



4th International Conference on Theory and Practice (ICTP -2018), Adelaide, South Australia

ISBN:978-0-6481172-5-4

Asia Pacific Institute of Advanced Research (APIAR)

www.apiar.org.au

TRANSITIONS FROM TEMPORARY EMPLOYMENT TO PERMANENT EMPLOYMENT AMONG YOUTH: THE ROLE OF LABOR LAW AND EDUCATION SYSTEMS

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Abstract

In order to fight high levels of youth unemployment, European governments have deregulated labor markets and showed an increased interest in vocational secondary education. The argument behind reforms has been to enable outsider groups such as youth to get a foothold on the labor market.

Research have, accordingly, studied the consequences of these reforms for levels of permanent and temporary employment among youth. However, critics have raised worries that young people risk becoming stuck with temporary contracts. Because existing research have mainly been cross-sectional, we do not know whether these policies affect the opportunities to move to permanent employment, that is, whether they succeed in enabling labor market outsiders to establish themselves as insiders.

The aim of this paper is to investigate variability in transition rates from temporary to permanent employment across Europe, as well as to analyze if the structure of employment legislation and the vocational orientation of education systems affect these transition rates. For this purpose, we utilize standardized panel data covering 29 European countries, and including more than 18 000 employed young Europeans.

Preliminary results show that, on average, weaker employment protection for both permanent and temporary employment is associated with higher rates of transitions to permanent employment, contradicting the claim that deregulation cause youth to become stuck in outsider positions. However, this effect is conditional on the structure of education systems: In countries with strong vocational orientation, strict protectionist associated with higher transition rates to permanent employment.

In conclusion, the results show that institutional factors interact in shaping transitions between employment statuses among European youth. The impact of employment legislation cannot be understood in isolation, but is conditional on the structure of the education system.

Keywords: Europe, Youth Employment, Permanent Employment.

Note to readers: The background and, especially, the analysis will be developed in many ways. Specifically, we plan to carry out several checks, and we plan to utilize the longitudinal dimensions on the country level, to carry out a so called hybrid model, where we simultaneously utilize the cross-country variation and the variation within countries across time (Fairbrother, 2014)

1. Introduction

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

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

This European variation has resulted in a substantial comparative research interest in institutional level factors that could explain the differences, where in particular the role of differences in labor market regimes have been investigated while the role of the educational systems have received less interest. The research that has been conducted has also mainly used cross-sectional comparative data or repeated cross-sectional data, while comparative studies of actual transitions have been uncommon. The aim of this study is building on previous research to investigate the following main research question:

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

2. Previous research

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

It is; however, not sufficient to only analyze the overall strictness of EPL. Theoretically, it is important to distinguish between EPL for regular (EPL-regular) contracts and EPL for temporary contracts (EPL-temporary) as they may have different implications for youth labor market outcomes (Gebel & Baranowska, 2010). While the strictness of EPL for regular contracts should be related to higher prevalence of temporary contracts through the mechanism discussed above, the strictness of EPL-temporary could actually be expected to have the opposite effect. Given that EPL-temporary is largely related to limitations on the use

of temporary contracts, strict EPL-temporary should by making the use of temporary contracts harder for employers actually lower the incidence of temporary contracts. It has also become widely accepted that the strictness of the two types of EPL should not be considered separately, but that the central factor might be the gap between the two. In a situation where EPL- regular is very strict as compared to EPL temporary there will theoretically be an added incentive for firms to use temporary contracts to regulate numerical flexibility in relation to the market (Passaretta & Wolbers, 2016). The comparative empirical literature dealing with the relationship between EPL and temporary employment is mainly built on cross sectional or repeated cross-sectional designs that look at the risk for youth of being in temporary employment. This research mainly supports the theoretical assumptions. Less strictness in EPL-temporary has been found to be related to higher relative temporary employment rates while less strictness in EPL-regular has been found to be related to lower temporary employment rates (see for instance de Lange et al. 2014). These conclusions have also been supported in the analysis of change in strictness of EPL (Gebel & Baranowska, 2010). Findings on the relationship between the gap and temporary employment among youth have been less clear but appear to conform to theory. Whereas Baranowska & Gebel, (2010) find no relationship between the EPL-temporary and EPL-regular gap in a cross-sectional analysis of youth temporary employment rates, Passaretta & Wolbers, (2016) in an analysis of retrospective transitions across countries and time find it to be of importance for transitions from temporary employment to permanent employment or unemployment.

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

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

This study has the ambition to add to the previous research on the relationship between the institutional setting and temporary employment in three ways. Firstly, a majority of previous studies have only looked at the relationship between the institutional setting and the risk of being in temporary employment. In this study, we will look at the probability for transiting from temporary employment to permanent employment. Even though it is likely that the relative rate of temporary employment is related to transition probabilities, this is in no way certain. Secondly, very few studies have looked at the role of the educational systems for the transition from temporary employment to permanent employment. In this study, this will be a central focus. Thirdly, previous research looking at the transition from school to work found that both less strict EPL highly vocationally specific educational systems to be of importance for smooth transitions (Müller & Gangl, 2003). As these two factors do tend to be represented in different countries, the role of the interaction between these, as noted by Breen, (2005) in relation to youth unemployment rates, becomes very interesting. This not least in our case as a few country studies have suggested that the transition probabilities from temporary

employment in contexts that from the perspective of labor law is similar can be very different (Scherer, 2004). In this study, we will specifically look at how EPL and vocational specificity interacts in relation to transition probabilities where the issue if EPL will have the same effect in different context is central.

3. Data and Variables

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

Individual level data are from the European Union Statistics on income and living conditions (EU-SILC), which provides cross-country comparable on individuals and households in all EU countries, as well as in many non-EU European countries. EU-SILC is the largest survey providing standardized panel data on individual labour market status and living conditions in the great majority of European countries, thus simultaneously enabling analysis over time *within* individuals and *between* countries (Iacovou, et al., 2012). Moreover, the large sample sizes enable analysis even of rare events such as labour market transitions. The rotational panel component of EU-SILC, which is used for this study, covers a maximum of four years (observations) for each individual.

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

The reason for this limitation is to maximize the number of observations as the number of youths 18-29 in the data are limited, and of them only a limited number are observed in temporary employment. This need to maximize the number of observations is accentuated by the comparative focus of the research question, where the number of observation on country level is varied. Youth also have a somewhat higher incidence of leaving the panel early through leaving the parental household, which could create stronger selection effects through attrition if analyzed in longer panels. In total, we have 25 595 observed transitions, nested in 18,945 individuals, nested in 29 countries. However, in the models using EPL as country-level predictors, only the 23 countries (17 202 individuals) with complete EPL-data are included, and in the models with education systems variables, this is further reduced to 21 countries (15 719 individuals).

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

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

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

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

A limitation of the country level approach used in the study is that the analyses are based on set or averaged indicators of labor law and school systems. In order to get closer to investigating causal relationships between institutional settings and transition probabilities, a 'hybrid' approach on the country-level, utilizing the variation within countries over time, would have been preferable (Fairbrother, 2014). This will, however, be investigated at a later stage.

4. Method

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

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

5. Results of the Empirical Analysis

Starting the analyses, we, in Figure 1, look at the overall one-year transition rates to permanent employment for the youth observed in temporary employment in the data. In line with previous research on the relative rate of temporary employment among youth, Figure 1 shows that there is also great variation in the transition rate from temporary employment to permanent employment between the 29 included European countries. The one-year transition rate varies from over 75% in Lithuania to only 18% in France, indicating that being in

temporary employment mean very different prospects for establishing oneself on the labor market across Europe. Figure 1. (can be found in the appendix).

It is also interesting to note in the figure that – as compared with findings on the relative rate of temporary employment among youth across Europe (Eurofound, 2013)– there are similarities, but there are also differences. There are countries such as Sweden, Austria and Ireland that have high or relatively high temporary unemployment rates among youth, but where the transition rates to permanent employment are also relatively high. Low rates of temporary employment does thus not per definition mean high transition rates, and reversely, high rates of temporary employment does not automatically mean low transition rates. The relative rates of temporary employment are thus probably not always a good measure if temporary employment functions as a stepping-stone for youth or is a dead end. In a country like Poland, which combines temporary employment rates for youth over 60% with transition probabilities slightly over 20%, this is probably the case, but in a country like Sweden, that combines temporary employment rates over 55% with transition rates of 55% this is probably less so.

We have now seen that there is great variation between European countries in transition rates from temporary employment to permanent employment. In Table 1, this analysis is taken further in multi-level analyses where the relationship between EPL and vocational specificity and the transition probability is investigated (remember that this analysis is only based on 23 or 21, not 29, countries). Starting with looking at model 1, we can see that EPL-regular, in line with theory and previous research on relative rates of temporary employment, is negatively related with the transition rates. The transition rates from temporary to permanent employment are thus lower in countries with strict EPL-regular.

In model 2, we can see that the relationship between EPL-temporary and the transition probability also is negative. The transition rates are thus lower in countries with stricter EPL-temporary. This is interesting in relation to previous research, as it has pointed to stricter EPL-temporary being related to lower rates of temporary employment. EPL-temporary thus appear to have opposite relationships with the incidence of temporary employment and the probability of transferring to permanent employment. It is here possible that the relationships theoretically should be understood quite differently. While the relationship between EPL-temporary and the temporary employment *incidence* could be understood from firms incentives for numerical flexibility, the relationship between EPL-temporary and employment *transitions* could perhaps rather be understood from the additional rights that stricter EPL-temporary mean for temporary employed. If the rights of the temporary employed are stronger, and the durations of temporary contracts are mandated to be longer, both the need and opportunity for transition to permanent employment could be reduced. In model 3, the final indicator of EPL, the difference between EPL-temporary and EPL-regular, shows no statistically significant relationship with the transition probability. Table 1 (can be found in the appendix)

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

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

temporary employment to permanent employment in respective model, and present them graphically in Figure 2 and Figure 3 (can be found in the appendix).

In model 6, both vocational specificity and EPL-temporary are added together with their interaction term. Doing this produces a strongly significant positive interaction effect of the two variables. The implication of this interaction effect becomes clear when looking at Figure 2 where the predicted probability of a transition from temporary to permanent employment at different levels of strictness of EPL-temporary have been calculated for an individual in four different hypothetical contexts of vocational specificity, where the proportion in a dual system is 0%, 15%, 30% and 45%. What can clearly be seen here is that when educational systems become more vocationally specific the effects of EPL-temporary (i.e. comparing high EPL-temporary with low EPL-temporary) on the transition rates change sign from negative to positive. Seen from another perspective, we can say that, when EPL for temporary contracts is weak, the vocational specificity of educational systems are not important for employment transitions. However, when EPL for temporary contracts is strong, only in vocationally specific education systems do we see high transition rates into permanent employment. Figure 2 (can be found in the appendix).

In the final model, model 7, vocational specificity and the difference between EPL-temporary and EPL-regular are added together with their interaction term. This produces a significant positive direct effect of vocational specificity, as was found in the original analysis in model 4, but it also produces a strong significant positive direct effect of the difference between EPL-temporary and EPL-regular. This would appear to be directly contrary to theory and previous findings, but should be related to the significant negative interaction term between the two variables. Figure 3 shows the implications of the relationship by looking at the predicted probabilities of transitions given the four vocational specificity levels at different levels of difference between EPL-temporary and EPL-regular. The left hand side shows that when EPL-temporary is stronger than, or equal to, EPL-regular, transitions to permanent employment is more common when vocational specificity is high. However, when EPL-regular is stronger, as in labour markets with deregulation at the margins, transition rates are at a similar and rather low level regardless of education system characteristics. Figure 3 (can be found in the appendix).

Summary

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

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

In line with previous research on relative rates of temporary employment, the study further showed that strong EPL-regular is related to lower transition probabilities. It, however, also found that strong EPL-temporary was related to lower transition rates, which on the surface

would seem to contradict previous findings. In line with the conclusion above, this indicates that it is important to separate relative rates of temporary employment from the transition probabilities, and that EPL-temporary could theoretically have different effects on these outcomes. The findings on the role of the difference in strictness of EPL-temporary and EPL-regular showed no direct effects, but it appeared to be of importance when analyzed in conjunction with vocational specificity.

The study did show that the signaling effects created by the vocational specificity of the education system appear to be related to the transition probabilities from temporary employment to permanent employment, especially when analyzed in conjunction to EPL-temporary and the difference between EPL-temporary and EPL-regular. Since EU-SILC do not provide data on whether individual respondents have vocational education, we cannot determine whether the effects of vocational specificity are due to increased transition rates among workers with vocational skills, or if it is a pure contextual level effect that affects all workers regardless of type of education. One can, for instance, conjecture that, labour markets in countries with where specific skills are highly valued, transition into permanent employment would be easier for workers with specific skills with high signaling value, but that workers without specific skills would rather be disadvantaged in this type of labour market. These two effects might go in opposite directions and partly offset each other on an aggregate level.

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

Two limitations of this study should be mentioned. First, EU-SILC data do not have data on individuals type of education (vocational vs. general), and so do not enable us to investigate whether the effects of vocational specific education systems are the same for all workers, or differ depending on whether the individual worker him/herself has a vocational education. Second, the cross-sectional analysis on the level of policies makes causal interpretation of the results inadvisable.

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Appendix

Table 1. Three level linear multilevel regression analysis of country level factors associated with the probability of moving from temporary to permanent employment, 2006-2013. Having permanent employment as dependent variable.

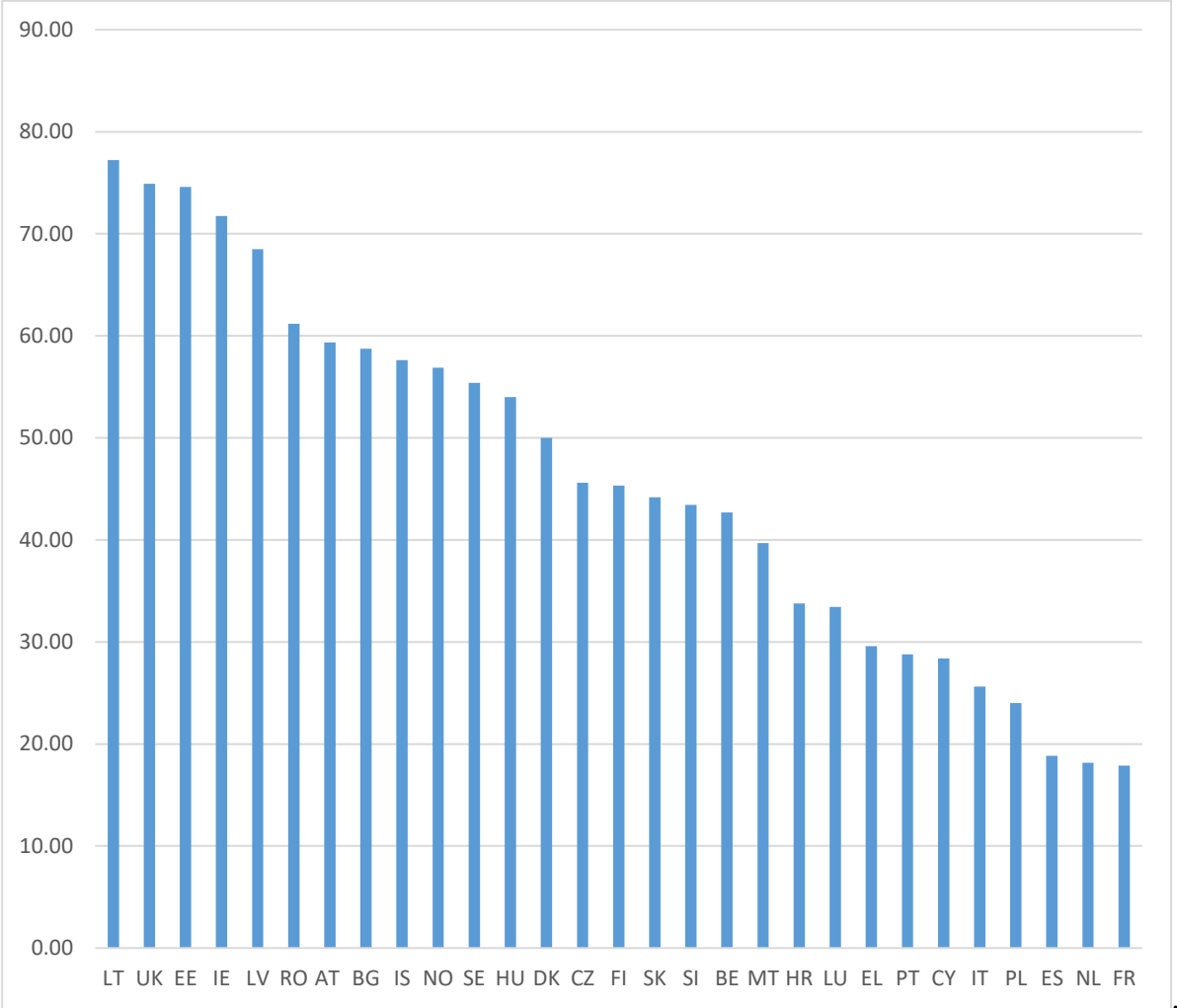
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
EPL regular contracts	-0.124* (0.057)				-.212 (.078)**		
EPL temporary contracts		-.094 (.036) **				-.218 (.048)***	
Difference EPL regular – EPL temporary			.039 (.040)				.159 (.060)**
Vocational specificity				.005 (.003)(*)	.006 (.011)	-.018(.006)**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

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

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



Figure 1. One year transition rates from temporary to permanent employment among youth in observed countries (Average 2006 – 2013)



Source: EU-SILC, waves 2006-2013

Figure 2. Predicted probabilities of transitions from temporary to permanent employment. Interactions between vocational specificity and EPL for temporary contracts.

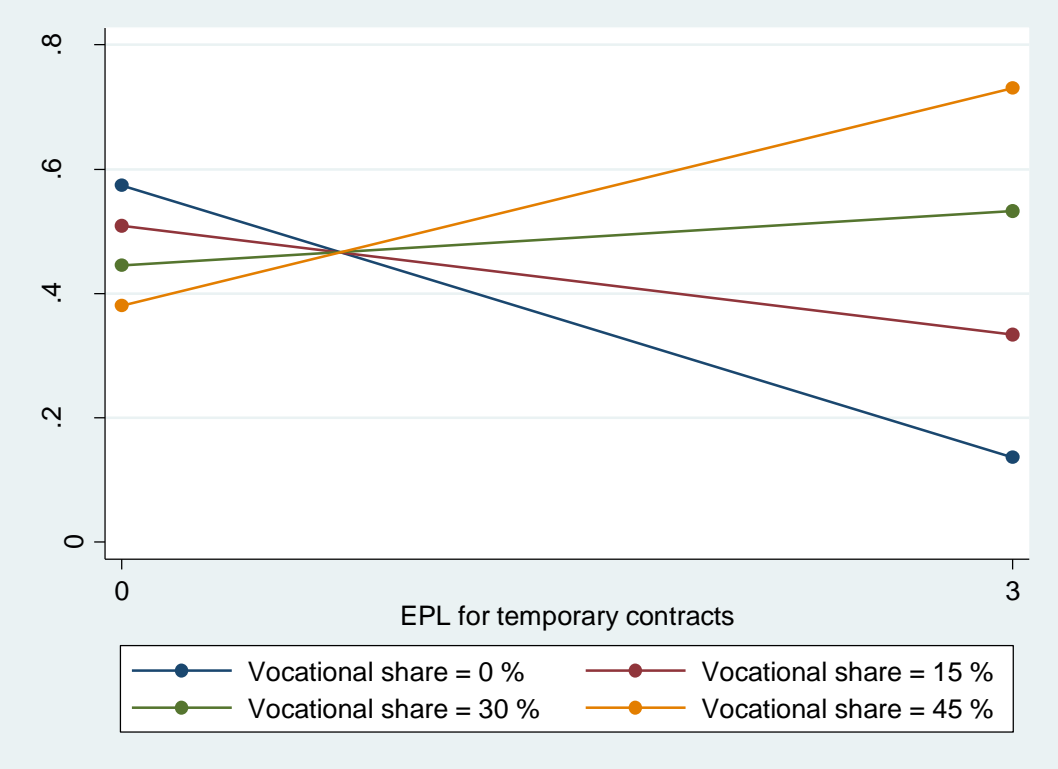
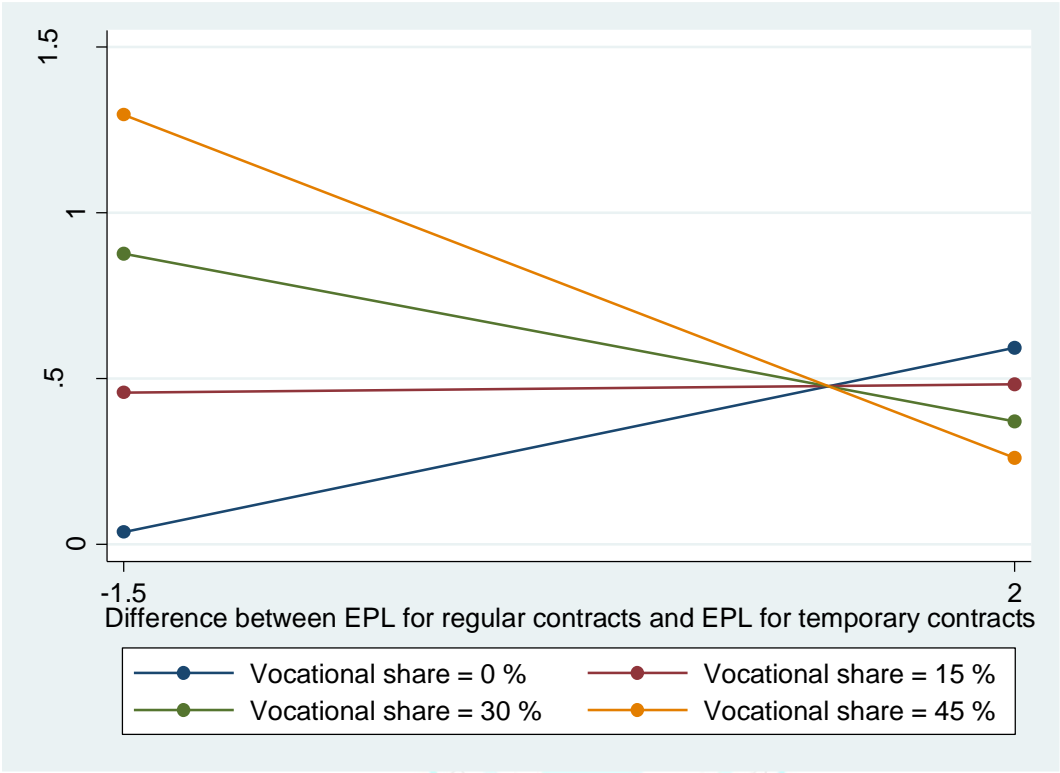


Figure 3. Predicted probabilities of transitions from temporary to permanent employment. Interactions between vocational specificity and difference between EPL for regular contracts and EPL for temporary contracts.





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