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Intergenerational transmission of educational attainment in adoptive families in the Netherlands

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ABSTRACT

To improve our understanding of the mechanisms underlying the strong association between family background and children's educational attainment, we examined intergenerational transmission within families where genetic transmission is absent. Specifically, we investigated the effect of parent's education and income on the educational attainment of their foreign-born adopted children. A large-scale register database was used, which contains information on the adoption status, educational level in secondary school and parental characteristics of all 15-year old children living in the Netherlands in the years 2011–2013. This study demonstrated that parental education mainly influenced their children's education when they were genetically related and that the influence was weak when they were adopted. Parental income, on the other hand, affected both adopted and biological children's educational attainment. Hence, the results suggested that genetic transmission and economic capital play a substantial role in intergenerational transmission of educational attainment.

1. Introduction

For decades, scholars have examined the effect of family background on the educational achievement of children (Blau & Duncan, 1967; Haveman & Wolfe, 1995). In general, the evidence indicated strong correlations between the educational performance of children and the educational attainment and income of their parents. Different mechanisms have been suggested to underlie this strong intergenerational transmission. First, parents may influence their children's educational attainment via the transmission of cultural capital (e.g. the transfer of knowledge, skills, behaviours etc.) (Bourdieu, 1973). Second, parents' financial capital can be important (Becker & Tomes, 1986). Higher-income parents have more resources to invest in their children, which can benefit children's academic performance. And a third possible cause is hereditary factors; since cognitive abilities and IQ are partially inherited, the similarity between parents and children can be the outcome of genetic transmission (Anger & Heineck, 2010; Leibowitz, 1974). Disentangling these three mechanisms is, however, difficult due to the interrelatedness of the indicators.

To separate the underlying mechanisms and improve our understanding of the role of genetic factors in intergenerational transmission of education and income, three different research strategies have been applied in recent studies (Holmlund, Lindahl & Plug, 2011). First, some studies examined twins. For instance, they compared monozygotic and dizygotic twins, as their difference in similarity can be attributed to genetic influence (De Zeeuw, De Geus & Boomsma, 2015), or they studied identical twins who were reared apart, since their differences can be ascribed to environmental influences (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990). Second, some studies utilized adoptees. As genetic transmission is absent within adoptive families, genetic factors cannot cause the observed correlation between parental and child's education and occupation (Björklund, Lindahl & Plug, 2006; Liu & Zeng, 2009). And third, some studies investigated intergenerational effects with the use of instrumental variables, such as educational reforms (Black, Devereux & Salvanes, 2005; Oreopoulos, Page & Stevens, 2006).

This paper focuses on the adoption strategy. In general, previous research on intergenerational transmission within adoptive fami-

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lies observed a significant correlation between the educational and income levels of adoptive parents and the education and income of their adopted children (e.g., Björklund, Jäntti & Solon, 2007; Plug & Vijverberg, 2003). These studies demonstrated the importance of family environment on children's schooling and income, even in the absence of a genetic relation. However, these studies also indicated the importance of genetics, since the intergenerational effect was weaker for adoptive families than for families with biologically related children.

Prior studies on intergenerational transmission within adoptive families have also left a number of questions unanswered. First, nearly all prior research examined mainly national adoptees (e.g., Björklund et al., 2007; Plug, 2004). However, native-born adoptees are possibly not randomly assigned to their adoptive home. National adoptions might include children adopted by relatives, or adoption agencies used corresponding characteristics of the natural and adoptive parents as a matching strategy (Scarr & Weinberg, 1994). Hence, studies examining native-born adoptees potentially overestimate the environmental effect. A strategy to control for selective placement is investigating international adoptees.[1] Foreign-born adoptees are much less likely to be genetically related to the adoptive parents, and selective placement is nearly impossible due to a general lack of information about the biological parents (Holmlund et al., 2011). The few studies that examined foreign-born adoptees provided inconsistent results. Whereas Sacerdote (2007) showed that parental education strongly affected the educational attainment of foreign-born adoptees in the United States, much smaller and even insignificant effects were found in studies implemented in Scandinavian countries (Haegeland, Kirkeboen, Raaum & Salvanes, 2010; Björklund & Richardson, 2001). Hence, our first aim is to examine intergenerational transmission of education between parents and their foreign-born adopted children.

Second, almost all previous studies focused on adopted children born (long) before 1980 (e.g., Björklund & Richardson, 2001; Björklund et al., 2006; Sacerdote, 2007). Their respondents were already adults at the time of the interview and went to school years ago. However, in the past decades school systems, average educational levels, openness of societies and gender equality have all changed (Erikson & Rudolphi, 2010; Peter & Horn, 2005), potentially leading to a change in the strength of intergenerational transmission as well. Therefore, the second aim is to investigate the effect of parental characteristics on their adopted children's educational attainment in a young cohort of children that have been enrolled in secondary education only recently.

Finally, prior research was conducted in a very limited number of countries, i.e. Sweden, Norway and the United States. Given that the strength of intergenerational transmission between biological parents and children is known to vary across countries (Blanden, 2013; Solon, 2002), it could be argued that context also matters for the study of transmission within adoptive families. Societies with high inequality generally have low intergenerational mobility: in these countries the family environment has a stronger influence on children's outcomes than in countries with low inequality (Blanden, 2013). Therefore, a third aim of this study is to test the strength of transmission among adoptive parents and children in a new context, i.e. the Netherlands. Inequality in the Netherlands is relatively low compared to the US, but relatively high compared to Sweden (OECD, 2011). Hence, ceteris paribus, it could be expected that intergenerational non-genetic transmission in the Netherlands is stronger than in Sweden, but weaker than in the US.

In summary, this study examines the effect of family background, in particular of parental education and income, on the educational attainment of foreign-born adoptees in the Netherlands. Focusing on internationally adopted children born between 1995 and 1998 enables us to investigate the parental effect on a recent cohort of school-aged children. Our central research question is: "To what extent is the educational attainment of foreign-born adopted children at age 15 related to the educational attainment and income of the adoptive parents in the Netherlands, and how does this compare to the parental effect on educational attainment of non-adopted children?" To answer this question, a large-scale register database is used, which contains information on the adoption status and educational level in secondary school of all 15-year old children living in the Netherlands in the years 2011–13.

2. International adoptions in the Netherlands

Even though adoption already became a legal option in several western countries as early as the 19th century, it was legalized in the Netherlands only in 1956 (Hoksbergen, 1991), making the Netherlands one of the last countries in Europe to legalize adoption. Although the new law offered the opportunity to adopt both nationally and internationally, in the 1950s and 1960s it mainly concerned national adoptions. However, since the 1970s there has been a tremendous growth in international adoptions, and a sharp decline in national adoptions. This was the result of the rising popularity of the birth control pill in the 1960–1970's, and the introduction of the 'National Assistance Act' in 1963 which provided financial aid for people unable to work, making it easier for young single mothers to raise their children themselves (Sprangers, De Jong & Van Zee, 2006). Since 1956, over 55,000 children have been adopted in the Netherlands of whom 39,000 of foreign-born origin. Nowadays, the number of nationally adopted children is very low.

Although the first internationally adopted children were predominantly born in other European countries such as Greece and Austria, the number of children adopted from European countries declined in the seventies. From that time onwards, international adoptees were mostly born in Asia – initially mainly in South Korea and later mostly in China – and South America, especially in Colombia (Sprangers et al., 2006). The proportion of adopted girls increased as well. Especially between 1995 and 2005, more girls than boys were adopted. The mean age of the children at adoption remained quite stable over time, on average between 2 and 3 years of age.

Dutch couples who want to adopt a foreign child must follow specific procedures and meet certain conditions. First, couples who submit the request for adoption both have to be younger than 42 and the difference between the oldest parent and the adoptee cannot be over 40 years. Couples also have to live in the Netherlands, have to hand in a medical certificate and a certificate of good conduct. Additionally, they have to attend several mandatory information and preparation sessions, especially to help them make an informed decision about the adoption. Also, the council of child protection examines the living conditions of the household, to ensure the adopted child is placed into a safe environment. Finally, there are costs involved in the adoption process, ranging from €7500 to over €35,000.

Due to this strict adoption procedure, parents with adopted children differ on average from parents with biological children on several characteristics. In general, parents who adopt a child have first tried to have children of their own. Hence, adoptive parents are

[1] Another strategy to control for selective placement is including information about the adoptive parents as well as the biological parents (Björklund et al., 2006). However, even if any information is available about the biological parents, this is generally only the case for national adoptions. Since the number of national adoptions is nowadays very low, this strategy has become impossible to implement with recent data.