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Youth Labor Market Conditions and the NEET Population in the EU: Do Poor Labor Market Opportunities Discourage Youth?

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by

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ABSTRACT

This study examines how poor labor market opportunities discourage youth between the ages of 15 and 24 and 15 to 29 from participating in the labor market in the European Union between 2005 and 2013. A critical portion of inactive NEETs (youth not in employment, education, or training) reports to be discouraged due to a recognized "lack of opportunities in the labor market." Despite indications from descriptive analyses that the conditions that drive the distinct subsets of the NEET population vary, empirical examinations of the effects of these conditions on the rates of different NEET groups across countries and over time are lacking. The policies prescribed for the NEET group as a whole tend to ignore the special needs of discouraged, inactive NEETs. Beyond the fundamental problem of engaging these individuals in the labor market, neglecting this group has a variety of implications, ranging from social exclusion, to poverty, and even radicalism.

A central goal of this project is to determine what a recognized "lack of opportunities" means. What is known concretely is that fellow youth are increasingly vulnerable to a range of labor market outcomes and conditions beyond unemployment, including difficulty transitioning into the labor market (school-to-work transitions), in-work poverty risk, non-standard employment opportunities (involuntary and voluntary), limited ability to transition into secure employment (i.e. upward mobility), lower wage levels, atypical employment, limited job security and support, and long-term unemployment. Utilizing aggregated survey data from the EU Labor Force Survey and EU Survey on Income and Living Conditions, I examine how a range of labor market outcomes and conditions for youth, representative of the poor labor market opportunities, affect the frequency of discouraged NEETs across 24 EU countries between 2005 and 2013. Findings suggest that the incidence of involuntary non-standard work, in-work poverty risk, and atypical

employment among fellow youth and the incidence of decreased work security among the adult working age population are associated with an increase in discouraged, inactive NEETs. This suggests that engaging this hard to reach subgroup of the NEET population requires a greater emphasis on creating improved labor market opportunities.

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I dedicate this work to my family. I am eternally grateful for their patience, support, and love throughout this arduous, yet rewarding journey. To my father, I will always feel your hand on my shoulder and carry your love in my heart. Sofia, everything I do, I do for you.

"Ich liebe dich, so sehr, in der ganzen weiten Welt."

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CHAPTER ONE: INTRODUCTION

The purpose of this thesis is to contribute to the literature a better understanding of the source of youth discouragement from participating in the labor market, education, or training in the European Union (EU). A critical portion of inactive NEETs (youth not in employment, education, or training) reports to be discouraged due to a recognized "lack of opportunities in the labor market." Beyond this vague notion that youth discouragement stems from a "lack of opportunities in the labor market," there is limited understanding of what a "lack of opportunities" refers to and the root of youth discouragement. Engaging this group of individuals back into the labor market is a primary concern at the EU level (see, for instance, Eurofound 2016), yet policy efforts to date aimed at the NEET population as a whole have had a limited effect on discouraged, inactive NEETs (European Commission 2016f). I conduct this study in an effort to enhance our understanding of discouraged, inactive NEETs in order to provide a basis for enhanced policy prescriptions. In order to clarify what a "lack of opportunities in the labor market" refers to, I examine whether "poor" labor conditions for youth are representative of a "lack of opportunities in the labor market" and thus a possible source of youth discouragement from participating in the labor market, education, or training.

Following the 2008 financial and economic crisis, NEET rates increased from 10.8% (13.2%) in 2008 to 13.2% (15.8%) in 2012 for youth ages 15-24 (15-29) (Eurofound 2012; Eurostat 2016; ILO 2015), leading to intensified research and policy efforts aimed at the NEET population as a whole. This research has revealed that the NEET concept, while useful in capturing a wide array of vulnerabilities youth face today in the labor market, also comprises a highly complex and diversified group of individuals, for whom the level of disengagement from the labor market and

extent of vulnerabilities faced is similarly varied. Despite an increase in policy efforts and a subsequent decline in the overall percentage of NEETs, the decline is driven by a reduction in the percentage of "unemployed" NEETs, while the percentage of "inactive" NEETs and "discouraged" NEETs in the population have remained largely unchanged (author's calculations, from Eurostat 2016; see also Jemotte 2016; ILO 2015). Figure 1 and Figure 2 demonstrate these trends, respectively, for each age group. At the same time, there is great variation in the trends in discouraged NEET rates across EU countries. Figures 3 through 5 illustrate these country-level variations by region.

Despite this statistical evidence and indications from descriptive analyses that different forces may be driving the distinct subsets and subgroups of the NEET population, there is limited understanding of the factors leading to the rising proportions of discouraged youth, who are considered to be at higher risk for social exclusion, a range of continued challenges in the labor market, such as lower lifetime earning potential (Eurofound 2012), greater odds of precarious employment opportunities (Green and Livanos 2015), and even permanent disengagement from the labor force (Eurofound 2016), among other implications. As previously noted, the key assumption that youth discouragement stems from a recognized "lack of opportunities in the labor market" offers limited understanding to form the basis of policy prescriptions.

The NEET concept has come under criticism for its usefulness as single indicator, particularly as the basis for determining how to reengage NEETs back into the labor market or circumvent NEET status altogether (see for instance Macguire 2015). While researchers are increasingly emphasizing the relevance of examining these unique subsets and subgroups individually, to date no such research exists. While evidence suggests that high youth

unemployment rates may lead to youth discouragement (Bruno et al. 2014),[1] it cannot be assumed that a recognized "lack of opportunities in the labor market" refers simply to an inability to find any work at all. For instance, the International Labour Organization describes youth discouragement, which again refers to inactive NEETS discouraged from the labor market due to a "lack of opportunities", to include feeling that there is a lack of suitable jobs, a requirement mismatch between employers and employees, or a lack of certainty in where or how to find work (Elder 2009). Elder (2009) asserts that discouraged youth find the employment search to be a worthless endeavor. In any case, the "discouraged youth" is a highly contentious subject that is often misunderstood; thus, incorrect presumptions and extensions are often made (Elder 2015).

At the same time, research on youth in the labor market emphasizes that across the EU youth are vulnerable to a range of what may considered "poor" labor market outcomes, including difficulty transitioning into the labor market (school-to-work transitions), in-work poverty risk, a higher incidence of non-standard employment opportunities (involuntary and voluntary), limited ability to transition into secure employment (i.e. upward mobility), lower wage levels, limited job security and support, unemployment, and long-term unemployment (ILO 2015). Such are the problems that youth face today in the labor market, that even extended schooling or training is no guarantee for finding employment. As such, in the research there is an increasing emphasis on studying youth beyond the traditional age group of 15 to 24 years, to include young adults up to age 29 (see, for instance, Eurofound 2012).

[1] Bruno et al. (2014) discuss a 2012 ILO study where this is demonstrated by the increase in the youth unemployment rate after adjusted for those who dropped out of the labor market due to the economic crisis.

In this study, I examine whether variations in "poor" labor market outcomes of fellow youth, should be considered representative of a "lack of opportunities" in the labor market, and thus a possible source driving youth into a high-risk situation of inactivity, and more importantly discouragement from participating in the labor market, education, or training. In order to do so, I offer empirical analyses of the relationship between the incidence of involuntary non-standard work, in-work poverty risk, atypical employment, and long-term unemployment among fellow youth and decreased work security among the adult population and the rate of discouraged, inactive NEETs. Understanding that there is an increased emphasis in the literature on examining an extended age range, I study this for both youth ages 15-24 and the extended age group, 15-29 years old, across 23 and 24 EU countries between the years 2005 and 2013.

The findings suggest that the incidence of youth, ages 15 to 24, employed in involuntary non-standard employment, facing in-work poverty risk, and living in low work intensity households are associated with an increase in the percentage of discouraged youth, ages 15 to 24. For the extended age group, ages 15 to 29, the incidence of youth employed in involuntary non-standard employment, employed in atypical working hours, and living in low work intensity households bear a significant and positive association with discouragement. For the both the 15 to 24 year old and extended age group, the incidence of transitions towards lesser employment security also has significant and positive effect on youth discouragement, ages 15 to 29. The econometric models are also tested against NEET inactive for reasons other than discouragement and unemployed NEETs in separate analyses. These results for the models applied against NEETs inactive for other reasons reveal that these same labor market conditions do not have the similar relationship with NEETs inactive for other reasons, such as personal illness and/or disability, family responsibilities, or voluntary NEET status (i.e. personal exploration). The results for the

models applied against unemployed NEETs do not clarify whether unemployed NEET status is an initial step prior to entering discouraged, inactive NEET status.

1.1 Quantifying Poor Labor Market Opportunities

Quantifying what "poor labor market opportunities" means is precluded by a lack of survey data tailored to answering what exactly this refers to. However, it is possible to theorize that the labor market conditions and outcomes of fellow youth may provide a means to assess this. For one, the literature provides a theoretical basis for examining this relationship. Not only is discouraged, inactive NEET status said to be linked to "labor market-driven factors" (see, for instance, Eurofound 2016), but also labor market institutions are considered to be of foremost importance in relation to disparate labor market conditions for youth, such as the youth unemployment rate (see, for instance, Bruno et al. 2014). Moreover, social factors, such as family ties, are considered relevant to the youth unemployment rate (Brada et al. 2014) and the social context of youth experiences are considered important components of youth engagement (Soler and Ferrer-Fons 2015). Social networks are also considered an important in relation to youth aspirations (Braziene and Dorelaitiene 2012). Finally, personal preferences in relation to labor market opportunities are thought to be influential on whether youth are engaged in the labor market, education, or training (Brada et al. 2014; Kelly et al. 2014).

While discouraged, inactive NEET status is considered related to "labor market-driven factors," NEETs that are inactive for other reasons, such as personal illness/disability, family responsibilities, or voluntary reasons, are considered related to issues of social-policy orientation (Eurofound 2016). Given this assumption, it is clear there exists a unique link between discouraged, inactive NEET status and the labor market, which may be determined by the

conditions youth face in the labor market. In that labor market institutions also include the prevalence of nonstandard employment contracts (see, for instance, Bruno et al. 2014), for which the incidence of part-time or temporary employment is considered an important determinant of the youth unemployment rate (Bruno et al. 2014; Choudhry et al. 2013), it is possible to consider this as a relevant factor in relation to youth discouragement from participating in the labor market, education, or training. While the incidence of part-time employment is negatively associated with the youth unemployment rate (Choudhry et al. 2013), here it expected to be positively associated with the discouraged, inactive NEET rate, for a variety of reasons.

It is possible that personal preferences for better opportunities in the labor market may drive youth into discouraged, inactive NEET status. Whether this is from personal experience with poor labor market opportunities or the experiences of fellow youth, it is expected that the "poor labor market opportunities" examined here may be less preferred by some youth. According to Bourdieu's work on the notion of 'social space', an individual's placement in the social space is based upon the allocation of resources, which is comprised of economic, cultural, social, and symbolic capital (Soler and Ferrer-Fons 2015: 94). The status of youth as a whole in respect to the "system of relationships of a given society forms the basis for their opinion of feeling more or less integrated…" (Soler and Ferrer-Fons 2015: 94). For instance, the "centrality of young people in youth transition regimes" – the measure for which is a composite to quantify vulnerability (based on the overall NEET level, the unemployment level, and household financial status), length of transitions (based on the length of time youth live at home with parents), generosity of the welfare (based on state spending on social policies), and age-orientation (state expenditure by age, family status) – demonstrates how the social space may be comprised of labor market conditions and

outcomes that "determines their opportunities and expectations and shape their practices", such as willingness to participate (Soler and Ferrer-Fons 2015: 93; 103-104).

Taking a range of labor market outcomes and conditions to represent the "poor labor market opportunities" it can be theorized that poor labor market opportunities may cause youth to feel less integrated with society and thus propel exit into inactivity and even discouragement. Thus, it is possible to consider that indicators on a range of labor market outcomes and conditions that youth are increasingly vulnerable to be worthy of examination in relation to the discouraged, inactive NEET population. Involuntary part-time work and involuntary temporary work may be exemplary of jobs that are not desired since these indicators signify that permanent work was the primary preference of the respondent (Eurostat 2016). The availability of decent jobs may be considered to factor into perspectives about economic opportunities in the labor market. To that end, the ease with which transition occurs into more secure jobs may also be considered a characteristic that factors into perspectives about economic opportunities in the labor market. In fact, NEET status is a commonly used barometer of school-to-work transition outcomes, as are the level of youth in temporary work, wages levels, and job type allocation (Raffe 2014). However, I argue that discouraged, inactive NEETs, who are not engaged in the labor market, education, or training, are a barometer of a larger set of labor market outcomes for youth.

It is thus that the labor market outcomes and conditions (or experiences so to speak) of fellow youth and possibly even previous experiences of these individuals themselves in the labor market that are expected to have an effect on whether NEETs are disengaged (inactive), and more specifically discouraged, from the labor market. Labor market outcomes and conditions, defined by the number of youth in less preferred jobs (involuntary non-standard work or atypical working hours), the incidence of working poor, the incidence of youth experiencing long-term

unemployment, and the incidence of decreased work security among the adult population are expected to influence the youth perspectives about labor market opportunities and in turn whether NEETs are inactive due to discouragement. When labor market conditions are poor, youth see this as a lack of opportunity, quantified by the number of discouraged, inactive NEETs.

In order to engage discouraged, inactive NEETs into the labor force requires a closer examination into what a recognized "lack of opportunities in the labor market" really means. As active labor market policies often engage youth into the labor market via part-time and temporary employment opportunities, yet these opportunities vary in desirability across countries, choosing the right policies to create the right kind of jobs to engage discouraged youth requires careful consideration. Moreover, general conditions such as unemployment and long-term unemployment among fellow youth may further amplify the level of discouragement. In order to qualify for unemployment benefits, youth in in most developed countries must show that they are actively looking for work, which is said to serve as a motivating force (ILO 2015). Yet, discouraged, inactive NEETs are not seeking work.

Also of importance, in line with Bourdieu's social space model and taken into consideration by Soler et al. (2015), is the size of the welfare state. Thus, active labor market policies will also be considered an important factor in youth labor market outcomes and conditions. As put forth by the ILO (2015), Gallup polls indicated in 2014 that there is overall pessimism about the local job market (i.e. in Greece, France, Slovakia, Spain, and Italy between 78-90% of youth felt that employment opportunities were getting worse). The local job market, in addition to cultural elements, economic statistics, and the media, is said to influence whether youth view employment opportunities positively or negatively (ILO 2015). The question remains whether this holds true empirically against the actual labor market conditions among the youth cohort.

Examining this against the discouraged, inactive NEET population should demonstrate that the policy choices made must be considered carefully. The policy prescription of one country may not work for another.

For example, a closer examination of non-standard employment trends reveals some striking findings. While all atypical (i.e. non-standard) employment is considered to be outsider status in the labor market, the relationship between part-time work and the preference for full-time is not exactly straightforward (ILO 2015).[2] In the Netherlands, of the nearly 70 percent of youth employed part-time less than 7 percent would prefer to work more hours; at the opposite end of the spectrum in Greece: while only 18.4 percent of youth are employed part-time, 67.2 percent of them would like to work more hours (ILO 2015). Looking further into these two cases reveals that in the Netherlands the unemployment rate of youth with low education is less than 13%, while in Greece the percentage is far higher (Eurofound 2012). Higher educational attainment also serves to protect youth from unemployment in the Netherlands, while in Greece unemployment rates for youth with tertiary education are high as well - nearly 49% (Eurofound 2012). In Greece the percentage of temporary workers that preferred to be working full-time is nearly triple that of the Netherlands (ibid.).

Statistics on NEETs are even more telling in just comparing these two cases. While in both Greece and the Netherlands the majority of NEETs are classified as inactive, there is a critical distinction (Eurofound 2012). A majority of inactive NEETs in Greece are discouraged workers, yet in the Netherlands the percentage who are discouraged in far below the EU average (Eurofound

[2] The following figures refer to 2011.

2012). Examining several more cases like this reveals a similar pattern. Clearly the labor market conditions and preferences of the youth vary tremendously, as does whether the inactive NEET population is characterized as discouraged or not. Do the labor market conditions of fellow youth in the labor force and their preferences about their employment opportunities serve to discourage youth into inactivity? Whether the labor market opportunities are seen as poor and less than desirable may very well determine the level of inactive NEETs that are discouraged by a recognized "lack of employment opportunities." Moreover, "…decent jobs can look very different, depending on the geography and socio-cultural background of the youth" (ILO 2015).

1.2 Overview of Thesis Chapters

This thesis is organized as follow: In Chapters Two and Three, I review the scholarly literature on NEETs and youth labor market outcomes in the EU. The literature on NEETs centers around three main themes. In Chapter Two, I present the qualitative evidence that provides descriptive information about the main subsets of the NEET population and the subgroups of the inactive NEET population, offering greater insight into how NEETs are unique from traditionally unemployed youth and a highly heterogeneous group (see for instance Carcillo et al. 2015; Eurofound 2012; Eurofound 2016). This qualitative evidence also offers insight into the central tendencies across EU countries. Additionally, descriptive analyses on NEETs discuss the individual and collective implications of the NEET population. Importantly, I also discuss the policy efforts to date that are aimed at engaging NEETs and how these policy efforts have not only failed to reach discouraged, inactive NEETs, but also how they have largely ignored the 25 to 29 year olds who are included in the extended age group. Regarding the discouraged, inactive NEETs the discussion mainly revolves around clarifying who they are, but empirical evidence is lacking

in support of the assertions made. In Chapter Three, I review the empirical evidence available to date, which reveals the key factors associated with higher risk of entering NEET status and the central determinants of the NEET population as a whole. Here, I also discuss in greater detail the literature supporting why particular youth labor market conditions and outcomes should be considered "poor labor market opportunities" and why these should be examined in relation to youth discouragement. I also review trends in youth labor market conditions in the EU in relation to the NEET trends, especially in regards to discouraged, inactive NEETs, as discussed in Chapter Two. In Chapter Four, I provide an overview of the data and methodology employed to test the hypotheses. In Chapter Five, I offer a summary of the results found in the analyses. In Chapter Six, I discuss these results in relation to the extant literature. To conclude, in Chapter Seven, I consider the possible limitations of the analyses conducted here, in addition to the contributions of this study to the literature to date, and the implications this study has for the direction of future research.

CHAPTER TWO: THE NEET CONCEPT AND TRENDS IN THE EU

> "…the NEET rate embraces a much wider cohort, with young people who are inactive from the labour market, as well as those who are actively seeking work…While this more inclusive approach should be applauded, the move to define a much wider and older group within the NEET group co-exists with a paucity of research about the extended group, in terms of characteristics and diversity, as well as limited policy intervention to support the group's needs." (Macguire 2015: 526-27)

As a somewhat novel focal point of labor market studies on youth, research on NEETs was slow to develop after the terminology was created in the early 1990s. Following the 2008 economic crisis, however, the increasing percentage of overall NEETs, which reached a record high of 13.2% (15.9%) of all youth ages 15 to 24 (15 to 29) in 2012 (2013) on average for the EU-28, became a pressing concern that formed the basis of new research. The resulting literature provides the necessary background for this study, which seeks to determine whether the labor market conditions experienced by fellow youth are a factor in driving youth into discouragement from participating in the labor market, education, or training. To be clear though, as the above quote states, research is still at the beginning stages. Empirical examinations are limited to studying the NEET population as a whole, yet qualitative research reveals the NEET population to be comprised of distinct subsets containing multiple subgroups, with each having special characteristics and needs.

It is the discouraged, inactive NEETs I aim to offer a better understanding of in this research. Examining this specific subgroup of inactive NEETs should offer a means to better gauge how to address the problem at hand and assist in developing country-specific approaches to counter youth discouragement from participating in the labor market, education, and training. Between 2012 and 2015, as NEETs have become a more specific and targeted policy focus in the EU, over

90 percent of the decline in the number of NEETs has been the result of a decline in the percentage of unemployed NEETs, which excludes the discouraged, inactive NEETs (author's calculations from Eurostat 2016). These policies have largely failed to reach to reduce the overall number of inactive NEETs, and the percentage of discouraged NEETs (as a proportion of all NEETs) during the same time period only decreased from 6.04% to 5.88% and has since increased to 6.6% in 2014 (author's calculations from Eurostat 2016). Additionally, these policies tend to focus on the 15 to 24 year old age group, while the 25 to 29 year old age group has been largely ignored (Eurofound 2016).

We know little of the root of youth discouragement; research has merely indicated a vague notion that it stems from "a lack of opportunities in the labor market" (Eurofound 2016). Yet, the design and application of targeted policies, which are only at the beginning stages, aimed at engaging discouraged youth are based on this limited information. These programs tend to emphasize confidence building, such as 'ambitions clubs' in France, or seek to engage discouraged youth via scholarships, social skills development, or encouraging political participation, as in Poland (Ibid.). While we know that high unemployment levels may lead youth to be discouraged from seeking employment (Bruno et al. 2014; Eurofound 2012), we cannot assume that a "lack of opportunities in the labor market" refers simply to discouragement that stems from an inability to find any work at all. Research on youth in the labor market emphasizes that across the EU youth ages 15 to 24, as are 25 to 29 year olds increasingly since the 2008 financial and economic crisis, are vulnerable to a range of labor market conditions and outcomes beyond unemployment, including precarious work, limited upward mobility, and difficulty finding work despite educational attainment. I argue that it is the prevalence of labor market conditions such as these, considered here to be "poor labor market opportunities" for youth that is propelling them into the

high-risk situation of inactivity, and more importantly discouragement. Not only can the current efforts be improved by knowing the extent to which the issue lies in the actual opportunities in the labor market, but also new policy prescriptions can develop alternate approaches towards engaging discouraged, inactive NEETs.

In order to fully grasp the importance and purpose of this research requires: 1) a conceptual understanding of who NEETs are and what the challenges are, particularly in relation to discouraged, inactive NEETs; 2) understanding the extent of the NEET issue, especially in relation discouraged, inactive NEETs, in the EU. In this chapter, I begin with an overview of the NEET concept, followed by a discussion on the individual and societal costs of the NEET issue, and the evolution of policy efforts aimed at addressing the NEET problem. I then offer a more detailed look into the NEET population and discuss common trends in the EU. The subsequent literature reveals the unique nature of the NEET population, where policy efforts have fallen short, and the necessity of exploring discouraged, inactive NEETs distinctly and for both age groups.

2.1 NEETs: Capturing and Addressing Vulnerability

The NEET concept, which includes both the unemployed and inactive youth who are not in school or training, as a whole offers a means to classify youth considered more detached from the labor market - due to nonparticipation in education, training, or employment - and thus at greater risk of continued labor market exclusion, poverty, and social exclusion (Eurostat 2016), among other implications. However, examining such a diverse population when grouped under a single concept offers limited information and as a result the effects of policies are somewhat limited in reach, as demonstrated by the persistence of inactive NEET rate (refer to Figure 1 and Figure 2, Chapter 1). While NEETs in general may be considered more detached from the labor market than traditionally

unemployed youth, who may still be in education or training, among NEETs the level and basis of detachment is not universal. A majority of unemployed NEETs, for instance, are actively seeking employment (Eurofound 2012), an indicator of labor market engagement. Inactive NEETs, on the other hand, are considered harder to reach due to their level of detachment from the labor market – in addition to not engaging in employment, education, or training, they are more often not registered with employment agencies or welfare services (OECD 2015). This is particularly the case for discouraged, inactive NEETs, with less than 20 percent registered with public employment services in 2013 (Eurofound 2016). In being particularly hard to reach, this portion of the NEET population faces even greater odds of remaining NEET and the implications of being NEET may be amplified (Macguire 2015). In order to highlight the urgency of exploring root of youth discouragement, in the next section I discuss the implications of being NEET for youth, in addition to the larger problem that NEETs pose for not only labor market statistics, but also for society in a larger sense. Here an emphasis is also placed on why discouraged, inactive NEETs pose a particular challenge for policymakers.

2.1.1 Why NEETs Matter

NEETs present a problem for labor market statistics, but also pose a different set of social, economic, and political problems. Beyond the fundamental problem of engaging the discouraged, inactive NEETs, not doing so presents a range of implications. The basis of the NEET indicator alone demonstrates why NEETs should be considered an issue of critical importance. The youth unemployment rate does not express a similar level of vulnerability, in that unemployed youth may still be building their human capital through education or training (Bardak et al. 2015). While NEETs are alike in that they are failing to build human capital through recognized establishments

(Eurofound 2012), they are dissimilar in their level of engagement, vulnerability, and the extent of their detachment from the labor market. For one, some youth that give up on the employment search choose to return to education (Bruno et al. 2014), while among NEETs the unemployed are still somewhat engaged. Discouraged NEETs, on the other hand, are extremely disengaged, and this choice is reflective of a causal mechanism unique from inactive NEETs who are taking care of family members in some respect, are ill or disabled themselves, or are voluntarily traveling or engaging in other voluntary activities.

Moreover, policies aimed at engaging NEETs often target the less disadvantaged among the NEET population, such as unemployed NEETS who are more often actively seeking work and are registered with state or local services (Bardak et al. 2015). As noted previously, in 2013 less than 20 percent of discouraged, inactive NEETs were registered with public employment services, compared to approximately 50 percent of unemployed NEETs; public employment services are designated as the primary pathway towards re-entry into the labor market as part of the Youth Guarantee (Eurofound 2016). Understanding what is driving youth to be inactive or fully disengage from the labor market is of precedence not only to find solutions for labor market integration, but the costs of the NEET population in general are far and wide (Eurofound 2012). At this point in time, policies directed at discouraged NEETs are limited in application and scope. As previously discussed, in France, the focus is on confidence-building clubs in poor urban communities where youth have achieved low levels of education (Eurostat 2016). Alternatively, in Poland, the emphasis is placed on scholarships, social skills development, and promoting political participation (Eurostat 2016). None of these policy efforts consider the source of youth discouragement from the labor market.

The NEET issue poses a problem both at the individual and societal level. At the individual level, the implications of being NEET range from the more easily quantified, such as poverty (Eurofound 2012; European Commission 2010; ILO 2015), to the less easily quantified social costs, such as poor mental and physical health (Eurofound 2012). Being NEET also bears both immediate and long-term implications (Alegre et al. 2015). In the short term, youth may experience a loss or of stunting of human capital development (Carcillo et al. 2015). A large number of these youth are at risk for social exclusion and/or poverty now and later in life (Eurofound 2012; European Commission 2010; ILO 2015), such as social and later labor market exclusion (Eurofound 2012; ILO 2015). To be sure, NEET status is associated with depressed wages later in life (Caliendo and Schmidl 2016) and may have lasting effects on career pursuits and labor market outcomes (Alegre et al. 2015). While the extent of scarring effects are said to be dependent upon general performance of the labor market, the already challenged are generally much worse off (Choudhry et al. 2013). In particular, discouraged NEETs are categorized as having 'lost hope', feeling that the employment search is a worthless endeavor (Elder 2009). Faced with living with parents at home for a longer period of time, discouraged youth may even be prone to developing psychological issues, making finding employment even more difficult (OECD 2015).

At the societal level, there exist a range of indirect and direct political, social, and economic implications. For one, due to declines in human capital and productivity, there are immediate threats to national income and even "sustained and equitable economic growth" (Alegre et al. 2015; Eurofound 2012). For instance, across countries in the EU the annual cost per youth has been estimated to range between 27.5 thousand euros in Finland (in 2007) to 66 thousand euros in the UK (in 2009) (Hawley et al. 2012). At the EU level, in 2011 Eurofound estimated the cost at 100 billion euros annually (Hawley et al. 2012). Direct costs also include the economic burden of

passive labor market policies, which provide welfare support (Caliendo and Schmidl 2016; Eurofound 2012).

A further implication of exclusion from the labor market is declining trust in political institutions, a lack of political engagement, limited social and civic participation (Eurofound 2012), and even and increased disposition towards crime (Caliendo and Schmidl 2016). For example, NEET status has been linked to variations in the type of political participation (Soler and Ferrer-Fons 2015). Where youth perceive their transitions as risk laden, insecure, vulnerable to the market and reliant on family, there may be a tendency to have greater indifference and even declining trust in political institutions (Soler and Ferrer-Fons 2015). Even more so, the size of the NEET population is highly correlated with the incidence of terrorism (Institute for Economics and Peace 2015). Furthermore, youth have played a central role in many incidences of social unrest occurring throughout the world in recent years, many of which have been linked to their experiences with high unemployment levels (see for instance Ahmed 2014; Andrianov et al. 2015, Antentas 2015, and Schröter, Javanović & Renn 2014).

Moreover, policy approaches in the EU are often offered as policy prescriptions elsewhere. The EU works together with the European Training Foundation (ETF) member countries, which are non-EU countries and many of which are unstable, with structurally deficient labor market institutions, poor labor markets, and economies extremely damaged by the economic crisis and also exhibit extremely high levels of inactive NEETs that are discouraged (Bardak et al. 2015)[1].

[1] This includes many transitioning and developing countries, with a total of 29 countries (Albania, Algeria, Armenia, Azerbeijan, Belarus, Bosnia and Herzegovina, Croatia, Egypt, Former Yugoslav Republic of Macedonia, Georgia, Israel, Jordan, Kazahkstan, Kosovo, Kyrgyzstan, Lebanon, Libya, Moldova, Montenegro, Morocco, Palestine, Russia, Serbia, Syria, Tajikistan, Tunisia, Turkey, Turkmenistan, Ukraine, and Uzbekistan).

It can only be assumed that inability to target the discouraged portion of the inactive NEET population will have costly implications as well. As previously discussed, discouraged NEETs are particularly difficult to reach and targeted policies are limited to date. As such the likelihood of staying NEET status for a lengthier time only grows, further exacerbating the risks of extended social exclusion, economic, and other challenges (Macguire 2015). Across the EU, where there are high levels of inactive NEETs, there are also generally higher levels of discouraged NEETs (Eurofound 2012). At the same time, the inactive NEET rate has overall remained largely unchanged over the last decade as has the discouraged, inactive NEET rate (Author's calculations, from Eurostat 2016), meaning that this particular subgroup is of critical importance to focus on regarding policy interventions (Eurofound 2012).

2.1.2 Background on Policy Efforts Aimed at NEETs

Addressing youth unemployment rates emerged as a policy focus in the EU beginning in the 1980s, when youth unemployment levels increased as the baby boomer generation reached working age (Eurofound 2012). In the late 1980s/early 1990s,[2] the failure of youth to integrate into the labor market became so pressing in the UK that a new category "NEETs" was created to distinguish youth leaving schooling and not entering training or the workforce from unemployed youth who may still be in training or education and thus not wholly disengaged from the labor market (Assirelli 2013; Eurofound 2012; Eurofound 2016), with a focus on youth between 16 and 18 years

[2] Some discrepancies exist surrounding the exact timeline of these events (see for instance Assirelli 2013, Eurofound 2012, and Macquire 2015).

of age (Macguire 2015).[3] While researchers and government representatives began to recognize the importance of capturing a more comprehensive range of vulnerabilities experienced by youth in labor market, the classification was not termed "NEETs" until the late 1990s (Eurofound 2012), when the age group of focus was also extended to 24 years of age (Macguire 2015).

In the late 1990s/early 2000s, labor market policies for youth unemployment and employment exhibited a shift away from passive labor market policies (PLMPs) towards active labor market policies (ALMPs) (Caroleo and Pastore 2003) as part of the European Employment Strategy, an EU effort that originated in 1997 in order to coordinate employment policy with the goal of increasing the number and quality of jobs (European Commission 2016a). Active labor market policies encourage employment of the labor force via government expenditures on employment services, training programs, special policies catered to youths and disabled, and employment subsidies,[4] whereas passive labor market policies (PLMPs) focus on unemployment benefits and early retirement funds (Armingeon 2007; Rueda 2014). While addressing youth unemployment was a major component, ALMPs varied greatly across the EU in the extent to which they targeted youth specifically (Caroleo and Pastore 2003). Furthermore, in many cases the specific policies instituted aimed at unemployed youth often slighted the most disadvantaged youth (O'Higgins 2001). This issue is not unique to unemployed youth.

Following the establishment of the NEET category, ALMPs were *indirectly* targeted at NEETs via programs aimed at targeting youth unemployment and employment rates (Bardak et

[3] Additional discrepancies exist on this age range; it is also said that the original target group was 16-17 (see for instance Eurofound 2016 and MacDonald 2011).
[4] Employment subsidies include either direct subsidies to employers as an incentive to hire the unemployed, entrepreneurial assistance the unemployed, or the generation of public sector jobs (Armingeon 2007).

al. 2015). Following the 2008 financial and economic crisis, concerns in the EU about high levels of NEETs led to an increasing focus on NEETs in the European policy arena with goals being incorporated into the European Commission's Europe 2020 agenda (Bardak et al. 2015; Bruno et al. 2014; Eurofound 2012; Eurofound 2016; European Commission 2010). Here, NEETs were first discussed during the "Youth on the move" initiative in 2010 (Bardak et al. 2015; Bruno et al. 2014; Eurofound 2012; Eurofound 2016; European Commission 2010) and the NEET indicator was officially adopted by the Employment Committee of the European Commission (Bussi and Graziano 2015).

Despite that the 25 to 29 year old age group has also faced challenges in the labor market following the 2008 financial and economic crisis, the initial focus of the European policy initiative "Youth on the move" centered on the 15 to 24 year old age group, with the extended age group of 25 to 29 year olds included at a later point in time (Eurofound 2016). A major goal of "Youth on the move" has been to improve higher educational attainment and training among youth ages 15 to 24 in order to prepare for an expected increase in jobs that have "high-level qualifications, combined with a capacity to adapt and innovate" (European Commission 2010: 3). The European Commission (2010) publication on the "Youth on the move" adds that 25 to 29 year olds (along with 30 to 34 year olds) are the most mobile individuals in the EU. This age group is considered to have "better knowledge of languages and fewer family obligations" (European Commission 2012: 10). As such, another central aim of the "Youth on the move" initiative is to extend this trend to support the employment mobility of and access to employment and skill-building opportunities for 15 to 24 year olds (Ibid.).

Today, NEETs are a main focal point of the European policy arena, where similar policy recommendations are advocated to *directly* reduce the NEET rate via ALMPs (Bardak et al. 2015;

Eurofound 2016). These policies often focus on efforts to draw youth back into education or training and enhancing labor market interaction (Bardak et al. 2015). As part of the EU Council of Employment and Social Affairs' "Youth Guarantee" in 2013 (Bruno et al. 2014; Eurofound 2012; Eurofound 2016), even greater weight has been placed on the NEET issue (Bruno et al. 2014). The "Youth Guarantee" has also been similarly focused on the 15 to 24 year old age group (Eurofound 2016). This commands that EU member countries institute policies that ensure swift intervention (Bardak et al. 2015), requiring that within four months of leaving school or becoming unemployed, youth (up to age 25) will be offered either decent quality work, a return to education, or an apprenticeship (Brada et al. 2014; Bruno et al. 2014).

The "Youth Guarantee" is currently further backed up by the "Youth Employment Initiative," a measure providing funding for policies solely aimed at NEETs (European Commission 2016). The purpose of the "Youth Employment Initiative" is to support the implementation of the "Youth Guarantee" in EU countries and to provide additional funding towards this goal (Eurofound 2016). EU countries were expected to provide specifications of plans for implementation of the "Youth Guarantee" (Ibid.). The "Youth Guarantee" was not planned as a "'one size fits all' approach and encourages Member States to…tailor their interventions to their national, regional, and local circumstances and most importantly their legal political and financial frameworks" (Eurofound 2016: 48). Because of this, EU countries are able to cater policies towards their NEETs' particular needs (Ibid.). This is relevant in that not only does the composition of the NEET population vary across countries, but so too does the prevalence of NEET status among different age groups. However, reviews of the early stages of "Youth Guarantee" implementation in EU countries concluded that the main emphasis has been on youth and not the subgroups that are more disadvantaged. Between EU countries, whether the focus for each

subgroup of the NEET population is on 15 to 24 year olds or the extended age group varies greatly. For example, some countries have tended to ignore NEETs in the 25 to 29 year old age group, such Greece and Italy, where they require just as much focus as the 15 to 24 year old age group due to the extent of the NEET issue for the older youth cohort as well as the younger one. As another example, while the "Youth Guarantee" initially only covered youth up to age 25, Finland was early to extend eligibility criteria to include to extended age group Finland's policy efforts are touted as a prime model of addressing the NEET problem (Eurofound 2016).

In 2012 and 2013, the "Youth Opportunities Initiative" introduced additional measures to the "Youth on the Move" aimed at drawing youth into upper-secondary education or vocational training and creating first-time job opportunities for new graduates (European Commission 2016). Additionally, efforts are aimed at preventing early school leaving (Bruno et al. 2014). As previously noted though, the main driver in the overall (EU average) reduction of the percentage of NEETs is the unemployed, while the percentage of inactive NEETs has remained largely unaffected by these policy efforts (Author's calculations, from Eurostat EU-LFS ad hoc data extraction 2016; see also Jemotte 2016; ILO 2015).

For policy recommendations, initial efforts emphasize determining the factors that make youth more likely to enter into NEET status in the first place (Bardak et al. 2015; Eurofound 2012). Awareness of these factors, which are discussed in Chapter 3, provides a means to develop policies to mediate NEET status earlier or circumvent it altogether and also permits a clearer identification of the subgroups such that directed policies may be developed (Bardak et al. 2015). Scholars are increasingly noting though, that due to the diverse nature of the NEET population, which includes those considered to be discouraged, that not only should the main subsets of unemployed and inactive NEETs be studied individually (see for instance Bardak et al. 2015 and Furlong 2006),

but so too should the diverse subgroups within the inactive NEETs subset (Bardak et al. 2015). Second, the policies that have been implemented largely ignore the special needs of these distinct subgroups (Bardak et al. 2015; Maguire 2015), for one because inactive NEETs, who are not actively seeking work, generally do not meet the qualifications for specialized programs (Macguire 2015). Moreover, implementation of the "Youth Guarantee" has been more limited in focus on the extended age group (Eurofound 2016). In the next section, I review in greater detail the diverse nature of the NEET population and trends in the EU. Understanding the limitations of policy efforts thus far, I emphasize not only differences in the composition of the various subsets and subgroups of the NEET population, but also how the NEET population varies for the 15 to 24 year old and extended age group. The central emphasis is on the prevalence of discouraged, inactive NEETs.

2.2 NEETs in the EU

The increasing emphasis on understanding the diverse nature of the NEET population in the EU is driven by an understanding that while the NEET indicator as a whole offers a means to capture youth facing a range of vulnerabilities, it is increasingly recognized that the extent and level of vulnerabilities faced are highly varied across the EU. Scholarly literature on NEETs in the EU offers qualitative examinations that provide descriptive information about the main subsets of the NEET population, the unemployed and inactive, and the subgroups of the inactive NEET population. This research offers further insight into how NEETs are unique from traditionally unemployed youth and the highly diverse nature of the NEET population (see for instance Carcillo et al. 2015; Eurofound 2012; Eurofound 2016). The collection of comprehensive statistics based on survey data compiled by Eurostat, the statistical office of the EU, offers the ability to distinguish the various subgroups of the NEET population and to delineate central tendencies in composition

of the NEET population throughout the EU (see for instance Eurofound 2012; Eurofound 2016). The evidence reveals the critical importance of examining each subgroup uniquely.

2.2.1 The Diversity of NEETs

Qualitative research reveals that the NEET population is highly heterogeneous across the EU (see, for instance, Eurofound 2012). This diversity has increased even more so due to the inclusion of the 25 to 29 year old age group into the NEET category (Eurofound 2012). To demonstrate the heterogeneity of the NEET population requires a deeper understanding of the main subsets and various subcategories (see Figure 6) and how the composition varies in frequency throughout countries in the EU. In order to distinguish NEETs from the traditionally unemployed youth, all NEETs are classified as "not employed" and have not been in training or education for the previous four weeks prior to the survey (Eurofound 2012; Eurostat 2016).[5] The two main subsets of NEETs are the unemployed and the inactive. Similar to traditionally unemployed youth, unemployed NEETs include both long-term and short-term unemployed youth who are available for work and have sought work in the previous four weeks (Eurostat 2015); however, there is also a portion of which are unavailable at the time of the survey to work due to a variety of reasons (see Figure 6) (Eurofound 2016).

The inactive NEETs subset is much more diverse and introduces the central subcategory of interest. This subset contains several subgroups based on the response to a survey question on main reason for inactivity (Eurostat 2016). This includes youth who are inactive for reasons of family caring responsibilities (i.e. for children, elderly, or disabled adults), personal illness or

[5] This is based on survey data compiled by Eurostat (2016) for the European Commission.

disability, other voluntary reasons (i.e. travel or self-exploration), and the discouraged, who are "of the belief no work is available" (Bardak et al. 2015; Eurofound 2012; Eurofound 2016).

While the composition of NEETs varies greatly throughout EU countries, some patterns can be found. In addition to these trends, there is great variation in welfare states, the extent and types of ALMP programs emphasized, and other institutional features. These factors are also relevant in regards to the labor market conditions experienced by fellow youth who are engaged in the labor market. In the next section, I discuss these trends.

2.2.2 Common Trends Throughout the EU

Several groupings of countries depending on their respective composition of NEETs have been configured since the 2008 financial and economic crisis. These trends reveal the variation in the types and incidences of the subsets and subgroups of the NEET population across the EU. Importantly, shifts in these groupings and convergence among the groups (from four main groups to three) may be useful to examine in relation to variation in labor market conditions and outcomes for youth across the EU. Central tendencies on NEETs in the EU are relevant here due to the possibility that parallel trends are occurring in relation to youth labor market conditions, which may then also be related more specifically to the level of discouraged, inactive NEETs. Relevant to these trends may be variations in labor market institutions (Bruno et al. 2014). Thus, the discussion here also refers to the types of policies emphasized in different regions, with varying welfare regimes.

2.2.2.1 *Pre-2008 Economic and Financial Crisis and NEET Trends in the EU*

Prior to the 2008 financial and economic crisis, the overall percentage of NEETs was on the decline in the EU, falling from 12.9% (15.3%) of all youth ages 15 to 24 (15 to 29), except those who did

not answer whether they had participated in school or training, in 2004 to 10.9% (13.1%) in 2008 on average (Eurostat 2016). However, the drop is substantially larger for the number of unemployed NEETs, which fell from 6.4% (7.0%) to 5.0% (5.4%) on average for youth ages 15 to 24 (15 to 29). In comparison, for inactive NEETs the decline was from 6.5% (8.2%) to 5.9% (7.7%); more specifically, 70% (74%) of the fall in the number of NEETs aged 15 to 24 (15 to 29) was due to a decline in the number of unemployed NEETs (Eurostat 2016). During this same time period, the percentage of discouraged NEETs also decreased from 5.8% (5.2%) to 5.1%. (4.7%) of all youth, ages 15 to 24 (15 to 29), in the EU (Author's calculations from Eurostat 2016).

To be clear though, there was also great variation across countries of the EU, with some exhibiting substantial increases in the percentage of discouraged NEETs. For instance, the percentage of discouraged NEETs for both age groups increased in Estonia, Greece, Ireland, Latvia, Poland, Portugal, Slovakia, and Spain. For some of these countries this may be explained by more resilient NEET rates overall in Mediterranean countries prior to the 2008 financial and economic crisis (Bruno et al. 2014; Quintini et al. 2007). In the Eurozone, the discouraged NEET rate increased on average, from 4.6% (4.5%) to 5.4% (5.0%) of all youth ages 15 to 24 (15 to 29),[6] presumably due to increases in the discouraged NEET rate in Greece, Ireland, Portugal, and Spain, which were members at time (European Commission 2016b).

[6] For Estonia, the increase in discouraged NEETs only represents youth ages 15 to 24 due to missing data for the extended age group for the year 2008.

2.2.2.2 *Post-2008 Economic and Financial Crisis and NEET Trends in the EU*

Between 2008 and 2012, the percentage of unemployed NEETs, between the ages of 15 and 24 (15 and 29) increased from 5.0% (5.4%) to 6.9% (7.9%), of all youth of the same age group, on average in the EU (Eurostat 2016). Comparatively, the percentage of inactive NEETs rose from 5.9% (7.7%) to 6.2% (7.9%) on average (Eurostat 2016). For the most part, between 2008 and 2012 increasing NEET rates were mainly a product of an increase in the number of unemployed NEETs, with the number of inactive NEETs remaining fairly steady, however there are some exceptions to this (Carcillo et al. 2015). Respectively, 86.4% (92.6%) of the increase in the percentage of NEETs ages 15 to 24 (15 to 29) was due to and increase in the percentage of unemployed NEETs (Author's calculations, from Eurostat data extract 2016). Between 2008 and 2011, the percentage of discouraged NEETs increased from 5.1% (4.7%) to 6.3% (5.8%) for youth ages 15 to 24 (15 to 29) in the EU.[7] *Discouraged, inactive NEETs* were most prevalent in Eastern and Mediterranean Europe and in general those countries hit particularly hard by the financial and economic crisis (Eurofound 2012). Figure 7 demonstrates an overview of the trends during this period.

In the Continental and Nordic countries and the UK, while the most prevalent subset of NEETs is the inactive, these countries also exhibit the *lowest levels of discouraged NEETs* (Eurofound 2012). This is true for both youth ages 15 to 24 and the extended age group (Author's calculations from Eurostat 2016). More specifically, this includes: (Continental) Austria,

[7] Note: A slight drop occurred in the average discouraged NEET rate for both age groups between 2011 and 2012. However, the trend reverses in subsequent years (Author's calculations, from Eurostat 2016).

Germany, and Luxembourg; (Nordic) Denmark, Finland, the Netherlands, and Sweden; and the UK (Eurofound 2012). More specifically the discouraged NEET rate ranged between 0.5% (0.4%) in Austria (2008) and 6.9% (5.2%) in Finland (2012) for youth ages 15 to 24 (15 to 29) (Author's calculations, from Eurostat ad hoc data extraction 2016). These countries have either emphasized the utilization of flexicurity policies or having instituted dual systems of education, with the exception of the UK where policies tend to be neoliberal in orientation (Eurofound 2012). While the UK exhibits particularly high NEET rates (Berry 2014; Eurofound 2012), the remaining countries exhibit the lowest NEET rates overall (Eurofound 2012). Importantly, a majority of NEETs in this set of countries have minimal educational attainment (Eurofound 2012).

Dual education systems are common among the Continental countries (Bruno et al. 2014). It is considered that dual educational systems that utilize apprenticeships are a good mechanism by which to minimize the limited experience issue youth face (Brunello et al. 2007; Brada et al. 2014). In particular, dual systems of education address a central issue youth face, in that a lack of work experience diminishes employability (Bruno et al. 2014). Flexicurity policies, in addition to large-scale use of active labor market policies, are more common to Scandinavian countries (Bruno et al. 2014). Neoliberal policy orientation is associated with greater levels of labor market flexibility and this is more common among Anglo-Saxon countries that are generally known for their high quality educational systems (Bruno et al. 2014).

The NEET rate in the UK exceeded the EU mean between 2007-2013 (Eurostat 2016). Germany had the highest NEET rate in the group prior to 2009, after which Finland did (Eurostat 2016). Since 2009, Finland had the highest NEET rate (Eurostat 2016). Sweden has predominantly had a slightly *higher level of unemployed NEETs* (Eurostat 2016). Germany had a higher proportion of unemployed NEETs prior to 2009 (Eurostat 2016). Between 2007 and 2012,

Germany, Austria, and Norway all experienced a fall in the overall percentage of NEETs that was led by a decrease in the percentage of unemployed NEETs (Carcillo et al. 2015). A majority of NEETs in this country group have minimal educational attainment, yet this country group also exhibits the *lowest levels of discouraged NEETs* (Eurofound 2012). Following the onset of the crisis, Denmark exhibited an increase in the proportion of inactive NEETs (Carcillo et al. 2015).

In the countries of Eastern Europe (Bulgaria, Hungary, Poland, Romania, and Slovakia) and Meditarranean Europe (Greece and Italy) a *very high proportion of inactive NEETs are discouraged* (Eurofound 2012). The *majority of NEETs in this country group are inactive*, most of which have limited to no experience in the workforce, with the exclusion of Greece and Slovakia, which shifted to a higher proportion of unemployed NEETs between 2009 and 2012 (Eurostat 2016). For Poland, a rise in the number of inactive NEETs was the main driver of the rising percentage of overall NEETs (Carcillo et al. 2015). The number of NEETs with tertiary education is higher than the EU average, however, most NEETs are of minimal educational attainment (Eurofound 2012). There is also a very high rate of female NEETs (Eurofound 2012).

The countries of Eastern Europe are newer EU members. These newer members often are facing the challenge of establishing contemporary welfare systems similar in extent to older EU members (Bruno et al. 2014). Southern European (considered here in the Mediterranean grouping) countries tend to have a more traditional policies, as compared to the corporatist or flexicurity models seen other EU countries, where it is more common to have the family as a focal point, though an emphasis temporary work has become more common (Bruno et al. 2014).

Countries that were hit especially hard by the 2008 financial and economic crisis and ensuing recession (Estonia, Ireland, Latvia, Lithuania, Portugal, and Spain), exhibited a *high proportion of inactive NEETs that were discouraged* (Eurofound 2012), but moderate discouraged

NEET rates overall (Author's calculations, from Eurostat 2016). For instance, while the discouraged NEET rate ranged from 1.5% in Lithuania 2009 to 8.2% in Estonia (2011) for youth ages 15 to 24, the proportion of inactive NEETs that were discouraged ranged from 4.0% in Portugal 2010) to 35.2% in Ireland (2011) (Author's calculations, from Eurostat ad hoc data extraction 2016). Due to economic conditions though, *most NEETs were unemployed* and this was dominated by a larger percentage of male NEETs (Eurofound 2012). Additionally, this set of countries also has a high level of NEETs with experience in the workforce and with tertiary educational attainment (Eurofound 2012). For the most part the level of NEETs was higher than the EU mean (Eurofound 2012) up to 2010 (Eurostat 2016). Since 2011, Estonia and Lithuania have fallen just under the EU mean since 2011 (Eurostat 2016). In Spain, NEET rates were highest in the EU in 2014, while the country fell in second place in unemployment levels (Alegre et al. 2015). In Ireland, studies show that compared to unemployed youth, NEETs tend to remain in this state for longer periods of time (Kelly and McGuinness 2015).

The remaining EU countries (Belgium, Cyprus, the Czech Republic, France, Luxembourg, and Slovenia) are the most varied in composition (Eurofound 2012). Despite this varied composition, for these countries a *lower level of NEETs are discouraged* (Eurofound 2012). The discouraged NEET rate ranged from 0.2% in the Czech Republic (2008) to 2.8% in Slovenia (2012) for youth ages 15 to 24 and from (0.3%) in the Czech Republic (2008) and 2.5% in Cyprus (2011) for the extended age group (Author's calculations, from Eurostat data extract 2016). The proportion of inactive NEETs that are discouraged is also low, falling under 10% (7.1%) for youth ages 15 to 24 (15 to 29) (Author's calculations, from Eurostat 2016). The level of NEETs is moderate, falling just under the EU mean (Eurofound 2012), with the exception of Cyprus, which has exceeded the mean since 2011, Belgium in 2015, and France in 2009 (Eurostat 2016). For the

most part, the *largest portion is unemployed* (Eurofound 2012), except for Belgium in 2011-2012 (Eurostat 2016), and a higher level has some experience in the workforce (Eurofound 2012). A majority of the NEETs are women (Eurofound 2012).

2.2.2.3 *NEET Trends in Recent Years (2012 and Beyond: Post-Policy Initiatives Targeted at NEETs)*

Since more tailored policies focused on NEETs have been instituted, the overall NEET rate, as a proportion of all youth ages 15 to 24 (15 to 29) has declined from 13.2% (15.8%) in 2012 to 12.0% (14.8%) in 2015. More specifically, the percentage of unemployed NEETs has declined from 6.9% (7.9%) in 2012 to 5.9% (6.9%) in 2015 (Eurostat 2016). On the other hand, there has been a minimal decline in the percentage of inactive NEETs, declining only from 6.2% in 2012 to 6.1% in 2015 for youth ages 15 to 24 and fluctuating from 7.9% to 7.8% back to 7.9% for youth ages 15 to 29 (Eurostat 2016). Meaning, unemployed NEETs account for 91.1% (100%) of the decline in the percentage of NEETs (Autor's calculations, from Eurostat ad hoc data extraction 2016). Figure 8 demonstrates an overview of the trends during this period. At the same time, the percentage of discouraged NEETs increased for both age groups.

In more recent years (post-2012), *discouraged, inactive NEETs* have been most prevalent in countries of Mediterranean Europe, and several countries still exhibiting difficulties due to the 2008 financial and economic crisis (Eurofound 2016). On the other hand, Eastern European countries exhibit a high variation of change in the level of inactive NEETs who are discouraged, some for the better and some for the worse between 2012 and 2013 (Eurofound 2016), although the proportion of inactive NEETs who are discouraged declined for all countries between 2013 and 2014 (Author's calculations, from Eurostat data extract 2016). In Nordic and Continental

European countries the percentage of inactive NEETs remains low, as does the proportion of those deemed to be discouraged (Eurofound 2012; Eurofound 2016).

Due to shifts in NEET levels (overall and within subsets and subcategories) and the addition of Croatia and Malta, a more recent set of trends are evident. The Continental countries, Nordic countries, and the UK have maintained *fewer discouraged workers*; they have also maintained *low levels of NEETs* overall, except for the UK (Eurofound 2016). The discouraged NEET rate has ranged between 0.5% in Austria (2012) and 6.9% in Finland (2012) for youth ages 15 to 24 and 0.6% in the UK (2012) and 6.6% in the Netherlands (2014) for the extended age group (Author's calculations, from Eurostat ad hoc data extraction 2016). While these figures demonstrate that the discouraged NEET rates are comparatively lower than in other regions of the EU, there is variation across countries and time in whether the percentage of discouraged NEETs is increasing or decreasing (Author's calculations, from Eurostat data extract 2016). For instance, the discouraged NEET rate increases between 2013 and 2014 in France and the Netherlands for both age groups, but is declining in all other countries for both age groups (Author's calculations, from Eurostat ad hoc data extraction 2016). For the most part, the majority of NEETs in this group are *inactive* (Eurofound 2016).[8] These same overall characteristics are also present in Malta, while Slovenia and Belgium have transitioned from the fourth set of countries (Eurofound 2016). The variation between countries in the female proportion of this group reflects a higher proportion of NEETs inactive due to family commitments in some countries (Austria, Germany, and the UK),

[8] The exceptions to this include Slovenia in 2013 and 2014, France in all years, Austria in 2014, Luxembourg in 2014 and 2015, Sweden in 2014, and the UK in 2013 (Eurostat 2016).

while in several others a large portion are driven into inactivity due to illness or disability (Denmark, the Netherlands, and Finland) (Eurofound 2016). Since 2014 the NEET rate in the UK has fallen just below the EU mean (Eurostat 2016). Overall, school-to-work transitions occur with ease due to either the use of flexicurity policies, well-established dual systems of education, or neoliberal policy orientation (Eurofound 2016). Additionally, these countries feature well-implemented Youth Guarantee programs (Eurofound 2016).

Despite that school-to work transitions are said to happen so smoothly, other evidence illustrates that the effect on the NEET population is not exactly shared among all NEETs. In England implementation of the Youth Contract in 2012 targeted specifically towards NEETs, efforts have failed to promote the integration of inactive NEETs who "are often overlooked within the eligibility of specific programme interventions" (Macguire 2015: 526).[9]

Countries that were impacted especially hard by the 2008 financial and economic crisis, including the Mediterranean countries (Cyprus, Greece, Italy, Portugal, and Spain), in addition to Croatia and Ireland, in general exhibit *many long-term unemployed youth* and *discouraged, inactive NEETs* (Eurofound 2016). Since 2015, *inactive NEETs* have been the majority in Ireland (Eurostat 2016). In Greece, the discouraged NEET rate is on the lower end, averaging around 0.9% (0.8%) of all youth ages 15 to 24 (15 to 29), as is the proportion of inactive NEETs who are discouraged, which averages around 2.9% (3.5%) of inactive NEETs ages 15 to 24 (15 to 29) (Author's calculations, from Eurostat ad hoc data extraction 2016). For the remainder countries,

[9] Additionally, the Youth Guarantee was adopted in Wales, Scotland, and Northern Ireland. England did not adopt the Youth Guarantee, but did implement the Youth Employment Initiative, although only in parts of England (Macguire 2015).

the proportion of inactive NEETs who are discouraged ranges from 4.7% (5.8%) in Cyprus (2012) to 30.8% (26.9%) in Croatia (2013) of inactive NEETs ages 15 to 24 (15 to 29) (Author's calculations, from Eurostat ad hoc data extraction 2016).

Within this set of countries there is variation in the vulnerability of being NEET in relation to education; in Spain and Portugal those with lower levels of educational attainment are most at risk, while in Italy and Ireland those with middle-level educational attainment are most vulnerable, and in all other countries it is the youth with higher levels of education (Eurostat 2016). In 2013, overall NEET rates in Greece, Italy, Cyprus, and Croatia were between 26 and 30 percent; for the remainder countries they were only slightly lower, falling between 18.8% and 24% (Brada et al. 2014). Portugal has fallen below the EU mean for overall NEETs since 2014 (Eurostat 2016). In Italy, youth tend to live at home longer than average, possibly due to a culture of strong family ties between generations and alternatively due to minimal welfare provisions and poor labor market conditions (Alfieri et al. 2015). At the same time, the discouraged, inactive NEET rate is substantially higher in Italy (Author's calculations, from Eurostat ad hoc data extraction 2016).

The Eastern European countries (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, and Slovakia) while having greater variation in the level of NEETs overall, for the most part have *moderate* to *high proportions of discouraged, inactive NEETs*, with the exception of Slovakia (Author's calculations, from Eurostat ad hoc data extraction 2016). These countries also exhibit *higher levels of NEETs inactive due to family obligations* and for the most part (except for Estonia) the majority is female (Eurofound 2016). Estonia has just shifted towards having inactive NEETs as the majority since 2014 (Eurostat 2016). For the overall percentage of NEETs, Latvia has fallen below the EU mean since 2014 (Eurostat 2016).

In sum, the previous discussion serves several purposes. For one, we have learned the importance of addressing the NEET issue. First and foremost, the NEET concept overall captures a level of vulnerability that youth face in the labor market and that NEET status has relevant implications and the individual and societal level, which are likely to be both immediate and long-term. This is particularly so for discouraged, inactive NEETs who are characterized by extreme levels of disengagement. Second, understanding that policy efforts, while increasingly aimed at NEETs, are targeted at the NEET population as a whole, taking into consideration the limited effect these policies have had on inactive, and in particular discouraged, NEETs, and knowing the diversity of the NEET population informs us of the critical importance of examining the subsets and subgroups distinctly in order to tailor policies to each. Even more so, trends in discouraged, inactive NEET rates across regions of the EU signal that regional differences in labor market outcomes and welfare states may be an important component of discouraged, inactive NEET rates. At the same time, country level variations in trends in the discouraged, inactive NEET rate across EU countries, which is increasing in some countries, decreasing in others, and remaining comparatively higher for others despite decreases, demonstrate the importance of investigating the mechanisms underlying these changes. Moreover, given the general emphasis of policy efforts on the 15 to 24 year old age group and limited focus on the 15 to 29 year old age group, despite the prevalence of NEET status among 25 to 29 year olds, alerts us of the relevance of also examining the factors linked to discouraged, inactive NEET status for this extended age group.

In the next chapter, I provide a review of the literature that investigates empirically the key factors associated with being NEET. As previously noted, certain factors put youth at higher risk of entering NEET status. Additionally, I discuss the institutional, structural, and macro-economic or cyclically related determinants associated with variations in the NEET rate. I also take into

consideration the literature on the variety of difficult experiences youth face in the labor market in an effort to deepen our understanding of why the labor market experiences of fellow youth may be driving youth into the high-risk situation of inactivity and more importantly discouragement. Together this literature, in conjunction with the preceding evidence, provides the basis for the theoretical relevance in why poor labor market conditions and outcomes for youth, representative of a "lack of opportunities" in the labor market, should be examined as the impetus for youth discouragement from the labor market, education, and training.

CHAPTER THREE: METHODOLOGICAL APPROACHES, YOUTH LABOR MARKET CONDITIONS, AND THEORETICAL FRAMEWORK

The literature that investigates empirically the key factors associated with being NEET centers on two approaches. This includes determining which factors put youth at higher risk of entering NEET status and examining the institutional, structural, and macro-economic or cyclically related determinants associated with variations in the NEET rate. While the importance of examining the subsets and subgroups of the NEET population distinctly is increasingly noted in the literature (see for instance Bardak et al. 2015; Eurofound 2012; Eurofound 2016; Maguire 2015), empirical examinations of NEETs have been limited to the NEET population as a whole (see for instance Bruno et al. 2014; Eurofound 2012). Just as policies targeted at NEETs have been based on those aimed at youth unemployment, so too have empirical examinations. A review of the evidence provided in these examinations, in combination with the previously discussed statistics on the varying prevalence of discouraged, inactive of NEETs throughout the EU and knowledge that the main driver of the reduction in NEETs is the unemployed, demonstrates well the limitations of this approach and the need for more intricate research. These studies have yet to enhance our understanding of what is driving youth to be discouraged from participating in the labor market, education, or training. However, these studies do provide the necessary foundation for moving forward as these factors may also be relevant in relation to discouraged, inactive NEETs and as such are worthy of consideration.

I also take into consideration the literature on the variety of challenges youth face in the labor market in an effort to deepen our understanding of why the labor market experiences of fellow youth should be examined in relation to youth entering the high-risk situation of inactivity

and more importantly youth discouragement. I then offer evidence on trends in youth labor market conditions across the EU and examine how these compare to the trends in the NEET rate, and more specifically discouraged, inactive NEETs, as discussed in Chapter 2. Together this literature, in conjunction with the evidence presented in Chapter 2, provides the basis for the theoretical relevance in why poor labor market conditions and outcomes for youth, representative of a "lack of opportunities" in the labor market, should be examined as the impetus for youth discouragement from the labor market, education, and training.

3.1 Methodological and Theoretical Approaches

A primary theoretical approach examines the factors that put youth at higher risk of entering NEET status. This approach has been taken in order to better understand the characteristics of the NEET population and is considered an important mechanism to develop policies that may circumvent NEET status and facilitate early intervention (Bardak et al. 2015; Eurofound 2012).

Empirical examinations that focus on the determinants of the NEET population as a whole follow in line with extensive research that examines youth unemployment as a key labor market concern. These examinations focus on the NEET population as a whole and offer a means to gauge the overall risk youth face in entering NEET status and thus present a basis for policy prescriptions to integrate the group as a whole into the labor market (Eurofound 2012). Scholars are increasingly emphasizing the relevance of tailoring policy prescriptions to the meet the subsets' and subgroups' unique needs (see, for instance, Bardak et al. 2015 and Furlong 2006).

3.1.1 Becoming NEET: Key Factors

At the EU level, several factors are associated with an increased probability of becoming NEET. These include lower educational attainment, immigration status, sickness or disability, challenging

family circumstances, low household income, and living in remote areas (Bardak et al. 2012; Eurofound 2012: Eurofound 2016), and being female (Eurfound 2016). Many of these factors have also been explored in relation to youth unemployment levels (see for instance European Commission 2008; Pastore and Giuliani 2015). Several studies at the country level support these findings (see for instance Alfieri et al. 2015; Kelly and McGuinness 2014). None, however, specify what makes youth more likely to enter into the discouraged, inactive NEET status.

Alfieri et al.'s (2015) study offers insight into the role of family life on the probability of NEET status in Italy. Findings demonstrate that higher educational attainment (secondary or tertiary) of parents is associated with lower NEET rates (Alfieri et al. 2015). On the other hand, parental "intrusiveness" – a proxy for how overbearing or controlling parents are – is associated with an increase in the NEET rate, but is only significant for female NEETs (Alfieri et al. 2015: 314-16). Autonomy, representative of how independent youth feel their parents allow them to be, is associated with a decrease in the NEET rate, although this is only significant for male NEETs. Parental support, demonstrative of how much youth feel they can depend on their parents, exhibits a significant, negative association with the NEET rate. Despite having an increasing availability of options at the university level, the odds of completion are low, especially for youth whose parents have minimal educational attainment (Alfieri et al. 2015).

In a study on labor market transitions in Ireland, Kelly and McGuinness (2014) find that some of similar factors also affect the likelihood of transitioning out of NEET status after the Great Recession. For instance, both unemployed youth and NEETs with higher educational attainment (tertiary or advanced certificates) were more likely to exit NEET status (Kelly and McGuinness 2014). Male unemployed youths and male NEETs were significantly more likely than females to remain NEET (Kelly and McGuinness 2014). Both unemployed youth and NEETs between the

ages of 20 and 24 were significantly more likely to remain in NEET status than youth between ages of 15 and 24 years (Kelly and McGuinness 2014). These findings were prior to the Youth Guarantee being fully implemented in Ireland (Kelly and McGuinness 2014).

3.1.2 The NEET Rate: Key Determinants

As previously noted, youth unemployment rates were the traditional policy focus in the EU (Eurofound 2012). Three overarching determinants are considered preeminent in regards to variations in youth unemployment across countries (Bruno et al. 2014). First, a variety of institutional variables that have been related to youth unemployment rates, such as the strictness of employment protection legislation (EPL), spending on active labor market policies (ALMPs), the extent of collective bargaining, the degree of union influence (see for instance Choudhry et al. 2013), and minimum wage levels (Bruno et al. 2014), have also been applied in examinations on NEETs (Eurofound 2012). Second, macroeconomic- or cyclically-related factors have been examined in relation to youth unemployment levels (Bruno et al. 2014; Choudhry et al. 2013),[1] and from this GDP growth has been applied to examinations on the NEET rate (see for instance Bruno et al. 2014 and Eurofound 2012). The third group includes structural, demographic, individual, or social factors (Brada et al. 2014; Choudry et al. 2013),[2] where the relative size of

[1] Macroeconomic- or cyclically-related factors also include "productivity growth, trade openness, the terms of trade dynamics the inflation rate and real (long-term) interest rates." (Choudry et al. 2013: 6).
[2] Structural factors include variables "such as trade specialization of countries, the links between the financial sector and real economic activities, the degree of competitiveness," among others. Demographic factors "refer not only to the composition and natural movements of the population, but also to migration flows." (Brada et al. 2014: 559; see also Choudry et al. 2013: 6).

the youth population for the demographic component has been examined in relation to the NEET rate (Eurofound 2012).

These studies have found that several variables are relevant in relation to the NEET rate, for which the findings are overall consistent with those in studies on the youth unemployment rate. For one, the NEET rate overall has a negative association with GDP growth (Bruno et al. 2014; Eurofound 2012). However, in times of crisis (i.e. 2008 financial and economic crisis) the association is positive; meaning, NEET rates are highly resilient (Brada et al. 2014; Bruno et al. 2014). Similarly, the youth unemployment rate is resilient during times of crisis (Bruno et al. 2014). ALMP spending and more extensive dual-based systems that combine education with training both have a significant negative effect on the NEET rate (Eurofound 2012). Labor market training, job search assistance, wage subsidies, and public works programs have demonstrated a positive effect on youth employment across various studies (Caliendo and Schmidl 2016).

The various institutional variables that have been tested in regards to the NEET rate represent more specifically labor market institutions (Brada et al. 2014; Bruno et al. 2014; Eurofound 2012). Nearly two-thirds of variation in youth unemployment levels and NEET rates across countries are caused by differences in labor market institutions (Bruno et al. 2014). Labor market institutions vary greatly across the EU, although some trends depend upon the labor market regime.

EPL is considered to contribute to rigid labor markets (Eurofound 2012). While this type of legislation provides job security by making unwarranted firing more costly, these extra costs may impede employers from hiring (Eurofound 2012). Additionally, EPL may offer a portion of the workforce greater job security often at the detriment to those at the periphery of the labor market (Rueda et al. 2015). EPL is considered to be an impediment to labor market integration for all youth (de Lange et al. 2014). EPL was considered so problematic for unemployment in general

that efforts to counter unemployment led to an emphasis on creating more flexible labor markets (Rueda 2013; Rueda 2014) and the utilization of ALMPs (Armingeon 2007). Plentiful research, however, demonstrates that EPL is only minimally relevant in regards to youth unemployment, although the effect can be larger when combined with economic liberalization and market demand problems, which are amplified during crises, that challenge school-to-work transitions (Choudhry et al. 2013).

When examined alone findings suggest that EPL (summary index) is significantly associated with an increase in the NEET rate (Eurofound 2012). EPL has differing effects depending on which subset of the workforce the EPL targets. The bivariate relationship between EPL for regular (full-time) employment demonstrates no relationship with NEET rates, while EPL for temporary employment demonstrates a positive relationship with NEET rates. Hence, it appears that deregulation of temporary employment should facilitate labor market integration of the NEET population. However, when the EPL summary index is combined with additional causal factors the relationship does not hold (Eurofound 2012).

Spending on ALMPs serves to reduce the NEET rates and the relationship persists even when other variables are included in the analysis (Eurofound 2012). ALMPs are promoted and utilized as a means to ease labor market entry for NEETs (and in general) (Eurofound 2012). To a lesser extent, enlarging mixed work and school-based systems of vocational and technical training also exhibits a significant, negative association with the NEET rate that also withstands more rigorous analysis (Eurofound 2012). Previous evidence suggests that dual systems that combine education with vocational training or apprenticeships dampen the odds of unemployment for youth and ease entry in the workforce from education (Bruno et al. 2014; Eurofound 2012).

In the literature, one line of thought contends that union influence may have a beneficial effect on the ease of entry into the labor market for youth when combined with coordination among labor market actors and centralized collective bargaining (Eurofound 2012). Evidence suggests otherwise, finding either a negative effect (Bertola et al. 2007; Eurofound 2012) or none at all (Eurofound 2012; Van der Velden and Wolbers 2007). Union influence, measured by the extent of collective bargaining coverage, exhibits a significant, negative association with the NEET rate, but only in pooled OLS models (Eurfound 2012). Bivariate analyses reveal that wage bargaining, a proxy for the extent of collective bargaining, exhibits a significant, negative relationship with the NEET rate, that holds under some models, but not under multivariate testing (Eurofound 2012). The inclusion of a variable for minimum wage levels is based on neoclassic theory that minimum wages impede youth entry into the labor market (Eurofound 2012). Minimum wage levels exhibit a slight significant, positive association with NEET rates, but only when examined in a pooled OLS or random-effects model (Eurofound 2012).

In regards to macroeconomic factors, GDP growth is considered an important driver of changes in NEET rates (Brada et al. 2014). The premise of the role of GDP growth is based upon plentiful evidence that the youth unemployment rate is much more affected by fluctuations in GDP than the total unemployment rate (Brada et al. 2014). GDP growth also provides a gauge of the overall state of the labor market (Eurofound 2012). In general, GDP growth exhibits a significant, negative association with the NEET rate (Bruno et al. 2014; Eurofound 2012). However, Bruno et al. (2014) find that the effects of GDP growth are nuanced (Brada et al. 2014). Taking a regional approach, Bruno et al. (2014) examine the role of GDP growth before and after the onset of the 2008 financial and economic crisis (Brada et al. 2014). The findings suggest that NEET rates are enduring and that the overall effect of GDP growth on NEET rates diminishes at the height of the

crisis (Brada et al. 2014; Bruno et al. 2014), meaning that the endurance of the NEET rate increases during periods of crisis (Bruno et al. 2014). The extent to which NEET rates are resistant varies regionally, where in Southern countries NEET rates are most resistant to changes in GDP, in Continental countries they are highly resistant to changes in GDP, in Anglo-Saxon countries they are especially responsive to fluctuations, and in newer member countries to the EU the NEET rates are always responsive to any changes in GDP (Brada et al. 2014; Bruno et al. 2014). The key regional differences lie in the labor market institutions (Brada et al. 2014; Bruno et al. 2014), with educational systems and programs available to promote school-to-work transitions also playing an important role (Bruno et al. 2014).

In regards to demographically related variables, the size of the youth population has been examined against the NEET rate. The importance of the size of the youth population is based on the idea as a greater number of youth are entering into the labor market the job market becomes more competitive (Eurofound 2012). Bivariate analyses reveal a significant, positive relationship between the size of youth populations between (ages 15-29) in proportion to the adult working age population (ages 15-64) and the NEET rate (Eurofound 2012). However, this relationship does not hold when other factors are accounted for (Eurofound 2012).

In relation to the previously discussed determinants, no studies have offered an examination of any major subset (unemployed or inactive) of the NEET population, nor any of the diverse subgroups of the inactive NEET population. Hence, from the previous analyses it is not clear which subsets or subgroups of the NEET population these factors are correlated with. Knowing the diversity of the NEET population and understanding that the decline in the NEET rates is driven by a decline in the percentage of unemployed NEETs, the suggestions that the NEET subsets should be studied distinctly is warranted.

As discussed in the Introduction, the existing literature also provides a basis for the examination of labor market outcomes of fellow youth in regards to youth discouragement from participation in the labor market, education, or training. For one, individual preferences for better opportunities in the labor market may also play a role in the why some youth enter into discouraged, inactive NEET status. For instance, Brada et al. (2014) and Kelly et al. (2014) argue that "the preferences of workers" during times of poor economic conditions may explain the "the 'discouraged worker hypothesis'" and why some youth go back into and others stay in education. Indeed, recent Gallup polls indicate there is an overall pessimism with the labor market conditions among youth (see, for instance, Manchin 2012).

Additionally, while social factors include "the role of the family, ties with parents and barriers to regional mobility" (Brada et al. 2014), here I contend that it is the experiences of fellow youth in the labor market that also play a role in explaining why some youth become discouraged, inactive NEETs. As discussed in the Introduction, Bourdieu's work on the notion of 'social space', tells us that an individual's placement in the social space is based upon the allocation of resources, which includes economic and social capital (Soler and Ferrer-Fons 2015: 94). Here, the labor market outcomes for youth are considered to be representative of the allocation of resources in the labor market that determine the economic and social capital of youth. In turn, this determines the status of youth as a whole in respect to the "system of relationships of a given society forms the basis for their opinion of feeling more or less integrated…" (Soler and Ferrer-Fons 2015: 94).[3]

[3] For instance, the "centrality of young people in youth transition regimes" – the measure for which is a composite to quantify vulnerability (based on the overall NEET level, the unemployment level, and household financial status), length of transitions (based on the length of time youth live at home with parents), generosity of the welfare (based on state spending on social policies), and age-orientation (state expenditure by age, family status) – demonstrates how

Moreover, case evidence also demonstrates that youth may be highly affected by their social networks and employment aspirations, as in the case of Lithuania (Braziene and Dorelaitiene 2012).

Additional labor market institutions include the prevalence of nonstandard employment contracts (see for instance Bruno et al. 2014). Several of these are considered central determinants of the youth unemployment rate, such as the incidence of part-time or temporary employment (Bruno et al. 2014; Choudhry et al. 2013). This has not been specifically tested in relation to NEETs, though increases in non-standard employment opportunities have been associated with a decrease in unemployment levels (Choudry et al. 2013). Empirical evidence also shows that the overall unemployment rate in the population is positively correlated with the overall NEET rate even when other variables are included (Eurofound 2012). Furthermore, as discussed in the Introduction, for the subgroups of NEETs inactive for other reasons, the basis of inactivity has been connected to issues of social-policy orientation, whereas inactive NEETs who are discouraged are considered more the result of "labor market-driven factors" (Eurofound 2016: 34).

While the evidence for ALMP spending may elicit the expectation that these policies should also engage discourage, inactive NEETs into the labor market, the statistical evidence suggests otherwise. For example, active labor market policies aimed at NEETs focus on creating avenues toward education and training, bringing together potential employers and job seekers, programs that assist new graduates in finding employment, and swift action when youth enter into

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the social space may be comprised of labor market conditions and outcomes that "determines their opportunities and expectations and shape their practices", such as willingness to participate (Soler and Ferrer-Fons 2015: 93; 103-104).

unemployed status (Eurofound 2016). However, this may come in the form of temporary employment opportunities that do not lead to regular employment (see for instance Berry 2014). As previously noted, the decline in the NEET rate, however, is driven by a decline in unemployed NEETs. As such, it is possible ALMP spending may not be having a similar effect in relation to engaging discouraged, inactive NEETs.

Given the unclear nature of youth discouragement from the labor market, the lack of empirical examinations of the particular subgroup of inactive NEETs, and the connections discussed here the examination pursued in this paper is well founded. In the next section I discuss the various labor market conditions youth experience in the EU and develop an argument as to why these must be considered to have a distinct effect on discouraged, inactive NEETs.

3.2 Youth Labor Market Conditions in the EU

There are several reasons for considering a range of labor market conditions for youth as a source of discouragement from the labor market. Among working-age individuals in the labor market, youth across the EU face many challenges in the labor market beyond unemployment. For one, youth are particularly challenged by a diminishing number of quality, secure full-time jobs (de Lange et al. 2014; Green and Livanos 2015; European Commission 2016c). Since the turn of the 21st century this has increasingly included atypical (non-standard) employment, such as part-time (involuntary and voluntary) and temporary jobs (ILO 2015). Working youth also must contend with low wages, poor quality work, in-work poverty risk, limited transitions into secure employment, and difficulty transitioning into the labor market after schooling (ILO 2015), among other impediments to labor market entry. As discussed in the Introduction, quantifying what youth consider to be a "lack of opportunities in the labor market" is precluded by a lack of survey

questions tailored specifically towards assessing the type of jobs youth desire. However, as previously noted, polls indicate that there is an overall pessimism about labor market opportunities (ILO 2015). Furthermore, what youth consider as decent work can be based upon a range of factors, such as geographical location or socio-cultural background (ILO 2015), which are discussed further in the analysis of the findings.

3.2.1 Background on Disparate Labor Market Conditions

Youth labor market conditions are partially a product of labor market divisions that while varying in severity are common to the EU. This divide in the labor market is comprised by "insiders", consisting of workers in more protected and in secure full-time permanent employment, and "outsiders", who are either unemployed (de Lange et al. 2014; Fervers and Schwander 2015; Schwander and Häusermann 2013; Rueda 2007; Rueda 2014) or in jobs without sufficient employment protection, rights, benefits, social security, lower salaries, and often with nonstandard employment contracts (Fervers and Schwander 2015; Schwander and Häusermann 2013; Rueda 2007; Rueda 2014). This divide has been increasing in the EU since the 1980s (Rueda 2014). Whether youth face the challenge of higher risk for unemployment, atypical employment, lower wages, difficulty transitioning into the labor market after schooling, or otherwise, youth comprise a great portion of the outsider population (de Lange et 2014). For example, in 2013, 8.7 million youth could not find a job, nearly 27 million youth faced the risk of poverty, 13.7 million youth were in NEET status, and many youth faced high odds of non-standard (voluntary or involuntary) employment (European Commission 2016c).

These divisions themselves are rooted in labor market regulations, such as protectionist measures and insurance against employment risk, that heavily favored labor market insiders

(Rueda et al. 2015). More specifically, starting in the 1960s these policies included employment protection legislation (EPL), which increases the expense of hiring and dismissals (Rueda 2014). Across these countries though, while a consistent split between labor market insiders and outsiders developed, the level of protection and benefits initially offered to insiders varied greatly (Rueda et al. 2015). [4] The outcomes of such policies have not only persisted despite decades of economic liberalization, but have also demonstrated constancy within countries and great variation between (Rueda et al. 2015).

The initial response to address unemployment levels for the entire working age population was supply-side oriented and focused on more costly efforts such as early retirement plans and social benefits (Rueda 2014). In the 1970s, deregulation of the labor market became a more common response throughout the EU to counter high levels of unemployment that were spurred by the oil crisis (Davidsson and Emmenegger 2013). This takes the form of a dualized approach, lifting restrictions on job security legislation in particular for temporary or fixed-term employment, while retaining protections for insiders (Ibid.). The 1980s was a period of deindustrialization throughout the OECD and labor market regulations also became less restrictive via measures that challenged market entry without impeding on EPL (Rueda 2013; Rueda 2014). As discussed in the Chapter 2, during the 1980s, youth unemployment levels also became an issue of importance in the EU policy arena, due to the large proportion of baby-boomer generation youth entering the labor market. (Eurofound 2012)

[4] For instance, countries such as the US instituted more moderate levels of protection and benefits for insiders as compared to smaller states of Northern Europe (Rueda et al. 2015; see also Katzenstein 1985).

The 2008 financial and economic crisis has created additional challenges for countries trying to counter labor market deficiencies due to the need to emphasize greater fiscal conservativeness, which often comes with cutbacks in social spending (Carcillo et al. 2015). Additionally, EU countries have continued shifting towards greater flexibility in the labor market (Green and Livanos 2015). The main purpose of active labor market policies (ALMPs) is to counter disparities in the labor market (Escudero 2015). These policies encourage employment of the labor force via government expenditures on employment services, training programs, special policies catered to youths and disabled, and employment subsidies[5] (Armingeon 2007; Rueda 2014). Alternatively, passive labor market policies (PLMP) focus on unemployment benefits and early retirement funds (Armingeon 2007).

3.2.2 Poor Labor Market Opportunities For Youth

Active labor market policies implemented to target youth unemployment take a variety of forms and also vary in the level of expenditure across the EU (Eichhorst and Rinne 2014). In general, the use of ALMPs came with even greater emphasis on non-standard employment (Green and Livanos 2015). As such, the number of part-time and temporary jobs has continued to increase (Green and Livanos 2015). Between 2005 and 2015, the number of youth in the EU working in part-time (temporary) jobs increased substantially, from 24.9% to 32.2% of total youth employment (Eurostat 2016). At the same time, between 2007 and 2012, the youth employment rate declined 4.6% (Carcillo et al. 2015). Often these policies also aim to create better quality employment

[5] Employment subsidies include either direct subsidies to employers as an incentive to hire the unemployed, entrepreneurial assistance the unemployed, or the generation of public sector jobs (Armingeon 2007).

(Green and Livanos 2015). However, the emphasis is usually on quantity over quality (Berry 2014). Moreover, the number of youth in involuntary part-time (and involuntary temporary) as a proportion of all part-time (temporary) employment for youth jobs in the EU increased from 24.3% (30.6%) in 2005 to 28% (37.3%) in 2015 for youth ages 15 to 24 (15 to 29) (Eurostat 2016). These types of jobs are often the product of the same active labor market policies that are prescribed to engage NEETs and similarly the general unemployed in the labor force.

These jobs may be considered poor employment opportunities for several reasons. For one, temporary employment opportunities often do not translate into permanent contracts (Eichhorst and Rinne 2014). Integration of youth into the labor market resulting from subsidized employment, a form of active labor market policy, often consists of consecutive fixed-term employment contracts cycled with periods of unemployment (Eichhorst and Rinne 2014). Second, while many part-time jobs are taken on voluntarily by youth pursuing education in conjunction with work or as a first step into the labor market as are temporary jobs (Eurofound 2012),[6] a number of these jobs are also taken on involuntarily (Eurostat 2016; Fagan et al. 2014; Green and Livanos 2015).[7] This is considered demonstrative of greater insecurity for youth in the labor market (Eurofound 2012). Involuntary non-standard employment reflects both the "precarious nature" of such work and the "lack of choice" (Green and Livanos 2015: 2). Third, even voluntary part-time work may be considered an example of choosing a second-best option, as even though stated as voluntary,

[6] They also offer incentive to employers to hire inexperienced youth, especially in times of economic instability (Eurofound 2012).
[7] This is recognizable by responses to surveys in EU-LFS as to the main reason for part-time or temporary work being that full-time work was not available (Eurostat 2016; Fagan et al. 2014; Green and Livanos 2015).

constraints that prevent full-time employment for those who prefer to work more hours are not accounted for (i.e. lack of sufficient childcare services) (Fagan et al. 2014).

Moreover, these matters only touch upon the aspect of sufficient hours, not the quality of such employment. For instance, part-time employment is often characterized by lower hourly wages, lacking job security and benefits, and offering minimal opportunities to advance (Fagan et al. 2014). Similarly, temporary employment often suffers from the same characteristics (Young 2010). Additionally, previously unemployed individuals bear a significantly higher risk of involuntary non-standard employment implying that policies should also focus on the quality of jobs offered to individuals entering the labor market after unemployment (Green and Livanos 2015). This further exemplifies how labor market outcomes and conditions may result in poor labor market opportunities. Based on the previous evidence, I hypothesize:

H1: As the prevalence of youth employed in non-standard work involuntarily increases, the percentage of inactive NEETs who are discouraged will increase.

H2: As the prevalence of employed individuals moving into the position of decreased work security increases, the percentage of inactive NEETs who are discouraged will increase.

In-work poverty is said to be dependent upon overall household economic conditions (Bardone and Guio 2005). While youth may be more prone to low-paying jobs, as previously discussed, youth who are receiving low pay may be living with parents and thus enjoying a higher standard of living than say those who live independently (Bardone and Guio 2005). Statistics demonstrate that while in-work poverty risk is not age determined, it is dependent upon the household family structure and earnings (European Commission 2010).

As labor market entrants, often with limited or no work experience, youth face additional challenges in the labor market (Eurofound 2012). It is common that youth are not only first-time labor market entrants, they are also living on their own and taking care of their own finances for the first time (Carcillo et al. 2015). As such, there may already be a loss in disposable income that may be amplified by the prevalence of part-time employment or low wages among youth (Carcillo et al. 2015). Youth that are actually employed vary in type of employment and whether this is combined with education or not (Carcillo et al. 2015).

Minimum wages are intended to prevent too low wages for youth (Eurofound 2012; Kalenkoski 2016) and poverty among youth (Kalenkoski 2016). However, this often has the opposite effect in making labor market integration more difficult for youth (Eurofound 2012; Kalenkoski 2016). This has been confirmed in a review of the extensive literature examining this relationship (Eurofound 2012; Neumark and Wascher 2007). Minimum wages can lead to fewer job opportunities, more job seekers, and thus higher unemployment for youth (Kalenkoski 2016). Additionally, minimum wages often decrease the availability of training opportunities, which are often offered with a reduced wage level, but likely mean higher wages in the future (Kalenkoski 2016). As such, in postponing labor market entry, minimum wages lower lifetime earning potential (Ibid.), which in turn may also be reflected by an increase in-work poverty risk. Based on the previous evidence, I hypothesize:

H3: As the prevalence of employed youth experiencing in-work poverty risk increases, the percentage of inactive NEETs who are discouraged will increase.

Youth have become increasingly prone to working atypical workings hours, such as shift work, especially since the 2008 financial and economic crisis (Pusterla 2016). Shift work is classified as atypical employment as it often characterized working odd hours and days, such as

working at night, early mornings, and/or on weekends (Eurostat 2016). These forms of working arrangements, despite entailing a 'regular' (i.e. full-time) work schedule (Ibid.), can be problematic for several reasons. For one, shift work often constitutes abnormal sleeping hours and abnormal rest days (Eurostat 2016). Second, shift work often exposes workers to high stress conditions that can adversely affect physical health, mental wellbeing, and quality of life (Eurostat 2010). Employees working atypical hours experience a higher percentage of accidents at work and this is an even more prevalent occurrence for youth (Ibid.). For instance, between 1999 and 2007, the number of accidents occurring at work increased for youth, while it decreased for workers between the ages of 25 and 64 (Ibid.). Shift work often intrudes upon family time and for married couples it is associated with a higher risk for divorce (Margherita et al. 2009). Atypical working hours also limit the opportunity to participate in social, political, and/or cultural activities, and thus can lead to a sense of exclusion from society (Ibid.). Often, shift work is attributed to blue-collar type jobs; these workers often report they take on such work because they have limited options and lack the ability to negotiate at work or to find work with better hours (Ibid.). Based on the previous discussion, I hypothesize:

> **H4:** As the prevalence of youth employed in shift work increases, the percentage of the percentage of inactive NEETs who are discouraged will increase.

Conflicting evidence has led to increasing doubt regarding the ability of ALMPs to reduce unemployment in general as far back as the mid-1990s when such policies became more prevalent (Caroleo and Pastore 2003). More troubling was evidence from Sweden, where ALMPs appeared to reduce youth unemployment, but at the expense of also reducing full-time work (Calmfors et al. 2002; Caroleo and Pastore 2003). In fact, it has also been suggested in the case of the UK that ALMPs emphasize the quantity of jobs created, "marginalizing concerns about pay and job

quality" (Berry 2014: 592). Furthermore, unemployment/employment periods are often shorter for youth with lower skills due to the fact that they are more likely to accept lower paying temporary and part-time jobs (Caroleo and Pastore 2003).

Long-term unemployment, for youth who may still be in education or training, faces similar risks as NEET status. Despite that youth may be developing greater human capital and attaining higher levels of education, this is no guarantee for better labor market opportunities or an increase in the number jobs available (Bruno et al. 2014; ILO 2012). Additionally, long-term unemployment still results in a loss of work experience, greater challenges in gaining employment, and lower lifetime income, and greater risk of precarious and poor quality employment opportunities (Choudhry et al. 2013). For instance, youth who have experienced long-term unemployment often face "wage penalty" even if they are never unemployed again (Eurofound 2012: 8). The experience of long-term unemployment for youth also increases the odds of permanent labor market disengagement (Eurofound 2012). Based on the previous evidence, I hypothesize:

> **H5:** As the prevalence of youth experiencing long-term unemployment increases, the percentage of the percentage of inactive NEETs who are discouraged will increase.

3.2.3 Trends in Youth Labor Market Conditions in the EU

Across the EU, youth labor market conditions vary greatly. This pertains to all labor market conditions. However, some trends are apparent throughout discussions in the literature. Here, I discuss trends in non-standard employment (i.e. voluntary and involuntary part-time and temporary work), school-to-work transitions, transitions into secure employment, in-work poverty risk, shift work, and long-term unemployment.

Since the 2008 financial and economic crisis, there has been an overall increase in the levels of involuntary and voluntary non-standard employment (Green and Livanos 2015). This is the continuation of trends prior to the 2008 crisis. Figure 9 provides an overview of the change in the incidence of involuntary non-standard employment as a percentage of non-standard employment between 2004 and 2015. This figure illustrates that as a proportion of youth of the same age group employed in non-standard work, the incidence of this work being taken on involuntarily is much higher for the extended age group, reflecting that this is a more undesired employment condition when including 25 to 29 year olds. Figure 10 provides an overview of the change in the incidence of involuntary non-standard employment as a percentage of employed youth between 2004 and 2015. More specifically, the percentage of youth ages 15 to 24 (15 to 29) in involuntary part-time work, as a proportion of all youth of the same age group in part-time work, has increased from 21.4% (24.8%) in 2004 to 28% (33.8%) in 2015 (Eurostat 2016). The percentage of youth in involuntary temporary work, as a proportion of all youth ages 15 to 24 (15 to 29) in temporary work, has decreased overall, but only slightly, from 38.5% (48.3%) in 2004 to 37.3% (47.6%) in 2015 (Eurostat 2016). The percentage of youth, ages 15 to 24, in voluntary part-time (temporary) work, in relation to all employed youth, has increased from 37.5% (24.7%) in 2004 to 43.4% (37.1%) in 2015.

However, there is considerable variation in the levels and the composition of both youth (Eurostat 2016) (and adults) in involuntary non-standard work (Green and Livanos 2015). Part-time work in general has become a more prevalent feature in the industrialized countries of the EU (Buddlemeyer et al. 2004). In a few Continental and Nordic (Austria, Denmark, Germany), Eastern European (Estonia and Lithuania), and Anglo-Saxon countries (Ireland and the UK), involuntary part-time workers comprise the majority of involuntary non-standard employment (for all adults)

(Green and Livanos 2015). These countries also have high levels of permanent part-time employment, particularly so in the Netherlands (Ibid.). In particular, since 2008 the majority of involuntary non-standard youth workers are youth employed in *involuntary part-time work* in (Continental countries) Austria, Germany, and France, and (Southern Europe) Italy (Eurostat 2016).

In many countries of Eastern Europe (Bulgaria, Czech Republic, Poland, Romania, Slovakia) and Southern and Mediterranean Europe (Cyprus, Poland, and Spain), involuntary temporary work comprises the majority of involuntary non-standard employment (Green and Livanos 2015). This is also the case for the Netherlands, which had the largest percentage of involuntary temporary workers (and voluntary part-time workers) (Green and Livanos 2015). Regarding youth, since 2008 the majority of involuntary non-standard youth workers are youth employed in *involuntary temporary work* in: (Continental Europe) Belgium; (Nordic) Denmark and Finland; (Eastern Europe) the Czech Republic, Hungary, Poland, and Slovakia; (Mediterranean Europe) Portugal, Spain, and Greece (except for 2012 and 2015); and Ireland (Eurostat 2016).

Involuntary temporary and involuntary part-time employment are also theorized to be weak integration into the labor market and thus a poor labor market outcome. The Netherlands emphasizes the creation of flexible part-time jobs, yet the incidence of involuntary part-time workers is very minimal (Eichhorst and Rinne 2014). An examination of ten EU countries (Finland, France, Germany, Greece, the Netherlands, Poland, Spain, Sweden, and the UK) demonstrates that in all cases except for Germany the risk of being employed in involuntary non-standard work is much greater for individuals with lower educational attainment; this is especially so for Greece, Lithuania, and Poland (Green and Livanos 2015). The UK has a large number of

individuals employed in insecure work or underemployed (Berry 2014). In general, previously unemployed individuals bear a significantly higher risk of involuntary non-standard employment (Green and Livanos 2015) implying that policies should also focus on the quality of jobs offered to individuals entering the labor market after unemployment (Green and Livanos 2015). This further exemplifies the how labor market outcomes and conditions may be considered poor labor market opportunities.

While some countries may have a higher percentage of youth in involuntary part-time work and others involuntary temporary work, comparatively the incidence for each is higher in some countries than in others. In many of the Continental and Nordic countries discussed in Chapter 2, *where the level of discouraged, inactive NEETs is much lower*, the rate of youth in involuntary part-time employment, as a percentage of youth in part-time employment, is comparatively lower, with some exceptions. For instance, the percentage of youth in involuntary part-time employment, as a percentage of youth in part-time employment, has been under 10% in the Netherlands since 2004 and Denmark since 2006 (Eurostat 2016). However, in Finland the percentage of youth in involuntary part-time employment, as a percentage of youth in part-time employment, has been above 17% and above since 2004 (Eurostat 2016). Overall, the incidence of youth, ages 15 to 29, employed in *involuntary part-time work* as a percentage of part-time work in the Continental region ranges between 11.1% in Austria (2012) to 59% in France (2015) (Ibid.). In Germany, since the 2008 crisis, this rate has been on the decline from 24.7% (23.4%) in 2008 to 10.1% (12.8%) in 2015 for youth ages 15 to 24 (15 to 29) (Eurostat 2016). In Austria, the rate has remained under 20% (19%) since 2004, for youth ages 15 to 24 (15 to 29), although it has increased from a low of 12.1% (11.1%) in 2012 to 15.5% (15.1%) in 2015 (Eurostat 2016). The incidence of youth in involuntary temporary work, as a percentage of youth in temporary employment, is also

comparatively lower in several of these countries, but remarkably higher in others. For example, in Austria, between 2006 and 2015 it has ranged between 4.3% in 2006 and 2.5% in 2013, for youth ages 15 to 24, and between 4.6% in 2013 and 8.4% in 2007 for youth ages 15 to 29 (Ibid.). The incidence is also fairly low in Germany, falling below 9.2% (13%) for youth ages 15 to 24 (15 to 29) between 2004 and 2015. However, in France this rate is much higher for both age groups, falling above 36.6% (44.9%) for youth ages 15 to 24 (15 to 29) in the same time range.

On the other hand, in many of the Eastern European countries, *where the proportion of discouraged, inactive NEETs is much higher*, the rate of youth in involuntary part-time employment, as a percentage of youth in part-time employment, is comparatively higher overall than it is in the Continental and Nordic countries, with some exceptions. For example, in Hungary, Romania, and Slovakia the rate ranges between 27.7% (22.8%) and 74.1% (76.1%) for youth ages 15 to 24 (15 to 29) during this time period (2004-2015) (Eurostat 2016). Slovenia stands out as having a much lower incidence of youth in involuntary part-time employment, as a percentage of youth in part-time employment, falling under 12% for youth ages 15 to 24 (15 to 29) between 2004 and 2015; however, the rate has increased 4.1% (8.1%) (Ibid.).

Similarly, the incidence of youth in involuntary temporary work, as a percentage of youth in temporary employment, is also comparatively higher in several of these countries. For Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovakia, the incidence of involuntary temporary employment, as a percentage of youth in temporary employment, for youth ages 15 to 24 ranges from 47.1% in 2005 (Bulgaria) to 88.8% in 2004 (Slovakia); for 15 to 29 year olds this ranges between 49.4% in 2008 (Bulgaria) and 88.9% in 2013 (Slovakia). For the majority of the years between 2004 and 2015 the rate in these countries ranged between 50% and 86% (Eurostat 2016). The incidence of youth in involuntary temporary work, as a percentage of youth in

temporary employment, in Estonia, falls below the EU mean in many years and has been decreasing. On the other hand, in Slovenia, which also falls below the EU mean in many years, the rate has increased from 32% in 2004 to 49.7% in 2015 for youth ages 15 to 29 (Ibid.).

In the countries hit especially hard by the 2008 financial and economic crisis, where *many long-term unemployed youth* and *discouraged, inactive NEETs,* there is also a higher incidence of youth in both involuntary part-time employment, as a percentage of youth in part-time employment. Prior to the crisis, in Greece, Italy, Portugal, and Spain, the rate ranged between 23.5% (24.6%) in 2004 (Spain) and 51.2 (58.8%) in Greece (2004) for 15 to 24 (15 to 29) year olds (Eurostat 2016). After 2008, the incidence is far higher, ranging from 41.3% (45.4%) in 2009 (Spain) and 83.7% (82.2%) in 2015 (Italy) for youth ages 15 to 24 (15 to 29) (Ibid.). Prior to the crisis, the incidence of youth in involuntary temporary employment ranged from 29.2% in 2004 (Italy) and 85.8% in 2004 (Spain) for youth ages 15 to 24 (Ibid.). After 2008, the incidence has remained high, ranging from 34.9% (45%) in 2009 (Italy) to 82.2% in 2011 (84.7% in 2012) (Spain) for youth ages 15 to 24 (15 to 29) (Eurostat 2016).

Closely related to non-standard employment opportunities is in-work poverty risk (Horemans et al. 2016). Between 2001 and 2007, the in-work poverty risk for youth increased substantially in some EU countries, but declined in others (Bardone and Guio 2005; European Commission 2010) and this trend has continued (Eurostat EU-SILC 2016). The incidence of part-time, and especially involuntary part-time work (for the working age population) increased following the 2008 financial and economic crisis, particularly for countries hit hard by the crisis and thus experiencing comparatively higher unemployment levels (Horemans et al. 2016). In-work poverty increased greatly for individuals employed in involuntary part-time jobs, while in-work poverty risk increased for part-time employees (Horemans et al. 2016). Overall though, the in-

work poverty rate did not fluctuate greatly due to the inclusion of full-time employment (Horemans et al. 2016).

Most importantly, youth are significantly more at risk of in-work poverty than the remainder of the working age population across the EU (Horemans et a. 2016). At the EU level, in-work poverty risk for employed youth fluctuated between 11.2% (8.7%) and 12.0% (9.5%) for youth ages 15 to 24 (15 to 29) between 2010 and 2013 (Eurostat 2016). Greater detail is available for individual member states. In-work poverty risk for employed youth ages 15 to 24 is substantially higher between 2004 and 2015 for Denmark, (ranging between 15.4% in 2006 and 26.5% in 2012), Norway (ranging between 15.8% in 2004 and 27.5% in 2008), Sweden (ranging between 16.5% in 2011 and 22.8% in 2006), Poland (ranging between 11.2% in 2009 and 15.5% in 2006), and Greece (ranging between 11.6% in 2009 and 17.9% in 2013) (Eurostat 2016). In-work poverty risk tends to decrease for these countries for the extended age group, although the figures are still comparatively higher than other countries.

In-work poverty risk is moderately higher for youth ages 15 to 24 in Bulgaria (ranging between 4.3% in 2006 and 11.3% in 2012), Lithuania (ranging between 4.7% in 2007 and 11.8% in 2010), Germany (ranging between 7% in 2005 and 11.7% in 2009), Finland (ranging between 5.8% in 2009 and 12.5% in 2008), France (ranging between 6.6% in 2007 and 13.1% in 2013), Luxembourg (ranging between 8.9% in 2004/2010 and 13.2% in 2009), Italy (ranging between 8.5% in 2008 and 15.2% in 2011), Portugal (ranging between 7.4% in 2006 and 13.5% in 2013), and the UK (ranging between 6.1% in 2009 and 11.8% in 2012) (Eurostat 2016). For all of these countries the in-work poverty risk is lower for the extended age group, with the exception of Germany, where the in-work poverty risk ranges between 6.9% in 2005 and 11.5% in 2007 (Eurostat 2016).

Figure 11 demonstrates the range of vulnerability youth face for in-work poverty comparatively for both age groups across countries in the EU. While there are some outliers for some of the countries, evident by the miscellaneous data points beyond the normal range of the data, the general trends indicate that in certain countries youth face a remarkably higher risk for in-work poverty (i.e. Romania and Denmark). Additionally, for some countries the risk for in-work poverty is comparable for both age groups (i.e. Austria), while for others the overall risk and variation in risk is much greater for the younger cohort (ages 15 to 24) (i.e. Estonia, Denmark, France, Romania, Spain, and Sweden).

The ease of school-to-work transitions varies across the EU. In earlier studies examining school-to-work transitions prior to 2001, findings in a revealed that on average the transition process from school-to-work takes 1-2 years and even longer, approximately 3-4 years to find permanent employment (Garrouste and Loi 2011; Quintini et al. 2001). The initial process of finding any form of work was lengthier in Finland, Portugal, and Spain, while finding permanent employment was a lengthier process in Greece, Spain (Garrouste and Loi 2011; Quintini et al. 2001), Portugal (Quintini et al. 2001), and Italy (Garrouste and Loi 2011). In Mediterranean countries, there was substantially greater likelihood of transitioning from school to unemployment and staying in unemployment for a lengthy time only to then transition into temporary work (Garrouste and Loi 2011). In countries with dual systems combining education and training, such as Germany, the transitions from school-to-work for youth without vocational degrees most often consisted of entry in temporary employment, meaning the type of degree was an instrumental factor in the type of employment gained (Garrouste and Loi 2011). In countries with limited coordination between educational systems and the labor market, such as the UK and France, school-to-work transitions occurred with greatest ease (Garrouste and Loi 2011).

Overall in the EU, school-to-work transitions have been challenged following the 2008 financial and economic crisis (de Lange et al. 2014). In the Continental and Nordic countries though, *where the level of discouraged, inactive NEETs is much lower,* school-to-work transitions still occur with ease and with minimal delay (Eurofound 2016). At the same time, temporary employment is generally very high in these countries (de Lange et al. 2014). For instance, in Germany and the Netherlands over 30% of employed youth were working on temporary contracts in 2011 (de Lange et al. 2014). However, as discussed previously, there is a much lower percentage of youth in involuntary temporary work.

Across the EU, the prevalence of shift work among youth ages 15 to 24 (15 to 29) has increased on average 2.1% (1.8%) between 2004 and 2015, with the incidence averaging around 20 percent of all working youth of the same age group (Eurostat 2016). However, there are substantial differences when looking at different regions and individual countries. Figure 12 and Figure 13 show the change in the mean level of shift work in each region of the EU in 2005, 2009, and 2013. These figures also demonstrate how the incidence of shift work varies on average between regions and between the different age groups. For instance, in the Eastern European countries, *where the level of discouraged, inactive NEETs is much higher,* the incidence of shift work among youth is much higher. The prevalence of shift work in the Czech Republic, Poland, Slovenia, and Slovakia is connected to the higher proportion of jobs in the manufacturing industry (Margherita et al. 2009). The rate of youth, ages 15 to 29, in shift work in these Eastern European countries ranges between 29.9% in Slovakia in 2010 and 45% in Slovenia 2015 (Eurostat 2016). Many of the Eastern European countries generally fall above the highest EU mean (21.5% in 2015 for 15 to 29 year olds), including Bulgaria, the Czech Republic, Hungary, Latvia, Poland,

Romania, Slovakia, and Slovenia (Ibid.). This is also the case for 15 to 24 year olds in the Eastern European region (Ibid.).

In the Nordic countries, where *where the level of discouraged, inactive NEETs is much lower,* the incidence of shift work varies substantially. In Denmark, the incidence of shift work is remarkably low, falling under 5.9% (5.8%) for youth ages 15 to 24 (15 to 29) in all years between 2004 and 2015; however, the rate has increased 1.2% (0.6%) in this span of time (Ibid.). In the Netherlands, the incidence is also very low, falling under 15% (16.2%) for youth ages 15 to 24 (15 to 29) in all years between 2004 and 2015; however, the rate has also increased here and by a greater amount – 6.7% (7.3%) in the same span of time (Ibid.). Finland and Sweden, however, generally fall above the EU mean (Ibid.). The Continental countries, *where the level of discouraged, inactive NEETs is also much lower,* there is also some variation in the extent of shift work among youth. In general, Germany and Austria fall just below the highest EU mean, and the incidence of youth in shift work, for both age groups, has increased between 2004 and 2015 (Ibid.). The incidence of youth employed in shift work in Belgium and France ranges between 5.7% in France (2004) and 13.5% in Belgium (2015) for 15 to 29 year olds, and has decreased for both age groups (Ibid.). In the Anglo-Saxon region, *where the level of discouraged, inactive NEETs is much lower,* the incidence of shift work among youth is close to the EU mean in all years and the rate has increased (Ibid.). In Ireland, for example, the incidence of shift work among 15 to 24 (15 to 29) year olds increased by 6.3% (5.8%) between 2004 and 2015 (Ibid.).

In Southern Europe and the Mediterranean, *where the level of discouraged, inactive NEETs is much higher,* high youth unemployment levels (i.e. exceeding 50% of the youth population in 2011 in Spain and Greece) demonstrate how challenged school-to-work transitions (de Lange et al. 2014). In 2009, it took between 3.1 to 5 years to find initial employment in Portugal and Spain,

regardless of educational level (Eurostat 2016). For Cyprus, Greece, and Italy, it took between 3.1 to 8.9 years, where the number of years is far higher for youth with secondary education in Cyprus and Greece (Eurostat 2016). Transitions from school to work are also unpredictable in Eastern Europe (de Lange et al. 2014).

In an examination of 18 EU countries between 1996 and 2008, Laporšek (2013) finds that minimum wages are associated with a decrease in the youth employment rate; this holds for 14 countries even when controlling for other labor market institutions (EPL, ALMP spending, trade union density, and tax wedges).[8] Nearly all EU countries now have a national minimum wage, with the exception of Austria, Cyprus, Denmark, Finland, Italy, and Sweden; all EU candidate countries, that are also ETF partner countries and thus receiving advisement regarding labor market policies for engaging youth, also have minimum wages (Eurostat 2016). For some countries, however, the statutory minimum wage is at the national level, while for others it is only in some sectors (Visser 2014). For instance, Austria, Denmark, Finland, Italy, and Sweden have no statutory minimum wage, while Germany did not either until establishing a national statutory minimum wage in 2015 (Visser 2014). All other countries have a national statutory minimum wage, except for Cyprus and Latvia, where it only exists at the sectoral level (Visser 2014).

Prior to the 2008 financial and economic crisis, long-term unemployment, for unemployed youth ages 15 to 24 (15 to 29), who may be in education or training, decreased from 5.6% (5.1%) in 2004 to 4.6% (3.1%) in 2008 (Eurostat 2016). Since 2008, long-term unemployment for youth

[8] The countries included in this analysis include those with a national minimum wage at the time of the study. In the second analysis, data was unavailable for labor market institutions for Latvia, Lithuania, Luxembourg, and Romania (Laporšek 2013).

has been increasing across the EU, particularly in countries struggling with economic issues (European Commission 2016a). By 2012, the youth long-term unemployment rate, as a percentage of the youth population of the same age group, had increased to 7.5% (8%) for youth ages 15 to 24 (15 to 29) (Ibid.). In some countries, however, the proportion of unemployed youth facing long-term unemployment is remarkably higher. Figures 14 through 16 provide an overview of the trends in youth long-term unemployment in different regions of the EU. In 2011, youth long-term unemployment as a percentage of unemployed youth was greater than 40% in: (Eastern Europe) Bulgaria, Slovakia, and Romania; (Southern and Mediterranean Europe) Greece and Italy; and (Anglo-Saxon) Ireland (Eurofound 2012). On the other hand, the proportion of unemployed youth facing long-term unemployment was ~ 10% in Finland, Denmark, and Sweden (Eurofound 2012), Norway, Switzerland, and the UK (Eurostat 2016), all countries where *the rate of discouraged, inactive NEETs is much lower*. In Germany and Romania the percentage of youth in long-term unemployment, as a percentage of unemployed youth, decreased to 10% since the 2008 crisis (Eurofound 2012). Since 2011, the long-term unemployment rate for youth has remained high in the countries listed as above 40% in 2011, except for Romania (Eurostat 2016).

For these figure, while some outliers exist in the data, the trends are clear. The percentage of the youth population, for each respective age group, that spend greater than 12 months unemployed varies substantially, not only between countries, but also within. Overall though, the figures demonstrate that across the EU, the younger age group (15 to 24) faces a greater risk of long-term unemployment than the extended age group. Comparatively though, while in Ireland both age groups face much higher risk of long-term unemployment (between 2.3% And 10.3%), in the Mediterranean region the risk for most countries spans range from ~2.5% to 27.5% (similarly with Eastern European countries).

The previous discussion demonstrates the importance of examining the research question I present in this thesis. It also provides the foundation of the empirical examinations I conduct in this study. It is critical to keep in mind the factors associated with an increased risk of entering into NEET status, as these same factors may be associated with increasing the risk of entering discouraged, inactive NEET status. Second, it is also relevant to take into consideration the previously examined determinants of overall NEET rates and to control for these factors. Third, the previous discussion on youth labor market conditions offers an understanding of why many youth labor market conditions should be considered "poor labor market opportunities." It also provides a basis for determining which labor market conditions should be examined in relation to discouraged, inactive NEETs.

Moreover, we have learned that in addition to the variation in discouraged, inactive NEET rates, there is great variation in the extent of "poor labor market opportunities" for youth across the EU. We have also learned there is variation in the prevalence of varying labor market outcomes for the 15 to 24 year old and extended age group, as there is in the prevalence of discouraged, inactive NEETs. This further demonstrates the relevance of examining both age groups in relation to discouraged, inactive NEETs. For example, overall, the prevalence of in-work poverty risk is lower for the 15 to 29 year old age group. As such, this factor may have less of an impact on youth discouragement for the extended age group.

Importantly, the theoretical relationship discussed in the literature between discouraged, inactive NEET status and "labor market-driven factors," the known connections between labor market institutions and youth labor market conditions (i.e. youth unemployment rate and the overall NEET rate), and the discussion on role that the social factors and personal preferences may have, enhances the theoretical reasoning underlying this study. In the next chapter, I provide the

research design I employ to examine whether the trends in labor market outcomes for youth, both for ages 15 to 24 and the extended age group, can explain variations in the levels of discouraged, inactive NEETs across the EU and over time.

CHAPTER FOUR: RESEARCH DESIGN

The previous discussions demonstrate the need to look at the existence of a correlation between youth labor market conditions and the prevalence of discouraged, inactive NEETs across countries and over time. The main goal of this study is to assess the effects of youth labor market conditions on youth discouragement from participating in the labor market, education, and training. Utilizing aggregated household survey data from the European Union Labour Force Survey (EU-LFS) and European Union Statistics on Income and Living Conditions (EU-SILC), I perform several generalized regression analyses in order to assess how select youth labor market outcomes and conditions, considered here to quantify "poor labor market opportunities", affect the level of inactive, and more specifically discouraged, NEETs across the EU between the years of 2005 and 2013.

4.1 Data & Scope of the Econometric Analyses

EU-LFS collects survey responses on a range of labor market outcomes and conditions, while EU-SILC collects survey responses on a range of income and living conditions. EU-LFS provides an expansive sample of household survey responses to questions (by interview) pertaining to labor force participation (or lack thereof), collected quarterly and annually, for individuals 15 years and older living in private households (Eurostat 2016). EU-SILC collects responses to survey questions at the household level for information on social exclusion and housing conditions and for individuals 16 years and older for information on labor, education, and health status (Ibid.). While the survey data is collected by the national statistic office of each member state, the efforts are coordinated by Eurostat and utilize harmonized variables and definitions (Eurostat 2016; Green and Livanos 2015), offering a reliable database for comparative social research on European

countries (Green and Livanos 2015). The micro data is then aggregated and available on Eurostat's online database, either at the quarterly or annual level (Eurostat 2016). The variables considered in this study are available at the aggregate annual level.

4.1.1 Scope of the Statistical Analyses

Data availability for the dependent variables and central independent variables of interest limits the number of countries available for each analysis to 23 EU countries for the 15 to 24 year old age group and the analyses to the years 2005 to 2013. This set of countries includes: (Nordic) Belgium, Denmark, Finland, and Sweden; (Continental) Austria, France, and Germany; (Anglo-Saxon) Ireland; (Eastern European) Bulgaria, Croatia, the Czech Republic, Hungary, Latvia, Poland, Slovakia, Slovenia, and Romania; and (Mediterranean) Cyprus, Greece, Italy, Malta, Portugal, and Spain. For the 15 to 29 year old age group, data availability for the dependent variables and central independent variables of interest limits the number of countries available for each analysis to 24 EU countries and the analyses to the years 2005 to 2013. This set of countries includes: (Nordic) Belgium, Denmark, Finland, and Sweden; (Continental) Austria, France, and Germany; (Anglo-Saxon) Ireland; (Eastern European) Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia, and Romania; and (Mediterranean) Cyprus, Greece, Italy, Malta, Portugal, and Spain.

In both cases, the set of countries comprises a selection that is representative of regional differences in welfare states, as discussed in the previous chapters. Focusing on this time range permits examination of a period of great fluctuation in the proportion of NEETs (as a whole and within main subsets and the central subcategory, discouraged NEETs), fluctuations in the overall labor market opportunities and conditions for youth, as well as varying macroeconomic conditions,

and when many institutional changes have taken place. Additionally, shifts between country groups with common compositions of NEETs and convergence among these groups demonstrate the importance of these fluctuations and that institutional factors may play a role as well.

4.1.2 Dependent Variable

The key dependent variable in the analyses is the percentage of *DISCOURAGED, INACTIVE NEETs*. This measure is calculated from annual data comprised of aggregated survey responses from an ad hoc extraction provided by Eurostat (2016) following Eurostat methodology. For the purpose of this study, in order to distinguish discouraged, inactive NEETs from NEETs that are inactive for other reasons, the dependent variable is the proportion of inactive NEETS that is discouraged. I examine this for two age groups, which includes youth between the ages of 15 and 24 and the extended age group of 15 to 29 year olds. The rate is calculated as follows:

Discouraged IA rate = 100* [(ILOSTAT = 3 "Inactive" and COURATT = 2 "NO" and EDUCSTAT = 2 "has not been student or apprentice" and SEEKWORK = 3 "NO" and SEEKREAS = 7 "belief no jobs available")]/(Total # Inactive NEETs - no answer),

where COURATT = "No" refers to non-participation in non-formal education or training in the past four weeks, EDUCSTAT = "No" refers to non-participation in formal education or training in the past four weeks, SEEKWORK = "No" denotes not seeking work and no future job starting at a later time, and SEAKREAS provides the basis for not seeking work (Eurostat 2016Q1).

There are several reasons for utilizing a measure for the proportion of inactive NEETs who are discouraged as opposed to the percentage of all NEETs, which includes both the unemployed and inactive subsets, considered to be discouraged. Inclusively, the inactive NEET measure targets all NEETs that are disengaged from the labor market, meaning they are not seeking employment and thus are not considered unemployed (Eurostat 2016). As previously discussed, this subset in

particular is considered “hard to reach” and has remained largely unchanged over time for both age groups even as the percentage of unemployed NEETs has declined. At the same time, the discouraged, inactive NEET population has exhibited much greater variation and has seen an overall increase over time and this particular subgroup is considered especially “hard to reach”. The purpose here is to distinguish how discouraged, inactive NEETs are unique from NEETs inactive for other reasons and why poor labor market opportunities should be considered as a source of youth inactivity, but only in relation to youth discouragement.

The discouraged, inactive NEET variable measure specifically targets youth that are not in employment, not in education or training, are inactive and have supplied the reasoning of not seeking work because they are “of the belief no work is available” (EU-LFS 2016). The conceptual utility of the NEET measure in general is that it is thought to offer a means to assess a subset of the youth population that is discouraged from working or unable to access education or training (ILO 2015). Even more so, it is thought to demonstrate a level of disengagement from the labor market that bears great implications, as previously discussed. Importantly though, unemployed NEETs are considered to be still somewhat engaged in the labor market as they are continuing to seek employment according to the data (Eurostat 2016) and hence the need to study these specific portions of the NEET population. Alternatively, as previously discussed, for the subgroups of NEETs inactive for other reasons, the basis of inactivity has been connected to issues of social-policy orientation, whereas inactive NEETs who are discouraged are considered more the result of “labor market-driven factors” (Eurofound 2016: 34). Hence, I also apply the same empirical examinations on NEETs inactive for other reasons as a robustness test and to confirm these assumptions.

4.1.3 Independent Variables

The independent variables in the analysis include factors that are considered representative of poor labor market outcomes and conditions and exemplary of "poor labor market opportunities". This includes the incidence of involuntary non-standard employment, in-work poverty risk, the incidence of shift work, transitions into decreased employment security, and long-term unemployment. *INVOLUNTARY NON-STANDARD EMPLOYMENT* is a combined measure based on two separate variables for the incidence of youth employed in involuntary part-time work and involuntary temporary work; these variables are generated from survey questions in EU-LFS, where respondents declare the main reason for such employment is that they "could not find a permanent job" (Eurostat 2016). These variables measure the proportion of part-time and temporary employees of the same age group that are working in each respective type of employment involuntarily (Eurostat 2016). The combined measure presents the average percentage of youth employed in non-standard work involuntarily.

There is solid reasoning for basing the measure as a proportion of each respective type of employment as opposed to the level of involuntary part-time or involuntary temporary work as a proportion of all employed individuals of the same age group in the population. While the latter measure reflects the effect of involuntary non-standard employment on the total employed population, the former conveys the risk of involuntary non-standard employment (Eurostat 2016). For example, in 2015 the Netherlands, Sweden, and the UK rank fairly high among EU countries in the level of involuntary part-time as a percentage of total employment, right up there among Cyprus, Greece, and Spain; however, as a percentage of part-time workers of the same age group

both of these countries rank far lower in comparison to other EU countries (Ibid.).[1] Similarly, involuntary temporary employment as a percentage of temporary employment offers a better understanding of the overuse of temporary contracts, which are more prevalent among youth and more likely in this case to be a repeated employment experience (Eurostat 2016).

The variable *IN-WORK POVERTY RISK* comes from EU-SILC, which takes into account earnings in relation to the total household income (Eurostat 2010). This variable denotes the incidence of youth in the total population who declare to be employed in the calendar year, and whose earnings fall below the poverty-risk threshold, where equivalized disposable income is less than 60% of the national median equivalized disposable income post-social transfers (Eurostat 2016). The variable *SHIFT WORK* comes from EU-LFS and is utilized to represent employment with atypical working hours and is categorized in the database as a 'quality of employment' indicator (Ibid.). This type of work constitutes a regular work schedule, but includes either working at night, and/or on weekends, and abnormal rest days (Ibid.). Even more so, atypical working hours are associated with a higher incidence of accidents, usually due to losing control, falling, or physical stress (Eurostat 2010). Workers employed in shift work are exposed to conditions that affect physical health, mental wellbeing, and overall quality of life (Ibid.).

The variable *LONG-TERM UNEMPLOYMENT$_{(t-1)}$* measures the annual rate of youth unemployment lasting longer than twelve months for those who have been seeking employment as a percentage of total unemployment of youth in the same age group (Eurostat 2016). This variable is lagged one year in order to account for the effect that unemployment levels may have

[1] Note: This information refers to the total working age population (15 to 74).

not only on ALMP spending (see for instance Escudero 2015), but also the prevalence of involuntary non-standard employment (see for instance Green and Livanos 2015). The variable *DECREASED WORK SECURITY*$_{(t-1)}$ represents labor market transitions from greater to less employment security. This variable comes from a survey question in EU-SILC that assesses the percentage of all working-age individuals that move from permanent jobs, temporary jobs, employed persons who are not employees, unemployment, inactivity, student status, or retirement in the previous year into a position of greater insecurity the following year (Eurostat 2016). Age breakdowns are not available for this variable. This variable is lagged one year, as involuntary non-standard employment may be considered less secure than permanent employment, meaning that a transition into less secure employment could include taking up non-standard work involuntarily.

4.1.4 Control Variables

Based upon findings in previous analyses on NEETs and unemployed youth, I include several control variables in the analyses. The variable *ALMP SPENDING* is generated from the indicator on spending on active labor market policies as a percentage of annual real GDP (Eurostat 2016). Active labor market policies that are implemented to target youth unemployment take a variety of forms and also vary in the level of expenditure across the EU (Eichhorst and Rinne 2014). Active labor market policies are considered closely related to the types of employment opportunities produced (Green and Livanos 2015) and have also been included in empirical examinations on the NEET population as a whole (Eurofound 2012). The variable *GDP GROWTH* is included to account for the effects of cyclically-related conditions. This variable measures the percentage of annual real GDP growth (Eurostat 2016).

The variable *COORDINATION OF WAGE BARGAINING* refers to the degree to which wage setting is coordinated between actors (i.e. employers' associations, industries, firms, unions, and government) and wage bargaining levels throughout an economy, where the actors involved take into consideration the external economic implications of the wage choices made (Caju et al. 2008). In other words, coordination refers to the how harmonized wage policies are between different players at all levels of wage bargaining, or the degree to which less influential players follow in line with more influential ones (Visser 2013). To be clear, coordination is also determined by union concentration and the reach of employers' associations (Visser 2013). Thus, this variable is utilized to reflect the centralization of wage bargaining and union influence, as previously examined in relation to NEET rates (see Eurofound 2012). This indicator ranges from 1 to 5, where 1 denotes highly fragmented bargaining, largely at the plant or firm level, and 5 denotes highly coordinated bargaining in a variety of combinations (i.e. with unions being highly influential) (Visser 2014).

As per Choudry et al. (2013), I include the variables *SECONDARY EDUCATION* and *TERTIARY EDUCATION* to account for the role of human capital. The level of educational attainment is considered among the factors that increase the probability of entering NEET status, where youth with lower levels of education are more at risk for entering NEET status (Bardak et al. 2012; Eurofound 2012: Eurofound 2016). On the same note, higher levels of educational attainment are associated with a decrease in the youth unemployment rate, which conveys that greater educational attainment facilitates finding employment (Choudhry et al. 2013).

Secondary education refers to the proportion of the population of the same age group that has attained upper secondary and post-secondary non-tertiary education (Eurostat 2016). Post-secondary non-tertiary education complements upper secondary education and aims to prepare

individuals for entering the labor market or tertiary education (ISCED 2011). For example, upper secondary education can either be vocationally based or general education programs, as such students of vocationally-based programs may need to develop general education skills to meet the requirements for entry into tertiary education programs, while students of general education programs may require vocational qualifications to gain employment in a particular sector (Ibid.). Tertiary education refers to the proportion of the population of the same age group having attained a bachelor's, master's, or doctoral degree (Eurostat 2016). In the EU, youth typically enter upper secondary education between 14 and 16 years of age (Ibid.).

The variable *LOW WORK INTENSITY HOUSEHOLD* is included to account for family or home circumstances that may lead youth to be discouraged from seeking employment. For instance, low household income is considered a key factor putting youth at greater risk for entering NEET status (Bardak et al. 2012; Eurofound 2012: Eurofound 2016). Research also demonstrates that what youth perceive about employment is influenced by parents' work experiences (Loughlin and Barling 2001). This shapes how youth feel about the quality of work, job satisfaction, expectations about employment security, and the anticipated pay-offs for making job-related sacrifices (Ibid.) For instance, if parents do not acquire benefits from the work sacrifices made, such as those related to work/life balance, their children may be less willing to make such sacrifices (Ibid.), or in this case they may be more likely to perceive that there is a lack of employment opportunities in the labor market. Additionally, youth experiences with parental job insecurity, can lead to a greater desire for immediate payoffs and decreased trust in what the labor market has to offer or less willingness to take up insecure employment (Loughlin and Barling 2001). This variable measures the percentage of youth in each respective age group living in a household, with parents or other adults, with low work intensity. Work intensity refers the ratio of the total number

of months worked in a given year for all working-age household members to the total number of possible months that could have been worked, where low work intensity is where the adults work 20% or less of their total work potential in the past year (Eurostat 2016).

4.2 Methodology

In order to test my hypotheses, I estimate four main models, each via generalized linear regression utilizing cross-sectional panel data. More specifically, I utilize a generalized estimations equations (GEE) regression model in order to account for serial correlation and heteroskedasticity, as generalized linear regressions assume data are independent (Hardin 2003). Two different econometric approaches are taken for the purpose of assessing the robustness of the results and to account for additional critical factors, such as regional effects that may be due differences in welfare state policies or other extraneous regional factors.

I initially employ a Hausman test to determine whether to utilize a fixed-effects or a random-effects model best suits the analyses. While the results of the Hausman test reveal a fixed-effects model to be best and this would offer a means to capture country-specific features that are time invariant in assuming that the variations in the explanatory variables are not due to random causes (Torres-Reyna 2007), subsequent tests reveal both serial correlation and heteroskedasticity.

Significant Woolridge test statistics reveal that there is a high likelihood of first-order serial correlation.[2] There are several reasons that serial correlation can be present, any of which may be

[2] The Woolridge test provides a means to test for the correlation of error terms across time (Woolridge 2002). The null hyothesis for this test is no first-order autocorrelation. The F statistic result for the 15 to 24 (15 to 29) years age group is a p-value of 0.0012 (0.0166). These results apply to the models that include regional dummy variables.

applicable in the case of this study. For one, serial correlation often occurs due to intertia that is inherent in time series data on employment and unemployment, which often display cycles (Gujarati 2004). These types of series move in conjunction with economic cycles, resulting in interdependent successive observations (Ibid.). For instance, starting at the trough of a recession, these time series will move upward during economic recovery, such that "the value of a series at one point in time is greater than its previous value," creating a momentum that continues until exogenous factors (i.e. interest rate increases) enter the picture and curb this momentum (Gujarati 2004: 444-445). In the case of this study, the inclusion of multiple labor market variables may result is such an issue. Alternatively, excluded variables can lead to specification bias. As this study introduces a novel empirical examination, confirmation of this proves to be a challenge. Another source may be the manipulation of data, such as when quarterly data is derived from averaging monthly data. This produces smoothness in the data that can lead to autocorrelation due to a systematic pattern in the disturbances (Gujarati 2004). In the case of EU-LFS, statistics on labor market participation are collected quarterly. These statistics are then aggregated and provided in the Eurostat database as annual statistics (Eurostat 2016). In the case of EU-SILC, longitudinal data collection examines individual-level changes, with period observations taking place over a four-year period (Ibid.) The use of aggregated statistics in this study could thus be a factor resulting in serial correlation.

Significant test statistics from a modified Wald test reveal the presence of heteroskedasticity[3] Classical linear regression models have a critical assumption that disturbances in μ are homoscedastic, or that they have the same variance (Gujarati 2004). Gujarati (2004) explains several reasons that heteroskedasticity may be present, some of which could apply here. For one, the presence of an outlier could be a determinant; indeed, an outlier exists in this data sample, however, following the removal of this outlier the test statistics remain significant.[4] Similar to serial correlation, the omission of important explanatory variables can also result in heteroskedasticity. As previously noted though, this study introduces a novel empirical examination, thus, confirmation of this proves to be a challenge. Another possible source is skewedness in the distribution of one of the explanatory variables, which is often prevalent in economic variables income, wealth, and education. In sum, the implication is the same – inaccurate inferences and conclusions (Gujarati 2004).

Employing a GEE estimation model permits the specification of the within-panel correlation structure (StataCorp 2013). The GEE model is derived from the generalized linear model, however, it is based on quasi-likelihood theory as opposed to maximum likelihood theory as in the GLM model (Cui 2007). This model fits population-averaged panel-data models and also permits robust estimates of variance (Ibid.) and does not require that the unobserved individual

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[3] The Modified Wald test offers a means to test for groupwise heteroskedasticity in fixed-effects regression models. The null hypothesis asserts that homoscedasticity, or constant variance, is present (Torres-Reyena 2007). The tests for both models resulted in significant chi-squared statistics. For the 15 to 24 years age group, a significant p-value of 0.000 (0.000) is associated with a chi-squared of 695 (1919.4) with 23 (24) degrees of freedom.

[4] For Belgium in 2004, calculation of the level of discouraged, inactive NEETs based on the Eurostat EU-LFS ad hoc data extraction results in an extraordinarily high figure that is out of place not only for Belgium, but also across all countries. For instance, for 15 to 24 year olds the percentage of discouraged, inactive NEETs is 73.2%, while for the remainder years this ranges between 0.40% and 4.7% (Author's calculations, from Eurostat EU-LFS ad hoc data extraction 2016).

effects of the explanatory variables be independent (Xiu 2008). This approach is not uncommon in examinations on labor market conditions (see, for instance, Gangl 2002 and Xiu 2008).[5] For instance, Gangle (2002) describes the usefulness of this regression technique in controlling for unobserved heterogeneity associated with μ and the model's ability to provide robust results in small sample cases. The GEE approach is also appropriate in studies where the focus is on how the average response for the population changes as the explanatory variables change (Xiu 2008; Zeger et al. 1988). Moreover, GEE models can also take into account survey design by adding survey weights into the regression (Xiu 2008). In order to determine which correlation structure is optimal, I perform a QIC criterion test for model selection in GEE analyses (Cui 2007). The results indicate an exchangeable correlation structure, which produces an equal-correlation linear regression estimator, is optimal (Stata 2013).

For the first econometric approach, in Model 1 and Model 3, I estimate the effects of "poor labor market opportunities" for youth on the rate of discouraged, inactive NEETs for each respective age group. The baseline fixed-effects regression models for the change in the percentage of discouraged, inactive NEETs is as follows:

$$DiscIA_{i,t} = \alpha_{i,t} + \beta_1 InvNSE_{i,t} + \beta_2 IWPR_{i,t} + \beta_3 SW_{i,t} + \beta_4 DecSEC_{i,t} + \beta_5 LTUE_{i,t-1} + \beta_6 GDP_{i,t}$$
$$\Sigma\beta_k X_{m,i,t} + \Sigma\beta_m X_{m,i,t} + \varepsilon_{i,t}$$

where $DiscIA_{i,t}$ is the proportion of inactive NEETs who are inactive due to discouragement in country i during year t. $InvNSE_{i,t}$ it the percentage of youth employed in non-standard work

[5] Gangl (2002: 67) uses a GEE model to examine "the effects of cyclical changes in aggregate economic conditions, changing youth cohort sizes, increasing educational expansion and structural changes in labour demand on market entrants' unemployment risks and occupational allocation."

involuntarily as a percentage of youth employed in non-standard work, $IWPR_{i,t}$ is the percentage of youth facing in-work poverty risk, $SW_{i,t}$ is the percentage of youth employed in shift work, and $LTUE_{i,t-1}$ is the percentage of youth facing long-term unemployment in the previous year; respectively, each of these variables represents the data on the youth cohort of the same age group as the dependent variable. $DecSEC_{i,t-1}$ is the percentage of the adult working age population moving into a position of less employment security in country *i* in the previous year. $GDP_{i,t}$ is the percentage of GDP growth and is included as a gauge for macroeconomic conditions. $\Sigma\beta_m X_{m,i,t}$ is a vector of controls for labor market institutions that includes ALMP spending ($ALMP_{i,t}$) and coordination of wage bargaining ($COORD_{i,t}$). $\Sigma\beta_n X_{n,i,t}$ is a vector of controls for factors that put youth at higher risk for entering NEET status and includes $LowINT_{i,t}$ for the percentage of youth of the respective age group living in low work intensity households, $TERT_{i,t}$ for the percentage of youth with tertiary education, and $SECPS_{i,t}$ for the percentage of youth with secondary or post-secondary, non-tertiary educational attainment; respectively, each of these variables represents the data on the youth cohort of the same age group as the dependent variable.

Similar to Green and Livanos (2015), who employ a least-squares dummy variable model (LSDV) to account for regional effects in the EU, I also run the GEE regressions with the inclusion of regional dummies. Here, the analyses for each respective group (MODELS 2 and 4) are run with region dummy variables for the purpose of capturing institutional differences, such as those discussed in the sections on trends in NEET rates/composition and labor market conditions for youth across the EU. The region dummies also serve to account for country-group specific effects that are not controlled for in the analyses (Green and Livanos 2015), similar to the benefits of utilizing a fixed-effects model. The baseline regression models for the change in the percentage of discouraged, inactive NEETs is as follows:

$$DiscIA_{i,t} = \alpha_{1i,t} + \alpha_2 CT_i + \alpha_3 AS_i + \alpha_4 EE_i + \alpha_5 SM_i + \beta_1 InvNSE_{i,t} + \beta_2 IWPR_{i,t} + \beta_3 LoINT_{i,t} + \beta_4 SW_{i,t}$$
$$+ \beta_5 DecSEC_{i,t-1} + \Sigma\beta_k X_{m,i,t} + \Sigma\beta_m X_{m,i,t} + \varepsilon_{i,t}$$

where $CT_i = 1$ if the observation belongs to a Continental European country, 0 otherwise; $AS_i = 1$ if the observation belongs to an Anglo-Saxon country, 0 otherwise; $EE_i = 1$ if the observation belongs to an Eastern European country, 0 otherwise; and $SM_i = 1$ if the observation belongs to a Mediterranean country, 0 otherwise. The reference category here is Nordic countries, where α_{1i} represents the intercept for the Nordic region and represent how much the intercepts of the Continental, Anglo-Saxon, Eastern European, and Mediterranean regions vary from the intercept of the Nordic region (Gujarati 2004).

Following these analyses, I provide a comparison of the effects of "poor youth labor market conditions" on discouraged, inactive NEETs and NEETs inactive for other reasons. I also examine the effects of "poor youth labor market conditions" on unemployed NEETs. There are two purposes here. For one, I conduct the comparison between the effects of "poor youth labor market conditions" on reasons for inactive status to lend empirical support to the assumption that among the other subgroups of the inactive NEET population, inactivity is related to issues of social-policy orientation, and strengthen the argument that discouragement is more related to issues relating to labor market. Additionally, the approach taken here adds further robustness to the results of the previous analyses. In order to make a comparison between NEETs who are inactive for reasons of discouragement and NEETs inactive for other reasons, I run analyses for both age groups and both econometric models against the proportion of total NEETs who are inactive due to discouragement and inactive for other reasons. I also run a modified version of both analyses against the percentage of NEETS who are unemployed status for both age groups and both econometric models. The intent of these examinations is to examine whether moving into

unemployed NEET status is a preliminary step prior to entering discouraged, inactive NEET status. In the next chapter, I provide a detailed overview and summary of the results of these empirical examinations.

CHAPTER FIVE: RESULTS

In this chapter, I present a detailed overview of the statistical results in the main models, where I examine the effect of "poor youth labor market conditions" on the incidence of discouraged, inactive NEETs. I also provide an overview of the results in the alternate models, which explore how the same determinants are related to the incidence of NEETs inactive for other reasons and the level of unemployed NEETs.

5.1 Main Models

The results of the four main models are shown in TABLE 1. These results show varying levels of support for the hypotheses of this study depending on the type of labor market condition under consideration and the econometric approach. It is critical to keep in mind that, respectively, in each model the independent variables involuntary non-standard employment, in-work poverty risk, shift work, long-term unemployment, and low work intensity household represent the incidence of these youth labor market conditions for each age group's cohort. The variable for decreased work security represents the rate for the adult working age population.

In Model 1 and Model 3, I examine the effect of "poor youth labor market conditions" on the incidence of discouraged, inactive NEETs for 15 to 24 year olds and the extended age group, 15 to 29 years old. The coefficient for the incidence of involuntary non-standard employment is positive and statistically significant at the 0.05 level for the 15 to 24 year old age group and at the 0.01 level for the extended age group. This provides support for Hypothesis 1. More specifically, for 15 to 24 (15 to 29) year olds, a one percentage-point increase in the size of the population of fellow youth employed involuntarily in non-standard employment, as a percentage of youth of the

same age group in non-standard employment, is associated with a 0.147 (0.212) percentage-point increase in discouraged, inactive NEETs of the same age group.

The coefficient for the incidence of youth employed in shift work is also positive and statistically significant for both age groups, to the 0.05 level for both age groups. This provides support for Hypothesis 4. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in the size of the population of fellow youth employed in shift work, as a percentage of all employed youth of the same age group, is associated with a 0.304 (0.292) percentage-point increase in discouraged, inactive NEETs.

The coefficient for the incidence of youth in-work poverty risk is positive for both age groups. However, it is not significant for the 15 to 29 year old age group and only mildly significant for the 15 to 24 year old age group (ρ-value: 0.10). This partially provides support for Hypothesis 3. For the younger cohort, a one percentage-point increase in the incidence of fellow youth experiencing in-work poverty risk is associated with a 0.333 percentage-point increase in discouraged, inactive NEETs ages 15 to 24.

The coefficient for the rate of youth long-term unemployment is negative for both age groups; however, it is only significant for the younger cohort (ρ-value: 0.01). The direction of the relationship is opposite of what was expected and thus fails to support Hypothesis 5. For 15 to 24 year old age group, a one percentage-point increase in the rate of youth long-term unemployment for youth of the same age group is associated with a 0.469 percentage-point decrease in the level of discouraged, inactive NEETs of the same age group. The coefficient for decreased work security among the adult working age population is positive in both models, but at varying levels of significance. For the 15 to 24 (15 to 29) year old age group the ρ-value is 0.05 (0.10). This provides support for Hypothesis 2. More specifically, a one percentage-point increase in the decreased work

security among the adult working age population is associated with a 0.362 (0.264) percentage-point increase in discouraged, inactive NEETs, respectively.

For the control variables that represent labor market institutions, ALMP spending is not significant for either age group, however, the coefficients are positive in both cases. The coefficient for coordination of wage bargaining is negative for both age groups; however, this is at varying levels of significance. For the 15 to 24 (15 to 29) year old age group the ρ-value is 0.10 (0.01). For 15 to 24 (15 to 29) year olds, an increase in one level of coordination of wage bargaining is associated with a 1.190 (1.499) percentage-point decrease in the proportion of NEETs of the same age group that are inactive due to discouragement. GDP growth, the variable that represents cyclically-related factors, is not significant either model for both age groups.

For the control variables that represent factors that are associated with the risk of entering NEET status, the coefficient for youth living in low work intensity households is positive for both age groups. However, it is not significant for the 15 to 24 year old age group and only mildly significant for the 15 to 29 year old age group (ρ-value: 0.10). For 15 to 29 year olds, a one percentage-point increase in the number of youth living in low work intensity households is associated with a 0.452 percentage-point increase in the percentage of discouraged, inactive NEETs of the same age group. The coefficient for secondary education is positive and significant for both age groups at the 0.10 level. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in youth having attained secondary/post-secondary non-tertiary educational status is associated with a 0.408 (0.332) percentage-point increase in the percentage of discouraged, inactive NEETs of the same age group.

In MODEL 2 and MODEL 4, I include country region dummies in testing the effect of "poor youth labor market conditions" on the incidence of discouraged, inactive NEETs for 15 to

24 year olds and the extended age group, 15 to 29 year olds. For both age groups, the coefficient for the incidence of involuntary non-standard employment among fellow youth is positive. However, while the test statistic remains significant, albeit slightly less so (ρ-value: 0.05), for the extended age group (15 to 29), it is no longer significant for the younger cohort. This partially provides support for Hypothesis 1. More specifically, for 15 to 29 year olds, a one percentage-point increase in the size of the population of fellow youth employed involuntarily in non-standard employment, as a percentage of youth of the same age group in non-standard employment, is associated with a 0.175 percentage-point increase in discouraged, inactive NEETs, ages 15 to 29.

The coefficient for youth in-work poverty risk is positive for both age groups. However, this is at varying levels of significance; the ρ-value is 0.05 for the younger cohort and 0.10 for the extended age group. This provides support for Hypothesis 3. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in the percentage of youth facing in-work poverty risk is associated with a 0.403 (0.385) percentage-point increase in discouraged, inactive NEETs of the same age group. The coefficient for the variable shift work is positive for both age groups, but only remains significant, and slightly less so, for 15 to 29 year olds (ρ-value: 0.10). This partially provides support for Hypothesis 4. For 15 to 29 year olds, a one percentage-point increase in the percentage of youth of the same age group employed in shift work is associated with a 0.308 percentage-point increase in discouraged, inactive NEETs of the same age group.

The coefficient for decreased work security among the adult working age population is positive in both models, but only significant (ρ-value: 0.10) in the model for the younger cohort. This partially provides support for Hypothesis 2. More specifically, a one percentage-point increase in the decreased work security among the adult working age population is associated with a 0.352 percentage-point increase in the level of discouraged, inactive NEETs, ages 15 to 24. The

coefficient for the rate of youth long-term unemployment is negative for both age groups, although this is at varying levels of significance. For 15 to 24 (15 to 29) year olds, the ρ-value is 0.01 (0.10). More specifically, a one percentage-point increase in the rate of youth long-term unemployment for youth ages 15 to 24 (15 to 29) is associated with a 0.507 (0.475) percentage-point decrease in discouraged, inactive NEETs of the same age group. The direction of the relationship is opposite of what was expected and thus fails to support Hypothesis 5.

For the control variables that represent labor market institutions, ALMP spending is only significant (ρ-value: 0.10) for the younger cohort. A one percentage-point increase in ALMP expenditure, as a percentage of GDP, is associated with a 2.219 percentage-point increase in discouraged, inactive NEETs, ages 15 to 24. The coefficient for coordination of wage bargaining, while negative for both age groups, is only significant for the extended age group (ρ-value: 0.10). For 15 to 29 year olds, an increase in one level of coordination of wage bargaining is associated with a 1.256 percentage-point decrease in the proportion of NEETs of the same age group that are inactive due to discouragement, and respectively a 0.893 percentage-point decrease when controlling for region.

GDP growth remains an insignificant factor across all models. Similar to MODEL 1 and MODEL 3, GDP growth, is also not significant in either model and the coefficient remains negative. For the control variables that represent factors that are associated with the risk of entering NEET status, the coefficient for youth living in low work intensity households is positive and significant at the 0.05 level for both age groups. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in the number of youth of the same age group living in low work intensity households is associated with a 0.577 (0.601) percentage-point increase in discouraged, inactive NEETs of the same age group.

For the 15 to 24 year old age group, the coefficients for the Eastern European and Mediterranean region dummy variables are positive and significant at the 0.01 and 0.10 level, respectively. Compared to the Nordic region country group, the Eastern European region country group and Mediterranean region country group are 3.949 and 2.209 percentage-points more likely to have discouraged, inactive NEETs ages 15 to 24, respectively. The coefficient for the Continental region is positive, but insignificant for the younger cohort. The Anglo-Saxon country group coefficient is negative and insignificant for both age groups. For the 15 to 29 year old age group, the coefficients for the Eastern European and continental region dummy variables are positive and significant the 0.10 level. Compared to the Nordic region country group, the Eastern European region country group and Continental region country group are 1.849 and 4.394 percentage-points more likely to have discouraged, inactive NEETs ages 15 to 29, respectively.

5.2 Alternate Models

In this section, I review the results of the alternate models. Here, I reveal the results for the effects of "poor youth labor market conditions" on discouraged, inactive NEETs, NEETs inactive for other reasons, and unemployed NEETs. More specifically, I review these results in relation to the assumption that among the other subgroups of the inactive NEET population, inactivity is related to issues of social-policy orientation, and strengthen the argument that discouragement is more related to issues relating to labor market. Additionally, this approach serves to add further robustness to the results of the previous analyses in that it examines the proportion of all NEETs who are discouraged. I also present the results of the analyses against the percentage of NEETS who are unemployed status for both age groups and both econometric models, where I examine

whether moving into unemployed NEET status is a preliminary step prior to entering discouraged, inactive NEET status.

5.2.1 Testing the Robustness of the Initial Analyses

To begin, TABLE 2 presents the results for the effects of "poor youth labor market conditions" on the percentage of all NEETs who are inactive due to discouragement. These results confirm the robustness of the initial analyses. In comparing the results between TABLE 1 and TABLE 2, the results lend further support for the hypotheses. While the strength of some of the relationships is slightly diminished, most of them retain statistical significance and a few that were not statistically significant in the previous analyses gain significance.

In MODEL 5 and MODEL 7, the coefficient for the incidence of involuntary non-standard employment among youth is still positive and significant to the same degree, albeit the association is to a lesser extent. More specifically, for 15 to 24 (15 to 29) year olds, a one percentage-point increase in the percentage of youth employed in non-standard work involuntarily is associated with a 0.068 (0.086) percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. The results continue to support Hypothesis 1. In MODEL 6 and MODEL 8, when controlling for region, the coefficient for the incidence of involuntary non-standard employment among youth also remains positive and significant to the same degree, but again the association is to a lesser extent. More specifically, for 15 to 29 year olds, a one percentage-point increase in the percentage of youth employed in non-standard work involuntarily is associated with a 0.078 percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement.

In MODEL 5 and MODEL 7, the coefficient for the incidence of employed youth facing in-work poverty risk is still positive; however, the results are now only significant for the 15 to 29 year old age group (ρ-value: 0.10). This partially provides support for Hypothesis 3. For 15 to 29 year olds, a one percentage-point increase in the number of employed youth facing in-work poverty risk is associated with a 0.172 percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. In MODEL 6 and MODEL 8, when controlling for region, the coefficient for the incidence of employed youth facing in-work poverty risk remains positive at the same level of statistical significance for both age groups, albeit the strength of the relationship is moderated somewhat. More specifically, for 15 to 24 (15 to 29) year olds, a one percentage-point increase in the percentage of employed youth facing in-work poverty risk is associated with a 0.198 (0.171) percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. The results continue to support Hypothesis 3.

In MODEL 5 and MODEL 7, the coefficient for the incidence of youth employed in shift work is still positive. However, the results are now only significant for the 15 to 29 year old age group (ρ-value: 0.10) and the strength of the relationship is to a lesser degree. This partially provides support for Hypothesis 4. For 15 to 29 year olds, a one percentage-point increase in the percentage of youth employed in shift work is associated with a 0.114 percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. In MODEL 6 and MODEL 8, when controlling for region, the coefficient for the incidence of youth employed in shift work remains positive, although the results are no longer significant. The results fail to continue to support Hypothesis 4.

In MODEL 5 and MODEL 7, the coefficient for decreased work security among the adult working age population remains positive and significant for both age groups. This continues to

provide support for Hypothesis 4. However, the levels of significance change, where the ρ-value is now 0.10 (0.05) for the 15 to 24 (15 to 29) years old age group and the strength of the relationship is somewhat diminished. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in the percentage of the adult working age population experiencing decreased work security is associated with a 0.137 (0.128) percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. In MODEL 6 and MODEL 8, when controlling for region, the coefficient for the incidence of decreased work security among the adult working age population remains positive. However, the relationship is now only significant for the 15 to 29 year old age group. This partially provides support for Hypothesis 4. More specifically, for 15 to 29 year olds, a one percentage-point increase in the percentage of the adult working age population experiencing decreased work security is associated with a 0.126 percentage-point increase in the proportion of NEETs of the same age group that are inactive due to discouragement. In MODELS 5 through 8, coefficient for the rate of youth long-term unemployment is negative and significant in all cases. The direction of the relationship is opposite of what was expected in all cases and thus fails to support Hypothesis 5.

For the most part, the relationship for each of the control variables retains the same direction across all models, however, many variables lose significance altogether. For the factors associated with a greater risk of entering NEET status, the coefficient for the incidence of youth living in low work intensity households remains positive across all models, although the results are only significant for the younger cohort (ρ-value: 0.10). For 15 to 24 year olds, a one percentage-point increase the incidence of youth living in low work intensity households is associated with a 0.270 percentage-point increase the proportion of NEETs of the same age group that are inactive due to discouragement, and respectively a 0.304 percentage-point increase when controlling for

region. Across all models, the coefficient for secondary educational attainment, while still positive, it is no longer a significant factor. The coefficient for tertiary education remains positive and insignificant.

In regards to the factors related to labor market institutions, in MODEL 6, where region is controlled for, ALMP spending is no longer significant for the 15 to 24 year old age group (as it was is MODEL 2), although the relationship remains positive. ALMP spending remains insignificant in all other models. The coefficient for coordination of wage bargaining remains negative across all models, however, it only retains significance (ρ-value: 0.05 for both) for the extended age group, as shown in MODEL 7 and MODEL 8. For 15 to 29 year olds, an increase in one level of coordination of wage bargaining is associated with a 0.929 percentage-point decrease in the proportion of NEETs of the same age group that are inactive due to discouragement, and respectively a 0.893 percent decrease when controlling for region. GDP growth remains an insignificant factor across all models. Only the dummy variable for the Eastern European region retains significance (ρ-value: 0.01), and this is only for the 15 to 24 years old age group. Compared to the Nordic region, the Eastern European region is 1.867 percent more likely to have NEETs who are inactive due to discouragement. The direction of the relationship for the Continental, Anglo-Saxon, and Mediterranean regions is consistent, although these are now an insignificant factor.

5.2.2 Comparing Reasons For Inactivity Among NEETS

In testing the two econometric models, with and without region dummy variables, against the proportion of NEETs inactive for other reasons (i.e. personal disability/illness, family responsibilities, and voluntary reasons) the results are markedly different, as expected. These

results are presented in TABLE 3 and due to the nature of the measurement can be compared more accurately to the results in TABLE 2. Overall, the relationship between the effects of "poor youth labor market conditions" and the percentage of NEETs inactive for other reasons is in the opposite direction and many labor market variables lose significance altogether. On the other hand, the variables representing labor market institutions, the variable representing cyclically- related factors, and tertiary education all gain high levels of significance.

For both age groups, in MODEL 9 and MODEL 11, the coefficient for youth involuntary non-standard employment is negative, unlike the findings on the proportion of NEETs inactive due to discouragement, and significant at the 0.01 level. For youth ages 15 to 24 (15 to 29), a one percentage-point increase in the percentage of youth employed in non-standard work involuntarily is associated with a 0.301 (0.324) percentage-point decrease in the proportion of NEETs who are inactive for other reasons. In MODEL 10 and MODEL 12, when controlling for region, the coefficient for youth involuntary non-standard employment is also negative, unlike the findings on the proportion of NEETs inactive due to discouragement, and significant to the 0.01 level for both age groups. More specifically, for youth ages 15 to 24 (15 to 29), a one percentage-point increase in the percentage of youth employed in non-standard work involuntarily is associated with a 0.299 (0.340) percentage-point decrease in the proportion of NEETs who are inactive for other reasons.

The coefficient for youth facing in-work poverty risk is positive for both age groups, similar to the findings on the proportion of NEETs inactive due to discouragement, and in all models (MODELS 9 – 12), but not significant in any case. In MODEL 9, MODEL 10, and MODEL 12, the coefficient for youth facing long-term unemployment is positive, unlike the findings on the proportion of NEETs inactive due to discouragement, while the coefficient is

negative in MODEL 11; in any case, however, none of the results are significant. The coefficient for decreased work security among the adult working age population is negative, unlike the findings on the proportion of NEETs inactive due to discouragement, for both age groups and across all models (MODELS 9 – 12), but the result is only significant for the younger cohort (ρ-value: 0.10), when controlling for region. As shown in MODEL 10, for 15 to 24 year olds, a one percentage-point increase in decreased work security among the adult working age population is associated with a 0.397 percentage-point decrease in the proportion of NEETs who are inactive for other reasons.

In all models (MODELS 9 – 12), the coefficient for the percentage of youth employed in shift work is negative, unlike the findings on the proportion of NEETs inactive due to discouragement, and significant for both age groups (ρ-value: 0.01). For 15 to 24 (15 to 29) year olds, a one percentage-point increase in the percentage of youth employed in shift work is associated with a 0.587 (0.680) percentage-point decrease in the proportion of NEETs who are inactive for other reasons. For 15 to 24 (15 to 29) year olds, when controlling for region, a one percentage-point increase in the percentage of youth employed in shift work is associated with a 0.533 (0.699) percentage-point decrease in the proportion of NEETs who are inactive for other reasons.

For the most part, the relationship for each of the control variables exhibits the reverse effect when examining the effect on the proportion of NEETs who are inactive for other reasons. Notably, some variables gain substantial significance. For the factors associated with a greater risk of entering NEET status, the coefficient for the incidence of youth living in low work intensity households is negative in MODELS 10 -12, although the results are only significant (ρ-value: 0.01) for the extended age group when controlling for region. For 15 to 29 year olds, when controlling

for region, a one percentage-point increase the incidence of youth living in low work intensity households is associated with a 0.628 percentage-point decrease in the proportion of NEETs of the same age group that are inactive for other reasons.

The coefficient for tertiary education is negative and highly significant (ρ-value: 0.01) across all models (MODELS 9 -12). For 15 to 24 (15 to 29) year olds, a one percentage-point increase youth with tertiary level educational attainment is associated with a 1.036 (0.778) percentage-point decrease in the proportion of NEETs of the same age group that are inactive for other reasons. When controlling for region (MODEL 10 and MODEL 12), for 15 to 24 (15 to 29) year olds, a one percentage-point increase youth with tertiary level educational attainment is associated with a 0.827 (0.952) percentage-point decrease in the proportion of NEETs that are inactive for other reasons. The coefficient for secondary educational attainment is negative in MODELS 9 through 11, unlike the findings on the proportion of NEETs inactive due to discouragement, albeit insignificant in all cases. For the 15 to 29 year old age group, when controlling for region, the coefficient for secondary educational attainment is positive, similar to the findings on the proportion of NEETs inactive due to discouragement, albeit insignificant as well.

In regards to the factors related to labor market institutions, there is a remarkable difference in the effect of ALMP spending and coordination of wage bargaining. The coefficient for ALMP spending is negative and highly significant (ρ-value: 0.01) in all cases (MODELS 9 – 12). For 15 to 24 (15 to 29) year olds, a one percentage-point increase in ALMP spending (per GDP) is associated with a 5.140 (4.805) percentage-point decrease in the proportion of NEETs who are inactive for other reasons. For 15 to 24 (15 to 29) year olds, when controlling for region, a one percentage-point increase in ALMP spending (per GDP) is associated with a 4.805 (6.207)

percentage-point decrease in the proportion of NEETs who are inactive for other reasons. The coefficient for coordination of wage bargaining is positive across all models (MODELS 9 -12); however, this is to varying levels of significance, with a ρ-value of 0.01 in both cases for 15 to 24 year olds and for the 15 to 29 year old age group, when controlling for region. In MODEL 11, prior to controlling for region, the ρ-value is 0.05 for 15 to 29 year olds. For 15 to 24 (15 to 29) year olds, an increase in one level of coordination of wage bargaining (greater coordination) is associated with a 1.706 (1.692) percentage-point increase in the proportion of NEETs of the same age group that are inactive for other reasons. When controlling for region, for 15 to 24 (15 to 29) year olds, an increase in one level of coordination of wage bargaining is associated with a 1.836 (1.692) percentage-point increase in the proportion of NEETs of the same age group that are inactive for other reasons.

Across all models (MODELS 9 -12), GDP growth demonstrates a positive and highly significant (ρ-value: 0.01) relationship with the proportion of NEETs who are inactive for other reasons. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in GDP growth is associated with a 0.303 (0.346) percentage-point increase in the proportion of NEETs who are inactive for other reasons. When controlling for region, for 15 to 24 (15 to 29) year olds, a one percentage-point increase in GDP growth is associated with a 0.346 (0.276) percentage-point increase in the proportion of NEETs who are inactive for other reasons.

The coefficients for the region dummy variables are in the opposite direction in all cases and for both models (MODEL 10 and MODEL 12), however, several more show significance. For 15 to 24 year olds, the coefficients for of the dummy variables are negative and significant for the Continental (ρ-value: 0.01), Eastern European (ρ-value: 0.10), and Mediterranean (ρ-value: 0.01) regions. Compared to the Nordic region, the Continental European region is 17.65 percentage-

points less likely to have NEETs who are inactive for other reasons, the Eastern European region is 1.931 percentage-points less likely, and the Mediterranean region is 1.965 percentage-points less likely. For 15 to 29 year olds, the coefficients for the dummy variables are negative and significant for the Continental (ρ-value: 0.05) and Eastern European region (ρ-value: 0.01), while it is positive and significant for the Anglo-Saxon (ρ-value: 0.01) region. Compared to the Nordic region, the Continental European region is 18.03 percentage-points less likely to have NEETs who are inactive for other reasons, while the Eastern European region is 4.056 percentage-points less likely. Compared to the Nordic region, the Anglo-Saxon region is 7.617 percentage-points more likely to have NEETs who are inactive for other reasons.

5.2.3 Youth Labor Market Conditions and Unemployed NEET Status

In testing the two econometric models, with and without region dummy variables, against the proportion of NEETs who are unemployed, the results do not lend support to the notion that unemployed NEET status may be a preliminary step for entering discouraged, NEET status. These results are presented in TABLE 4 and due to the similar nature of the measurement can be compared accurately to the results in TABLE 2.

Across all models (MODELS 13 – 16), the coefficient for youth involuntary non-standard employment is positive, similar to the findings on the proportion of NEETs inactive due to discouragement, but only significant for the 15 to 24 year old age group when controlling for region (ρ-value: 0.05). For youth ages 15 to 24, when controlling for region, a one percentage-point increase in the percentage of youth employed in non-standard work involuntarily is associated with a 0.210 percentage-point increase in the proportion of NEETs who are unemployed.

The coefficient for youth facing in-work poverty risk is negative, unlike the findings on the proportion of NEETs inactive due to discouragement; however, the results are insignificant for both age groups and in all models (MODELS 13 – 16). In all models (MODEL 13 – 16), the coefficient for youth facing long-term unemployment is positive, unlike the findings on the proportion of NEETs inactive due to discouragement. Additionally, the results are only significant (ρ-value: 0.01) for the extended age group. For 15 to 29 year olds, a one percentage-point increase in youth facing long-term unemployment is associated with a 1.050 percentage-point increase in the proportion of NEETs who are unemployed and a 1.065 increase when controlling for region. The coefficient for decreased work security among the adult working age population is positive, but insignificant for both age groups and across all models (MODELS 13 – 16).

The coefficient for the percentage of youth employed in shift work is positive in all models (MODELS 13 – 16), similar to the findings on the proportion of NEETs inactive due to discouragement, but at varying levels of significance. When not controlling for region, the percentage of youth employed in shift work is only significant (ρ-value: 0.01) for the younger cohort. For 15 to 24 year olds, a one percentage-point increase in the percentage of youth employed in shift work is associated with a 0.593 percentage-point increase in the proportion of NEETs who are unemployed. For 15 to 24 (15 to 29) year olds, when controlling for region, a one percentage-point increase in the percentage of youth employed in shift work is associated with a 0.764 (0.492) percentage-point increase in the proportion of NEETs who are unemployed, and significant at the 0.01 (0.05) level.

For the most part, the relationship for each of the control variables exhibits the reverse effect when examining the effect on the proportion of NEETs who are unemployed. Notably, some variables gain substantial significance. For the factors associated with a greater risk of entering

NEET status, the coefficient for the incidence of youth living in low work intensity households is negative in all models (MODELS 13 -16). The results are only significant (ρ-value: 0.05) for the younger cohort. For 15 to 24 year olds, a one percentage-point increase the incidence of youth living in low work intensity households is associated with a 0.984 percentage-point decrease in the proportion of NEETs who are unemployed. When controlling for region, a one percentage-point increase the incidence of youth living in low work intensity households is associated with a 1.288 percentage-point decrease in the proportion of NEETs who are unemployed.

The coefficient for tertiary education is positive and highly significant (ρ-value: 0.01) across all models (MODELS 13 - 16). For 15 to 24 (15 to 29) year olds, a one percentage-point increase youth with tertiary level educational attainment is associated with a 1.554 (1.222) percentage-point decrease in the proportion of NEETs of the same age group that are unemployed. When controlling for region (MODEL 14 and MODEL 16), for 15 to 24 (15 to 29) year olds, a one percentage-point increase youth with tertiary level educational attainment is associated with a 0.897 (0.821) percentage-point increase in the proportion of NEETs who are unemployed. The coefficient for secondary educational attainment is negative, unlike the findings on the proportion of NEETs inactive due to discouragement, and insignificant across all models (MODELS 13 – 16).

In regards to the factors related to labor market institutions, there is a substantial difference in the effect of ALMP spending and coordination of wage bargaining. The coefficient for ALMP spending is positive, unlike the findings on the proportion of NEETs inactive due to discouragement, and highly significant (ρ-value: 0.01) in all cases (MODELS 13 – 16). For 15 to 24 (15 to 29) year olds, a one percentage-point increase in ALMP spending (per GDP) is associated with a 6.310 (7.232) percentage-point increase in the proportion of NEETs who are unemployed. For 15 to 24 (15 to 29) year olds, when controlling for region, a one percentage-point increase in

ALMP spending (per GDP) is associated with a 6.048 (6.766) percentage-point increase in the proportion of NEETs who are unemployed. The coefficient for coordination of wage bargaining is positive across all models (MODELS 13 -16), unlike the findings on the proportion of NEETs inactive due to discouragement. However, the results are insignificant in all cases.

Across all models (MODELS 13 -16), GDP growth demonstrates a negative and highly significant (ρ-value: 0.01) relationship with the proportion of NEETs who unemployed. For 15 to 24 (15 to 29) year olds, a one percentage-point increase in GDP growth is associated with a 0.354 (0.374) percentage-point increase in the proportion of NEETs who are unemployed. When controlling for region, for 15 to 24 (15 to 29) year olds, a one percentage-point increase in GDP growth is associated with a 0.339 (0.399) percentage-point increase in the proportion of NEETs who are unemployed.

The coefficients for the region dummy variables are in the similar direction in all cases and for both age groups (MODELS 13 – 16)), however, several more show significance. For 15 to 24 year olds, the coefficients for of the dummy variables are positive and significant for the Continental (ρ-value: 0.01), Anglo-Saxon (ρ-value: 0.10), and Mediterranean (ρ-value: 0.10) regions. Compared to the Nordic region, the Continental European region is 18.86 percentage-points more likely to have NEETs who are unemployed, the Anglo-Saxon region is 8.499 percent more likely, and the Mediterranean region is 1.574 percentage-points more likely. For 15 to 29 year olds, the coefficients for the dummy variables are positive and significant for the Continental (ρ-value: 0.05) and Eastern European region (ρ-value: 0.01), while it is positive and significant for the Anglo-Saxon (ρ-value: 0.10) region. Compared to the Nordic region, the Continental European region is 13.21 percentage-points less likely to have NEETs who are unemployed, while the Anglo-Saxon region is 4.992 percentage-points more likely.

5.3 Summary of the Results

The previous findings show that regardless of whether examining the percentage of inactive NEETs who are discouraged or the proportion of all NEETs who are inactive due to discouragement, the incidence of youth employed in non-standard work involuntarily is overall statistically significant and positively related to the incidence of discouraged, inactive NEETs (TABLE 1 and TABLE 2). Conversely, the incidence of youth employed in non-standard work involuntarily is overall statistically significant and negatively related to the proportion of NEETs who are inactive for other reasons (TABLE 3). Similar to the results for the percentage of NEETs who are inactive due to discouragement, the incidence of youth employed in non-standard work involuntarily is positively related to the percentage of NEETs who are unemployed, albeit this is only significant for the 15 to 24 year old age group, when controlling for region (TABLE 4).

Additionally, whether examining the percentage of inactive NEETs who are discouraged or the proportion of all NEETs who are inactive due to discouragement, the incidence of employed youth facing in-work poverty risk is overall statistically significant and positively related to the incidence of discouraged, inactive NEETs (TABLE 1 and TABLE 2). Comparatively, the incidence of employed youth facing in-work poverty risk, while also positively related to the percentage of NEETs who are inactive for other reasons, is not significant in any model (TABLE 3). The incidence of employed youth facing in-work poverty risk is negatively related to the percentage of NEETs who are unemployed and insignificant (TABLE 4).

The incidence of youth employed in shift work, while consistently exhibiting a positive association, varies in significance depending on the measurement of the dependent variable for discouraged, inactive NEETs. In Model 1, when examining the percentage of inactive NEETs who are discouraged, the incidence of youth employed in shift work is overall statistically significant.

However, in Model 2, when examined against the proportion of all NEETs who are inactive due to discouragement this factor loses significance, except for the 15 to 29 year old age group, when not controlling for region. Comparatively, the incidence of youth employed in shift work is negatively related to the percentage of NEETs who are inactive for other reasons and is statistically significant across all models (TABLE 3). Similar to the results for the percentage of NEETs who are inactive due to discouragement, the incidence of youth employed in shift work is positively related to the percentage of NEETs who are unemployed and overall this is a statistically significant factor.

Whether examining the percentage of inactive NEETs who are discouraged or the proportion of all NEETs who are inactive due to discouragement, the incidence of decreased work security among the adult population is overall statistically significant and positively related to the incidence of discouraged, inactive NEETs (TABLE 1 and TABLE 2). Conversely, the incidence of decreased work security among the adult population is negatively related to the percentage of NEETs who are inactive for other reasons and not statistically significant across all models (TABLE 3). Similar to the results for the percentage of NEETs who are inactive due to discouragement, the incidence of decreased work security among the adult population is positively related to the incidence of unemployed NEETs, however, this factor is not statistically significant in any model (TABLE 4).

Finally, whether examining the percentage of inactive NEETs who are discouraged or the proportion of all NEETs who are inactive due to discouragement, the incidence of youth experiencing long-term unemployment (lagged) is overall statistically significant and negatively related to the incidence of discouraged, inactive NEETs (TABLE 1 and TABLE 2). Conversely, the incidence of youth experiencing long-term unemployment (lagged) is positively related to the

percentage of NEETs who are inactive for other reasons, but this is an insignificant factor in all models (TABLE 3). The incidence of youth experiencing long-term unemployment (lagged) is positively related to the incidence of unemployed NEETs, however, this factor is only statistically significant in the models for the 15 to 29 year old age group (TABLE 4).

In the next chapter, I provide a discussion of the preceding results. I discuss these results in relation to the argument in this study and in relation to theories and evidence in the literature. I then provide an analysis of the results found in this study, how much support they offer for the argument made here and how these contribute towards theoretical arguments in the literature.

CHAPTER SIX: DISCUSSION

The findings presented in Chapter 5 lend support for the proposed relationship between poor labor market opportunities for youth and youth discouragement from participating in the labor market, education, or training. However, the significance for some of the variables varies depending on the age group, whether controlling for region, and depending on the measure utilized for the dependent variable. The results for the effect of similar labor market conditions on NEETs who are inactive for other reasons, add further robustness to the findings; they also lend support to the argument that the rate of NEETs inactive due to discouragement are more related to issues tied to the labor market, whereas NEETs inactive for other reasons are more related to issues of social-policy orientation. The results for the effect of similar labor market conditions on unemployed NEETs are inconclusive in regards to pathways into discouraged, inactive NEET status.

Whether examining the percentage of inactive NEETs who are discouraged or the proportion of all NEETs who are inactive due to discouragement, the incidence of youth employed in non-standard work involuntarily is overall statistically significant and positively related to the percentage of inactive NEETs who are discouraged (TABLE 1 and TABLE 2). In general, the positive and significant relationship suggests that incidence of involuntary non-standard employment is an important factor in the prevalence of discouraged youth in EU countries, as proposed in Hypothesis 1. This relationship remains consistently significant, albeit the effect is somewhat moderated, even when examining the effects of poor labor market opportunities for youth on the overall percentage of NEETs who are inactive due to discouragement (TABLE 2). Also, the predicted value change is somewhat greater for the extended age group whether

controlling for region or not, whereas the predicted value change is much smaller and not significant for the 15 to 24 year old age group when controlling for region.

There could be several reasons for these differences. To begin, regarding the larger predicted value change in the dependent variable for the extended age group, it is important to recall that it is more common today that youth in the EU enter the labor market at a later age (after age 24) following extended schooling (Eurofound 2012; Lutz et al. 2006). Moreover, across the EU, a much greater percentage of youth, ages 15 to 29, has achieved tertiary levels of education, as compared to youth ages 15 to 24. On average, 68% of youth ages 15 to 29 have attained a bachelor's, master's, or doctoral degree, while only 52% of youth ages 15 to 24 have (Author's calculations, from Eurostat ad hoc data extraction 2016).

The achievement of higher levels educational status, such as secondary or tertiary education, may lead to greater frustration with poor labor market opportunities. For instance, interviews conducted in Lithuania prior to 2012 on youth ages 15 to 29 reveal that a considerable number of youth have high expectations for earnings and working conditions (Braziene and Dorelaitiene 2012). These interviews also reveal that this may stem from the social networks of youth (i.e. relatives and friends), where career choices are influenced by "trends, popularity and prestige" and where networking opportunities may exist (Braziene and Dorelaitiene 2012: 35). However, often jobs are hard to find, especially when "young people study specialties the market does not wish to pay money for" (Ibid.). Furthermore, in some countries, such as Italy and Greece, youth in the 25 to 29 year old age range currently are not included in the policy discussion (Eurofound 2016). In either case, the result may be greater frustration with a poor labor market outcomes, such as involuntary non-standard employment opportunities. Indeed, as noted in the Introduction, Gallup polls indicate that pessimism about the job market has been evident in years

since the 2008 financial and economic crisis (see, for instance, Manchin 2012). Moreover, this evidence supports arguments in the literature that the local job market, cultural elements, and economic statistics influence youth perceptions of employment opportunities (ILO 2015). The statistics also show that involuntary non-standard employment is on average much more prevalent among the extended age group as compared to youth ages 15 to 24. For example, the average incidence of involuntary non-standard employment (both involuntary temporary and involuntary part-time) in proportion to youth employed in non-standard work (temporary and part-time for any reason) in the EU ranges from 30% in 2004 to 33.8% in 2013 for youth ages 15 to 24. On the other hand, for the extended age group the incidence ranges from 36.6% in 2004 to 41.4% in 2013.

The smaller predicted value change in the dependent variable and lack of significance when controlling for region for the younger cohort (MODEL 2 and MODEL 6) could be driven by the data. The analysis on the 15 to 29 year old age group includes both Estonia and Lithuania, but not Croatia, which is included in the data on the 15 to 24 year old age group. Estonia and Lithuania both have rates of youth with tertiary educational attainment near or above the EU average of 17.2%, while Croatia is well below the EU mean, averaging at 10.4% across all years. At the same time, Croatia and Lithuania both have high proportions of youth in the extended age group employed in non-standard work involuntarily, above the EU mean on average between 2004 and 2015. This suggests that higher proportions of youth with tertiary levels of education may be exposed to involuntary non-standard employment in Lithuania.

Comparatively, when examining the percentage of NEETs who are inactive for other reasons, the incidence of youth employed in non-standard work involuntarily is statistically significant in all models and negatively related to the percentage of NEETs who are inactive for other reasons (TABLE 3). The predicted value changes are also much larger, where the effect is

greater for the extended age group. Importantly, the opposing direction of the relationship adds further robustness to the findings on discouraged, inactive NEETs. It also lends support to that the argument that NEETs inactivity for other reasons is related to issues of social-policy orientation, while youth discouragement is connected to issues relating to labor market conditions. Typically, social policy support is more limited for individuals working part-time hours (Horemans et al. 2016). However, since the 2008 financial and economic crisis, there has been an increasing emphasis on social support for part-time workers in many EU countries (Ibid.). It is possible then to conjecture that youth who are inactive for other reasons, such as personal disability/illness, or due to family responsibilities, may be more willing to take on such work, especially when sufficient social support is available, while discouraged youth are not willing to. However, despite the willingness to take on such work, involuntary work still represents a situation that is not wanted and thus takes on a negative overtone (Pusterla 2016).

In relation to the percentage of NEETs who are unemployed (TABLE 4), the incidence of youth employed in non-standard work involuntarily, while positive across all models, is only statistically significant for the 15 to 24 year old age group, when controlling for region (MODEL 14). Not only are the results statistically significant in the same model where the results were insignificant for the same age group of NEETs inactive due to discouragement, but also the predicted value change is now largest for this group when it was comparatively smallest in the model examining NEETs inactive due to discouragement (TABLE 2, MODEL 6). One assumption is that this relates to regional differences in policies tailored towards the 15 to 24 year old age group, where despite high incidences of involuntary non-standard employment, social policy support targeted at unemployed youth of this age group may make unemployment more feasible.

On the same note, similar policies targeted at unemployed youth of this age group would limit youth discouragement.

The incidence of employed youth facing in-work poverty risk is overall statistically significant and positively related to the percentage of inactive NEETs who are discouraged (TABLE 1 and TABLE 2). In general, the positive and significant relationship suggests that incidence of in-work poverty risk is an important factor in the prevalence of discouraged youth in EU countries, as proposed in Hypothesis 3. This relationship remains overall significant, albeit the predicted value change is somewhat moderated and there is a slight shift in the statistical significance of the results when examining the effects of poor labor market opportunities for youth on the overall percentage of NEETs who are inactive due to discouragement (TABLE 2). The statistics also show that in-work poverty risk is on average much higher among youth ages 15 to 24 as compared to the extended age group. For example, the average incidence of in-work poverty risk, in proportion to employed youth of the same age group, in the EU ranges from 11.1% in 2010 to 12.9% in 2014 for youth ages 15 to 24. On the other hand, for the extended age group the incidence ranges from 8.7% in 2010 to 10.5% in 2014.

Comparatively, the relationship between the incidence of employed youth facing in-work poverty risk and the percentage of NEETs who are inactive for other reasons, while positive, is insignificant in all models (TABLE 3). This adds further robustness to the findings on NEETs who are inactive due to discouragement, especially taking into consideration the disproportionately smaller percent of the NEET population this subgroup represents. Further, this lends additional support to the argument that discouragement among inactive NEET status is more related to issues tied to the labor market, while for NEETs inactive for other reasons the issue is related to social policies. For instance, in-work poverty risk can be minimized by social policy support (Horemans

et al. 2016). At the same time, "in-work poverty risk increases with the number of children" (Horemans et al. 2016: 11). Meaning, the incidence of NEET inactivity for other reasons may be partially due to a lack of sufficient social policy support, and provided sufficient support in-work poverty risk is not a factor. The overall positive association between in-work poverty risk and NEETs who are inactive due to discouragement may reflect more strongly that in-work poverty represents the number of workers in jobs that do not guarantee a "decent quality of life" (Pusterla 2016).

The prevalence of decreased work security among the adult population is also statistically significant in general and positively associated with the percentage of inactive NEETs who are discouraged (TABLE 1). Overall, the positive and significant relationship implies that the occurrence of decreased work security among the adult population is an important factor in the prevalence of discouraged youth in EU countries, as proposed in Hypothesis 2. This relationship remains overall significant even when examining the effects of poor labor market opportunities for youth on the overall percentage of NEETs who are inactive due to discouragement (TABLE 2). However, the predicted value change is somewhat minimized and there is a slight shift in the statistical significance of the results. In the initial analyses, the result for the 15 to 29 year old age group when controlling for region is not significant (TABLE 1, MODEL 4), but it is in the second examination (TABLE 2, MODEL 8), while the reverse is true for the 15 to 24 year old age group (TABLE 1, MODEL 2 and TABLE 2, MODEL 6). It is challenging here to decipher the basis of this difference.

Compared to 15 to 24 year olds, in all cases, the predicted value change is slightly minimized for the extended age group. This could be explained by stronger impact overall worsening labor market conditions, which may be represented by decreased work security among

the adult population, often have on the younger cohort. The younger cohort is usually the first to feel the effects of diminished opportunities in the labor market, which may the basis of greater feelings of discouragement. For instance, the extended age group has only recently been taken into greater consideration due to the impact of the economic recession that followed the 2008 financial and economic crisis also had on individuals aged 25 to 29 (Eurofound 2012). Previous to this time, the emphasis was on examining NEETs ages 15 to 24 (Ibid.) In any case, diminished work security among the adult population is overall a significant factor in youth discouragement.

At the same time, the incidence of decreased work security among the adult population is generally insignificant and negatively associated with the percentage of NEETs who are inactive for other reasons. For one, this suggests that decreased work security among the adult population is a less important factor overall for NEETs who are inactive for other reasons, adding further robustness to the findings on NEETs who are inactive for reasons of discouragement. Moreover, this also adds further supports the arguments regarding the respective relationship each has to issues of social-policy versus labor market orientation.

The incidence of youth employed in shift work, is significant overall when examining the effects of poor labor market opportunities for youth on the percentage of inactive NEETs who are discouraged, in support of Hypothesis 4 (TABLE 1). However, this variable loses considerable significance when examined against the overall percentage of NEETs who are inactive due to discouragement (TABLE 2). This is suggestive of a somewhat weaker relationship between shift work and youth discouragement. To be sure, there is also a less disruptive type of shift work that does not necessarily disturb family life or impinge upon normal sleeping hours (Margherita et al. 2009). Importantly, the direction of the relationship is still positive and significant for the 15 to 29 year old age group, but not when controlling for region.

On the other hand, the incidence of youth employed in shift work is highly significant and negatively associated with the percentage of NEETs who are inactive for other reasons. This lends further support to the findings on discouraged, inactive NEETs. This may be indicative of youth with family caring responsibilities being more willing to take on shift work. For example, there are high shares of male shift workers with children in Hungary, Romania, and Latvia (Margherita et al. 2009). Additionally, shift work is extremely prevalent among women with children in he Czech Republic, Hungary, Slovakia, and Slovenia (Ibid.). This is also the case in Finland, albeit slightly less so (Ibid.). However, in other countries the incidence is much lower among women with children, such as Cyprus, Germany, Lithuania, and France; this is also the case for men, such as in Cyprus and Denmark (Ibid.).

These variations lend further support to the notion that NEETs who are inactive for other reasons are related to issues of social policy orientation, while youth discouragement is driven by labor market related factors. This argument is strengthened by the inclusion of youth who are inactive due to disability among NEET youth who are inactive for other reasons and that the relationship is still negative. Meaning, while youth in shift work may be more likely to be in inactive, NEET status due to the prevalence of accidents among shift workers, when this is the case youth recovering from injuries usually return to work in a relatively shorter period of time than older employees (Eurostat 2010). The incidence of youth employed in shift work is highly significant and positively associated with the percentage of NEETs who are unemployed (TABLE 4). It is difficult to determine the meaning of this, for the prevalence of accidents in these types of jobs may factor into temporary unemployment due to injury, without taking up education or training during this time period. The statistic for unemployed NEETs does permit further breakdowns to decipher reason for unemployment, so this may be useful to examine in the future.

The negative association between the youth long-term unemployment and discouraged, inactive NEETs is not as proposed in Hypothesis 5. However, both bivariate regression analysis and correlation tests reveal a positive association between the rate of youth long-term unemployment and the percentage of discouraged, inactive NEETs regardless of how the dependent variable is measured. The negative association may be due to a stronger relationship between the long-term unemployment rate for youth and the other labor market variables. For instance, correlation testing reveals a positive association between the youth long-term unemployment rate and each of the labor market variables. The types of labor market opportunities tend to vary with overall economic conditions, for which unemployment levels are a key indicator. As discussed previously, labor market policies have increasingly emphasized more flexible work arrangements in the labor market to counter youth unemployment (see, for instance, green and Livanos 2015). The incidence of youth long-term unemployment, while positively associated with the percentage of NEETs inactive for other reasons, is insignificant in all models. Given that the primary results do not support Hypothesis 5, no inference can be made as to whether these findings offer additional support.

In the final chapter, I offer some concluding remarks, where I discuss the implications this study and the findings presented here have on the NEET literature. I also discuss the limitations of this study, including the caution that must be taken with making inferences from these findings. Finally, I consider some avenues for future research in relation to the limitations of this study and present some alternative means by which the theoretical argument explored here could be improved and offer greater insight into the root of youth discouragement from participating in the labor market, education, or training.

CHAPTER SEVEN: CONCLUSION AND FUTURE WORK

The results in this study demonstrate the importance of taking into greater consideration the need for improved opportunities in the labor market in order to engage discouraged, inactive NEETs. At present, discussion in the literature includes an emphasis on preventative measures and tracking at-risk populations to circumvent youth discouragement (Eurofound 2016). Indeed, some countries are making considerable advances in recent years in the implementation of the Youth Guarantee and Youth Employment Initiative. However, there is much work to be done (European Commission 2016f). This could not be truer than in the case of the discouraged, inactive NEETs. The results found here create an avenue towards gaining a better understanding the root of youth discouragement from participating in the labor market, education, or training.

The relevance of the findings in this study and what they will contribute to the literature are evident. Examples of the more targeted approaches to date clarify how the findings in this study can further improve our understanding of discouraged, inactive NEETs and how to best tailor policies towards this subgroup of the NEET population. For example, France is taking a more targeted approach, focusing on "deprived urban neighbourhoods that are characterized by low educational attainment" in testing out ways to boost self-confidence prior to job searching, such as 'ambitions clubs', and to help youth discover their talents and abilities (Eurofound 2016: 52). Alternatively, in Poland, a multifaceted approach is being taken, which includes offering scholarships for higher education, programs for social skills development, emphasizing active citizenship, and encouraging participation of youth in the policy debate (Ibid.). The latter emphasis seems most relevant in regards to the results found in this paper. With greater participation the policy debate it would become clearer what opportunities youth seek. One mechanism that would

be useful would be the inclusion of survey questions targeted towards discovering the types of opportunities youth seek and what youth consider "a lack of opportunities" in the labor market. The evidence in this study demonstrates the relevance of investigating these questions more closely. Activation measures that are targeted at inactive NEETs and in particular those who are "less motivated", such as currently being emphasized in Latvia (European Commission 2016d), understanding the root of this lack of motivation would facilitate the development of tailored policies and likely enhance their effectiveness.

As noted by Elder (2009: 3), discouraged youth are described as having stopped looking for work for a variety of reasons, including "an inability to find work matching their skills; not knowing how or where to seek work; previous job searches having led to no results; feeling too young to find work; and the sense that no jobs were available in the area." While 'ambitions clubs,' job search techniques, and developing social skills may help address some of the discouraged NEET population, such as those who feel too young to find work or those who do not know how to find work, it cannot be assumed these are optimal methods to engage all discouraged, inactive NEETs. The issue of skills-mismatching readily lends support to the interpretation of the findings in this study. Additionally, the results found in this study may indicate that "no jobs available" includes also that no desirable jobs are available, while "previous job searches having led to no results" may indicate that no desirable results were found.

Moreover, statistical evidence on trends in the percentage of discouraged, inactive NEETs in some countries in combination with country-level assessments by the European Commission of the implementation of Youth Guarantee programs demonstrate the urgency of developing a more comprehensive understanding of the sources of youth discouragement in relation to opportunities in the labor market. For example, despite the targeted programs described above in France, the

percentage of NEETs who are inactive due to discouragement has risen from 2.8% in 2013 to 4.5% in 2015 for 15 to 24 year olds (Author's calculations, from Eurostat EU-LFS ad hoc data extraction 2016). The European Commission's (2016e) assessment on France's implementation of the Youth Guarantee notes that in order to engage the hard-to-reach, enhanced efforts are in order. Furthermore, the European Commission (2016f) notes that even though marked improvements have been made in the implementation of the Youth Guarantee and Youth Employment Initiative across the EU, greater effort needs to be aimed at the harder-to-reach portions of the NEET population, who have benefitted least from these developments. The European Commission's (2016f) reference to the statistics reminds us of what we already know, that declines in NEET rates are largely due to declines in the percentage of NEETs who are unemployed. It is worth adding to this reference that the change in the percentage of NEETs who are inactive due to discouragement has been particularly stagnant, with a mere ~0.1 percent reduction for both age groups between 2014 and 2015 (Author's calculations, from Eurostat ad hoc data extraction 2016).

Even more so, the European Commission (2016f) adds that an emphasis is needed on improving the quality of opportunities offered to youth; although the quality of jobs available is partially linked to overall conditions in the labor market, a key issue also lies in what are presented and defined as quality job offers or and taking into consideration youth's personal satisfaction with these employment outcomes. Only a few EU members have established minimum quality criteria for jobs targeted a youth or to monitor the effects of the Youth Guarantee (European Commission 2016f). As discussed throughout this study, there is good reason to consider the labor market conditions studied here as poor labor market opportunities for youth. As elaborated on in Chapter 3, there are many reasons to consider these particular jobs poor labor market opportunities, which may contribute not only to the inherent quality of the employment, but also the recognized quality.

The results from this study offer a starting point to address some of these challenges. As previously discussed, the results indicate that poor labor market opportunities should be considered more closely in relation to youth discouragement from participating in the labor market, education or training. Given the positive and significant association between the labor market conditions studied here (incidence of involuntary non-standard employment, in-work poverty risk, and shift work among fellow youth, and decreased work security among the adult population) and the rate of discouraged, inactive NEETs, the urgency of taking in consideration not only the personal satisfaction youth get from the opportunities in the labor market and their employment experiences, but also what opportunities youth seek is certain.

This study is limited in a few aspects that must be pointed out. This study has implemented as rigorous of an examination as possible utilizing aggregated survey data. I have tested the same labor market conditions against the percentage of inactive NEETs who are discouraged and the percentage of all NEETs who are inactive due to discouragement for further robustness. I have also examined the same labor market conditions in relation to the level of NEETs who are inactive for other reasons. These findings add further robustness to the primary findings and also lend support to the argument that the rate of NEETs inactive due to discouragement are more related to issues tied to the labor market, whereas NEETs inactive for other reasons are more related to issues of social policy orientation. The findings on current youth labor market conditions on unemployed NEETs are not very telling as to the pathway towards discouraged, NEET status. Additional testing with these key variables lagged in order to distinguish the reverse causality that unemployment conditions can have on the opportunities available in the labor market does not add much clarity.

Further examination is needed to not only add further robustness to the results found here, but also to gain a better understanding of the pathway into discouraged NEET status. In this study,

I have argued that youth will be aware of the labor market opportunities available to them and sensitive to the labor market experiences of fellow youth. However, it is important to note that any inferences made in this study should be taken with caution do to the use of aggregated data.

Micro data would permit the ability to clarify further the association between poor labor market opportunities and youth discouragement. Moreover, quarterly data at the individual level would also enhance our ability to track pathways towards discouraged, inactive NEET status. Alternate methodological approaches could be applied to micro data, such as a multilevel analysis to track movement in the labor market, as per de Lange et al. (2014). In reality, the link found here can most clearly be deciphered by employing tailored survey questions that seek to clarify what youth perceptions are of the actual labor market conditions around them and what opportunities youth seek. Further, as is clear from the variety of descriptors (see Elder 2009) as to why youth are discouraged from participating in the labor market, education, or training, and acknowledging the diverse nature of the NEET population itself, poor labor market opportunities may not be the only issue driving youth discouragement.

There are also additional factors that should be considered in the future, including the role of other factors that put youth at higher risk of NEET status, such as immigrant status, and the role of passive labor market spending. In order to further advance the findings in this study, variations in discouraged, inactive NEETs and labor market conditions for youth at the regional and local level should be taken into account.

In sum, this study provides many avenues for future research. The findings here, despite the discussed limitations of this study, provide a strong basis for the relevance of examining this topic matter further. The previous suggestions for future research offer several pathways by which we can gain a better understanding of the root of youth discouragement from participating in the

labor market education or training and thus the means by which to develop targeted policies to engage these particularly hard-to-reach youth.

APPENDIX A: CHAPTER ONE FIGURES

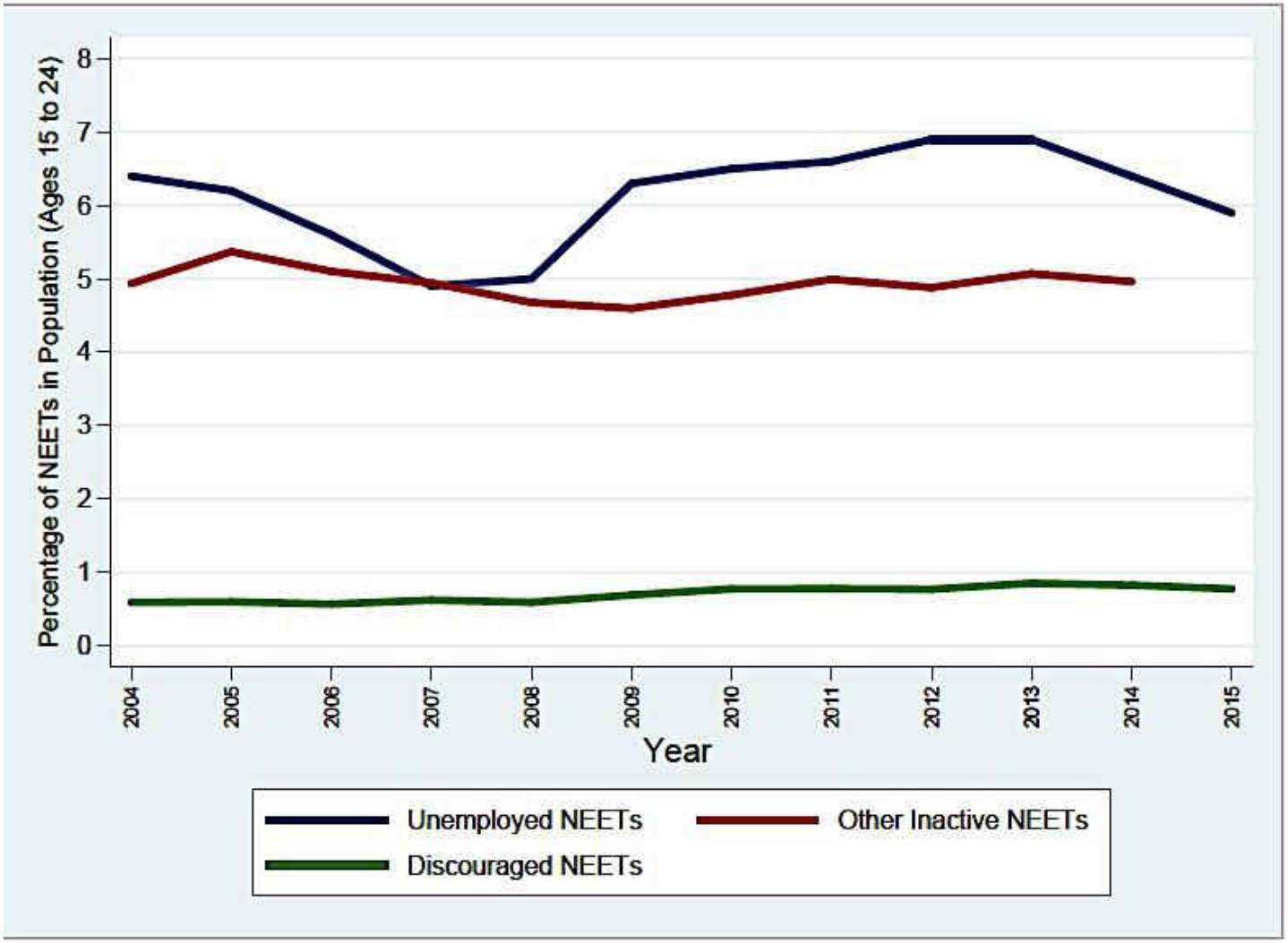

Figure 1: Unemployed, Inactive, and Discouraged NEET Rates, EU-28, Ages 15-24
Source: Eurostat 2016 (Note: Author's calculations for discouraged NEETs).

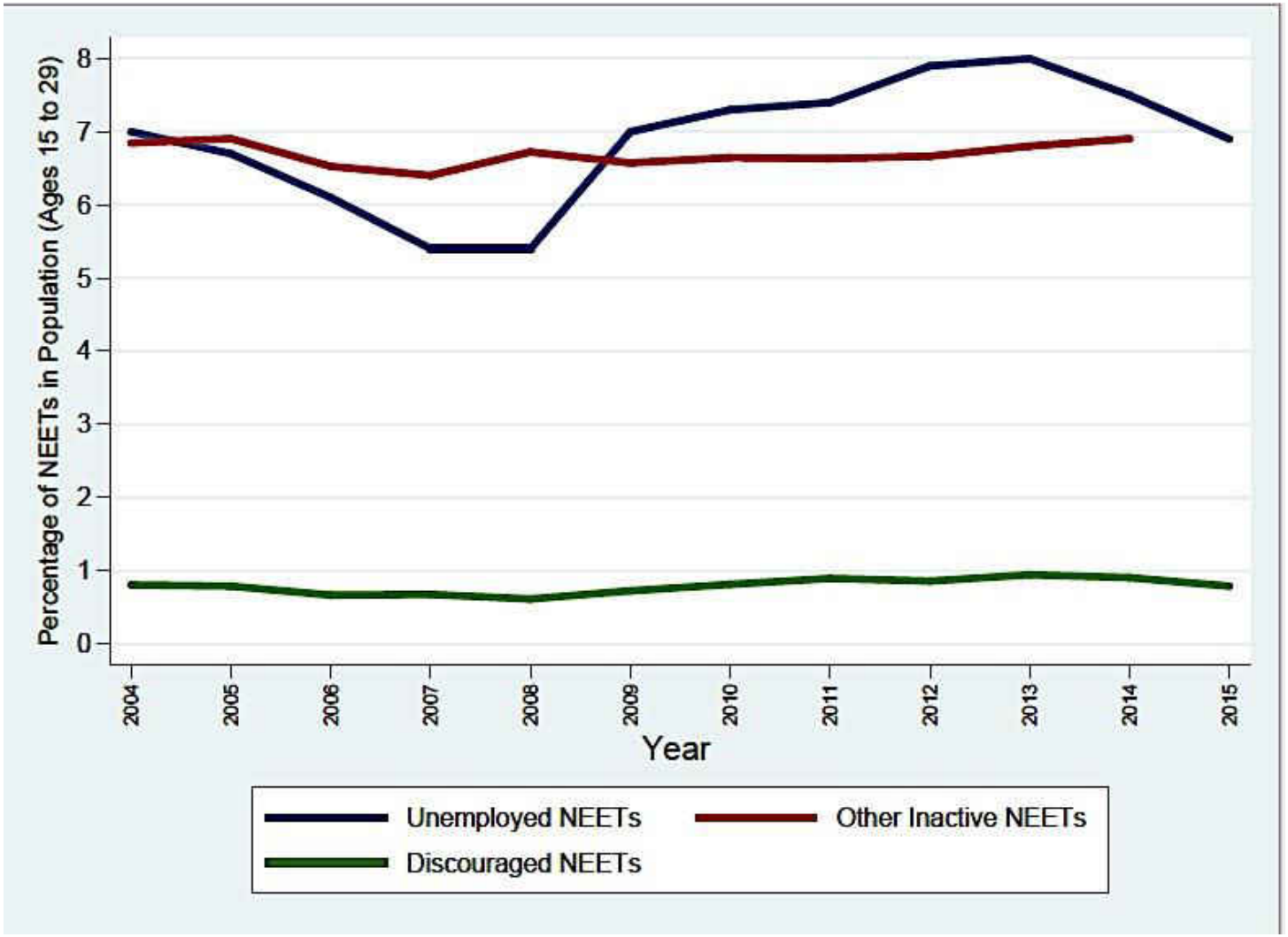

Figure 2: Unemployed, Inactive, and Discouraged NEET Rates, EU-28, Ages 15-29
Source: Eurostat 2016 (Note: Author's calculations for discouraged NEETs).

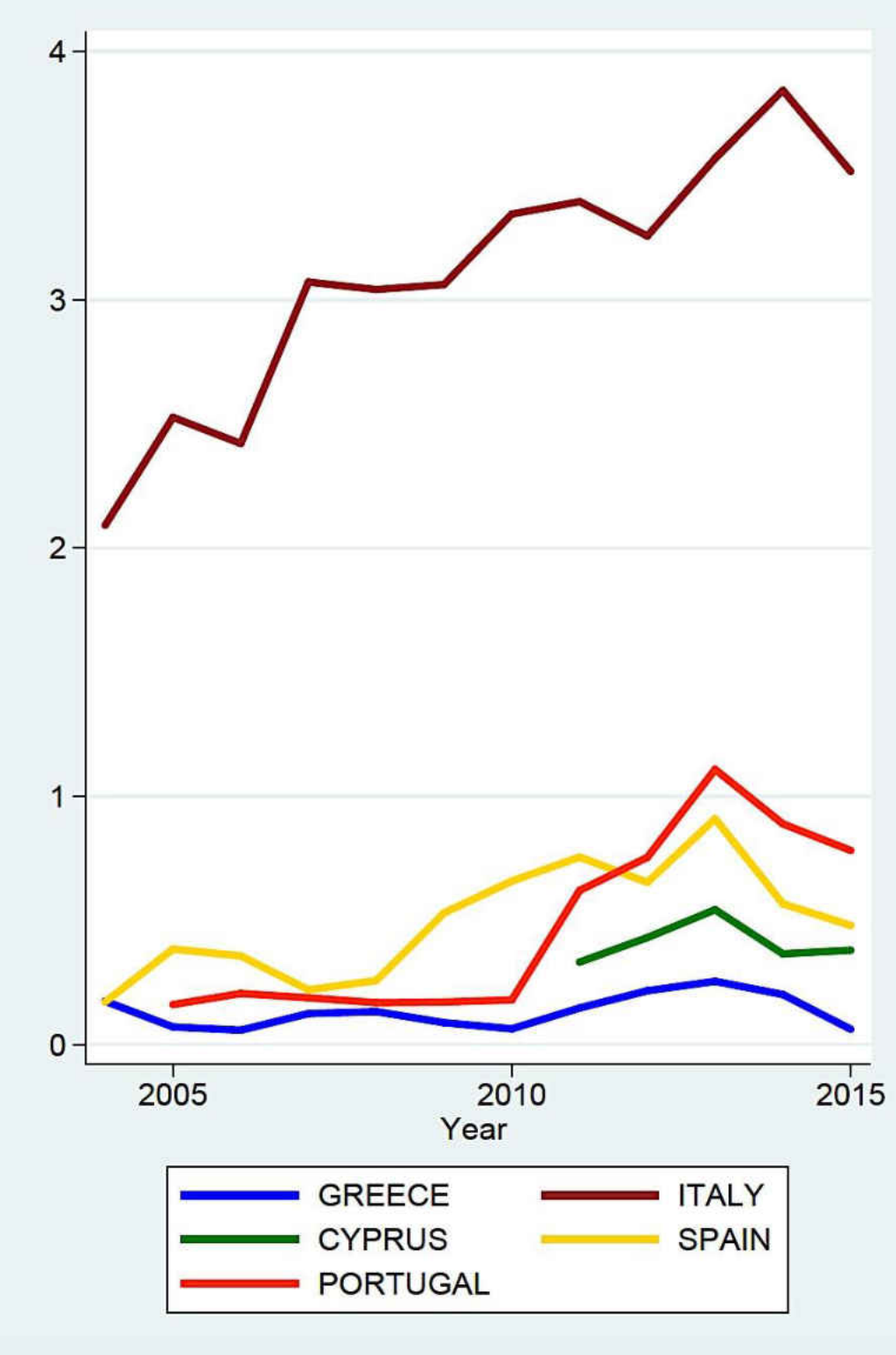

Figure 3: Discouraged NEET rate (Ages 15 to 29) in Mediterranean Countries (2004-2015)
Source: Eurostat 2016 (Note: Author's calculations for discouraged NEETs).

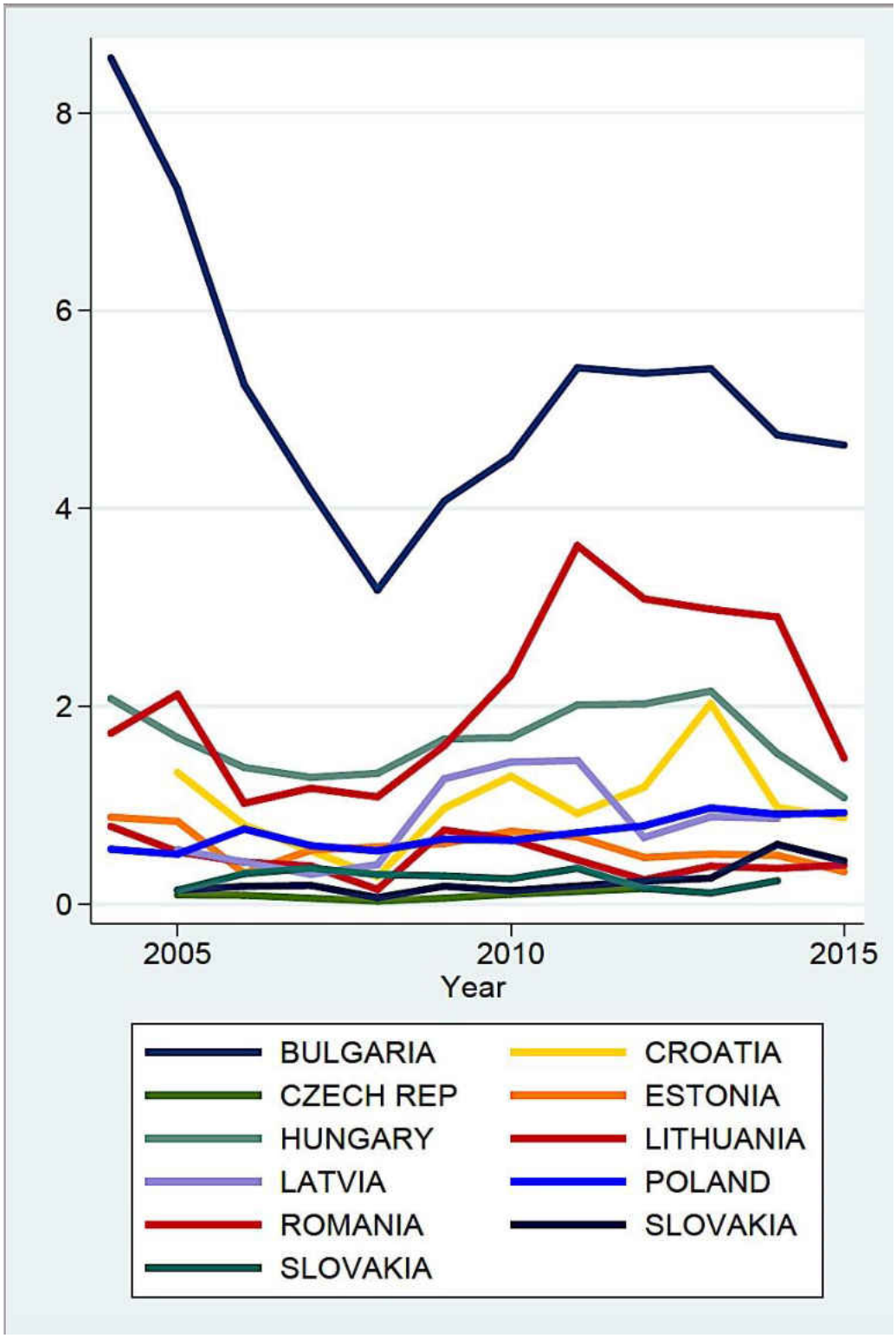

Figure 4: Discouraged NEET rate (Ages 15 to 29) in E. European Countries (2004-2015)
Source: Eurostat 2016 (Note: Author's calculations for discouraged NEETs).

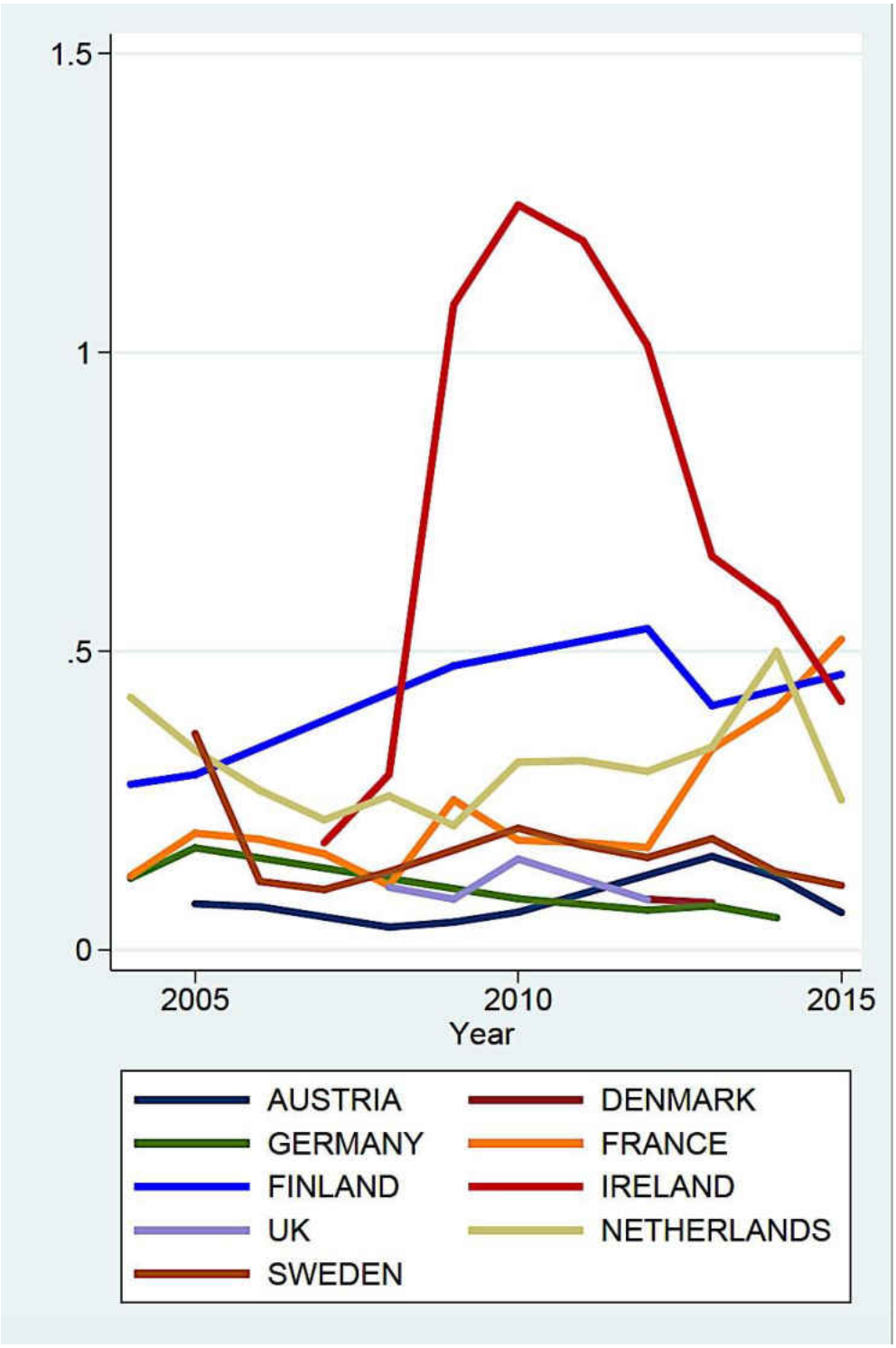

Figure 5: Discouraged NEET rate (Ages 15 to 29) in Anglo-Saxon, Continental, and Nordic Countries (2004-2015)
Source: Eurostat 2016 (Note: Author's calculations for discouraged NEETs).

APPENDIX B: CHAPTER TWO FIGURES

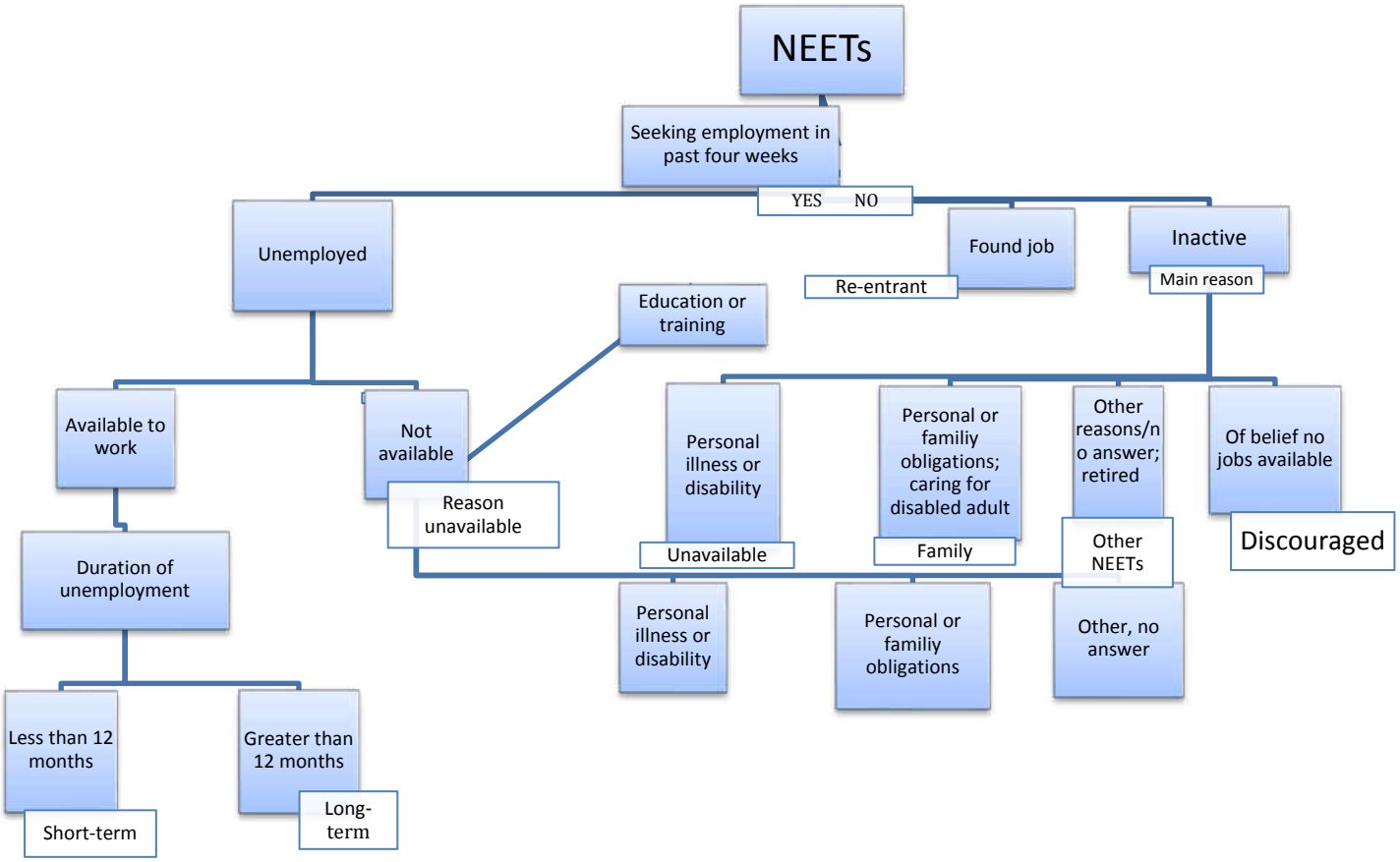

Figure 6: NEETs: Main Subsets and Subcategories
Source: Author's table created with information from Eurofound 2016 (Original source of data: Eurostat 2015).

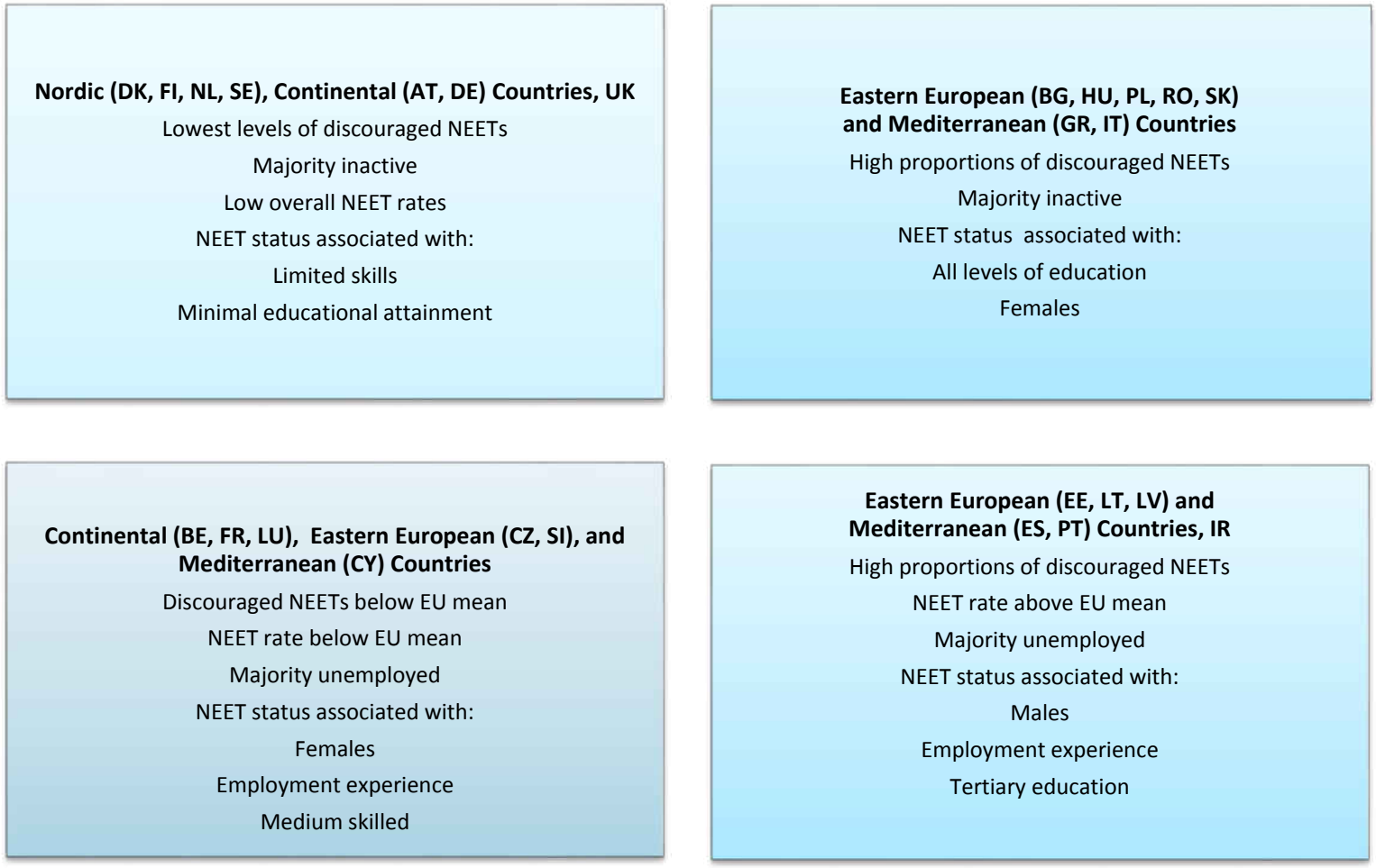

Figure 7: NEET Trends in the EU (2008 -20012)
Source: Eurofound 2012.

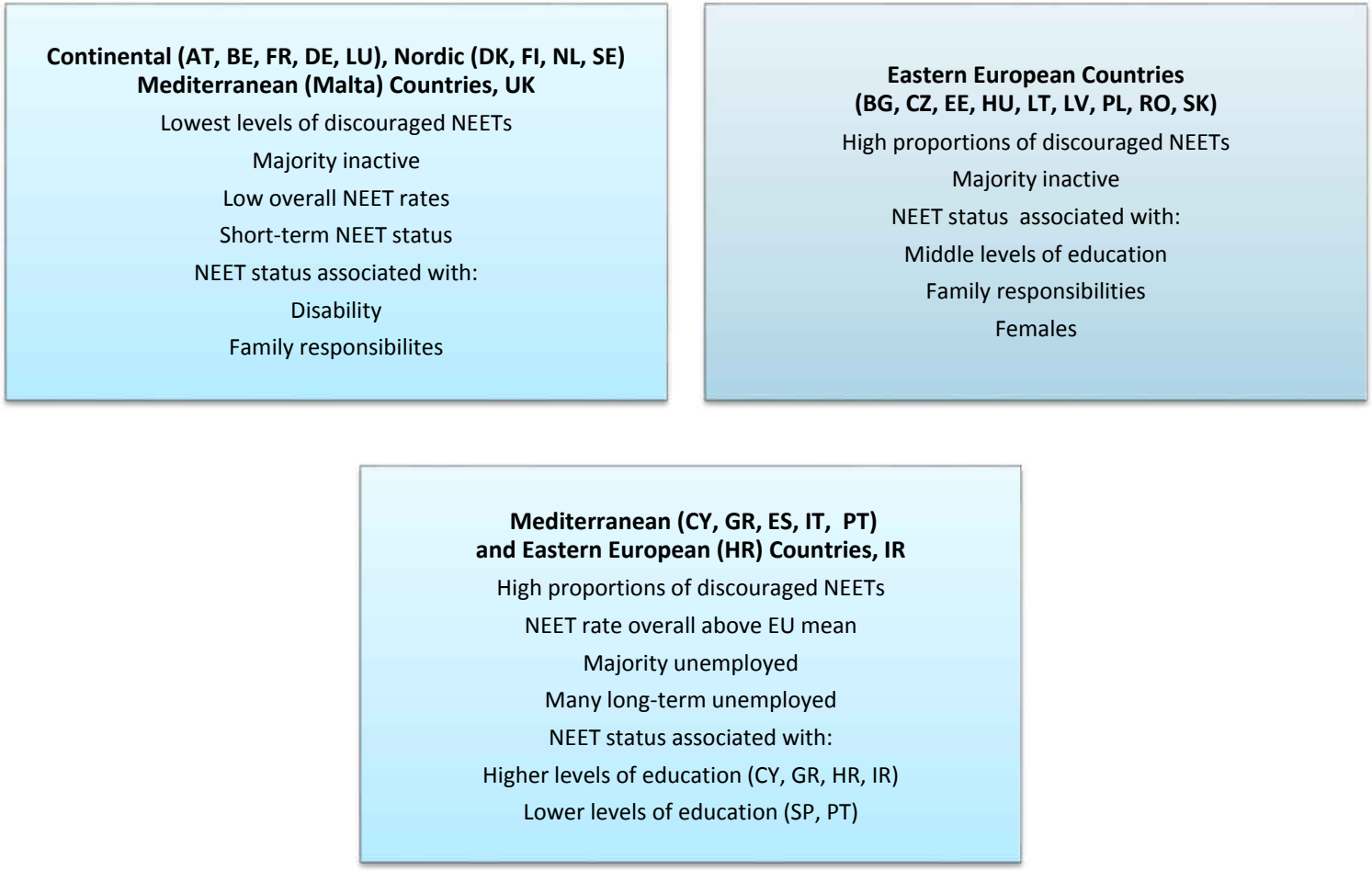

Figure 8: NEET Trends in the EU (Post-2012)
Source: Eurostat 2016; Eurofound 2016**.**

APPENDIX C: CHAPTER THREE FIGURES

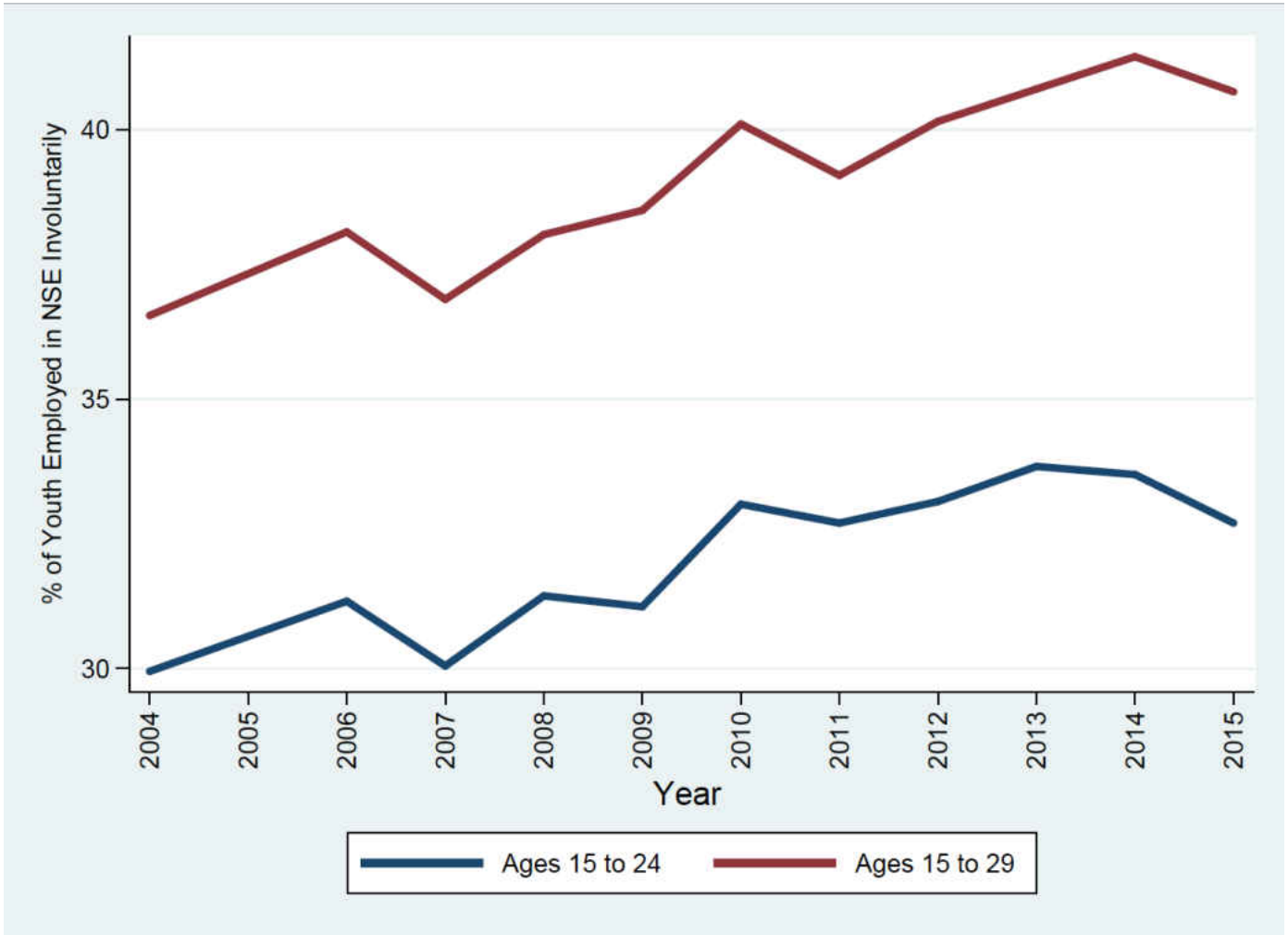

Figure 9: Trends in Involuntary Non-Standard Employment for Youth, EU28 (2004-2015)

Note: Graph refers to the incidence on involuntary non-standard employment among youth, ages 15 to 24 (15 to 29) in proportion to youth of the same age group employed in non-standard employment. Source: Eurostat EU-LFS (2016).

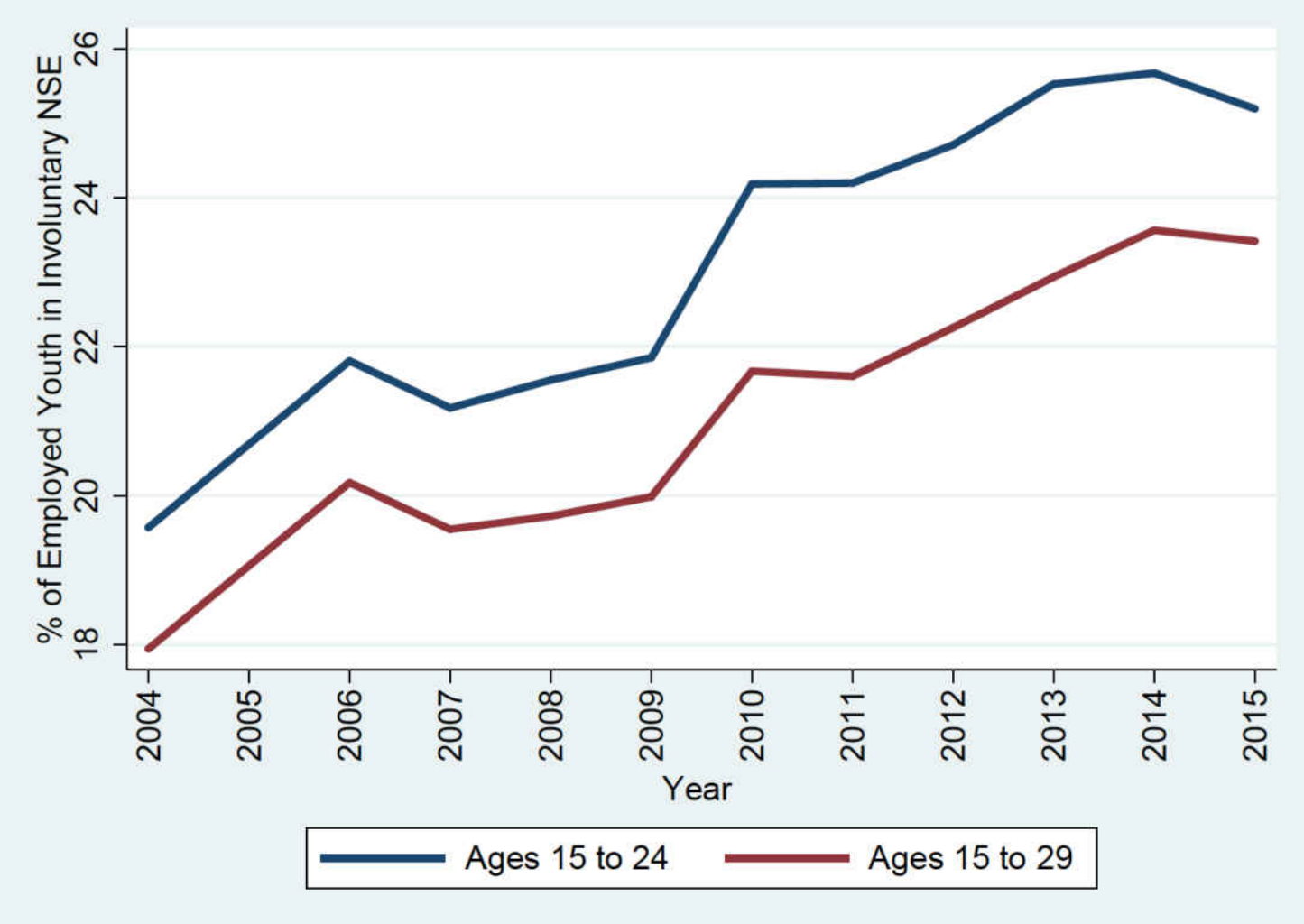

Figure 10: Trends in Involuntary Non-Standard Employment for Youth, EU28 (2004-2015)

Note: Graph refers to the incidence on involuntary non-standard employment among youth, ages 15 to 24 (15 to 29) in proportion to all employed youth of the same age group. Source: Eurostat EU-LFS (2016).

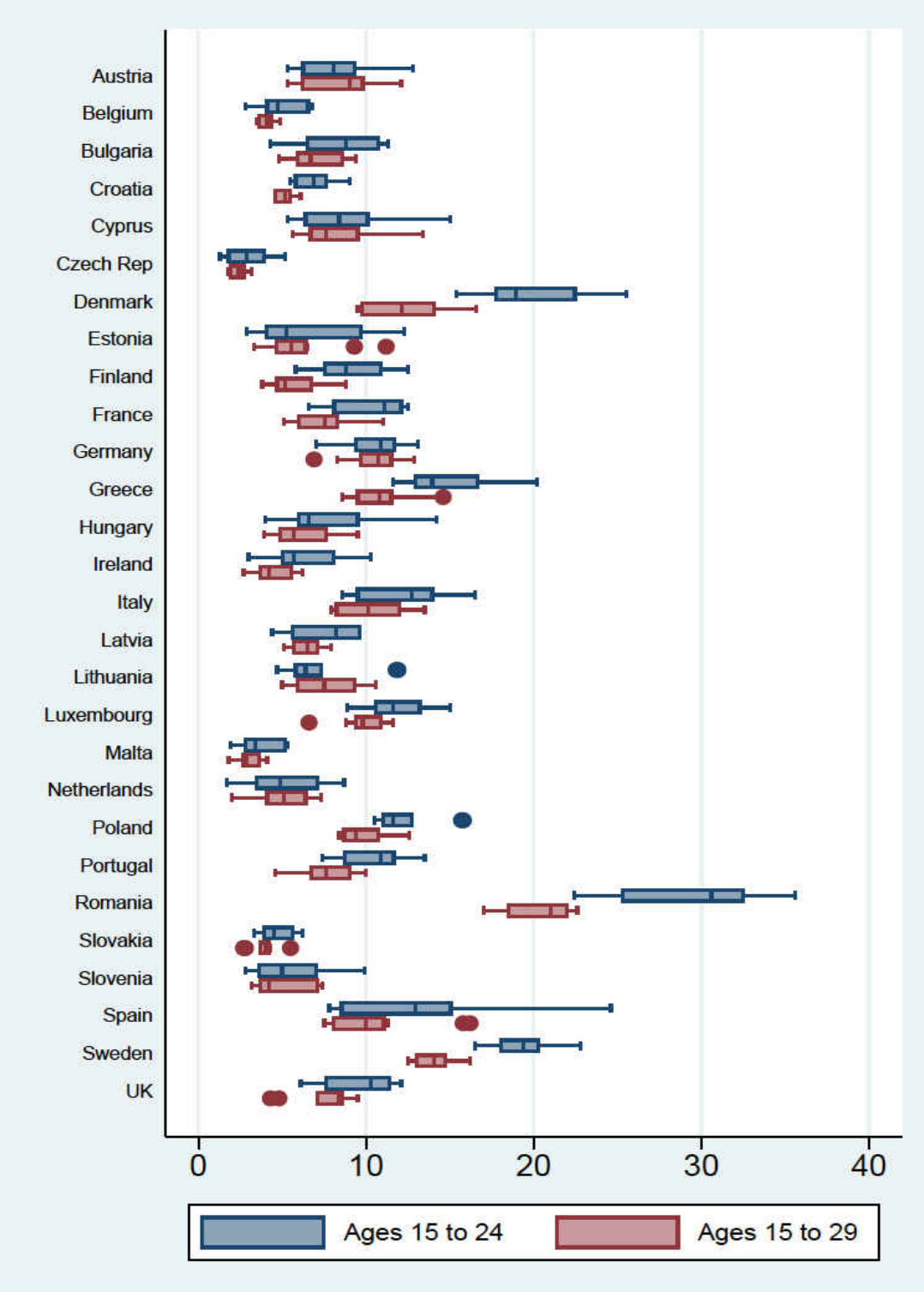

Figure 11: Comparative In-work Poverty Risk for Employed Youth (2004 – 2015)
Source: Eurostat EU-LFS (2016).

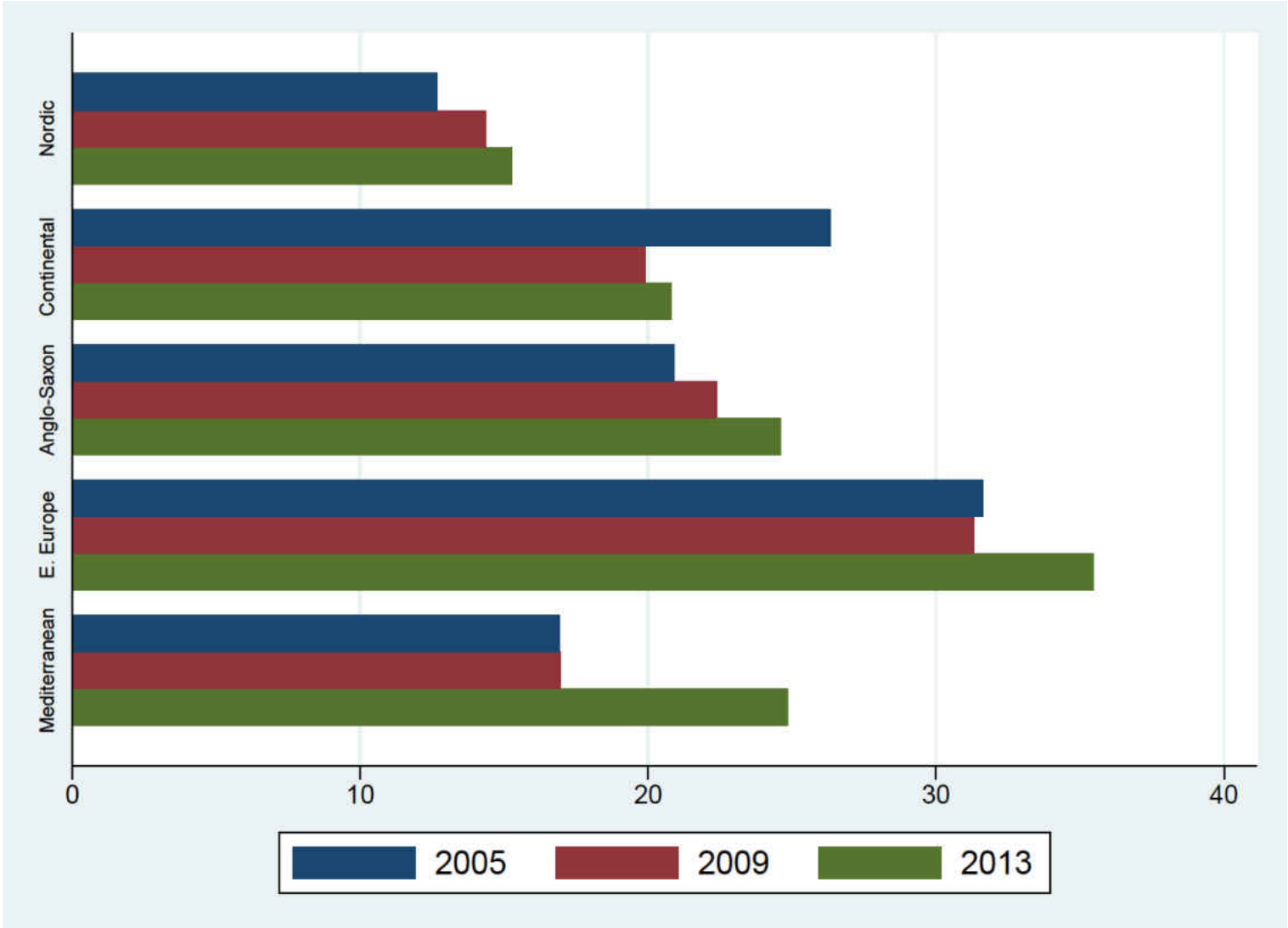

Figure 12: Average Percentage of Youth (15 to 24) Employed in Shift Work in Regions of the EU (2005. 2009, 2013).
Note: Refers to the percentage of shift workers as a percentage of employed youth of the same age group. Source: Eurostat EU-SILC (2016).

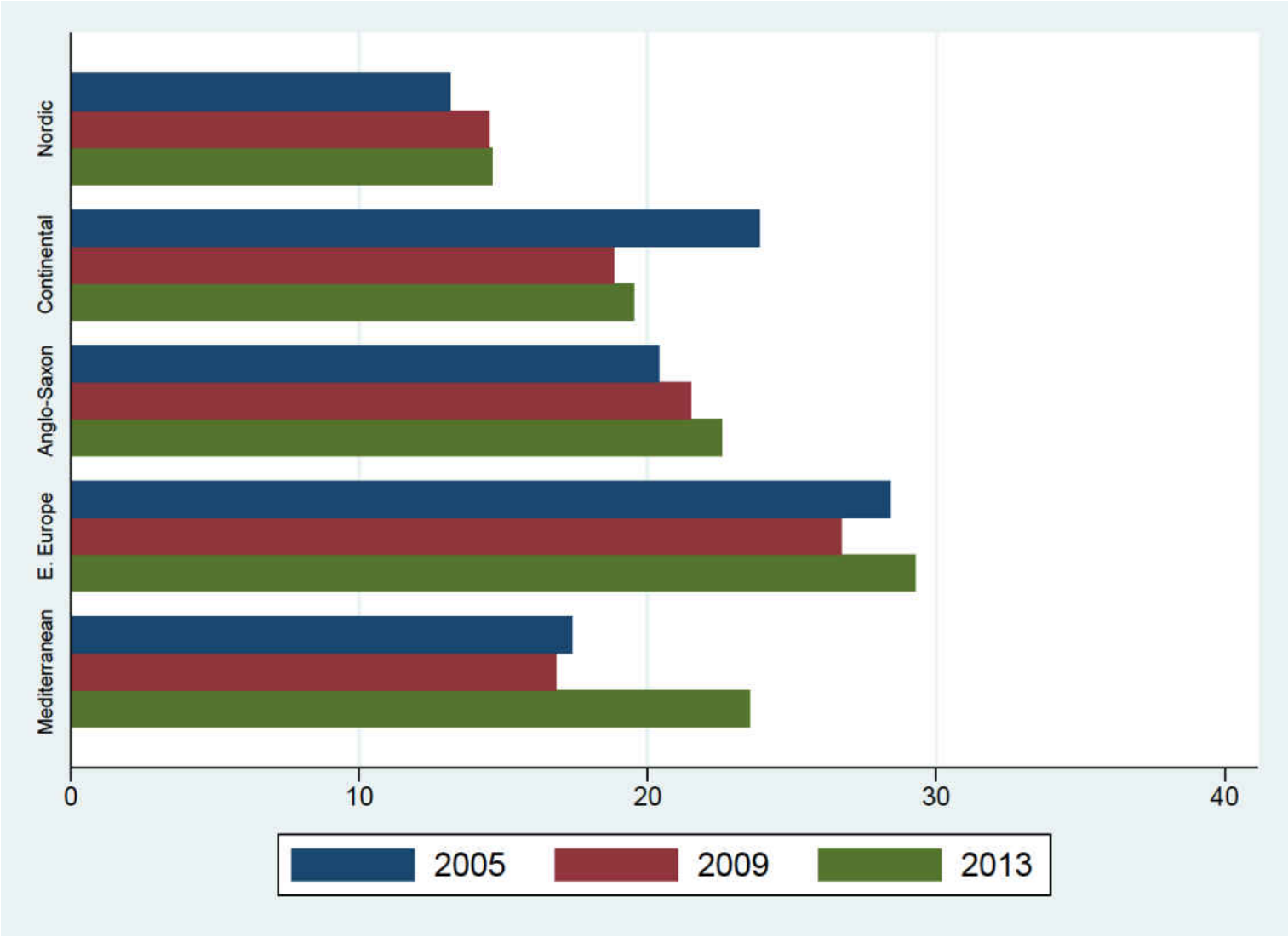

Figure 13: Average Percentage of Youth (15 to 29) Employed in Shift Work in Regions of the EU (2005. 2009, 2013)
Note: Refers to the percentage of shift workers as a percentage of employed youth of the same age group. Source: Eurostat EU-SILC (2016).

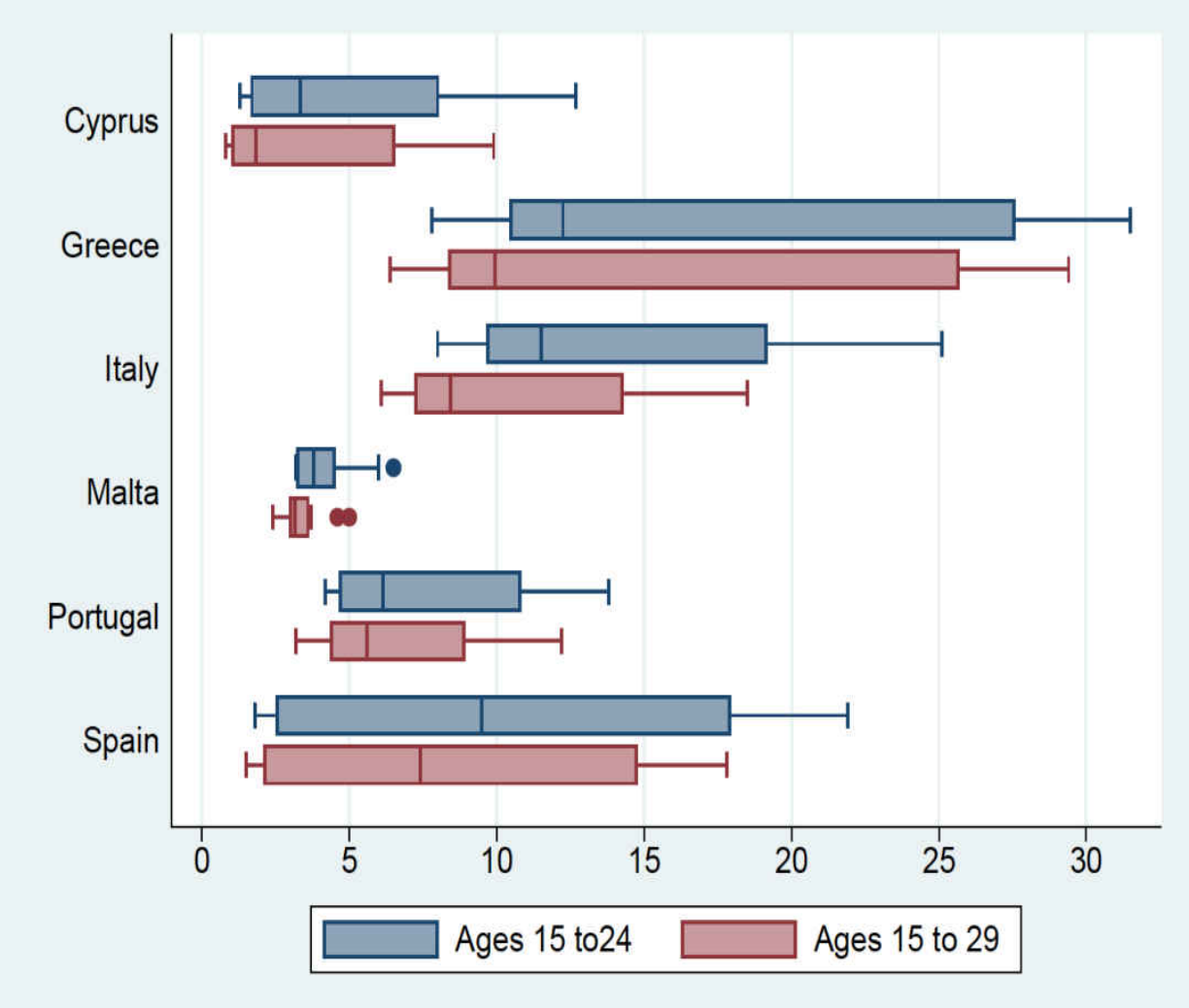

Figure 14: Long-Term Unemployment for Mediterranean Countries (2004 – 2015)
Source: Eurostat EU-LFS (2016).

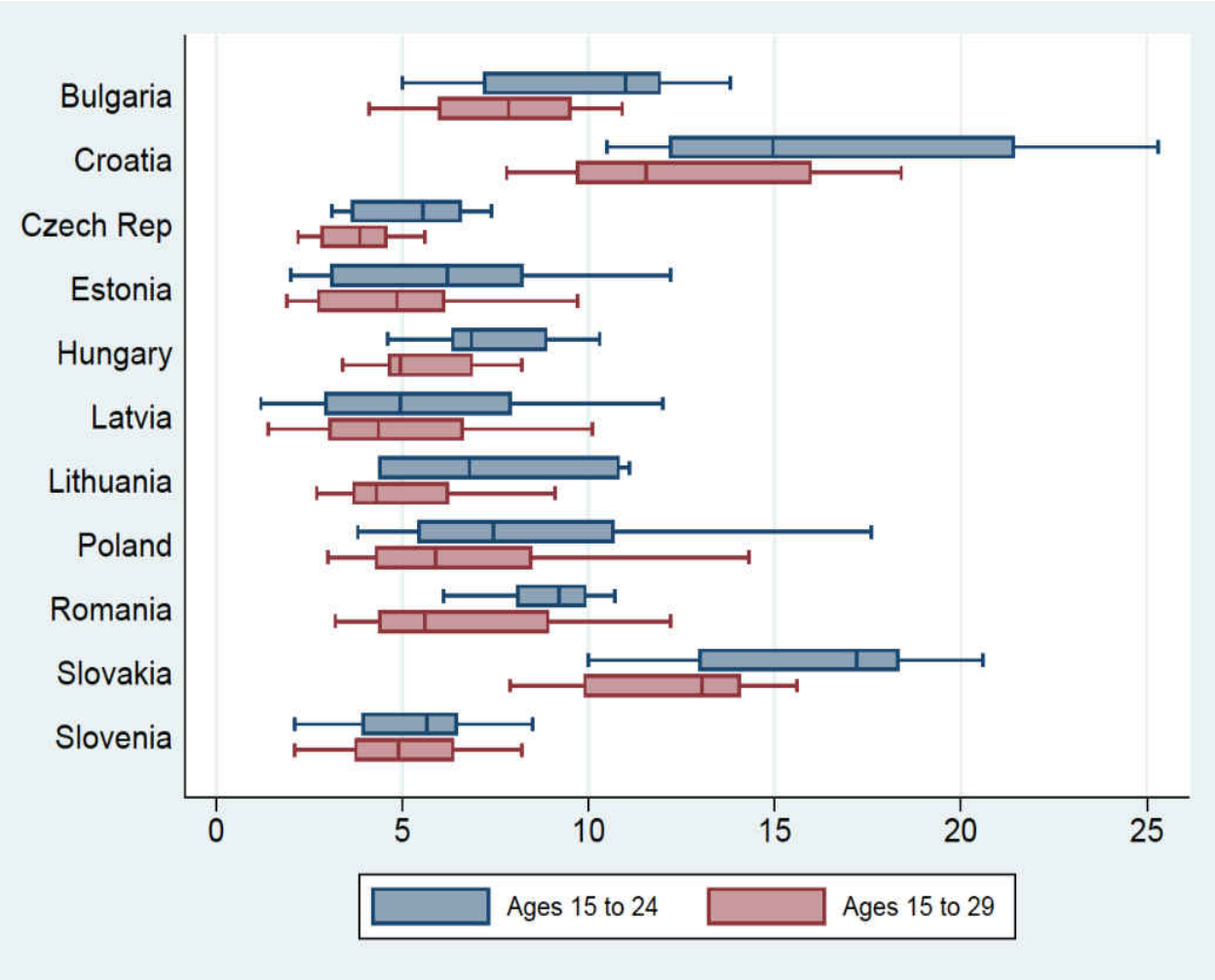

Figure 15: Long-Term Unemployment for Eastern European Countries (2004 – 2015)
Source: Eurostat EU-LFS (2016).

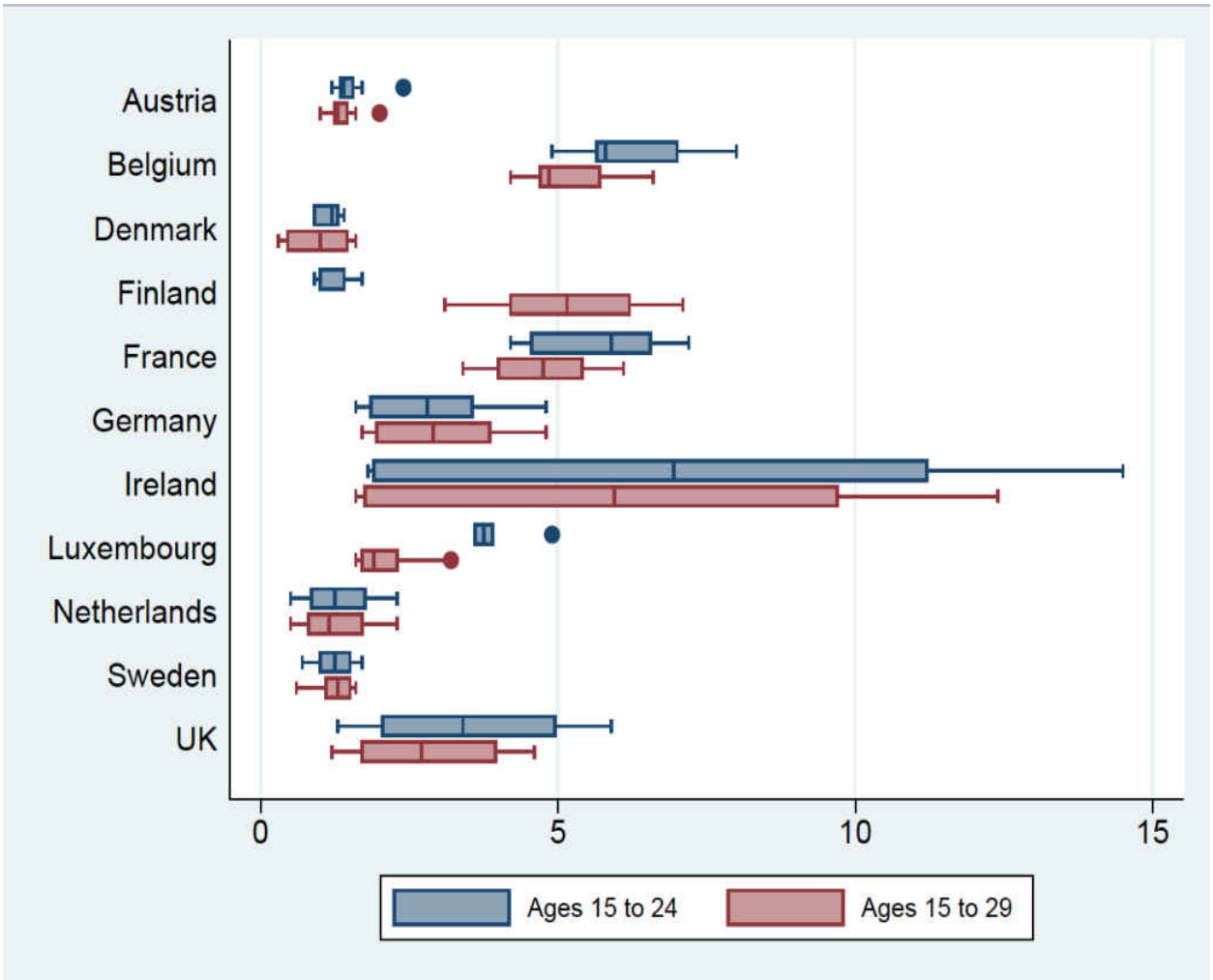

Figure 16: Long-Term Unemployment for Continental, Nordic, and Anglo-Saxon Countries (2004 – 2015)
Source: Eurostat EU-LFS (2016).

APPENDIX D: CHAPTER FIVE TABLES

Table 1: Youth Labor Market Outcomes and Discouraged, Inactive NEETs (2005-2013)

	Ages 15 to 24		Ages 15 to 29	
	Model 1	**Model 2**	**Model 3**	**Model 4**
YOUTH INVOLUNTARY NSE	0.147**	0.049	0.212***	0.175**
	-0.0653	-0.092	-0.0604	-0.0697
YOUTH IN-WORK POVERTY RISK	0.333*	0.403**	0.372	0.385*
	-0.196	-0.186	-0.237	-0.222
YOUTH LOW INTENSITY HSHLD	0.422	0.577**	0.452*	0.601**
	-0.277	-0.261	-0.235	-0.243
YOUTH SHIFT WORK	0.304**	0.265	0.292**	0.308*
	-0.14	-0.164	-0.141	-0.158
DECREASED WORK SECURITY (t-1)	0.362**	0.352*	0.264*	0.241
	-0.167	-0.183	-0.146	-0.15
YOUTH LONG-TERM UE (t-1)	-0.469***	-0.507***	-0.412	-0.475*
	-0.166	-0.163	-0.265	-0.257
Youth Secondary Education	0.408*	0.334*	0.332*	0.263
	-0.219	-0.196	-0.198	-0.187
Youth Tertiary Education	0.375	0.587	0.138	0.193
	-0.403	-0.381	-0.204	-0.202
Coordination of Wage Bargaining	-1.190*	-0.686	-1.499***	-1.256*
	-0.699	-0.695	-0.543	-0.661
ALMP Spending	0.707	2.219*	0.096	0.721
	-1.143	-1.15	-0.861	-1.094
GDP Growth	-0.107	-0.056	-0.034	-0.022
	-0.104	-0.104	-0.085	-0.092
Eastern		3.949***		1.849*
		-1.334		-0.947
Continental		5.008		4.394*
		-3.339		-2.515
Anglo-Saxon		-1.310		-2.168
		-1.761		-1.358
Mediterranean		2.209*		1.101
		-1.327		-1.138
Constant	-32.04**	-40.04***	-30.20**	-33.95**
	-14.65	-14.33	-13.96	-15.28
Observations	116	116	120	120
Number of Countries	23	23	24	24

Note: Point estimates from generalized estimating equation regressions, with robust standard errors (in grey). Countries included and time coverage are detailed in the appendix. Variable descriptions and sources are also detailed in the appendix. *,**,*** denote significance at the .10, .05, and .01 level, respectively.

Table 2: Youth Labor Market Outcomes and the Percentage of All NEETs Inactive due to Discouragement (2005-2013)

	Ages 15 to 24		Ages 15 to 29	
	Model 5	**Model 6**	**Model 7**	**Model 8**
YOUTH INVOLUNTARY NSE	0.068**	0.009	0.086***	0.078**
	-0.017	-0.0218	-0.0166	-0.0184
YOUTH IN-WORK POVERTY RISK	0.176	0.198**	0.172*	0.171*
	-0.109	-0.0956	-0.099	-0.093
YOUTH LOW INTENSITY HSHLD	0.270*	0.304*	0.147	0.165
	-0.155	-0.158	-0.118	-0.125
YOUTH SHIFT WORK	0.081	0.051	0.114*	0.113
	-0.059	-0.071	-0.063	-0.071
DECREASED WORK SECURITY (t-1)	0.137*	0.139	0.128**	0.126**
	-0.076	-0.087	-0.061	-0.062
YOUTH LONG-TERM UE (t-1)	-0.269***	-0.267***	-0.255**	-0.263**
	-0.08	-0.085	-0.114	-0.116
Youth Secondary Education	0.125	0.0855	0.093	0.078
	-0.103	-0.0822	-0.088	-0.076
Youth Tertiary Education	0.075	0.230	0.067	0.086
	-0.169	-0.145	-0.082	-0.081
Coordination of Wage Bargaining	-0.632	-0.404	-0.929**	-0.893**
	-0.421	-0.392	-0.383	-0.419
ALMP Spending	-0.76	0.006	-0.782	-0.646
	-0.657	-0.478	-0.527	-0.551
GDP Growth	-0.010	0.012	0.018	0.021
	-0.053	-0.051	-0.039	-0.040
Eastern		1.867***		0.463
		-0.667		-0.554
Continental		0.974		0.857
		-2.066		-1.399
Anglo-Saxon		-0.535		-0.616
		-0.904		-0.634
Mediterranean		0.795		0.188
		-0.734		-0.678
Constant	119.3***	117.9***	-6.876	-7.61
	-9.536	-12.57	-6.321	-6.377
Observations	116	116	120	120
Number of Countries	23	23	24	24

Note: Point estimates from generalized estimating equation regressions, with robust standard errors (in grey). Countries included and time coverage are detailed in the appendix. Variable descriptions and sources are also detailed in the appendix. *,**,*** denote significance at the .10, .05, and .01 level, respectively.

Table 3: Youth Labor Market Outcomes and the Percentage of All NEETs Inactive for Other Reasons (2005-2013)

	Ages 15 to 24		Ages 15 to 29	
	Model 9	**Model 10**	**Model 11**	**Model 12**
YOUTH INVOLUNTARY NSE	-0.301***	-0.299***	-0.324***	-0.340***
	-0.098	-0.083	-0.106	-0.119
YOUTH IN-WORK POVERTY RISK	0.180	0.110	0.236	0.374
	-0.128	-0.0945	-0.291	-0.290
YOUTH LOW INTENSITY HSHLD	0.057	-0.088	-0.076	-0.628*
	-0.353	-0.339	-0.458	-0.371
YOUTH SHIFT WORK	-0.587***	-0.680***	-0.533***	-0.699***
	-0.126	-0.123	-0.164	-0.230
DECREASED WORK SECURITY (t-1)	-0.363	-0.397*	-0.220	-0.210
	-0.235	-0.207	-0.269	-0.254
YOUTH LONG-TERM UE (t-1)	0.133	0.208	-0.331	0.112
	-0.226	-0.222	-0.329	-0.329
Youth Secondary Education	-0.101	-0.060	-0.003	0.402
	-0.217	-0.205	-0.243	-0.307
Youth Tertiary Education	-1.036***	-0.827***	-0.778***	-0.952***
	-0.365	-0.273	-0.197	-0.168
Coordination of Wage Bargaining	1.706***	1.832***	1.692**	1.233***
	-0.453	-0.522	-0.724	-0.475
ALMP Spending	-5.140***	-4.805***	-5.246***	-6.207***
	-1.132	-0.979	-1.522	-1.629
GDP Growth	0.303***	0.315***	0.346***	0.276***
	-0.088	-0.090	-0.106	-0.101
Eastern		-1.931*		-4.056***
		-0.994		-1.212
Continental		-17.650***		-18.030**
		-5.021		-7.537
Anglo-Saxon		2.451		7.617***
		-2.095		-1.888
Mediterranean		-1.965***		-1.437
		-0.746		-1.208
Constant	97.69***	109.1***	98.02***	97.79***
	-14.06	-15.16	-14.23	-13.84
Observations	117	117	116	116
Number of Countries	23	23	24	24

Note: Point estimates from generalized estimating equation regressions, with robust standard errors (in grey). Countries included and time coverage are detailed in the appendix. Variable descriptions and sources are also detailed in the appendix. *,**,*** denote significance at the .10, .05, and .01 level, respectively.

Table 4: Youth Labor Market Outcomes and the Percentage of All NEETs in Unemployed Status (2005-2013)

	Ages 15 to 24		Ages 15 to 29	
	Model 13	**Model 14**	**Model 15**	**Model 16**
YOUTH INVOLUNTARY NSE	0.121	0.210**	0.150	0.153
	-0.104	-0.087	-0.112	-0.117
YOUTH IN-WORK POVERTY RISK	-0.218	-0.143	-0.196	-0.192
	-0.189	-0.223	-0.324	-0.354
YOUTH LOW INTENSITY HSHLD	-0.984**	-1.288**	-0.889	-0.933
	-0.497	-0.584	-0.694	-0.774
YOUTH SHIFT WORK	0.593***	0.764***	0.416	0.492**
	-0.17	-0.158	-0.277	-0.248
DECREASED WORK SECURITY (t-1)	0.264	0.375	0.092	0.137
	-0.258	-0.276	-0.243	-0.269
YOUTH LONG-TERM UE (t-1)	0.418	0.337	1.050**	1.065**
	-0.268	-0.277	-0.425	-0.446
Youth Secondary Education	-0.0479	0.025	-0.0103	-0.0854
	-0.247	-0.223	-0.230	-0.243
Youth Tertiary Education	1.554***	1.222***	0.897***	0.821***
	-0.477	-0.387	-0.264	-0.247
Coordination of Wage Bargaining	1.013	0.694	0.213	0.065
	-1.405	-1.233	-1.583	-1.535
ALMP Spending	6.310***	6.048***	7.232***	6.766***
	-1.359	-1.467	-1.549	-1.829
GDP Growth	-0.354***	-0.339***	-0.374***	-0.399***
	-0.122	-0.124	-0.103	-0.108
Eastern		0.836		1.247
		-1.273		-1.984
Continental		18.86***		13.21**
		-5.699		-6.095
Anglo-Saxon		8.499***		4.992*
		-2.777		-2.661
Mediterranean		1.574*		0.792
		-0.918		-1.319
Constant	15.92	0.671	10.45	7.897
	-15.17	-13.6	-14.18	-13.6
Observations	132	132	152	152
Number of Countries	24	24	26	26

Note: Point estimates from generalized estimating equation regressions, with robust standard errors (in grey). Countries included and time coverage are detailed in the appendix. Variable descriptions and sources are also detailed in the appendix. *,**,*** denote significance at the .10, .05, and .01 level, respectively.

APPENDIX E: SUPPLEMENTAL TALBES

Table 5: Total NEET Rate (Ages 15 to 24) in Population

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	12.90	12.70	11.70	11.00	10.90	12.40	12.80	12.90	13.20	13.00	12.50	12.00
Belgium	15.40	13.00	11.20	11.20	10.10	11.10	10.90	11.80	12.30	12.70	12.00	12.20
Bulgaria	26.40	25.10	22.20	19.10	17.40	19.50	21.00	21.80	21.50	21.60	20.20	19.30
Czech Rep	13.70	13.30	9.20	6.90	6.70	8.50	8.80	8.30	8.90	9.10	8.10	7.50
Denmark	5.10	4.30	3.60	4.30	4.30	5.40	6.00	6.30	6.60	6.00	5.80	6.20
Germany	10.10	10.90	9.60	8.90	8.40	8.80	8.30	7.50	7.10	6.30	6.40	6.20
Estonia	12.50	10.60	8.80	8.90	8.70	14.50	14.00	11.60	12.20	11.30	11.70	10.80
Ireland	11.90	10.90	10.10	10.80	15.00	18.60	19.20	18.80	18.70	16.10	15.20	14.30
Greece	16.60	15.90	12.00	11.30	11.40	12.40	14.80	17.40	20.20	20.40	19.10	17.20
Spain	12.50	13.00	11.80	12.00	14.30	18.10	17.80	18.20	18.60	18.60	17.10	15.60
France	10.90	11.20	11.30	10.70	10.50	12.70	12.70	12.30	12.50	11.20	11.40	11.90
Croatia	17.10	16.70	14.20	12.90	11.60	13.40	15.70	16.20	16.60	19.60	19.30	18.50
Italy	16.80	17.10	16.80	16.10	16.60	17.60	19.00	19.70	21.00	22.20	22.10	21.40
Cyprus	9.40	19.50	10.70	9.00	9.70	9.90	11.70	14.60	16.00	18.70	17.00	15.20
Latvia	12.40	10.60	11.50	11.90	11.80	17.50	17.80	16.00	14.90	13.00	12.00	10.50
Lithuania	10.60	8.80	8.30	7.10	8.80	12.10	13.20	11.80	11.20	11.10	9.90	9.20
Luxembourg	6.30	5.50	6.70	5.70	6.20	5.80	5.10	4.70	5.90	5.00	6.30	6.20
Hungary	12.70	12.90	12.40	11.50	11.50	13.60	12.60	13.20	14.80	15.50	13.60	11.60
Malta	13.10	11.90	10.30	11.50	8.30	9.90	9.50	10.20	10.60	9.90	10.50	10.40
Netherlands	5.30	5.30	4.00	3.50	3.40	4.10	4.30	4.30	4.90	5.60	5.50	4.70
Austria	9.10	8.60	7.80	7.40	7.40	8.20	7.40	7.30	6.80	7.30	7.70	7.50
Poland	15.00	13.90	12.60	10.60	9.00	10.10	10.80	11.50	11.80	12.20	12.00	11.00
Portugal	11.20	11.10	10.60	11.20	10.20	11.20	11.40	12.60	13.90	14.10	12.30	11.30
Romania	19.80	16.80	14.80	13.30	11.60	13.90	16.60	17.50	16.80	17.00	17.00	18.10
Slovenia	7.50	8.90	8.50	6.70	6.50	7.50	7.10	7.10	9.30	9.20	9.40	9.50
Slovakia	17.90	15.80	14.40	12.50	11.10	12.50	14.10	13.80	13.80	13.70	12.80	13.70
Finland	9.10	7.80	7.70	7.00	7.80	9.90	9.00	8.40	8.60	9.30	10.20	10.60
Sweden	7.60	10.50	9.30	7.50	7.80	9.60	7.70	7.50	7.80	7.50	7.20	6.70
UK	8.40	8.40	8.60	11.90	12.10	13.20	13.60	14.20	13.90	13.20	11.90	11.10

Source: Eurostat EU-LFS (2016).

Table 6: Percentage of NEETs (Ages 15 to 24) that are "Inactive"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	50.39	51.18	52.14	54.55	54.13	49.19	49.22	48.84	46.97	46.92	48.80	50.83
Belgium	59.09	54.62	50.89	54.46	52.48	45.95	44.04	57.63	58.54	51.97	51.67	51.64
Bulgaria	73.48	76.49	77.03	79.06	79.89	77.44	70.48	69.72	65.12	66.20	71.29	74.09
Czech Rep	48.91	54.14	40.22	55.07	58.21	43.53	43.18	44.58	39.33	43.96	48.15	53.33
Denmark	54.90	62.79	55.56	62.79	53.49	51.85	55.00	60.32	62.12	65.00	62.07	64.52
Germany	46.53	44.04	44.79	47.19	51.19	50.00	54.22	57.33	59.15	55.56	56.25	61.29
Estonia	52.00	56.60	64.77	69.66	63.22	42.07	36.43	46.55	49.18	51.33	61.54	64.81
Ireland	68.07	66.06	63.37	61.11	54.67	47.85	47.40	46.28	45.99	48.45	53.29	55.94
Greece	46.39	52.20	42.50	46.90	50.88	45.97	39.86	34.48	31.68	29.90	32.98	36.05
Spain	40.00	51.54	53.39	52.50	41.96	32.60	31.46	29.67	28.49	29.03	30.41	32.69
France	43.12	41.96	41.59	43.93	44.76	39.37	40.94	42.28	40.80	41.96	42.98	44.54
Croatia	28.65	30.54	34.51	32.56	31.03	35.07	30.57	29.01	27.71	29.08	24.87	27.03
Italy	58.93	59.65	64.88	67.70	67.47	63.64	63.68	63.96	57.62	56.31	53.85	56.07
Cyprus	65.96	73.33	69.16	64.44	70.10	55.56	52.14	47.95	46.25	36.90	31.76	39.47
Latvia	57.26	68.87	65.22	75.63	65.25	42.86	42.70	46.25	44.97	46.92	50.00	50.48
Lithuania	54.72	61.36	72.29	74.65	70.45	47.11	37.88	39.83	41.96	47.75	46.46	53.26
Luxembourg	34.92	36.36	40.30	36.84	22.58	34.48	50.98	42.55	38.98	52.00	44.44	48.39
Hungary	70.08	65.12	63.71	62.61	60.87	55.88	52.38	55.30	54.05	56.13	58.82	56.90
Malta	44.27	43.70	42.72	53.04	54.22	45.45	49.47	50.98	48.11	50.51	55.24	57.69
Netherlands	58.49	62.26	67.50	71.43	73.53	65.85	65.12	60.47	57.14	55.36	61.82	61.70
Austria	52.75	50.00	55.13	51.35	56.76	48.78	52.70	52.05	48.53	53.42	49.35	50.67
Poland	33.33	34.53	42.06	53.77	60.00	51.49	47.22	45.22	45.76	44.26	45.83	49.09
Portugal	48.21	45.95	44.34	45.54	43.14	39.29	38.60	34.92	30.22	34.04	33.33	33.63
Romania	63.13	64.88	58.11	56.39	54.31	56.83	62.05	61.14	61.90	61.18	61.76	64.64
Slovenia	42.67	52.81	52.94	59.70	52.31	50.67	46.48	45.07	45.16	43.48	45.74	51.58
Slovakia	31.28	34.81	37.50	46.40	45.05	34.40	29.08	29.71	28.26	27.01	32.81	40.15
Finland	57.14	52.56	53.25	55.71	58.97	52.53	53.33	55.95	56.98	55.91	56.86	51.89
Sweden	50.00	53.33	49.46	49.33	50.00	44.79	46.75	46.67	48.72	50.67	48.61	52.24
UK	55.95	55.95	53.49	57.14	55.37	50.00	50.00	46.48	47.48	46.97	52.10	55.86

Source: Eurostat EU-LFS (2016).

Table 7: Percentage of NEETs (Ages 15 to 24) that are "Unemployed"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	49.61	48.82	47.86	44.55	45.87	50.81	50.78	51.16	52.27	53.08	51.20	49.17
Belgium	40.91	45.38	49.11	45.54	48.51	54.05	55.05	42.37	42.28	48.03	49.17	48.36
Bulgaria	26.52	23.51	22.97	21.47	20.11	22.56	29.52	30.28	34.88	33.80	28.71	25.91
Czech Rep	51.09	45.86	59.78	44.93	41.79	57.65	57.95	55.42	59.55	57.14	51.85	46.67
Denmark	47.06	37.21	44.44	37.21	46.51	48.15	46.67	39.68	37.88	35.00	37.93	35.48
Germany	53.47	55.96	55.21	52.81	50.00	50.00	45.78	41.33	40.85	44.44	42.19	38.71
Estonia	48.00	43.40	35.23	29.21	36.78	57.93	63.57	52.59	50.82	48.67	38.46	36.11
Ireland	31.09	33.94	36.63	39.81	44.67	52.15	52.60	53.19	54.01	51.55	46.71	44.06
Greece	53.01	47.80	56.67	53.10	49.12	54.03	59.46	64.94	68.32	70.10	67.02	63.95
Spain	60.00	48.46	47.46	47.50	57.34	67.40	68.54	70.33	71.51	71.51	70.18	67.95
France	56.88	58.04	58.41	55.14	55.24	60.63	58.27	56.91	59.20	58.04	57.02	55.46
Croatia	70.76	69.46	65.49	67.44	69.83	64.93	69.43	70.99	72.29	70.92	75.13	72.43
Italy	41.67	40.94	34.52	32.92	32.53	35.80	36.32	36.04	42.38	43.69	46.15	43.93
Cyprus	32.98	26.67	31.78	35.56	29.90	44.44	47.86	52.05	53.75	63.10	68.24	60.53
Latvia	41.94	30.19	33.91	25.21	34.75	57.14	57.30	53.75	55.03	53.85	50.00	49.52
Lithuania	45.28	37.50	27.71	23.94	29.55	53.72	62.12	60.17	58.04	52.25	53.54	46.74
Luxembourg	63.49	63.64	59.70	63.16	77.42	65.52	49.02	57.45	61.02	48.00	55.56	50.00
Hungary	29.92	35.66	36.29	36.52	38.26	44.12	46.83	44.70	45.95	43.87	41.18	43.10
Malta	55.73	56.30	57.28	46.96	45.78	53.54	51.58	49.02	52.83	50.51	44.76	42.31
Netherlands	41.51	37.74	35.00	28.57	26.47	34.15	34.88	39.53	40.82	44.64	38.18	38.30
Austria	47.25	50.00	44.87	50.00	43.24	51.22	47.30	47.95	51.47	47.95	50.65	50.67
Poland	66.67	66.19	57.94	46.23	40.00	48.51	52.78	54.78	54.24	56.56	54.17	50.91
Portugal	50.89	53.15	55.66	53.57	56.86	60.71	62.28	64.29	69.78	65.25	66.67	65.49
Romania	36.87	35.12	41.89	43.61	45.69	43.17	37.95	38.86	38.10	38.82	38.82	35.36
Slovenia	57.33	48.31	47.06	40.30	47.69	49.33	53.52	54.93	54.84	57.61	54.26	48.42
Slovakia	68.72	65.19	62.50	54.40	54.05	65.60	70.92	70.29	71.74	72.99	67.19	59.85
Finland	41.76	47.44	46.75	44.29	42.31	46.46	46.67	44.05	43.02	44.09	43.14	47.17
Sweden	50.00	46.67	50.54	49.33	50.00	55.21	53.25	54.67	51.28	49.33	51.39	47.76
UK	45.24	45.24	46.51	42.86	44.63	50.00	50.00	53.52	52.52	53.79	47.06	44.14

Source: Eurostat EU-LFS (2016).

Table 8: Percentage of NEETs (Ages 15 to 24) that are "Discouraged"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	4.55	4.68	4.82	5.62	5.40	5.54	6.03	6.01	5.81	6.52	6.57	6.43
Belgium		0.68	0.20	1.33	2.01	1.57	1.11	0.62	1.18	1.92	1.87	2.43
Bulgaria	32.14	28.10	23.56	22.52	18.71	20.98	22.05	25.53	23.32	23.70	21.21	23.48
Czech Rep		0.60	0.25		0.16	0.69	0.85		1.27		1.75	
Denmark							1.45	0.99	1.16	1.07		0.94
Germany	0.95	1.41	0.69				0.81		0.73	0.90	0.56	1.24
Estonia	3.97	4.39	3.56	7.07	4.94	4.29	5.20	8.23	4.58	5.57	4.11	2.66
Ireland				1.63	2.42	5.43	5.95	5.95	4.92	3.52	3.24	2.87
Greece	0.95	0.50	0.53	0.70	1.13	0.69	0.47	0.90	1.17	1.01	0.41	0.15
Spain	1.26	3.36	4.33	2.31	1.98	3.52	4.29	4.07	4.24	5.08	4.45	3.01
France	1.23	1.69	2.26	1.30	0.86	2.04	1.52	1.18	1.22	2.76	3.10	4.50
Croatia		7.53	5.31	2.13	1.95	8.36	9.18	4.58	4.24	8.33	3.38	3.67
Italy	11.71	14.41	13.56	18.45	16.98	16.13	16.48	16.00	14.11	14.20	15.09	13.68
Cyprus		0.71				1.83	2.10	2.76	2.19	2.84	1.75	1.58
Latvia		2.85		1.75	2.86	4.88	7.74	7.49	2.89	5.63	5.16	2.74
Lithuania	4.23	5.44	6.21	5.24	0.91	5.90	5.06	3.87	2.50	3.34	2.10	3.02
Luxembourg												
Hungary	16.43	11.26	10.42	10.37	10.78	11.44	10.75	13.05	12.16	13.89	11.19	9.35
Malta		0.76		1.10	1.48			2.60				
Netherlands	6.83	5.29	4.67	4.19	6.06	3.86	4.80	3.00	6.17	3.40	6.20	3.54
Austria		0.68	0.81	0.84	0.48	0.41	0.95	1.07	0.54	2.78	1.78	0.65
Poland	2.58	3.13	4.81	5.06	5.62	5.70	5.79	5.87	6.43	7.68	6.86	6.95
Portugal		1.40	1.52	1.75	1.14	1.75	1.54	5.60	6.38	7.56	7.08	6.56
Romania	10.95	14.98	8.40	10.69	9.05	11.28	14.15	19.71	16.54	16.38	15.43	8.52
Slovenia		1.56	1.32	1.24	0.44	2.01	1.86	1.12	2.39	2.14	3.95	2.86
Slovakia	0.83	0.96	2.89	3.59	2.84	2.01	1.72	2.45	0.44	0.42		
Finland	2.56	3.61	2.50	2.47	3.69	5.23	4.56	4.35	6.91	4.26	3.63	5.17
Sweden		3.99	1.43	1.35	1.62	1.60	2.23	2.34	2.07	2.88	1.49	1.53
UK	0.58	1.07			0.77	0.53	1.24	0.34	0.62		0.55	

Source: Eurostat EU-LFS (2016). Note: Author's calculations.

Table 9: Percentage of NEETs (Ages 15 to 29) that are "Inactive"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	53.59	54.67	55.71	59.09	58.78	53.06	51.97	51.95	50.00	49.06	50.65	53.38
Belgium	57.06	52.86	51.94	53.08	53.33	48.44	45.38	57.97	56.25	53.02	50.35	52.78
Bulgaria	72.47	75.75	75.31	77.34	78.92	76.92	68.51	67.21	63.16	64.20	68.75	72.52
Czech Rep	61.02	63.31	62.04	69.83	72.90	57.48	55.81	59.50	56.59	57.03	61.16	65.25
Denmark	53.13	67.80	57.45	64.15	62.00	52.31	52.05	57.89	60.98	62.67	60.27	63.64
Germany	51.94	48.55	48.82	51.72	55.45	53.51	57.41	60.82	61.29	59.77	62.07	63.53
Estonia	58.44	62.96	68.52	71.55	71.05	49.18	40.88	47.62	56.29	58.04	63.77	68.80
Ireland	70.31	69.49	66.37	64.71	56.79	48.77	47.44	45.45	47.42	48.92	52.49	55.95
Greece	47.72	49.73	45.16	47.37	50.68	45.28	38.71	30.87	26.12	23.51	25.09	26.97
Spain	43.06	52.86	53.49	54.69	43.14	32.66	29.50	29.13	26.58	26.22	28.02	30.41
France	47.33	46.21	46.97	48.44	50.79	43.54	44.59	44.90	45.70	44.93	45.77	47.62
Croatia	31.77	34.08	38.61	34.48	36.92	38.93	34.09	30.37	27.41	31.39	28.44	28.86
Italy	61.22	63.00	66.15	69.68	68.91	65.85	65.45	65.78	59.24	57.69	55.73	57.59
Cyprus	69.61	70.39	67.23	66.99	70.64	60.00	53.49	48.65	42.77	33.33	30.77	35.68
Latvia	57.69	68.79	67.88	74.10	63.97	43.27	40.58	46.60	45.93	51.28	53.95	53.62
Lithuania	57.36	64.49	72.82	76.24	73.11	45.33	37.06	40.82	43.17	46.72	48.84	52.54
Luxembourg	45.68	48.53	45.00	46.58	33.70	45.33	54.10	50.00	47.37	50.00	38.46	48.68
Hungary	75.15	70.76	68.48	68.79	67.30	60.34	58.19	60.23	56.68	59.78	62.20	62.91
Malta	59.09	62.00	59.56	64.23	66.67	61.90	61.48	60.33	57.26	56.64	58.97	61.40
Netherlands	63.64	65.15	69.09	75.51	78.26	67.92	66.67	64.41	61.54	57.33	61.84	62.69
Austria	60.19	57.43	60.42	60.64	64.04	56.25	59.34	58.82	54.88	56.98	56.99	55.17
Poland	37.24	39.13	46.99	59.72	65.35	58.57	52.70	51.97	50.96	49.38	51.61	56.16
Portugal	50.00	43.90	42.50	43.31	42.02	37.60	37.50	33.81	28.21	32.32	34.25	35.61
Romania	65.57	66.85	60.61	61.49	61.36	61.78	64.55	64.62	64.25	64.29	64.32	66.99
Slovenia	41.46	49.48	50.52	57.32	52.00	50.54	43.62	40.43	40.68	40.31	42.64	42.28
Slovakia	38.68	44.55	48.62	55.03	54.90	47.40	41.05	41.71	38.30	37.89	43.96	48.84
Finland	59.81	56.84	58.51	61.90	61.80	55.75	58.10	59.00	60.58	58.72	58.47	55.65
Sweden	48.10	50.96	51.04	51.90	53.75	46.46	50.60	50.63	51.19	51.90	52.56	54.05
UK	61.80	62.92	60.67	65.12	63.36	56.25	56.85	53.90	54.90	54.79	60.45	62.99

Source: Eurostat EU-LFS (2016). N

Table 10: Percentage of NEETs (Ages 15 to 29) that are "Unemployed"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	45.75	44.67	43.57	40.91	41.22	47.62	48.03	48.05	50.00	50.31	48.70	46.62
Belgium	42.94	47.14	48.06	46.92	46.67	51.56	53.85	42.75	43.75	46.98	49.65	47.22
Bulgaria	27.53	24.25	24.69	22.66	21.08	23.08	31.06	33.20	36.84	35.80	31.25	27.48
Czech Rep	38.98	36.69	37.96	30.17	27.10	41.73	44.19	41.32	44.19	42.97	38.84	34.75
Denmark	48.44	33.90	40.43	35.85	40.00	47.69	47.95	42.11	39.02	37.33	38.36	37.66
Germany	48.84	51.45	51.18	48.28	44.55	46.49	42.59	40.21	38.71	40.23	37.93	36.47
Estonia	40.91	36.30	31.48	27.59	28.95	51.37	58.56	52.38	43.71	41.26	36.23	31.20
Ireland	28.91	30.51	33.63	35.29	43.21	51.72	52.56	54.09	52.58	51.08	47.51	44.05
Greece	52.28	50.27	54.84	52.63	49.32	54.72	61.29	69.13	73.88	76.49	74.91	73.03
Spain	56.25	47.14	45.74	45.31	56.21	67.34	70.50	70.87	73.42	73.78	72.46	70.10
France	52.67	53.79	53.03	51.56	50.00	55.78	55.41	54.42	54.30	55.80	54.23	52.38
Croatia	68.23	65.92	61.39	64.83	63.08	61.07	66.48	69.63	72.59	68.61	71.56	71.64
Italy	38.78	37.50	33.33	30.32	31.09	34.15	34.55	34.22	40.34	42.31	44.66	42.41
Cyprus	30.39	29.61	32.77	33.01	29.36	40.00	46.51	51.35	57.23	66.67	69.23	63.78
Latvia	42.95	31.21	32.12	25.90	36.03	56.73	59.42	53.40	54.07	48.72	46.05	46.38
Lithuania	42.64	35.51	27.18	22.77	26.89	54.67	62.94	58.50	56.83	54.01	51.16	47.46
Luxembourg	54.32	50.00	55.00	53.42	66.30	54.67	45.90	50.00	51.32	50.00	61.54	50.00
Hungary	24.85	29.24	31.52	31.21	32.70	39.11	42.37	39.77	43.32	40.76	37.80	37.09
Malta	40.91	37.33	40.44	35.77	33.33	38.10	38.52	39.67	42.74	43.36	41.03	38.60
Netherlands	36.36	34.85	30.91	24.49	23.91	30.19	33.33	35.59	38.46	42.67	38.16	37.31
Austria	40.78	42.57	38.54	39.36	35.96	43.75	40.66	41.18	46.34	44.19	43.01	44.83
Poland	62.76	61.41	53.01	40.28	35.43	41.43	46.62	48.03	49.04	50.62	48.39	43.84
Portugal	50.00	56.10	57.50	56.69	57.98	61.60	62.50	66.19	71.79	67.68	65.75	65.15
Romania	34.43	33.15	39.39	38.51	38.64	38.22	35.45	35.90	35.75	35.71	35.68	33.49
Slovenia	58.54	50.52	49.48	43.90	48.00	50.54	56.38	59.57	59.32	59.69	58.14	57.72
Slovakia	61.32	55.45	51.38	44.97	44.44	53.18	58.95	58.29	61.70	62.11	56.04	51.74
Finland	40.19	43.16	41.49	38.10	38.20	44.25	42.86	41.00	39.42	41.28	41.53	44.35
Sweden	51.90	49.04	50.00	48.10	47.50	53.54	49.40	49.37	48.81	46.84	47.44	45.95
UK	38.20	37.08	39.33	34.88	36.64	43.75	43.15	46.10	45.10	45.21	39.55	37.01

Source: Eurostat EU-LFS (2016)..

Table 11: Percentage of NEETs (Ages 15 to 29) that are "Discouraged"

GEO/TIME	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
EU28	5.25	5.24	4.73	5.09	4.66	4.91	5.33	5.79	5.42	5.92	5.86	5.30
Belgium		0.76	0.51	1.20	1.74	1.46	1.12	0.93	1.45	2.11	1.92	2.14
Bulgaria	29.81	26.97	21.97	20.60	17.16	19.59	19.26	21.95	21.73	21.06	19.76	20.90
Czech Rep		0.55	0.66		0.29	0.48	0.77		1.23			
Denmark									1.04	1.06		
Germany	0.94	1.24					0.80		0.72	0.86	0.63	1.04
Estonia	5.71	6.20	2.89	4.71		3.34	4.07	4.62	3.13	3.54	3.58	2.63
Ireland				1.51	1.81	5.32	5.80	5.40	4.75	3.54	3.21	2.48
Greece	0.89	0.38	0.37	0.82	0.90	0.56	0.34	0.64	0.81	0.89	0.76	0.26
Spain	1.19	2.75	2.77	1.72	1.69	2.67	3.29	3.67	2.94	4.04	2.74	2.47
France	0.95	1.49	1.41	1.26	0.86	1.71	1.24	1.23	1.14	2.44	2.85	3.54
Croatia		7.44	5.06	3.71	2.15	6.51	7.35	4.79	6.00	9.10	4.48	4.35
Italy	10.67	12.63	12.61	16.34	15.76	14.93	15.21	15.09	13.68	13.73	14.67	13.68
Cyprus								2.25	2.49	2.66	1.88	2.05
Latvia		3.91		2.17	2.94	6.09	6.94	7.61	3.92	5.66	5.71	4.16
Lithuania	6.09	4.95	4.12	3.83	1.25	4.99	3.86	3.03	1.78	2.80	2.80	3.36
Luxembourg												
Hungary	12.29	9.85	8.38	8.16	8.32	9.32	9.51	11.44	10.82	11.70	9.29	7.13
Malta												
Netherlands	6.41	5.07	4.87	4.46	5.61	3.94	5.52	5.37	4.60	4.54	6.58	3.76
Austria		0.77	0.76		0.44	0.49	0.70			1.83	1.32	0.73
Poland	2.83	2.75	4.58	4.11	4.24	4.71	4.36	4.75	5.05	6.01	5.87	6.33
Portugal		1.31	1.72	1.48	1.42	1.37	1.32	4.47	4.84	6.76	6.09	5.92
Romania	8.15	11.53	6.18	7.92	8.22	10.21	12.25	18.59	15.99	15.21	14.59	7.07
Slovenia		1.47	1.85	2.32	0.88	1.96	1.45		1.97	2.04	4.68	3.56
Slovakia		0.69	1.70	2.15	1.96	1.65	1.35	1.94	0.85	0.60	1.30	
Finland	2.60	3.09				4.21			5.18	3.76		3.72
Sweden		3.49	1.20	1.29	1.65	1.69	2.46	2.22	1.85	2.37	1.68	1.47
UK					0.81	0.60	1.05		0.55			

Source: Eurostat EU-LFS (2016

APPENDIX F: COUNTRY NOTES

Table 12: Country-Years in Analyses (Models 1-4; 5-8)

Austria	2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2006, 2007, 2009, 2010, 2013
Belgium	2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Bulgaria	2013 2009, 2010, 2012, 2013
Cyprus	2009, 2010, 2011, 2012, 2013 2011, 2012, 2013
Czech Rep	2005, 2006, 2008, 2009, 2010, 2012 2005, 2006, 2008, 2009, 2010, 2012
Germany	2005, 2006, 2010, 2012, 2013 2010, 2012, 2013
Denmark	2010, 2011, 2012, 2013 2012, 2013
Estonia	 2009, 2011, 2012, 2013
Spain	2004, 2006, 2007, 2008, 2009, 2010, 2011, 2013 2006, 2007, 2008, 2009, 2010, 2011, 2013
Finland	2004, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2009, 2012, 2013
France	2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Greece	2004, 2005, 2006, 2007, 2008, 2009, 2010, 2013 2006, 2007, 2008, 2009, 2010, 2013
Croatia	2013 2012
Hungary	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Ireland	2012, 2013 2012, 2013
Italy	2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Latvia	2008, 2009, 2010, 2011, 2012, 2013 2007, 2008, 2009, 2010, 2011, 2012, 2013
Lithuania	 2010, 2011, 2012, 2013
Malta	2007, 2008, 2011
Poland	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013

Portugal	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Romania	2007, 2008, 2009, 2010, 2011, 2012, 2013 2007, 2008, 2009, 2010, 2011, 2012
Sweden	2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Slovenia	2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013
Slovakia	2009, 2010, 2011, 2012, 2013 2005, 2008, 2009, 2010, 2011, 2012, 2013

REFERENCES

2015. “Global Terrorism Index: Measuring and Understanding the Impact of Terrorism.” Institute for Economics and Peace.

Alegre, Miquel Àngel1, David1 Casado, Jordi1 Sanz, and Federico A.1 Todeschini. 2015. "The impact of training-intensive labour market policies on labour and educational prospects of NEETs: evidence from Catalonia (Spain)." *Educational Research* 57(2): 151-167.

Adrianov, V., Bourmpoula, V., Chacaltana, J., et al. 2015. *World Employment and Social Outlook: Trends 2015.* International Labour Organization, Geneva. DOI: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_337069.pdf

Alfieri, Sara, SIroni, Emiliano, Marta, Elena, Rosina, Alessandro, and Daniela Marzana. 2015. “Young Italian NEETs (Not in Employment, Education, or Training) and the Influence of Their Family Background.” *Europe’s Journal of Psychology* 11(2): 311-322. DOI: 10.5964/ejop.v11i2.901

Antentas, Josep Maria. 2015. “Spain: the indignados rebellion of 2011 in perspective.” *Labor History* 56(2): pp. 136-160.

Armingeon, Klaus. 2007. "Active labour market policy, international organizations and domestic politics." *Journal Of European Public Policy* 14(6): 905-932.

Bardak, Ummuhan, Martiño Rubal Maseda, and Francesca Rosso. 2015. “Young People Not in Employment, Education or Training (NEET): An Overview in ETF Partner Countries.” Torino: European Training Foundation.

Bardone, Laura and Anne-Catherine Guio. 2005. “In-Work Poverty: New commonly agreed indicators at the EU level.” Eurostat Statistics in focus: Population and Social Conditions. Luxembourg: Publications Office of the European Union.

Berry, Craig. 2014. “Quantity over quality: a political economy of active labour market policy in the UK.” Policy Studies 35(6): 592-610. DOI: 10.1080/01442872. 2014.971730

Bertola, Giuseppe, Blau, Francine D., and Lawrence M. Kahn. 2007. “Labor market institutions and demographic employment patterns.” *Journal of Population Economics* 20(4): 833-867.

Brada, Josef C., Enrico Marelli, and Marcello Signorelli. 2014. "Young People and the Labor Market: Key Determinants and New Evidence." *Comparative Economic Studies* 56: 556-566.

Braziene, Ruta and Agne Dorelaitiene. 2012. "Transition of Youth from Education to the Labour Market: the Case of Lithuania." *Social Sciences* 3(77): 30-40.

Brunello G., Garibaldi, P, and E. Wasmer. 2007. *Education and Training in Europe*. Oxford University Press, New York. DOI: 10.1057/ces.2012.20

Bruno, Giovanni S. F., Enrico Marelli, and Marcello Signorelli. 2014. "The Rise of NEET and Youth Unemployment in EU Regions after the Crisis." *Comparative Economic Studies* 56(4): 592-615.

Buddlemeyer, Hielke, Mourre, gilles, and Melanie Ward. 2004. "Recent Developments in Part-Time Work in EU-15 Countries: Trends and Policy." IZA Discussion Paper No. 1415. Bonn: IZA.

Bussi, Margherita and Paolo R. Graziano, "The Youth Guarantee – A Case of Europeanisation of ALMP?." Presented at: Society for the Advancement of Socio-Economics Conference 2015: Inequality in the 21st Century, The London School of Economics, London.

Caliendo, Marco and Ricarda Schmidl. 2016. "Youth unemployment and active labor market policies in Europe." *IZA Journal of Labor Policy* 5: 1-30.

Calmfors, Lars, Anders Forslund, and Maria Hemstrom. 2001. "Does Active Labour Market Policy Work? Lessons from the Swedish Experiences." *Swedish Economic Policy Review* 8, no. 2: 61-124.

Caju, Philip Du, Gautier, Erwan, Momferatour, Daphne, and Melanie Ward-Warmedinger. 2008. "Institutional Features of Wage bargaining in 23 European Countries, the US and Japan." *European Central Bank*, Working Paper No. 974 (December 2008).

Carcillo, Stepahnie, Fernández, Rodrigo, Königs, Sebastian, and Andreea Minea. 2015.
2015. "NEET Youth in the Aftermath of the Crisis: Challenges and Policies." *OECD Social, Employment and Migration Working Papers* No. 164, OECD Publishing. http://dx.doi.org/10.1781/5js6363503f6-en

Caroleo, Floro Ernesto and Francesco Pastore. 2003. "*Youth participation in the labour market in Germany, Spain and Sweden*." In *Youth unemployment and social exclusion in Europe: A comparative study*. Hammer,Torild, Editor. Policy Press, Bristol. DOI: 10.1332/policypress/9781861343680.003.0007

Choudhry, Misbah, Marelli, Enrico, and Marco Sinorelli. 2013. "Youth and the total unemployment rate: The impact of policies and institutions." *Rivista Internazionale di Scienze Sociali*, 121(1): 63-86.

Cui, James. 2007. "QIC program and model selection in GEE analyses." Stata Journal 7(2): 209-220.

Davidsson, Johan Bo and Patrick Emmenegger. 2013. "Defending the organisation, not the members: Unions and the reform of job security legislation in Western Europe." *European Journal of Political Research* 52(3): 339-63.

de Lange, M, M Gesthuizen, and MHJ Wolbers. 2014. "Youth Labour Market Integration Across Europe: The impact of cyclical, structural, and institutional characteristics." *European Societies* 16 2): 194-212.

Eichhorst, Werner and Ulf Rinne. 2014. "Promoting youth employment through activation strategies." ILO Employment Policy Department, Employment Working Paper No. 163. Geneva: International Labour Office.

Elder, Sara. 2009. "ILO school-to-work transition survey: A methodological guide. Module 4 – Key indicators of youth labour markets: Concepts, definition and tabulations." International Labour Office, Geneva. http://www.ilo.org/wcmsp5/groups/public/@ed_emp/documents/instructionalmaterial/wcms_140860.pdf

Elder, Sara. 2015. "What does NEETs mean and why is the concept so easily misinterpreted?" International Labour Organization, Geneva: Work4Youth Technical Brief No. 1. http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_343153.pdf

Escudero, Verónica. 2015. "Are active labour market policies effective in activating and integrating low-skilled individuals? An international comparison." ILO Research Department Working Paper No. 3. Geneva: International Labour Organization.

European Commission. 2010. *Youth on the Move.* Publications Office of the European Union. Luxembourg

European Commission. 2016a. *European employment strategy*. European Commission's DG for Employment, Social Affairs & Inclusion. Available from: http://ec.europa.eu/social/main.jsp?catId=101&langId=en

European Commission. 2016b. "What is the euro area?." https://ec.europa.eu/info/business-economy-euro/euro-area/what-euro-area_en

European Commission. 2016c. *EU Youth Report 2015*. Luxembourg: Publications Office of the European Union.

European Commission. 2016d. Youth Guarantee country by country: Latvia. Luxembourg: Publications Office of the European Union.

European Commission. 2016e. Youth Guarantee country by country: France. Luxembourg: Publications Office of the European Union.

European Commission. 2016f. *The Youth Guarantee and Youth Employment Initiative three years on*. Strousberg: European Commission. http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1477901398883&uri=CELEX:52016DC0646

European Foundation for the Improvement of Living and Working Conditions (Eurofound). 2012. "NEETs – Young people not in employment, education or training: Characteristics, costs and policy responses in Europe." Luxembourg: Publications Office of the European Union.

European Foundation for the Improvement of Living and Working Conditions (Eurofound). 2016. "Exploring the diversity of NEETs." Luxembourg: Publications Office of the European Union.

Eurostat. 2010. *Health and safety at work in Europe (1997-2007): A statistical portrait*. SLuxembourg: Publications Office of the European Union. http://ec.europa.eu/eurostat/documents/3217494/5718905/KS-31-09-290-EN.PDF/88eef9f7-c229-40de-b1cd-43126bc4a946

Eurostat. 2015. *Being Young in Europe Today*. Eurostat Statistical Books. Luxembourg: Publications Office of the European Union.

Eurostat. 2016. *Statistics explained*. http://ec.europa.eu/eurostat/statistics-explained/index.php/Main_Page

Eurostat. 2016Q1. EU Labour Force Survey Explanatory Notes. Luxembourg: European Comission.

Fagan, Colette, Helen Norman, Mark Smith, and María C. Gonzílez Menßndez. 2014. "In search of good quality part-time employment."ILO: Conditions Of Work & Employment Working Papers no. 43/45/47/48: 1-87. , Geneva: International Labour Office.

Fervers, Lukas, and Hanna Schwander. 2015. "Are outsiders equally out everywhere? The economic disadvantage of outsiders in cross-national perspective." *European Journal Of Industrial Relations* 21 (4): 369-87.

Furlong, Andy. 2006. "Not a very NEET Solution: Representing Problematic Labour Market Transitions Among Early School-leavers." *Work, Employment & Society* 20(3) 553-569.

Gangl, Markus. 2002. "Changing labour markets and early career outcomes: labour market entry in Europe over the past decade." *Work, Employment & Society* 16(1): 67-90.

Garrouste, Christelle and Massimo Loi. 2011. *School-to-work transitions in Europe: Paths towards a permanent contract.* MPRA Paper No. 37167. Luxembourg: Publications Office of the European Union. https://ub.uni-muenchen.de/37267/

Green, Anne and Ilias Livanos. 2015. "Involuntary non-standard employment in Europe." European Urban and Regional Studies. 1-18. Available online December 29, 2015. DOI: 10.1177/0969776415622257

Gujarati, Damodar N. 2004. *Basic econometrics*. New York: McGraw-Hill.

Hawley, Jo, Nevala, Anne-Marie, and Tina Weber. 2012. "Recent policy developments related to those not in employment, education and training (NEETs)." *European Monitoring Centre on Change*, European Foundation for the Improvement of Living and Working Conditions. February 6, 2012. https://www.eurofound.europa.eu/observatories/emcc/comparative-information/recent-policy-developments-related-to-those-not-in-employment-education-and-training-neets

Hardin, James W. and Joseph Hilbe. *Generalized Estimating Equations*. Boca Raton, Fla.: Chapman & Hall/CRC.

Horemans, Jereon, Marx, Ive, and Brian Nolan. 2016. "Hanging in, but only just: part-time employment and in-work poverty throughout the crisis." *IZA Journal of European Labor Studies* 5(5): 1-19. DOI: 10.1186/s40174-016-0053-6

ILO. 2012. *Global Employment Trends for Youth 2012*. Geneva: International Labour Office.

ILO. 2015. *Global Employment Trends for Youth 2015: Scaling up investments in decent jobs for youth.* Geneva: International Labour Office.

Jemmotte, S. 2016. "Young people and the labour market: a tale of two NEETs." European Commission. Employment, Social Affairs, and Inclusion: Evidence in Focus. 1 June 2016. http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=2551&furtherNews=yes

Kalenkoski, Charlene Marie. 2016. "The effects of minimum wages on youth employment and income." IZA World of Labor No. 243. Bonn: IZA. DOI: 10.15185/izawol.243.

Kelly, Elish and Seamus McGuinness. 2015. "Impact of the Great Recession on unemployed and NEET individuals' labour market transitions in Ireland." Economic Systems 39: 59-71. DOI: 10.1016/j.ecosys.2014.06.004.

Laporšek, S. 2013. "Minimum wage effects on youth employment in the European Union." *Applied Economic Letters* 20(14): 1288-1292.

Laughlin, Catherin and Julian Barling. 2001. "Young workers' work values, attitudes, and behaviors." *Journal of Occupational and Organizational Psychology* 74: 543-558.

Lutz, Wolfgang, Rudolf Richter, and Christopher Wilson. 2006. *The new generations of Europeans.* Sterling, VA: Earthscan.

Maguire, Sue. 2015. "NEET, unemployed, inactive or unknown – why does it matter?." *Educational Research*, 57(2): 121-132. DOI: 10.1080/00131881.2015.1030850

Maguire, Sue. 2015. "Young People Not in Education, Employment or Training (NEET): Recent Policy Initiatives in England and Their Effects." *Research In Comparative And International Education* 10(4): 525-536

Manchin, Anna. 2012. "Worldwide, Greeks Most Pessimistic About Their Lives." Gallup. 25 July 2012. http://www.gallup.com/poll/156137/worldwide-greeks-pessimistic-lives.aspx

Marelli, Enrico, Choudhry, Misbah T., and Marcello Signorelli. 2013. "Youth and total unemployment rate: the impact of policies and institutions." *Rivista Internazionale di Scienze Sociali* (121)1: 63-86. DOI: http://EconPapers.repec.org/RePEc:vep:journl:y:2013:v:121:i:1:p:63-86.

Margherita, Antonia, O'Dorchai, Sile, and Jelle Bosch. 2009. *Reconciliation between work, private and family life in the European Union*. Eurostat. Luxembourg: Office for the Official Publications of the European Communities.

Neumark, D. and W. Wascher. 2007. Minimum wages and employment. IZA Discussion Paper No. 2570. Bonn: IZA.

OECD. 2015. *OECD Skills Outlook 2015: Youth Skills and Employability*. OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264234178-en

O'Higgins, Niall. 2001. *Youth unemployment and employment policy: A global perspective.* International Labour Office Publications Center, Geneva. https://mpra.ub.uni-muenchen.de/id/eprint/23698

Pastore, Francesco and Luca Giuliana. 2015. "The European Youth Guarantee: labor market context, conditions and opportunities in Italy." *IZA Journal of European Labor Studies* 4(1): 1-22.

Pusterla, Filippo. 2016. "The Great Recession and the Working Conditions of Youth: A Descriptive Analysis of the European Labour Market." *KOF Studies* 83: 1-32.

Quintini, Glenda, Martin, John P., and Sébastien Martin. 2007. "The changing nature of the school-to-work transition process in OECD countries." *IZA Discussion Papers 2582*. https://www.econstor.eu/bitstream/10419/33781/1/527494933.pdf

Raffe, David. 2014. "Explaining National Differences in Education-work Transitions. *European Societies* 16(2): 175-193. Published online before print August 7, 2013, DOI: 10.1080/14616696.2013.821619

Rueda, David. 2007. *Social Democracy Inside Out*. Oxford: Oxford University Press.

Rueda, David. 2014. "Dualization, crisis and the welfare state." *Socio-Economic Review* 12(2): 381-407.

Rueda, David, Wibbels, Erik, and Melina Alatamirano. 2015. "The Origins of Dualism." In *The Politics of Advanced Capitalism*. Edited by: Beramendi, Pablo, Silja Häusermann, Herbert Kitschelt, and Hanspeter Kriesi. New York: Cambridge University Press.

Schröter Regina, Javaonović Alksander, and Ortwin Renn. 2014. "Social Unrest: A Systemic Risk Perspective." *Global Risk Forum, GRF Davos* 2(2): 125-134. Available from: http://planet-risk.org.

Schwander, Hanna, and Silja Häusermann. 2013. "Who is in and who is out? A risk-based conceptualization of insiders and outsiders." *Journal Of European Social Policy* 23(3): 248-69.

Soler-i-Martí, Roger, and Mariona Ferrer-Fons. 2015. "Youth participation in context: the impact of youth transition regimes on political action strategies in Europe." *Sociological Review* 63: 92-117.

StataCorp. 2013. Stata: Release 13. Statistical Softwar. College Station, TX: StataCorp LP.

Sutradhar, Brajendra C., and Milorad Kovacevic. 2000. "Analysing ordinal longitudinal survey data: generalised estimating equations approach." *Biometrika* 87(4): 837-848.

Torres-Reyna, Oscar. 2007. “Panel Data Analysis: Fixed and Random Effects Using Stata (v. 42).” *Data & Statistical Services*, Princeton University. https://pdfs.semanticscholar.org/f70f/9754bc51b1eb2e74dc7dc4e47549910730ed.pdf

United Nations Educational, Scientific and Cultural Organization (UNESCO) Institute for Statistics. 2012. *International Standard Classification of Education: ISCED 2011.* Montreal: UNESCO Institute for Statistics.

Van der Velden, R.K.W. and Martin H.J. Wolbers. 2003. “The integration of young people into the labour market: The role of training systems and labour market regulation.” In *Transitions from education to work in Europe: The integration of youth into EU labour markets*. Oxford: Oxford University Press. 186-211.

Visser, Jelle. 2013. “Data base on Institutional Characteristics of Trade Unions, Wage Setting, State Intervention and Social Pacts, 1960-2011 (ICTWSS).” Amsterdam: Amsterdam Institute for Advanced Labour Studies.

Visser, Jelle. 2015. ICTWSS Data base, version 5.0. Amsterdam: Amsterdam Institute for Advanced Labour Studies AIAS. October 2015. www.uva-aias.net/208

Woolridge, Jeffrey M. 2002. *Econometric Analysis of Cross Section and Panel Data*. Cambridge: MIT Press.

Young, Marisa C. 2010. "Gender Differences in Precarious Work Settings." *Industrial Relations* 65(1): 74-97.

Xiu, Li. 2008. “Social Capital and Employment Entry of Recent Immigrants to Canada: Evidence from the Longitudinal Survey of Immigrants to Canada (LSIC).” Government of Canada: Citizenship and Immigration Research and Evaluation. http://www.cic.gc.ca/ENGLISH/pdf/research-stats/social-capital-w3-eng.pdf

Zeger, Scott L., Kung-Yee Liang, and Paul S. Albert. 1988. "Models for Longitudinal Data: A Generalized Estimating Equation Approach." *Biometrics*, 1988. 1049.