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## **Educational endeavors: children of immigrants in education in the Netherlands, 1980-2020**

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# Chapter 5 - Intergenerational transmission of educational inequalities among children of immigrants in the Netherlands

## Introduction

Over the last fifty years, the population of the Netherlands has become increasingly diverse. Over 11 percent of the Dutch population has a second-generation migration background, i.e., children born in the Netherlands to at least one parent born abroad (Statistics Netherlands, 2019). The educational disparities between second-generation children and children without a migration background persisted over time in the Netherlands (Crul & Heering, 2008; Dekkers et al., 2000; Kalmijn & Kraaykamp, 2003; Tolsma et al., 2007; van de Werfhorst & van Tubergen, 2007; van Ours & Veenman, 2003) and other European countries (Fleischmann et al., 2014; Heath et al., 2008; Kilpi-Jakonen, 2011, 2012; Kristen & Granato, 2007; Riphahn & Trübswetter, 2013). These studies have found that students with a migration background have lower grades in primary school, attend and complete lower tracks in high school, are less likely to attend higher education, and have lower educational attainment levels in adulthood. Against this backdrop, zooming out over time offers a more nuanced picture: the educational levels of children of immigrants are rising, with the most recent cohorts doing better than their predecessors, yet generally they still lag behind their peers without a migration background – as explained in Chapter 3.

Many explanations have been offered for the educational inequalities – as described in Chapter 4. The most prominent explanations relate to lower parental socio-economic background and status, gender, use of minority versus majority language and unfamiliarity with the host culture at home, social and ethnic segregation in schools and neighborhoods, and institutional differences across countries (Blossfeld & von Maurice, 2011; Brandén et al., 2016; Dronkers & Fleischmann, 2010; Fleischmann et al., 2014; Heath et al., 2008; Kao & Thompson, 2003; Levels & Dronkers, 2008). Previous research examined educational outcomes mainly at a single point in time, for example, PISA scores at age 15 or grades and track placement in secondary school (Bauer & Riphahn, 2007; Entorf & Tatsi, 2009; Hustinx, 2002; Kalmijn & Kraaykamp, 2003; Kilpi-Jakonen, 2012; Levels & Dronkers, 2008).

This chapter analyzes the educational level at two points in time: the level attained at the age of 15 and that obtained between the age of 23 and 28. Specifically, I examine the importance of

parental background for educational outcomes over time through processes of intergenerational transmission, in which parents transfer various types of capital to their children. This is studied among the students in the Netherlands with a second-generation Turkish, Moroccan, Surinamese, Antillean, and Indonesian migration background and peers without a migration background. This chapter therefore addresses the third sub-research question of my dissertation: how does migration background interact with other student characteristics in affecting the educational trajectories of children of immigrants? The purpose is to examine whether parental capital affects the educational level at these two points in time differently for children of immigrants than for children of Dutch natives. The main research question of this chapter is thus: how does parental capital influence educational outcomes over the life course of youth with and without a migration background?

## Theoretical background

Blossfeld and Von Maurice (2011) described education as a lifelong process. They formulated five principles of studying education as a lifelong process, inspired by Elder's life course research (Elder, 1994). These principles are: (1) "focusing on long-term educational processes over the individual lifespan", (2) "considering individual educational pathways within their institutional and social embeddedness", (3) "analyzing decision-making processes in education connected with the idea of agency as well as planning, creative and self-determining actors", (4) "investigating the time structure and timing of educational events and transitions and the consequences they have for the subsequent educational pathways and educational chances", and (5) "conceptionally differentiating age, cohort, and period effects" (Blossfeld & von Maurice, 2011). These five principles shine light on how educational trajectories can look different among students depending on their surroundings and networks, their choices or agency, the timing of and the time they are in education.

In this chapter, the relationship between, on the one hand, parental background - i.e., the ascribed characteristic – and, on the other hand, educational attainment in secondary school at age 15 and adulthood - i.e., the achieved characteristic(s) - is studied. First, the importance of parental background on educational attainment through intergenerational transmission of behavior and values is examined. This relates to the second principle of linked lives. Educational achievement is studied, instead of educational decisions (Mare, 1980) and thus the third principle is not incorporated in this research. The fifth principal concerns period, cohort, or age effects. Period effects regard changes in the historical or societal context experienced by everyone, irrespective of life course phase, e.g. the turn of the public debate on immigration towards pessimism around the millennium (Lucassen &

Lucassen, 2015, 2018) . Cohort effects zoom in on the influences of a period that particularly affects the life course phase for a specific cohort, e.g. changes in the education system experienced by a specific cohort such as the 1998 introduction of the *Tweede Fase*, a renewed curriculum for HAVO and VWO tracks in secondary education and the 1999 introduction of the VMBO and its sub tracks as the successor of the previously separate *mavo* and *VBO*. Given that this chapter examines a selected number of years – i.e. 1988-1993 – the period and cohort effects should be largely alike for those born in these years. Age effects, however, are more likely to appear. This refers to the variation in outcomes due to the chronological age. Because the youth included in this study is born in these restricted number of years, the educational attainment in adulthood is measured at the same point in time – i.e. in 2016 - for the five birth years. The older birth cohorts are more likely to have obtained a higher educational level than the younger ones, simply because they had more years to achieve this. This is accounted for in the sensitivity analyses.

### Intergenerational transmission

A vast literature has examined the intergenerational transmission of socioeconomic and education specifically (Blau & Duncan, 1967; Boudon, 1974; Bourdieu, 1973; Erola et al., 2016; Fekjaer, 2007; Kalmijn & Kraaykamp, 2003; Kloosterman, 2010; Mare, 1980). Blau and Duncan (1967) developed the status attainment model in which ascribed and achieved characteristics affect status attainment. In this model, the background of the family, i.e., the status or social position, affects the occupational position of the child directly, as well as indirectly via educational attainment (Blau & Duncan, 1967). They operationalized the ascribed characteristics through paternal education and occupation. The achieved characteristics referred to the child's efforts and abilities that contribute to the status attainment. Regarding the ascribed characteristics, the primary and secondary effects of parental background are distinguished by Boudon (1974). Primary effects of parental background concern the impact of human capital and the socioeconomic position of the family on educational performance, attainment, and level. Secondary effects of parental background refer to the educational inequalities that originate in educational choices children and their parents make, dependent on their socioeconomic position (Boudon, 1974).

Three types of capital transmission underpin the primary effects of parental background: human capital, cultural capital, and economic capital (Kloosterman, 2010; Scheeren et al., 2017). First, the human capital component in intergenerational transmission refers to the transfer of cognitive abilities and behavior from parents to children. Intergenerational transmission of cognitive abilities can take place in two ways: a nature-based and nurture-based explanation (Anger & Heineck, 2010; Björklund et al., 2010; Plug & Vijverberg, 2005). The nature-based explanation focuses on how children inherit

genes from their biological parents. Research into this biological transmission of cognitive abilities has shown that parents and children share at least a sizeable part of their abilities and IQ (Björklund et al., 2010; Black et al., 2009; de Zeeuw et al., 2015). The assumption in this “nature” argument is that the higher the abilities and IQ of the parents, the higher this will be among their children, and these ability levels and cognitive development will result in higher educational performance. The nurture-based explanation, by contrast, focuses on how cognitive abilities and skills can be transferred from parent to child via parental education and upbringing. Moreover, parents with higher cognitive abilities and skills will invest more in their children which could result in higher health and educational outcomes (Anger & Heineck, 2010; Plug & Vijverberg, 2005). This argument thus relies heavily on the mediating effect of parental education and investments in the parent-to-child transmission of cognitive development.

Second, cultural capital affects the educational performance of children. Parents endow their children with capital that benefits their education. This capital specifically refers to how parents transmit cultural codes, practices, and norms to their children through socialization, which is called *habitus* by Bourdieu (1973). The cultural capital that is transferred from parents to children reflects the position of the family in society and thus varies by social class. Families with a higher-class background will pass on the “high-brow” cultural capital that is valued in society. Specifically, the educational system is shaped by the cultural codes and norms of the higher social strata. So, children coming from higher social status families are more likely to feel at home at school because they have already been socialized with the norms, behavior, and other cultural codes that dominate the educational system and thus will be rewarded with positive evaluations or higher achievement levels. Children who grew up in families with higher social status are thus endowed with cultural capital that benefits them in school; the transmission of parental cultural capital thus reproduces the social and educational inequalities over generations (Bourdieu, 1973).

Third, families from higher social strata have more financial resources to support their children throughout education (Becker & Tomes, 1986; Leibowitz, 1974). Following argumentation from Bourdieu’s economic capital theory, parents with more financial means can support their children better in their education because they can afford better schools and extra-curricular activities (Buis, 2013; de Graaf et al., 2000). However, financial support can take different forms. First, direct financial investments benefit the children’s education explicitly. Although primary and secondary education is publicly funded in the Netherlands, families with more financial resources can afford tutoring or extracurricular activities. Higher-resource families can pay for tuition in tertiary education, so their children do not have to take out student loans. Second, higher-resource families can provide a home environment that is beneficial for the educational performance of their children. On the one

hand, parents can provide tangible goods such as electronics, books, and a desk or room to do homework, also described as objectified cultural capital by Bourdieu (Bourdieu, 1973; Buis, 2013; Von Otter, 2014). On the other hand, parents influence the living conditions of the children through nutrition, health, and family size. Children who grow up with better nutrition and health tend to do better in school. According to Dumont's law of capillary actions this is related to family size: bigger families have to redistribute resources like food and health investments over more children (Bras et al., 2010; Dumont, 1890; Kok et al., 2011). Moreover, by means of resource concentration or dilution the status attainment outcomes of the children increase with a lower number of siblings and decrease with more siblings.

However, the context in which intergenerational transmission takes place may alter the process of transmission. These processes could be different for immigrant families as compared to families without a migration background on three grounds. Firstly, Nauck (2001) and Kwak (2003) explained how parent-child relations can be disrupted due to migration. An example of this would be an information and knowledge asymmetry among immigrant families - because children of immigrants grew up in the host society, they potentially master the language of the country of destination better than their parents and have more insight into the host society institutions such as the education system. This results in the waning role of parents as the main agents in socialization as family-external sources – e.g., peers or school – could gain influence. This relates to the theory of dissonant acculturation (Kwak, 2003; Portes, 1997) in which the balance between the host country's influences and the origin country's influences are at conflict with one another. Secondly, the cultural capital that immigrant parents do have and can transfer to their children might not be as relevant to a similar extent as that of non-migrant families. The cultural capital present in immigrant families was most likely gathered through education and socialization in the country of origin. This context-specific cultural capital could deviate from the "high-brow" cultural capital that is positively evaluated in the education system in the host country and thus may not be as useful and of as much value in the Dutch education system.

Third, intergenerational transmission of capital has a genetic element too. Children and their biological parents share at least some cognitive abilities and IQ (Mills & Tropf, 2020). This likely remains undisturbed by migration. However, human capital transmission also relies heavily on the 'nurture' transmission through the mediation of education level – which would be hindered in immigrant families as first-generation parents are likely to be educated in the country of origin. Parents from developing countries could have lacked opportunities to enter education to enter education therefore lacking the chance regardless of their cognitive abilities.

Various types of capital are often intertwined as shown by The Netherlands Institute for Social Research (2023) and Savage and colleagues (2013; 2015). In this chapter, I focus on economic capital. Given the intertwined nature of the types of capital, economic capital might be a proxy for the other types of capital as well. The more human and cultural capital parents have, the higher the parental economic capital is assumed to be, and hence more capital can be intergenerationally transmitted from parent to child. According to Plug and Vijverberg (2003), the mechanisms of intergenerational transmission are only assumed to partially work through economic capital. They also specified that the transmission of genetic abilities as part of human capital could partially be determined by income. In this chapter, this is most likely the case for higher able parents - in terms of human capital - and parents with “high-brow” cultural capital. Given the entangled nature of capital types, a higher education level could consequently result in a higher status job with higher income. Household income is also a proxy for the financial capital of the parents: the higher the household income is, the more parents can invest in their children’s education. Thus, a higher income implies more human, cultural, and financial capital that can be transferred to or invested in children to benefit their education. In line with Boudon’s economic capital hypothesis (1974), I expect children living in a family with a higher household income to attain higher educational levels. A higher income is expected to be directly positively associated with the child’s educational attainment in secondary education as well as in adulthood, but less so in immigrant families than in families without a migration background (*hypothesis 1*).

### The Dutch context: education system and migrant groups

Children commonly attend primary school from the age of 4 onwards in the Netherlands. After primary education up until the age of 12, students enter secondary school in different tracks. They are advised to attend a track in secondary education based on their score in a nationwide standardized test in the last year of primary school and/or based upon the consultation of the teacher. The Dutch educational system distinguishes three main tracks in secondary education, see Chapter 2 for the complete structure of the educational system in the Netherlands. Parents are largely free to decide in which school they enroll their child, despite some recent regulations in big cities to redistribute students proportionally over several high schools. Dutch schools, regardless of whether they are public, religious, or ideological principled, are state-funded. Pre-vocational track (VMBO) has four sub-tracks: lower vocational education (*VMBO basis*), vocational education (*VMBO kader*), mixed vocational and theoretical education (*VMBO gemengd*), and theoretical education (*VMBO theoretisch*) and prepares the students in four years for upper secondary vocational education (*MBO*, with four tracks

hierarchically numbered 1 to 4). The *pre-college track* (HAVO) takes five years and prepares students for higher tertiary education (HBO). *Pre-university education* (VWO) lasts the longest at six years and prepares students for university. Generally, the different tracks prepare students for different tertiary educational levels.

It should be noted though that the second moment of stratification takes place after the second year - in the vocational track - or third year - in the pre-college and pre-university track. Students select, based on personal preference, grades, and school guidance, a thematic path within their track, e.g., economics or science. At this point switching between tracks is also possible, for example, a student whose grade point average is not satisfactory for the pre-university track can switch to the pre-college track. This is an example of downward-track mobility. Track mobility is a rather specific feature of the Dutch educational system and allows students to switch tracks or education levels over time. Track mobility can be either “downward” or “upward”. “Stacking” is the most prominent example of “upward” track mobility as it allows for the accumulation of educational levels over time. For example, if a student finished the pre-college track (5 years) with a satisfactory grade point average, he or she can enroll for two years in the pre-university track and subsequently enter university.

The migrant groups studied in this chapter are of Turkish, Moroccan, Surinamese, Antillean and Indonesian descent. To understand some between group differences, a brief contextualization is included. Immigration of the first generation from Suriname, the Dutch Antilles, and Indonesia related to decolonization and continuous colonial links. Suriname and Indonesia (former Dutch East Indies) were both Dutch colonies and the Dutch Antilles are currently still part of the Kingdom of the Netherlands. Many Indonesian and Surinamese immigrants migrated to the Netherlands in the buildup to the independence of Indonesia and Suriname from the Netherlands in respectively 1949 and 1975. Education and labor-related reasons for migration were common among the Surinamese and Antillean first generation, many of them were educated in the Netherlands (van Amersfoort & van Niekerk, 2006). As a result of the colonial ties and education in the Netherlands, many Surinamese, Antillean, and Indonesian first-generation parents are expected to have more Dutch context-specific cultural and linguistic capital (van Amersfoort & van Niekerk, 2006) than the Turkish and Moroccan first-generation who migrated as ‘guest-workers’ in the 1960s and 1970s or through family reunification from the mid-1970s onwards. This Dutch context-specific cultural and linguistic capital is expected to result in a higher household income for these immigrant groups. A higher income is expected to be positively associated with a child’s educational attainment but more so in families with post-colonial heritage than in Turkish and Moroccan families (*hypothesis 2*).



When it comes to the family structure and socioeconomic status, Surinamese and Antillean families have similarities as Surinamese – especially with Creole heritage - and Antillean migrant families are often not intact: single mothers are the head of the household in a large share of the families. Meanwhile, in comparison to other migrant groups, more Surinamese and Antillean first-generation migrants had a Dutch partner (van Niekerk, 2007). Their socio-economic position is generally better than those of Turkish and Moroccan families (Hartog & Zorlu, 2001).

## Methods

### Data and population

This study used administrative register data from the System of Social Statistical Datasets (SSD) compiled and provided by Statistics Netherlands (Bakker et al., 2014). The use of this register data from Statistics Netherlands (CBS) was made possible through the collaboration between Statistics Netherlands and the Netherlands Interdisciplinary Demographic Institute (NIDI). The SSD combines a large number of thematic registers with the population registers (*Basisregistratie Personen*, BRP) resulting in a dataset containing individual-level demographic information including birth date, migration background, gender, and information on education, income, employment, and welfare benefits. The individual-level data of the children can be linked to the information of the parents and the household, such as the income and the household structure. As pointed out by Blossfeld and Von Maurice (2011) and Blossfeld (2009), such data provides unique opportunities to study educational levels, because it includes information on the same individuals over time.

This study includes second-generation youth and youth without a migration background born in the Netherlands between 1988 and 1993 who were registered in the Netherlands on December 31, 2016. The birth cohorts between 1988 to 1993 were chosen as these children turned 15 years old in the school year 2002/2003 or later and they were at least 23 years old in 2016. The data on high school enrolment were available from 2002/2003 onwards. Moreover, only those who lived with at least one parent in the same household at the age of 15 years are included. Therefore, children living in institutional households – such as residential childcare communities - were excluded. Regarding migration background, youth with a second-generation Turkish, Moroccan, Surinamese, Antillean, or Indonesian migration background are included, as well as youth without a migration background. This resulted in the following sample sizes – by migration background: Turkish (N = 33 976), Moroccan (N = 29 931), Surinamese (N = 26 709), Antillean (N = 8 117) or Indonesian (N = 15 028) migration background and without a migration background (N = 903 411).

## Dependent variables

Two dependent variables are included: the educational level at the age of 15 and the educational level in adulthood, i.e., between the age of 23 and 28. The educational level at both ages was derived from the educational registers as maintained by the Dutch Department of Education, Culture, and Science.

*Education level at age 15* referred to the track the student is enrolled in at this age. Four categories are distinguished. The four pre-vocational tracks – i.e., the VMBO tracks - were categorized into lower vocational tracks by combining *VMBO basis/kader* and *VMBO beroeps* into one category and higher vocational tracks by combining *VMBO gemengd* and *VMBO theoretisch* into another category. This is in addition to the pre-college track (*HAVO*) and pre-university track (*VWO*). Education level at age 15 is treated as an ordinal variable in the regression analyses.

*Education level in adulthood* referred to the highest educational level at which a diploma was obtained and was measured on December 31, 2016. There are three categories: low, medium, and high educational levels. A low educational level refers to primary education, a lower secondary education (*VMBO basis/kader* or *beroeps*) or lower vocational education (*MBO* Level 1), medium educational levels refer to higher general secondary education (*HAVO*), pre-university secondary education (*VWO*) and higher vocational training (*MBO* Level 2, 3 or 4), and a higher educational level referred to higher professional education (*HBO*) and university. Education level in adulthood was also treated as an ordinal variable in the regression analyses.

## Independent variables

The *household income* referred to the annual income of the household at the child's age of 15 and is obtained from tax registers. This income measure is equalized by correcting for differences in the size of the household. Due to inflation, the same gross annual household income in euros is not comparable across various years. Hence, the yearly household income in percentiles is used. The annual household income in percentiles indicated the relative socio-economic position of the household in comparison with all other households. The children for whom household income was unknown were excluded from the analyses.

*Migration background* is operationalized by the parental country of birth. A child is considered as having a migration background if at least one parent was born abroad. If both parents are born abroad but in different countries, the maternal country of birth defined the child's migration

background. Six backgrounds are distinguished: no migration background, Turkish, Moroccan, Surinamese, Antillean, or Indonesian migration background. Dummy variables for each migration background (e.g., 1 = Turkish, 0 = not Turkish) were included in the analyses. The reference category was youth without a migration background.

## Control variables

We controlled for the individual's *gender* – coded as 0 = female, 1 = male - and the individual's *year of birth* by including dummies for each year of birth. The year 1988 was the reference category. The *degree of urbanization* was included as a control variable and as a dummy variable. The dummy variables referred to the degree of urbanization of the individual's residence on January 1, 2017, varying from a very high degree of urbanization, i.e., over 2 500 house addresses per squared kilometer, to not urbanized, i.e., less than 500 house addresses per squared kilometer, with the latter as the reference category. *The household structure* was measured at the child's age of 15 years by two categories "1" intact family - i.e., the child lived with both legal parents - and "0" not intact family - i.e., the child did not live with both legal parents, either with a single parent and possibly also with a stepparent. An interaction term of an intact family and migration background was the last control variable, because for certain migrant groups - i.e., Turkish and Moroccan - intact families are shown to be more prevalent than among other migrant groups - i.e., Surinamese and Antillean.

## Method

The descriptive results can be found in Table 5.1. The results of the ordinal regression analyses can be found in Table 5.2. First, the effects of the independent and control variables on the educational level at age 15 were estimated for each group, see Model 1. In this first model, interactions for household income are included to examine whether this affected the educational level differently for the migrant groups. Next, the effects of the independent and control variables on the educational level in adulthood were estimated, see Model 2.

Considering that education in adulthood was measured between the ages 23 and 28, a group of students might still be in education. In a sensitivity analysis, this was controlled for by replicating the analyses with an alternative dependent variable, i.e., the highest attained education level in adulthood. Therefore, those students who were currently attending education were included too.

## Results

### Descriptive analyses

Table 5.1 presents the descriptive statistics of the dependent, independent, and control variables. The research population included 1 017 172 individuals, of whom 11.1%, i.e., 113 761 individuals, had a second-generation migration background. The Turkish second generation was the largest group at 3.3% of the total population, followed by the Moroccan second generation making up 2.9%.

The second generation had on average, a lower educational level at age 15 than Dutch peers. The Indonesian second generation formed an exception: 29% were enrolled in the pre-university track. This is a higher pre-university enrollment than among Dutch children, i.e., 22.4%. More than half of the Turkish – i.e., 52.9% - and Moroccan – i.e., 54% - second generation was enrolled in lower vocational secondary education. In adulthood, youth without a migration background and with an Indonesian migration background obtained a higher education level: respectively 35.2% and 37.2% were higher educated. Among all migration backgrounds, the most commonly obtained educational level was the medium level.

Children without a migration background grew up in a household with, on average, a higher income – i.e., the 55th percentile, SD = 16.59 - than the second-generation children with various migration backgrounds, except for the Indonesian second generation. Nevertheless, the mean income percentile across migration backgrounds varied: children with a Turkish or Moroccan migration background grew up in a household with lower incomes, respectively the 31st and 25th percentile, SD = 21 and 19, as compared to the Surinamese – i.e., the 42nd percentile, SD = 25 - and Indonesian – i.e., the 55th percentile, SD = 26 - second generation. Children without a migration background grew up mostly in intact family situations, i.e., 80%. Among children with a second-generation migration background, these percentages were slightly lower for the Turkish, Moroccan, and Indonesian second generation, but substantially lower for the Surinamese and Antillean second generation. A larger share of the second generation lived in an urban context than their Dutch peers.

**Table 5.1**

*Descriptive statistics for dependent, independent, and control variables, for the total population and by migration background, all variables in percentages and income in percentiles*

	Total population (N=1017172)	Dutch, migrant (N=903411)	non- Turkish (N=33976 )	Moroccan (N =29931)	Surinamese (N= 26709)	Antillean (N=8117)	Indonesian (N=15028)
Educational level, age 15, in %							
lower VMBO tracks	31.0	29.2	52.9	54.0	42.4	41.6	22.8
higher VMBO tracks	26.6	26.7	26.2	26.2	27.3	23.5	25.1
HAVO	21.0	21.7	12.7	12.2	16.6	16.8	22.8
VWO	21.4	22.4	8.1	7.7	13.7	18.1	29.2
Educational level in adulthood, in %							
Low	12.6	11.6	21.8	24.2	19.1	19.2	12.2
Middle	53.9	53.3	61.6	58.6	59.6	56.3	50.6
High	33.5	35.1	16.6	17.0	21.3	24.5	37.2
Household income, mean (SD) in percentiles	52.98 (26.06)	55.08 (25.43)	30.62 (21.27)	25.42 (19.45)	41.88 (24.67)	46.06 (27.16)	55.33 (26.22)
Male, in %	0.51	0.51	0.52	0.51	0.50	0.51	0.50
Year of birth, in %							
1988	0.160	0.143	0.143	0.144	0.167	0.141	0.201
1989	0.163	0.163	0.159	0.157	0.160	0.155	0.185
1990	0.170	0.170	0.168	0.168	0.171	0.178	0.173
1991	0.171	0.171	0.175	0.169	0.171	0.178	0.162
1992	0.169	0.168	0.177	0.182	0.166	0.180	0.147
1993	0.168	0.168	0.178	0.179	0.165	0.168	0.131
Intact family, in %	0.785	0.800	0.755	0.792	0.437	0.467	0.726
Degree of urbanization, in %							
Not	0.075	0.083	0.004	0.007	0.007	0.014	0.021
barely	0.182	0.198	0.054	0.042	0.033	0.060	0.086
moderate	0.148	0.155	0.110	0.088	0.068	0.084	0.115
high	0.301	0.299	0.344	0.308	0.271	0.330	0.348
very high %	0.294	0.264	0.489	0.556	0.621	0.512	0.430

## Multivariate analyses

Table 5.2 presents the multivariate analyses. The educational level at age 15 is the dependent variable in the first model. In the second model, the highest obtained education level in adulthood is the dependent variable. The first model examined the influence of migration background, household income, gender, birth cohort, living in an intact family, and degree of urbanization of the living environment on attending a higher education level at the age 15, i.e. in secondary school. For household income and living in an intact family interaction effects are included to examine the between group differences.

Students with a migration background had a lower probability of attending a higher education level at age 15 than non-migrant children. Indonesian second-generation youth were the exception to this, they did have a higher probability of attending higher education level at age 15 than peers without a migration background. An increase in household income was associated with an increase in the odds of attending a higher education level at age 15 among the majority population - with an odds ratio of 1.017. This suggests that for non-migrant youth growing up in households with a higher income will have a higher probability of attending a higher education level at age 15. As per the first hypothesis, the association between growing up in a higher-income household and attending a higher education level at age 15 is somewhat more attenuated among students with a Turkish or Moroccan migration background compared to non-migrant youth. The slightly larger effect size for Antillean students indicates that growing up in households with a higher income will have increase the probability of attending a higher education level at age 15 than among non-migrant youth. The role of household income is thus somewhat more pronounced in Antillean families than in families without a migration background. The Indonesian and Surinamese second-generation youth did not differ significantly from non-migrant students when it comes to the association between household income and education level at age 15. It should be noted though that despite a significant and positive association between household income and education level at age 15, the standard error indicates some uncertainty.

**Table 5.2***Regressions analyses for highest obtained educational level, 1988 – 1993*

	Model 1 (N = 906674)		Model 2 (N = 993261)	
	Education level, age 15		Education level, adulthood	
	B(SE)	Exp(B)	B(SE)	Exp(B)
Threshold (1)	0.750 (0.010)***		-1.051 (0.011)***	
Threshold (2)	2.005 (0.011)***		1.893 (0.011)***	
Threshold (3)	3.135 (0.011)***			
Turkish migration background ( <i>ref. non-migrant</i> )	-0.728 (0.028)***	0.483	-0.359 (0.026)***	0.699
Moroccan migration background	-0.712 (0.032)***	0.491	-0.416 (0.030)***	0.659
Surinamese migration background	-0.778 (0.026)***	0.459	-0.416 (0.025)***	0.66
Antillean migration background	-1.152 (0.050)***	0.316	-0.730 (0.045)***	0.482
Indonesian migration background	0.136 (0.041)**	1.146	0.003 (0.043)	1.003
Equalized household income, in percentiles ( <i>ref. non-migrant</i> )	0.017 (0.086)***	1.017	0.016 (0.089)***	1.016
Household income * Turkish	-0.007 (0.001)***	1.01	-0.008 (0.001)***	1.009
Household income * Moroccan	-0.005 (0.001)***	1.012	-0.007 (0.001)***	1.009
Household income * Surinamese	-0.001 (0.001)	1.016	-0.003 (0.001)***	1.013
Household income * Antillean	0.008 (0.001)***	1.025	0.006 (0.001)***	1.022
Household income * Indonesian	0.001 (0.001)	1.018	0.000 (0.001)	1.016
Male	-0.262 (0.004)***	0.769	-0.570 (0.004)***	0.566
Year of birth, 1989	0.042 (0.007)***	1.043	-0.065 (0.007)***	0.937
Year of birth, 1990	0.014 (0.007)*	1.014	-0.106 (0.007)***	0.899
Year of birth, 1991	0.055 (0.007)***	1.057	-0.205 (0.007)***	0.815
Year of birth, 1992	0.038 (0.007)***	1.038	-0.372 (0.007)***	0.69
Year of birth, 1993	0.068 (0.007)***	1.071	-0.607 (0.007)***	0.545
Intact family ( <i>ref. non-migrant</i> )	0.411 (0.005)***	1.508	0.637 (0.006)***	1.891
Intact family * Turkish	-0.075 (0.029)**	1.399	-0.137 (0.027)***	1.649
Intact family* Moroccan	-0.249 (0.032)***	1.175	-0.216 (0.029)***	1.524
Intact family* Surinamese	0.184 (0.027)***	1.812	-0.017 (0.028)	1.859
Intact family* Antillean	0.458 (0.052)***	2.383	0.067 (0.052)	2.023
Intact family* Indonesian	-0.042 (0.038)	1.445	-0.089 (0.039)*	1.731
Very high ( <i>ref. not urbanized</i> )	1.355 (0.008)***	3.879	0.877 (0.008)***	2.403
High	0.545 (0.008)***	1.725	0.233 (0.008)***	1.262
Moderate	0.243 (0.009)***	1.276	0.074 (0.009)***	1.077
Barely	0.075 (0.008)***	1.078	0.032 (0.009)***	1.032
R-squared	0.161		0.136	

\*\*\* p &lt; 0.001; \*\* p &lt; 0.01; \* p &lt; 0.05

Boys had, on average, a lower educational level than girls at age 15. Moreover, living in an intact family was positively associated with a higher educational level at age 15 for non-migrant youth. For the Surinamese and Antillean second-generation youth, the association between living in an intact family and education level at age 15 was somewhat stronger than in non-migrant families. This association was smaller in magnitude among Turkish and Moroccan second-generation youth than among non-migrant youth.

The second model examined the same independent variables and interactions as the first model, but the outcome variable was educational level in adulthood. Similar to the first model, students with a migration background had a lower probability of obtaining a higher education level in adulthood than non-migrant children. Indonesian second-generation youth were again the exception to this, they did not significantly differ from non-migration youth in their odds of obtaining higher education level in adulthood. Household income was positively associated with education level in adulthood for youth without a migration background. This suggests that non-migrant students growing up in households with a higher income will have a higher probability of obtaining a higher education level in adulthood. The interaction effects suggest that the impact of growing up in a higher income household on the educational level in adulthood is slightly weaker among Turkish, Moroccan, and Surinamese youth than among non-migrant youth. Again, for Antillean youth, the interaction term suggests that the association between household income and education in adulthood is slightly stronger than among non-migrant youth. This association among Indonesian second-generation youth does not vary significantly from their non-migrant peers. In adulthood, men still had on average, a lower educational level than women. For non-migrant youth, those living in an intact family had a higher probability of obtaining a higher education level in adulthood than peers from broken homes. For Turkish and Moroccan second-generation youth, the positive impact of living in an intact family on education level in adulthood was slightly attenuated in comparison to youth without a migration background. For youth with an Indonesian background, living in an intact family resulted in a higher probability of obtaining a higher education level in adulthood than among non-migrant peers. Living in an urbanized context was - again contrasted to living in non-urban environment - positively associated with a higher educational level in adulthood.

In sum, the first and second hypotheses were largely supported. Regarding the first hypothesis, I can conclude that a higher income was found to increase the probability of obtaining a higher education level at age 15 as well as in adulthood, for non-migrant students this was however more pronounced than for students with a Turkish or Moroccan migration background. Among the Antillean second generation, at both ages, the association between household income and educational level was even stronger than among non-migrant youth. Moreover, the Indonesian



second generation did not differ from youth without a migration background in the role household income played in their education level, at both ages. For the Surinamese second generation, at age 15 this association did not differ from youth without a migration background. Subsequently, I can conclude that corresponding with second hypothesis the impact of growing up in a higher income household on the probability of obtaining higher education levels at age 15 and in adulthood was more pronounced for Surinamese, Antillean, and Indonesian students than for Turkish and Moroccan peers.

Two additional analyses were conducted. First, although beyond the initial scope of this chapter, the role of previous education on 'final' education level later in life was explored. Research conducted by Von Otter (2014) found that the relation between parental resources and involvement and adult educational level is partially though substantially mediated through performance in secondary school in Sweden. Exploratively, I looked into predicting education level in adulthood from education level at age 15. Attending a pre-university preparatory track in secondary school (VWO) resulted in incredibly high odds ratios in obtaining higher education levels in adulthood among students with and without migration backgrounds. This is not surprising at all, given the stratified education system from secondary school onwards: students are stratified in secondary school into tracks that prepare them for specific types of tertiary education. Students in a VMBO track are prepped for vocational tertiary education (MBO), students in a HAVO track for university of applied sciences (HBO), and students in VWO for university. Due to this tracked nature of the Dutch education system, educational level at age 15 and education level in adulthood are likely to be collinear in this model, and therefore this relation has not been further examined in this chapter. Moreover, for students with a migration background drawing a direct inference from education level at age 15 to education level in adulthood may overlook the nuanced reality. For students with a migration background, "stacking" degrees is a proven strategy to have agency and find ways to obtain higher education through accumulation of educational levels over time (Crul et al., 2009.; Schnell et al., 2013). Stacking degrees provides a loophole to the nominally rather stratified educational trajectory for children of immigrants especially in the "stacking" of degrees from VMBO and HAVO tracks of secondary education as shown by (CBS Integratierapport 2022).

Education in adulthood was measured between the ages 23 and 28, so it could very well be that the students were still in education around this age. Therefore, a sensitivity analysis examined whether the results were influenced by this. The youngest cohort was only 23, they are relatively young to have completed their education completely. These concerns could specifically apply to the second generation because previous studies have shown that these students take a longer route to their final education level (Crul et al., 2009; Schnell et al., 2013). In this sensitivity analysis, the highest

obtained educational level in adulthood was swapped for the highest attended educational level on December 31, 2016, to control for the students who potentially were still attending tertiary education. Appendix C presents the results of this sensitivity analysis. The findings aligned with the main analyses: a higher household income resulted in a higher educational level at both age 15 and in adulthood.

## Discussion

In this chapter, I used a unique sample of nationwide administrative data that included students with a second-generation migration background and peers without a migration background. I examined how parental capital influences educational outcomes of these students over their life course. The key finding is that parental capital is associated with educational outcomes for students of all migration backgrounds, yet this association was found to be slightly weaker among the second generation with a Turkish, Moroccan, or Surinamese migration background. In short, the higher the capital, as measured by household income, the higher the educational outcomes in adolescence - at age 15 - and in adulthood – between the age of 23 to 28.

Substantial differences between the several second-generation groups were observed. The association between household income and educational levels at both ages was stronger for second-generation Indonesian, Surinamese, and Antillean youth than for second-generation Turkish and Moroccan youth. This may signal that families with an Indonesian, Surinamese and Antillean migration background have more capital available that could benefit the education of their children. Specifically, these families might have cultural capital or language skills that are relevant in the Dutch context for their children's education. Especially given that many of these first-generation parents were educated in an education system based upon the Dutch educational system in the former Dutch colonies (van Amersfoort & van Niekerk, 2006) or perhaps came to the Netherlands to pursue their education further. Another explanation might be that more second-generation youth with an Indonesian, Surinamese, and Antillean migration background have a parent without a migration background as mixed relationships between a Surinamese, Antillean or Indonesian partner and a Dutch partner occur more frequently than among Turkish and Moroccan peers (Centraal Bureau voor de Statistiek, 2017; Wachter & de Valk, 2019), who could also be more familiar with the Dutch education than those with a Turkish or Moroccan migration background. The impact of mixed parental heritage on the educational outcomes of children in the United States was found to be mixed: although higher parental human capital and linguistic capital positively mediated this association, other mechanisms like precarious family situations negatively impacted the educational outcomes (Emonds & Van

Tubergen, 2015). Insights into this in the Dutch context would be a promising avenue for future studies given the interesting position of migrant groups from former Dutch colonies.

In addition, the impact of living in an intact family varied across the migrant groups. For the Turkish and Moroccan second generation, this had a positive yet weaker association with the educational level at age 15 than the native Dutch. Potentially, variation in family arrangements play a role in explaining this. Fewer children with a Surinamese and Antillean migration background grow up in intact families than their peers with a Turkish, Moroccan, Indonesian or non-migrant background. Therefore, the positive effect that growing up in an intact family – contrasted to a non-intact family - might be more substantial for children of Surinamese and Antillean descent.

An interesting reflection on the outcome that the effect of income on educational outcomes in Indonesian families was like families without a migration background is the specific selection of birth years of the second generation. The first generation of Indonesian Dutch living in the Netherlands who were born in Indonesia is comprised of various groups such as Moluccans, Dutch-origin government and private sector employees, and Indonesian nationals who migrated to the Netherlands. At least one parent was born in Indonesia of this Indonesian second-generation group (born between 1988 and 1993) and so was likely born in Indonesia around 25 to 35 years earlier, i.e., the mid-1950s to late 1960s. These parents most likely migrated – or were repatriated – to the Netherlands in the 1960s and 1970s. The first subgroup of interest here are “spijtoptanten”, referring to people who came to the Netherlands in the 1960s and 1970s. The socio-economic standing of these “spijtoptanten” is somewhat ambiguous. On the one hand, in comparison to other migrant groups from Indonesia such as those with Dutch ancestry, “spijtoptanten” had lower social standings. On the other hand, higher social and educational positions have been attributed to “spijtoptanten” too, as they aimed to seize the opportunities and to occupy the higher social strata in Indonesia that were left unoccupied after the Dutch colonial rule ended. Some registrations of the occupational status of “spijtoptanten” by institutions supporting migrants from Indonesia as reported by Ellemers and Vaillant (1985) indicated that a sizeable share of the “spijtoptanten” were skilled workers, or with a “medium” occupational status.

Another subgroup stands out in this context. Many people registered as first-generation Indonesian migrants had Dutch ancestry and had higher socio-economic positions and occupations – such as those working for the Dutch colonial government or private sector employees working for Dutch companies like Shell in the former Dutch East Indies. The children of this specific subgroup could have benefitted from their parents’ higher social standing- in comparison with other migrant groups in this chapter. A possible explanation for the effect of income on educational outcomes in Indonesian families could be driven by the socio-economic standing of these particular groups of migrants.

Patterns in circular migration could explain the larger coefficient of income among Antillean families as compared to families without a migration background. Circular migration refers to moving back and forth between the Dutch Antilles and the Netherlands among Dutch-Antillean families. The finding that household income has a stronger effect on educational levels at both ages in Antillean families might be explained by the socio-economic divergence of the families who permanently reside in the Netherlands and those circularly migrating between the Netherlands and the Dutch Antilles. Potentially, more dire socio-economic circumstances collide with circular migration for Antillean families. This socioeconomic reasoning could go both ways: circular migration might be a disposition of the fragile socio-economic situations of Antillean families in the Netherlands or their fragile socio-economic positions might be ground for circular migration. The families permanently residing in the Netherlands would have more stable socio-economic positions. Either way, the difference between families permanently residing in the Netherlands and those circularly migrating could be rooted in socio-economic divergence. In short, the larger coefficient of income could be a selection effect based on socio-economic divergence within Dutch-Antillean families in the Netherlands. Examining this in more detail would be a valuable avenue for further research.

The impact of previous education level – such as in secondary school – on education level in later life was beyond the scope of this chapter. Particularly, this link between education in earlier and later life for students with a migration background could be an interesting topic for further investigation (see for an interesting example: Kuyvenhoven & Das, 2022). This would be especially insightful keeping in mind the fact that ‘stacking’ degrees is a proven strategy for children of immigrant to obtain higher levels of education. However, this option of the longer route could be self-selective as extended years in education could require more resources from those families. Economic resources could be needed to cover the costs of extended time in education and the opportunity cost that come along with it, as well as the ambition and commitment to keep going.

Even though it can be concluded that parental capital is important for educational outcomes, the underlying mechanisms of intergenerational transmission at play here remain unknown. I apprehend the limited operationalization of parental capital by household income in our study. Parental education would have been a preferred addition to the measurement of parental capital as done in other Dutch and international studies (de Graaf et al., 2000; Erola et al., 2016; Kilpi-Jakonen, 2012; Scheeren et al., 2017; Wolbers & Driessen, 1996). However, in the register database that is used in this study, the availability of the educational level of the parents is limited as the educational level is known of approximately only 20% of the first-generation parents. This limited information on parental education was deliberately not included in this study as it is likely to be rather self-selective and thus potentially biased as the educational levels are self-reported. So first-generation migrants who

migrated at an early age and completed education in the Netherlands and those with better Dutch language skills are more likely to fill out their educational levels. In addition, I reckon that the wide variety of educational systems and degrees in the country of origin of the parents poses problems to the comparability of the educational level of first-generation and parents without a migration background as also remarked by Van de Werfhorst and van Tubergen (2007).

Further examination of the mechanisms of intergenerational transmission through human capital, cultural capital, and economic capital deserve attention in future research. Sibling models could explore to what extent variation in educational outcomes between siblings stem from parental genetic and environmental influences in migrant families (for example in the majority population in Sweden: Björklund et al., 2010). In addition, more explicit measures of cultural capital, such as language spoken at home or the educational level of parents, could be included in future research, especially when utilizing survey research rather than register data in which such detailed information on skills, behavior, and childrearing remains absent to date. In particular, examining the role of human capital in intergenerational transmission of socio-economic positions among immigrant families could be examined further. The issue here might be that first-generation parents are most likely to be educated in the country of origin, but that immigrant parents from developing countries – such as Morocco or Turkey - might have lacked opportunities in the country of origin to translate their cognitive abilities into a certain education level. The intergenerational transmission of human capital would thus rely mostly on the nature dimension rather than the nurture dimension – so an overall lower transmission as the mediating effect of education may dwindle.

In summary, household income is important for the educational outcomes of students in the short and long run. The Dutch annual education report (Onderwijsinspectie, 2016) pointed out that educational inequalities between children from low and high-resource families are rising. Extra-curricular support, such as hiring a tutor or sending the child to study-specific training, has an important role in these inequalities. The findings in this chapter suggest that resource differences between families do not affect the educational outcomes of youth with a migration background and youth without a migration background alike. Growing up in a family with more resources benefits the educational outcomes of youth without a migration background more than those of second-generation youth. This is extra alarming when keeping the results of the Inspectorate of Education in mind as educational gaps may sustain and grow over time.