

The Impact of the Recession on the Structure and Labour  
Market Success of Young NEET Individuals in Ireland

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*Abstract:* The labour market consequences of the severe fall in economic activity that took place in Ireland after the recent global recession were quite stark, especially for young people. One particularly disquieting development has been the rise in the number of young people not in employment, education or training (NEET), which increased from 11.8 per cent in 2006 to 24 per cent in 2011 (Eurostat, 2013). Very little is known about NEET individuals in Ireland, either in terms of their profile or their labour market transitions, i.e., the extent to which youth NEETs have transitioned into employment. Given this information gap, and particularly its importance for the design of effective activation measures to assist young NEETs, this paper uses newly available longitudinal data from the *Quarterly National Household Survey* to examine the extent to which transitions to employment among NEETs and prime-aged unemployed changed over the recent recession in Ireland. The paper found that the rate of transition to employment fell dramatically for both groups between 2006 and 2011. The results from the analysis also revealed that the drop in the transition rates of NEET and prime-aged unemployed individuals' was not due to changes in the underlying sub-group population structures but to changes in external factors that have had an impact on individuals possessing certain characteristics during the recession. From a policy perspective, the results would seem to support a greater emphasis on higher levels of human capital (i.e., third-level qualifications) for young NEETs, and the redesign of vocational-type qualifications (i.e., Post Leaving Cert level courses) to increase their relevance to those areas of the labour market where jobs are emerging.

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## I Introduction

The recent global recession has had a major impact on young people's labour market status, particularly in those economies that have been worst affected by the downturn. Ireland is one such State where real GDP fell by 10 per cent between 2008 and 2010, with the economy returning to modest growth in 2011 (Barrett and McGuinness, 2012). The labour market consequences from this severe fall in economic activity were stark, with the country's overall unemployment rate increasing from 4.4 per cent in 2006 to 14.7 per cent in 2012 (Central Statistics Office, 2012 and 2013a). The youth unemployment rate has grown from 8.7 per cent in 2006 to 30.6 per cent in 2012 (Eurostat, 2013),<sup>1</sup> while the youth unemployment ratio<sup>2</sup> doubled over the course of the recession, increasing from 5.4 per cent in Quarter 3 (Q3) 2007 to 12.8 per cent in Q3 2011, and currently stands at 9.8 per cent (Kelly, McGuinness and O'Connell, 2013).

In relation to young unemployed people in Ireland, two worrying trends have emerged: i) the increase in the proportions with relatively low levels of schooling, which has risen from 17.4 per cent in 2007 to 48.9 per cent in 2011<sup>3</sup> (Eurostat, 2012);<sup>4</sup> and ii) the share of young unemployed people that are now long-term unemployed, which has grown from 20.3 per cent in 2007 to 45.8 per cent in 2011 (OECD, 2013).<sup>5</sup> Another disquieting development has been the rise in the number of young people not in employment, education or training (NEET), which has increased from 11.8 per cent in 2006 to 24 per cent in 2011 (Eurostat, 2013).<sup>6</sup>

While the unemployment rate of young people has been well documented in Ireland, very little is known about NEET individuals, particularly in terms of their profile and whether it has changed since the recent recession.<sup>7</sup> Another important information gap is in relation to their labour market transitions - i.e., the extent to which young NEETS have transitioned into employment, both pre and post the recession. Given this gap in the literature, and

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<sup>1</sup> Eurostat, March 2013:

<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=tsdec460>

<sup>2</sup> The youth unemployment ratio, which is youth unemployed expressed as a ratio of the total youth population, is viewed as a better indicator of unemployment among young people given that many choose to remain on in education during an economic downturn.

<sup>3</sup> These proportions relate to individuals holding a Junior Certificate or less qualification. The Junior Certificate is typically taken by 16 year old students.

<sup>4</sup> Eurostat, October 2012: <http://appsso.eurostat.ec.europa.eu/nui/show.do>.

<sup>5</sup> OECD, March 2013: [http://stats.oecd.org/Index.aspx?DatasetCode=DUR\\_I#](http://stats.oecd.org/Index.aspx?DatasetCode=DUR_I#)

<sup>6</sup> Eurostat, March 2013: <http://appsso.eurostat.ec.europa.eu/nui/setupModifyTableLayout.do>

<sup>7</sup> FÁS (2008) presented a profile of NEETS in Ireland in 2008 using Irish labour force survey data, the *Quarterly National Household Survey (QNHS)*, and also cross-country comparative NEET statistics using 2008 *OECD* data. The most recent research on NEETS in Ireland, which was part of a cross-country comparative study that used the 2008 wave of the *European Values Survey* and also 2012 *Eurostat* data, was conducted by Eurofound (2012).

specifically its importance in the design of effective activation measures to assist young NEET people, this paper aims to address the following questions:

1. Has the profile of NEET youths, according to their labour market transition status (i.e. continuously NEET or transitioned into employment), altered since the recent downturn?
2. What are the determinants of being a NEET youth, and have these factors changed since the recession?
3. What are the labour market transition patterns of NEET youths pre and post the economic crisis?
4. To what extent do changes in the composition of the NEET youth stock explain changes in their labour market transition rates over time?
5. To what degree do adjustments in the labour market value of various attributes account for changes in NEET youth's labour market transition rates pre and post the recession?

Newly available longitudinal data from the *Quarterly National Household Survey*, which is Ireland's Labour Force Survey, have been used to address these questions. For comparative purposes, the same questions have been examined for unemployed prime-aged individuals.

The remainder of the paper is structured as follows. Section II outlines the data and methodologies that are used in the paper. The results from the analyses conducted are presented in Section III, while the main conclusions are set out in Section IV.

## **II Data and Methodology**

The data used in this paper come from the *Quarterly National Household Survey* (QNHS) longitudinal data file, which is a relatively new dataset compiled by the Central Statistics Office (CSO).<sup>8</sup> The main objective of the QNHS is to provide quarterly data on employment, unemployment, etc. The survey is continuous and targets all private households. The total sample for each quarter is approximately 39,000, which is achieved by interviewing about 3,000 households per week. Households are asked to take part in the survey for five consecutive quarters. In each quarter, one-fifth of the households surveyed are replaced and the QNHS sample involves an overlap of 80 per cent between consecutive quarters and 20 per cent between the same quarters in consecutive years. Participation in the QNHS is voluntary; however, the response rate is quite high (approximately 85 per cent in recent years).<sup>9</sup> One of the main benefits of using the QNHS longitudinal data is that it enables researchers to track individuals for up to 5 consecutive quarters.

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<sup>8</sup> The CSO is Ireland's national statistical collection organisation.

<sup>9</sup> Information provided by the CSO.

In this study, we focused on comparing the situation of NEET youths and unemployed prime-aged individuals both pre recession and at the latter stages of the economic downturn: we chose Q2 2006 as the starting point for our analysis, which was during the height of Ireland's boom; and Q2 2011 as our recessionary time point. We selected two balanced panels for each sub-group analysed. Specifically, we focused on NEET youths (defined as aged 15 to 24) and unemployed prime-aged individuals (defined as aged 25-54), who were in each of their respective labour market states on entering the panel and who remained in the panel for the next two consecutive quarters. We were not able to use the five quarters of data as the number of young people who were initially NEET and remained present in the data for five continuous quarters during the earlier period (e.g. 2006) was too small. For comparative purposes, we then restricted the unemployed prime-aged analysis to three quarters of data as well. Thus, in the paper we focused on the labour market transition patterns of NEET youths and unemployed prime-aged individuals between Q2 and Q4 in 2006 and 2011 respectively, concentrating particularly on their transitions from NEET/unemployment into employment. In order to accommodate our empirical strategy, we transformed our balanced panel into a cross-sectional dataset based on the characteristics of individuals observed in Q2 2006 and Q2 2011 respectively, and incorporate their transition behaviours in Q3 and Q4 for each of the observed years. The analysis is based on individuals who remained in Ireland over the observation periods; therefore, the impacts of migration are not considered.

In terms of our approach to defining the samples, the QNHS contains two economic status variables: an International Labour Office (ILO) measure and a self-defined Principal Economic Status (PES) measure. For the purposes of this paper, we used the official ILO measure to create our prime-aged unemployment variable. In terms of our NEET measure, we initially selected out the ILO 'unemployed' and 'not economically active' categories. We then cross-referenced this NEET measure with the PES variable to omit individuals that defined themselves as being either a student or in employment.<sup>10</sup> Finally, we excluded individuals from this latter NEET measure who indicated in the QNHS that they had received formal education in the past 4 weeks. Based on these unemployed and NEET definitions, and the restriction of our data to those who were in the 2006 and 2011 panels for three consecutive quarters (i.e. Q2 to Q4), our samples for each sub-group analysed are set out in Table 1.<sup>11</sup>

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<sup>10</sup> The PES variable allows for the separate identification of those in employment, unemployment, students, those on home duties and those that have retired.

<sup>11</sup> We omitted individuals that did not provide education data, and those who transitioned into economic inactivity are excluded from the unemployed prime-aged models.

**Table 1 Sample Information: 2006 and 2011**<sup>12</sup>

	<b>2006</b>	<b>2011</b>
NEET Youths	15,430	23,389
Unemployed Prime-Aged Individuals	11,053	65,385

In terms of methodology, we began by estimating separate binary probit models to identify the characteristics associated with being a i) NEET youth or ii) an unemployed prime-aged individual in both 2006 and 2011. For both of these models, the dependent variable equalled one for the subgroup being examined (e.g. NEET youths) and zero otherwise. The characteristics investigated were as follows: gender, age, nationality, educational attainment and geographic location. We also ran a series of probit models where we included year interaction terms to test for significant differences in the coefficients between the boom (2006) and recessionary (2011) time points.

We then assessed the impact of various socio-economic and demographic factors on a NEET youth's likelihood of transitioning to employment, and unemployed prime-aged individuals as well. These analyses were undertaken by estimating separate binary probit models for 2006 and 2011, where the dependent variable equalled one if an individual transitioned to employment during the observation period and zero otherwise.<sup>13</sup>

Finally, we used decomposition analysis to determine the extent to which variations in the rate of transitions to employment between 2006 and 2011 were related to changes in the population structures of the two groups analysed (an endowment effect) as opposed to changes in the return to labour market characteristics (a coefficient effect). The decomposition models are estimated by pooling the data for each grouping for 2006 and 2011 and then decomposing differences in the employment transition rate for the group over the period. Given that our dependent variable is a dichotomous 0/1 variable, we estimated a non-linear Oaxaca decomposition.

### **III Results**

#### *Descriptives*

Table 2 presents the characteristics of both NEET youths and prime-aged unemployed individuals in Q2 2006 and Q2 2011 respectively.

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<sup>12</sup> Note that these figures relate to population figures, which have been obtained by expanding the QNHS data by the population sample.

<sup>13</sup> The same covariates that were used in the individual sub-group determinant models were used in this analysis as well, with the inclusion of a previous unemployment duration variable.

**Table 2: Profile of NEET Youths and Unemployed Prime-Age Individuals: 2006 (Q2) and 2011 (Q2)**

	NEET Youths		UE Prime-Aged	
	2006	2011	2006	2011
<b>Age:</b>				
15-19	27.2	20.5	-	-
20-24	72.8	79.5	-	-
25-34	-	-	41.7	47.7
35-44	-	-	29.9	33.1
45-54	-	-	28.3	19.2
<b>Gender:</b>				
Male	42.7	55.5	65.5	73.5
Female	57.3	44.5	34.5	26.5
<b>Nationality:</b>				
Irish	90.6	91.2	86.5	87.3
Non-Irish	9.4	8.8	13.5	12.8
<b>Educational Attainment:</b>				
Junior Certificate or Less	48.8	32.9	47.1	31.3
Leaving Certificate	37.2	42.2	22.1	27.4
Post-Leaving Certificate	6.0	14.5	9.4	21.6
Third-level Non-degree	4.1	4.7	10.5	9.1
Third-level Degree or Higher	4.0	5.8	10.9	10.6
<b>Geographic Location:</b>				
Dublin	27.0	26.1	28.9	24.6
Border	12.1	15.3	14.9	8.4
Mid-East	5.7	6.5	4.7	8.8
Midlands	4.7	8.4	3.2	6.5
Mid-West	15.8	9.2	8.3	11.6
South-East	12.0	11.4	13.4	15.8
South-West	11.7	13.1	16.5	13.2
West	11.0	9.8	10.1	11.1
<b>Previous Unemployment Duration:</b>				
1-3 Months	17.2	11.0	32.7	14.8
4-6 Months	5.2	8.0	16.1	12.1
7-12 Months	13.3	15.1	18.5	15.9
13 Months and Above	13.1	31.6	32.7	57.2
Never had a Job	51.22	34.2	-	-

**Source:** Constructed with data from the 2006 (Q2) and 2011 (Q2) *Quarterly National Household Survey* longitudinal datafiles.

We can see from Table 2 that over two-thirds of NEET youths were aged between 20 and 24 in both 2006 and 2011. A greater proportion of NEET individuals were female in 2006, but by 2011 a higher percentage was male. The majority of NEET youths were Irish in both the boom and recession periods. With regards to educational attainment, during the boom period almost 50 per cent of NEET individuals had a Junior Certificate or less qualification,

with just over 8 per cent having a third-level qualification. In 2011, however, the percentage with a Junior Certificate or less qualification fell to 33 per cent, while the proportions with either a Leaving Certificate or Post-Leaving Cert (PLC) level qualification increased, particularly the percentage with a PLC level qualification. The geographical distribution of NEET youths has remained more or less stable during both the boom and recessionary periods, apart from the Border and Midlands, which have experienced an increase in the proportion of NEET youths, and the Mid-West, where there has been a fall in the percentage of NEET individuals.

In relation to unemployed prime-aged individuals, we can see from Table 2 that they are predominately male, regardless of time point. In addition, almost 50 per cent had a Junior Certificate or less qualification during the boom period, but by the recession there was a fall in the proportion with this education qualification and increases in the percentages with either a Leaving Certificate or PLC level qualification. Similar boom and recessionary education patterns were observed for NEET individuals. In 2006, just over one-third of unemployed prime-aged individuals had experienced previous long-term unemployment; however, by 2011 this proportion had increased to 57 per cent. The percentage of NEET youths that had previous experience of long-term unemployment also increased between 2006 and 2011, from 13 per cent to 32 per cent.

### *Econometrics*

Table 3 presents the results from our probit model on the determinants of being a NEET youth relative to an employed youth in both 2006 and 2011. The same model is also shown for unemployed prime-aged individuals. The 'change' column indicates whether the movement in the coefficients between 2006 and 2011 are statistically significant.

In 2006, the characteristics that raised the probability of being a NEET youth relative to an employed youth were being female, aged 20 to 24 (relative to aged 15 to 19), and being educated to a compulsory lower secondary school qualification, known as the Junior Certificate, or less than this educational attainment. Living in the Mid-West and West, relative to Dublin, also increased a youth's likelihood of being NEET during the boom. In the aftermath of the downturn (2011), the negative impact of having compulsory lower secondary educational attainment or less became much stronger with graduates 35 per cent less likely to be NEET relative to youths with lower secondary compulsory levels of schooling or less (compared to a 15 per cent impact in 2006). The impact of geographical location also became more pronounced; in particular, the degree of disadvantage to living outside of Dublin rose substantially for many regions. Interestingly, male youths were much more likely to be NEET in 2011, which is likely to be linked to their concentration in the construction sector during the boom period and the subsequent collapse of the property market. Finally, immigrant youths were statistically more likely to be NEET during both the boom and recession.

**Table 3: Determinants of being a NEET Youth and Unemployed Prime-Aged Individual: 2006 and 2011**

	<b>2006 Marginal Effects</b>	<b>2011 Marginal Effects</b>	<b>Change</b>
<b>NEET Youths:</b>			
<i>Reference: Female</i>			
Male	-0.116***	0.018***	Yes
<i>Reference: Age 15-19</i>			
Age 20-24	0.029***	0.056***	No
<i>Reference: Junior Certificate or Less</i>			
Leaving Certificate	-0.145***	-0.291***	Yes
Post Leaving Cert	-0.132***	-0.165***	Yes
Third-level Non-Degree	-0.133***	-0.299***	Yes
Third-level Degree	-0.152***	-0.351***	Yes
<i>Reference: Dublin</i>			
Border	-0.007*	0.109***	Yes
Mid-East	-0.059***	-0.077***	Yes
Midlands	-0.034***	0.131***	Yes
<b>NEET Youths:</b>			
<i>Reference: Dublin</i>			
Mid-West	0.020***	0.096***	Yes
South-East	-0.023***	-0.044***	No
South-West	-0.029***	-0.007	Yes
West	0.022***	0.027***	No
<i>Reference: Non-Irish</i>			
Irish	-0.021***	-0.078***	Yes
<b>UE Prime-Aged (Reference categories as above):</b>			
Male	-0.008**	0.042***	Yes
Age 35-44	-0.012***	-0.046***	No
Age 45-54	-0.010**	-0.084***	Yes
Leaving Certificate	-0.027***	-0.074***	No
Post Leaving Cert	-0.021***	-0.046***	No
Third-level Non-Degree	-0.027***	-0.107***	Yes
Third-level Degree	-0.039***	-0.150***	Yes
Border	-0.004	-0.012	No
Mid-East	-0.014**	-0.012	No
Midlands	-0.018**	-0.007	Yes
Mid-West	-0.007	0.034**	Yes
South-East	-0.002	0.028**	No
South-West	-0.007	-0.011	No
West	-0.004	0.013	No
Irish	-0.034***	-0.039***	Yes
Observations:	99,277	68,272	



In relation to prime-aged unemployed individuals, they shared similar traits to NEETS during both the boom and recession, specifically in terms of gender, nationality and educational attainment. However, the negative impact of having a compulsory lower secondary school or less qualification was much lower for prime-aged individuals. Given the insignificance of many of the regional effects, location does not appear to be as strong a factor in determining older individuals' economic status as it is for youths.

Moving on to our labour market transitions analysis, Table 4 shows the two-quarter transition rates for NEET youths and unemployed prime-aged individuals in both 2006 and 2011.

In relation to NEET youths, 79 per cent remained continuously NEET during the boom, while 21 per cent transitioned into employment. Post recession, the proportion of NEET youths that remained continuously NEET increased to 86 per cent, with only 14 per cent transitioning into employment.

With regards to unemployed prime-aged individuals, 39 per cent remained continuously unemployed during three quarters in 2006, 28 per cent transitioned into employment, while a slightly higher proportion became inactive (33 per cent). Post recession, the share of prime-aged unemployed that remained continuously unemployed increased quite considerably to 63 per cent, while only 17 per cent transitioned into employment and 21 per cent into inactivity.

**Table 4: NEET Youths and Prime-Aged Unemployed Individuals Labour Market Transition Rates: 2006 and 2011**

	Continuously NEET	Into Employment	
<b>NEET Youths:</b>			
2006	78.6	21.4	
2011	86.4	13.6	
	Continuously Unemployed	Into Employment	Into Inactivity
<b>Prime-Aged:</b>			
2006	38.5	28.3	33.2
2011	62.9	16.6	20.6

**Source:** Constructed with data from the 2006 (Q2) and 2011 (Q2) *Quarterly National Household Survey* longitudinal datafiles.

Our probit model results on the determinants of transitioning from NEET to employment in two subsequent quarters, or from unemployment to employment for prime-aged individuals, in 2006 and 2011 are presented in Table 5. During both the boom and post recessionary periods in Ireland, prime-aged unemployed males were significantly less likely than unemployed females to transition to employment. In contrast, NEET males were more likely to transition to employment during the boom period, but by 2011 their transition pattern was consistent with prime-aged unemployed males. Similarly, NEET youths aged 20

to 24 were more likely to find a job compared to those aged 15 to 19 during 2006; however, the opposite was the case during 2011. During both 2006 and 2011, prime-aged unemployed people aged 25 to 34 were more likely to transition to employment compared to their older counterparts.

**Table 5: Probit Models of the Determinants of Transitioning from Unemployment/NEET to Employment: 2006 and 2011**

	NEET Youths		UE Prime-Aged	
	2006	2011	2006	2011
<b>Gender (Ref = Female):</b>				
Male	0.077*** (0.007)	-0.010** (0.004)	-0.210*** (0.013)	-0.026*** (0.004)
<b>Age (Ref = Age 15-19):</b>				
Aged 20-24	0.028*** (0.007)	-0.104*** (0.007)	-	-
<b>Age (Ref = Age 25-34):</b>				
Aged 35-44	-	-	-0.185*** (0.012)	-0.040*** (0.003)
Age 45-54	-	-	-0.078*** (0.012)	-0.079*** (0.004)
<b>Educational Attainment (Ref = Junior Certificate or less):</b>				
Leaving Certificate	0.116*** (0.008)	0.016*** (0.005)	0.315*** (0.015)	0.037*** (0.005)
Post Leaving Cert	0.353*** (0.021)	0.051*** (0.008)	0.215*** (0.022)	0.160*** (0.006)
Third-level Non-Degree	-0.040*** (0.014)	0.075*** (0.014)	0.001 (0.018)	0.163*** (0.008)
Third-level Degree	0.070*** (0.020)	0.402*** (0.018)	0.081*** (0.020)	0.253*** (0.008)
<b>Geographic Location (Ref = Dublin):</b>				
Border	-0.023** (0.010)	-0.050*** (0.005)	0.068*** (0.017)	0.010 (0.007)
Mid-East	-0.136*** (0.005)	-0.015* (0.008)	0.071*** (0.026)	0.052*** (0.007)
Midlands	-0.109*** (0.008)	0.030*** (0.009)	-0.215*** (0.023)	0.035*** (0.008)
Mid-West	-0.128*** (0.006)	0.136*** (0.011)	0.013 (0.020)	0.101*** (0.007)
South-East	-0.012 (0.010)	-0.003 (0.007)	-0.137*** (0.015)	0.058*** (0.006)
South-West	-0.121*** (0.006)	0.062*** (0.008)	0.212*** (0.018)	0.086*** (0.006)
West	-0.080*** (0.007)	-0.024*** (0.006)	0.001 (0.022)	0.098*** (0.007)

**Table 5: Continued**

	NEET Youths		UE Prime-Aged	
	2006	2011	2006	2011
<b>Previous UE Duration (Ref = 1-3 Months):</b>				
4-6 Months	-0.021*	0.084***	-0.353***	-0.066***
	(0.012)	(0.011)	(0.008)	(0.004)
7-12 Months	-0.106***	-0.110***	-0.308***	-0.076***
	(0.006)	(0.003)	(0.009)	(0.004)
13 Months and Above	-0.125***	0.001	-0.524***	-0.170***
	(0.006)	(0.007)	(0.008)	(0.004)
Never had a Job	-0.328***	-0.095***	-	-
	(0.009)	(0.006)	-	-
<b>Nationality (Ref = Non-Irish):</b>				
Irish	-0.207***	0.087***	-0.045**	0.020***
	(0.015)	(0.004)	(0.018)	(0.004)
Observations	15,430	23,389	11,053	65,385
Pseudo R2	0.244	0.174	0.321	0.0967

In relation to nationality, Irish NEET and prime-aged unemployed individuals were less likely to transition to employment during the boom period compared to immigrants, but by 2011 we see a reversal in the employment fortunes of Irish nationals for both groups.

From a policy perspective, probably the most important pattern that we observe is with respect to education. During 2006, an unusual non-linear relationship existed between employment transitions for both NEET and unemployed prime-aged individuals. Specifically, both compulsory higher secondary school (i.e. the Leaving Certificate) and the Post Leaving Certificate (PLC) qualification, which tends to be vocational in nature, had a stronger marginal impact than third-level education on transitioning to employment for both NEET and unemployed prime-aged individuals. In fact, NEET individuals with a Third-level non-degree qualification were less likely to transition to employment compared to those with compulsory lower secondary school or less education, while there was no difference between prime-aged individuals with both of these types of education. The strength of the PLC qualification in 2006 was likely to at least partially reflect the importance of the construction industry during that time period. By 2011, the impact of education generally followed a more standard linear pattern, with higher levels of educational attainment having a bigger marginal impact than lower qualifications on both NEET and prime-aged unemployed individuals' likelihood of transitioning to employment. Perhaps not surprisingly, the marginal impact of a PLC qualification fell off dramatically by 2011 due, presumably, to a substantial falls in the demand for vocationally qualified labour.

Previous unemployment duration emerged as another important factor in determining transitions to employment for both NEET and unemployed prime-aged individuals during both the boom and recession, with the probability of an employment transition being lower

for both groups the higher the duration. However, in terms of the order of magnitude, this factor had the largest negative impact on prime-aged individuals, particularly for durations in excess of 12 months. By 2011, the marginal impact of a previous unemployment spell fell dramatically for both NEET and prime-aged unemployed individuals. In particular, for NEET youths the movement was most marked at both extremes of the duration spectrum, with little change observed with respect to the 7 to 12 month duration variable. Thus, for NEET individuals there has been a rapid fall in the scarring impact of both short- and long-term previous unemployment durations. The fall in the scarring effect of previous long-term unemployment is likely to be driven by the higher incidence of long-term unemployment among NEET individuals. The implication of this result is that the policy emphasis should be on improving the human capital of young NEET individuals as opposed to focussing on the cessation of the drift into long-term unemployment. For prime-aged unemployed individuals, a substantial fall occurred in the marginal impact of all three unemployment duration variables between 2006 and 2011. As with NEET youths, the fall in the marginal impact of the 13 month and above unemployment duration variable is most likely explained by the rapid increase in the incidence of long-term unemployment among prime-aged individuals by 2011.

Next we undertook our decomposition analysis, the results from which are presented in Tables 6 and 7. The overall decomposition result from the Oaxaca non-linear decomposition is presented in Table 6; while a breakdown of the individual coefficient results are shown in Table 7.

Focussing first on the results in Table 6, the 'Overall Difference' result for each sub-group analysed tells us how much the transition rate to employment fell by between 2006 and 2011. For NEET youths the rate for transitioning into employment fell by just under 8 percentage points, while for unemployed prime-aged individuals the rate fell by just over 17 percentage points. For NEET youths, changes in the composition of the population, the endowment effect, accounted for less than 2 percentage points of the overall fall. The vast majority of the fall in the transition rate relates to coefficient effects, which incorporate a change in the return to observable and unobservable characteristics. A similar pattern emerges for prime-aged unemployed individuals, where composition effects explain virtually none of the fall in employment transitions with the bulk of the change related to coefficient effects.

**Table 6: Overall Decomposition Results**

	<b>Oaxaca</b>
<b>NEET Youths:</b>	
Overall Difference	-7.8
Endowment Effect	1.4
Coefficient Effect	-13.6
Interaction	4.4
<b>Unemployed Prime-Aged:</b>	
Overall Difference	-17.4
Endowment Effect	-0.3
Coefficient Effect	-8.8
Interaction	-8.4

The individual coefficient results presented in Table 7 tell us what the main determinants are in explaining the change in the employment transition rate for NEET youths and unemployed prime-aged unemployed individuals between 2006 and 2011. We separate these results out into the impacts on observables, which measure the change in the returns to labour market characteristics over time, and unobservables which is proxied by the value of the constant term.

For NEET individuals, we found that being male, aged 20 to 24 (relative to aged 15-19) and possessing a compulsory higher secondary school qualification i.e. the Leaving Certificate or a vocational type qualification i.e. a PLC level qualification (relative to a Junior Certificate or less qualification) had a depreciating effect on NEET youths employment transition rate between 2006 and 2011, suggesting declines in the returns to such characteristics. In line with the earlier probit models, having previous unemployment duration of 7 to 12 months (relative to 1 to 3 months) also had a depreciating effect on NEET individuals' employment transition rate between 2006 and 2011. Possessing a third-level qualification and being Irish, on the other hand, had appreciating effects on NEET youths employment transition rate between 2006 and 2011, as did having previous unemployment duration of either 4 to 6 months or 13 months and above. The positive coefficient effect for both short-term and long-term unemployment may seem unusual; however, as indicated earlier, it is clear that the result reflects a fall in the negative impact of short and long-term previous unemployment durations.

**Table 7: Oaxaca Individual Coefficient Effects on the Change in the Labour Market Transition Rates between 2006 and 2011**

	NEET Youths	UE Prime-Aged
<i>Observable Coefficient Effects:</i>		
Male	-0.055***	0.157***
Aged 20-24	-0.130***	-
Aged 35-44	-	0.059***
Aged 45-54	-	-0.010***
Leaving Certificate	-0.041***	-0.086***
Pos Leaving Cert	-0.030***	-0.002
Third-level Non-Degree	0.007***	0.022***
Third-level Degree	0.016***	0.027***
Border	-0.010***	-0.006***
Mid-East	0.015***	-0.000
Midlands	0.018***	0.026***
Mid-West	0.032***	0.016***
South-East	0.001	0.044***
South-West	0.034***	-0.015***
West	0.006***	0.017***
4-6 Months	0.010***	0.059***
7-12 Months	-0.017***	0.053***
13 Months and Above	0.060***	0.312***
Never had a Job	0.067***	-
Irish	0.350***	0.080***
Total:	0.333	0.755
<i>Unobservables:</i>		
Constant	-0.470***	-0.842***
Overall Coefficient Effect:	-0.136	-0.088

Similar determinants emerged for unemployed prime-aged individuals, particularly in relation to the impact of educational attainment and being Irish. However, being male had an appreciating effect on the unemployment to employment transition rate for prime-aged individuals, as did all previous unemployment durations: this latter result suggests that the fall in unemployment scarring effects was more consistent for prime-aged individuals. For both NEET and prime-aged unemployed individuals, the change in the return to observables increased the likelihood of labour market transitions. However, these positive impacts were more than offset by a decline in the return to unobservables, which, presumably, relate to factors not controlled for in the model, such as the external macroeconomic environment and controls such as social class, previous employment tenure, etc.

Overall, the results from this analysis suggest that the relative fall in the NEET/unemployment to employment transition rates for NEET youths and unemployed prime-aged between 2006 and 2011 is not due to changes in the underlying sub-group population structures but to changes in external factors that have had an impact on possessing certain characteristics over the recession. Thus, even though there have been huge changes in the macro-economic environment between 2006 and 2011, which resulted in a rapid growth of the unemployed and NEET populations, these changes in the underlying populations have not substantially impacted the extent of transitions to employment. Nevertheless, the period has seen a substantial change in the labour market value of some characteristics. In particular, there has been a decline in the value of lower level credentials, a rise in the value of more advanced levels of educational attainment and a decline in the scarring impacts of previous unemployment.

#### **IV Conclusions**

This paper uses a unique longitudinal dataset to examine the extent to which transitions to employment among NEET youths and prime-aged unemployed changed over the economic cycle in Ireland, and attempts to explain the nature of such change. We find that for both groupings that the rate of transition to employment has, not surprisingly, fallen dramatically. Overall, the results from this analysis show for NEET and prime-aged unemployed individuals that the drop in their transition rates is not due to changes in the underlying sub-group population structures but to changes in external factors that have had an impact on individuals possessing certain characteristics during the recession. For instance, we found that the labour market value of certain characteristics in achieving a successful transition has altered, including a rise in the marginal value of education and Irish nationality and a fall in the scarring impact of unemployment durations among both groups.

From a policy perspective, the results would seem to support a greater emphasis on higher levels of human capital (i.e. third-level qualifications) for young NEETs; and given the rapid fall off in the returns to vocational-type qualifications (i.e. PLCs), the redesign of vocational-type training to increase their relevance to those areas of the labour market where jobs are emerging. Finally, the evidence suggests that the level of disadvantage had become much more acute for unqualified individuals by 2011, suggesting the need for a greater emphasis on policies designed to tackle early school leaving.

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