

Neighborhood Socioeconomic Status and Immigrant Adolescents' School Grades

- A Natural Experiment

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Adolescents with an immigrant background have lower educational performance than their native counterparts and this may partly be explained by the quality of their neighborhood area upon immigration to Sweden during childhood/adolescence. An important part of neighborhood quality is neighborhood socioeconomic status (NSES). This paper examines the effect of initial NSES of immigrants/refugees on their subsequent school grades by using a natural experiment between 1985 and 1994 when immigrants/refugees were randomly assigned to Swedish neighborhoods. We applied Principal Component Analysis (PCA) to assess NSES based on neighborhood socioeconomic characteristics. We found robust evidence that a higher NSES at arrival is associated with higher school grades in immigrant adolescents. In addition, the increase in school grades was most pronounced when NSES increased from the lowest scores. Our results suggest that initial placement in neighborhoods affects immigrant/refugee children and adolescents' academic performance and that those neighborhoods with the lowest socioeconomic characteristics may need to be avoided in the initial placement of refugee families.

Introduction

Due to ongoing wars and hunger crises, the world is now witnessing an alarming situation with around 100 million people having been forced to leave their homes. In the last decades, there has been a large-scale immigration to many European countries, including Sweden, and effective integration policies are urgently needed. One of the discussed topics is how and to which neighborhoods refugees should be assigned when they enter Sweden. Evidence shows that the initial neighborhood where refugees are placed profoundly affects their and their children's socioeconomic outcomes (Edin et al., 2003). In this context, those with an immigrant background perform, on average, worse socioeconomically than their native counterparts and this may at least partly be explained by the initial neighborhood area upon immigration to Sweden during childhood/adolescence (Grönqvist and Niknami, 2020). In light of this, the primary aim of this paper is to examine to what extent immigrant adolescents' educational performance upon graduation from compulsory schooling is affected by their initial neighborhood in terms of neighborhood socioeconomic characteristics. Our study has significant potential contributions. First, the dispersal policy applied in Sweden between 1985 and 1994 removes self-selection into

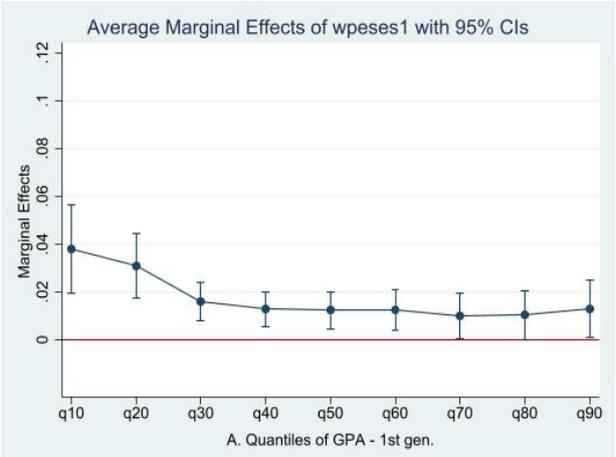
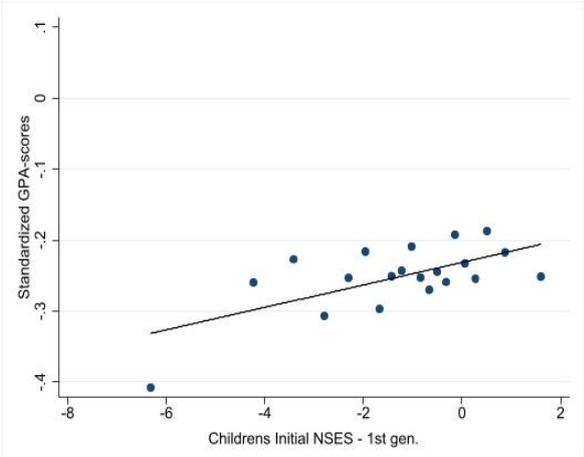
neighborhoods, which strengthens the evidence of a potential causality. Second, our results may be used for a policy point of view, i.e., to which type of neighborhoods refugee families should be assigned when they enter Sweden.

Methods

We used detailed information of individuals living in Small Area Market Statistics (SAMS) areas, to construct a Neighborhood Socioeconomic Status (NSES) measure. Then, we exploited the spatial dispersal of newly arrived refugees into neighborhoods applied by a Swedish dispersal policy during a defined time period, as a quasi-experiment. This method allowed us to alleviate concerns related to self-selection into neighborhoods and natural variation in exposure to neighborhood characteristics. We employed unconditional quantile regression (UQR) proposed by Firpo et al., (2009) to identify heterogeneous NSES across the whole educational performance distribution. The study population comprised 20,871 individuals arriving to Sweden between the years 1985 and 1991 in ages 0 to 17 at arrival. Their school grades were assessed at ages 16 to 20 years.

Results

We found a positive effect of childhood exposure to higher NSES on educational performances upon graduation from compulsory education. On average, one standard deviation increase in NSES increased grade point average (GPA) with 0.028 standard deviation points (figure below, left part). NSES at the initial neighborhood around the mean of 0 increased GPA-scores by around 0.28 standard deviation points (corresponding to GPA-scores in parity with native students). Non-linear regression showed that NSES effects on educational performances were particularly accentuated in individuals exposed to the lowest NSES, roughly ten to fifteen percent of the study population. The heterogeneous effects using UQR are shown in the right part of the figure below.



Conclusions

Overall, these findings show that neighborhood socioeconomic characteristics of refugee children and adolescents' initial neighborhood have implications for their future educational performances. Furthermore, we identified heterogeneous effects using UQR. The overall results are robust and consistent and call for alternative policies and econometric estimation strategies.

References

- Edin, P-A., Fredriksson, P., and Åslund, O., (2003) Ethnic Enclaves and the Economic Success of Immigrants-Evidence from a Natural Experiment. *The Quarterly Journal of Economics*. P. 329–357
- Firpo, S., Fortin, N., and Lemieux, T (2009) Unconditional quantile regressions. *Econometrica* 77(3), 953-973
- Grönqvist, H and Niknami, S., (2020) The performance gap between native and foreign-born pupils. *SNS Research Report 2020.03.06*