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**To cite this article:** Dennis Tamesberger & Johann Bacher (2014) NEET youth in Austria: a typology including socio-demography, labour market behaviour and permanence, *Journal of Youth Studies*, 17:9, 1239-1259, DOI: [10.1080/13676261.2014.901492](https://doi.org/10.1080/13676261.2014.901492)

**To link to this article:** <https://doi.org/10.1080/13676261.2014.901492>



Published online: 03 Apr 2014.



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## **NEET youth in Austria: a typology including socio-demography, labour market behaviour and permanence**

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*(Received 2 May 2013; accepted 3 March 2014)*

Due to the limited relevance of traditional labour market indicators for youth unemployment, researchers and policy-makers focus on an indicator known as not in employment, education or training ('NEET'). The underlying assumption is that NEET indicates young people with a high risk of social exclusion. For political solutions, it is necessary to consider the heterogeneity of the NEET group. This paper examines the socio-structural attributes that characterise NEET youth in Austria, the main reasons for the NEET situation and whether NEET status, once assigned to an individual, is permanent or temporary. Latent cluster analyses identify seven subgroups of NEET youth, all of which face different challenges. The data source used is the Austrian Labour Force Survey (micro census) from the years 2008–2010, and young people between 16 and 24 years old are analysed. A panel data-set is created to analyse NEET permanence. Drawing on the identified reasons for a permanent NEET situation, this paper argues for more job and training opportunities that fit the needs of young people, especially those with illnesses. Finally, this study asks whether the definition of NEET should be adapted to exclude young mothers with care responsibilities who are not actively looking for a job.

**Keywords:** social exclusion; youth unemployment; NEET; Austria; Labour Force Survey

### **1. Introduction**

Young people have been more affected than other groups by the current economic crisis. The increase in youth unemployment has been faster and greater than the average for the population of Europe (Bell and Blanchflower 2011). Due to the limited relevance of traditional labour market indicators for young people, politicians and academics focus on an indicator known as not in employment, education or training ('NEET') (Eurofound 2011, 3), which encompasses young people who are not integrated into the labour market or the education system at a certain point in time. The underlying assumption is that NEET indicates young people who are at high risk of social exclusion. The NEET-indicator includes, for example, those young people who withdraw from labour market due to hopelessness. These youths are not covered by the usual unemployment statistics because they are not actively looking for a job. Approximately, only half of the NEET-youth are looking for a job and, hence, are counted as unemployed.

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Austria has one of the lowest NEET rates in the European Union and has managed to avoid a big increase in NEET youth during the crisis (Eurofound 2012). According to the European definition (for the age group from 15 to 24 years), Austria had a NEET rate of about 6.5% in 2012; the UK, on the other hand, had a NEET rate that was more than two times higher (14%) than that of Austria. If we look back to year 2000, the difference between these two countries was much smaller. In Austria, the NEET rate was about 6.4%, and in the UK, it was about 7.5% (Eurostat 2013). It seems that in the last 12 years, the integration of young people into the labour market has become a much more serious problem in the UK than in Austria. The relatively good labour market position for young people in Austria is mainly explained in the literature with reference to apprenticeship schemes (Eurofound 2011, 8) and certain labour market instruments like youth guarantees (Scharle and Weber 2011).

In comparison to the UK<sup>1</sup> and Japan,<sup>2</sup> current Austrian knowledge about NEET youth is unsatisfactory. A first estimation of the NEET situation in Austria was published by Bacher (2011), while Bacher and Tamesberger (2011) provided the first socio-demographic description.

This paper aims to deepen knowledge of this group, and discusses the following questions:

- Which social-structural attributes characterise NEET youth in Austria?
- What are the reasons for the NEET status?
- Are there specific NEET groups that differ from others in terms of social-structural attributes and reasons for their NEET status?
- Is an individual's NEET status temporary or permanent?

## **2. Research context**

The NEET indicator originated in the late 1980s in the UK, when a large increase in youth unemployment during the recession led to a change in labour market policy (Furlong 2007, 102ff.). Central to the UK Government's new strategy was the aim of increasing young people's participation in training. This involved – according to Furlong – placing significant pressure on young, unemployed people to participate in training programmes, which were often unpopular as they did not meet young people's occupational aims. If young people refused to take up these training places, they lost their right to receive unemployment benefits and were no longer recognised as unemployed. The consequence was that many young people were assigned the status 'not in employment, education or training' (Furlong 2007). This status was initially termed 'Zero', mainly for technical reasons: the UK career service used Status 1 for young people in education, Status 2 for those in training, and Status 3 for young employees. Status Zero referred to young people who were not covered by the main categories of the labour market (Eurofound 2012, 19f.). To avoid the negative connotation of the term Zero, researchers began to use NEET, which was firmly established by a report entitled 'Bridging the Gap' (Social Exclusion Unit 1999).

Since some years and especially since the crisis in 2009 growing interest in policies concerning NEET youth can be observed in Europe. The term is used internationally as an indicator for young people who are at high risk of social exclusion (Eurofound 2012; European Commission 2010; Manfredi, Sonnet, and Scarpetta 2010; International Labour Organisation 2012). But many researchers have also criticised the NEET concept. The

main criticism is related to the belief that every young person who is not in employment, education or training has a similar history and faces the same risks and challenges in the future. Many researchers emphasise that NEET youth are not a homogeneous group, and that political solutions have to take this into account (Spielhofer et al. 2009; Bynner and Parsons 2002; Furlong 2006, 2007; Simmons and Thompson 2011; Yates and Payne 2006; Finlay et al. 2010). The causes of NEET status are diverse, as shown by the heterogeneity of the group. Individual risk factors range from low household income, living in remote areas and difficult family environments, to immigration background, disability and low educational levels (Eurofound 2012, 57). The NEET concept includes young people who are able to work and are actively looking for work, as well as those who are not able to work or who are not working by choice. Some are not seeking work because they have responsibilities for the care of children or because of health problems; other NEET groups conduct voluntary work or take time off for travelling. This means that the NEET category combines young people who are involuntarily excluded from the labour market and the educational system with privileged young people who can decide their own futures (Furlong 2007, 104ff.). Consequently, NEET status cannot be generally interpreted as negative (Simmons and Thompson 2011, 6).

In aiming to 'reflect the dynamics of young people's lives', Bynner and Parsons (2002, 297) suggest defining NEET longitudinally, by a minimum period of six months of NEET status. Their study showed that young people aged between 16 and 18 years who have been assigned NEET status for at least six months have a poor labour market position and a high risk of regaining the status at the age of 21.

We try to prove the indicated heterogeneity of the NEET group in Austria and to identify factors that are relevant for NEET status. Further, we analyse the permanence of NEET status. According to the assumed heterogeneity of the group, we try to identify different groups of NEET-Status as well as reasons for permanent or temporary exclusion from the labour market and educational system. In this context, it is also important to question the role that the Austrian Public Employment Service (PES) plays in the permanence of NEET status.

### **3. Data source and method**

#### **3.1. Data source**

We utilise the Austrian Labour Force Survey (micro census) from 2008 to 2010 as our data source, and analyse young people between 16 and 24 years old ( $n = 59.844$ ). In contrast to the international research literature (European Commission 2011, 2), we use this age limit because compulsory education in Austria ends after nine years of school which is most of the time at the age of 15 and 16 years, respectively. This means that if we analyse youth aged between 15 and 24 years in Austria, then the NEET rate would be lower because of the compulsory education, and we would, therefore, underestimate the transition problems faced by youth in Austria.<sup>3</sup>

#### **3.2. Background information about the analysed time period**

The time period analysed (2008–2010) is characterised by the financial and economic crisis. Austria reacted quickly to the crisis by implementing measures to stimulate the economy (Breuss, Kaniovski, and Schratzenstaller 2009), a large extension of short-time work<sup>4</sup> (Bock-Schappelwein, Mahringer, and Rückert 2011), and for young people

especially the implementation of the youth guarantee. The youth guarantee means that every person in Austria less than 18 years who is not able to find an apprenticeship firm is able to undertake supra-company training. In a supra-company training institution, young people have the opportunity to complete an apprenticeship which is financed by PES (BMASK 2012).

A number of evidence-based measures were implemented in educational policy during this period. A new school type (*neue Mittelschule*) was introduced to promote new learning models and to reduce educational inequalities. Full-time schools were further developed. However, these measures have not yet improved Austria's poor performance in the Programme for International Student Assessment (PISA; OECD 2010) or in the Progress in International Reading Literacy Study (PIRLS; Martin and Mullis 2013). Hence, we can expect that their influence on the NEET-rate is very small, too.

### 3.3. Measurement of NEET

In the micro census, we assigned the NEET status to those who have not been in employment or education or participating in training during the observation period (normally about four weeks). Leisure courses are not included in the definition. Young people who are in the military or civil service are not regarded as NEET. According to the Labour Force Concept, young people who are employed for at least one hour in the observation period are counted as employed. Hence, the NEET status does not include young people in precarious occupation (for further restrictions see below).

### 3.4. Data-sets for analysis and statistical methods

The micro census used a household sample stratified by regions, rather than a simple random sample. Each person will be interviewed five times in a row on a quarterly basis (means totally five quarters) within the micro census, which means that dependent observations can occur. Dependent observations also occur when more young people from the target group live in one household. According to this complex data structure, the design effect is computed as described by Ganninger (2006) and is considered for the data analysis. The design effect for the NEET group is 3.71. The outcome of this is an effective sample of  $n_{\text{eff}} = 16.130$  youth aged between 16 and 24 years, and  $n_{\text{eff}} = 1.317$  NEET youth. We use this data-set to answer the first research question about the social-structural attributes of NEET youth (see Tables 1, 2 and 3).

In addition, we created a panel data-set to analyse the NEET dynamic. The basis for this is all NEET youth who have been included in the sample for the first time and for whom at least three further observations<sup>5</sup> exist – this equates to a total of  $n = 861$ . A maximum of five observations are available for these. Because each young person represents only one case in the analysis, we only considered deviations from the simple random sample that are caused by unequal selection probabilities, and after weightings. The design effect is, therefore, 1.33. The outcome of this is an effective sample of  $n_{\text{eff}} = 664$  NEET youth.

In order to answer the third research question, which addresses whether there are specific NEET groups, we applied latent class models (Bacher, Pöge, and Wenzig 2010; Vermunt and Magidson 2005a, 2005b). We used the program LatentGOLD (Vermunt and Magidson 2005a) to analyse the socio-demographic variables, as well as reasons for NEET status and labour market behaviour, which serve as classification variables. All the other analyses were calculated using IBM-SPSS19.

Table 1. Research questions, data-set and applied statistical procedures.

Research question	Data-set	Justification	Statistical procedure <sup>a</sup>
• Which social-structural attributes characterise NEET youth in Austria?	Pooled cross-sectional data-set over five observations (T1–T5)	To guarantee sufficient number of cases	Cross tabulations and logistic regression
• What are the reasons for NEET status?	Pooled cross-sectional data-set over five observations (T1–T5)	To guarantee sufficient number of cases	Cross tabulations
• Are there specific NEET groups that differ from others in terms of social-structural attributes and reasons for their NEET status?	Pooled cross-sectional data-set over five observations (T1–T5)	To guarantee sufficient number of cases	Latent cluster analysis
• Is NEET status temporary or permanent?	Panel data-set. Basic sample starts with T1	To analyse changes	Logistic regression

<sup>a</sup>Design effect for complex sample structure was considered.

A multinomial logistic regression model was used for the prediction of multi-categorical outcome variables, for example, permanent NEET, temporary NEET and exit from NEET. We set  $p < 0.05$  to establish the statistical significance of results, and  $p < 0.10$  as little significance.

### 3.5. Limitation of the analysis

Before discussing the results, it is necessary to refer to the limitations of our analyses, as well as those of other analyses based on Labour Force or household surveys.<sup>6</sup> Our data does not cover young people who are homeless or living in institutions, such as care homes. To our estimations, these groups are small. The number of young people living in institutional settings is about 9000 (Statistik Austria 2010), and this figure also includes students. Estimates for the number of homeless young people do not exist for Austria. In Vienna, there are 6800 registered homeless people, about 20% of whom are aged between 18 and 29 (Riesenfelder, Schelepa, and Wetzel 2012, 19). This means that about 1400 homeless young people are living in Vienna alone. Even though we do not have information about their employment and education situation, it is highly likely that these young people would be in a NEET status as well. From the literature in the UK (Cusworth et al. 2009, 49), we know that about 57% of homeless 16- to 17-year olds were in a NEET situation prior to becoming homeless. Therefore, analyses based on the Labour Force Survey underestimate the size of the NEET population.

In addition, young people in precarious occupation are not registered as NEET per definition. According to our estimation, 3.1% of young people are marginally engaged with less than 13 hours per week. On the other hand – as already mentioned – not all NEET-youth are faced with social exclusion. The NEET-status includes, for example, young people who have finished school and who will start at universities in the near future.

A further restriction concerns the multivariate causal analysis. In Part 4.4, for example, a multinomial logistic regression is applied to analyse whether the NEET-

Table 2. Social-structural differences between NEET and non-NEET youth.

Attributes	NEET (%)	Non-NEET (%)	Test statistic $\chi^2$	<i>p</i>
Gender				
Female	53.5	48.8	11.0	0.001
Country of birth = foreign country?				
Yes	32.0	12.5	378.1	0.001
Migration background <sup>a</sup>				
None	59.5	82.0	171.4	0.000
First generation	29.9	11.2		
Second generation	10.6	6.9		
Aged between 20 and 24?				
Yes	67.7	55.4	75.4	0.000
Population				
<5000	34.2	46.2	82.6	0.000
5001–30,000	23.2	22.2		
>30,000	42.5	31.6		
Educational attainment—maximum compulsory school and not at school anymore (early school-leavers)				
Yes	48.8	5.0	2943.8	0.000
Living circumstances				
With both parents	45.6	64.5	550.6	0.000
With a single parent	13.9	13.4		
With a single parent and in a relationship	1.4	0.9		
With a partner	27.3	8.8		
Alone	9.9	12.2		
With a single father or a mother	1.9	0.3		
Having at least one child under 6 years and living in the same household.				
Yes	22.9	3.1	1026.9	0.000
Parents' highest education level <sup>d</sup>				
Maximum compulsory school	22.4	9.7	163.3	0.000
Apprenticeship/vocational school <sup>b</sup>	54.0	51.8		
High school diploma <sup>c</sup>	15.3	22.4		
University	8.2	16.1		

Note: NEET status refers to the last four weeks before the survey. The definition and analysis are based on a cross-sectional perspective.

<sup>a</sup>Available only for 2009 onwards, <sup>b</sup>Including nursing school (NEET: 0.3%; non-NEET: 0.6%), <sup>c</sup>Including training courses and examinations for a master craftsman's certificate (NEET: 0.2%; non-NEET: 0.7%),

<sup>d</sup>Information about parents is only available for those who live with at least one parent, which is the case for 60.9% of NEET youth and 78.8% of non-NEET youth.

status is permanent, temporary or non-permanent. Socio-demographic variables and reasons – given by the respondents – are included as independent variables. The inclusion of socio-demographic variables is unproblematic. From a strict causal point of view, however, it is problematic to include the reasons for NEET as independent variables in the analysis because it is difficult to measure causes (NEET) and reasons independently. Therefore, we used a two-step model with socio-demographic background characteristics first and reasons for NEET second. We included the reasons for NEET because they offer important hints of the factors that are influencing NEET. In addition,

Table 3. NEET risk in relation to social-structural variables (results of logistic regressions).

Attributes	Risk of NEET status (all young people)		Risk of NEET status (only those who are living in same household with parents)	
	Female	Male	Female	Male
Gender = Stratification variable				
Migration background?				
No	Reference	Reference	Reference	Reference
First generation	2.000**	0.976	1.090	0.794
Second generation	1.935*	0.971	1.635	0.861
Aged between 20 and 24?				
Yes	1.008	1.521**	1.150	1.641**
Population				
<5000	Reference	Reference	Reference	Reference
5001–30,000	0.902	1.045	0.754	1.033
>30,000	0.905	1.643*	0.953	1.711*
Educational attainment				
Maximum compulsory school and not at school anymore (early school-leavers)	12.109***	14.832***	30.314***	18.601***
Living circumstances <sup>a</sup>				
With both parents	0.989	1.161	Reference	Reference
With single parents	1.566	1.253	1.528**	0.992
With a partner	2.062**	1.034	— <sup>c</sup>	— <sup>c</sup>
With at least one child	5.481***	0.862	5.676	0.377
Parents' highest education level				
Maximum compulsory school	— <sup>b</sup>	— <sup>b</sup>	Reference	Reference
Apprenticeship/vocational school	— <sup>b</sup>	— <sup>b</sup>	1.284	0.759
High school diploma <sup>d</sup>	— <sup>b</sup>	— <sup>b</sup>	0.753	0.676
University	— <sup>b</sup>	— <sup>b</sup>	0.568	0.577
Nagelkerke pseudo- $R^2$	0.362	0.218	0.315	0.261

Note: NEET status refers to the last four weeks before the survey. The definition and analysis are based on a cross-sectional perspective.

<sup>a</sup>In order to fulfil the requirements for a chi-square test, the categories of living circumstances were merged. In column "Risk of NEET status (all young people)" the reference category for living circumstances was living alone.

<sup>b</sup>Not included, because parents' information is only available for those who are living with parents in one household, <sup>c</sup>Not included, because most young people who live with their parents do not live with a partner,

<sup>d</sup>Including training courses and examinations for a master craftsman's certificate (NEET: 0.2%; non-NEET: 0.7%).

\* $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

the reasons are measured at time point T1 before the NEET-pattern (permanent, temporary and non-permanent) that refers to time point T1–T5. Hence at least one formal condition of causal inference is fulfilled, namely, that the event that causes another event has to occur previously (Heise 1975, 15–16).

## 4. Results

### 4.1. Social-structural attributes of NEET youth

Table 2 shows the differences between NEET youth and young people who are integrated into the labour market or education system (non-NEET youth). If we look first at the



column of NEET youth, the heterogeneity of the group is obvious: 53.5% are female, 46.5% male; 32.0% were born in a foreign country; 59.5% have no migration background (neither the parents nor the children have immigrated), which leaves 40.5% who do have a migration background. In addition, 48.8% of those with NEET status are early school-leavers, while 51.2% have a higher level of education than compulsory school.

Considerable variation can be seen with respect to living circumstances. Almost half (45.6%) live with both parents, 27.3% live with a partner, 13.9% live with a single parent and 22.9% already have one child under 6 years. Theoretically, the mentioned child in the household is maybe not the child of the analysed person. It is conceivable that it could be the child of brothers and sisters or of the parents of the analysed person as well. For this reason, we used an additional variable to measure the relation of the analysed person to the child. In the analysis, we included only those persons as having a child who are living with a child under 6 years and who have the relation 'parent' to the child. Hence, all analysed persons with a child are parents.

Concerning social background, 22.4% of NEET youth in Austria have parents with low educational attainment, while 23.5% of parents have finished high school or have a university degree.

There are some remarkable differences between the NEET and non-NEET groups. NEET youth are more likely to be female, with a migration background, living in urban areas and in a relationship. They are also more likely to have children, and their parents generally have a lower level of education.

Concerning educational attainment, half of the NEET youth are early school-leavers, whereas only 5.0% of not-NEET youth. A further important difference that relates to contemporary and future chances is long-term unemployment, which characterises a certain percentage of NEET youth. According to our results, approximately 20–25% of NEET youth in Austria are faced with long-term unemployment.

Analysing the factors that influence risk from a multivariate perspective confirms the interpretation above and reveals interesting details (Table 3). Separate analyses were conducted for males and females, since it can be assumed that different factors determine the NEET risk for males compared to females; for example, it can be expected that having a child will increase the NEET risk for females, but not for males.

The main factor influencing the NEET risk of females is early school-leaving. The risk of NEET status is 12.1 times higher for early school-leavers than for young people with a higher school level, or who are still in the school system. Additional factors influencing female NEET risk are migration background, family structure and having a child. Belonging to the first- or second-migration generation, living with a partner and having a child increase the NEET risk.

For the male population, the results reveal an effect from age and population size of domicile. Older males are at higher risk with respect to NEET. One possible explanation for this finding is that certain measures of the labour market policy end at the age of 18–19 years in Austria. Migration from rural to urban area in the case of unemployment can perhaps explain the effect of population size of domicile. However, the effect is weak and should not be overinterpreted. The main factor influencing the NEET risk of males is again early school-leaving.

Migration background does not significantly predict NEET risk for the male population. The main reason for this finding relates to the indirect effect of migration background on early school-leaving: males with migration background have a higher risk of becoming early school-leavers (either by dropout or by migration after compulsory

education), and, hence, face higher risk of obtaining NEET-status. This indirect effect is effective for the female population, too. The influence of migration background reduces significantly, especially for the first generation (first generation: OR-bivariate: 4.9; OR-multivariate: 2.0; second generation: OR-bivariate: 2.6, OR-multivariate: 1.9) in the female population. The main reason for this reduction is early school-leaving. However, the effect of migration background remains significant. In the meantime, we have conducted further analysis on this topic. Including a longer time period (2006–2011) and further variables in the multivariate analysis reduces the effect of migration background further and migration background becomes insignificantly in a multivariate perspective for the female population, too (Bacher, Tamesberger, and Leitgöb 2013).

According to our expectation, living conditions have no influence within the male population.

Analysing the results regarding educational background show that there is no significant effect from parents' education. The explanation for this is similar to that relating to migration background: parents' low education level results in a higher risk of early school-leaving, which in turn leads to a higher NEET risk.

#### 4.2. Reasons for NEET

Table 4 gives an overview of the reasons for the NEET situation as given by the youth themselves. The reason most frequently given for the respondents' NEET situation was childcare responsibilities (16.3%), followed by termination by an employer (13.1%); other reasons (13.6%) not explained in the data-set; illness (8.6%); and the ending of a temporary contract (8.6%).

Table 4. Reasons for NEET situation.

Categories in questionnaire	Absolute ( $n_{\text{eff}}$ )	In percentage (%)	Pooled categories
Illness, incapacity or retirement	113	8.6	Illness
Educational or vocational training	37	2.8	Training
Other personal or family circumstances (housekeeping)	80	6.1	Personal or family reasons
Parental leave or other care of children or adults	215	16.3	Care responsibilities
Already found a new activity	46	3.5	Starting a job
Waiting for results of former job- seeking activities	31	2.4	Waiting for results
Termination by employer	172	13.1	Termination by employer
Ending of a temporary contract	113	8.6	End of temporary contract
Termination by employee, or mutually agreed termination	108	8.2	Termination by employee, or mutually agreed termination
Return to former job	55	4.2	Return opportunities
No suitable job, other reasons, military or civil service	179	13.6	Other
No information	169	12.8	Sysmis
Total ( $n_{\text{eff}}$ )	1318	100	

Our data-set does not make it possible to distinguish between different kinds of illnesses (physical or psychological). The category also includes disabled persons. The few studies in Austria to address this topic estimate that about 17% of young people aged between 15 and 30 have chronic or permanent illnesses (Klimont, Kytir, and Leitner 2007, 60), about 52,000 young people under 20 years are disabled (BMASK 2009, 13), and around 26,000 persons aged between 11 and 20 have psychological illnesses (HV, GKK 2011, 5).

#### 4.3. Typology of NEET youth in Austria

We applied latent class analysis to the NEET youth in question. The active variables included were gender, migration background, age, place of residence, form of housing, having a child and reasons for the NEET situation.<sup>7</sup> The descriptive (inactive) variables included were looking for work, parental education and other socio-structural attributes. We used the AIC3 coefficient to identify the number of clusters because it performs well for nominal classification characteristics (Bacher, Pöge, and Wenzig 2010, 425; Fonseca and Cardoso 2007). The AIC3 value proposes a solution with eight clusters; however, here the value for eight clusters is only slightly lower than that derived from seven clusters (see Table 5). We, therefore, decided to use the variant with a smaller number of clusters.

The average profile of the seven-cluster solution is shown in Appendix 1. On the basis of the profiles, we can name seven clusters (Table 6).

#### 4.4. Permanent or temporary NEET situation?

In this section, we explore whether the NEET situation is temporary or permanent. The permanence is divided into three categories:

- *Permanent NEET*: The young person was in a NEET situation during the first observation and all succeeding observations.

Table 5. Information criteria for determining the number of clusters.

Cluster number	LL	<i>n</i> par	BIC	AIC	AIC3
1	−10,855.8354	24	21,884.0	21,759.7	21,783.7
2	−9,843.0590	49	20,037.9	19,784.1	19,833.1
3	−9,682.2511	74	19,895.8	19,512.5	19,586.5
4	−9,585.0862	99	<u>19,881.0</u>	19,368.2	19,467.2
5	−9,507.1675	124	<u>19,904.6</u>	19,262.3	19,386.3
6	−9,447.6965	149	19,965.2	19,193.4	19,342.4
7	−9,398.7168	174	20,046.7	19,145.4	19,319.4
8	−9,354.7663	199	20,138.3	19,107.5	<u>19,306.5</u>
9	−9,320.1675	224	20,248.6	19,088.3	19,312.3
10	−9,292.7158	249	20,373.2	<u>19,083.4</u>	19,332.4
11	−9,270.4366	274	20,508.2	19,088.9	19,362.9
12	−9,248.9469	299	20,644.7	19,095.9	19,394.9

The lowest value of each test statistic is underlined to show the proposed number of clusters. LL value for the log-likelihood-function; *n*par, number of parameters which have to be estimated; BIC, best information criteria; AIC, Akaike information criteria; AIC3, Akaike information criteria 3. See Bacher, Pöge, and Wenzig (2010, p. 419–426).

Table 6. Structural attributes of the seven-cluster solution.

Cluster	%	Attributes
Unemployed young early school-leavers	23	Autochton, 16–19 years old, male or female, maximum compulsory school, living with one or both parents. A frequent reason is loss of a former job. A main reason for inactivity is illness (around 30%). No care responsibilities.
Apprenticeship graduates in the countryside	19	Autochton, mainly men, 20–24 years old, medium education (apprenticeship), living with one or both parents in a town of up to 5000 inhabitants. Twenty-five percent have a job offer, no care responsibilities. Probably looking for a job nearer to his/her home town.
Older unemployed	18	Autochton, 20–24 years old, mainly men, low-to-medium education, living with one or both parents or alone, major reason for inactivity is illness (around 18%). Frequent reason for NEET is loss of a job.
Graduates in waiting position	11	Autochton, frequent graduates from high school or at least vocational school, living with one or both parents, in waiting position for further education, a suitable job or the military/civil service.
Young mothers with migration backgrounds	14	Migration background, 20–24 years old, married, medium education and high school diploma (10%), care responsibilities for one or more children, no active job-seeking in the past three weeks before the survey.
Young mothers without migration backgrounds	9	Young mothers, 20–24 years old, autochton, living in partnerships, with parents or as single parent, low-to-medium education, care responsibilities for one or more children, one in five had actively looked for a job in the past three weeks before the survey.
Young married women with migration backgrounds	6	Migration background, married, living in partnership, low-to-medium education, 10% with high school diploma, partial care responsibilities, personal or family reasons for inactivity.

- *Permanent Exit*: The young person was in a NEET situation during the first observation, but in employment, education or training during all succeeding observations.
- *Temporary Exit/NEET*: The young person was in a NEET situation during the first observation, and in at least one NEET and one non-NEET situation during all succeeding observations.

The analysis provides the following picture (Table 7) from at least two follow-up observations: 34.7% of NEET youth have permanent NEET status, 33.1% have made a temporary change, and 32.2% have made a permanent change. For the last observation value we find that 53.4% are still in a NEET situation, while 46.6% are in education, employment or training.

With regards to job seeking, 40.2% of the NEET youth who were looking for a job at the date of the interviews have permanently exited NEET. A further 38.0% have made a

Table 7. Development of NEET with regards to job-seeking.

Job-seeking	Permanent NEET (%)	Temporary exit/partially NEET (%)	Permanent exit (%)	$n_{\text{eff}}$
Yes	21.8	38.0	40.2	326
No	47.2	28.3	24.5	339
Total	34.7	33.1	32.2	665

$$\chi^2 = 48,384, p = 0.000.$$

temporary exit, while NEET is a permanent situation for 21.8%. Of those NEET youth who are not looking for a job, 47.2% are in a permanent NEET situation.

There is a strong connection between the reason for NEET and the development of the NEET situation. Responsibilities for care have led to a permanent NEET situation for 72.6% of respondents (Table 8), while 22.6% of NEET youth with responsibilities for care have achieved at least a temporary exit from their situation. A similar but less pronounced picture exists for personal or family reasons. A permanent exit is more likely to be achieved when the NEET situation occurred due to waiting to start education or a new job. When the NEET youth had previously lost a job, the risk of facing a permanent NEET situation increased by between 12.8 and 24.0%, depending on the way that job was lost. The lowest risk applies to young persons who quit their jobs on their own, or when the termination was mutually agreed. The risk of a permanent NEET situation is significantly higher if the employer terminated the job.

The multivariate analysis reveals the following effects (see Table 9):

- The risk of a permanent NEET situation, rather than a permanent exit, is smaller if the youth in question are living with their parents. One explanation for this is that parents may support them emotionally or help them to find a job.
- The risk of a permanent NEET situation is substantially higher if the youth are early school-leavers.

Table 8. Development of NEET with regards to reasons for NEET status.

Reasons for NEET	Permanent NEET (%)	Temporary exit/partially NEET (%)	Permanent exit (%)	$n_{\text{eff}}$
Care responsibilities	72.6	22.6	4.7	106
Personal or family reasons	61.8	20.6	17.6	34
Education	0.0	44.4	55.6	18
Illness	52.5	31.1	16.4	61
Starting a job	4.4	33.3	62.2	45
Waiting for results	14.3	57.1	28.6	14
Termination by employer	24.0	37.5	38.5	96
End of limitation	22.7	34.8	42.4	66
Termination by employee or mutually agreed termination	12.8	38.5	48.7	39
Other reasons and missing values	28.8	34.8	36.4	184
Total	34.7	33	32.3	663

Table 9. NEET development with regard to reasons for NEET status and socio-demographic attributes (results of multinomial logistic regression).

	Permanent NEET versus permanent exit		Temporary exit versus permanent exit	
	exp( $\beta$ )	exp( $\beta$ )	exp( $\beta$ )	exp( $\beta$ )
Female	1.327*	1.172	1.124	1.038
Migration background	1.432*	1.358	1.075	1.033
Between 20 and 24 years	1.432*	1.271	1.234	1.189
Living with parents	0.535**	0.531**	1.104	0.859
Living with partner	0.676	0.673	0.527**	1.104
Have child(ren)	3.919***	1.947*	2.748***	0.530*
Actively looking for work	0.626***	0.744	0.437	1.368
Maximum compulsory school and not in school-system (early school-leaver)	3.079***	2.536***	0.892	0.859
<i>NEET reasons</i>				
Care responsibilities	— <sup>a</sup>	5.172**	— <sup>a</sup>	1.891
Personal or family reasons	— <sup>a</sup>	3.473*	— <sup>a</sup>	1.854
Waiting for next job or educational opportunity	— <sup>a</sup>	0.386**	— <sup>a</sup>	0.782
Illness	— <sup>a</sup>	3.027**	— <sup>a</sup>	0.917
Waiting for results of former job-seeking	— <sup>a</sup>	0.789	— <sup>a</sup>	1.195
Termination by employer	— <sup>a</sup>	1.126	— <sup>a</sup>	0.624
End of limitation	— <sup>a</sup>	1.104	— <sup>a</sup>	0.581
Other reasons and missing values	— <sup>a</sup>	0.978	— <sup>a</sup>	0.658
Termination by employee or agreed mutually	Reference	Reference	Reference	Reference

<sup>a</sup>Not included.\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ .

- The risk of a permanent NEET situation is lower if the youth are actively looking for work. This effect becomes insignificant if the analysis includes the subjective reasons for NEET. The effect is substituted by factors that reduce job search activities – these factors are responsibilities for care or some kind of illness/disabilities. In contrast, the risk of a permanent NEET situation is lower if the youth are waiting to start their next job or educational opportunity.
- Gender, migration background and age have a significant influence as long as subjective reasons are not included in the analysis. The effects become insignificantly if the analysis includes subjective reasons as independent variables. The risk of a permanent NEET-Status of females, migrants and older youth can be explained by care responsibilities and illness.
- The risk of a partial, rather than permanent, exit from NEET is substantially higher if the youth have responsibilities for care.

To summarise, it is clear that care responsibilities are one of the main reasons for a permanent NEET situation in Austria. The question arises as to whether young mothers with care responsibilities, who are not actively looking for a job, should be excluded from the NEET definition. Further important causes are illnesses/disabilities and the most important is early school-leaving, which can lead to permanent exclusion from society.

Socio-demographic attributes do not have a direct influence on the situation, although they do indirectly affect the reasons for NEET and the person’s job-seeking activities. For example, the educational qualification ‘apprenticeship’ often leads to a termination of the contract and thereby increases the risk of a permanent NEET situation. Another example is that young women often have more responsibilities for care, and so are at higher risk, compared to men.

4.5. Job-seeking and public employment service

Active job-seeking decreases the risk of a permanent NEET situation, but does not guarantee a permanent exit. In this context, questions arise about the role of the PES.

Of those NEET youth who were looking for work during the first observation and for whom we have information from at least two follow-up observations ( $n = 325$ ), 86.4% had had contact with the PES, and 50.9% of them had received a job offer through the PES.

When asked whether contact with the PES or getting a job offer leads to a higher probability of permanent or temporary exit from the NEET situation, we see bivariate (Tables 10 and 11) and multivariate (not pointed out) no statistical significance. Evaluation studies on the effectiveness of Austrian labour market measures for young people show that only long-term measures, like supra-company training, increase the employment likelihood of young unemployed. For all other measures, the results were not significant (Vogtenhuber et al. 2010). In contrast to this, Eurofound (2012) and, more recently for Austria, Bacher, Tamesberger, and Leitgöb (2013) found a context effect regarding expenditure on the active labour market policy. This means that the higher the expenditure for active labour market policy in a country or a region, which is mainly realised through public employment services, the lower the NEET rate.

These contradictory results indicate a certain preventive effect of the labour market policy, which protects young people from getting into a NEET situation. However, the labour market policy is less successful at the individual level in terms of helping those with NEET status to overcome their situation. A further explanation for this is that expenditure on a labour market policy stimulates consumer demand, which in turn stimulates business cycle, and, therefore, eases labour market entry for young people.

5. Discussion and conclusion

The aims of this article were to examine the socio-structural attributes that characterise NEET youth in Austria, the main reasons for the NEET situation, whether there are different subgroups of NEET, whether the NEET situation is permanent or temporary and the extent to which those with NEET status have contact with the PES.

Table 10. Development of NEET with regard to PES contact.

PES contact?	Permanent NEET (%)	Temporary exit/partially NEET (%)	Permanent exit (%)	$n_{\text{eff}}$
Yes	19.9	38.8	41.3	281
No	34.1	31.8	34.1	44
Total	21.8	37.8	40.3	325

$\chi^2 = 4.469, p = 0.107.$

Table 11. Development of NEET with regard to job offers through PES.

Job-offer?	Permanent NEET (%)	Temporary exit/partially NEET (%)	Permanent exit (%)	$n_{\text{eff}}$
Yes	20.6	36.4	43.0	165
No	23.3	39.6	37.1	159
Total	21.9	38.0	40.1	324

$\chi^2 = 1.197, p = 0.550.$

From the socio-structural point of view, NEET youth in Austria are a heterogeneous group. There are differences between NEET and non-NEET groups. In Austria, NEET youth are primarily female, with a migration background, living in cities and with low educational attainment. NEET youth are more likely to have a partner and/or child. The main factor influencing the NEET risk for young people in Austria is early school-leaving. The risk of falling into a NEET situation is substantially higher for early school-leavers than for young people with a higher school level.

On the basis of individual risk factors and socio-structural attributes, we identified seven subgroups of NEET youth, all of which face different challenges. A relatively large group is young early school-leavers who are out of work; another is apprenticeship graduates living in the countryside, whose contracts have been terminated. Other groups are the older unemployed, young people who are waiting for their next educational opportunity or job, two groups of young mothers with responsibilities for care and one of young married women, frequently with a migration background.

The NEET situation is permanent for one-third of those affected. A further third have achieved a temporary exit from the NEET situation, and the final third have achieved permanent integration into the labour market or education system. Most NEET youth who were looking for work (47% of all NEETs) have had contact with the PES. Half of those mentioned that they have also obtained a job offer through the PES. This means that the PES reaches and can offer jobs at least to those NEET youth who explicitly wish to work. Current knowledge about the effects of PES activities in Austria is unsatisfactory; however, Eurofound (2012) has shown that the expenditure on active labour market policy across Europe, which is mainly realised through PES, has a positive influence on reducing the NEET rate.

From a methodical and substantive point of view, this study asks whether the definition of NEET should be adapted to exclude young mothers with care responsibilities who are not actively looking for a job. It is not easy to find a clear answer to this question. On the one hand, early pregnancy can be a cause and also a consequence of the NEET situation. Early parenthood is often linked to poverty or a lack of good education or job opportunities (Bynner and Londra 2004; Tunnard, Barnes, and Flood 2008). On the other hand, having children is a socially desirable and financially supported position. Therefore, it is necessary to deepen knowledge about young mothers and to design policy measures for those who are at the risk of social exclusion, which can be assumed by young mothers with low education.

From a social-structural point of view, the risk of remaining in a NEET situation permanently depends on gender, migration background, age, living conditions, having a child, formal education and looking for a job (see Table 9). Female young people who have a migration background are aged between 20 and 24 years, are not living with a



parent, have a child and are early school-leavers and are not looking for a job have the highest risk of being caught in a permanent NEET situation. If we add the causes for NEET, most social-structural factors are not of statistical significance.

The permanent NEET youth group represent a special challenge to social and labour market policy. If we consider the reasons for a permanent NEET situation (Table 9), illness/disabilities comes third, beneath care responsibilities and personal or family reasons. The micro census does not reveal any further information about illnesses. Regardless of the lack of research into this topic, the results obviously show that there are fewer job or training opportunities that fit the needs of young people with illnesses. The third influencing factor on the permanence of the NEET situation is job-seeking activity, which is a precondition for exiting NEET status. Alongside care responsibilities and personal or family circumstances, a relatively large group (11.3%) gave other reasons for not seeking work. It is vital to get access to this group, which has had no contact with the PES. One strategy for this could be to establish a good network of all players on the regional level (labour market policy, youth work, schools, clubs, etc.)<sup>8</sup> (Klingelmair and Bödenhofer 2009, 155f.). In 2012, the Austrian Government introduced so-called ‘youth coaches’ to try to keep in touch with the youth before they leave compulsory school. The aim of this programme is to avoid early school-leaving and losing young people during the transition from school to the labour market (Bundessozialamt 2011). Its success has yet to be proven empirically. Another factor which tends to result in a permanent NEET situation is the termination of a temporary contract. The consequences of flexible labour markets for disadvantaged young people has frequently appeared in literature about NEET (Simmons and Thompson 2011; Thompson 2011; Furlong 2007). Indeed, the main challenge in relation to labour market policy nowadays is to create enough good jobs or educational opportunities for disadvantaged young people. One possibility in this regard is to extend a second labour market for this target group, and invest more into experimental labour market policies.

### **Acknowledgement**

For helpful comments, we would like to thank Rudolf Moser as well as two anonymous referees. Remaining errors are of course ours.

### **Notes**

1. For an overview of the UK situation see, for example, York Consulting (2005) and DfCSF (2008). For an estimation of the lifetime costs of NEET, see Coles et al. (2010), and for a comparative study on NEET in Japan and the UK see Furlong (2007).
2. For Japan see, for example, Genda (2007); or Inui, Sano and Hiratsuka (2007).
3. In contrast to the early UK literature (Social Exclusion Unit 1999), which concentrated on NEET youth aged between 16 and 18 years, later research enlarged the age range to 15–24 years. This made it possible to analyse the return of young mothers to the labour market. In Austria, the number of teenage mothers is small (about 5%), and the enlarged age range is necessary to analyse young mothers who had their first child aged between 20 and 24 years. Interestingly, the NEET rate for the age group 20–24 in the UK is dramatically high (19.4%) compared to Austria (8.6%) (Eurostat 2013). This could indicate that early pregnancy is a much more pertinent topic in the UK than in Austria.
4. Short-time workers receive for reducing regular work hours, according to the unemployment insurance scheme, about 55% of their net wage differential (normal working hours minus actual working hours) from PES. Under certain circumstance the percentage is higher.
5. To extend the number of cases, we use three observations instead of four possible observations.

6. An overview of the literature on this topic in the UK is provided by Cusworth et al. (2009).
7. The stability of a cluster solution depends on the number of observations and the quality of the variables. ‘Good’ variables are more important to find clusters than the number of observations (see Bacher, Pöge, and Wenzig 2010). Therefore, we include the reasons for NEET because we assume that the reasons characterise different NEET groups.
8. A good example of a regional youth network in Austria can be found at: [http://ooe.arbeiterkammer.at/ueberuns/bezirksstellen/gmunden/jugendnetzwerksalzkammergut/Jugendnetzwerk\\_Salzkammergut.html](http://ooe.arbeiterkammer.at/ueberuns/bezirksstellen/gmunden/jugendnetzwerksalzkammergut/Jugendnetzwerk_Salzkammergut.html)

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**Appendix 1**

Table A1. Cluster.

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
Size of cluster	0.2332	0.1873	0.1826	0.1385	0.1091	0.0875	0.0618
<i>Active variables</i>							
Female 'no/yes'?							
No	0.5898	0.6791	0.6871	0.0848	0.5622	0.0112	0.0059
Yes	0.4102	0.3209	0.3129	0.9152	0.4378	0.9888	0.9941
Migration background?							
No	0.7594	0.9412	0.5889	0.1526	0.9459	0.9982	0.1539
Yes	0.2406	0.0588	0.4111	0.8474	0.0541	0.0018	0.8461
Age between 20 and 24 years?							
No	0.7898	0.2118	0.0742	0.0572	0.5184	0.1318	0.1559
Yes	0.2102	0.7882	0.9258	0.9428	0.4816	0.8682	0.8441
Number of inhabitants – place of living							
<5000	0.2805	0.6125	0.1319	0.2176	0.5037	0.4591	0.2251
5001–30000	0.2498	0.2765	0.1544	0.1927	0.2445	0.2663	0.2818
>30000	0.4697	0.1110	0.7137	0.5896	0.2518	0.2746	0.4931
Highest degree of education							
Maximum compulsory school	0.9549	0.1597	0.3976	0.6227	0.0042	0.4215	0.4895
Apprenticeship	0.0100	0.7004	0.3416	0.1545	0.0857	0.3760	0.1317
Vocational school	0.0345	0.0752	0.0797	0.1051	0.1844	0.1509	0.1260
High school diploma	0.0006	0.0531	0.1668	0.0947	0.6769	0.0514	0.2164
University	0.0000	0.0117	0.0143	0.0231	0.0489	0.0002	0.0364
Living circumstances							
With both parents	0.7113	0.6561	0.3008	0.0004	0.8292	0.1421	0.1668
With a single parent	0.2591	0.1737	0.1232	0.0189	0.1327	0.0653	0.0139
With a single parent and partner	0.0033	0.0139	0.0396	0.0143	0.0012	0.0195	0.0000
With a partner	0.0037	0.0714	0.1451	0.9390	0.0074	0.6115	0.7509
Alone	0.0226	0.0849	0.3913	0.0001	0.0294	0.0001	0.0683
Single father or mother	0.0000	0.0000	0.0000	0.0273	0.0000	0.1614	0.0000
At least one own child?							
No	0.9998	0.9995	0.9814	0.0015	0.9998	0.0045	0.9988
Yes	0.0002	0.0005	0.0186	0.9985	0.0002	0.9955	0.0012
Reasons for NEET (summarised)							
Responsibilities	0.0075	0.0002	0.0009	0.7170	0.0040	0.6710	0.0566
Personal or family reasons	0.0371	0.0098	0.0313	0.0503	0.0733	0.0344	0.4284
Education	0.0366	0.0057	0.0256	0.0112	0.1141	0.0005	0.0020
Illness	0.1653	0.0799	0.1514	0.0077	0.0108	0.0224	0.0005
Starting a job	0.0207	0.2325	0.0753	0.0121	0.0729	0.039	0.0103
Waiting for results	0.0367	0.0115	0.0249	0.0080	0.0312	0.0165	0.0400
Termination by employer	0.1161	0.1874	0.2946	0.0571	0.0053	0.0555	0.0175
End of limitation	0.0483	0.2329	0.1408	0.0112	0.0120	0.0236	0.0030

Table A1. (Continued)

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7
Termination by employee or agreed mutually	0.0887	0.1653	0.1243	0.0118	0.0067	0.0291	0.0534
Others	0.4431	0.0747	0.1308	0.1136	0.6697	0.1081	0.3883
<i>Passive variables</i>							
Active job-seeking in the last four weeks?							
Yes	0.5935	0.6415	0.6501	0.1276	0.4292	0.1898	0.1985
No	0.4065	0.3585	0.3499	0.8724	0.5708	0.8102	0.8015
Highest education of parents							
Maximum compulsory school	0.3364	0.1143	0.1232	0.0064	0.0477	0.0632	0.0555
Apprenticeship/ vocational school	0.4888	0.5607	0.2227	0.0178	0.4592	0.1481	0.0736
High school diploma	0.1117	0.1219	0.0806	0.002	0.2437	0.0136	0.0277
University	0.0369	0.0469	0.037	0.0069	0.2129	0.0015	0.0232
	0.0262	0.1562	0.5364	0.9669	0.0365	0.7736	0.8199
Highest education of partner							
Maximum compulsory school	0.0019	0.0167	0.055	0.3767	0.0014	0.1304	0.2409
Apprenticeship/ vocational school	0.0024	0.0591	0.0909	0.4517	0.0041	0.4188	0.4108
High school diploma	0.0025	0.0089	0.0284	0.1061	0.0029	0.0704	0.0789
University	0.0001	0.0004	0.0103	0.0192	0.0000	0.0119	0.0211
	0.9931	0.9149	0.8154	0.0462	0.9917	0.3685	0.2483
Family status							
Single	0.9902	0.9793	0.8708	0.1768	0.9972	0.6409	0.3840
Married	0.0083	0.0180	0.1191	0.8217	0.0028	0.3367	0.6153
Divorced	0.0015	0.0028	0.0101	0.0015	0.0000	0.0224	0.0007
Age of partner							
Mean	24.3658	24.0439	24.2462	27.2135	24.8591	27.5445	25.623