
REPORTS

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Study on the link between dropping out of school and NEET status

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Study on the link between early school leavers and NEET status¹

Abstract:

This report marks the third published document in the frame of a project launched in collaboration with the National Youth Service (SNJ), the Inspectorate General of Social Security (IGSS) and the Luxembourg Institute of Socio-Economic Research (LISER). This project, initiated by SNJ, aims to improve the knowledge available throughout Luxembourg on young people who are not in education, employment or training (known as NEETs).

While the first two documents focus on the trajectories of NEETs in Luxembourg and highlight the heterogeneity hidden behind this population, this document has more of an explanatory scope. It focuses on the relationship between NEET status and another problem concerning youth -- dropping out of school -- and aims, in particular, to answer the following questions: does dropping out of school lead to becoming NEET? Were NEETs who dropped out of school in a more difficult situation than those who did not drop out?

To answer these questions, data from the Survey on Young People in the Job Market, conducted between October 2014 and June 2015, is being used. The data provides information on the status of young people at the time of the survey, who, one year before being surveyed, declare that they have dropped out of school. Unsurprisingly, the study found that early school leavers are more likely to become NEETs than their counterparts who complete their school education. In addition, school dropouts who are also NEETs are more likely to be vulnerable than non-school dropouts; they remain in this status for a longer period of time and are more alienated from society and/or the job market. Combating the issue of school dropouts therefore helps tackle the NEET phenomenon by targeting the most vulnerable young people. However, to tackle the issue of NEET status, we need more than educational policies aimed at reducing the school dropout rate. On the one hand, not all NEETs are former school dropouts and, on the other hand, other risk factors are linked to NEET status. The study shows that policies that develop young people's cognitive and non-cognitive skills, as well as family policies that support vulnerable or less culturally adapted families should also be implemented.

¹ This report was drafted as part of a project initiated by the National Youth Service and conducted in collaboration with the Inspectorate General of Social Security and the Luxembourg Institute of Socio-Economic Research. Mireille Zanardelli (Labour and Employment Unit, IGSS) led the scientific coordination of this project.

Introduction

Given the economic crisis, the situation of young people on the job market has deteriorated throughout Europe, and Luxembourg is no exception. Between 2007 and 2014, the unemployment rate of under-25s increased from 15.6% to 22.3% and the rate of NEETs, i.e. young people not in education, employment or training, rose from 5.7% to 6.3% (Eurostat). Various policies have been implemented both on European and national levels in an effort to combat the situation, including policies aimed at solving the issue of early school leavers. Studies have in fact shown that dropping out of school can have medium- and long-term negative consequences on young people's situation on the job market (Belfield, 2008). The European Commission proposed an action plan aimed at reducing the school dropout rate within the European Union to below 10% by 2020. Although the school dropout rate in Luxembourg is below the European average, it is on the rise², which has brought the subject to the forefront of public concerns.

This report focuses on the link between dropping out of school and NEET status in order to demonstrate that fighting against dropping out of school can, in part, be an effective response to the NEET phenomenon. To that end, this report examines the future of young people who had previously dropped out of school and aims to answer the following questions: is being a school dropout linked to the risk of being NEET? Are early school leavers more likely to be vulnerable NEETs than those who do not drop out? What are the characteristics of school dropouts who do not become NEETs? Conversely, what are the characteristics of those who do not drop out but become NEETs? To answer these questions, we use data from the *Survey on Young People in the Job Market*, which contains information on a sample of young residents between the ages of 17 and 24 in March 2014.

This report is organised in the following way. The first section focuses on the relationship between early school leavers and NEET. The second section examines the degree of NEET vulnerability, depending on whether or not they have dropped out of school. The third section identifies the risk factors linked to dropping out of school. In the fourth and fifth sections, we highlight the differences in the characteristics of NEETs and non-NEETs among school dropouts and non-dropouts.

² The rate of young people abandoning their studies or training early (18-24 years old) increased from 8.1% in 2012 to 9.3% in 2015 (European Commission, 2016). In 2015, in the European Union, the rate was 11%.

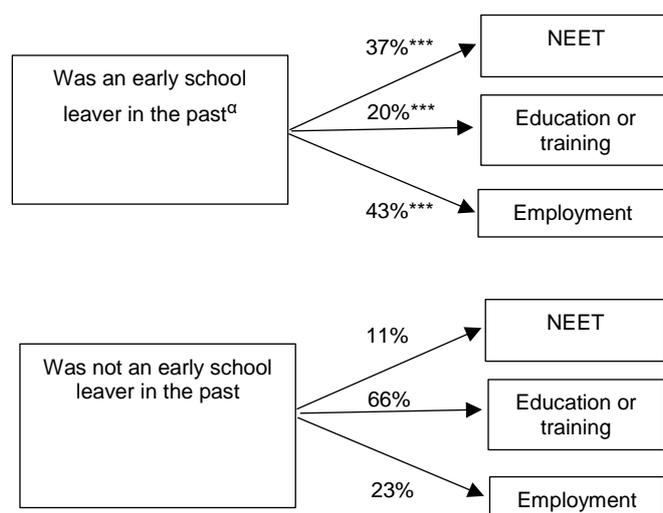
1. Dropping out of school and the risk of becoming NEET

Using data from the *Survey on Young People in the Job Market*, this section examines the risk factors associated with NEET status in Luxembourg. Firstly, we will highlight the fact that dropping out of school is the main risk factor for becoming NEET. Secondly, we will present other risk factors that are associated with this status.

1.1. Dropping out of school is the main risk factor for becoming NEET.

A year before being surveyed (see Box 1), 11% of young people reported that they had dropped out of school, i.e. they left school at least once with an education below upper secondary level. At the time of the survey, their situation shows that **having dropped out of school is positively related to becoming NEET**. In fact, 37% of young people who had dropped out of school were NEETs at the time of the survey, compared with 11% of their counterparts who did not drop out (see figure 1).

Diagram 1 Self-reported status at the time of the survey of young people who had or had not dropped out of school.



Domain: Young residents aged between 17 and 24, in March 2014, who are covered by the Luxembourg social security system (excluding homeless people).

Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.

^a: a young person who, a year before being surveyed, reports having already left the education system with certification below upper secondary level.

Reading guide: 37% of young people who had dropped out of school in the past were NEET at the time of the survey. For young people who have not dropped out of school in the past, this is 11%. This difference in proportions has a 1% significance level.

*** $p < 0.01$

Box 1. Survey on Young People in the Job Market

The Survey on Young People in the Job Market was conducted between October 2014 and June 2015 by LISER, in collaboration with the Inspectorate General of Social Security, on behalf of the National Youth Service. This survey was conducted in March 2014 in face-to-face interviews. A sample of young residents covered by the Luxembourg social security system, either in their own name or as a co-insured party, aged between 17 and 24 was used. This means that international civil servants and their children, as well as homeless young people, are excluded from the scope of the survey. These exclusions constitute a limitation of this study. A total of 7,430 young people were contacted and the response rate was 35%.

Based on the survey data, we can study the relationship between dropping out of school and NEET status.

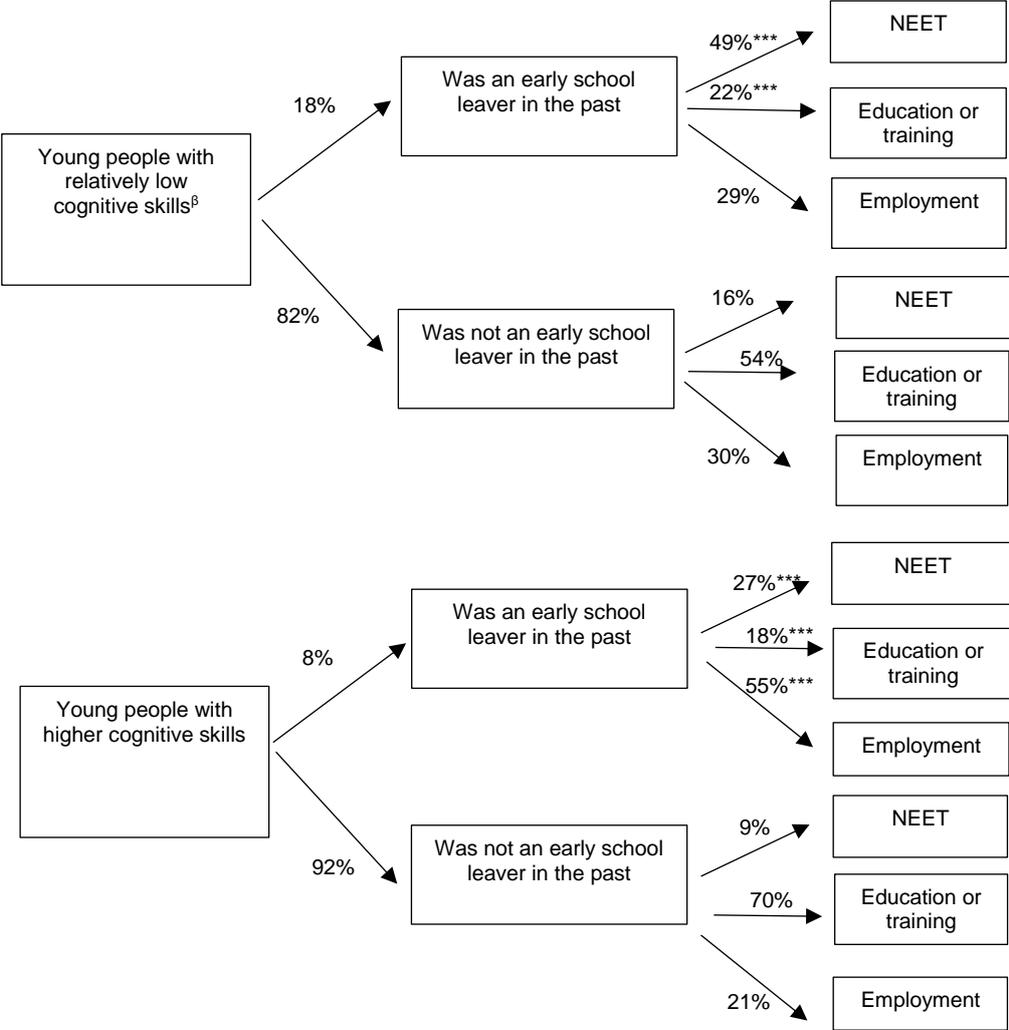
A young person is considered to have dropped out of school when they report that, one year before being surveyed, they have already left the education system with a diploma below upper secondary level.

A young person is defined as NEET if, at the time of the survey, they are not in education, employment or training and were not a pupil, apprentice or a student during the four weeks prior to the survey.

To determine whether this relationship is real and not in fact hiding other factors, differences in characteristics likely to exist between young dropouts and non-dropouts need to be considered. Indeed, the over-representation of NEETs among young people who have previously dropped out of school could be explained by these differences in characteristics. One of which, highlighted in the literature, is that dropouts have, on average, lower cognitive skills³ than non-dropouts (Cairns et al., 1989; Audas and Willms, 2001; Traag and Van der Velden, 2008). Figure 2 considers this difference when evaluating the relationship between dropping out of school and NEET status.

³ A test to measure a young person's cognitive skills was introduced as part of the survey. This test was developed by psychologists under the auspices of the International Cognitive Ability Resource (ICAR) project (Condon and Revelle, 2014). Sixteen questions are used to assess verbal reasoning levels of the young people being studied.

Diagram 2 Cognitive skills, having dropped out of school and NEET status



Domain: Young residents aged between 17 and 24, in March 2014, who are covered by the Luxembourg social security system (excluding homeless people).
 Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.
^β: i.e., cognitive skills that are at the lower end of the distribution.
 *** p <0.01 (control group: young people who have not dropped out of school in the past).

From this diagram, three observations can be made.

Firstly, young people with relatively low cognitive skills are proportionally more likely than others to have dropped out of school at least once (18% versus 8%). In Luxembourg, as in other countries, cognitive skills constitute a risk factor for dropping out of school. The issue of dropping out of school could

therefore be conquered through programmes aimed at developing children's cognitive skills. In order to develop these abilities, the OECD (2016) recommends reducing class sizes, in particular.

Secondly, young people who had dropped out of school were proportionately more likely to be NEETs than those who had not dropped out, regardless of cognitive skills. Thus, among young people with relatively low cognitive skills, 49% of those who had dropped out of school were NEETs at the time of the survey, compared with 16% of other young people. Meanwhile, among young people with a higher distribution of cognitive skills, 27% of those who had dropped out were NEETs, compared with 9% of other young people.

Thirdly, schooling helps reduce the impact that cognitive skills have on young people's integration into society and the job market. 84% of young people with relatively low cognitive skills who did not drop out of school are in education, training or employment. This proportion is comparatively similar to that of young people with relatively higher cognitive skills who did not drop out of school (91%).

The relationship between dropping out of school and NEET status therefore remains after controlling for cognitive skills. But what happens when we simultaneously consider the differences in characteristics observed between school dropouts and non-dropouts? The statistical analysis conducted to answer this question shows that this relationship persists⁴. Specifically, the risk of becoming NEET, after taking the differences in characteristics into account, was three times higher for young people who had dropped out than for those who had not. Moreover, among the risk factors that were analysed, dropping out of school is most linked to NEET status. This result can be found in other studies, notably in that of Tamesberger and Bacher (2014). It should be noted that the link between dropping out of school and NEET status, even if it subsides, persists over time. In fact, compared to those who have never dropped out of school, the risk of being NEET is 5 times higher for young people who dropped out one year before the start of the survey. It is 3.6 times higher for those who dropped out two years before the survey, 3.2 times higher for those who dropped out three or four years before and 2.2 higher times for those who dropped out at least 5 years before.

While dropping out of school is the main risk factor for becoming NEET, other factors are likely to play a role. We present them in the following paragraph.

1.2. Other Risk Factors

Factors other than dropping out of school are related to the risk of becoming NEET. These factors relate to the young person's socio-demographic characteristics, family environment and cognitive and non-cognitive skills⁵.

Sociodemographic characteristics

Gender

⁴ The results of this evaluation are presented in Appendix 1.

⁵ It should be noted that these factors are presented by category, not in order of significance.

In the literature, while studies agree that gender is not neutral on the risk of being NEET, they do not agree on whether men or women are most likely to experience this status (Duckworth and Schoon, 2012, Tamesberger and Bacher, 2014). Indeed, results vary according to country and, for a given country, depending on the period studied. For example, Duckworth and Schoon (2012) find that, in the United Kingdom, for the cohort born in the 1970s, it is women who are more likely to be NEET, whereas for the cohort born in 1989/1990, it is men. Similar developments are found in Ireland, by Kelly and McGuinness (2013), over the 2006-2011 period. The authors explain this development by changes to the economic situation. According to them, the economic crisis in Ireland has had a greater impact on the construction sector, yet men are more present than women in this sector. Since the data we have for Luxembourg is not longitudinal, we are unable to evaluate such an evolution. On the other hand, we note that, over the 2014-2015 period, men are, all else being equal, more likely to be NEET. Therefore, the risk of being NEET is, all else being equal, 1.4 times greater for men than for women.

Migration

There is no consensus in the literature on the link between migration and NEET status. Therefore, while Kelly and McGuinness (2013) conclude that, in Ireland, young people in ethnic minorities are more likely to be NEET than natives, Mendola and Walker (2015) come to the opposite conclusion in the United Kingdom. In the case of Luxembourg, immigrants, whether first or second generation, are more likely, all else being equal, to be NEET than young people who, along with at least one of their parents, were born in Luxembourg. It should be noted, however, that when compared with the native population (young people, along with at least one of their parents, who were born in Luxembourg), the risk of first-generation immigrants being NEET is 1.9 times greater and 1.6 times higher for second-generation immigrants.

Health

All else being equal, declaring suffering from a health problem is positively related to NEET status. However, our study does not provide information on the meaning of the causal link. While health status can indeed influence the risk of becoming NEET, it must be noted that being NEET for a prolonged period can affect health status (Bynner and Parsons, 2002). Some studies, for example Cornaglia et al. (2012), allow us to further study this relationship. Their study highlights the fact that suffering from a mental illness increases the risk of becoming NEET in the future. These authors explain this result by the idea that young people suffering from this type of pathology have little incentive to invest in their education due to the fact that they are confronted with learning difficulties reducing the return on investment of education.

Family burden

Our study shows that having at least one child is positively related to the risk of becoming NEET. However, in the absence of longitudinal data, we cannot make any comments on the causal link. While having a child may indeed cause the young person to become NEET, being NEET may also result in having a child (some inactive young women may seek some form of recognition by becoming a mother or justification for their situation).

Family environment

The family environment may influence the probability of becoming NEET through various channels.

The first channel goes through the parents' level of education. The literature has highlighted that the risk of becoming NEET decreases with parental education (Bynner and Parsons, 2002; Duckworth and Schoon, 2012). The same result is found in Luxembourg: adolescents who have at least one parent with post-secondary education are, all else being equal, less likely to be NEET than those whose parents' level of education did not exceed primary school. Several explanations in the literature explain this link. The first is parental aspirations in terms of education for their children (Schoon, 2010), which increase with the parent's level of education. The second is the educational support that parents can provide and their knowledge of the education system (Rennison et al., 2006). Parents with a higher level of education can help their children more easily and will most likely have better knowledge of the education system, which means they can provide more assistance to their children in terms of career counselling. Moreover, our study reveals that parental involvement in education⁶ is negatively related to the risk of being NEET⁷.

The second channel is family structure. The literature highlights the fact that young people who grew up in a single-parent family are more likely to become NEET than those who grew up in another type of family (Duckworth and Schoon, 2012). Our study reveals that children whose parents are separated or divorced are more likely, all else being equal, to be NEET. However, we only note differences between children over 11 years of age at the time of their parents' separation or divorce and those whose parents did not divorce, with regard to the risk of being NEET. The number of siblings is also important; in our study, we find that only children are, all else being equal, more often NEETs.

The third channel is the household standard of living when growing up. Authors, in particular, Britton et al. (2011) and Mendola and Walker (2015), have shown that young people who grew up in a disadvantaged family are more likely to be NEET. The literature explains this result by the idea that family origin sends signals regarding the benefits of education. So, according to Furlong et al. (2003), young people from disadvantaged families are more likely to move into unskilled jobs, which leads them to invest less in their education and ultimately increases their risk of becoming NEET. In our study, there was a positive relationship between having lived in a household that had difficulty coping with current expenditure and NEET status. However, this link is significant only at the 11% threshold.

Cognitive and non-cognitive skills

The literature has highlighted that cognitive and non-cognitive skills contribute to explaining multiple aspects of the situation in which an individual finds themselves on the job market. Nevertheless, few studies have looked at the links between these skills and the status of NEET.

Non-cognitive skills, however, can be cited in the study by Mendola and Walker (2015), who conclude that lack of self-confidence and having an external locus of control⁸ are positively related to NEET status. Conversely, tenacity is negatively linked with this status. The Survey on Young People in the Job Market

⁶ Parental involvement in education means that parents participate in parent-teacher meetings and monitor their child's academic performance.

⁷ On the other hand, the lack of importance attached to homework by parents, approximated by the fact that during childhood the young person had to carry out domestic tasks or care for siblings instead of doing homework, is positively linked to the risk of being NEET.

⁸ An individual has an external locus of control if they tend to think that events occur due to forces out of their control, rather than their own doing.

examines seven personality traits, namely tenacity, openness to experience, conscientiousness, agreeableness⁹, neuroticism¹⁰, attitude to risk and the future. In our study, only agreeableness is significantly related to the risk of being NEET, which, without explanation¹¹, increases along with the agreeableness score. We note that, although not significant at the 10% threshold, tenacity is negatively related to NEET status.

With regard to cognitive skills, our study shows that this type of skill is, all else being equal, negatively related to the risk of being NEET. Thus, preventive policies aimed at developing cognitive skills in early childhood could reduce the risk of becoming NEET.

2. School dropouts are more likely to be vulnerable NEETs

As we have seen, young people who dropped out of school are proportionately more likely to be NEETs than their counterparts who did not drop out. Since the population of NEETs is heterogeneous, it is interesting to ask whether NEETs who dropped out of school have more difficulties than their counterparts who did not drop out. To answer this question, we refer to both the way NEETs judge their own situation and more objective elements.

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When referring to the way NEETs perceive their situation, there are no discrepancies between early school leavers and non-early school leavers. They report the same level of satisfaction with life: on average, their satisfaction is 7.4 on a scale from 0 to 10. Moreover, the same proportion (56%) believe that NEETs have no chance of finding a job. These similarities can, however, be explained by different expectations. School dropouts and non-dropouts who grew up in a different family environment (Traag and Van der Velden, 2008) are likely to have different reference points that may direct their perceptions.

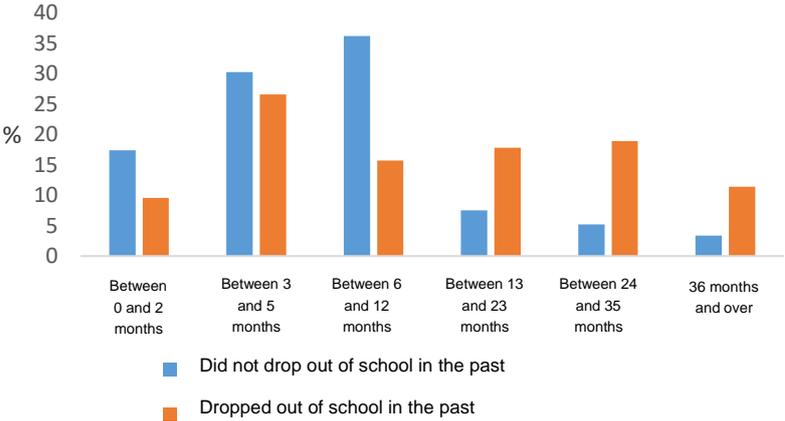
When objective factors are applied, we see that NEETs who dropped out of school are in a more vulnerable situation than those who did not drop out. This greater vulnerability can first be seen in the duration of the current episode of NEET. NEETs who dropped out of school reported having this status, on average, for 16 months, compared with 8 for those who had not dropped out of school (see Graph 1). Dropping out of school may make it more difficult to enter the job market (for example, the diploma protecting against the risk of being unemployed) or to access training.

⁹ Agreeableness is linked to the desire for cooperation and social harmony. An agreeable individual is friendly, helpful and inclined to reconcile interests with those of others.

¹⁰ Neuroticism refers to an unstable emotional character. Individuals who report strong neuroticism easily experience negative feelings (anger, anxiety). Their emotions may impede their ability to reason.

¹¹ In the literature, a negative link is highlighted between agreeableness and wage level (Heineck, 2007).

Graph 1. Duration of the current NEET episode depending on whether or not the young person dropped out of school



Domain: Young residents aged between 17 and 24, in March 2014, who are covered by the Luxembourg social security system (excluding homeless people) and who are NEET at the time of the survey.
 Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.

The greatest vulnerability of NEETs is reflected, secondly, in the nature of the difficulties encountered. In an earlier report (Hauret, 2017), NEETs in Luxembourg were divided into 8 groups, which can be split into two broad categories: NEETs are considered vulnerable because they are alienated from society and/or the job market, whereas non-vulnerable NEETs are either in a transition phase between school and work or between jobs, or have chosen this status. Using this divide, we can see that among NEETs who dropped out of school, 5 out of 10 can be termed vulnerable. This is 3 out of 10 for NEETs who did not drop out of school. For example, almost 15% of young people who dropped out of school can be classified as vulnerable NEETs compared to 3% of those who did not drop out of school.

The situation of vulnerability in which young people find themselves can be worsened by not being involved with various organisations that may help them. We investigated whether there are differences on this point between NEETs who dropped out of school and those who did not. We found that NEETs who dropped out of school were proportionally more likely than those who did not drop out of school to report having already used the services of ADEM and certain associations to help job seekers join the job market (see Table 1). The difficulties encountered by young people who dropped out of school presumably make them more likely than others to turn to organisations that can help them with professional integration. On the other hand, NEETs who dropped out of school do not differ from other NEETs in their use of organisations offering career guidance. For example, 59% of them compared to 63% of other NEETs report having used SPOS before, but this difference is not statistically significant. This finding is surprising since, given the school problems faced by those who drop out of school, we could have expected more use of these types of organisations.

Table 1. Proportion of NEETs reporting that they already use organisations, depending on whether or not they have dropped out of school

	Has dropped out in the past	Did not drop out
Maison de l'orientation (Career Guidance Organisation)	25%	30%
ADEM	86%	75%**
Centre National de la Formation Professionnelle Continue (CNFPC -- National Centre for Continuing Professional Development)	15%	21%
ProActif	6%	4%
Schläifmillen	6%	3%
Groupe d'Assistance en milieu ouvert (GAMO)	4%	1%
Co-Labor	10%	1%***
Polygone	6%	1%**
Youth centre	45%	50%
Services de Psychologie et d'Orientation Scolaires (SPOS -- School Counselling and Psychology Services)	59%	63%

Domain: Young residents aged between 17 and 24, in March 2014, who are covered by the Luxembourg social security system (excluding homeless people) and who are NEET at the time of the survey.

Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.

*** p<0.01, ** p<0.05, * p<0.1.

Given the fact that implementing policies to combat school dropout rates can partially address the NEET phenomenon while targeting the most vulnerable NEETs, in the third section, we are interested in risk factors associated with dropping out of school.

3. Risk factors associated with dropping out of school

The literature, in particular Glasman (2003), emphasises that there is no standard process that leads young people to drop out of school, but rather a variety of processes. Our study reveals that socio-demographic characteristics, family environment, cognitive and non-cognitive skills and school experience¹² are related to the risk of dropping out of school¹³.

Sociodemographic characteristics

In our study, several socio-demographic characteristics appear to be related to the risk of dropping out of school. Such is the case for gender. Indeed, men are, when all else is equal, more likely to have dropped out than women. This result can also be found in other evaluations of Luxembourg data

¹² These factors are presented by category, not in order of significance.

¹³ The results of this evaluation are presented in Appendix 2.

(Ministère de l'Éducation nationale, de l'Enfance et de la Jeunesse, 2015) and foreign data (Marks and Fleming, 1999; Institut national de recherche pédagogique, 2009).

Young people who report having Portuguese as their first language are proportionately more likely to report dropping out of school: 16% compared to 10% for those with German, French or Luxembourgish as their mother tongue. However, the relationship between mother tongue and dropping out of school disappears when parents' level of education is taken into account (young people with Portuguese as their mother tongue are less likely to have parents with higher education).

Family background

The family background with which the young person grew up is linked to the risk of dropping out of school. This link, as we shall see, has two channels.

According to Boudon's social stratification theory (1974), educational choices are related to social class. The author explains this relationship through the idea that net gain in education differs according to social origin. According to Boudon, the cost of education (for the young person or their family) is higher for a young person from a disadvantaged social environment, while at the same time the expected return on education is lower. This difference leads young people from poorer social backgrounds to invest less in their education and ultimately run a higher risk of dropping out of school. At the same time, children from privileged social backgrounds are more likely to be helped, mentored and encouraged to study and are therefore less likely to drop out of school (Traag and Van der Velden, 2008). Our results correspond with this theory, since the risk of dropping out of school is negatively related to having parents with higher education (Orfield, 2004; Coudrin, 2006).

Family structure, through the interactions allowed between children and parents, also has a role to play. According to Coleman (1988), children who do not interact much with their parents are less able to take advantage of parental resources and, therefore, all else being equal, are more likely to drop out of school. Parent-child interactions are likely to be lowest in single-parent families and in large families due to lower parental availability (either because only one parent is responsible for everything or parents need to share their time between several children). Our study and the literature confirm the link between these family structures and dropping out of school. Indeed, children who lived in a large family (in our study this means at least four children), all else being equal, are more likely to have dropped out of school than others (Ní Bhrolcháin et al., 2000; Heard, 2004; Traag and Van der Velden, 2008). Similarly, all else being equal, having separated or divorced parents is positively related to the risk of dropping out of school. In our study, this is also the case for those with a deceased mother or father.

Cognitive and non-cognitive skills

Cognitive skills, both in our study and in the literature (Cairns et al., 1989; Audas and Willms, 2001; Traag and Van der Velden, 2008), are linked to dropping out of school. Thus, the risk of dropping out of school decreases, when all else is equal, when cognitive skills are greater.

Non-cognitive skills, i.e., personality traits, are also important. Among the personality traits present in our study, only conscientiousness is significantly related (11% threshold) to dropping out of school. As one would expect, the more conscientiousness a young person, the less likely they are to report having dropped out of school.

School experience

Unsurprisingly, the way in which the young person experiences schooling is linked to the risk of dropping out of school. Firstly, young people who report a good atmosphere in the school they attended are less likely, when all else is equal, to drop out of school than others. Secondly, young people who report not having completed the training they would have liked due to results not being good enough to do something else or because they had received poor guidance on orientation are more likely, when all else is equal, to have dropped out of school. This result is consistent with Glasman (2003), who emphasises that an unwanted orientation is an important factor in dropping out of school. In our study, however, we must be careful when interpreting this relationship; young people might hide their willingness to rationalise their actions and, in particular, to justify leaving school with low levels of education. Thirdly, young people who have repeated years during their education are more likely, when all else is equal, to have dropped out. This result is found in other studies that highlight the important role played by repeating school years in the risk of dropping out (Hirschman and Pharris-Ciurej, 2004). Moreover, we note that the risk of dropping out of school is greater for young people who reported having repeated a school year at least twice during school than those who reported having only done so once.

In summary, most risk factors linked to dropping out of school trace back to the school system (guidance received, repeating school years), the family environment (large family, separated parents, death) and in young people's cognitive skills. Therefore, the best policies to combat the issue of dropping out of school are those aiming to: take better consideration of children's career goals and/or their parents' guidance, increase parental involvement at school, support fragile families or improve children's cognitive skills. While some of these policies indirectly help reduce NEET rates via their effects on school dropout rates, others will have a more direct effect. There are, in fact, certain risk factors linked to dropping out of school and NEET status. For example, lower cognitive skills or growing up in a fragile or less culturally adapted family.

Policies to combat school dropout rates are, however, insufficient in combating the NEET phenomenon as there is no perfect overlap between dropping out of school and NEETs.

4. The majority of young people who dropped out of school do not become NEET

While dropping out of school is the main risk factor of becoming NEET, not all young people who dropped out of school become NEET. Rather, as can be seen in Figure 1, 63% of them are in education, employment or training (EET) at the time of the survey.

Comparing the characteristics of young people who were able to integrate with those of NEETs (see Table 2) highlights six major differences. These differences may help explain why some young people who drop out of school managed to integrate, unlike others.

The first difference is **family environment**. Young people who dropped out of school and are currently in education, employment or training, grew up in a more culturally privileged family. They are in fact more likely to have parents who completed upper secondary school (52% compared with 40%). The importance placed on education in the family is also more important because they are less likely to report having to perform domestic tasks as a child instead of completing their homework (9% compared

to 16%). Being from a more culturally privileged family environment can make the reintegration of school dropouts easier, especially due to parents' greater involvement with education. The family's standard of living is also important. While the EETs who were studied are less likely to have lived in a household that found it difficult to cope with current expenditure than their NEET counterparts (22% versus 32%), they are also less likely to have been living in a household that was coping easily or very easily with these expenses (35% versus 43%). On one hand, parents' living standards can help those who drop out of school to reintegrate because they have more opportunities available to them (for example, education or training opportunities), while, on the other hand, a high standard of living can dissuade young people from wanting to integrate because their needs are covered by their parents. On this point, we note that NEETs are more likely than their integrated counterparts to declare receiving financial support from their parents. However, from the available data, we cannot identify whether it is their NEET status that is the reason for this parental support, or if this encourages them to remain NEET.

The second difference is related to **health** status and **family burden**. Young people who dropped out of school and who are currently in education, employment or training are less likely to report having health problems that limit their activities (2% versus 16%) and having family burdens (8% versus 13%). Health and family constraints may make it more difficult to return to education and access employment or training due to a lower availability.

The third difference is **school experience**. Young people who dropped out of school and who are currently in education, employment or training are slightly less likely to report having faced problems such as being assaulted, harassed or discriminated against during their education (32% versus 40%). Such problems can make it difficult for young people to return to education or training due to a sense of unease at school. In addition, EETs are proportionately less likely to report undertaking particular training due to no other choice, because of poor school results (14% versus 25%). The career guidance given can demotivate young people or lead them down paths where the job market is more difficult.

The fourth difference is **cognitive skills**. Young people who dropped out of school and are currently in education, employment or training have, on average, higher cognitive skills than their NEET counterparts. They had an average score of 5.7 out of 16 in cognitive ability tests conducted as part of the Survey on Young People in the Job Market, compared to a score of 4.6 for their NEET counterparts. This difference echoes the literature, which shows that cognitive skills may explain many aspects of the situation in which an individual finds themselves on the job market, with regard to employment status, salary and long-term unemployment (Heckman et al., 2006; Carneiro et al., 2007; Lindqvist and Vestman, 2009).

The fifth difference is **relationship to work**. Young people who dropped out of school and are currently in education, employment or training ascribe greater value to the concept of work. They are therefore more likely than others to think that having a job is necessary to fully develop their skills (52% versus 40%), that it is humiliating to receive money without working (42% versus 33%) and that work is a duty to society (54% versus 39%). The value given to work can make inactivity more arduous and encourage young people who share this value to do everything possible to reintegrate.

The sixth difference is **non-cognitive skills**, or personality traits. Young people who dropped out of school and who are currently in education, employment or training are slightly less likely to have strong neuroticism (10% versus 17%), i.e. they are more emotionally stable. In addition, they are more likely to show open-mindedness (34% versus 26%). Programmes to develop non-cognitive skills could help young people who dropped out of school emerge from NEET status. Such programmes have been implemented in some countries, for example, the Social and Emotional Aspects of Learning programme,

introduced in various schools throughout the United Kingdom, which aims to develop the social and emotional skills of children and adolescents (Mendola and Walker, 2015).

Table 2. Characteristics of young people who, a year before the survey, had dropped out of school, depending on their NEET status during the survey

	In employment, education or training (EET)	NEET
Male	64%	61%
Migration background:		
Born in Luxembourg as well as their parents	50%	45%
First-generation immigrant	31%	32%
Second-generation immigrant	19%	21%
No information	0%	2%
Divorced or separated parents	36%	39%
At least one deceased parent	10%	11%
With at least one child	8%	13%*
Health problem restricting activities	2%	16%***
Parents with at least secondary-school education	52%	40%***
Standard of living of the household in which the young person was living at the age of 11:		
Difficult to cope with current expenses	22%	33%**
Fairly easy to cope with current expenses	41%	22%***
Easy or very easy to cope with current expenses	35%	43%*
No information	2%	2%
Very good relationship with parents	50%	56%
Financial assistance from parents	46%	66%***
Some help from family and friends if needed	80%	68%***
Lived in a household with at least 4 children	15%	23%**
Had to do domestic chores instead of doing homework	9%	16%**
Parents involved in schooling	81%	78%
Victim of aggression, bullying, harassment at school	32%	40%*
Unwanted schooling due to poor career guidance	15%	12%
Unwanted schooling due to insufficient academic performance	14%	25%***
Strongly agree that in order to fully develop their abilities, it is necessary to have a job	52%	40%***
Strongly agree that it is humiliating to receive money without working	42%	33%**
Strongly agree that working is a duty to society	54%	39%***
Cognitive skills	5.7	4.6***
High extroversion	24%	29%
High agreeableness	29%	31%
High conscientiousness	29%	35%
High neuroticism	10%	17%**
High openness	34%	26%*
Strong preference for risk	34%	33%
Strong concern for the future	15%	16%
Strong tenacity	28%	23%

Domain: Young residents between the ages of 17 and 24, in March 2014, who are covered by the Luxembourg social security system (homeless excluded) and who state that as of one year before the survey, they had dropped out of school.

Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.

*** p<0.01, ** p<0.05, * p<0.1.

When we delve further into the analysis, by comparing, among young people who dropped out of school, the characteristics of vulnerable NEETs and non-vulnerable NEETs (in transition to the job market or who deliberately chose this status), we find that there are differences. Non-vulnerable NEETs are more likely to be financially supported by their family (78% versus 51%). They report facing health problems (1% versus 26%) and having family burdens (5% versus 23%) less frequently. Their education has often been interspersed with problems of aggression, harassment or discrimination (27% versus 55%). In terms of non-cognitive skills, non-vulnerable NEETs are proportionally less likely to like risks (26% versus 47%). Contrary to what one might expect, non-vulnerable NEETs have, on average, cognitive skills somewhat lower than vulnerable NEETs (4.2 versus 5.1). This result highlights the fact that the vulnerability in which early school leavers find themselves, does not necessarily reflect their skills, but is influenced by the background in which they grew up.

5. Characteristics of NEETs who completed their school education

Young people who dropped out of school one year before the survey have a greater risk of NEET status than young people who did not. However, this does not mean that young people who did not drop out are not at risk of becoming NEET. Indeed, 11% of young people who had not dropped out of school one year before the survey, are currently in NEET status and 3% can be described as vulnerable NEETs.

Many characteristics that distinguish EETs from NEETs among those who drop out of school are found among non-dropouts (see Table 3). Therefore, among non-dropouts as among the dropouts, NEETs are more likely to have lived in a less culturally adapted family environment, facing economic hardship and where homework is not deemed as important. They are also more likely to report suffering from a health problem that limits their activity, or they have family burdens¹⁴. On average they have lower cognitive skills.

Other differences are, however, specific to young people who had not dropped out of school.

These differences relate to certain demographic characteristics of youth; hence, among the young people who did not drop out of school, NEETs are more likely to be male than EETs (57% compared to 49%). Furthermore, NEETs are more likely to be first generation immigrants (29% versus 22%) and less likely to, along with their parents, have been born in Luxembourg (39% versus 52%)¹⁵.

Others focus on family background. Among young people who did not drop out of school, NEETs are more likely to grow up in a family that suffered the separation or divorce of parents (31% versus 22%).

¹⁴ These characteristics also distinguish young people who did not drop out of school who have medium or high cognitive skills that become NEETs from those who do not become NEET. Note that NEETs with medium or high cognitive skills are in NEET status for less time than their counterparts with lower cognitive abilities (7 months compared with 10 months).

¹⁵ These differences were not reflected in young people who had dropped out of school, because school dropouts already have the distinction of, most often, being men (63% of young people who had dropped out of school were male, compared to 50% of their counterparts who had not dropped out) and are mostly first-generation immigrants (31% versus 22%).

Finally, there are differences related to personality trait. So, among young people who did not drop out of school, NEETs, on average, are more agreeable and are less outgoing and less tenacious. Tenacity may enable young people not to be discouraged by the difficulties in entering the job market.

Table 3. Characteristics of young people who did not drop out of school according to whether or not they are NEET

	EET	NEET
Male	49%	57%**
Migration background:		
Born in Luxembourg as well as their parents	52%	39%***
First-generation immigrant	22%	29%**
Second-generation immigrant	25%	30%
No information	1%	2%
Separated or divorced parents	22%	31%***
At least one deceased parent	4%	5%
With at least one child	2%	8%***
Health problem restricting activities	6%	9%**
Parents with at least secondary-school education	69%	53%***
Standard of living of the household in which the young person was living at the age of 11:		
Difficult to cope with current expenses	16%	30%***
Fairly easy to cope with current expenses	31%	29%
Easy or very easy to cope with current expenses	49%	38%***
No information	4%	3%
Very good relationship with parents	62%	51%***
Financial assistance from parents	73%	68%
Some help from family and friends if needed	85%	77%***
Lived in a household with at least 4 children	13%	9%
Had to do domestic chores instead of doing homework	9%	16%***
Parents involved in schooling	83%	71%***
Victim of aggression, bullying, harassment at school	26%	27%
Unwanted schooling due to poor career guidance	4%	12%***
Unwanted schooling due to insufficient academic performance	4%	15%
Strongly agree that in order to fully develop their skills, it is necessary to have a job	39%	41%
Strongly agree that it is humiliating to receive money without working	28%	29%
Strongly agree that working is a duty to society	47%	49%
Cognitive skills	7.7	6.4***
Extroversion	3.7	3.5***
Agreeableness	3.8	3.9***
Conscientiousness	3.9	3.9
Neuroticism	2.6	2.6
Open-mindedness	3.5	3.6
Risk lover	6	5.9
Concern for the future	6.5	6.4
Tenacity	3.6	3.5**

Domain: Young residents between the ages of 17 and 24, in March 2014, who are covered by the Luxembourg social security system (homeless excluded) and who state that as of one year before the survey, they have never dropped out of school.

Source: *Situation des Jeunes sur le marché du travail* [Survey on Young People in the Job Market], October 2014-June 2015, National Youth Service and LISER.

*** p<0.01, ** p<0.05, * p<0.1.

Conclusion

This report, from the Survey on Young People in the Job Market, concerns the relationship between dropping out of school and NEET status. Specifically, it aims to identify the weight of dropping out of school among risk factors linked to NEET status. Six main conclusions emerge from this report.

1. Dropping out of school is a risk factor for becoming NEET. Among the risk factors studied (demographic characteristics, family environment, cognitive and non-cognitive skills, etc.), dropping out of school is most linked to NEET status.
2. Given, on the one hand, the link between dropping out of school and NEET status and, on the other hand, common risk factors for dropping out of school and NEET status (family environment, low cognitive skills, etc.), combating the issue of dropping out of school means the NEET phenomenon can be tackled.
3. Combating the issue of dropping out of school is more beneficial to vulnerable NEETs. Indeed, NEETs who dropped out of school remain NEET for longer and are more alienated from society and/or the job market than their counterparts who were did not drop out of school.
4. However, the link between dropping out of school and NEET status is not deterministic. On the contrary, the majority of young people who dropped out of school enter the job market or return to education or training.
5. Young people who dropped out of school who are able to enter the job market, or return to education or training, are more likely to come from a family with a cultural advantage and are less likely to undergo training due to no other choice. On average, they also have greater cognitive skills, attribute greater value to work and are more emotionally stable.
6. The combat against NEET status must not be based solely on educational policies to reduce dropout rates, but must also rely on policies that support vulnerable families and policies that develop children's and adolescents' cognitive and non-cognitive skills.

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Appendix 1: Logit model – Risk of being NEET at the time of the survey

	Risk report
Male	1.455**
Age	1.116***
With at least one child	2.246***
Immigration status	
First-generation immigrant	1.913***
Second-generation immigrant	1.608**
Native	<i>Ref.</i>
Health problem restricting activities	2.175***
At least one parent deceased	0.951
Divorced or separated parents:	
Parents divorced or separated before the age of 5	1.376
Parents divorced or separated between the age of 5 and 11	1.337
Parents divorced after the age of 11	1.677**
Parents not divorced or separated	<i>Ref.</i>
Parents' level of education:	
Primary	<i>Ref.</i>
Lower secondary	1.159
Upper secondary	0.861
Post-secondary	0.565**
No information	1.874*
Employment status of head of household when young person was 11:	
Not working	0.793
Working	<i>Ref.</i>
No information	1.387
Standard of living of the household in which the young person was living at the age of 11:	
Difficult to cope with current expenses	1.352
Fairly easy to cope with current expenses	0.769
Easy or very easy to cope with current expenses	<i>Ref.</i>
No information	0.971
Number of children in the household when the young person was 11:	
1 child	<i>Ref.</i>
2 children	0.601**
3 children	0.769
4 or more children	0.581**
Frequently had help with homework	1.150
Was prevented from doing homework due to domestic work	1.534**
Parents involved in schooling	0.652**
Victim of aggression, bullying, harassment during school	1.156
Had already dropped out of school at least once, one year before the survey	3.110***
Level of cognitive skills:	
Low	<i>Ref.</i>
Medium	0.540***
High	0.526***
Difficulties speaking Luxembourgish	0.795

Difficulties speaking German	0.597**
Difficulties speaking French	1.350**
Difficulties reading German and French	1.545
Degree of tenacity:	
Low	<i>Ref.</i>
Medium	1.069
High	0.865
Degree of extroversion:	
Low	<i>Ref.</i>
Medium	1.089
High	0.864
Degree of agreeableness:	
Low	<i>Ref.</i>
Medium	1.357*
High	1.733**
Degree of conscientiousness	
Low	<i>Ref.</i>
Medium	0.979
High	0.815
Degree of neuroticism:	
Low	<i>Ref.</i>
Medium	1.015
High	1.059
Degree of open-mindedness:	
Low	<i>Ref.</i>
Medium	1.177
High	1.026
Love of risk:	
Low	<i>Ref.</i>
Medium	0.658**
High	0.863
Concern for the future:	
Low	<i>Ref.</i>
Medium	1.155
High	1.057
Situation with regard to repeating a school year:	
Never repeated a school year	<i>Ref.</i>
Repeated a school year once	1.138
Repeated a school year more than once	1.040
Pseudo R2: 0.33	

*** p<0.01, ** p<0.05, * p<0.1.

Appendix 2: Logit model – Risk of having dropped out of school

	Risk report
Male	1.797***
Age	1.067*
Gave birth to a child	0.586
Immigration status	
First-generation immigrant	1.664
Second-generation immigrant	0.557*
Native	<i>Ref.</i>
Health problem restricting activities	0.813
At least one parent deceased	3.763***
Divorced or separated parents	3.864***
Parents' level of education:	
Primary	<i>Ref.</i>
Lower secondary	0.981
Upper secondary or non-university post-secondary	0.907
Higher education	0.340***
No information	2.764***
Standard of living of the household in which the young person was living at the age of 11:	
Difficult to cope with current expenses	<i>Ref.</i>
Fairly easy to cope with current expenses	1.694**
Easy or very easy to cope with current expenses	1.365
No information	0.367
Number of children in the household when the young person was 11:	
1 child	
2 children	0.870
3 children	1.116
4 or more children	1.953**
Was prevented from doing homework due to domestic work	1.040
First language:	
Luxembourgish	<i>Ref.</i>
German	0.707
French	0.657
Portuguese	1.231
Other	0.426**
Cognitive skills	0.834***
Tenacity	0.888
Agreeableness	1.040
Conscientiousness	0.828
Neuroticism	0.981
Open-mindedness	1.118
Risk	1.013
Future	0.969
Extroversion	1.100
Aggression, bullying, harassment during school	1.123
Situation with regard to repeating a school year:	
Never repeated a school year	<i>Ref.</i>

Repeated a school year once	2.069***
Repeated a school year more than once	4.260***
Was undertaking training due to poor career guidance	2.221***
Was undertaking training due to poor results leading to no other options	2.305***
Good atmosphere in the schools attended	0.665**
Pseudo R2: 0.32	

*** p<0.01, ** p<0.05, * p<0.1.

