecurity on the persistence of poverty from a medium term perspective. Longer accumulated unemployment experience increases the likelihood of being poor in any three consecutive waves across the sample period (Column (1)) and increases the number of waves in which one is coded as being poor. In both cases, the effect is driven entirely by the impact of unemployment experience being longer than one year during the period from 16 to 34 years old.

## 4.3 Pooled OLS Analysis

VI combines results for all the poverty outcomes and intermediate outcomes from the estimation approach 2, described above. In this approach the labour market status both in terms of exclusion and insecurity is related to the poverty outcomes in five years, which means that all the coefficients show the impact of a particular status on poverty outcomes relative to

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<sup>13</sup> [http://www.except-project.eu/files/filemanager/files/WP8\\_Interdependencies\\_between\\_labour\\_market\\_insecurity\\_and\\_well-being.pdf](http://www.except-project.eu/files/filemanager/files/WP8_Interdependencies_between_labour_market_insecurity_and_well-being.pdf)



full-time worker in a permanent position. Again, the odd-numbered columns are reporting results without controlling for occupation at time period (t+5), while even-numbered column – with. Column (1), for example, reveals that compared to the full-time permanent employment, all other statuses with respect to labour market are associated with higher likelihood of poverty five years into the future. The impact of having a part-time job is the smallest, increasing the likelihood of poverty by 1.6 percentage points an effect which is not statistically significant, followed by the impact of temporary employment (3.2 p.p.) and education (4.2 p.p.) with the impact of being economically inactive of 4.2 p.p. while being unemployed having a much higher 6.3 percentage point effect. While the effect of part-time employment is statistically insignificant, all other effects are significant at the 5% level. For the probability of having arrears on current bills neither education nor insecure jobs have any statistically significant effect. For this measure being unemployed has the largest impact, followed by being economically inactive (7.5 p.p. vs. 7.0 p.p.). Material deprivation is affected the worst by unemployment (being deprived of 0.615 more items on average, which being about one quarter of the mean), followed by economically inactive (0.427), education (0.213) and temporary employment (0.250), with part-time employment having no effect. In terms of subjective poverty, only unemployment, being economically inactive and education have significant effects. As can be seen from Columns (9)-(11), part of the impact is also explained by the lower total personal income and higher likelihood of being unemployed.

Comparing results in even-numbered columns to those in odd-numbered ones, it is also evident, that similar to the findings based on the employment history data, up to half of the effect is driven by downward mobility as including occupational controls in period (t+5) results in up to 50% smaller sizes of the coefficients, but they never disappear. As before, the effects are larger for males than they are for females (see Tables VII-VIII). Figure V summarises the findings from Table VI Table VIII. In this case, a significant gender difference is observed for the unemployment and being inactive compared to having full-time permanent position, with men suffering much more negative impact.

#### 4.4 Fixed Effect Analysis

Table IX presents the results of the fixed effects estimation of Equation (3). There are two variations to these model to be aware of, when comparing these results to the earlier findings. First of all, to implement fixed effects approach we switch to (t+4) instead of (t+5) time lag. This is to ensure repeat observation for the same individual and allow the differencing out of individual specific time-invariant fixed effects. At the moment there are only six waves of the Understanding Society survey. So, we fit a change in labour market status from wave 1 to wave 2 to the change in poverty status from wave 5 to wave 6. Second, we use the linear probability model. As can be seen, the estimates from the FE estimations are not statistically significant in almost all of the specifications. And although, as Column (12) shows, there is a significant effect of labour market exclusion and job insecurity on future unemployment, this does not translate into any effects in terms of poverty outcomes with one exception on the probability of reporting a manageable current financial situation as a result of part-time employment four years before. This suggests that most of the effect is due to unobserved heterogeneity, i.e. that there are time invariant factors because of which people are both unemployed and poor in the future. However, disaggregated analysis by gender reveals the following: While the general results are preserved for men (odd numbered columns in Table X), this is not the case for women: even though there is no effect on female relative poverty (Column (2)), unemployment does increase the probability of being behind on paying the bills (Column (4)), as well as increases material deprivation (Column (6)) and decreases personal



income. Being in part time employment also decreases the probability of reporting manageable financial situation and personal income. Therefore, there is not enough evidence to support Hypothesis 6, as within a four-year timeframe individual heterogeneity does explain a significant (all in the case of men) share of the effect. However, these findings are only indicative due to the small number of years available and, as a result, small within variation in the variables, to estimate medium term effects controlling for unobserved heterogeneity. Thus, more research would be needed in the future along these lines.

## 5. Conclusions

In this paper we have investigated the effect of early life labour market exclusion and job insecurity (ages 16-34) on a range of medium term poverty measures (ages 35-45) and intermediate outcomes. The direction of this effect is not clear a priori and remains an empirical question. We tested this in the context of the UK, a country that in recent years compares favourably to her EU peers in terms of youth unemployment but has observed an increasing level of insecure employment and overall has a history of poor labour market integration of youth.

Making use of the special employment history module of Understanding Society, the most recent and comprehensive longitudinal survey, we find evidence in support of the hypothesis that early life labour market exclusion and job insecurity are associated with an increased poverty in the medium term. Longer accumulated unemployment experience is associated with a higher probability of being poor at the age 35-45. Similarly, the greater the number of unemployment spells (more instances of entering and exiting the labour market), the higher is the probability of being in poverty. The highest effect on poverty is estimated in the case of unemployment lasting over a year. The findings are consistent across a range of poverty measures, including having income less than the 50% of median equivalised household income<sup>14</sup>, material deprivation, having arrears with paying the bills, and reporting household financial situation as being manageable or better.

We have also explored possible pathways for this effect and found that part of the effect could be explained by reduced personal income and higher chances of being unemployed that result from early life unemployment. In addition, when controlling for occupation, the estimated effect of labour market exclusion (being unemployed or economically inactive) and job insecurity (having part-time or temporary job) on medium-term poverty are reduced suggesting that early life unemployment is associated with a downward occupational mobility path resulting in poverty in the medium-term.

Youth unemployment experience does not only lead to a greater chance of being poor as documented by a snapshot at the time of interview, but also to persistent poverty later in life.

We have also investigated the impact of unobserved heterogeneity on the estimates, albeit the results cannot be applied to the findings based on the unemployment history data, since they are only spanning across 4 year period. However, as the association between the labour market exclusion and insecurity and poverty four years later is substantially weakened for women and becomes not statistically significant for men. This suggests that within this timespan both life outcomes – unemployment/insecure job and poverty – move together for some types of people. Perhaps those who are coming from disadvantaged backgrounds. Further research is needed to identify casual part of the effect as well as the risk factors which determine this double burden. This is particularly important for policy development, as knowing

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<sup>14</sup> Available upon request.



these risk factors may help targeting youth who are at risk of being unemployed when young and poor later on with support programmes earlier in their life.

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TABLE I SUMMARY STATISTICS FOR THE SAMPLE BASED ON EMPLOYMENT HISTORY

Variable	All		Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Poverty	0.093		0.101		0.087	
Arrears	0.083		0.079		0.085	
Material Deprivation	2.785	1.687	2.852	1.761	2.736	1.629
Fin Situation manageable	0.852		0.862		0.844	
Personal Monthly Income	2,252.96	1,812.88	2,754.79	2,073.70	1,888.01	1,494.60
No unemployment experience	0.790		0.743		0.825	
Months Unemployed	5.940	29.859	7.563	33.666	4.759	26.694
Months Other	19.325	50.729	5.134	27.942	29.645	60.205
<i>Number of Unemployment Spells</i>						
0	0.790		0.743		0.825	
1	0.155		0.119		0.279	
2	0.037		0.180		0.137	
3	0.012		0.052		0.027	
4+	0.005		0.017		0.009	
<i>Unemployment Category</i>						
0 Months	0.844		0.802		0.875	
1 to 12 Months	0.091		0.113		0.075	
13+ Months	0.065		0.085		0.050	
Age	40.184	3.153	40.162	3.133	40.200	3.168
Male	0.421					
Rural	0.189		0.183		0.193	
Children	0.691	0.462	0.639	0.480	0.728	0.445
Degree	0.323		0.335		0.314	
Married	0.619		0.654		0.594	
Dad Unemp	0.076		0.072		0.080	
Mum Unemp	0.362		0.378		0.351	
N	6,864		2,890		3,974	



TABLE II IMPACT OF CUMULATIVE YOUTH UNEMPLOYMENT EXPERIENCE (16-34) ON POVERTY AT AGE 35-45

		Pr(Poverty)		Pr(Arrears)		MatDep		Pr(FinSit)		LogTotPersInc		Pr(Unemp)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(A)	12m Unemployment	0.006*** (0.001)	0.003*** (0.001)	0.004*** (0.001)	0.001 (0.001)	0.047*** (0.009)	0.020** (0.009)	-0.007*** (0.001)	-0.002 (0.001)	-0.091*** (0.012)	-0.040*** (0.012)	0.013*** (0.001)
	12m Unemployment	0.004*** (0.001)	0.003** (0.001)	0.001 (0.001)	0.000 (0.001)	0.031*** (0.010)	0.013 (0.010)	-0.004** (0.002)	-0.001 (0.001)	-0.072*** (0.014)	-0.036*** (0.013)	0.005*** (0.000)
	Spell No. 1	0.019** (0.009)	0.004 (0.008)	0.028*** (0.010)	0.012 (0.009)	0.125** (0.056)	0.034 (0.055)	-0.060*** (0.013)	-0.036*** (0.012)	-0.247*** (0.054)	-0.061 (0.048)	0.155*** (0.011)
	Spell No. 2	0.059*** (0.018)	0.029* (0.016)	0.025 (0.018)	0.000 (0.015)	0.493*** (0.113)	0.311*** (0.111)	-0.091*** (0.026)	-0.046** (0.023)	-0.424*** (0.122)	-0.065 (0.106)	0.211*** (0.025)
(B)	Spell No. 3	0.006 (0.024)	-0.017 (0.021)	0.103** (0.041)	0.069* (0.036)	0.348* (0.202)	0.173 (0.197)	-0.076* (0.042)	-0.033 (0.037)	-0.428** (0.206)	-0.081 (0.182)	0.200*** (0.042)
	Spell No. 4+	0.099** (0.049)	0.055 (0.043)	0.171** (0.070)	0.111* (0.060)	0.843*** (0.259)	0.571** (0.280)	-0.038 (0.064)	0.018 (0.050)	-0.533* (0.282)	0.010 (0.244)	0.198*** (0.062)
(C)	Dur. 1 to 12m	-0.003 (0.011)	-0.009 (0.011)	-0.014 (0.010)	-0.017* (0.010)	-0.052 (0.060)	-0.079 (0.060)	-0.004 (0.015)	0.003 (0.014)	-0.128** (0.061)	-0.062 (0.053)	0.090*** (0.013)
	Dur. 13m+	0.066*** (0.014)	0.029** (0.012)	0.057*** (0.016)	0.021 (0.013)	0.546*** (0.087)	0.317*** (0.086)	-0.097*** (0.020)	-0.042** (0.017)	-0.712*** (0.094)	-0.269*** (0.081)	0.239*** (0.021)
N						6,864						



Table II Note: The results in this table use the following control variables for results labelled with even numbers: months of education between 16 & 34, months where employment status not education or employment between 16 & 34, age & it's square, uk region of residence, number of children under 16, parent's employment status when respondent 14, if the respondent has a degree-level qualification, gender, ethnicity, whether the individual lives in a rural area, whether the respondent has ever been married and time effects. Those with odd numbers add the individuals current occupation code to the vector of controls.

**TABLE III IMPACT OF CUMULATIVE YOUTH UNEMPLOYMENT EXPERIENCE (16-34) ON POVERTY AT AGE 35-45, MALES**

		Pr(Poverty)		Pr(Arrears)		MatDep		Pr(FinSit)		LogTotPersInc		Pr(Unemp)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(A)	12m Unemployment	0.006*** (0.001)	0.002* (0.001)	0.004*** (0.001)	0.000 (0.001)	0.051*** (0.013)	0.019 (0.014)	-0.010*** (0.002)	-0.003* (0.002)	-0.110*** (0.018)	-0.040** (0.019)	0.014*** (0.001)
	12m Unemployment	0.004*** (0.001)	0.002 (0.001)	0.002 (0.001)	0.000 (0.001)	0.033** (0.014)	0.012 (0.015)	-0.008*** (0.002)	-0.003 (0.002)	-0.086*** (0.021)	-0.035* (0.021)	0.006*** (0.001)
	Spell No. 1	0.025* (0.013)	0.006 (0.012)	0.017 (0.014)	-0.008 (0.012)	0.132* (0.079)	0.037 (0.079)	-0.043** (0.018)	-0.008 (0.016)	-0.329*** (0.080)	-0.108 (0.069)	0.138*** (0.015)
(B)	Spell No. 2	0.063*** (0.022)	0.031 (0.020)	0.032 (0.023)	-0.003 (0.019)	0.526*** (0.148)	0.359** (0.147)	-0.116*** (0.033)	-0.058** (0.029)	-0.417** (0.168)	-0.053 (0.142)	0.170*** (0.028)
	Spell No. 3	0.008 (0.034)	-0.019 (0.029)	0.041 (0.043)	0.001 (0.033)	0.372 (0.272)	0.175 (0.271)	-0.049 (0.051)	0.006 (0.041)	-0.579* (0.299)	-0.164 (0.272)	0.230*** (0.058)
	Spell No. 4+	0.101* (0.056)	0.055 (0.050)	0.129* (0.075)	0.065 (0.062)	1.100*** (0.325)	0.821** (0.357)	-0.026 (0.068)	0.038 (0.046)	-0.628* (0.326)	0.043 (0.294)	0.234*** (0.077)
(C)	Dur. 1 to 6m	0.002 (0.016)	-0.008 (0.015)	-0.024* (0.013)	-0.034*** (0.012)	0.042 (0.088)	0.002 (0.089)	-0.016 (0.020)	0.001 (0.018)	-0.196** (0.086)	-0.070 (0.073)	0.097*** (0.018)
	Dur. 13m+	0.069*** (0.019)	0.022 (0.016)	0.067*** (0.022)	0.011 (0.018)	0.626*** (0.116)	0.347*** (0.117)	-0.144*** (0.028)	-0.052** (0.024)	-0.777*** (0.129)	-0.148 (0.113)	0.267*** (0.028)
N						2,890						

Note: The vector of controls is identical to the model for both genders with the obvious exclusion of controlling for gender.

TABLE IV IMPACT OF CUMULATIVE YOUTH UNEMPLOYMENT EXPERIENCE (16-34) ON POVERTY AT AGE 35-45, FEMALES

		Pr(Poverty)		Pr(Arrears)		MatDep		Pr(FinSit)		LogTotPersInc		Pr(Unemp)
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(A)	12m Unemployment	0.005*** (0.001)	0.003** (0.001)	0.003** (0.001)	0.001 (0.001)	0.041*** (0.012)	0.019 (0.012)	-0.002 (0.002)	0.001 (0.002)	-0.066*** (0.014)	-0.026* (0.013)	0.012*** (0.001)
	12m Unemployment	0.004*** (0.001)	0.003** (0.001)	0.001 (0.002)	0.000 (0.002)	0.028** (0.013)	0.014 (0.013)	0.002 (0.002)	0.004 (0.002)	-0.051*** (0.016)	-0.025* (0.014)	0.004*** (0.001)
(B)	Spell No. 1	0.016 (0.012)	0.003 (0.011)	0.037** (0.015)	0.024* (0.014)	0.122 (0.076)	0.030 (0.074)	-0.076*** (0.019)	-0.055*** (0.018)	-0.195*** (0.070)	-0.012 (0.064)	0.181*** (0.016)
	Spell No. 2	0.0536* (0.028)	0.025 (0.024)	0.012 (0.026)	-0.008 (0.022)	0.439** (0.179)	0.238 (0.175)	-0.045 (0.037)	-0.008 (0.032)	-0.404** (0.167)	-0.026 (0.148)	0.261 (0.041)
	Spell No. 3	0.007 (0.036)	-0.013 (0.030)	0.168** (0.068)	0.138** (0.065)	0.336 (0.301)	0.188 (0.279)	-0.101 (0.067)	-0.067 (0.064)	-0.257 (0.262)	0.015 (0.215)	0.169*** (0.052)
	Spell No. 4+	0.123 (0.102)	0.071 (0.081)	0.291** (0.148)	0.219* (0.132)	0.094 (0.182)	-0.199 (0.239)	-0.021 (0.132)	0.027 (0.108)	0.220 (0.470)	0.721** (0.342)	0.096 (0.081)
(C)	Dur. 1 to 6m	-0.005 (0.015)	-0.008 (0.014)	-0.001 (0.017)	-0.002 (0.017)	-0.130 (0.081)	-0.151* (0.080)	0.004 (0.022)	0.007 (0.021)	-0.079 (0.085)	-0.037 (0.074)	0.079*** (0.018)
	Dur. 13m+	0.062*** (0.020)	0.033* (0.017)	0.042* (0.022)	0.019 (0.019)	0.444*** (0.131)	0.271** (0.128)	-0.036 (0.027)	-0.005 (0.024)	-0.602*** (0.132)	-0.273** (0.113)	0.212*** (0.029)
N		3,974										

Note: The vector of controls is identical to the model for both genders with the obvious exclusion of controlling for gender.



TABLE V IMPACT OF THE NUMBER OF MONTHS OF UNEMPLOYMENT BETWEEN 16 & 34 ON POVERTY PERSISTENCE BETWEEN 35 & 45

	Pr(Persistent Poverty) <sup>20</sup>	Number of Poverty Spells <sup>21</sup>
	(1)	(2)
12m Unemployment	0.004*** (0.001)	0.050*** (0.010)
Dur. 1 to 12m	-0.010 (0.021)	-0.085 (0.117)
Dur. 13m+	0.079*** (0.029)	0.747*** (0.137)
N	1,157	

Notes: The results in this table use the following control variables: number of months in education between 16 & 34, number of months not in employment or education between 16 & 34, age & its square, uk region of residence, number of children under 16, parent's employment status when respondent 14, if the respondent has a degree-level qualification, gender, ethnicity, whether the individual lives in a rural area, and whether the respondent has ever been married.

<sup>20</sup> Between waves one and six the respondent had an equivalised household income less than 50% of the relevant national median for three consecutive waves.

<sup>21</sup> Between waves one and six the number of times that the respondent had an equivalised household income that was less than 50% of the relevant national median.

TABLE VI IMPACT OF CURRENT EMPLOYMENT STATUS ON POVERTY FIVE YEARS IN THE FUTURE

	Pr(Poverty <sub>t+5</sub> )		Pr(Arrears <sub>t+5</sub> )		MatDep <sub>t+5</sub>		Pr(FinSit <sub>t+5</sub> )		LogTotPersInc <sub>t+5</sub>		Pr(Unemp <sub>t+5</sub> )
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Unemp <sub>t</sub>	0.063*** (0.015)	0.044*** (0.015)	0.075*** (0.017)	0.045*** (0.015)	0.615*** (0.102)	0.504*** (0.105)	-0.076*** (0.017)	-0.039** (0.016)	-0.808*** (0.093)	-0.103 (0.086)	0.187*** (0.019)
Econ. Inactive <sub>t</sub>	0.042*** (0.014)	0.024* (0.014)	0.070*** (0.014)	0.038*** (0.013)	0.427*** (0.076)	0.305*** (0.080)	-0.069*** (0.014)	-0.029** (0.013)	-0.967*** (0.080)	-0.164** (0.078)	0.107*** (0.016)
Educ <sub>t</sub>	0.042*** (0.014)	0.038*** (0.014)	0.003 (0.013)	-0.005 (0.013)	0.213** (0.099)	0.184* (0.10)	-0.033** (0.015)	-0.021 (0.016)	-0.460*** (0.085)	-0.265*** (0.074)	0.059*** (0.012)
Temp Emp <sub>t</sub>	0.032** (0.016)	0.031* (0.016)	0.021 (0.017)	0.022 (0.019)	0.250** (0.110)	0.228** (0.111)	-0.026 (0.017)	-0.022 (0.019)	-0.382*** (0.101)	-0.288*** (0.088)	0.017 (0.012)
P-T Emp <sub>t</sub>	0.016 (0.012)	0.014 (0.013)	0.007 (0.011)	0.002 (0.011)	0.071 (0.073)	0.067 (0.073)	-0.007 (0.011)	0.003 (0.012)	-0.465*** (0.063)	-0.340*** (0.056)	0.036*** (0.011)
N	5,407										

Note: The results in this table use the following control variables for results labelled with even numbers: age & its square, uk region of residence, number of children under 16, parent's employment status when respondent 14, if the respondent has a degree-level qualification, gender, ethnicity, whether the individual lives in a rural area, and whether the respondent has ever been married. Those with odd numbers add the individuals occupation code at t+5 to the vector of controls.

TABLE VII IMPACT OF CURRENT EMPLOYMENT STATUS ON POVERTY FIVE YEARS IN THE FUTURE, MALES

	Pr(Poverty <sub>t+5</sub> )		Pr(Arrears <sub>t+5</sub> )		MatDep <sub>t+5</sub>		Pr(FinSit <sub>t+5</sub> )		LogTotPersInc <sub>t+5</sub>		Pr(Unemp <sub>t+5</sub> )
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Unemp <sub>t</sub>	0.113*** (0.027)	0.086*** (0.026)	0.087*** (0.025)	0.048** (0.022)	0.802*** (0.152)	0.645*** (0.157)	-0.110*** (0.027)	-0.048** (0.023)	-1.029*** (0.141)	-0.162 (0.122)	0.262*** (0.032)
Econ. Inactive <sub>t</sub>	0.095** (0.045)	0.065 (0.042)	0.124*** (0.048)	0.070* (0.040)	0.974*** (0.308)	0.761** (0.310)	-0.122** (0.048)	-0.041 (0.036)	-0.874*** (0.246)	0.379 (0.247)	0.226*** (0.057)
Educ <sub>t</sub>	0.084*** (0.027)	0.076*** (0.027)	0.003 (0.017)	-0.005 (0.017)	0.487*** (0.156)	0.445*** (0.159)	-0.055** (0.026)	-0.030 (0.025)	-0.627*** (0.155)	-0.278** (0.130)	0.084*** (0.022)
Temp Emp <sub>t</sub>	0.026 (0.024)	0.024 (0.024)	0.022 (0.024)	0.019 (0.025)	0.242 (0.165)	0.216 (0.164)	-0.029 (0.024)	-0.024 (0.025)	-0.308** (0.125)	-0.220** (0.101)	0.031* (0.018)
P-T Emp <sub>t</sub>	0.040 (0.030)	0.033 (0.029)	0.000 (0.022)	-0.008 (0.021)	0.318* (0.190)	0.256 (0.190)	-0.0592* (0.032)	-0.040 (0.029)	-0.504*** (0.128)	-0.281*** (0.106)	0.060** (0.028)
N	2,090										

Note: The vector of controls is identical to the model for both genders with the obvious exclusion of controlling for gender.

TABLE VIII IMPACT OF CURRENT EMPLOYMENT STATUS ON POVERTY FIVE YEARS IN THE FUTURE, FEMALES

	Pr(Poverty <sub>t+5</sub> )		Pr(Arrears <sub>t+5</sub> )		MatDep <sub>t+5</sub>		Pr(FinSit <sub>t+5</sub> )		LogTotPersInc <sub>t+5</sub>		Pr(Unemp <sub>t+5</sub> )
	(1)	(2) <sup>22</sup>	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Unemp <sub>t</sub>	0.030*	0.017	0.071***	0.042*	0.513***	0.430***	-0.056**	-0.027	-0.546***	0.105	0.136***
	(0.018)	(0.017)	(0.023)	(0.022)	(0.130)	(0.132)	(0.023)	(0.022)	(0.121)	(0.119)	(0.022)
Econ. Active <sub>t</sub>	0.031**	0.017	0.068***	0.038**	0.345***	0.253***	-0.057***	-0.026	-0.912***	-0.218**	0.073***
	(0.015)	(0.015)	(0.017)	(0.017)	(0.087)	(0.091)	(0.017)	(0.017)	(0.096)	(0.092)	(0.015)
Educ <sub>t</sub>	0.021	0.019	0.003	-0.006	0.066	0.044	-0.019	-0.012	-0.321***	-0.176**	0.051***
	(0.015)	(0.016)	(0.017)	(0.018)	(0.123)	(0.124)	(0.019)	(0.020)	(0.095)	(0.086)	(0.014)
Temp Emp <sub>t</sub>	0.044**	0.046**	0.023	0.025	0.284**	0.266*	-0.020	-0.014	-0.399***	-0.297**	0.011
	(0.022)	(0.023)	(0.024)	(0.027)	(0.145)	(0.146)	(0.025)	(0.027)	(0.153)	(0.136)	(0.016)
P-T Emp <sub>t</sub>	0.009	0.008	0.007	0.002	0.010	0.024	0.010	0.018	-0.434***	-0.321***	0.028**
	(0.013)	(0.014)	(0.014)	(0.015)	(0.084)	(0.085)	(0.013)	(0.014)	(0.080)	(0.073)	(0.012)
N	3,317										

Note: The vector of controls is identical to the model for both genders with the obvious exclusion of controlling for gender.

<sup>22</sup> Only 3,285 usable observations due to insufficient variation within occupational code 8.

TABLE IX IMPACT OF CURRENT EMPLOYMENT STATUS ON POVERTY FOUR YEARS IN THE FUTURE, FE APPROACH

	Pr(Poverty <sub>t+4</sub> )		Pr(Arrears <sub>t+4</sub> )		MatDep <sub>t+4</sub>		Pr(FinSit <sub>t+4</sub> )		LogTotPersInc <sub>t+4</sub>		Pr(Unemp <sub>t+4</sub> )	
	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE	POLS	FE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Unemp <sub>t</sub>	0.069***	-0.002	0.081***	0.015	0.669***	0.124	-	0.010	-	-0.036	0.167***	0.379**
	(0.011)	(0.015)	(0.01)	(0.023)	(0.070)	(0.090)	0.098***		0.803***		(0.012)	(0.155)
Econ. Inactive <sub>t</sub>	0.063***	0.003	0.067***	-0.017	0.458***	0.057	-	-0.015	-	-0.131	0.096***	0.844
	(0.012)	(0.012)	(0.009)	(0.019)	(0.052)	(0.080)	0.073***		0.880***		(0.011)	(0.438)
Educ <sub>t</sub>	0.024***	-0.024	0.001	-0.031	0.154**	0.045	-0.008	0.016	-	-0.168	0.059***	0.271***
	(0.009)	(0.015)	(0.008)	(0.021)	(0.068)	(0.096)	(0.010)	(0.022)	0.739***		(0.008)	(0.124)
Temp Emp <sub>t</sub>	0.028**	-0.007	0.023*	-0.003	0.194***	-0.141*	-0.034**	0.007	-	-0.020	0.020**	0.327**
	(0.011)	(0.017)	(0.012)	(0.015)	(0.070)	(0.081)	(0.013)	(0.020)	0.385***		(0.009)	(0.186)
P-T Emp <sub>t</sub>	0.008	0.003	0.018**	-0.013	0.099**	-0.052	-0.023**	-0.033*	-	-0.111	0.030***	0.519
	(0.009)	(0.011)	(0.008)	(0.014)	(0.050)	(0.069)	(0.009)	(0.018)	0.515***		(0.007)	(0.271)
N	11,562											

Note: For all specifications in this model the following vector of time-variant controls are used: uk region of residence, number of children under 16, if the respondent has a degree-level qualification, whether the individual lives in a rural area, whether the respondent has ever been married, and time effects.

TABLE X IMPACT OF CURRENT EMPLOYMENT STATUS ON POVERTY FOUR YEARS IN THE FUTURE, FE APPROACH, BY GENDER

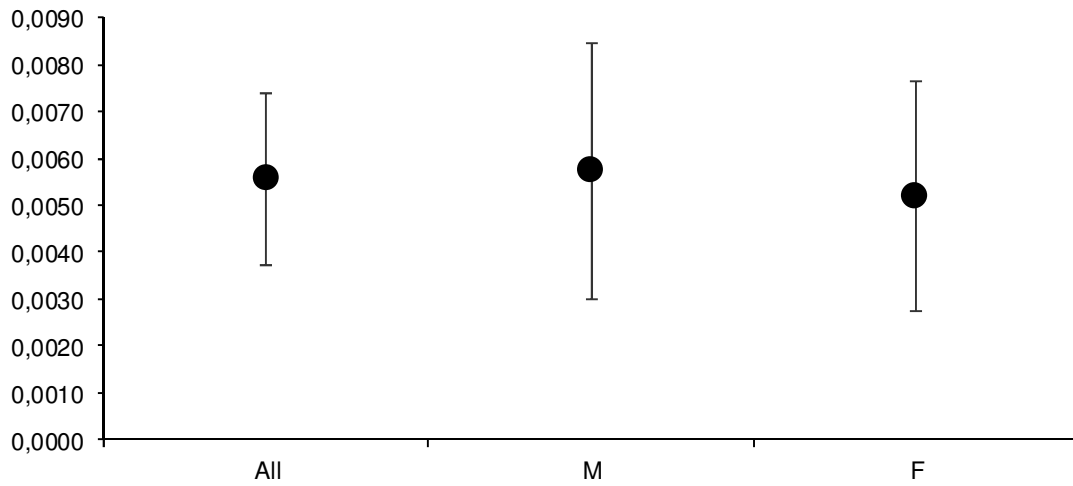
	Pr(Poverty <sub>t+4</sub> )		Pr(Arrears <sub>t+4</sub> )		MatDep <sub>t+4</sub>		Pr(FinSit <sub>t+4</sub> )		LogTotPersInc <sub>t+4</sub>	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Unemp <sub>t</sub>	-0.016 (0.022)	0.016 (0.023)	-0.043 (0.032)	0.063* (0.034)	0.000 (0.146)	0.203* (0.110)	0.026 (0.033)	-0.007 (0.035)	0.224 (0.168)	-0.261* (0.146)
Econ. Inactive <sub>t</sub>	0.038 (0.041)	0.002 (0.013)	-0.120 (0.082)	0.002 (0.020)	0.108 (0.358)	0.082 (0.088)	0.015 (0.106)	-0.029 (0.024)	-0.144 (0.393)	-0.201** (0.097)
Educ <sub>t</sub>	-0.012 (0.027)	-0.030* (0.018)	-0.016 (0.032)	-0.042 (0.029)	-0.101 (0.155)	0.106 (0.120)	0.035 (0.038)	0.008 (0.028)	-0.033 (0.195)	-0.223 (0.172)
Temp Emp <sub>t</sub>	0.003 (0.030)	-0.011 (0.021)	0.029 (0.030)	-0.025 (0.016)	-0.181 (0.120)	-0.112 (0.109)	-0.039 (0.032)	0.035 (0.025)	-0.087 (0.138)	0.043 (0.126)
P-T Emp <sub>t</sub>	0.005 (0.028)	0.003 (0.012)	0.015 (0.030)	-0.014 (0.017)	-0.173 (0.146)	-0.004 (0.079)	0.017 (0.031)	-0.052** (0.021)	0.146 (0.163)	-0.211** (0.096)
N	11,562									

Note: The vector of controls is identical to the model for both genders. The fixed effect multinomial logit model is only able to use observations for which there is within variation. Given the persistent nature of employment status, there is insufficient within variation to estimate the model separately for each gender sample.



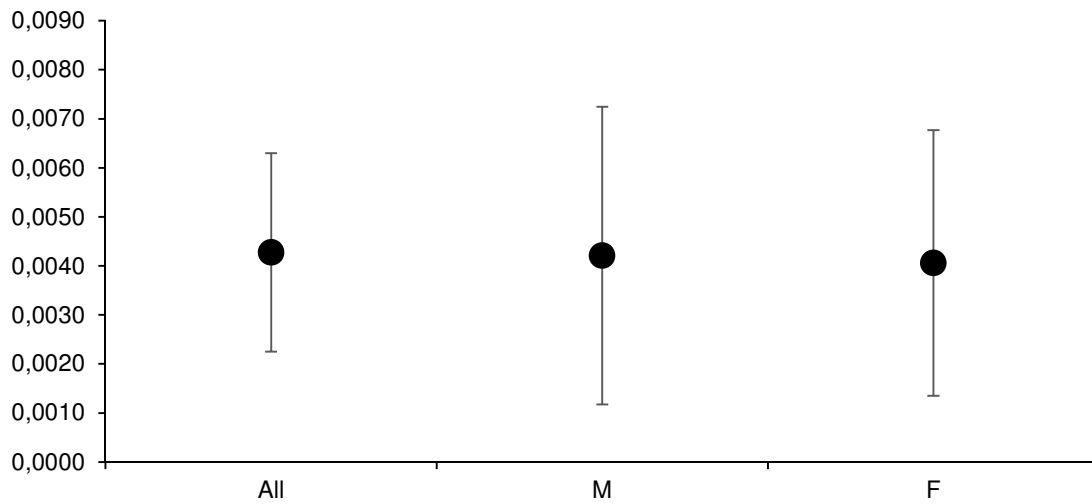


**FIGURE I MARGINAL EFFECT OF CUMULATIVE MONTHS UNEMPLOYED (16-34) ON POVERTY AT AGE 35-45 (PANEL A, COLUMN 1, TABLES II, III, IV)**



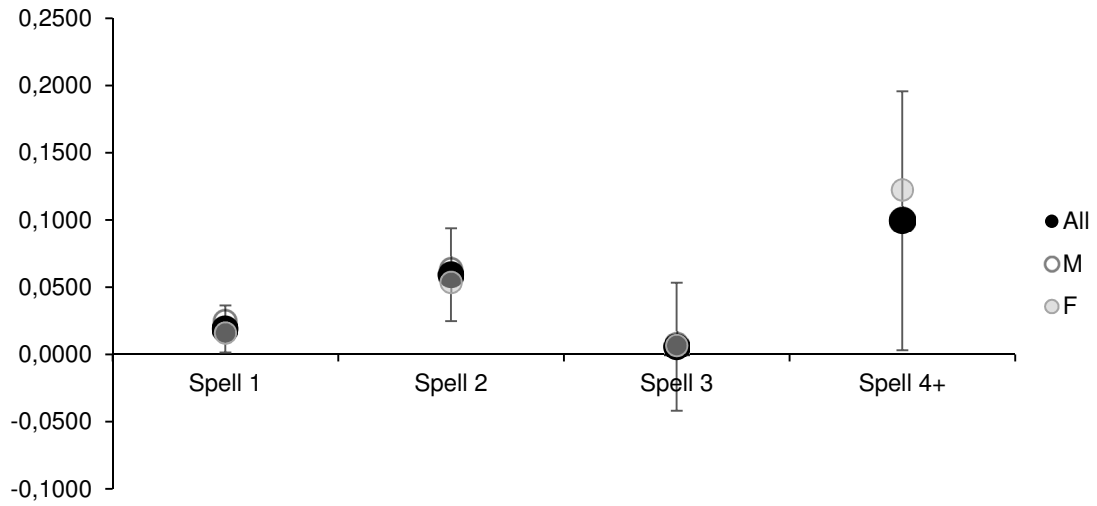
Notes: In all figures the dot denote the estimated marginal effect and the whiskers capture the 95% confidence interval. In figures 3,4 and 5 the 95% confidence interval is plotted only for estimates using the full sample.

**FIGURE II MARGINAL EFFECT OF CUMULATIVE MONTHS UNEMPLOYED (16-34) ON POVERTY AT AGE 35-45 (PANEL B, COLUMN 1, TABLES II, III, IV)**

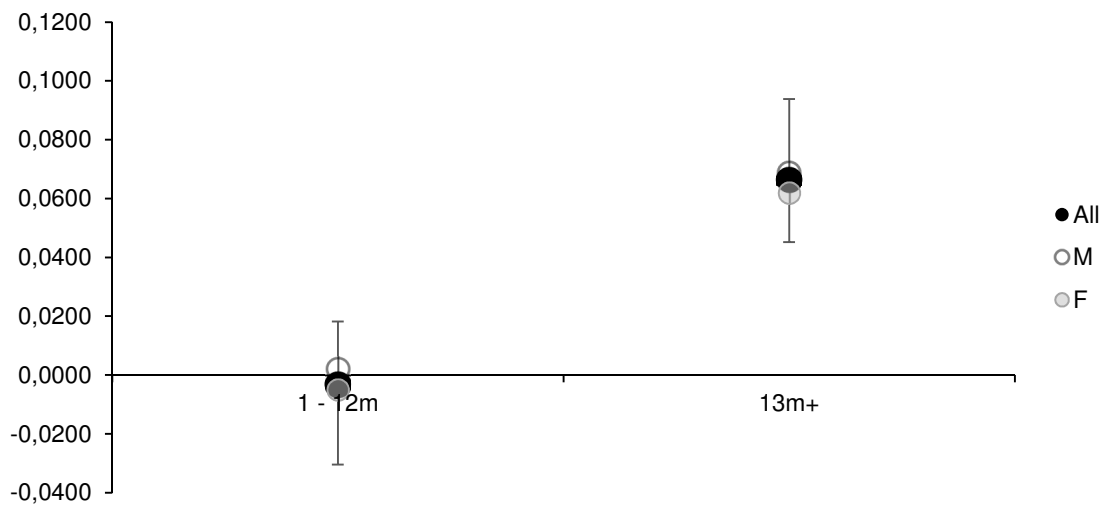




**FIGURE III MARGINAL EFFECT OF NUMBER OF UNEMPLOYMENT SPELLS (16-34) ON POVERTY AT AGE 35-45 (PANEL B, COLUMN 1, TABLES II, III, IV)**

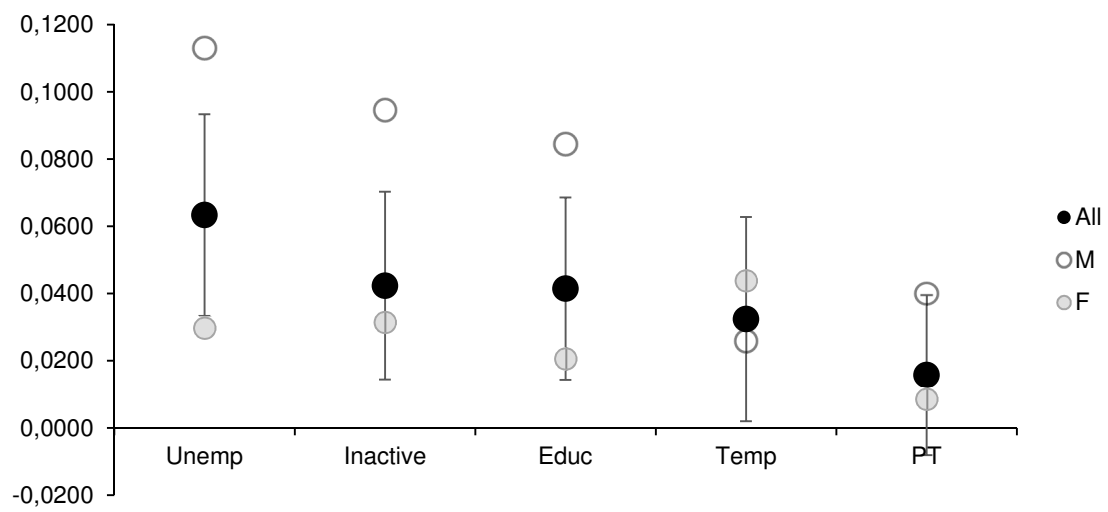


**FIGURE IV MARGINAL EFFECT OF EMPLOYMENT SPELL LENGTH (16-34) ON POVERTY AT AGE 35-45 (PANEL C, COLUMN 1, TABLES II, III, IV)**





**FIGURE V MARGINAL EFFECT OF EMPLOYMENT TYPE IN WAVE ONE (16-35) ON POVERTY FIVE YEARS HENCE (COLUMN 1, TABLES VI, VII, VIII)**





## Appendix

**TABLE I.I: EMPLOYMENT HISTORY SUMMARY TABLE**

Variable	All		Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Poverty	0.093		0.101		0.087	
Arrears	0.083		0.079		0.085	
Mat Dep	2.785	1.687	2.852	1.761	2.736	1.629
Fin Sit	0.852		0.862		0.844	
Inc	2252.96	1812.88	2754.79	2073.70	1888.01	1494.60
<i>Emp Stat</i>						
FT Perm Emp	0.565		0.784		0.405	
Unemp	0.054		0.061		0.048	
Econ. Inactive	0.152		0.053		0.223	
Educ	0.006		0.005		0.007	
Temp FT Emp	0.044		0.044		0.044	
PT Perm Emp	0.180		0.053		0.273	
<i>Occupation Code</i>						
0	0.212		0.119		0.279	
1	0.138		0.189		0.101	
2	0.117		0.139		0.101	
3	0.138		0.139		0.138	
4	0.084		0.042		0.116	
5	0.068		0.136		0.018	
6	0.080		0.023		0.121	
7	0.041		0.024		0.053	
8	0.052		0.111		0.010	
9	0.070		0.119		0.064	
Months Unemployed	5.940	29.859	7.563	33.666	4.759	26.694
Months Other	19.325	50.729	5.134	27.942	29.645	60.205
Months Education	15.622	38.171	15.860	37.071	15.448	38.955
<i>Number of Spells</i>						
0	0.790		0.743		0.825	
1	0.155		0.180		0.137	
2	0.037		0.052		0.027	
3	0.012		0.017		0.009	
4+	0.005		0.008		0.002	
<i>Unemployment Category</i>						
0 Months	0.844		0.802		0.875	
1 to 12 Months	0.091		0.113		0.075	
13+ Months	0.065		0.085		0.050	



**TABLE I.I (CONT.): EMPLOYMENT HISTORY SUMMARY TABLE**

Variable	All		Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	40.184	3.153	40.162	3.133	40.200	3.168
<i>UK Region</i>						
1	0.036		0.037		0.035	
2	0.105		0.103		0.107	
3	0.087		0.089		0.086	
4	0.075		0.073		0.077	
5	0.089		0.088		0.089	
6	0.093		0.095		0.091	
7	0.163		0.163		0.163	
8	0.124		0.129		0.121	
9	0.074		0.074		0.074	
10	0.040		0.039		0.041	
11	0.069		0.068		0.069	
12	0.044		0.042		0.046	
Children	0.691	0.462	0.639	0.480	0.728	0.445
Dad Unemp	0.076		0.072		0.080	
Mum Unemp	0.362		0.378		0.351	
Degree	0.323		0.335		0.314	
Male	0.421		-		-	
<i>Ethnicity</i>						
1	0.780		0.783		0.777	
2	0.139		0.148		0.132	
3	0.055		0.045		0.062	
4	0.027		0.024		0.029	
Rural	0.189		0.183		0.193	
Married	0.619		0.654		0.594	
Wave 5	0.630		0.629		0.631	
N	6,864		2,890		3,974	



**TABLE I.II: EMPLOYMENT STATUS SUMMARY TABLE – POLS**

Variable	All		Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Mat Dep t+5	2.903	1.648	2.897	1.679	2.907	1.628
Fin Sit t+5	0.918	0.274	0.928	0.259	0.913	0.283
Poverty t+5	0.067	0.250	0.078	0.269	0.060	0.237
Inc t+5	1909.38	1626.10	2341.07	1918.73	1637.38	1341.65
Arrears t+5	0.077	0.266	0.061	0.239	0.087	0.281
<i>Emp Stat t+5</i>						
FT Perm Emp	0.537	0.499	0.760	0.427	0.396	0.489
Unemp	0.068	0.251	0.076	0.265	0.062	0.241
Econ. Inactive	0.153	0.360	0.027	0.163	0.232	0.422
Educ	0.038	0.191	0.033	0.179	0.041	0.198
Temp FT Emp	0.050	0.219	0.051	0.220	0.050	0.218
PT Perm Emp	0.155	0.362	0.052	0.222	0.219	0.414
<i>Occupation Code t+5</i>						
0	0.258	0.438	0.136	0.343	0.335	0.472
1	0.101	0.302	0.144	0.351	0.075	0.263
2	0.122	0.328	0.145	0.352	0.108	0.310
3	0.142	0.350	0.157	0.364	0.133	0.340
4	0.074	0.262	0.050	0.218	0.090	0.286
5	0.055	0.227	0.123	0.329	0.011	0.105
6	0.082	0.275	0.025	0.156	0.118	0.323
7	0.063	0.243	0.058	0.234	0.066	0.249
8	0.037	0.188	0.080	0.271	0.010	0.098
9	0.065	0.246	0.082	0.274	0.054	0.227
<i>Emp Stat t</i>						
FT Perm Emp	0.433	0.496	0.594	0.491	0.396	0.489
Unemp	0.080	0.271	0.093	0.291	0.071	0.258
Econ. Inactive	0.151	0.358	0.025	0.157	0.230	0.421
Educ	0.168	0.374	0.182	0.386	0.159	0.365
Temp FT Emp	0.052	0.222	0.059	0.236	0.048	0.213
PT Perm Emp	0.116	0.321	0.046	0.209	0.161	0.367



**TABLE I.II (CONT.): EMPLOYMENT STATUS SUMMARY TABLE – POLS**

Variable	All		Male		Female	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Age	26.815	5.800	26.627	5.946	26.933	5.704
<i>UK Region</i>						
1	0.048	0.214	0.056	0.231	0.098	0.202
2	0.112	0.316	0.111	0.314	0.113	0.317
3	0.098	0.298	0.099	0.298	0.098	0.297
4	0.080	0.271	0.078	0.267	0.081	0.273
5	0.094	0.292	0.102	0.303	0.089	0.285
6	0.081	0.273	0.080	0.272	0.082	0.274
7	0.155	0.362	0.156	0.363	0.154	0.361
8	0.116	0.320	0.115	0.319	0.116	0.321
9	0.072	0.258	0.068	0.252	0.074	0.262
10	0.045	0.208	0.041	0.198	0.048	0.214
11	0.055	0.229	0.056	0.229	0.055	0.229
12	0.043	0.203	0.039	0.194	0.046	0.208
Children	0.417	0.493	0.288	0.453	0.499	0.500
Dad Unemp	0.091	0.288	0.080	0.271	0.098	0.298
Mum Unemp	0.330	0.470	0.323	0.468	0.334	0.472
Degree	0.294	0.456	0.299	0.458	0.292	0.455
Male	0.387	0.487	-	-	-	-
<i>Ethnicity</i>						
1	0.770	0.421	0.778	0.416	0.765	0.424
2	0.155	0.362	0.164	0.370	0.150	0.357
3	0.044	0.205	0.034	0.182	0.050	0.218
4	0.031	0.173	0.024	0.154	0.035	0.183
Rural	0.168	0.374	0.159	0.366	0.173	0.378
Married	0.343	0.475	0.316	0.465	0.360	0.480
N	5,407		2,090		3,317	



**TABLE I.III: EMPLOYMENT STATUS SUMMARY TABLE – FE**

Variable		Mean	Std. Dev.
Mat Dep <sub>t+4</sub>	overall	2.983	1.667
	between		1.619
	within		0.546
Arrears <sub>t+4</sub>	overall	0.079	0.270
	between		0.250
	within		0.124
Inc <sub>t+4</sub>	overall	1838.87	1541.21
	between		1474.04
	within		504.94
Poverty <sub>t+4</sub>	overall	0.077	0.266
	between		0.256
	within		0.101
Fin Sit <sub>t+4</sub>	overall	0.900	0.300
	between		0.281
	within		0.140
EmpStat=1 <sub>t+4</sub>	overall	0.522	0.500
	between		0.479
	within		0.163
EmpStat=2 <sub>t+4</sub>	overall	0.065	0.247
	between		0.231
	within		0.114
EmpStat=3 <sub>t+4</sub>	overall	0.157	0.363
	between		0.344
	within		0.131
EmpStat=4 <sub>t+4</sub>	overall	0.053	0.224
	between		0.219
	within		0.084
EmpStat=5 <sub>t+4</sub>	overall	0.051	0.219
	between		0.195
	within		0.113
EmpStat=6 <sub>t+4</sub>	overall	0.152	0.359
	between		0.332
	within		0.143
Region 1	overall	0.044	0.206
	between		0.202
	within		0.011
Region 2	overall	0.115	0.318
	between		0.316
	within		0.024
Region 3	overall	0.094	0.291
	between		0.289
	within		0.019





Region 4	overall	0.081	0.273
	between		0.271
	within		0.017
Region 5	overall	0.089	0.285
	between		0.285
	within		0.017
Region 6	overall	0.083	0.276
	between		0.276
	within		0.024
Region 7	overall	0.159	0.365
	between		0.371
	within		0.033
Region 8	overall	0.119	0.324
	between		0.321
	within		0.030
Region 9	overall	0.072	0.258
	between		0.253
	within		0.024
Region 10	overall	0.045	0.208
	between		0.206
	within		0.016
Region 11	overall	0.058	0.233
	between		0.234
	within		0.013
Region 12	overall	0.042	0.200
	between		0.201
	within		0.000
Rural	overall	0.167	0.373
	between		0.369
	within		0.050
Married	overall	0.341	0.474
	between		0.466
	within		0.088
Degree	overall	0.292	0.455
	between		0.450
	within		0.049
Children	overall	0.422	0.494
	between		0.486
	within		0.098
Wave 1	overall	0.562	0.496
	between		0.325
	within		0.419
Wave 2	overall	0.438	0.496
	between		0.325
	within		0.419



No. 12 – Medium-term consequences  
Hofäcker (ed)

Occ_code1 <sub>t+4</sub>	overall	0.275	0.447
	between		0.429
	within		0.150
Occ_code2 <sub>t+4</sub>	overall	0.097	0.296
	between		0.289
	within		0.078
Occ_code3 <sub>t+4</sub>	Overall	0.117	0.321
	between		0.308
	within		0.076
Occ_code4 <sub>t+4</sub>	overall	0.132	0.339
	between		0.326
	within		0.097
Occ_code5 <sub>t+4</sub>	overall	0.074	0.262
	between		0.253
	within		0.074
Occ_code6 <sub>t+4</sub>	overall	0.056	0.230
	between		0.225
	within		0.051
Occ_code7 <sub>t+4</sub>	overall	0.083	0.276
	between		0.268
	within		0.070
Occ_code8 <sub>t+4</sub>	overall	0.064	0.245
	between		0.235
	within		0.082
Occ_code9 <sub>t+4</sub>	overall	0.036	0.187
	between		0.183
	within		0.049
Occ_code10 <sub>t+4</sub>	overall	0.065	0.246
	between		0.239
	within		0.081
N		11,562	



**TABLE I.IV: POVERTY PERSISTENCE SUMMARY TABLE**

Variable	Mean	Std. Dev.
Pers Pov	0.086	0.281
Num Pov	0.597	1.412
<i>Unemp Cat</i>		
0 Months	0.811	0.392
1 to 12 Months	0.110	0.313
13+ Months	0.080	0.271
Months Unemp	9.953	42.266
Months Other	28.054	64.687
Months Educ	44.312	52.580
Age	40.045	3.115
<i>Region</i>		
1	0.043	0.203
2	0.109	0.312
3	0.085	0.279
4	0.075	0.264
5	0.059	0.235
6	0.080	0.272
7	0.142	0.349
8	0.133	0.340
9	0.092	0.289
10	0.042	0.201
11	0.068	0.252
12	0.072	0.258
Children	0.669	0.471
Dad Unemp	0.072	0.258
Mum Unemp	0.359	0.480
Degree	0.341	0.474
Male	0.420	0.494
<i>Ethnicity</i>		
1	0.822	0.383
2	0.095	0.293
3	0.054	0.225
4	0.029	0.169
Rural	0.239	0.426
Married	0.608	0.488
Age	40.045	3.115
N		1,157



## V Socioeconomic Consequences of Job Insecurity and Subjective Poverty Among Youth in Italy

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### 1. Labour Market Situation of Youth in Italy and Their Risk of Poverty

With regard to the youth labour market situation, Italy is characterised by structural youth unemployment. A vast amount of literature argued that, even before the onset of the recent economic crisis, the Italian partial and targeted model of labour market deregulation, introduced since the 1990s (with the insider-outsider divide that followed and the re-regulating welfare and labour market) greatly deteriorated the plight of young people (Barbieri 2011, Barbieri and Scherer 2009, Blossfeld et al. 2012). Young people were, in fact, considered the main losers of the Italian labour market flexibilisation process – “*at the margins*” (Barbieri 2011, Barbieri and Cutuli 2016, Blossfeld et al. 2011).

As we know, the national institutional contexts can “*filter*” the negative consequences of labour market exclusion and job insecurity in terms of economic vulnerability, leading to different outcomes in different contexts (Hofäcker et al. 2010). In this respect, the characteristics of the Italian system of employment protection and regulation, as well as unemployment protection, play a significant role,

Considering both the employment protection legislation and social protection system specifically, the Italian labour market has undergone substantial reforms over the past two decades (Barbieri & Scherer 2009, Mussida & Lucarelli 2014, Treu 2013, Fana, Guarascio & Cirillo 2015). In the 1990s, Italy was among the countries with the highest score on the OECD employment protection legislation index. However, in 2010, the level changed and became almost average (Reyneri 2011). Nevertheless, the reform process was “*marginal and asymmetric*” (Boeri 2012): marginal in the sense that it applied only to new jobs and asymmetric as it affected only a fraction of the population. A very rapid introduction of temporary employment, without the creation of an adequate system of new forms of social protection, affected the life of young people differently than in other countries, where such changes were slower or accompanied by higher levels of social protection (Bertolini, 2011). In a typical “*outsiders*” and



“insiders” model, permanent workers often enjoyed a high level of protection when working or not (e.g. through state unemployment funds, sick leave arrangements etc.), while there was only a low level of social protection for fixed-term workers in terms of not only income but also job guarantees.

The Italian education and vocational training system has to be considered as well. In particular, two main features have to be highlighted. First, while exhibiting the lowest rate of university graduates in the age group 30-34 among EU28 countries (25.3% vs. 38.7% (European Commission 2016)), Italy has also been a country with high levels of educational mismatch: About 32% of employed population in the working age 16-65 are educational mismatched. Among the highest percentage among European countries (Flisj et al. 2017). In a framework of extremely weak demand for skilled labour, the labour market was not able to absorb the increasing numbers of young people, especially female, exiting the school system with high levels of education (Reyneri & Pintaldi 2013). Secondly, the relationship between vocational training and businesses is historically very weak in Italy and young people exiting education lack the professional knowledge that could facilitate their entry into the labour market. This disconnection between education and job-training therefore has made the transition from school to work problematic, which has been reflected in very high levels of youth unemployment and prolonged precarious employment careers. Over the years, according to Ricucci (2015: 101) “the demands of the scientific community for an ever-closer partnership have effectively resulted in experiments, rarely in lasting policies (Barone 2012). Secondary schools (mainly at their upper stage) have been placed under observation: firstly, technical and vocational schools have been under-scrutinized, with their mission focussed on educating and training good technicians (and, of course, a huge variety of skills); then high schools, which are nowadays under a profound transformation in order to define their programmes as much more interrelated with the socio-economic fabric than they were”.

More recently, the latest school reform, called “*La buona scuola*” [the good school], has stressed the need for a close (and strong) link between learning and job experiences: training activities have now to be developed in all the educational tracks. From the legislator’s point of view, the introduction of alternation is considered as an innovation of the traditional learning model, moving towards the possibility of introducing the German dual-system into Italy (Ballarino 2011, Ballarino & Checchi 2013)<sup>1</sup>. In this scenario, the weakness of the Italian youth condition in the labour market has been exacerbated by the long-lasting economic crisis that began in 2008, which disproportionately affected young people. The segmentation across age, gender and region was very marked in Italy and job opportunities unevenly distributed among the labour force, with strong marginalisation of young people, especially those residing in the South (Colombo and Regini 2016, Fernández-Macías and Vacas-Soriano 2017). The age employment gap was much wider in Italy than in other EU countries, with employment rates ranging in 2015 from 68.2% in the 25-54 age bracket, to 15.6% for young people (15-24) and 48.2% for 55-64, compared to respectively 78%, 33.1% and 53.3% of the EU28 average (Eurostat 2016c). Even though declining due to the dramatic reduction in male employment, the gender gap in employment rates still reached 20% in 2015 compared to 11.6% of the EU28 average (Eurostat 2017b).

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<sup>1</sup> The German model is really far away from the Italian situation: however, at this stage the latest school reform tries to shift from an approach based on an individual subject to “a type of wider school community in which formal education activities are combined with non-formal and informal learning actions in other places of civil society and leads to an acquisition of recognizable skills” (Indire 2013: 23).



Between 2008 and 2013, the employment rate of youth aged 15-24 dropped by 8 percentage points to reach 16.3% in 2013, and the unemployment rate increased by about 20 percentage points to reach the dramatic figure of 42.4% in January 2014, an unprecedented level in Italy (ISTAT 2016a). After a deep and long recession, Italy seems to have started to recover, although recovery remains weak, and productivity continues to decline (ISTAT 2016a, OECD 2017). The unemployment rate is decreasing, but remains seriously high among young people. The high level of unemployment has led to discouragement and inactivity among young people: the incidence of NEET reaches in Italy one of the highest values in Europe. In 2015 25.7% of young people aged 15-29 was NEET (6.4 percentage points above that of 2008) compared to 14.8% of the EU28 average (Eurostat 2016b).

Unemployment and low pay are the most relevant risk factors for poverty among young people: in Italy, they are the most likely to be at risk of poverty and social exclusion. In 2015, the percentage of young Italian people aged 16-24 at risk of poverty and social exclusion<sup>2</sup> was 36.5% (+ 5.4 p.p. compared to 2007 and + 5.6 p.p. compared to EU28). Among young people aged 25-29, this reached 36.8%, 10 percentage points higher than the EU28 average (Eurostat, 2016a). In comparison with the risk of poverty of other age groups, such as people aged 60 or over (20%), or with overall poverty risk (28.7%), youth disadvantage has become particularly evident.

Poverty and social exclusion do not affect only those who are economically inactive or unemployed. Considering the Italian in-work at-risk-of-poverty rate by age in 2015, those aged 25-29 were in the most serious condition with 12.6%, more than 4 p.p. higher than in 2007, and 3.4 p.p. above that of EU28. The greater vulnerability to poverty of young workers had to do with the fact that they were more likely to hold short-term, atypical labour contracts, and tended to be more exposed to employment loss, even when they held permanent contracts (Eurostat 2016). As stressed by existing literature, atypical employees experienced considerable risk of remaining trapped in a secondary, sub-protected labour market. In addition, they were less paid and faced higher unemployment risks and lower upward mobility chances (Barbieri 2011).

Looking at ISTAT (National Institute of Statistics) data, during the long recession, the incidence of absolute and relative poverty steadily decreased for people aged 65 and over, while it significantly increased among minors and young people. In 2015, the total incidence of absolute poverty<sup>3</sup> was 6.1% in terms of residing households. Considering the absolute poverty incidence (for households) by the reference person's age class, it is evident that it has declined over the last few years with age. In 2015, it reached 10.2% if the reference person was 18-34 years old, the highest value regarding all the age ranges, while in 2007 – before the crisis – it was 3%. Between 2007 and 2015, the household relative poverty incidence, if the age of the reference person was up to 35 years old, increased by more than 3 p.p., while it decreased for older persons (ISTAT 2016b).

In the absence of a minimum income scheme, young Italian people often needed to rely on their families, creating a phenomenon of hidden youth poverty, as well as increased deprivation for their families. This enforced dependency on parents, disguised the lack of opportunities and the poverty faced by young people (Saraceno 2015). Having to provide for one's children for longer was not only an increased financial burden on parents, but also created obstacles

<sup>2</sup> According to Eurostat definition "At risk of poverty or social exclusion, abbreviated as AROPE, refers to the situation of people either at risk of poverty, or severely materially deprived or living in a household with a very low work intensity" (Eurostat Glossary 2017).

<sup>3</sup> In the ISTAT definition, absolute poverty defines as poor "a household with a consumption expenditure lower or equal to the monetary value of a basket of goods and services considered as essential to avoid severe forms of social exclusion".



to youth autonomy, perpetuating a cycle of family poverty (Ghigi and Impicciatore 2015, Saraceno 2015).

However, the Italian family, the main social safety net of the Italian welfare model, has shown worrying signs of inadequacy in dealing with the crisis in the last few years. Family solidarity was able to shoulder the loss of income and employment among family members in the first period of the crisis, making use of savings. Nevertheless, as the crisis persisted, it showed weaknesses: the decline in both disposable income and the purchasing power of households and, at the same time, the increase in debt in the last few years, which undermined the important role of family redistribution (Banca D'Italia 2013). Therefore, the impact of the family pooling of income in reducing generational inequalities has recently run down.

Human capital was still an important protective factor but in Italy, income earned was still strongly linked with the socioeconomic (family) background, a link that tended to impede social mobility processes (ISTAT 2016a). Among the OECD countries, Italy is, after the UK and the US, the country where the intergenerational transmission of economic conditions is particularly pronounced. The influence of the family of origin on income levels reached by children is illustrated by people who belong to a high-status family and can benefit from greater opportunities in terms of human capital, social capital and wealth. In particular, parent's educational qualifications are discriminatory in Italy: individuals who at 14 had at least one parent with university or upper secondary school education, have today, at over 30 years old, incomes at their disposal 29% and 26% higher with respect to those individuals who had parents with a lower level of education (Istat 2016a, Franzini and Raitano 2013).

The process of welfare reforms undergone by Italy in the last decades safeguarded the older cohorts of insiders and pensioners, producing a surplus of social protection for the elderly. Specific attention has been devoted to national anti-poverty policies. Data on the risk of poverty before and after social transfers (excluding pensions) were used to evaluate if welfare systems could prevent people from the risk of falling into this condition (Fernández-Macías and Vacas-Soriano 2017). According to this data, the social protection system in Italy is among the least effective in Europe: social transfers reduced poverty by 5.3% compared with a European average of about 9%. The Italian transfer system's (excluding pensions) efficacy in reducing the risk of poverty among younger segments of the population was below the European average and, in any case, unable to counterbalance the trend of constant impoverishment (Fernández-Macías and Vacas-Soriano 2017, OECD 2017). In this situation, public opinion polls and surveys revealed widespread concerns among Italian people about their current and future income trends and the increased perception of being exposed to the risk of impoverishment. According to the last Italian Report of Eurispes (2017), the perception of poverty is on the rise, especially among young people. About one person in four says that he/she feels *'quite'* (21.2%) or *'very'* (3%) poor. Many young people declared that they had to implement anti-crisis strategies, such as returning to the parental home (13.8%), getting economic help (32.6%), or receiving help for their children from the grandparents by not having to pay for private nursery schools or babysitters (23%).

The phenomenon of subjective socioeconomic insecurity, the perception of risk and fear of job loss and income stability, was widely discussed in current public debates in Italy; however, it was little investigated in academic research. While much of the relevant research focuses on objective conditions of poverty or risk of poverty, little is known about how labour market exclusion and job insecurity impacts youth's individual feelings of insecurity. Most researchers



attribute young people's heightened socioeconomic insecurities to labour market changes, welfare state retrenchment and competitive pressures stemming from an increasingly globalised economy (Gautié and Schmitt 2010). As argued, in Italy young people were particularly exposed to the risk of not achieving stability over the course of their lives and not maintaining or reaching a socioeconomic status allowing them to create plans for the future (Busetta and Milito 2010, Ranci 2011). It thus is interesting to explore their subjective feelings of being poor.

### Subjective poverty

Subjective poverty is generally defined as people's overall subjective evaluation of their own financial/material situation. This definition is based on individual feelings, i.e. those who say that they feel poor represent subjective poverty. This notion was formulated in the 1970s (Buttler 2013, Goedhart et al. 1977). Whereas income poverty was based on external criteria, subjective poverty was based on individual perceptions and evaluations of external circumstances (Goedemé and Rottiers 2011). It was defined as a considerably low level of satisfaction with one's life situation or with particular life domains, such as income, health, leisure time, environment or social integration (Böhnke 2008, van Praag and van der Sar 1988).

Like the relative income definition, subjective poverty had a relative component as well. It was shown that not only does objective reality influence the evaluation of one's living situation, but the comparison with other people's living standards also played a role (Delhey and Kohler, 2008). Subjective poverty was operationalised in different ways: for example, (Whelan and Maître 2009) as "*subjective economic stress*", and (Goedemé and Rottiers 2011) as "*a feeling that you do not have enough to get along*".

Research showed the existence of a high cross-country variation in subjective poverty and social exclusion (Böhnke 2008, Mau et al. 2012, Nolan and Whelan 2010). Some researchers showed that money did not have a uniform effect on subjective well-being across different countries, problematizing predefined income poverty thresholds. Buttler (2013), for example, investigated the importance of income poverty relative to the national and EU wide income distribution in explaining subjective poverty, showing that the relevance of monetary resources in determining subjective poverty varied substantially across EU countries. He found a high cross-country variation: those countries generally perceived as affluent, such as Scandinavian and Continental European countries, had lower subjective poverty rates, while those perceived as less prosperous had higher subjective poverty rates, especially in Eastern European and some Southern European countries (Bulgaria with the highest value, 63%, followed by Greece with 61%). In Italy, the rate of subjective poverty was around 38% compared to the EU rate of 29%. However, Buttler also found that the majority of people who felt subjectively poor were not affected by national income poverty. In prosperous countries, like Germany, Norway or the Netherlands, the national poverty threshold seemed to be a better predictor of subjective poverty than in less affluent countries. This could be explained by the relatively high standard of living. In less affluent Eastern and Mediterranean countries, absolute income seemed to be a better predictor.

Some studies showed that the extent to which a social situation is perceived as being secure depends on cultural factors, such as distant or close family ties, and cultural patterns of acceptance of complaints about income (Buttler 2013), while others demonstrated that it depended on the way individuals were accustomed to (in)security and the capacity to cope with insecurity (Tulloch and Lupton 2003). However, it was also argued that institutional and socio-economic factors mattered (Mau et al. 2012).

Several empirical studies showed how and to what extent in Europe self-perceived poverty was associated with household size and type, with available household resources (Castilla





2010, Ravallion and Lokshin 2002, van Praag and van der Sar 1988), with individual and household socioeconomic characteristics (i.e. gender, age, employment status, education, tenure status and area of residence) (ISAE 2009, Ravallion and Lokshin 2002, Stanovnik and Verbič 2004). Guagnano and Santarelli (2013) showed, through a cross-country comparative analysis, to what extent self-perceived poverty in European countries was associated with specific household socioeconomic characteristics and aspects of household/community social capital endowment.

Special Eurobarometer data from 2011 on perceptions and attitudes towards poverty and social exclusion, revealed that in Europe, in 2009, gender, education and respondents' employment situations all made a difference with regard to how widespread poverty was thought to be.

More often than men, women believe poverty was widespread. In terms of age, the largest difference was noted between young respondents and those aged 40-54, while those who stayed in full-time education the longest, considered it to be less widespread than those who left school earlier. The most striking differences, however, were recorded among people with different working situations: 82% of unemployed respondents believed poverty was widespread in their country (compared to 69% of managers and 64% of students).

Regarding Italy, the ISAE (Institute of Study and Economic Analysis) revealed that, in 2007, three out of four Italians felt they were poor (ISAE 2009). The disadvantage perception was most prevalent among households where reference people had low levels of education, were manual workers, unemployed or housewives. Subjective poverty affected, more often, those who had a fixed-term contract than those with a permanent one, and those who lived in rented accommodation. Compared to the 2004 survey, perceived subjective poverty in Italy had risen in 2007 by 11 percentage points.

More recently, statistics on the evaluation of Italian families about the adequacy of family resources showed that in 2016 about 39% of Italian families defined the available economic resources of their family as scarce or insufficient (Istat 2016). This proportion was higher among households with one single component (43%) and among large households with five (48%) or more components (62%). In addition, the figures remained quite stable across the years, with values about 42% just before the economic crisis, in 2007, to up to 50% in 2013, and then decreasing to 39% in the most recent year (2016).

Filandri and Parisi (2012) investigated whether the relationship between objective and subjective poverty varied in the early years of the crisis in European countries, because of increased uncertainty due to the weakening of social protection. They showed that, comparing 2007 and 2009, the strength of the relationship between income and the perception of its adequacy did not change in the early years of the crisis, even for those traditionally disadvantaged segments of the population such as single parents with children. They hypothesised that the amount of time analysed and its close placement to the start of the crisis were not enough to appreciate the changes that had taken place: families seemed unaware of the degree of deterioration in place, probably because of their general difficulty to recognise the change due to, perhaps, inertia and perceptual delays. Further research should address more the role of other variables besides household composition, identifying the primary risk factors among the individual and household socioeconomic and contextual characteristics, and understanding, in more depth, the link between objective and subjective poverty.

In this framework, the paper investigates the medium-term relationship in Italy between labour force status and job insecurity at the time of the end of education and the level of subjective poverty that individuals experience five years later. The characteristics of the dependent variables are outlined above. With regard to the key traits of the main independent variables –



unemployment, inactivity and objective job insecurity – we already mentioned that young cohorts of entrants into the labour market are increasingly interested by insecure fixed-term contracts with little job or income protection and experience a high risk of prolonged entrapment in precarious careers. This was also confirmed by the most recent statistics showing that in 2015 about 41% (vs. 32.8% of the EU28 average) of youth aged 15-29 had fixed-term employment. As far as labour market exclusion is concerned, the proportion of inactive youth aged 15-29 was almost double the EU28 average (15% vs. 7.9%); the unemployment rate in the same age group was 29.9% (vs. 16.1% of EU28); and youth long-term unemployment rate (more than 12 months) was three times higher than the corresponding figure for the EU28 average (16.4% vs. 5.9% EU28) (Eurostat, 2017).

## 2. Operationalisation, Data and Method

The main research question leading the empirical analysis presented in this section is about the medium-term consequences of entering the labour market with precarious forms of employment or being excluded completely from the labour market regarding the risk of (subsequent) subjective poverty among youth in Italy. Second, we also investigate whether this relationship worsened further with the advent of the economic crisis. Finally, we also take into account the interaction with individual level factors such as education. In line with other country studies presented in this report, we test how the extent of the employment conditions at the time of entry to the labour market affected the risk of being in a situation of subjective poverty in the medium-term horizon, namely five years after having left education.

In more detail, we test two main hypotheses, built by combining the general framework outlined in the introduction of this report with the particular features of the Italian case illustrated in the previous section.

### Objective job insecurity and labour market exclusion

H1a: Entering the labour market with an atypical job (temporary but also other atypical forms of self-employment – semi-dependent, collaborator etc.) increases the chances of being subjectively poor in the following five years.

H1b: Remaining excluded from the labour market after the end of education (e.g. unemployed or inactive) negatively affects the chances of being subjectively poor in the following five years.

H1c: The number of job interruptions collected by the individual in the five years after the end of education is positively associated with a higher risk of feeling subjectively poor, since this was representative of fragmented careers that might have undermined income stability and thus the perception of poverty.

### Consequences of the economic crisis

H2: The chances of feeling poor for individuals who entered the labour market with atypical jobs further increased for those who were interviewed just after the economic crisis, in 2009. Although the consequences of the crisis took a couple of years to fully appear on the Italian labour market (highest peak of youth unemployment in Italy was in 2014 and 2013, in the EU), we expected that the worsening of the general economic conditions very soon impacted negatively on the perception citizens had about their available economic resources.

With respect to data, the potential of longitudinal analyses for Italy was restricted due to the very limited availability of appropriate databases on the national level. Among the very few longitudinal datasets available, some of them were outdated and others did not cover the information needed for this type of analysis on employment history and poverty. Nonetheless,



we identified the national dataset *Family and Social Subjects* (Famiglia e Soggetti Sociali) provided by the Italian Institute of Statistics (ISTAT), as a suitable candidate for the type of analysis we intend to perform. The dataset contains – among others – retrospective information about the end of education and the entire working career for a representative sample of Italian population. The survey was repeated in three time points, 1998, 2003 and 2009. For this work, we selected the two most recent waves (2003, 2009), which contained comparable items about the situation of subjective poverty<sup>4</sup>, while the first wave did not contain any information on the topic. All the variables used in this analysis regarding the characteristics of the individual at  $t_0$  were collected retrospectively. For each wave, the sample was composed of individuals who had attained their highest level of education five years prior to the survey (e.g. 1998 for people interviewed in 2003, and 2004 for individuals in the 2009 survey) and started their first job in the same year or following years, including those who never started working (i.e. were students or unemployed). Namely, we excluded those from the sample who had started their first job before attaining their highest level of education.

The dependent variable was whether the individual was in a situation of *subjective poverty at the moment of the interview* ( $t_5$ ). This was detected in the survey with the question, ““Regarding the last 12 months, and considering the needs of all family components, how have the family’s overall economic resources been?”. The choice was among excellent, good, scarce or insufficient. We operationalised the variable subjective poverty as a dichotomous variable with value 1 if the individual replied scarce or insufficient, and 0 otherwise.

The three independent variables of interest referred to the:

- *characteristics of the first job obtained after the end of education* ( $t_0$ ), namely if it was a permanent, temporary or self-employed job. The database provides detailed information about the type of contract, grouped together as follows:

Dependent worker with permanent contract	→ permanent
Dependent worker with fixed-term contract, Semi-dependent worker (contracts of collaboration on a project or on an occasional task), cooperative members	→ temporary & semi-dependent
Self-employed, entrepreneur, professional	→ autonomous; professional

For those who had never started working, the situation of labour market exclusion (being inactive or a student) was considered

- *number of job interruptions* collected by the individual during the 5 years taken into consideration
- *cohort*: a dummy variable coded 1 if the interviewee belonged to the third wave of the survey (collected in 2009) and 0 if they belonged to the second wave (2003). Although the third wave of the survey was collected just one year after the economic

<sup>4</sup> Information on actual income of the family was collected but was not available for researchers outside the ISTAT. Thus investigating objective poverty was not possible with the dataset. Nor was it possible to investigate material deprivation since the items included in this dataset did not match the Eurostat definition of material deprivation.



crisis of 2008, when the consequences on the labour market were not yet fully visible, the general context of negative expectations might have anyhow affected the perception of the interviewee's own economic condition

A first group of control variables referred to factors of particular interest for the object of study, such as the characteristics of the family. These variables were:

- *number of household components*: research showed that large families tended to be more exposed to objective and subjective poverty (Eurobarometer 2011, ISTAT 2016b), thus a high number of family members might have negatively affected the perception of poverty
- *reference person*: a dummy variable coded 1 if the interviewee was the reference person for the family in the survey. Indeed, information for all household components was collected through a reference person who was generally the head of the household. This variable was introduced in an attempt to control the fact that the dependent variable was collected at family level while the independent variables at  $t_0$  referred to the individual level

Other variables were the “typical” controls associated with the characteristics of the individual:

- *sex*: a dummy variable coded 1 for females
- *education*: a three-dummy variable (lower secondary or less, upper secondary and tertiary education) indicating the level of education attained (at  $t_0$ )

The methods used for the empirical analysis included cross-tabulations for descriptive statistics of the sample and logistic regressions for the probability of being subjectively poor after 5 years since the end of education, conditional on the characteristics of the first job obtained after the end of education and some control variables.



### 3. Results

#### 3.1 Descriptive statistics

In this section, we present the distribution of the dependent and independent variables and a cross-tabulation between dependent and independent variables. In our sample of individuals who finished education five years prior to the survey data, the proportion of individuals who perceived that the family's economic resources were not adequate (i.e. scarce or insufficient) at the time of the interview was about 34% (Table I).

In our sample, the groups of employed people with permanent and temporary or semi-dependent forms of contract were equally represented (Table II), while some other forms of employment covered a very low proportion of the sample. As mentioned before, we also considered the situation of labour market exclusion, for which we included: quite a relevant group of people who was still in education (39%), a small proportion (10%) of individuals who had never started working and were unemployed, and an even smaller proportion of inactive people (housewives or other types of inactive people). As far as the second independent variable was concerned, the number of job interruptions, the great majority of individuals who were employed after the end of education had never experienced a stop in their working career (71%). Among the others, 16% had one interruption and 7% had two interruptions in the last five years (Table II). Other characteristics of the sample are summarized in Table I.I in the appendix.

The cross-tabulation of the characteristics of the first job after the end of education (or a condition of LM exclusion) vis-a-vis the dependent variable, shows that the main divide ran across individuals in the labour market, and individuals who were excluded (Table IV). Indeed, the proportion of individuals who felt subjectively poor is greater among those who had never worked and were unemployed or inactive (56% and 49%), followed by students (36%). On the contrary, the proportions of individuals who perceived that the family's economic resources are inadequate are very similar for different groups of employed individuals: about 25% among temporary and self-employed workers, and about 30% for individuals with permanent contracts. This trend is confirmed in Table V, where the proportion of individuals who felt subjectively poor was greater among individuals who had never worked. However, contrary to what was expected, the two variables were inversely correlated: as the number of job interruptions collected in the five years increases, the perception of subjective poverty decreases. In the next section, we test further these descriptive results with a logistic regression for the association between labour market exclusion and objective job insecurity and the perception of subjective poverty.

**TABLE I DISTRIBUTION OF THE DEPENDENT VARIABLE**

Subjective poverty	No.	%
no	835	65.7
yes	436	34.3
Total	1,271	100

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



**TABLE II DISTRIBUTION OF THE LM STATUS AT T<sub>0</sub>**

<b>status at t<sub>0</sub></b>	<b>No.</b>	<b>%</b>
permanent	272	21.4
temporary or semi-dependent	273	21.5
autonomous; professionals	45	3.5
unemployed (never worked)	135	10.6
inactive (never worked)	45	3.5
student (never worked)	495	38.9
missing	6	0.5
Total	1,271	100

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)

**TABLE III DISTRIBUTION OF EMPLOYMENT SPELLS**

<b>number of job interruptions</b>	<b>No.</b>	<b>%</b>
0	419	70.8
1	96	16.2
2	41	6.9
3	23	3.9
4	10	1.7
5	1	0.2
6	2	0.3
Total (for employed individuals only)	592	100
people excluded from the LM (never worked)	679	
Total	1,271	

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



**TABLE IV CROSS-TABULATION BETWEEN LM STATUS AND SUBJECTIVE POVERTY**

subjectively poor						
status at $t_0$	No.			%		
	no	yes	total	no	yes	total
Permanent	191	81	272	70.2	29.8	100
temporary or semi-dependent	205	68	273	75.1	24.9	100
autonomous; professionals	34	11	45	75.6	24.4	100
unemployed (never worked)	60	75	135	44.4	55.6	100
inactive (never worked)	23	22	45	51.1	48.9	100
student (never worked)	318	177	495	64.2	35.8	100
Missing	4	2	6	66.7	33.3	100
Total	835	436	1,271	65.7	34.3	100

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)

**TABLE V CROSS-TABULATION BETWEEN THE NUMBER OF EMPLOYMENT SPELLS AND SUBJECTIVE POVERTY**

subjectively poor						
	No.			%		
	no	yes	total	no	yes	total
Zero	297	122	419	70.9	29.1	100
1 or two	105	32	137	76.6	23.4	100
three or more	29	7	36	80.6	19.4	100
never worked	404	275	679	59.5	40.5	100
Total	835	436	1,271	65.7	34.3	100

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)

### 3.2 Logistic regression

The estimates of the logit model for the association between the labour market condition of the individual after having left education ( $t_0$ ), the number of job interruptions collected and the situation of subjective poverty after five years ( $t_5$ ) are presented in Table VI. All models included the control variables presented in the data section and all the individuals in the sample. Model 1 only considers the first main independent variable; Model 2 also includes the number of job interruptions. As emerged in the descriptive results, the major divide in subjective poverty arises between people in the labour market (whatever the contract) and individuals excluded from the labour market. Indeed, individuals who had never started working and were searching for a job at the time of the interview (as they declared themselves as unemployed at  $t_5$ ), have a higher log odd of feeling subjectively poor compared to individuals who were employed with a permanent contract. The same can be said for individuals who are not employed and not



looking for a job (pure inactive, mainly self-defined as housewives). On the other hand, students do not perceive a higher feeling of subjective poverty compared to employed individuals in a permanent position, which might be associated to the fact that people who could afford to invest in education could count on their family or their own resources that guaranteed an adequate standard of living (in addition to positive expectations about future earnings). Therefore, we can say that H1a, assuming a positive association between entry to the first job with a temporary or atypical contract and subjective poverty in the medium-term, is not supported by our data. However, H1b, regarding a negative association between labour market exclusion and subjective poverty, is confirmed for unemployed and inactive individuals.

When introducing the number of job interruptions (Model 2), differences associated to the type of contract or exclusion from the labour market are no longer observable. The number of job interruptions itself is not statistically significant at the 95% level, although the first category (from 1 to 2 job interruptions) is slightly significant at 90% confidence interval (see Table III in the appendix). This indicates a reduction of subjective poverty for those who experienced no more than two interruptions after their first job (compared to those who never interrupted the first job after the end of education). This contrasts with what was hypothesised in H1c. However, this result may highlight that job interruptions may also reflect attempts of upward mobility in the labour market, which work through job changes to (hopefully) better jobs than being locked in one single job episode. Indeed, collecting several job experiences after the end of education might be considered a strategy for improving one's own position towards better jobs (in terms of pay and working conditions). This interpretation of the results is also supported by the fact that, when considering statistical significance at 90%, as in Table I.II in the appendix, individuals who found a temporary or semi-dependent contract after the end of education, are less likely to be subjectively poor than their counterpart with permanent contracts. This is probably because they had more chance of mobility through different jobs. Indeed, when introducing the control for the number of job interruptions (Model 2), this relationship is no longer significant, meaning that when the presence of job stops is controlled for, temporary or semi-dependent workers (at the beginning of the career) did not feel more or less subjectively poor after five years than their counterpart with permanent contracts.

With respect to the second hypothesis, it is interesting to note that there is a positive, significant and robust association across models, between subjective poverty and the period of observation, since individuals interviewed in 2009 tended to have a higher log odd of feeling subjectively poor. This supports H2, which assumed a negative effect on the perception of poverty among individuals, already observable soon after the start of the crisis, in 2008.

Finally, among control variables, we can see a significant protective role played by education, indicating that a higher educational level decreases the perception of poverty and, lastly, that being the reference person in the survey (compared to being a son/daughter or other relative in the household) increases significantly the log odd of feeling that the resources of the family are inadequate. No gender differences associated to the perception of subjective poverty emerged from our analysis.

As regards further controls, we also replicated the same analysis on the subsample of individuals who got a job after the end of education ( $t_0$ ), introducing the total number of months of job interruptions cumulated by the individual in the five years considered. However, since the latter information was available for a very limited number of individuals, the final sample size was reduced to 146 observations only, and estimates were not statistically significant. We also introduced an interaction effect between LM status at  $t_0$  and the level of education attained (Table I.III in the appendix), but the estimates did not show significantly different estimates between high and low education within the same job position.





In conclusion, Figure I plots the average marginal effect of different LM status at  $t_0$ , compared to being employed with a permanent contract, as emerged from the estimates of Model 1. It can be seen that, without controlling for the number of job interruptions, being unemployed and inactive increases significantly the log odd of being subjectively poor by, respectively, 20 p.p. and 15 p.p., compared to being employed with a permanent contract. On the other hand, having a temporary or semi-dependent contract slightly decreases the risk of feeling poor by about 7 p.p. (considering a 90% confidence interval).

Figure II plots together the average marginal effect of the main independent variables of interest, as emerged from Model 2 (see Table I.IV in the appendix for exact values). As mentioned above, labour market status changed and became non-significant once we included the number of job interruptions, while having one or two maximum job stops reduces the log odds of feeling subjectively poor by 9 p.p. (compared to not having any interruption), as well as being interviewed in 2009 (compared to 2003) increases the probability of feeling poor by about 9 p.p..

**TABLE VI LOGIT REGRESSION COEFFICIENTS (ALL INDIVIDUALS)**

	(1)	(2)
<b>LM status at <math>t_0</math> (ref= employed, permanent)</b>		
temporary & semi-dependent (collaborators; cooperative members)	-0.363 (0.201)	-0.220 (0.212)
autonomous; professional, freelance	-0.0791 (0.386)	-0.109 (0.387)
unemployed (n.w.)	<b>0.926***</b> (0.229)	1.656 (1.859)
inactive (n.w.)	<b>0.681*</b> (0.343)	1.409 (1.877)
student(n.w.)	-0.121 (0.181)	0.605 (1.854)
missing	-0.196 (0.889)	0.211 (1.448)
<b>number of job interruptions (ref= zero)</b>		
one or two		-0.441 (0.254)
three or more		-0.663 (0.458)
missing		-0.806 (1.844)



Table VI continued

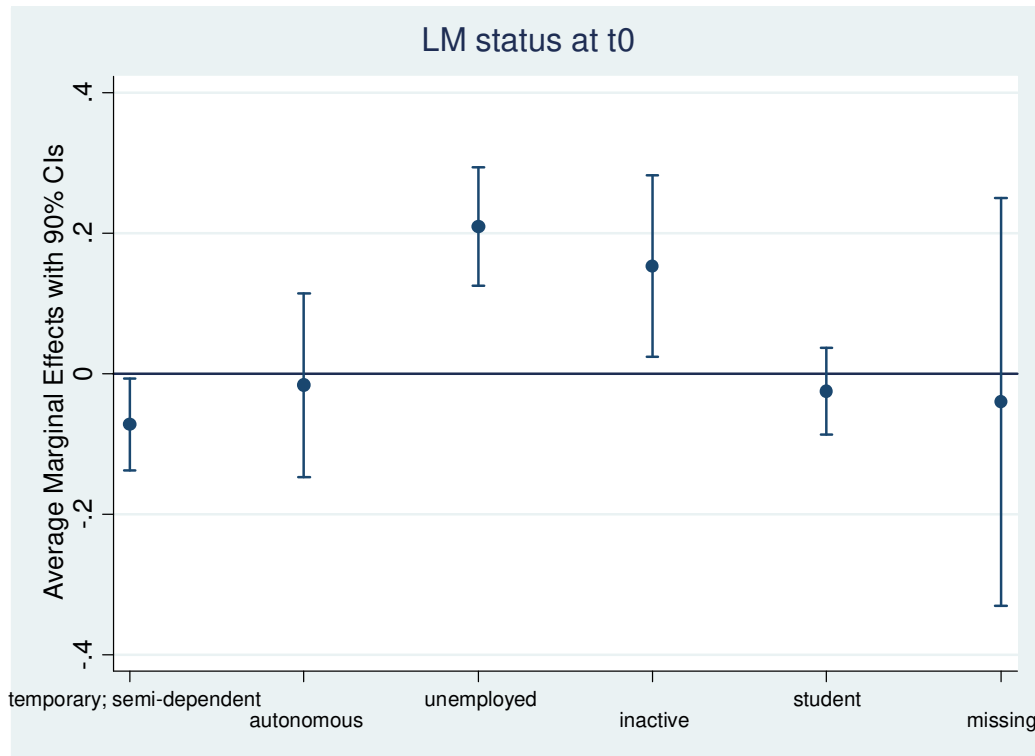
third wave (2009)	<b>0.384**</b> (0.127)	<b>0.429***</b> (0.130)
Age	0.000763 (0.0398)	-0.00108 (0.0398)
female (vs. male)	-0.131 (0.127)	-0.122 (0.127)
<hr/>		
education (ref= lower secondary or less)		
upper secondary	<b>-0.752**</b> (0.246)	<b>-0.747**</b> (0.246)
tertiary	<b>-1.621**</b> (0.503)	<b>-1.633**</b> (0.503)
number of household members	0.0720 (0.0627)	0.0718 (0.0628)
reference person	<b>0.851**</b> (0.301)	<b>0.877**</b> (0.302)
Constant	-0.528 (0.838)	-0.433 (0.841)
<hr/>		
Observations	1,271	1,271
Pseudo R <sup>2</sup>	0.0731	0.0759

Notes: Standard errors in parentheses; \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)

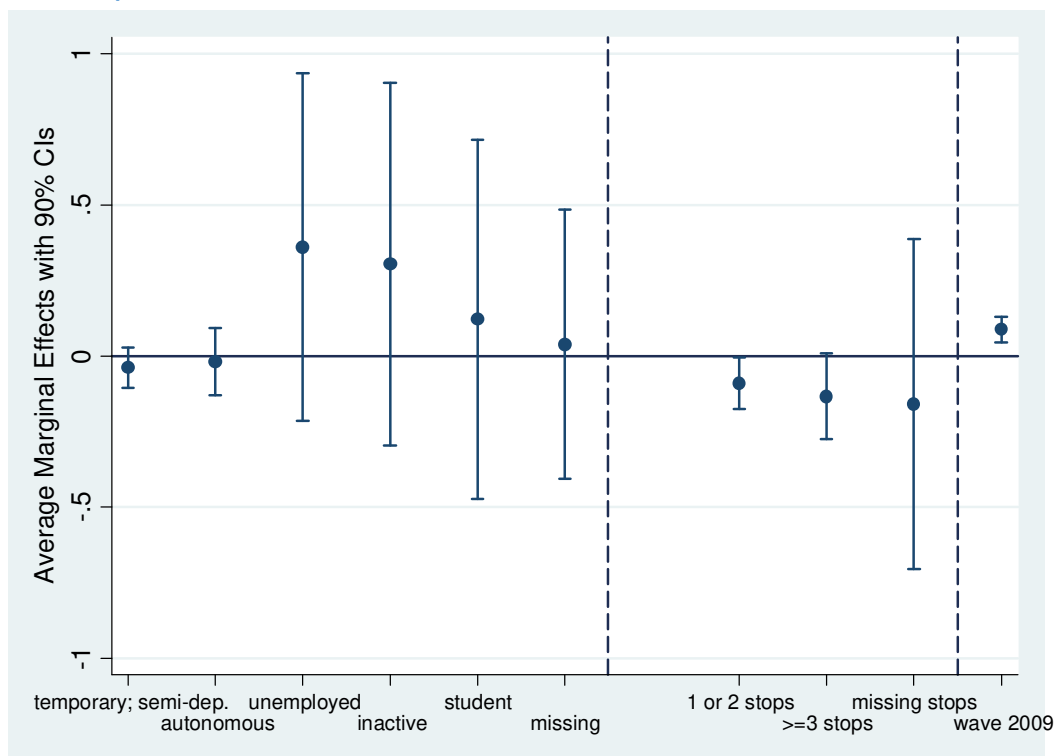


FIGURE I AVERAGE MARGINAL EFFECT OF LM STATUS (TABLE VII, MODEL 1)



Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)

FIGURE II AVERAGE MARGINAL EFFECT OF MAIN INDEPENDENT VARIABLES (TABLE VII, MODEL 2)



Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



#### 4. Summary

In this country study, we investigated the medium-term relationship between entering the labour market with precarious forms of employment (e.g. temporary contract) or being excluded from the labour market (e.g. being inactive) and the risk of subsequent subjective poverty among youth in Italy. We also tested whether the occurrence of the economic crisis in 2008 had an impact on the perception of subjective poverty after five years since the end of education, as well as some individual factors such as the educational attainment of individuals. The dependent variable, subjective poverty, was defined as a considerably low level of satisfaction with one's economic situation. In particular, in this work we looked at the individual's evaluation of the amount of resources available to the family (composed either of a single person or of more components). We analysed the relationship between the characteristics of the first job found after the end of education (or the exclusion from the labour market after the end of education) and the perception of subjective poverty after five years, conceived as the perception that economic resources available to the family were scarce or insufficient. Although limited to a small sample size and potentially exposed to measurement errors due to retrospective data, the empirical analysis showed that first, the feeling of being poor was more diffused among young people who were excluded from the labour market (namely unemployed or inactive). The descriptive analyses and the regression confirmed that individuals who had never started working and were searching for a job or were inactive at the moment of the interview ( $t_5$ ), had a higher log odds of feeling subjectively poor compared to individuals who were employed with a permanent contract (H1b). This result was confirmed in both international and national literature on poverty: unemployed people were at a higher risk of not only experiencing income poverty but also feeling subjectively poor. In particular, as Italy has a very low level of generosity of passive labour market policies, being unemployed coincided with not having access to other forms of social income. This can increase the feeling of not having the possibility to satisfy one's own needs. With respect to the type of contract (H1a) after the end of education and the perception of poverty, there were no differences across job contracts, with the exception of a small and slightly significant value for temporary and semi-dependent contracts, which decreased their perception (five years afterwards) of subjective poverty of about 7 p.p. compared to those who had a permanent contract after the end of education. Literature stressed that temporary workers were more vulnerable in Italy in the face of the economic crisis because, as mentioned in the introduction, they were more likely to lose their job and, at the same time, were less protected by the social security cushion (Barbieri et al. 2014, Brandolini 2009). This result can be explained by several factors. First, we might consider that even young people employed with a permanent contract may be exposed to the risk of poverty and, in particular, could fall into the category of working poor due to their low pay. Research showed that mean real earnings declined over the 1986 – 2004 period with a reduction in the entry wage, which was not compensated by faster subsequent wage growth (Rosolia and Torrini 2007). But this could also be due to the fact that entering the labour market with a temporary contract was very common and not associated to any idea of being poor, rather the expectation of future earnings was positive (Barbieri and Scherer 2005). Third, this could also be the result of subsequent steps in the labour market. Indeed, once we controlled for the number of job interruptions, the relative advantage of temporary and semi-dependent contract changed and was no longer significant. We might consider that job interruptions reflected attempts of upward mobility in the labour market, which worked through job changes towards (hopefully) better jobs compared to being locked in a one single-job episode. Indeed, collecting several job experiences after the end of education might be considered a strategy for improving one's own position towards better jobs (in terms of pay and working conditions). Moreover, having more job episodes may be a way to secure income continuity, even if in a situation of contract discontinuity, which in the end might help young people not to feel poor. Indeed, when job stops are



kept under control, individuals who, at the beginning of their career, were temporary or semi-dependent five years later, did not feel more or less poor than their counterparts who had started with permanent contracts. Besides, this is coherent with the result of control variables, by which there was a significant protective role played by education: a higher educational level decreased the perception of poverty<sup>5</sup>. In fact, literature underlined that, in Italy, having a high level of education did not increase the chances of entering the labour market with a permanent contract and a better position, but increased the chances of a better future career (Bertolini 2012, Franchi 2005, Reyneri 2011). Moreover, it is interesting to note that being the reference person in the survey (compared to being a son/daughter or other relative in the household) increased significantly the log odds of feeling that the family resources were inadequate. This result was consistent with the vast amount of literature that from time to time stressed one of the Italian patterns of poverty characteristics: it mainly concerned households, especially large households and those with minor children. Thus, having family responsibilities increases the feeling of being poor. Finally, as regards some considerations on the effect of the crisis, despite the consequences of the 2008 crisis taking a couple of years to fully appear on the Italian labour market (the highest peak of youth unemployment in Italy was in 2014), the worsening of the general economic conditions seemed to have impacted negatively on the perception that citizens had about their available economic resources (HP2). In fact, individuals who were interviewed in the third wave of the survey, which took place in 2009, tended to have a higher log odds of feeling subjectively poor compared to their fellow interviewees in 2003.

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<sup>5</sup> Although interaction between education and the type of contract does not provide a clear indication about the highly educated entering their first job with a temporary or semi-dependent contract being less exposed to subjective poverty than low-medium educated (which, on the other side, might be also due to the small sample size).



## Appendix

**TABLE I.I CHARACTERISTICS OF THE SAMPLE**

Variable	Mean	Std. Dev.
<i>Age</i>	23.2	4.3
	<b>N</b>	<b>%</b>
<i>Sex</i>		
male	629	49.5
female	642	50.5
	1,271	100
<i>Educational Level</i>		
lower secondary or less	467	36.7
upper secondary	610	48.0
tertiary	194	15.3
	1,271	100
<i>Number of household components</i>		
1	45	3.5
2	103	8.1
3	353	27.8
4	494	38.9
5	212	16.7
6 or more	64	5.0
	1,271	100
<i>Year of the survey (wave)</i>		
2003	767	60.3
2009	504	39.7
	Total	1,271
		100
<i>Reference person</i>		
no	1,193	93.9
yes	78	6.1
	1,271	100

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



**Table I.II Logit regression coefficients (90% confidence interval)**

	(1)	(2)
<b>LM status at t<sub>0</sub> (ref= employed, permanent)</b>		
temporary & self-dependent (collaborator; cooperative members)	-0.363+ (0.201)	-0.220 (0.212)
autonomous; professional, freelance	-0.0791 (0.386)	-0.109 (0.387)
unemployed (n.w.)	0.926*** (0.229)	1.656 (1.859)
inactive (n.w.)	0.681* (0.343)	1.409 (1.877)
student(n.w.)	-0.121 (0.181)	0.605 (1.854)
missing	-0.196 (0.889)	0.211 (1.448)
<b>no. of job interruptions (ref= zero)</b>		
one or two		-0.441+ (0.254)
three or more		-0.663 (0.458)
missing		-0.806 (1.844)
third wave (2009)	0.384** (0.127)	0.429*** (0.130)
age	0.000763 (0.0398)	-0.00108 (0.0398)
female	-0.131 (0.127)	-0.122 (0.127)
<b>education (ref=lower secondary or less)</b>		
upper secondary	-0.752** (0.246)	-0.747** (0.246)
tertiary	-1.621** (0.503)	-1.633** (0.503)
number of household members	0.0720 (0.0627)	0.0718 (0.0628)



*Table I.II continued*

reference person	0.851**	0.877**
	(0.301)	(0.302)
<hr/>		
Constant	-0.528	-0.433
	(0.838)	(0.841)
Observations	1,271	1,271
Pseudo R <sup>2</sup>	0.0731	0.0759

Notes: Standard errors in parentheses; + p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)





**TABLE I.III LOGIT REGRESSION COEFFICIENTS (MODEL WITH INTERACTION BETWEEN LM STATUS AND EDUCATION)**

	(beta)	(se)
<b>LM status at t0 (ref=employed, permanent)</b>		
temporary; semi-dependent	-0.429*	(-1.97)
autonomous; professional	-0.318	(-0.63)
unemployed (n.w.)	0.812***	(3.31)
inactive (n.w.)	0.544	(1.48)
student (n.w.)	-0.223	(-1.19)
missing	-0.402	(-0.45)
age	-0.103***	(-4.53)
female	-0.155	(-1.23)
high education	-0.760+	(-1.82)
<b>LM status at t0 &amp; education</b>		
temporary&high (vs. temporary&low/m)	0.543	(0.97)
autonomous&high (vs. autonomous&low/m)	0.770	(0.96)
unempl&high (vs.unem&low/m)	0.776	(1.19)
inactive&high (vs. inactive&low/m)	1.255	(1.35)
student&high (vs. student&low/m)	0.0575	(0.05)
missing&high (vs. missing&low/m)	omitted	
number of household members	0.0874	(1.39)
third wave (2009)	0.375**	(2.95)
reference person	0.979**	(3.15)
Constant	1.369*	(2.21)
Observations	1271	
R2	0.0694	

Notes: Standard errors in parentheses; + p < 0.10, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



**TABLE I.IV AVERAGE MARGINAL EFFECTS OF INDEPENDENT AND CONTROL VARIABLES ON SUBJECTIVE POVERTY (TABLE VII, MODEL 2)**

	dy/dx	Std. Err.	Z	P>z	[90% Conf. Interval]	
LM status at t <sub>0</sub> (ref=employed, permanent)						
temporary; semi-dependent	-0.04	0.04	-0.93	0.351	-0.105	0.029
autonomous; professional	-0.02	0.07	-0.28	0.777	-0.130	0.092
unemployed (n.w.)	0.36	0.35	1.03	0.303	-0.215	0.936
inactive (n.w.)	0.31	0.37	0.84	0.403	-0.295	0.906
student(n.w.)	0.12	0.36	0.34	0.737	-0.473	0.717
missing	0.04	0.27	0.15	0.883	-0.405	0.485
no. of job interruptions						
1 or two	-0.09	0.05	-1.76	0.079	-0.175	-0.006
three or more	-0.13	0.09	-1.54	0.124	-0.275	0.009
missing	-0.16	0.33	-0.48	0.632	-0.706	0.388
age	0.00	0.01	-0.03	0.978	-0.014	0.013
female	-0.02	0.03	-0.96	0.336	-0.067	0.018
education (ref= lower secondary or less)						
upper secondary	-0.17	0.06	-2.99	0.003	-0.257	-0.075
tertiary	-0.31	0.08	-3.78	0.000	-0.449	-0.177
no. household members	0.01	0.01	1.15	0.252	-0.006	0.036
wave 2009	0.09	0.03	3.34	0.001	0.044	0.130
reference person	0.18	0.06	2.94	0.003	0.079	0.279

Source: own elaboration on Family and Social Subjects, ISTAT (2003 and 2009)



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## VI Does the Early Career Unemployment during Economic Recession Leave Scars? Evidence from Registry Data from Estonia

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There is ample evidence that unemployment experience has a scarring effect on later work life, both in terms of higher unemployment occurrence and lower earnings. Results for several Western European countries, such as e.g. Great Britain, Sweden and Germany, as well as for the US similarly suggest that unemployment experiences have a damaging effect on post-unemployment earnings (Arulampalam 2000; Gregg and Tominey 2004; Nordström Skans 2004; Schmelzer 2012; Gangl 2006). However, the magnitude of the impact of unemployment on the work pattern differs by welfare state regimes both in terms of subsequent unemployment occurrence and wage penalty (Brandt and Hank 2014; Gangl 2006; Albæk et al 2002). Gangl (2006) offers a macro-level explanation of these differences, arguing that the negative effects of unemployment on workers' subsequent earnings are mitigated through either generous unemployment benefit systems or strict labour market regulation.

Indeed, the diminishing future prospects of youth due to problems in getting a foothold in the labour market are on a very high agenda in the recent global crisis (Rokicka et al 2015). Estonia was hit especially hard by the recent recession reaching one of the highest levels of youth unemployment rates in Europe in 2010 (32.9% in Estonia vs 21% in EU-28). This evokes a serious concern: is this a generation who carries the scars of unemployment also years later? Two key mechanisms are at play relevant to explain the possible scarring effects of bad labour market start: (1) A resource-related mechanism that links scarring to workers' loss or depreciation of skills during periods of unemployment; and (2) a signalling-related mechanism that links unemployment scarring to the stigma attached to it (see also Gangl 2006, Mooi-Reci and Ganzeboom 2015).

Estonia exhibits one of the highest unadjusted gender pay gaps in Europe (Eurostat, 2017a). In general, gender pay gap is much lower for new labour market entrants and tends to widen with age (ibid.). Maybe part of it can be explained by a different meaning of early unemployment for men and women on the later career outcomes? In sum, we are aiming to explore if early unemployment enforces the socio-economic inequalities between men and women in the medium-run. Furthermore, we will also analyse whether the early unemployment is more detrimental for ethnic minorities.

Education is the main resource youth have while looking for a job. Do the consequences of unemployment vary between youth with different educational resources? It might be that highly educated are more shielded due to the more general skills they possess which are less prone



to the depreciation. On the other hand, early unemployment might be more harmful for vocational school graduates with more specific skills which might become more rapidly obsolete. However, if the unemployment scarring is explained mainly by the stigma associated with it, then tertiary graduates can lose more as employers might perceive them more stigmatized as they are less expected to experience unemployment.

The current analysis looks at youth who graduated at the peak of economic crisis in 2010 in Estonia and follows their work career for five years until 2015. We concentrate on possible scars of early unemployment on monthly wage five years later. First, we look at the association between early unemployment and later risk of poverty. Second, we scrutinize how much the later wage gap can be attributed to early unemployment experience. The analysis is based on registry data and concentrates on school leavers with vocational secondary and tertiary education. We use the occurrence of unemployment after obtaining education, its duration as well as later episodes of unemployment to provide a nuanced view of unemployment effect on potential poverty risk and wage loss five years later.

The chapter is organised as follows. Firstly, the specifics of the Estonian institutional context and hypothesis are presented. This is followed by a short description of operationalisation, data and methods. Finally, we outline the results and conclude with a short summary.

## 1. Institutional Context and Hypothesis

In the following, we present the specificity of Estonian educational system, employment protection legislation, social welfare system, and recent labour market developments. This is subsequently followed by hypotheses for the Estonian case

In Estonia, similarly to other Baltic countries, the percentage of upper secondary school students enrolled in vocational education is substantially lower than in other Central Eastern European (CEE) countries, and an expansion of tertiary education has taken place. Very little coordination exists between schools and employers and both remain relatively uninvolved in students' entry into the labour force (Unt 2011).

Labour market legislation was higher than OECD average before 2009, however, turbulent times of economic crisis were accompanied by the change in labour market regulations (ibid.). A key change was the reduction of the cost of terminating an employment relationship through a reduction in the notice period and the amount paid in severance payments. As in most CEE countries, the Estonia welfare regime is not very well developed. The employment benefit system is conditional on previous work career. Traditional institutions of protection against labour market risks (trade unions, employment contracts law, and social security transfers) are weak. Low levels of social expenditure have been one of the main arguments to allocate Baltic countries to the liberal welfare regimes (Toots & Bachmann 2010).

The Estonian labour market has gone through tremendous fluctuations during the last decade. After reaching one of the highest levels of the youth unemployment rate in Europe (32.5% in Estonia vs 20.6% in EU-28 in 2010) during the financial crisis, the situation stabilized fast. The share of youth searching for a job is lower in comparison to most other European countries (13.1% in Estonia vs 20.3% in EU-28 in 2015)<sup>1</sup>. In the period of 2010-2015, there were 13% more employees, suggesting that decreasing unemployment rates are indeed due to the creation of new workplaces. Despite the fast recovery, the level of youth unemployment in Estonia remains higher than before the crisis and is more widespread for youth as compared to the

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<sup>1</sup> Source: Eurostat (yth\_empl\_100) 15-24-years old





prime-age population, indicating the presence of barriers for youth in entry to the labour market.

The *success story* of Estonia is also clouded by the worrisome fact of the above-EU-average level of long-term unemployment among youth. In 2010, almost half of unemployed youth was looking for a job for more than a year. Between 2011 and 2013, two out of five unemployed young persons in Estonia had been unemployed for more than one year. This share has remained almost unchanged despite of the overall quick recovery from the crisis. Similar to many other European countries, both unemployment and NEET risks among school leavers in Estonia remain strongly related to the attained level of education – more than half of the graduates from lower secondary education are NEET during the early career stage, whereas among the highly educated, the figure is about three times lower. In contrast to the general European trend, the educational gap has not widened much in Estonia over recent years (Krusell 2015). One explanation for why the low-educated in Estonia have managed better relative to their European peers is the rapidly decreasing size of youth cohorts and the recovering economy which has created labour shortages in low-paid, low-skilled positions (ibid.). In addition, one tenth of low educated Estonian youth has found a workplace abroad (Krusell 2015). Thus, low-educated manage to enter employment, but are still at a great risk of ending up in low-paid jobs.

Youth graduating during the recession is under a strong pressure to accept any jobs as the social security transfers are very low in Estonia and therefore, the early unemployment experience may be a trigger for later inequality in terms of increased poverty risk as well as in terms of lower future earnings. We thus hypothesise:

**H1a: Early career unemployment is a trigger for poverty risk and lower earnings in the medium-term, i.e. up to five years later.**

It is important to take into account the particular socio-economic environment in which unemployment spells are experienced (Lupi and Ordine 2002). Evidence based on panel data from Italy shows that, while in the northern regions there is evidence of scarring effect from unemployment, in the southern area of the country – where overall unemployment is much more widespread - the impact is not significant because unemployment is more common and thus stigmatises less (ibid.). Also Petreski et al (2016) do not find a wage scar in Macedonia during the period of very high overall unemployment. Similarly, we may assume that during a severe recession, unemployment experience is perceived as "normal" and does not necessarily signal poor quality of the worker. However, this is only true in case of short unemployment spells. We thus hypothesise:

**H1b: Short term early unemployment during the economic recession is not harmful for future outcomes.**

Stevens (1997) argues that the main mechanism underlying the wage penalty for unemployment might be the higher risk of multiple job losses associated with the initial trigger event. Thus, if individuals succeed to avoid falling into unemployment more than once, they will have a better chance of recovery. In similar vein, Gregg and Tominey (2004) show that the impact of youth unemployment on later wages depends on the repeated occurrence of unemployment. However, the penalty of early unemployment is still present. Based on the National Child Development Survey in England, Scotland and Wales of those born in 1958, they demonstrate that the impact of unemployment during youth is having an impact upon the wage of individuals



up to twenty years later with a magnitude of 12% to 15% at age 42. However, this penalty is lower, at 8% to 10%, if individuals avoid the repeated incidence of unemployment (ibid.).

**H1c: We expect the wage penalty and especially the poverty risk to be reduced substantially if initially unemployed school leavers succeed to avoid falling into unemployment later.**

It has been argued that unemployment may have a different impact on different educational groups and signalling models might be more appropriate for predicting outcomes for low-educated people or people with less transferable/vocational knowledge (Schmelzer 2011). High-educated workers might choose unemployment over a low-paid job as a means of signalling their productivity, while a prolonged job search for low-educated workers might be interpreted by employers not as a signal of their high aspirations, but of their low productivity. In addition, highly-educated young people may wait longer for a better job offer than those with lower education, who get fewer offers and are under greater pressure to accept them (ibid.). The institutional context potentially enforces the effect as low unemployment benefits in Estonia expose unemployed workers to economic pressure to accept the arriving job offer regardless of its quality (see Gangl 2006 similar arguments for the UK context). Schmelzer (2011) tested the argumentation on the likelihood of losing or gaining status upon re-entry in early career and found indeed that high-educated people gain status while low-educated entrants lose status upon re-entering the labour market after unemployment in the UK (ibid.).

**H2a1: The unemployment scar is stronger for vocational graduates compared to tertiary graduates.**

However, the alternative mechanism is also possible: It could be argued that in the Estonian context – where the unemployment risk is considerably lower for highly educated – the ‘cost’ of it might be higher too. In the eyes of employers, the unemployed highly educated might be perceived more stigmatized as these are least likely (expected) to experience unemployment.

**H2a2: The unemployment scar is stronger for tertiary graduates compared to vocational graduates.**

Mooi-Reci and Ganzeboom (2015) point out that if a resource-related mechanism prevails – which links scarring to workers’ loss or depreciation of skills during periods of unemployment – then no differences across gender should occur. However, if employers do not base their hiring decisions mainly on educational resources, then stigma drives unemployment scarring. In this case scarring effects should aggravate among specific disadvantaged groups (e.g. gender, ethnicity etc.). Estonia stands out having the highest gender pay gaps in Europe and most of it stays unexplained after accounting for vertical and horizontal segregation, educational choices and other relevant factors (Anspal et al. 2010). Therefore, looking whether and how unemployment scarring varies by gender offers a valuable possibility to shed additional light into the issue.

**H3a: Early unemployment is more scarring for women.**

In terms of ethnic cleavages, in addition, we may assume that unemployment experience may be more detrimental for minorities during the scarcity of jobs and tightened competition due to smaller networks available to receive information about the vacancies. Unemployment figures tend to be much higher for non-Estonians compared to Estonians and this did not change during the crisis either. Moreover, the unemployment gap between Estonians and non-Estonians widened after the crisis (Krusell, 2015). This puts them under a greater pressure to accept any offer in the context of the very weak Estonian welfare system.



### **H3b: Early unemployment is more scarring for minorities.**

## **2. Operationalisation, Data and Methods**

The following analysis is unique in that it has been made possible due to an interlinking of several register data for years 2010 - 2015:

- from the Estonian Education Information System: the graduation from vocational or tertiary education 2010-2015 including information on education level (ISCED 97) and curriculum (included in which language);
- from the Tax Office 2010-2015: annual employment duration (months) data and received wage;
- from the Public Employment Registry: annual information on registered unemployment (number of days).

The analysis is concentrated on those who graduated in 2010, either with vocational or tertiary education. As the interest is on young school leavers, we concentrate on the age group 16-29, excluding 15% of graduates who were older than 29.

Our dependent variables are as follow:

- an indicator for being at the risk of poverty, earnings below 60% of median income in 2015, an indicator of monthly earnings (ln) in 2015

We apply OLS for monthly (ln) earning and logistic regression for poverty models.

There are several data restrictions which should be pointed out. Firstly, we are able to track only those being officially registered unemployed and do not have information about those who were looking for a job, but did not sign up at Public Employment Office. Furthermore, while salary was measured at the individual-level; we do not have information about either household level income or any social transfers.

## **3. Results**

In the analysis, we concentrate on those who have received a salary in 2015. Are those experiencing unemployment after graduation also more likely to be out of employment five years later and thus stay out from our sample? There are rather small differences between those having no unemployment experience after graduation versus those being unemployed up to one year. Namely, 76% of those not having unemployment experience versus 74% of those having up to six months and 73% up to one-year unemployment do have a salary five years later. Still, those who have been unemployed for more than a year after graduation, are substantially less likely to work five years later: 67% of them have a salary in 2015. Thus, the likelihood to be in employment is lower among those who have stayed out of the labour market for longer than one year after graduation. Thus, we might underestimate their poverty risk and potential wage scar.

Looking at descriptive data, there are clear differences in employment outcomes five years later by the occurrence and duration of the unemployment experience shortly after the graduation. Being at risk of relative poverty five years after the graduation is 11% for those having no early unemployment experience and 3-8% points higher for those being unemployed less than a year. The risk of poverty is extremely high for those who were enrolled in public employment office for longer than a year – one third of them are receiving salary below 60% of the average median income in Estonia. The wage penalty of early unemployment is also visible



five years later in descriptive data. The average salary of all graduates with no early unemployment experience is 1226 EUR in 2015. In comparison, the average salary is approximately 20% smaller for those who experienced unemployment for a short term, 30% smaller of those who experienced it for a medium term and 40% of those who had unemployment experience for more than one-year unemployment after graduation.

**TABLE I DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES**

	Early unemployment in 2010-2011			
	No	up to 6	6-12 month	over 1 year
In relative poverty in 2015	11%	14%	18%	33%
Average monthly salary in 2015, EUR	1226	987	857	708
N	7419	1856	1033	357

Source: Pooled Registry Data, Estonian Statistical Office.

After controlling for gender, age, education, the language of curricula and grades from state exams, the early unemployment scar is still visible. People being more than six months in unemployment, are still at a higher poverty risk (Table II, Model 1). However, the short-term unemployed do not differ anymore from those who did not experience unemployment. The overall earnings loss is clearly visible for all. But the magnitude varies by the duration (Table III, Model 1). For short-term unemployed, the wage gap is 5%, for medium term 17% and for long term 28%.

However, once we control for unemployment occurrence and duration two to five years later for both outcomes, the early unemployment scar is substantially reduced being only 0-3%-point difference (Table II & III, Model 2). Apparently, the early unemployment scar is mediated through the later work pathway. In case school leavers succeed to avoid falling into unemployment later, they neither do face a significantly higher poverty risk nor a reduced earning capacity. In contrast, it is visible that especially those who experience early unemployment are more prone to experience unemployment also later.

Once later labour market vulnerability is accounted for, early unemployment does not matter for earnings loss. However, what is the effect of unemployment occurrence and duration occurring 2-5 years after school graduation? 11% from those who were not unemployed between 2012 and 2015 were at poverty risk in 2015. This risk does not differ for those experiencing only short-term unemployment. The longer unemployment spells are more harmful, increasing poverty risk up to 19% for those being unemployed for 6-12 months and 29% for those unemployed more than a year. However, even the short unemployment experience 2-5 years after graduation results in an earnings loss reflected in 11% lower earnings compared to those not falling into unemployment. The drop is bigger for those being longer in unemployment; 24% and 37% respectively for those being unemployed for up to half a year or more than a year (Table II & III, Model 2).

The effect of early unemployment experience does not differ by educational level (Table II & III, Model 3) in terms of the poverty risk. However, the graduates with MA who are looking for a job more than one year face a later wage penalty. Females on average do not face higher scarring effects than men (Table II & III, Model 4). However, these women are especially female MA graduates who suffer from the wage penalty of long-term unemployment.<sup>2</sup> At the

<sup>2</sup> Models not shown here, but available upon request from authors



same time, those who graduated from curricula taught in Russian and experienced long-term early unemployment face less earnings loss (Table II & III, Model 5).

**TABLE II AT-THE POVERTY RISK IN 2015**

	Model 1	Model 2	Model 3	Model 4	Model 5
	b	b	b	b	b
Early UE experience 2010-2011 (ref = no)	0.0668	-0.0753	-0.114	-0.0463	-0.0992
up to 6 months	0.293**	-0.153	-0.413	-0.218	-0.102
6-12 months	0.956***	0.146	0.335	-0.0452	0.239
over 1 year					
Gender					
Female	0.700***	0.651***	0.650***	0.627***	0.652***
Age	0.0254	0.0250	0.0253	0.0245	0.0246
Education (ref = ISCED 5A: BA)					
ISCED 2C, 3C	1.112***	1.085***	0.934***	1.090***	1.084***
ISCED 3B	0.584***	0.566***	0.612***	0.566***	0.563***
ISCED 4B	0.502***	0.513***	0.417***	0.508***	0.508***
ISCED 5B	-0.111	-0.0821	-0.113	-0.0846	-0.0831
ISCED 5A: MA	-0.315**	-0.289*	-0.281*	-0.289*	-0.289*
Language of curricula (ref = Estonian)					
Russian	0.442***	0.340***	0.336***	0.337***	0.372***
Grades from state exams (ref= average+-SD)					
Below average	0.180*	0.156	0.156	0.158	0.160
High performers	-0.173	-0.153	-0.155	-0.151	-0.151
Have not taken state exams	0.134	0.102	0.0935	0.0950	0.0994
UE duration 2012-2015 in total (ref = no)					
up to 6 months		0.111	0.105	0.110	0.107
6-12 months		0.700***	0.701***	0.703***	0.695***
over 1 year		1.238***	1.248***	1.238***	1.243***
Education#Early UE (ref = ISCED 5A: BA# no UE)					
ISCED 2C, 3C#up to 6 months			0.486		
ISCED 3B#up to 6 months			-0.0123		
ISCED 4B#up to 6 months			0.186		
ISCED 5B#up to 6 months			-0.160		
ISCED 5A: MA#up to 6 months			-0.0988		
ISCED 2C, 3C#6-12 months			0.0760		
ISCED 3B#6-12 months			0.133		
ISCED 4B#6-12 months			0.415		
ISCED 5B#6-12 months			0.633		
ISCED 5A: MA#6-12 months			0.135		
ISCED 2C, 3C#12+ months			0.104		
ISCED 3B#12+ months			-0.407		
ISCED 4B#12+ months			0.166		
ISCED 5B#12+ months			-0.276		
ISCED 5A: MA#12+ months			-0.662		



Table II continued

Language#Early UE (ref = Estonian# no UE)					
Russian#up to 6 months					-0.0562
Russian#6-12 months					0.110
Russian#12+ months					0.319
Gender#Early UE (ref = Male# no UE)					
Female#up to 6 months					0.0767
Female#6-12 months					-0.161
Female#12+ months					-0.230
Adjusted R2	0,05	0,06	0,05	0,05	0,06
N	10667	10667	10667	10667	10667

TABLE III THE AVERAGE MONTHLY SALARY IN 2015

	Model 1		Model 2		Model 3		Model 4		Model 5	
	exp(b)		exp(b)		exp(b)		exp(b)		exp(b)	
Early UE experience 2010-2011 (ref = no)										
up to 6 months	0,95	**	1,02		1,03		1,03		1,01	
6-12 months	0,83	***	0,98		0,98		0,98		0,97	
over 1 year	0,72	***	0,97		0,97		0,97		0,91	
Gender										
Female	0,71	***	0,72	***	0,72	***	0,72	***	0,72	***
Education (ref = ISCED 5A: BA)										
ISCED 2C, 3C	0,64	***	0,65	***	0,65	***	0,65	***	0,65	***
ISCED 3B	0,74	***	0,74	***	0,74	***	0,74	***	0,74	***
ISCED 4B	0,76	***	0,76	***	0,76	***	0,76	***	0,76	***
ISCED 5B	1,00		0,99		0,99		0,99		0,99	
ISCED 5A: MA	1,16	***	1,15	***	1,15	***	1,15	***	1,15	***
Language of curricula (ref = Estonian)										
Russian	0,87	***	0,90	***	0,90	***	0,90	***	0,88	***
Grades from state exams (ref= average+-SD)										
Below average	0,93	***	0,94	***	0,94	***	0,94	***	0,93	***
High performers	1,10	***	1,10	***	1,10	***	1,10	***	1,09	***
Have not taken state exams	0,90	***	0,91	***	0,91	***	0,91	***	0,91	***
UE duration 2012-2015 in total (ref = no)										
up to 6 months			0,89	***	0,89	***	0,89	***	0,89	***
6-12 months			0,76	***	0,76	***	0,76	***	0,76	***
over 1 year			0,63	***	0,63	***	0,63	***	0,63	***
Education#Early UE (ref = ISCED 5A: BA# no UE)										
ISCED 2C, 3C#up to 6 months					0,95					
ISCED 3B#up to 6 months					1,05					
ISCED 4B#up to 6 months					0,97					
ISCED 5B#up to 6 months					1,02					



Table III continued

ISCED 5A: MA#up to 6 months					0,95
ISCED 2C, 3C#6-12 months					1,03
ISCED 3B#6-12 months					1,06
ISCED 4B#6-12 months					0,98
ISCED 5B#6-12 months					0,93
ISCED 5A: MA#6-12 months					0,94
ISCED 2C, 3C#12+ months					0,97
ISCED 3B#12+ months					1,06
ISCED 4B#12+ months					0,93
ISCED 5B#12+ months					0,85
ISCED 5A: MA#12+ months					0,79 *
Language#Early UE (ref = Estonian# no UE)					
Russian#up to 6 months					1,05
Russian#6-12 months					1,04
Russian#12+ months					1,18 *
Gender#Early UE (ref = Male# no UE)					
Female#up to 6 months					0,98
Female#6-12 months					1,00
Female#12+ months					1,00
Adjusted R2	10669	10669	10669	10669	10669
N	0,17	0,18	0,16	0,16	0,16

Source: Pooled Registry Data, Estonian Statistical Office.

#### 4. Summary

The aim of the chapter was to answer whether the graduates of the global recession still suffer from the scarring effect of unemployment five years later. Summing up, we can conclude that the early career unemployment is not a direct trigger for poverty risk and income loss five years later if job search lasts *no longer than a year*. However, we also need to underline that those who experience early unemployment are more likely to lose their job later. Therefore, the good scenario only manifests itself if initially unemployed school leavers succeed to avoid falling into unemployment later, thus confirming the mechanism outlined by Stevens in 1997 and demonstrated by Gregg and Tominey (2004). However, compared to Gregg and Tominey's (2004) study on wage scars 20 years later in the UK, we do not only see a reduction of the penalty, but it's almost complete disappearance in Estonia (being 0-3% depending on duration of unemployment). This finding may provide further evidence that unemployment is less stigmatising during the economic downturn as employers do not to use it as a signal of lower productivity in line with findings for Macedonia from the last crisis (Petreski et al 2016).

However, later unemployment experiences are much more detrimental for labour market outcomes than early unemployment, raising the risk of at poverty risk and substantial salary loss.

Still, it seems that the long unemployment period after graduation lasting longer than a year leaves a scar for some groups. From this group, only 67% work five years later. Thus, income poverty can be considerably higher than wage poverty, taking into account the low level and weak coverage of social benefits in Estonia. The analysis revealed that especially females with MA degree and early long-term unemployment experience are facing a higher wage penalty also five years later. The same was not true for other educational levels. This might indicate



that the unemployment scar is stronger for highly educated, but the borderline is not between vocational and tertiary graduates, as could be expected based on previous literature. In the context of expansion and feminisation of tertiary education, the borderline is inside higher education and the most qualified with MA degree are the most likely to bear the stigma in case they do not find a job within a year.

The long-term unemployment effect differs for those graduating from curricula taught in Russian. Once they stay in job search for more than a year in the beginning of their work career, the wage gap is reduced somewhat. However, the overall salary of graduates from curricula taught in Russian is already 10% lower *ceteris paribus* and the positive interaction might be due to the floor effects stemming from the minimum wage barrier.

Overall, our research evidence based on registry data suggests that at least officially registered early unemployment lasting less than a year during the Great Recession does not leave scars on the labour market outcomes of graduates five years later in Estonia, in case youth manages to avoid a repeated unemployment.

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## VII Caught within an Insider-Outsider Labour Market? Medium-term Determinants of Objective and Subjective Poverty among Youth in Germany

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### 1. Introduction

This country study examines the consequences of unemployment and different types of employment uncertainty on socio-economic disadvantage among youth in Germany from a *medium-term perspective*. While *short-term consequences* refer to the immediate effect of uncertain employment for young people's socio-economic situation – e.g. the affectedness by low income or deprivation *when being* unemployed or atypically employed – medium-term consequences focus on what happens within a time span of around five years after the affectedness by such employment statuses. The guiding question in this report thus is not whether insecure employment conditions immediately entail negative socio-economic consequences for youth. Instead, we ask whether young people in Germany that are initially affected by such labour market disadvantages, are able to escape states of poverty or deprivation within the subsequent few years.

In line with the theoretical groundwork of the working package (Hofäcker and Neumann 2016; see also the introduction chapter to this report), we study socio-economic consequences from



a multidimensional perspective, differentiating between income-based versus deprivation-based measures, on the one hand, and subjectively vs. objective measures, on the other hand:

- *Objective Income poverty* represents the most commonly used indicator of socio-economic disadvantage, also frequently adopted by international statistical organizations such as Eurostat (2016) or the OECD (2015). It considers individuals as being poor when they fall below a certain income threshold which is considered to be indispensable when maintaining an adequate standard of living. There are different ways in which such thresholds can be defined, which are often exchangeably used in social reporting (Strengmann-Kuhn 2003). The German statistical office has long relied on administratively defined *absolute* measures of income poverty, which were based on certain pre-defined “baskets-of goods” considered to reflect the basic needs of an average German households. This approach has in more recent years been challenged by the standard relative measure of poverty, according to which individuals are being considered as poor when remaining under an income reflecting 60% of a country’s median equivalised household income. Given its more recent use in German statistics and better cross-national comparability, we refer to this second measure in our analysis of income-based socio-economic disadvantage.
- A measure that has often been alternatively used is that of *relative deprivation* where being poor is not directly linked to monetary resources, but related to using a scale of daily goods a household can afford (see Eurostat 2016). This measure considers that financial resources may be spent in very different ways, and that daily goods may be available at different prices in different regions. In measuring relative deprivation, German statistical offices have overtaken the standard Eurostat indicator<sup>1</sup> to which we will also refer in the following (see Sikorski and Kuchler 2011).
- Measures of *subjective poverty* assume that poverty may not be adequately captured by the objective categories set by scientific and/or political experts, which can divert from the individual’s own perception of being poor. They assume that poverty is only relevant if it is perceived as such by individuals. As shown in earlier project contributions (Neumann-Schmidt et al. 2016), such subjective measures may substantially differ from objective measures, so that we shall consider this dimension of socio-economic disadvantage in the following analyses as well. In doing so, we will refer to standard indicators of subjective financial deprivation, frequently used in German social surveys.

In our analyses, we will relate these different dimensions of socio-economic disadvantage to different types of labour market uncertainty, including both unemployment and atypical employment. With regard to the latter, we will particularly focus on fixed-term employment – whose importance has increased considerably among young labour market entrants in Germany throughout recent decades and concurrently makes up for around 20 to 40 per cent of youth employment (depending on the age-bracket used; see Seils 2016). In addition to this, we will also look at the so-called “minijobs” which were politically promoted after the turn of the millennium as a further means of labour market flexibilisation and which have considerably grown in numbers since then (Eichhorst et al. 2012). Minijobs describe a type of employment with low wages that are exempted from employees’ social security contributions and taxes. The social

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<sup>1</sup> The Eurostat indicator considers nine different dimensions of expenses of standard goods, including expenses for rent, adequate food, a car, a washing machine, a color TV, a telephone and reserves for unexpected expenses.



consequences of both types of employment have been discussed controversially in the literature, highlighting that its effects may be ambiguous, and may vary between different target groups (such as higher or lower-educated, first and secondary earners etc.). In our analyses, we will thus not only look at the overall effects of these work forms on young people as one unique group, but also analyse in detail how these affect different groups of youth on the German labour market.

Any consideration of employment types needs to acknowledge the relevant institutional context into which they are embedded and which may mitigate or amplify their consequences. Before turning to the actual empirical analyses, the following section thus will provide a stylized sketch of the relevant institutional context for youth employment in Germany. Subsequently, section 3 will describe both the incidence as well as the characteristics of unemployment and atypical employment among German youth.

The empirical part of our analyses comprises the next two sections. Section 4 first provides a concise overview of the longitudinal dataset that we use for our analyses, the German Socio-Economic Panel (GSOEP) as well as the way in which key concepts and variables were operationalized in it. Section 5 then presents results of bivariate as well as multivariate statistical analyses investigating the relationship between insecure employment and its socio-economic consequences for youth in a medium-term perspective. A final summary of the main results as well as the conclusions that may be drawn from the German case complete this country study.

## 2. The labour market situation of youth in Germany: Institutional background

In the following, we provide a stylized overview of the relevant institutions governing the situation of youth on the German labour market. In doing so, we focus on three different types of institutional context:

- The *system of education and training* defines the preconditions under which young people in Germany enter the labour market. It defines the chances and risks that young people experience in their early career phase. Insufficient performance in the education and training system may prevent young people from getting a (good) job and thus may equally affect their socio-economic situation in the medium-term. In the following, we discuss both the characteristics of the educational system in general as well as the German system of vocational training, often described as “the dual system”.
- While educational attainment influences the initial chances of job placement, *labour market policies* play an important role in the early career phase. Particularly active labour market policies (ALMP) promote processes of labour market integration through direct or indirect support. For those young people that have not fared well in the educational system, ALMP promote the chances of finding a safe and adequate job on the German labour market. In the subsequent overview, we thus will discuss both basic aspects of these policies and their coverage of young people.
- Finally, the *regulation of the labour market* may be of pivotal importance for young people’s early career success (see the introduction chapter, in this report). In the following, we will reconstruct the basic conditions of employment regulation in Germany and particularly pay attention to in how far such patterns may promote young people’s situation as either “insiders” or “outsiders” of the labour market.



## 2.1. The German system of education and training

Germany's **education system** has been described as exhibiting a high degree of both standardization and stratification (Allmendinger 1989, Müller and Shavit 1998). Stratification refers to the fact that selection in the educational system takes place at a comparatively early stage. Students are sorted at the age of 10 (i.e. after the completion of primary education) into different educational tracks of another four (finishing with a lower secondary "Hauptschule" degree), six (finishing with a middle school degree) or eight to nine years (finishing with a high school certificate, the so called "Abitur"). Mobility between the different educational tracks is practically very restricted. Selection into the different tracks is highly consequential as the attainment of educational certificates often makes up the basis for the pursuit of later occupational careers: The taking up of specific occupations may for example depend on at least possessing a middle school degree while academic education and training is only available to those with high school degrees. Educational degrees themselves are highly standardized, i.e. the standards governing the attainment of the different educational degrees are the same nationwide throughout Germany. Based on the attainment of different degrees, employers thus receive reliable signals about the qualifications that students possess. In other words, there exists a "tight coupling between educational attainment and labour market outcome" (Allmendinger 1989: 239). While this coupling may be beneficial for adequate job placement for those with higher degrees, it simultaneously discriminates against those with lower degrees. Early educational differences thus often make up the basis for long-lasting social inequalities within the German youth labour market.

Another particular feature is the German system of **vocational education and training**, the so called "dual model" (Blossfeld and Stockmann 1999). Unlike in many other European countries which concentrate either on theoretical learning in schools or on-the-job training, the German system effectively combines theoretical training in vocational schools with practically guided learning in firms. Certificates that are given to successful young individuals upon completion of their traineeship are highly standardized. It is this high informative value of certificates as well as the opportunity of employers to assess trainees throughout their firm-based traineeship that has contributed to the frequently observed smooth entry of young labour market entrants at positional levels that largely reflect the qualifications of the applicant (Bellmann and Hartung 2010). This feature again may be beneficial for the job placement of those that successfully complete their occupational studies; recent research indeed has indicated that participation in the dual system improves job placement and income chances (Cahuc et al. 2013). At the same time it may discriminate against those that fail to do so. Recent research has shown that there is a strong link between the educational and the occupational system, i.e. particularly youth with no or low educational education find it hard to acquire a place in the occupational training system and subsequently are largely excluded from the primary labour market (BIBB 2010, Caliendo 2011). In this sense, the occupational system thus exacerbates initial inequalities in schooling levels.

Taken together, education can be considered as both a valuable asset as well as a consequential discriminator for later career progression within the German labour market. It determines the chances with which young people are able to establish themselves within safe and secure employment or the risk with which they find themselves in precarious atypical employment or unemployment. At the same time, it may also affect the chances to leave such types of disadvantageous positions within the German labour market or to be caught within them more permanently.



## 2.2. Active labour market policies for youth in Germany

With around 0.7 per cent of GDP, the share of expenditure on active labour market policies in Germany ranges around the European average. After active labour market policies for youth have expanded in the 1990s, they have grown to an impressive bundle of different measures. The German Government invests comparatively high shares of its budget into various youth-related measures. Key components of current active labour market policies in Germany are the following:

- Measures to support the *qualification of unemployed youth*: There exist numerous qualification measures that range from short-term training aimed at transferring key competences in job applications (such as the “Maßnahmen zur Aktivierung und Eingliederung § 46 SGBIII”) to long-term measures lasting up to three years aiming at training for an entirely new occupation (such as the “Maßnahmen zur beruflichen Weiterbildung § 77ff. SGBIII”).
- In addition to this active employability measures, youths’ integration into employment is fostered by *financial incentive schemes* provided by the states. Targeted wage subsidies (“Eingliederungszuschüsse” § 217ff SGBIII), for example, are granted at 50% of wages to employers that employ disadvantaged youth for a period of up to one year. While this program aims at the integration into dependent employment, there are also start-up subsidies (“Gründungszuschuss”; § 57 SGBIII) for young people aiming to start a business of their own that provide both a certain starting capital as well as cover social security payments throughout the first year.
- There are also measures aiming at the direct creation of jobs (“Arbeitsbeschaffungs-/ Strukturanpassungsmaßnahmen”) that create temporary employment opportunities in the public non-profit sector to maintain the long-term employability of participants in such schemes.
- *Age-specific measures for youth*: While the afore-mentioned measures are age-neutral and thus provided to all individuals in need, there are some measures that aim to enhance the job prospects of youth. These include occupational in firm-training schemes (such as the “Einstiegsqualifizierungsprogramme”), job search measures as well as short- and long-term training programmes.

Active labour market policies for youth have often been evaluated positively (e.g. Caliendo et al. 2011, Caliendo and Schmidl 2016). They cover large parts of youths with a considerable number of them participating in more than one program. Most measures actually display positive effects on later job placement, in either the short or the medium term.<sup>2</sup> At the same time, evaluation results also show that the effect of educational attainment also extends into active labour market policies as they either do not sufficiently target lower-educated youth or have a lower employment impact for them. Youth that do not fare well in the school system often have lesser access to ALMP/training measures. Even when entering into labour market programs, there is a negative selection effect into (differently successful) types of programs.

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<sup>2</sup> The only notable exception are public job placement programs which even have proven to be harmful in the medium and long run.



### 2.3. The regulation of the German labour market: Youth as outsiders?

In previous literature (e.g. Blossfeld et al. 2005, 2008), Germany frequently has been described as exhibiting a modestly high level of employment protection, ranging between the highly regulated Southern European countries and the largely deregulated countries of the Anglo-Saxon world. Once individuals enter into a permanent contract, this contract is safeguarded by employment law and can only be terminated under relatively restricted conditions. The flipside of this high protection for insiders is that outsiders are caught in a secondary labour market with significantly lower wages and job security (Sengenberger 1987). Throughout recent decades, this secondary labour market of atypical employment has expanded significantly, increasingly undermining the German model of a continuous and permanent “normal employment relationship” (Mückenberger 1989). Previous research (e.g. Buchholz 2008) has shown that this flexibilisation of work forms particularly has affected youth, and mostly in the form of fixed-term employment (see also section 3.2 below). In contrast, flexible employment has spread far less among mid-career male workers and older employees in Germany (Blossfeld et al 2006a, b). In that sense, youths entering the labour market can indeed be regarded as “outsiders”.

However, there are also differentiations within youth concerning the “outsider status”. Besides educational attainment which was discussed earlier, it has also been shown that young people with a migration background, often perform less well in the regular school system, are less often found in higher educational strata and find it less easy to enter into vocational training (Autorengruppe Bildungsberichterstattung 2006). Owing to differences in the overall economic situation, unfavourable labour market circumstances and labour demand deficiencies often make it harder for young people in East Germany to enter the labour market (Brenke 2013).

The key question with regard to labour market disadvantage and exclusion is whether this outsider status just resembles an initial marginalization on the German labour market that is overcome as youth increasingly establish themselves on the labour market and gradually become insiders. Or does initial disadvantage translate into a permanent exclusion from the primary labour market and related income opportunities? We shall discuss this issue in the following section when looking at particular types of labour market exclusion and atypical employment in Germany.

## 3. Unemployment and atypical employment and unemployment among German youth

In the following, we look at unemployment and different types of atypical employment in Germany. We consider both the question, in how far both types of labour market uncertainty have spread among German youth. As we are interested in the socio-economic consequences of these work forms, we also discuss ideal-typically the material and financial consequences of each of these types of exclusion. Finally, from a longitudinal perspective, we additionally ask in how far the afore-mentioned statuses of labour market uncertainty are just a temporary phenomenon or whether youth – and if so: which groups of youth – are able to escape from these work forms and establish themselves safely on the German labour market.

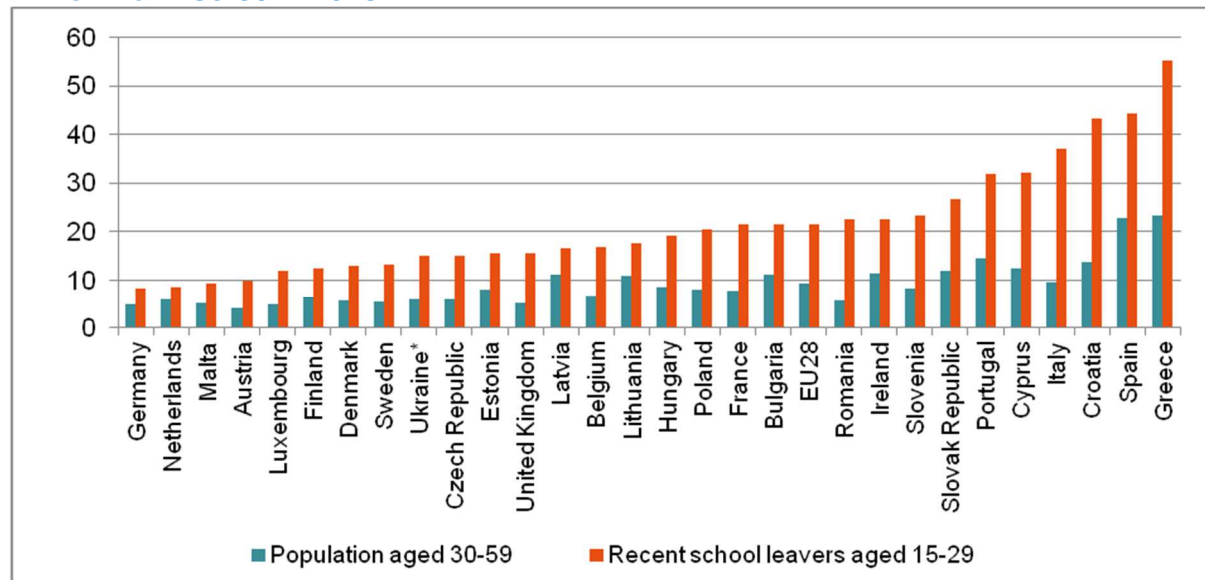
### 3.1. Youth Unemployment in Germany

In comparison to other European countries, the youth **unemployment** rate for recent school leavers in Germany has been traditionally low. While it takes values of around 20 percent in the EU on average and of more than 30% in some Southern European countries, it has remained at values of less than 10 per cent in Germany. This picture has remained remarkably



stable even throughout the recent economic crisis; with German youth unemployment becoming the lowest in the European Union by the year 2013 (see Figure I).

**FIGURE I: UNEMPLOYMENT RATE FOR RECENT SCHOOL LEAVERS (AGED 15-29) AND POPULATION AGED 30-59 IN 2013**



Source: Rokicka et al. 2015

There are numerous factors that have been held responsible for this positive performance of the German labour market. Without much doubt, the favourable overall economic situation since the millennium turn and the relative stability of the German economy throughout the economic crisis play a role in this respect. Furthermore, the described characteristics of the educational and vocational training system in Germany ensure a close matching of employers' demands and employees' qualifications and thus are often held responsible for the positive employment performance among German youth.

German youth not only are rarely affected by unemployment, they also spend only relatively short time in it. The average duration of youth unemployment in Germany is low by European standards: only around 41 per cent of youth remain unemployed for longer than six months; a value still almost twice as high than that of Scandinavian countries (such as Denmark or Sweden where long-term unemployment makes up only around 24 per cent). Yet, it certainly remains below that of many other European countries, particularly the Southern and Eastern European where long-term unemployment is almost as double as high (Dietrich 2016).

For those youth that become (long-term) unemployed, however, there may be severe consequences connected with it. Even though the German unemployment and social insurance system ensures that the unemployed can maintain a sufficient standard of living, there are detrimental effects of early unemployment on future employment and earnings, often discussed as "scarring effects" (e.g. Gangl 2004, Arulampalam 2001). As, for example, Manzoni and Mooi-Reci (2011) demonstrate, initial unemployment has negative cumulative effects as it harms future employment chances and thereby "breeds future unemployment" (ibid: 346) respectively destabilizes future careers. Möller and Umkehrer (2014) show, that these career instabilities are closely related to earnings losses in the future, even though the effect differs between higher earners (who are able to offset temporary earnings losses) while those with lower earnings suffer more persistent losses.

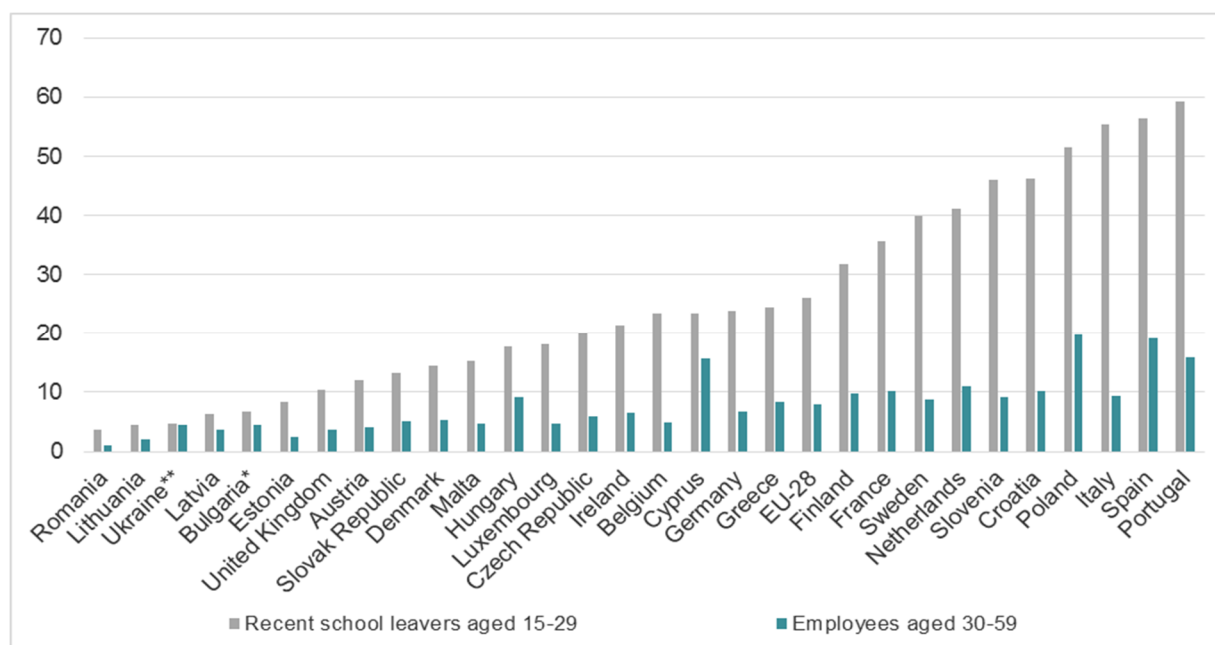




### 3.2. Fixed-term employment

While permanent exclusion from the labour market is a comparatively rare phenomenon on the German labour market, the flexibilisation of work forms has taken place to a similar degree as in many other countries representing the conservative welfare state model. As indicated by Figure II, the incidence of **fixed-term employment in Germany** ranges at around 25% among recent school leavers, a value that clearly surpasses the average incidence rate among mid-career workers. In international comparison, incidence rates of fixed-term employment among German youth come close to the overall European average, but clearly remain below those of Southern European countries that are almost as double as high.

FIGURE II: FIXED-TERM EMPLOYMENT RATE FOR RECENT SCHOOL LEAVERS AND POPULATION AGED 30-59 IN 2013



SOURCE: ROKICKA ET AL. 2015

The question whether fixed-term employment may help individuals to enter into safe employment or whether it permanently marginalizes individuals remains contested in the literature. Scherer (2004) has argued that fixed-term employment may indeed act as a “trap” which keep employees outside the “core labour market”. On the one hand, the fixed-term nature of the contract by itself bears the risk of becoming unemployed afterwards. On the other hand, exclusion from the core labour market may also occur when one fixed-term job is succeeded by another, thus building “chains” of fixed-term employment (Giesecke and Groß 2002). Yet, fixed-term employment may not necessarily imply a marginalization, but also can act as a “stepping stone” that allows for a gradual entry into the labour market (Scherer 2004). Gebel (2013), for example has shown that the chances of entering into permanent employment as well as future wages are better for fixed-term employees than for those in unemployment who directly aim to enter into a permanent position. Employers may treat fixed-term employment as an “extended probation period” in which they screen the qualifications and abilities of a potential young future employee and hire him/her upon positive evaluation. The question whether fixed-term employment leads to entrapment or acts as a stepping stone is closely linked to educational attainment. As Schmelzer and others (2015) demonstrate, those with higher degrees find it easier to enter permanent employment afterwards, while for lower educated employees, the flexibilisation of their employment is of a more permanent nature.



Concerning its effects on socio-economic well-being, previous literature has highlighted the negative income effects of fixed-term as compared to continuous employment (Giesecke and Groß 2004; Mertens and McGinnity 2005). Wage gaps between the two types of work are higher among those in low-paid sectors of the labour market than among those in the middle respectively upper parts of the income distribution (Pfeifer 2012). Even though there are clear income disadvantages for those in temporary employment (as compared to permanent employment), the financial situation often turns out to be clearly better than that of the unemployed. Still Seils (2016) finds that - as compared to permanent employees - the poverty risk of youth in fixed-term employment is significantly higher. Socio-economic disadvantage not only may appear at the objective income level: Gundert and Hohendanner (2014), point out that also subjectively, fixed-term employees may also feel more excluded subjectively than permanent employees due to their instability of their careers, their lower pay and less promising career prospects. At the same time, though, feelings of social exclusion are less pronounced among fixed-term employees as compared to the unemployed (ibid.)

### 3.3. Minijobs

The so-called “minijobs” describe employment relationships in which employees can earn a maximum wage of up to 450€ (400€ until 2013) per month without being obliged to pay social security contributions. This type of jobs was particularly fostered since 2003 in order to make minor employment more attractive, and it substantially gained popularity in the years thereafter, making up for about 7.5 million employees by the year 2012 (Eichhorst et al. 2012). Users of such employment contracts are a heterogeneous group, including young mothers, students and pupils, pensioners and individuals in receipt of unemployment benefits (Bäcker and Neuffer 2012). Young people make up a considerable share of such jobs with about 6.7 per cent being younger than 20 years, and another 18.8 per cent being between 20 and 30 years old (Eichhorst et al. 2012). Officially, there is no hour limit to minijobs, but virtually no such employee works more than 20 hours per week, while the majority is employed at less than 10 weekly hours. Most minijobs are offered in the retail sector, catering and hospitality and in the health and social sector. Even though most user of minijobs possess a school degree (and often also an occupational degree), the activities performed in these kind of jobs are usually lower skilled and do not match the qualifications of the respective employees (ibid.).

Minijobs were intended to provide a “top-up” income for these usually low- (or even none-) earning income groups, that can rely on other sources of income (such as that of the partner or parents). Due to their low wage-levels, such jobs do not provide sufficient income security as a stand-alone solution: As shown by the German Statistical Office, hourly wage levels for minijobbers are among the lowest of all atypical work forms in Germany (Statistisches Bundesamt 2012). Furthermore, they do not themselves establish the legal basis for health insurance claims and incur only minor social security payments by the employer, thus also endangering material security in the long run (Voss and Weinkopf 2012).

While the short-term financial consequences of minijobs can be considered as critical when no other income sources are available, it may be argued that minijobs – similar to fixed-term contracts – can in the medium-term act as pathways out of unemployment and stepping-stones into later continuous employment. Evidence on this “bridgehead function” of minijobs again is mixed. The majority of the literature suggests that the effects may be less positive than for fixed-term employment. Admittedly, there is some evidence that minijobs may improve future employment chances after a period of unemployment and may also prevent dequalification effects (Caliendo et al. 2012). Pott et al. (2007) even report, that about a fifth of minijobbers makes the transition into the primary labour market. At the same time, however, other literature



argues that transitions into the primary labour market cannot be considered as the consequence of minijobs, given their perception as a type of “add-on employment” and their often low qualification levels (Fertig et al. 2005, Steiner, 2008). Dingeldey and others (2012) thus summarize that minijobs in sum may rather function as a top-up benefit for the permanently excluded than as a bridge into regular employment.

### 3.4. Summary and Hypotheses

What **hypotheses** can be inferred from the previous overview for the subsequent analyses of the medium-term effects of employment uncertainty on socio-economic consequences for German youth?

We assume that the most negative impact of all three types of employment uncertainty will be exerted by **unemployment**. Unemployment not only drastically reduces a person’s own income, but also harms its future career opportunities through scarring effects and thus impedes an individual’s opportunity to move into a safe and adequately paid job. We expect that the effect of unemployment will be cumulative, i.e. the longer the time an individual spends in unemployment, the more likely it will imply negative socio-economic consequences. Such consequences may extend beyond mere income poverty (or deprivation) to subjective poverty, assuming that being in (long-term) unemployment fosters the self-perception of being excluded, considering the established insider-outsider structure of the German labour market.

Effects of **minijobs** on poverty and deprivation will be less severe than for unemployment. Yet given the clearly lower income and career prospects associated with minijobs, we still assume an increasing risk of poverty and deprivation. The subjective feeling of being poor will depend on the way in which the individual is using minijobs. In case of their perception as being just a temporary solution or as a top-up on other income, subjective poverty may be of lesser importance than for those where minijobs make up the only main income source.

Least severe effects are expected for **fixed-term employment** for two reasons. First, particularly for young people at the onset of their careers, such types of jobs may act as an “extended internship” and thus function as stepping-stones into safe and continuous employment. Secondly, even though existing research has identified income gaps, income differences may not be always large enough to justify a fall into poverty or substantial deprivation. More likely negative socio-economic consequences may be expected in the subjective dimension, i.e. the self-perception of individuals as being subjectively poor, e.g. due to the lower career respectively income prospects.

Finally, we assume that the effects of the afore-mentioned work forms on socio-economic outcome may **differ between educational groups**. First, the above overviews have shown, that particularly those with higher educational degrees have a higher earnings potential and career prospects on the German labour market. Secondly, the above overviews have shown that those with higher human capital are better able to escape from permanent marginalisation through either unemployment or fixed-term employment. The negative socio-economic consequences arising from these work forms are thus expected to be less severe for the higher than for the lower educated.

## 4. Data and Methods

To test the outlined hypotheses, we use data from the German Socio Economic Panel (GSOEP), a longitudinal data set frequently used in social and economic research on Germany (see Wagner et al. 2007). The GSOEP is a wide-ranging representative longitudinal study of private households, located at the German Institute for Economic Research, DIW Berlin. Every



year, there are nearly 11,000 households, and about 30,000 persons sampled by the fieldwork organization Kantar Public (formerly: (TNS) Infratest Sozialforschung).

The data provide information on Germans, foreigners and recent immigrants to Germany living in the Old and New German Federal States. Some of the many topics include household composition, occupational biographies, employment, earnings, health and satisfaction indicators. The GSOEP was started in 1984 and has been continued as a panel survey on a yearly basis up to present years.

The main focus of our analysis lies on a five year perspective to show if and how unemployment, temporary contracts and minijobs influence the risk of poverty of young adults. We fixed two observation points: at the first ( $t=0$ ) we set our independent variables while at the second observation point ( $t=+5$ ) we set our dependent variable poverty status. The population we included encompassed all respondents which were aged 30 or younger at the first observation point and therefore no more than 35 years old at the second observation point.

Table I below provides a schematic overview of all variables that were used as well as their respective operationalization. To consider the multidimensional nature of socio-economic disadvantage, we use different concepts of poverty: the risk of *household income poverty* (applying a threshold of 60% of the median equivalised household income), *household material deprivation* (reflecting the non-affordability of at least three items from the standard Eurostat scale) and subjective poverty (reflected by the individual satisfaction with one's own personal income). For the latter dimension, an individual (instead of a household indicator) was purposefully chosen to better approximate the individual feeling of disadvantage due to one's own employment and income situation. For our analysis, we used data from the most recently available five-year time horizon, namely the period from 2008 to 2013. For the analysis using Stata we employed logistic regression models as all our dependent variables are dummy coded.

In order to account for different labour market statuses, we differentiate between fully employed, part-time employed, occupational education, marginal employed, not employed and unemployed. To allow for differentiations in the length of unemployment (and thereby to test our assumption of a cumulative effect), we also control for the length of unemployment, measured by a count variable for the analysed five-year time span differentiating four categories: 0-6 months, 7-12 months, 13-24 months and more than 24 months of unemployment. A finer grading was applied in the bottom categories of the scale, as it can be assumed that particularly very short-term unemployment may be less harmful in terms of its medium-term socio-economic consequences. Fixed-term employment and minijobs are controlled for by metric variables measuring how many months were spent in the respective types of employment.

To control for basic socio-demographic influences, we control for the gender of respondents, the residence in either East or West Germany, living in the parental home and the question whether respondents have moved out of that home in the observed timeframe. Given the hypothesized central importance of education, it is included directly (using a six-step) as well as in interaction with the categories of unemployment, fixed-term employment and minijobs. All effects have been calculated as average marginal effects (AMEs) in order to better be able to compare results across models (Mood 2010).



TABLE I: VARIABLES AND OPERATIONALIZATION

<b>Dependent Variables</b>	
Household income risk of poverty	Household net income as 60% of the median household net income → Binary-coded: Poor yes/no
Material deprivation	Can't afford 3 out of 9 items: Financial savings, one week vacation, new furniture, inviting friends for dinner, car, house in good condition, good housing area, warm meal, coloured TV → Binary-coded: deprived yes/no
Subjective Poverty	Satisfaction with personal income (11 point scale: 0 "low" to 10 "high"), scale recoded to binary variable (scale points 0 to 4 "dissatisfied", 5 to 10 "satisfied") → Binary-coded: dissatisfied yes/no
<b>Independent Variables</b>	
Demographics	<ul style="list-style-type: none"><li>• Sex: female / male</li><li>• Region of residence: east / west</li><li>• education in 2008: inadequately/general elementary/ middle vocational/Vocational and Abitur/Higher Vocational /Higher education</li><li>• living with parents since 2008: not living with parents / move out / still living with parents</li></ul>
Contract	<ul style="list-style-type: none"><li>• Permanent or temporary contract in 2008 (yes/no)</li><li>• Number of years with a temporary contract in a 5 year period → metric</li></ul>
Minijob / Midijob	Number of years with a temporary contract in a 5 year period → metric
Unemployment	<ul style="list-style-type: none"><li>• Registered as unemployed in 2008 (yes/no)</li><li>• Number of unemployment months in a 5 year period → metric</li></ul>



Table I continued

Employment status in 2008      fully employed, part-time employed, occupational education,  
marginal employed, not employed, unemployed

Source: Own illustration

## 4. Results

### 4.1 Descriptive results

Table II starts by giving a descriptive overview of the incidence of the afore-mentioned measures of negative socio-economic consequences among the young population aged 30 and lower. As figures show, about a quarter of young people in Germany appear to be living in income-poor households, a figure slightly surpassing that of earlier studies (Groh-Samberg and Voges 2014). Figures indicate a modest increase around the financial crisis, but until 2013, poverty rates largely have returned to initial values again. Deprivation measures are reported two to seven percentage points below the income poverty level, indicating that not every young person that reports to be in an income-poor household actually experiences a substantial deprivation in necessary everyday goods.

**TABLE II: INCIDENCE OF NEGATIVE SOCIO-ECONOMIC CONSEQUENCES: RELATIVE INCOME POVERTY, DEPRIVATION AND SUBJECTIVE POVERTY**

Year	% poor	% deprived	% dissatisfied
2003 (N <sub>total</sub> = 1,239)	24.37		
2004 (N <sub>total</sub> = 1,123)	23.78		
2005 (N <sub>total</sub> = 1,022)	23.19	21.04	35.13
2006 (N <sub>total</sub> = 924)	24.68		33.98
2007 (N <sub>total</sub> = 837)	25.69	21.03	33.09
2008 (N <sub>total</sub> = 733)	26.33		33.70
2009 (N <sub>total</sub> = 638)	26.65		36.68
2010 (N <sub>total</sub> = 535)	25.98		35.14
2011 (N <sub>total</sub> = 443)	25.51	18.74	28.22
2012 (N <sub>total</sub> = 368)	22.55		25.82
2013 (N <sub>total</sub> = 300)	24.67	19.00	26.67

Source: GSOEP 2003-2013, own calculation

Notably however, the subjective satisfaction with the respective income appears to be low. In the early 2000s, subjective dissatisfaction rates exceeded poverty rates at about 10 percentage points, but the gap has narrowed significantly since then.



**TABLE III: MEDIUM-TERM EFFECTS OF POVERTY, BIVARIATE ANALYSIS 2008-2013**

	Not unem- ployed (N=625)	Unem- ployed (N=108)	Permanent contract (N=315)	Temporary contract (N=146)	Minijob/ Midijob (N=118)
2008					
2013					
Income poor	15.04	31.48	13.97	18.48	22.88
Deprived	11.52	35.19	12.70	15.07	19.49
Subjectively poor	23.84	35.19	18.10	25.34	25.42

Source: GSOEP 2008/2013, own calculation

While Table II focuses on the entire young population (irrespective of their labour market position), Table III shifts the attention to the effects of unemployment and employment type and adds a longitudinal dimension to the analyses. In order to identify the medium-term effects of labour market uncertainties, being in unemployment, fixed-term employment or a minijob in 2008 is compared to negative socio-economic outcomes (income poverty, deprivation and subjective poverty) five years after that date. What becomes evident from Table III is that particularly unemployment seems to be connected to negative socio-economic consequences, irrespective of the chosen indicator. While about 15% of youth being in employment report income poverty five years later, this is the case for more than the double share of those in unemployment. This picture is even more pronounced for relative deprivation (three times as high among the unemployed) while the gap is smaller (but still clearly observable) for subjective poverty.

Even though differences can also be observed with regard to the type of contract, they are clearly less distinct. For individuals with a fixed-term contract, poverty and deprivation rates are only two to four percentage points higher than for those in safe permanent employment. It thus is particularly the exclusion from employment as such that leads to poverty and deprivation. Being in atypical employment seems to be far less disadvantageous, confirming our assumption of its potential “stepping stone” or “bridgehead effects”.

Incidence rates of income poverty, deprivation and subjective poverty for those with minijobs fall between those of temporary contracts and unemployment. Due to their additional earnings, mini-jobbers apparently are less often affected by income poverty than those in unemployment are, particularly when this income functions a “top-up” to already existing income sources. They are also less often affected by severe deprivation and less often feel dissatisfied with their income. Yet, figures also show that compared to individuals starting in (presumably higher paid) fixed-term employment, minijobbers fare worse in objective dimensions.

## 4.2 Multivariate results

The meaningfulness of mere bivariate results is, however limited. The below tables thus report results of multivariate logistic regression analyses predicting the occurrence of income poverty (Table IV.I), deprivation (Table IV.II) and subjective poverty (Table IV.III). All regression models are constructed in a similar way, with Models M1 and M2 first introducing the afore-mentioned control variables. Models M3 to M6 then separately introduce the three main explanatory variables – unemployment, fixed-term employment and minijobs – while Model 7 combines their influence in one joint model. Model M8 additionally introduces the state of income poverty in the starting year to investigate in how far developments in the five-year time span have been dynamic or represent rather stable constellations. Models M9 to M12 finally introduce interaction effects with education in order to investigate in how far the effects of unemployment, fixed-term employment and minijobs are education-specific.



TABLE IV.I: LOGISTIC REGRESSION, DETERMINANTS OF OBJECTIVE INCOME POVERTY, 5-YEAR TIME SPAN 2008 (INDEP. VAR.) TO 2013 (DEP. VAR.), AME IN %

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Sex and Region of residence (references: Male, West Germany)												
Female	-4.03+	-1.05	-1.08	-0.98	-1.72+	-1.05	-1.69+	-0.84	-1.02	-0.89		-0.87
East Germany	11.23**	4.86*	4.18*	4.72*	6.44**	2.42	3.74+	2.40	2.86	3.95+		2.75
Changes in living Conditions between 2008 and 2013 (reference: not living with parents)												
Still living with parents	-11.40***	-3.93***	-3.78***	-3.75***	-4.22***	-3.80***	-4.02***	-2.43*	-2.94*	-2.60*	-2.91*	-2.77*
Move out	6.78	2.40	1.84	2.14	2.64	4.18*	3.72+	9.76**	11.13**	10.23**	11.16**	10.80**
Educational level in 2008 (reference: Higher education (ISCED 97))												
Inadequately		53.32**	51.85*	53.52**	47.83*	37.23	33.93	16.15	17.23	18.37	18.02	27.83
General elementary		27.81**	22.58**	27.42**	27.58**	13.67+	13.12+	11.41+	11.59	11.31+	12.37	15.24*
Middle vocational		18.55*	16.44*	18.29*	15.66*	13.78*	9.51+	7.09	8.19	7.81	8.02	7.69
Vocational and Abitur		8.95	9.48	8.92	6.50	8.02	5.46	3.47	4.10	3.90	4.03	3.67
Higher vocational		6.60	6.72	6.50	5.95	6.29	4.32	2.64	3.11	2.44	3.08	2.90
Employment status in 2008 (reference: Full-time employment)												
Part-Time employed			-2.03				-6.08+	-5.56+	-2.96*	-2.44+	-2.93*	-2.81*
Occupational education			3.53				8.66	6.39	4.25	3.79	4.18	4.10
Marginal employed			2.17				-2.15	-2.67	-1.59	-1.46	-1.54	-1.69
Not in employment			1.44				0.12	-0.41	-0.28	-0.24	-0.25	-0.35
Registered unemployed			5.06				-4.61	-6.66**	-3.50***	-2.96**	-3.43***	-3.23**
Number of years between 2008 and 2013 with...												
Temporary contract				0.59			0.25	-0.63	-0.61	-0.59	-0.65	-0.66
Minijob/Midijob					3.27***		2.97***	2.35**	2.33**	2.45**	2.34**	2.61**
Number of months in unemployment between 2008 and 2013 (reference: 0 to 6 months)												
7 to 12 months						1.60	1.56	0.81	1.03	0.63	0.97	0.78
13 to 24 months						9.81+	11.46+	8.30+	9.14+	14.31+	9.52+	9.61+
25 months and more						23.80**	30.68**	21.90**	23.40**	30.94**	24.52**	23.51**
Income poverty in 2008 (reference: not poor)												
Poor household								20.43***	20.32***	20.37***	20.45***	20.27***
Interaction effects (No/low educated * unemployment of 13 months and more / Years in temporary contract / Years in Minijob or Midijob, East Germany * unemployment of 13 months and more)												
Low educ*unemp 13+									2.31			
East Germ*unemp 13+										-5.83*		
Low educ*Temporary											0.27	
Low educ*Mini/Midi												-4.39
Pseudo-R2	0.05	0.10	0.11	0.10	0.11	0.15	0.18	0.24	0.24	0.25	0.24	0.25





*Table IV.1 continued*

Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BIC	-290.57	-275.97	-272.21	-275.76	-270.35	-259.74	-251.68	-231.02	-230.96	-229.90	-231.01	-230.05
LogLikelihood	607.23	610.61	635.69	616.72	605.90	597.71	627.22	592.43	598.83	596.70	598.93	597.00
N	678	678	678	678	678	678	678	678	678	678	678	678

Data Source: GSOEP 2008-2013, own analysis.

Notes: + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001



TABLE IV.II: LOGISTIC REGRESSION, DETERMINANTS OF RELATIVE DEPRIVATION, 5-YEAR TIME SPAN 2008 (INDEP. VAR.) TO 2013 (DEP. VAR.), AME IN %

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Sex and Region of residence (references: Male, West Germany)												
Female	1.09	0.85	1.39	0.85	0.64	0.93	1.09	1.09	1.39	1.22	1.42	1.40
East Germany	10.30**	3.35*	2.08+	3.35*	3.79*	1.13	0.92	0.91	1.23	1.89	1.18	1.18
Changes in living Conditions between 2008 and 2013 (reference: not living with parents)												
Still living with parents	-6.97**	-1.87***	-1.66**	-1.87***	-1.92***	-1.63***	-1.24**	-1.24**	-1.62**	-1.40**	-1.62**	-1.60**
Move out	-4.44+	-1.21*	-0.76	-1.21*	-1.24*	-0.58	-0.24	-0.23	-0.35	-0.26	-0.29	-0.30
Educational level in 2008 (reference: Higher education (ISCED 97))												
Inadequately		81.24***	80.99***	81.23***	80.57***	76.80***	74.34***	74.26***	80.22***	79.74***	80.06***	80.32***
General elementary		30.61***	23.27**	30.62***	30.48***	12.66+	10.73+	10.72+	10.30	12.11+	13.01	13.67+
Middle vocational		17.41*	17.77*	17.41*	16.23*	11.07+	9.91+	9.89+	13.13+	11.92+	12.39+	12.37+
Vocational and Abitur		5.31	5.11	5.31	4.54	4.14	2.85	2.84	3.82	3.51	3.61	3.61
Higher vocational		3.49	3.60	3.49	3.26	2.00	1.81	1.81	2.33	2.09	2.33	2.32
Employment status in 2008 (reference: Full-time employment)												
Part-Time employed			-0.26				-1.45	-1.45	-0.46	-0.28	-0.42	-0.42
Occupational education			-1.05				-2.38	-2.38	-0.72	-0.62	-0.70	-0.69
Marginal employed			0.96				0.76	0.76	0.22	0.15	0.24	0.23
Not in employment			-1.11**				-5.82***	-5.82***	-1.23***	-1.05***	-1.21***	-1.21***
Registered unemployed			5.99*				0.43	0.41	0.00	0.20	0.10	0.13
Number of years between 2008 and 2013 with...												
Temporary contract				-0.01			-0.06	-0.06	-0.03	-0.04	-0.11	-0.06
Minijob/Midijob					1.55		0.87	0.87	0.83	1.00	0.87	0.88
Number of months in unemployment between 2008 and 2013 (reference: 0 to 6 months)												
7 to 12 months						7.53*	4.95+	4.94+	6.94+	5.18+	6.36+	6.30+
13 to 24 months						7.51*	4.91+	4.89+	5.55	9.64+	6.29+	6.27+
25 months and more						19.49**	15.31*	15.24*	17.19*	24.62*	19.49*	19.15*
Income poverty in 2008 (reference: not poor)												
Poor household								0.12	0.07	0.29	0.16	0.12
Interaction effects (No/low educated * unemployment of 13 months and more / Years in temporary contract / Years in Minijob or Midijob, East Germany * unemployment of 13 months and more)												
Low educ*unemp 13+									6.21			
East Germ*unemp 13+										-5.66*		
Low educ*Temporary											0.32	
Low educ*Mini/Midi												-0.12
Pseudo-R2	0.03	0.13	0.17	0.13	0.13	0.21	0.23	0.23	0.23	0.24	0.23	0.23



*Table IV.II continued*

Prob > chi2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BIC	-267.39	-241.11	-230.25	-241.11	-239.94	-217.18	-212.77	-212.77	-212.40	-211.52	-212.76	-212.77
LogLikelihood	560.85	540.90	551.78	547.42	545.08	512.60	549.41	555.93	561.70	559.95	562.43	562.45
N	678	678	678	678	678	678	678	678	678	678	678	678

Data Source: GSOEP 2008-2013, own analysis.

Notes: + p<0.1, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001



**TABLE IV.III: LOGISTIC REGRESSION, DETERMINANTS OF SUBJECTIVE INCOME DISSATISFACTION, 5-YEAR TIME SPAN 2008 (INDEP. VAR.) TO 2013 (DEP. VAR.), AME IN %**

	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Sex and Region of residence (references: Male, West Germany)												
Female	9.84**	6.41**	5.01*	6.47**	5.91**	6.57**	5.76*	5.87*	5.10*	5.12*	4.83*	5.03*
East Germany	3.83	2.45	2.16	2.47	2.90	0.80	1.68	1.61	1.39	1.29	1.25	1.31
Changes in living Conditions between 2008 and 2013 (reference: not living with parents)												
Still living with parents	8.07+	3.45	2.40	3.51	3.72	3.81	3.66	4.05	3.51	3.53	3.74	3.47
Move out	-1.42	-1.08	-1.99	-1.05	-1.08	-0.37	-1.76	-1.50	-1.29	-1.29	-1.25	-1.21
Educational level in 2008 (reference: Higher education (ISCED 97))												
Inadequately		28.87+	24.87	28.76+	26.83	17.69	17.59	16.71	14.63	14.78	18.85	11.04
General elementary		21.29**	16.56*	21.39**	21.06**	12.50+	12.72+	12.67+	11.09	11.40+	21.57*	9.21
Middle vocational		14.08**	11.41*	14.12**	13.15*	11.35*	9.51+	9.38+	8.44+	8.41+	8.26+	8.59+
Vocational and Abitur		8.41+	8.90+	8.38	7.27	7.81	7.91	7.73	6.79	6.78	6.94	7.11
Higher vocational		2.34	2.02	2.31	2.05	1.76	0.78	0.82	0.70	0.71	0.84	0.79
Employment status in 2008 (reference: Full-time employment)												
Part-Time employed			-0.57				-1.95	-1.89	-0.87	-0.88	-0.86	-0.84
Occupational education			9.61				22.30*	22.22*	13.48+	13.54+	13.71+	13.84+
Marginal employed			0.07				-2.82	-2.89	-1.31	-1.31	-1.30	-1.09
Not in employment			6.60+				10.27*	10.21*	6.29+	6.33+	5.89+	6.50+
Registered unemployed			6.08				-1.58	-1.91	-0.91	-0.90	-0.04	-0.98
Number of years between 2008 and 2013 with...												
Temporary contract				-0.24			-0.97	-1.06	-1.06	-1.07	-0.25	-1.07
Minijob/Midijob					1.82		1.80	1.76	1.75	1.74	1.78	1.39
Number of months in unemployment between 2008 and 2013 (reference: 0 to 6 months)												
7 to 12 months						4.12	6.10	6.09	5.34	5.35	4.82	5.69
13 to 24 months						8.32+	12.77+	12.43+	10.87+	10.55	10.76+	10.96+
25 months and more						15.01*	20.34*	19.71*	17.47*	17.24+	14.65*	18.32*
Income poverty in 2008 (reference: not poor)												
Poor household								1.88	1.86	1.85	1.22	1.96
Interaction effects (No/low educated * unemployment of 13 months and more / Years in temporary contract / Years in Minijob or Midijob, East Germany * unemployment of 13 months and more)												
Low educ*unemp 13+									0.87			
East Germ*unemp 13+										1.04		
Low educ*Temporary											-9.26*	
Low educ*Mini/Midi												



## No. 12 – Medium-term consequences

Hofäcker (ed)

*Table IV.III continued*

Pseudo-R2	0.02	0.05	0.06	0.05	0.05	0.07	0.08	0.08	0.08	0.08	0.09	0.08
Prob > chi2	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BIC	-377.85	-367.73	-361.82	-367.70	-366.50	-359.85	-353.21	-353.10	-353.09	-353.09	-350.40	-352.65
LogLikelihood	781.77	794.13	814.92	800.60	798.19	797.92	830.27	836.57	843.09	843.08	837.71	842.20
N	678	678	678	678	678	678	678	678	678	678	678	678

Data Source: GSOEP 2008-2013, own analysis.

Notes: +  $p < 0.1$ , \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$



Table IV.I reports the results for **income poverty**. Starting with the influence of the control variables (Models M1/2), it first becomes evident that income poverty is more widespread among young persons in the former GDR, i.e. The East German *Länder*. The fact that this effect becomes insignificant once unemployment is introduced (Models M6ff.) suggest that this less favourable performance of Eastern German youth likely is related to the higher regional incidence of unemployment. Results also confirm the protective function of living with one's own parents: young people still living in the parental home exhibit a lower risk of relative income poverty (Model M1). This shielding effect is largely stable and only does not seem to apply when the parental household itself is poor (see the interaction with income poverty in 2008 in Model M8). Educational effects (Model M2ff.) initially are quite pronounced with particularly those with inadequate or only general elementary education exhibiting a high risk of poverty. Significant differences between the higher educated and those with middle vocational education are also observable, even though to a lesser intensity. Notably, virtually the entire effect of education turns insignificant when controlling for unemployment effect in Models M6ff., suggesting that it is the higher unemployment risk of lower-educated individuals that makes them more vulnerable financially.

Turning to the main explanatory variables of labour market status, results from Table I.I impressively confirm the poverty-reinforcing effect of unemployment. Being in unemployment significantly increases the risk of income poverty (Model M3ff) and this effect appears to be cumulative, i.e. the longer a young person is affected by unemployment, the more detrimental are its consequences for being affected by income poverty. Negative effects are particularly pronounced for those that have been unemployed for more than two years within the analysed five-year period (Model M6). Minijobs appear to be harmful for medium-term socio-economic security as well, indicated by the poverty-enhancing effect of the years being employed in such types of jobs (Model M5). Nonetheless, the magnitude of their effect remains well below that of unemployment. Notably, there seems to be no clearly observable effect of fixed-term employment (Model M4), corroborating our assumption that wage differences compared to permanent employment may be prevalent, but are not sufficiently large to be the cause of income poverty.

Having been in an already income-poor household in the year 2008 raises the poverty risk in 2013, suggesting that income poverty in Germany is rather a persistent phenomenon (Model M8). Yet, the finding that virtually all other effects remain largely stable after the introduction of this variable suggests that this persistency is largely independent of socio-demographic controls and labour statuses. Finally, no effect is found for any of the interactions terms between labour market status and educational attainment. Concluding that there are no differences between educational groups in the effect of unemployment, however, may be too premature, considering the rather modest sample size in relation to the number of variables.

Table IV.III shifts the attention to severe **material deprivation**. As for income poverty (see above), youth in East Germany appear to be more vulnerable (see M1), yet again, this may be attributable to the higher incidence of unemployment in this area (see M6 ff.) Parental protection apparently also shields German youth from deprivation, considering economies of scales in a joint family household (M2). Yet, moving out of the parental home does not appear to change poverty risks, suggesting that most youth only move



out of the parental home when they can afford at least most basic goods for their everyday life. Educational effects again are prevalent (M3), with poverty risks again being clearly highest among those with inadequate or only elementary education, moderate among the medium vocationally-educated and clearly lowest among the higher educational strata. The stronger educational effects may imply that individuals at different educational levels not only have different financial resources at their disposal (income poverty) but that they also exhibit different consumption styles (e.g. higher relative expenditure and less savings among the lower-educated), even though it would require further data to substantiate this conclusion.

Turning to the medium-term effects of different labour market statuses, results confirm the clearly negative and cumulative effect of early career unemployment (M6). Particularly those that were affected by long-term employment in the five-year observation period are at a high risk to be deprived in basic goods. In contrast, those with only short-term unemployment are apparently better able to avoid material deprivation, likely due to better possibilities to compensate for temporary income losses, e.g. by savings. Effects for the other two labour market statuses are clearly less pronounced, with no significant relationships observable (M4/5).

Turning finally to **subjective poverty** (Table IV.III), it first becomes evident that there no longer is an East-West difference among German youth. In addition, results indicate that women are more likely to subjectively feel poor than men (M1). Effects of the parental household are not consistently significant (M2). This seems reasonable, given that the question used here for the dependent variable did not inquire the satisfaction with the income security of the entire household, but the individual income, which more likely is related to individual-level factors. This interpretation is corroborated by the effects for different employments statuses (M3) which indicate that it is particularly those still in the educational system that are dissatisfied with their income situation. Subjective dissatisfaction with household income is also most widespread among those with lower educational degrees (M2), a finding in line with their higher income poverty and deprivation risks in the earlier regressions.

Results furthermore show that the unemployed not only are at a higher risk of being income-poor or deprived; their disadvantage also extends to the subjective dimension as those with more than one year of unemployment, and particularly those with more two years of unemployment in the observation period report a subjective feeling of dissatisfaction (M6). Higher subjective poverty is also found among those initially in minijobs (M5), a finding confirming earlier findings for income poverty and studies highlighting their more frequent feelings of social exclusion (see section 3.3.). Again, no such effects are found for those affected by fixed-term employment (M4) and minijobs (M5), suggesting that not only the financial and material hardship but also their feeling of being disadvantaged does not differ substantially from those in permanent employment. The modestly significant interaction between fixed-term employment and lower education (M11) seems to suggest that lower-educated individuals may feel less-disadvantaged through a temporary job, given the opportunity to avoid unemployment and their generally lower income prospects.



In order to control for unobserved heterogeneity, first difference models were also calculated for all three analytical dimensions. As a matter of fact, these could only consider individuals changing their values in the variables considered in between the two time points. Analyses thus were restricted to a limited number of variables respectively respondents. Results remained largely inconclusive with only very low shares of variance explanation (below 5%); they are thus not shown here. Occasional effects seemed to confirm the shielding function of the parental household, particularly for avoiding income poverty, and the cumulatively negative effect of unemployment.

## 5. Discussion

The results of the previous analyses provide insights into medium-term socio-economic risks arising from employment uncertainty among Germany youth. They clearly demonstrate that negative effects of employment uncertainty for poverty and deprivation are not restricted to immediate short-term effects but that they equally are important in a medium-term perspective of five years. Individuals that experience periods of employment uncertainty also bear a higher risk of being affected by poverty and deprivation five years after that data than young people in permanent employment.

Our results indicate that most severe effects on socio-economic outcomes are found for unemployment. German youth experiencing unemployment are either confronted with a high risk of being income poor or even deprived in their basic needs five years after that date. This effect is cumulative, i.e. the longer young people spend in a state of unemployment the worse are their income prospects in the observed period. These results corroborate the description of Germany as an insider-outsider labour market in which the unemployed outsiders are permanently disadvantaged in various aspects of life. Indeed, our analyses show that disadvantage arising from unemployment does not remain restricted to objective dimensions (income poverty and deprivation), but that it also negatively affects subjective income satisfaction. Unemployed youth thus may not only find it more difficult to make ends meet, they also more often may feel disadvantaged as compared to their employed counterparts, a feeling that may provoke further negative outcomes (such as physical or mental health).

The significance of minijobs has increased considerably on the German labour market in recent years. Our results indicate that due to their low wage levels, these kind of jobs also increase the risk of objective income poverty. Yet, the magnitude of the negative effects of minijobs clearly remain below those of unemployment, presumably due to the fact that they are associated with at least some minimum income and furthermore are often used as top-ups on other existing income. Notably, their effect on severe deprivation in everyday needs is not significant, suggesting that though minijobs may lead to negative income consequences (as compared to normal continues employment), these income losses are not large enough to cause severe material deprivation. Furthermore, due to the often only temporary use of such jobs, there seems to be no subjective feeling of being disadvantaged among youth. Nonetheless, the effects of minijobs on the income situation of youth remains negative, suggesting that the use of such types of jobs within the youth labour market would need to be critically reconsidered.





In our analyses, no significantly negative effects were found for fixed-term employment in Germany for any of the dimensions of socio-economic consequences analysed. Without much doubt, fixed-term employment frequently leads to lower career and income prospects in the medium term. Yet, these income disadvantages do not appear large enough to lead to severe economic disadvantages among youth. Furthermore, fixed-term employment contracts frequently function as stepping stones or bridgeheads into permanent employment. By these means, existing socio-economic disadvantages in the short-term (see Rokicka and Klobuszewska 2016) thus may be outbalanced in the medium term through upward career mobility.

Finally, our results also confirm the salience of educational degrees in predicting socio-economic outcomes for youth. It is the better educated that are best able to avoid negative socio-economic consequences in all dimensions analysed, while those with lower education bear a higher risk of poverty and deprivation. Significant effects, however, are almost only found for the direct effects of education, not for their interaction with the afore-mentioned forms of labour market insecurity (with the sole exception of the moderate interaction for fixed-term employment in Table IV.III). This goes against our hypothesis that effects of such work-forms may be education-specific, i.e. most detrimental among the lower educated. Yet, in this respect, the results of the previous analyses need to be taken with care, considering the relatively small sample size and breadth of indicators used. Further analyses with other data sets, e.g. the German Mikrozensus, may be required to substantiate our findings (even though due to the administrative nature of these data sets would only allow for analysis of objective income poverty).

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## VIII Summary of Results

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In the opening chapter of this report, we have provided a theoretical discussion about different types of labour market uncertainties and their assumed effect on the socio-economic situation of youth and its subjective perception. Using different data sets, the previous chapters have investigated this relationship in detail. This final chapter now summarises and critically reflects the results from these empirical analyses. In doing so, we turn back to the theoretical introduction chapter and investigate in how far the results confirmed our expectations that were developed based on earlier literature (see the introduction chapter). We will highlight congruities, but will also turn to deviations and innovative results. Finally, we outline what policy conclusions can be drawn from our empirical analyses.

### 1. Early career unemployment

In the theoretical chapter, we formulated theoretically grounded assumptions about the relationship between the experience of early career unemployment and its later-socio-economic consequences for youth. We assumed that unemployment would have detrimental effects not only in the short run, but also will imply “scarring effects” in a medium-term of around five years, in terms of employment chances and wage income, but also in subjective well-being and satisfaction. These effects were assumed to be cumulative over time, i.e. negative socio-economic consequences were assumed to increase with the length of time spent in unemployment respectively the number of consecutive unemployment spells. Finally, we expected socio-economic consequences to be most pronounced for the lower qualified, while the better educated are in a better position to avoid unemployment, and suffer less from its scarring effects.

The results from the empirical analyses corroborate our expectation of a harmful effect of unemployment on later career outcomes for youth. In other words: **negative consequences of unemployment do not remain restricted to immediate poverty and deprivation – as shown in the earlier EXCEPT work of Rokicka and Kłobuszewska (2016) – but also increase the likelihood of socio-economic disadvantage in subsequent years.** This conclusion remains valid for both the comparative EU analyses as



well as the subsequent country studies, and applies to all types of socio-economic outcomes considered. The comparative study on 24 EU countries (Rokicka, in this report) found a negative effect of unemployment experience on all dimensions of socio-economic disadvantage: income poverty, material deprivation and subjective poverty. This result remained robust, even when controlling for other socio-demographic factors, indicating that **the negative effect of unemployment applies to all groups of youth and cannot be reduced to its concentration among particular problem groups**. The country studies for Germany (Hofäcker et al., in this report) and the UK (Nizalova et al., in this report) confirmed this result across all dimensions of socio-economic uncertainty at the national level. Looking only at subjective financial consequences, Bertolini et al. (in this report) could confirm that the main socio-economic divide on the Italian labour market runs between the employed and the unemployed, with the latter exhibiting a clearly higher risk of poverty. This negative effect was most pronounced among those that never worked (as compared to those who are employed with a permanent contract), corroborating the idea of a division alongside the lines of employed “insiders” and complete “outsiders” of the labour market. Finally, the Estonian country study (Unt and Täht, in this report) that looked only at income-based consequences, also found evidence for a medium-term “scarring” effect of unemployment.

**All country studies as well as the comparative study also confirmed that in general, the effect of unemployment is *cumulative***, i.e. its detrimental consequences increase with the length of unemployment. Yet, country studies also showed that the form of this cumulative effect is not necessarily linear. Negative effects proved to be low or not significant for those with short unemployment periods up to one (Estonia) or two years (Germany). Only after reaching these threshold values of long-term or permanent unemployment, poverty and deprivation risk increased, but then often did so sharply. One possible reason for the only minor disadvantage incurred through short-term unemployment may be that it does not yet lead employers to connect it with lower abilities and productivity. As Unt and Täht (in this report) argue, that may be particularly so in times of economic crisis where jobs are scarce and unemployment may be hard to avoid – and thus appears less stigmatising. **Cumulative effects are not only found for the mere duration of unemployment spells, but equally apply to the number of subsequent (long) unemployment spells**. In fact, high numbers of subsequent unemployment spells may aggravate the negative signalling effect associated with it. Nizalova et al. show for the UK that “the negative effect of accumulated duration of unemployment is exacerbated by churning in and out of employment”. At the same time, the length of unemployment spells plays a role in this respect: Bertolini et al. demonstrate that a number of short employment interruptions may even have a positive signalling effect on the Italian labour market, as they signal an active search process of young individuals, possibly connected with intended upward occupational mobility.

## 2. Fixed-term employment

As outlined in the hypotheses in chapter 1, socio-economic consequences of fixed-term employment were expected to be less detrimental than that of unemployment. On the one hand, we assumed that the income situation of fixed-term employees would be more favourable given their own wage income. On the other hand, fixed-term employees may



not necessarily be scarred by this experience, but instead may use a temporarily uncertain job as a “bridge” into permanent employment. Only if fixed-term employment turns into a permanent phenomenon, there may be increased risks of poverty or social exclusion. We finally assumed that the question whether fixed-term employment was used as a bridge or rather resembled a “trap” would be closely related to young people’s individual human capital.

The results clearly **confirm the less detrimental effect of fixed-term employment as compared to unemployment**. In her comparative chapter, Rokicka (in this report) shows that differences between fixed-term and permanent employees in terms of poverty risks are clearly smaller than for the unemployed versus the employed; furthermore, the gap is declining over time. All in all, her results point to “no large material disadvantage” for fixed-term employees, reflected in the fact that negative effects were found only for income poverty but not for material deprivation and subjective exclusion. It seems reasonable that, **even though there are relative income disadvantages connected with fixed-term employment, these may not be large enough to cause severe material deprivation**. Apparently, young fixed-term employees in Europe also do not see themselves as being socially excluded. These results are also confirmed in the country studies, which found either no significant effect at all for temporary employment (Germany), only minor differences in poverty risks as compared to other employment forms (UK) or only weak effects of the type of contracts (Italy). Beyond the explanations given above, Bertolini et al. highlight that the lack of significant differences may also stem from the fact that wages have declined also among permanent employees, thus decreasing the wage gap. Furthermore, fixed-term employment contracts nowadays have turned into a “normal” labour market phenomenon, thus making it less stigmatizing for those having experienced it. Against this background, it is no surprise that in Germany, a country with very high rates of temporary employment among its youth (see chapter 1), there is no indication of a “scarring” effect through periods of fixed-term employment.

Results, however, need to be treated with certain care, given that the analyses often only looked at the likelihood of being income-poor, severely-deprived or experiencing a state of subjective social exclusion – not at relative losses in income, material goods or life satisfaction. **The fact that we found only weak effects for these poverty indicators does not rule out that there are income disadvantages that adversely affect fixed-term employees**. Yet, within the observed five-year timeframe, these are not large enough to cause severe material disadvantages. However, as earlier literature has shown, there may be still disadvantages in longer time horizons, particularly when making savings for later life (see Paskov 2008); a topic that is being critically discussed in other deliverables of the EXCEPT project (qualitative interviews; analysis of long-term effects in WP 6).

### 3. Other atypical employment forms

Contractual flexibility, however, is not the only dimension in which employment relationships can be flexibilised. There are also opportunities to change the amount of working time as well as the wage associated with a certain type of job. Where applicable, country studies investigated also the effects of these types of flexible jobs on poverty and social exclusion.



Both the UK as well as the German country study considered the influence of *part-time employment*, i.e. a reduction of working time to often 20-30 hours. Yet, results from both countries suggest that **part-time jobs have no negative effect on the material situation of youth in the medium-term**. This seems plausible given that part-time jobs often do not act as a precarious work form with clear wage disadvantages, but often are used to improve employee-based flexibility, e.g. during periods of study or throughout the early family phase. They thus often neither lead to severe drops in income on the household level nor are associated with experiencing social exclusion.

Around the 2000s, Germany began to foster another type of atypical work, the so-called “*mini-jobs*”. These are jobs, often entailing low working hours that are paid at a flat-rate of 400 Euros (after 2013: 450 Euros) and are exempted from taxes and social security contributions. They thus are considered as a financially attractive solution for employers and for individuals that want to top up an otherwise meagre income (women with young children, students, pensioners or public benefit recipients). As the German case study showed, **mini-jobs may also negatively affect youth’s income situation, yet results were mixed across dimensions**. While the German study found a negative effect on income-based poverty, there was no effect on deprivation and on subjective income satisfaction. Apparently, the low pay increases young individuals’ poverty risks in the medium-term, particularly when these types of jobs are the only source of income. Yet, as German youths frequently use them as temporary top-ups to other income sources, the income effect does not seem to be large enough to cause severe material deprivation. The partly ambiguous results should, not hide that if mini-jobs go beyond temporary income bridges (e.g. to have an income while studying), they may have harmful effects on youth, and thus cannot be compared to the rather positive example of fixed-term employment in Germany.

#### 4. Individual level factors

One major assumption in the theoretical chapter was that effect of employment uncertainty on the socio-economic situation of youth is not uniform, but differs between individuals with different degrees of human capital. Youth with higher educational attainment was expected to be better able to escape the poverty-enhancing cycle of unemployment and to use fixed-term employment rather as a stepping-stone into the primary labour market than to become trapped in it.

Our empirical results showed some indication that when faced with initial labour market uncertainty, **high-educated individuals find it easier to avoid poverty**. No education-specific effects were found for fixed-term employment, a finding likely due to the generally only modest to small differences in poverty risks between the fixed-term and the permanently employed (see the discussion above). Predominantly positive effects of education on avoiding poverty instead were found for those in unemployment. On the European level, Rokicka (in this report) could show that socio-economic disadvantage arising from initial unemployment concentrated among the lower-educated but did not so much harm those with medium to high education. Similarly, the Italian country study highlighted that higher education effectively shielded Italian youth from poverty in the medium-term as it allowed them to be upwardly mobile after experiencing unemployment early in their careers. By and large, education thus increases the likelihood to exit from





unfavourable employment circumstances and thus to avoid medium-term socio-economic disadvantage. However, for those higher-educated that do not adequately manage to make the transition to employment, scarring effects seem to be particularly detrimental. As Unt and Täht (in this report) show for the Estonian case, those higher-educated that remained in unemployment for more than one year particularly suffered from income losses and relative poverty.

While the main focus of the individual-level analyses was on the interaction between labour market uncertainty and human capital, further effects were found that point to additional risk respectively shielding factors with regard to early career uncertainty:

- Relevant effects result from the *household type* in which young individuals are embedded. On the one hand, **still living in the parental home effectively shielded youth from experiencing poverty through parental support and the sharing of resources** (Hofäcker et al., in this report). This effect may be particularly strong for households with high work intensity and thus strong financial resources (Rokicka, in this report). Yet, at the same time, the **move out of the parental home and the start of an own family may be associated with increasing poverty risks** (Bertolini et al., in this report).
- Further results point to the **relevance of the economic context in which youth are living**. German findings show that poverty risks are particularly high in Eastern Germany where the economic situation is significantly worse than in the West (Hofäcker et al., in this report). Similarly, findings from the Estonian and the Italian country studies (Unt and Täht respectively Bertolini et al., both in this report) – two countries that were hit by a deep recession after the financial crisis in 2008 – showed **that economic downturns may, on the one hand, increase the risk of objective and subjectively perceived poverty**. Yet, despite this effect, **economic crises may equally reduce the scars associated with unemployment and/or atypical employment and thereby improve the chances of youth affected by labour market uncertainty to re-enter employment once the economy recovers**.
- Effects of other socio-demographic variables remained comparatively weak and inconsistent. Even though the previous analyses occasionally found *gender* differences – suggesting that women are at a somewhat higher risk of poverty – they were not robust enough across countries to speak of women as a general risk group of poverty and deprivation.<sup>1</sup>

## 5. Institutional-level factors

Socio-economic consequences for youth arising from employment uncertainties are not only affected by individual characteristics of youth themselves and their immediate social

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<sup>1</sup> As in most regressions, various other factors (such as age, education, labour market status) were already controlled for, this does not rule out that negative socio-economic outcomes may affect women disproportionately. Yet the influence is largely mediated by other individual characteristics and thus gender is not a risk factor per se.



context. They may equally depend on the contextual settings provided through nation-specific education, welfare and labour market institutions. In the previous theoretical discussions in chapter 1, we assumed that standardized educational systems with clear qualification signals are effective in reducing poverty risks by reducing search time for youth and employers alike, promoting close qualification matches and thus allowing for a smooth entry into the labour market. Unemployment, if it occurred, may be only short-termed given the close link between education and the labour market, yet, if its duration increases, particularly youth in such vocation-specific education systems may experience stigmatization through it and suffer from long-term scars on the labour market. This effect was expected to be most pronounced when strong rules of employment protection promoted the development of tight labour market boundaries. We also hypothesized that labour market policies affect the outcomes of employment uncertainty for youth. Comprehensive active labour market policies improve qualifications and employment chances of young individuals and reduce the negative repercussions of early career employment uncertainties. Passive labour market policies, such as generous unemployment benefits, buffer the material consequences of unemployment and thereby reduce poverty and deprivation risks.

Turning to the empirical results, particularly the comparative study by Strandh and Högberg (in this report) confirmed the **negative effect of too rigid labour market regulation** by showing that it is countries with strong overall employment protection that promote lower transition rates from fixed-term into permanent employment. Yet, in line with earlier findings by Breen (2005), Strandh and Högberg (in this report) could also show that **educational policies promoting vocational specificity could offset the detrimental effects of employment regulation**. This proved to be particularly so in countries where the gap between the regulation of employment overall and the regulation of fixed-term contracts is low, leaving only little incentives to employers to use fixed-term contracts as a means of flexibilisation. Given that educational signals are clearly observable, employers will then be more likely to substitute fixed-term contracts by permanent employment relationships.

Effects of active and passive labour market policies were not explicitly tested in the previous analyses. Yet, it stands to reason that their influence on socio-economic outcomes may be limited. Germany – the country in our four-case-sample that exhibited the highest expenditure on both active and passive labour market policies – still displays a notable level of poverty on various dimensions, and scarring effects of unemployment are clearly prevalent. Even in Scandinavian countries, where ALMP expenditure is traditionally high and unemployment benefits are rather generous, youth poverty rates occasionally even surpassed the European average (see the case of Finland in Rokicka, in this report, Appendix 1 and 2). Results thus suggest that **it is rather preventive educational policies – allowing for a close matching between labour market demands and youth's qualifications that effectively prevent the emergence of negative socio-economic outcomes among youth in the medium-term – rather than interventions or financial support policies**.



## 6. Policy conclusions

The previous analyses unanimously show that the most negative medium-term consequences of labour market uncertainty arise from previous unemployment experience. Those youth affected by unemployment unanimously run a higher risk of being affected by income poverty, being materially deprived and by perceiving themselves as socially excluded in economic terms. In her pan-European overview, Rokicka (in this report) thus legitimately argues in favour of **more policy attention on youth unemployment** and “a **more intensive inclusive policy for youth excluded from the labour market.**”

Results on the cumulative effect of unemployment warrant that **particular policy attention should be paid to avoiding long-term unemployment.** As shown in this report, short-term unemployment spells may not be avoidable, particularly in times of economic crisis. Yet, they may also be used by youth for optimizing job search and achieving upward job mobility in the long-run. Both comparative as well as country study evidence show that short, early unemployment spells often do not imply long-term scarring. Yet, once unemployment becomes long-term, scarring effects are visible, even on the comparatively flexible labour markets of the UK and Estonia. Public policy is thus well-advised to invest into policies that enhance the employability and qualifications of unemployed youth and allow them to exit from unemployment within a short time-frame. Such exits may not necessarily end with direct entries into the core labour market, but may also imply further periods in atypical employment forms. Yet, as our analyses show, given the higher pay and the better opportunities to acquire further skills and competences, these periods are not connected with such strong socio-economic disadvantages as unemployment and furthermore may act as stepping-stones into safe employment in the medium term. **Employment policies thus may also aim not only at the direct integration into the “safe harbour” of permanent employment, but may also additionally promote a “stepwise” integration into the labour market.**

A basic prerequisite for successful labour market entry and a successful early career is that individual qualifications adequately match labour market demands. In this respect, **the promotion of higher educational attainment can generally be recommended, given that better educated youth are better able to overcome periods of labour market uncertainty and enter into the primarily labour market.** Yet, the mere promotion of higher education will not be helpful as long as these qualifications do not become visible to employers. Our findings in this report suggest that **labour market integration is best achieved by educational systems that standardize educational and vocational degrees and thereby provide clear signals on the job market.** Educational systems should be reformed to allow for such clear signalling of qualifications and abilities – to help youth optimize their search behaviour and to make their qualifications and competencies clearly visible to employers. Germany might serve as an exemplary case to that end.

In recent years, the flexibilisation of employment and the spread of atypical work forms has been a major trend on European labour markets, particularly for youth. As one of the key target groups of such uncertain work forms, youth thus were occasionally considered to be the “losers of globalization” (e.g. Buchholz 2008). Yet, our results indicate that **an – intuitively sensible – re-regulation of labour market contracts may not be advantageous to youth** starting their careers under conditions of labour market uncertainty.



European comparisons show that by and large, it is rather regulated economies where atypical employment makes up an “outsider segment” on the labour market, where youth in temporary jobs face highest entry barriers into permanent employment and where negative impacts of employment uncertainties are highest. Future policy directions may rather orient themselves at the promotion of atypical work forms as an opportunity for further skill enhancement and job search. In order to avoid the creation of outsider segments of young temporary workers, Strandh and Högberg (in this report) highlight that **partial deregulation – i.e. a large gap between the (strict regulation) of permanent employment and a (flexible) regulation of temporary contracts - should be avoided.** This would likely create negative incentives for the permanent use of temporary contracts as a flexibilisation measure in an otherwise regulated labour market.

Finally, our results suggest that best conditions for youth exist under conditions of a favourable economic climate. In times of recession, on the other hand, youth find it more difficult to successfully enter into employment. **Successful policy for youth thus is closely coupled with overall economic policy and the general promotion of high employment.**

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