

# NEGOTIATE

Overcoming early job-insecurity in Europe

Indicators and data sources  
to measure patterns of labour  
market entry across countries

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**NEGOTIATE**  
Overcoming early job-insecurity in Europe

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## Abstract

Job insecurity has been gaining research and policy attention throughout the two last decades. However, its definition and conceptualisation remain open questions within the relevant literature. When it comes to measuring early job insecurity and patterns of school-to-work transition, several methodological approaches have been proposed. Methods and variables largely depend on existing data sources. National databases have been developed in a significantly uneven way hindering comparability between different countries. Despite the existence of internationally comparable datasets that cover the EU and EEA countries, these datasets are characterised by specific limitations and constraints that render the detection of comparable transition patterns a difficult yet extremely challenging task.

## Definitions of job insecurity

It is widely accepted that unemployment and integration of young people in the labour market remains a major challenge for advanced economies and particularly for the European Union. In 2000, the Lisbon European Council was setting clear goals for the years 2000-2010 with regard to employment policies. According to Presidency's Conclusions, "the Lisbon strategy [was] designed to enable the Union to regain the conditions for *full employment*, and to strengthen *regional cohesion* in the European Union. The European Council needs to set a goal for full employment in Europe in an emerging new society which is more adapted to the personal choices of women and men."<sup>1</sup> By the mid-2000s, a High Level Group appointed by the European Commission in order to review the Lisbon strategy was admitting that "European Union and its Member States have clearly themselves contributed to slow progress by failing to act on much of the Lisbon strategy with sufficient urgency. This disappointing delivery is due to an overloaded agenda, poor coordination and conflicting priorities. Still, a key issue has been the lack of determined political action" (Kok, 2004).

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<sup>1</sup> Article 6 of Lisbon Strategy: see Lisbon European Council, "Presidency Conclusions", 23-24 March 2000, [http://www.consilium.europa.eu/en/uedocs/cms\\_data/docs/pressdata/en/ec/00100-r1.en0.htm](http://www.consilium.europa.eu/en/uedocs/cms_data/docs/pressdata/en/ec/00100-r1.en0.htm) (underlined by the authors).

By the end of Lisbon strategy's time of reference, and particularly after the breakout of the financial crisis in 2008, not only the goal of full employment in a knowledge-based economy was not achieved; moreover, as the description of the specific challenge which this very project is called to address was mentioning, "unemployment among young people in the EU has risen very sharply (...), reaching unprecedented levels. However, for over a decade the unemployment rate of young people in the EU remained approximately at double the rate of the overall unemployment in the economy while, at the same time, the use of flexible, fixed-term contacts and alternative forms of employment has been increasing."<sup>2</sup> This explains to a certain degree the haste of the European Union to design and implement new policy initiatives and schemes, among which the most important are the Youth Guarantee and the Youth Employment Initiative.<sup>3</sup>

In this framework of "growing job insecurity and systematic labour market and social exclusion of young people at the very beginning of their professional careers",<sup>4</sup> research and policy have been attempting to examine the characteristics of the problem and to reach any possible solution. However, despite the growing discourses over the 'threat of a lost generation', accompanied by a multi-faceted social malaise that includes among others high risks of poverty, precarity, social exclusion, disaffection, insecurity, scarring, higher propensity towards offence and crime, as well as (mental and physical) health problems, the notion of 'early job insecurity' is far from being completely theorised and conceptualised.

Job insecurity might be a misleading concept, since it might contain both employment and job insecurity. Chung and van Oorschot (2011), following the definitions proposed by Wilthagen and Tros (2004) as well as by the European Commission (Commission of European Communities, 2007) suggest the following distinction between job and employment security:

"(...) job security is the security of keeping a particular job or employment contract. On the other hand, employment security can be understood as having (the potential for) secure and continuous employment, which might entail changing employers and/or jobs. The difference between job and employment security is that the former focuses on keeping a current position with one employer, whereas the latter could entail greater mobility within the labour market. Thus workers can still have employment security when the chances of losing their jobs are high but the chance of finding another position relatively quickly is also high."

In other words, "job insecurity relates to employees' overall concern about the continued existence of the job in the future". This 'concern', however, has not only a quantitative or static dimension pertaining to whether someone is/feels secure about keeping his/her job. It also includes a qualitative dimension which pertains to the "the insecurity about the continued existence of valued characteristics of the job" (Vander Elst, De Witte, & De Cuyper, 2014). In fact, this anxiety has been identified as one of the most important stressors in work life (De Witte, 1999).

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<sup>2</sup> European Commission (Research & Innovation), "The Young Generation in an Innovative, Inclusive and Sustainable Europe", H2020-YOUNG-SOCIETY-2014,

<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/topics/2095-young-1-2014.html>

<sup>3</sup> For more on the EU Youth employment policy see <http://ec.europa.eu/social/main.jsp?catId=1036&langId=en>

<sup>4</sup> *Ibid.*

Therefore, beside the “powerlessness to maintain desired continuity in a threatened job situation” (Greenhalgh & Rosenblatt, 1984) or the “discrepancy between the level of security a person experiences and the level she or he might prefer” (Jacobson & Hartley, 1991), scholars have conducted empirical research in order to define job insecurity through its characteristics. In this regard, job insecurity is approached whether/or both as a *subjective experience* or/and as an *objective phenomenon* (De Witte & Näswall, 2003). Particularly in psychological but also in sociological literature, job insecurity is very often examined as a *perceived* situation, where employees might experience different feelings and levels of uncertainty within the same objective situation (Klandermans & van Vuuren, 1999; Sverke, Hellgren, & Näswall, 2002). Subjective perceptions of job insecurity can bear two components: a *cognitive* and an *affective* one (Anderson & Pontusson, 2007; Näswall & De Witte, 2003). The former refers to the individual’s estimate of the probability that one will lose their job in the near future, whereas the latter refers to the fear, worry or anxiety of losing one’s job (Chung & van Oorschot, 2010).

Common denominator, however, of different ways employees perceive their situation as job insecurity is the condition that the latter cannot but be an *involuntary* phenomenon; employees who choose for certain reasons an uncertain job, e.g. a temporary part-time job for a specific period of time, cannot be considered as cases of job insecurity (De Witte, 2005; Sverke & Hellgren, 2002). It is important to note that even if for methodological reasons they insist on the subjective characteristics, most of the studies that accept this two-fold nature of job insecurity combine both dimensions, while some connect empirically perceived insecurity with objective conditions, such as the employment status (Klandermans, Hesselink, & van Vuuren, 2010; Bernhardt & Krause, 2013).

Obviously, objective situations cannot be disregarded or underestimated. There also, one can find different types of indicators that are linked with different parts of the economic process. In this framework, the main factor that is taken into account is labour market and (some) of its characteristics. Thus, job insecurity is the most often linked to the threat of unemployment, the prevalence of internal or external labour markets within an economy or a specific sector and other factors that hamper individuals in finding or keeping a job. Within this stream, several theories are used, particularly when it comes to early job insecurity. The theories of human capital, labour mobility, job search, job matching and turnover, job competition and labour market segmentation account in different ways for the lower relative wages, the higher unemployment rate, and the greater labour mobility of young people, especially during their first years in the labour market (Karamessini, 2010).

Job insecurity along with the discussion on *precarious labour* and *precarity* are not used as simple descriptive notions neither as anti-euphemism of flexibility. It is part of the discourses developed since the early 1980s in order to encompass diverse forms of insecure or precarious work – informal, non-standard, atypical, non-declared, flexible, alternative, irregular, free-lance concealing dependent work etc. – that have appeared; more importantly, these in many cases have been the most dynamic form of labour, particularly in some sectors, such as services and agriculture, even if they have never been really accepted by any component of the tripartite corporatist system. Identified by scholars as an indisputably strong tendency in all capitalist economies, developed and developing, informalisation has been feared by national stakeholders and international organisations, such as OECD and ILO (Husmanns, 2003). Already in the mid-1990s, non-standard employment was reaching 37% in the UK, 30% in France, almost

40% in Italy, more than 40% in the Netherlands, almost 50% in Japan and in Australia (Carnoy & Castells, 2001).

In this framework, in an effort to combine growing economic performance with a minimum of social protection and security, the concept of ‘flexicurity’ was coined in the early 1990s and adopted by the European Commission as a leitmotiv of the European Employment Strategy and the revised Lisbon Strategy for Growth and Jobs, calling Member States to “promote flexibility combined with employment security and reduce labour market segmentation, having due regard to the role of the social partners” (European Commission, 2005). However, this shift in labour conditions has been the target of critiques that insist on the insecure character of contemporary employment and the lack of effective protection of workers, particularly those who belong in vulnerable social groups, such as women, members of minorities, migrants and of course young people. In this context, what is described as flexibility by some is interpreted as ‘flexploitation’ by others (Dean, 2008; Burroni & Keune, 2011; Keune & Serrano, 2014).

## Early job insecurity identified in school-to-work transitions

The existing literature on the transition from school to work has revealed that compared to the older established workers, young generations are in a more disadvantaged position in the labour market. Indeed, young people face higher risk of unemployment, unstable employment, flexible jobs with part-time and temporary contracts and much turnover between employment, unemployment and inactivity. Transition patterns seem to differ considerably across European countries, with Southern Europe facing the greatest difficulties in integrating young adults in the labour market. The picture has been worsened due to the financial crisis. According to OECD, in 2013 youth unemployment rates exceeded 35% in southern European countries, with Greece ranking first on the list with a percentage of 58.3, immediately followed by Spain.<sup>5</sup>

Several variables and indicators are considered as determinants of job insecurity covering a wide range of levels, from the individual and company or sector to the whole country and its institutions and market conditions. At the individual level, several categories are variables in order to examine job insecurity and establish possible patterns of transition: socio-demographic characteristics, i.e. age, gender, ethnicity; human and social capital, i.e. education and skills, previous employment experience, income, health conditions, family structure; forms of working arrangements and relations, i.e. type of contract, part-time work, participation in trade unions.

More precisely, a number of socio-demographic characteristics seem to affect the entry process. Gender plays a significant role in young people’s integration. Young women seem to encounter more problems with regard their transition than their male counterparts, with higher probabilities of being inactive or in non-standard employment for longer periods of time, while caring responsibilities also delay their entrance on labour market (Sigle-Rushton & Perrons, 2013; Plantenga, Remery, & Lodovici, 2013). Educational qualification and skills also have a strong effect on transitions from school to work, as low educated people hardly escape from spells of unemployment and inactivity, restricted mostly on temporary contracts (Quintini, Martin, & Martin, 2007).

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<sup>5</sup> <https://data.oecd.org/unemp/youth-unemployment-rate.htm>



Moreover, the socio-economic background seems to affect the transition process, as individuals from poorer households have lower job prospects, while educational background may postpone their first entry in countries with strong family support system. Scherer (2005) shows that compared to Germany and Great Britain, in Italy the parental educational attainments has a negative effect on young people's speed of entry, as the more educated parents support their offspring in longer searches for better jobs.

Apart from the individual characteristics, the different institutional contexts and arrangements in education systems and labour market shape variously the transition patterns of young people across countries. Most importantly, the vocational specificity in the educational system fastens the entry process, whereas the high levels of employment protection legislation has resulted in sluggish, but stable integration (Scherer S. , 2005; Scherer S. , 2001; Eurofound, Mapping youth transitions in Europe, 2014a). The distinction between internal labour markets (ILM) and occupational labour markets (OLM) can also explain the cross-national differences in the transition patterns (Gangl, 2003). Apprenticeships have been proved beneficial for young people's early stages of integration, as in countries where such systems have been developed, the transitions are smoother (Eurofound, 2014a). On the other hand, this depends on the way apprenticeships are organized. As Couppie and Mansuy (2003) mention, in the Scandinavian countries, the United Kingdom and the Netherlands, apprenticeships are less institutionalised and they are extended for a longer period, in comparison with Austria, Denmark and Germany.

Finally, conditions stemming from the position of the company and the conjuncture in which the economic sector and the labour market in general is positioned are taken into account in order to explain different patterns of transition (Chung & van Oorschot, 2010). In this respect, Iannelli and Soro-Bonmatí (2001) investigating the transition from school to work in Italy and Spain in relation to macro institutional characteristics, concluded that the faster expansion of tertiary education in Spain has resulted in higher competition between people with different educational attainments, leading to the worsening of labour market position of lower educated. Moreover, general institutional arrangements and labour legislation of a country are considered to shape young people's education-work transitions (Raffe, 2008).

## Existing data sources

One of the challenges in the school-to-work transition analysis is to find the adequate data sources that can capture the dynamics and complexity of the transition processes. Much of the empirical research has relied on national panel surveys, taking advantage of their longitudinal micro-data on young people's labour market entry. The German Socio-Economic Panel (SOEP) and the British Household Panel Study (BHPS) are some examples of such country-specific surveys, mostly used in transition-system research. Although these surveys provide detailed information on the flows of individuals in the labour market, the variations in their purpose, design and content make them unsuitable for comparative research. Frameworks and typologies that developed from the comparisons of such data represent only a small number of countries and have limited explanatory power when more countries are included in the analysis (Raffe, 2008).

In order to tackle the problem of data comparability, researchers of transition systems have focused their interest on large-scale international surveys. The coverage of a broad set of

European countries with diverse institutional contexts make cross-national surveys unique for comparative analysis, while their common methodological practices ensure the comparability across countries and over time. The most widely used cross-national data source is the European Labour Force Survey (EU-LFS), as it is the longest time series of comparable data on labour market. According to the official description of Eurostat<sup>6</sup>, the EU-LFS is a cross-sectional household sample survey, designed to provide quarterly and annual data on labour market participation of people aged 15 and over, as well as on persons outside the labour force. It is the main source of EU labour force statistics and the basis for structural indicators, such as the employment and the unemployment rates, the participation in life-long learning etc.

The survey is carried out in all 28 EU member states, three countries of European Free Trade Association – EFTA (Iceland, Norway and Switzerland) and two candidate countries (the Former Yugoslav Republic of Macedonia and Turkey), providing Eurostat with national data on employment, unemployment, inactivity and working conditions. The database enables multivariate analysis by sex, age, educational attainment and other socio-demographic characteristics, while information on working conditions allows for distinctions between permanent and temporary employment or between full-time and part-time jobs.

Since 1999, EU-LFS has been enhanced by a range of purpose-designed surveys, the so-called “ad hoc modules”, which are also carried out every year as supplementary datasets that provide users with statistics on specific topics concerning the labour market. Modules on “Transitions from school to working life” (2000) and on “Entry of young people into the labour market” (2009) are designed to provide further information on young people’s careers and fill possible gaps in this field of research. An additional module on “Young people on the labour market” is going to be released in 2016.

Using relatively large sample sizes and common definitions, concepts and classifications across participating countries, the EU-LFS is a rich database of comparable data on labour market behaviour in Europe. Nevertheless, despite its advantages there are limitations that hinder the explanation of labour market transition processes in their whole complexity. The main constraint arises from its cross-sectional nature and the lack of longitudinal data. Most of the information on employment status and labour market activities is referring to a specific point in time, with only some retrospective information provided in different periods of time. Therefore, each individual in the sample provides only a single event and as a consequence, transitions are not measured as a process, but they are limited to a status change making the construction of sequences between education and different employment states impossible (Muller & Gangl, 2003; Betti, Lemmi, & Verma, 2007). Additionally, due to the longitudinal span of the survey, the problem of left and right censoring arises, as individuals can be followed up for only a very short period of time, i.e. five quarters. Last but not least, the quarterly employment data does not allow to observe short-term labour market changes, such as unemployment lasting less than four months or multiple transitions between different employment statuses (Flek & Mysíková, 2015).

To overcome the limitations of the EU-LFS, comparative transition studies have also focused on alternative cross-national sources, such as the European Community Household Panel (ECHP) and the European Union Statistics on Income and Living Conditions (EU-SILC). Both

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<sup>6</sup> <http://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey>



databases contain longitudinal data on economic activity, revealing full series of pathways between education system and labour market.

The ECHP is a multi-purpose annual dataset, designed to collect data on a wide range of topics concerning living conditions. Conducted by the respective Statistical Offices of member countries, its main objective is to provide Eurostat with detailed information on income, labour force behaviour, social relations, housing situation, education and training etc., as well as to enable comparisons between European countries and regions. Carried out in the period from 1994 to 2001 (8 waves), it covers households and citizens aged 16 and over in most of the EU-15 countries. The ECHP consists of panel data so that the same respondents within each country are tracked year after year. In comparison with the EU-LFS, information on economic activities, education and training is updated in each wave of the survey, meaning that each individual provides as many units of analysis as the number of waves of the panel (Betti, Lemmi, & Verma, 2007). Thus, ECHP data can be used for sequence analysis, as they enable the recognition of labour market status sequences (Brzinsky-Fay C. , 2007; Brzinsky-Fay C. , 2014).

Replacing the European Community Panel Survey since 2003, the EU-SILC also provides timely and comparable cross-sectional, multidimensional and longitudinal micro-data on income, social exclusion and living conditions across Europe. It is a set of independent national sample surveys centrally designed and coordinated by Eurostat, which employ rigorous methodology in order to ensure the reliability, the validity and the comparability of data. The main goal of the survey is to study the income inequalities both at European and national levels, in order to document the living conditions of households and their members, as well as the social and economic characteristics that affect these conditions. Following the same logic with ECHP, the main advantage of EU-SILC lies in the fact that the four-year rotational design enables both longitudinal and cross-sectional estimations. The same persons are interviewed for a period of four years, while each year one quarter of the respondents is dropped out from the sample and replaced by a new one. Thus, monthly data are provided covering a longitudinal span of 48 months, while the time aggregation bias appears to be reduced compared to EU-LFS quarterly data (Flek & Mysíková, 2015).

Restrictions on both ECHP and EU-SILC arise mostly from the small size of their samples, which is an important constraint for the school-to-work transition research, considering that the analysis is concentrated on a specific age group. Limitations also emerge from the information on the 'most recently completed education'. Individuals who return to the educational system cannot be captured, and consequently some new school leavers are not first time entrants, but in fact re-entrants with previous work experience (Betti, Lemmi, & Verma, 2007). The limited data on working conditions, socio-economic background and ethnicity constrain further the analysis of the transitions. Finally, the retrospective and self-reported data on economic activities may give a misleading picture of transition processes, as respondents may not recall the exact time when they changed their status.

Apart from the above surveys widely used in the research on transitions, additional data sources provide a wide range of information on job security, working conditions and quality of employment.

The European Social Survey (ESS)<sup>7</sup> is a long-term, comparative research programme, designed to document attitudes, beliefs, values and behaviours of European citizens, aged 15 and over. Funded mainly by the European Commission's Framework programmes, the survey aims to develop a series of social and attitudinal indicators, comparable across European Union member states. It has been conducted since 2001 every two years, covering more than 30 European countries and it is consisted of two modules: the core module remains the same in every wave of the survey and concerns demographic and social characteristics, while the rotating modules are diversified in order to study different social issues. The ESS is a rich source of employment data, while information on family, socio-economic background and ethnicity enable a more in-depth analysis. Perceived/subjective employment security is also surveyed, as the respondents are asked to assess whether their job is secure or not. However, the different coding of the variable and the fact that it is not included in all waves of the survey do not allow comparisons in trends over time.<sup>8</sup>

Two additional international data sources are commissioned by the European Foundation for the Improvement of Living and Working Conditions (Eurofound): the European Working Condition Survey (EWCS) and the European Quality of Life Surveys (EQLS). Both surveys are conducted nowadays in more than 30 countries, while the target population includes all individuals aged 15 and over.

Carried out every five years since 1990, the EWCS aims to “assess and quantify working conditions of both employees and the self-employed across Europe on a harmonised basis; to analyse relationships between different aspects of working conditions; to identify groups at risk; and to contribute to European policy development, in particular on quality of work and employment issues” (Eurofound, 2014b). It looks at several aspects of working life, such as working time and work organisation, earnings and financial security, social relationships in the workplace, work-life balance etc.<sup>9</sup> The use of international classifications and definitions ensures comparability and enables comparisons with results from other databases. Bias arises, however, as the Eurostat strict definition of persons in employment used by the EWCS causes problems with regard to the quality of the collected data, as it is in fact inapplicable to “real-life situations, especially in less standard-industrial types of employment such as agricultural work, family business etc.” (Eurofound, 2007).

Despite the small sample sizes, the EQLS<sup>10</sup> provide further harmonised data on working life of European citizens. Running every four years since 2003, it aims to monitor key trends in the quality of people's life over time and it is the basis for traditional indicators of economic growth and standard of living, such as GDP or income. The data focus on a range of issues, such as living conditions, housing, family, public services and health, while self-reported information concerning happiness, life satisfaction and well-being are also gathered. Without being a survey targeted on labour market, data pertaining to employment, working conditions and perceived employment security are also available.

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<sup>7</sup> <http://www.europeansocialsurvey.org/>

<sup>8</sup> For an analysis on job insecurity with data drawn from ESS see Chung and van Oorschot (2010) and Cornelißen (2007).

<sup>9</sup> For a more detailed list on the topics covered, see <http://www.eurofound.europa.eu/european-working-conditions-surveys-ewcs>.

<sup>10</sup> <https://www.eurofound.europa.eu/european-quality-of-life-surveys-eqls>

Finally, a specific round of Eurobarometer surveys on “Employment and Social Policy, Job Security, and Active Aging” (EB 76.2)<sup>11</sup> was carried out in 2011, on behalf of the European Commission, covering EU-citizens aged 15 and over. The survey covers 27 countries of the European Union, as well as the candidate countries, Croatia, Turkey, Iceland, the FYROM, and Norway. Among others, questions concerning issues of job (in) security, participation in voluntary work and training programs, starting one’s own business and other aspects of working life are included. The data can be broken down according to a large number of socio-demographic variables. However, the small size of its sample (approximately 1,000 per country) imposes limits on the analysis.

## Methodologies and indicators used in existing empirical studies

When it comes to measuring early job insecurity and labour market exclusion, one can see that this is far from being a straightforward procedure. The existing studies are using a wide variety of different methodologies usually employing a variety of indicators and models. Nonetheless, although there is no standardised way of analysing quantitative information and drawing conclusions about job insecurity, there are certain patterns present in the literature.

Firstly, it is important to note, that there are different methodologies and indicators according to different definitions of job and employment insecurity. Depending on the distinction in the theoretical context between job insecurity (in the sense that the job is insecure but not necessarily the employment status) and employment insecurity (in the sense that a job may be insecure but the employment status is not) there are different indicators that should be used in every case. For job insecurity the OECD indicators are the most commonly used tools to express it quantitatively. Those are compiled by different items covering different aspects of job insecurity, such as individual dismissal of workers with regular contract, including employers’ inconvenience at the beginning of the dismissal process, such as notification and consultation periods, additional costs for collective dismissals and regulation of temporary contracts. Those indicators are combined to a weighted average so that they can be presented as a single score (OECD, 2015). Doogan (2001; 2005) and Fevre (2007) are using different indicators to estimate job insecurity such as types of employment contract (e.g. proportion of workers on temporary rather than permanent contracts), length of employment tenure (e.g. proportion of workers with the same employer for over 10 years), and subjective job insecurity (e.g. workers’ perceived likelihood of losing their job in the next 12 months).

However, if we approach employment insecurity, which is a much more dynamic process, we should focus on pathways to -and in- the labour market. The dynamic perspective, which is of our primary interest, is examined by multiple indicators and models, such as time after graduation until the first job or until the first stable job, rate of transitions from temporary to permanent employment, unemployment or inactivity, measuring in other words if temporary employment serves as a stepping stone or a trap within labour mobility. Those indicators are more suitable for estimating employment insecurity as they do not focus on the job itself, but they examine how secure the employment status is for a given individual. We should note here that the two different approaches do not have to be complementary. For example, according to several studies employment protection may lead to more persistent unemployment especially

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<sup>11</sup> <http://www.icpsr.umich.edu/icpsrweb/ICPSR/studies/34567/version/1>

for new entrants to the labour market and in general to increased employment insecurity ('insider-outsider' perspective; see Blanchard and Summers, 1986). There are studies, however, rejecting this relationship: for an overview see OECD (1999).

Many researchers are using descriptive statistics and indicators drawn from them to present a general image and explain differences among European countries. These statistics are usually analysed through and in combination with an econometric model. It should be noted, however, that since there is not a perfect indicator for early job insecurity, measures such as unemployment rate, youth unemployment rate and youth to adult unemployment ratio can all be particularly useful when examining job insecurity in different countries. In this sense, all these measures should be considered as complementary rather than competing. Moreover, one of the most commonly used indicators is the NEET (Not in education, employment or training). However, unlike the above mentioned measures the NEET lacks a clear definition and is extremely heterogeneous as it includes multiple categories, e.g. people that would fit to the classical definition of unemployed but also those unable to work, those who are inactive and other categories. Despite these limitations, the NEET is widely used in many countries, particularly within the literature that examines school-to-work transitions.<sup>12</sup> Moreover, in the literature one can find more complex indices that make use of the NEET definition as the ratio of the people than have been NEET at least one time over a five-year span to people who have been constantly NEET in those 5 years. This index measures the turnover in NEET status and provides information on the persistence of it (Quintini, Martin, & Martin, 2007).

The main method used to examine early job insecurity is by examining school-to-work transitions as well as job transitions of young people. Raffe (2008) discusses how different transition systems, i.e. the institutional arrangements that shape school-to-work transitions, are conceptualised by quantitative researchers. The author uses a conceptual framework that includes four levels of analysis: individual transition processes and outcomes, national transition patterns, institutional and structural dimensions and typologies. Theoretically, a transition process is a process in continuous time that can only take finite values that are the main employment statuses: employment, unemployment and non-participation. There are mainly two distinct methodologies of answering questions about school-to-work transitions and labour market transitions: event-history analysis and sequence analysis. Event history analysis focuses on the occurrence of one specific event in the life course, while sequence analysis allows a more general overview of life courses.<sup>13</sup>

Survival functions are the most common way to measure time lengths of certain statuses (employment, unemployment, non-participation). Scherer (2005) uses them to examine the time needed to enter employment, where she calculates the time needed to enter both the very first job and the first stable job. She has identified significant differences among the two that arise from different institutional arrangements in countries with different transition systems. In her analysis, both micro (individual characteristics) and macro (youth unemployment rate, size of birth cohorts) explanatory variables are used in order to control for the influence of different variables to the different kinds of employment entry. A two-stage approach to survival analysis

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<sup>12</sup> For a more analytical discussion about the NEET see Furlong (2006).

<sup>13</sup> For a more technical presentation of the different econometric methods on labour market transitions see Fougère and Kamionka (2005).

is also used by Tunny and Mangan (2004) in order to investigate if temporary employment serves as a stepping stone to permanent employment or as an effective trap.

A different methodology is used in order to estimate the probability of being unemployed, employed or inactive, in relation to the education level in different countries. Iannelli and Soro-Bonmatí (2001) use multinomial logit estimators to estimate the marginal and the total effects of education to labour market outcomes within different institutional environments. Moreover, the authors are using transition probability matrices by ‘education leavers’ in order to estimate the degree of job stability among them. The same method is used by (De Vries & Wolbers, 2005) in order to analyse the effects of non-standard employment relations on school leavers in Netherlands. A different way that limited dependent variable models (LDV) can be used in order to investigate labour market transitions is presented by Davia (2004). In order to analyse school-to-work transitions under a simultaneous framework, the author is using a bivariate probit that addresses the issue of simultaneity between the decision to stop studying and start working insisting on the common factors that affect both decisions. It is important to note, however, that when school to work transitions and especially the correlation between certain education levels and labour market statuses are studied, problems such as selectivity bias and measurement error are likely to arise. For this reason, researchers have used the IV model to overcome these problems (Abe, 2002).

As mentioned above, apart from the event history analysis (EHA) that uses mainly survival and LDV models, a different way of approaching transition dynamics is the sequence analysis (SA). Brzinsky-Fay (2014) presents the main advantages and disadvantages of the SA in comparison to the EHA. The author argues that the former enables researches to overcome simplified definitions of transitions, since it is rather an explanatory method than a hypothesis-testing one. In the SA method, the specific order of labour market statuses is of crucial importance and the comparison and grouping of those sequences may provide researchers with convincing arguments with regard to the choice of an event that might be of particular interest for the EHA. It should be noted, however, that the SA is not a method that can be used casually; therefore, it should be used complementarily to the EHA as it provides limited possibilities for the research of causal relationships.

The methods most commonly used to examine school-to-work transitions as a sequence and not as a single event are the optimal matching (OM) method and the cluster analysis (McVicar & Anyadike-Danes., 2002; Scherer, 2001; Schoon, 2001).<sup>14</sup> Brzinsky-Fay (2007) uses the OM method in order to calculate the distance between the sequences of school-to-work transitions for ten European countries, and then clusters sequences with similar distances and examines sequences as a whole; this gives him the possibility to reflect the complexity of the individual sequences.

Finally, a different methodology that exists in the relevant literature is the labour market flows analysis. Flek and Mysíková (2015) analyse labour market flows, i.e. flows between the employed, unemployed and inactive, using Markov transition systems in order to draw conclusions on unemployment dynamics in central Europe. Similarly, Ward-Warmedinge, Melanie and Macchiarelli (2013) use the same analytical tools in order to examine the main flows that affect the changes in unemployment rates in European countries. Markov system

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<sup>14</sup> The OM method was first developed by biologists and was firstly used as a methodological tool of social sciences by Abbott and Forrest (1986). For an overview of its use in social sciences, see Abbott and Tsay (2000).

analysis is also used by Symeonaki and Stamatopoulou (2015) in order to investigate labour market dynamics in Southern Europe.

## Conclusion

To sum up, one could argue that the existing data sources allow for the study of different aspects of young people's integration on labour market, without neglecting their respective advantages and limitations. The overview of the international literature reveals that a variety of methodologies are used in the existing empirical studies in order to measure the incidence of early job insecurity, while various indicators correspond to different levels of analysis. The choice of both data sources and indicators heavily depends on the theoretical framework and the definitions of early job insecurity. Using the context presented above, NEGOTIATE project will attempt to produce an overview of the general context in which young people in each country and across Europe form their work expectations and *negotiate* their labour market integration and transition from youth to adulthood, based on a macro-level comparative analysis of early job insecurity in Europe.



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