

# Do low educational attainment and unemployment keep you NEET?

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## Introduction

Since the start of the **Great Crisis**, European governments have focused on the reactivation of young people who do not work, study nor take part in training (NEET). Nonetheless, EUROSTAT (2016) estimates show that about **17 million young people aged 20-34** are still **NEET**.

Among the **potential causes**, **low educational attainment** and extended periods in **unemployment** may play a salient role (Blossfeld 2005; Manzonni and Mooi-Reci 2011). However, we do not know **whether** unemployment and low educational attainment also **predict who remains NEET**.

To address this question, I have focused on **Germany** looking at individuals who have been NEET at least once over the **age range 15-31**. Germany is a good case study as it has a **highly segmented labour market** and **education system** (Müller and Gangl 2003). Further, looking at longitudinal processes, rather than a single event (e.g. becoming NEET), factors in the increasing complexity of the life course (Brzinsky-Fay 2014).

## Theory

### Education may matter as

1. it provides individuals with **skills** increasing human capital (Mincer 1958; Becker 1962);
2. it may **signal** individual marginal productivity, which is unobserved (Spence 1973);
3. it gives **credentials** and/or **networks** that enhance social inclusion or exclusion from occupations (Collins 1979; Rosenbaum and Binder 1997; Weeden 2002).

### Unemployment may matter because

1. **past spells** could make future unemployment and **unstable working careers** more likely (Arulampalam et al. 2000, Gregg 2001);
2. increasing **length of unemployment** may lead to **less** efforts and time spent on **job search** (Krueger et al. 2011), and **fewer job interviews** after the sixth month out of work (Ghayad 2013).

### Cumulative disadvantage?

1. **Low education attainment** may **affect** labour market **entry opportunities** (Holtmann, Menze, and Solga 2017), as well as have a detrimental effect over the life course.
2. Differences in the **accumulation of unemployment** may then increase the probability to **remain NEET**.

## Data

I have used the **German National Educational Panel Study (NEPS)**, **Starting Cohort 6** (Allmendinger et al. 2011). Collected on an annual basis, it provides retrospective monthly life-course data on German adults born between 1944 and 1986. The final sample includes **4766 individuals**, who have been NEET at least once, with complete records from age 15-31.

## Methods

I have used a **Latent Class Growth Analysis** with a three step approach (Asparouhov and Muthén 2014). The **1st** step entails a **finite mixture model** linking **age** and the latent propensity to become **NEET assuming** a cubic polynomial relationship and **multiple discrete groups**:

$$Y_{it}^* = \beta_0^j + \beta_1^j Age_{it} + \beta_2^j Age_{it}^2 + \beta_3^j Age_{it}^3 + \epsilon_{it} \quad (1)$$

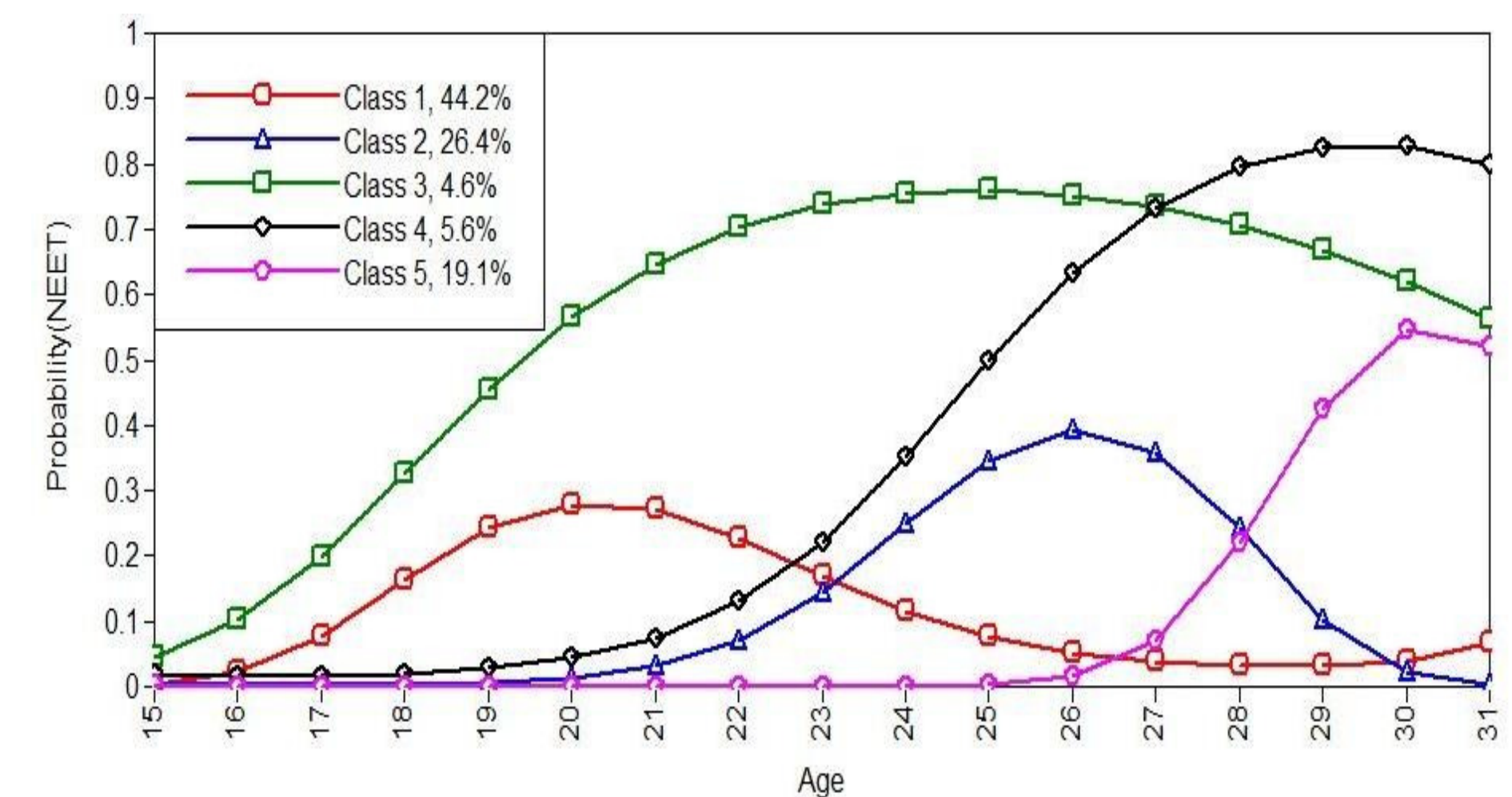
where  $y^*$  is the latent propensity to be NEET for individual  $i$  at time  $t$ , while  $j$  stands for the  $n$  **Age-NEET** trajectory. **Second**, I have created a most likely **Age-NEET trajectory variable** relying on data from step 1. The **3rd step** is a **multinomial logit** regression assessing the relationship between **education attained** (CASMIN) and **total months in unemployment** with the most likely **trajectory variable**. (1) uses information on misclassification rates from the 1st step to account for measurement error rates. The 3rd step also controls for cohort, parental education, and sociodemographics.

## Conclusions

- The analysis suggests that treating **NEETs as a homogenous group may have severe drawbacks** given within-group heterogeneity.
- Education attained does not clearly discriminate who embarks on risky age-NEET trajectories, neither who remains NEET.
- Those with higher total unemployment seems to be more likely to remain inactive. Nonetheless, similar unemployment histories may not clearly predict who remains NEET.
- While individual characteristics may trigger cumulative disadvantage, **framing the NEET phenomenon as a longitudinal process**, may help us understanding why some stay NEET while others get back to work.
- The current analysis focuses on between-person differences, but **future research should also inspect within-individual change**.

## Results

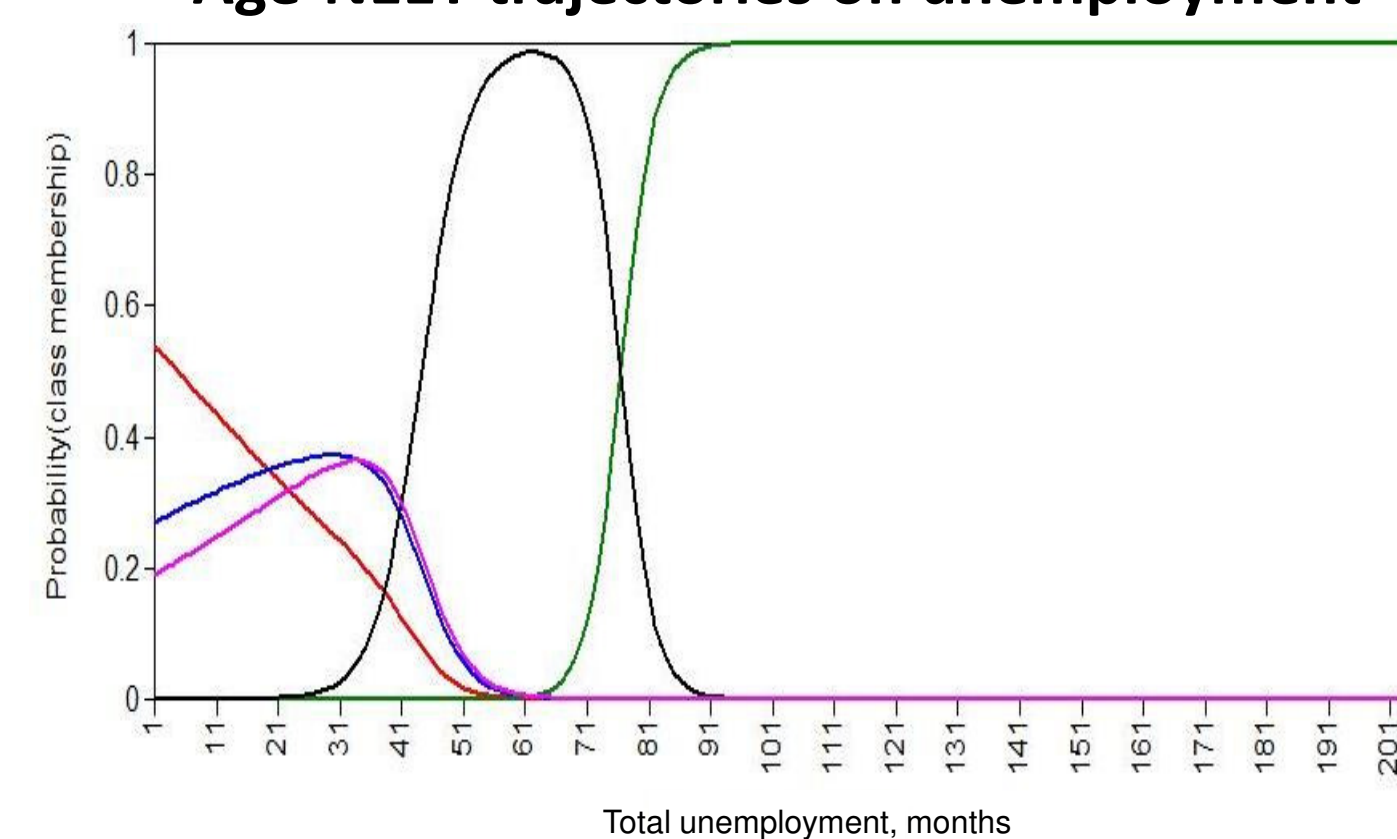
GRAPH 1. Age-NEET trajectories, predicted probabilities



- **5 Age-NEET trajectories** identified, but **2 main groups** appear, namely “high risk remain” (Class 3-5) and “low risk remain” (Class 1-2).
- Trajectories start similarly, but diverge in their shape and peaking points suggesting widespread heterogeneity.
- About **70% of the sample** (Class 1 and 2) **has predicted probabilities to be NEET close to 5% by the age 31**.

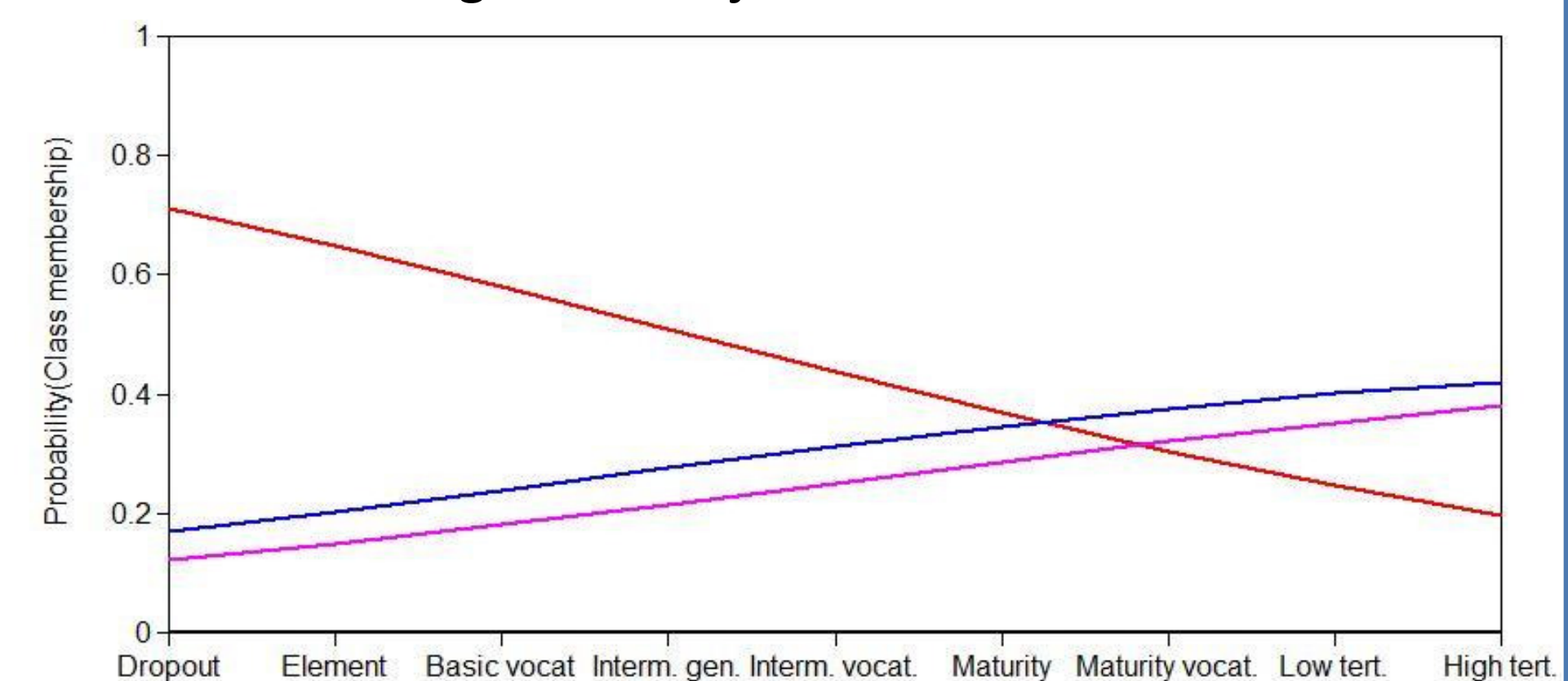
GRAPH 2.

### Age-NEET trajectories on unemployment



- **Education attained does not discriminate whether an individual is a “high risk remain”**.
- As education increases, the probability to be in class 1 (those an early NEET onset) goes down.
- **Higher education does not seem to protect completely individuals from ending up NEET**: it makes them more likely to be in either class 1 or class 5.

GRAPH 3. Age-NEET trajectories on education attained



## Literature Cited

1. Allmendinger, Jutta, Corinna Kleinert, Manfred Antoni, Bernhard Christoph, Katrin Drasch, Florian Janik, Kathrin Leuze, Britta Matthes, Reinhard Pollak, and Michael Ruland. 2011. “18 Adult Education and Lifelong learning. Erwachsenenbildung Und Lebenslanges Lernen.” Zeitschrift Für Erziehungswissenschaft 14 (2):283–99. <https://doi.org/10.1007/s11618-011-0197-0>.
2. Arulampalam, W. A. L. Booth, and M. P. Taylor. 2000. “Unemployment Persistence.” Oxford Economic Papers 52 (1):24–50. <https://doi.org/10.1093/oepp/52.1.24>.
3. Asparouhov, Tihomir, and Bengt Muthén. 2014. “Auxiliary Variables in Mixture Modeling: Three-Step Approaches Using Mplus.” Structural Equation Modeling: A Multidisciplinary Journal 21 (3):329–41. <https://doi.org/10.1080/10705511.2014.915181>.
4. Becker, Gary S. 1962. “Investment in Human Capital: A Theoretical Analysis.” Journal of Political Economy 70 (5):9–49.
5. Blossfeld, Hans-Peter. 2005. Globalization, Uncertainty and Youth in Society. Routledge.
6. Brzinsky-Fay, Christian. 2014. “The Measurement of School-to-Work Transitions as Processes.” European Societies 16 (2):213–32. <https://doi.org/10.1080/14616696.2013.821620>.
7. Collins, Randall. 1979. The Credential Society: An Historical Sociology of Education and Stratification. Acad. Press.
8. Ghayad, Rand. 2013. “The Jobless Trap.” Northeastern University. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.692.6736&rep=rep1&type=pdf>.
9. Gregg, Paul. 2001. “The Impact of Youth Unemployment on Adult Unemployment in the NCDS.” The Economic Journal 111 (475):626–53. <https://doi.org/10.1111/1468-0297.00666>. Holtmann, Anne Christine, Laura Menze, and Heike Solga. 2017. “Persistent Disadvantages or New Opportunities? The Role of Agency and Structural Constraints for Low-Achieving Adolescents’ School-to-Work Transitions.” Journal of Youth and Adolescence 46 (10):2091–2113. <https://doi.org/10.1007/s10964-017-0719-z>.
11. Krueger, Alan B., Andreas Mueller, Steven J. Davis, and Ayşegül Şahin. 2011. “Job Search, Emotional Well-Being, and Job Finding in a Period of Mass Unemployment: Evidence from High Frequency Longitudinal Data [with Comments and Discussion].” Brookings Papers on Economic Activity, 1–81.
12. Manzonni, and Irma Mooi-Reci. 2011. “Early Unemployment and Subsequent Career Complexity: A Sequence-Based Perspective.” Schmollers Jahrbuch 131 (2):339–48. <https://doi.org/10.3790/schm.131.2.339>.
13. Mincer, Jacob. 1958. “Investment in Human Capital and Personal Income Distribution.” Journal of Political Economy 66 (4):281–302.
14. Müller, Walter, and Markus Gangl, eds. 2003. Transitions from Education to Work in Europe: The Integration of Youth into EU Labour Markets. Oxford, New York: Oxford University Press.
15. Rosenbaum, James E., and Amy Binder. 1997. “Do Employers Really Need More Educated Youth?” Sociology of Education 70 (1):68–85. <https://doi.org/10.2307/2673193>.
16. Spence, Michael. 1973. “Job Market Signaling.” The Quarterly Journal of Economics 87 (3):355–74.
17. Weeden, Kim A. 2002. “Why Do Some Occupations Pay More than Others? Social Closure and Earnings Inequality in the United States.” American Journal of Sociology 108 (1):55–101. <https://doi.org/10.1086/344121>.