Unexpected colonial returns

Self-selection and economic integration of migrants over multiple generations

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Abstract

A ban on migration from Suriname, a former Dutch colony, to the Netherlands induced a mass migration and changed the selection of migrants. We exploit this historical episode to study the relationship between the self-selection of migrants and their long-term economic integration over three generations. 'Beat-the-ban' migrants, those arriving just before the ban, are negatively selected relative to economic migrants arriving earlier. This difference in selection is reflected in the outcomes of the first generation. However, the inequality in outcomes between differently selected migrants is not persistent ass offspring of negatively selected migrants catch-up relative to natives which can be explained by inequities in the country of origin.

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1. Introduction

Immigration flows continue to spark fierce debates about the short-term and long-term consequences for host countries and migrants themselves. For instance, the recent migration flows from the Middle East, Northern Africa and Latin America towards Europe and the US raise questions about the accommodation and integration of large numbers of immigrants in Western society. In particular, countries are concerned about accepting 'negatively selected' migrants as their economic integration might be problematic and induce high social costs. Moreover, these problematic outcomes might spill over to the next generations and generate persistent differences between natives and migrants. Although several studies have investigated the self-selection and economic integration of migrants (e.g. Abramitzky and Boustan 2017, Abramitzky et al. 2020, Ward 2020, Bauer et al. 2013), little is known about the relationship between migrant selection and economic integration in the long-run over multiple generations.[1]

This paper studies the self-selection of migrants and the intergenerational mobility of the next generations by exploiting a unique migration episode linked to Dutch colonial history, which induced a major change in the migrant stream from Suriname to the Netherlands. We investigate whether the offspring of more negatively selected parents achieves a slower or faster catch-up to the economic outcomes of natives than the offspring of positively selected migrants. On the one hand, differences brought from the home country, for instance in terms of human capital or earnings potential, might be reinforced in the host country. The social mobility of children (and grandchildren) of negatively selected parents might be lower due to growing up in more segregated neighborhoods with lower quality of schools or by experiencing discrimination themselves. For the US it has been documented that differences between ethnic groups are quite persistent (Borjas 1995; Ward 2020, Chetty et al. 2020). On the other hand, differences brought from the home country might disappear in the new socioeconomic environment. For instance, children (and grandchildren) of negatively selected parents might have a stronger upward mobility if their parents faced unequal opportunities in the home country that prevented them from realizing their full economic potential (Abramitzky et al. 2021).

[1] A related paper by Collins and Zimran (2019) studies migrant selection and assimilation among two generations of Irish migrants in the U.S. The study focuses on father-son links constructed from surnames matches. Our data provide actual family links for three generations enabling an analysis of entire families including mothers and (grand-) daughters (see also Section 3).

Suriname, a former Dutch colony, obtained political independence in 1975. The announcement of this major political reform and the resulting restriction on migration to the Netherlands created uncertainty about the future and fears about ethnic dominance[2] which induced a mass migration. Many Surinamese families rushed to leave the country before losing their rights to Dutch citizenship, the so-called 'beat-the-ban rush' (Bovenkerk 1983). Within a short timespan approximately one third of the entire population of 400,000 migrated to the Netherlands. Not only the size of the migration flow but also the composition of the migration flow was unexpected. Contemporary observers noted that the composition of the mass migration was very different from the positively selected economic migration in previous years and included both individuals and entire families from all segments of society among which many were poorly skilled and ill prepared for the modern Dutch society (Koot et al. 1985).[3]

We adopt a multigenerational approach to investigate the long-term outcomes of migrants who arrived before and after the announcement of the migration ban, and the outcomes of their children and grandchildren. Unique administrative micro-level data of the entire population of Surinamese immigrants in the Netherlands allows us to investigate the economic integration of three generations of families in the Netherlands more than 40 years after the 'beat-the-ban rush' relative to the outcomes of native Dutch. The data include a range of socioeconomic outcomes such as schooling, wages, employment, and social security dependence. A special feature of our data is that it contains biological family links. Earlier studies have typically relied on linking generations based on ancestry information (e.g. Borjas 2001; Alba et al. 2001), whereas more recent studies have linked generations based on their name, year of birth and place of birth, respectively (e.g. Abramitzky et. al 2021).[4]

Our study focuses on two related questions. First, we study the decision to migrate from Suriname to the Netherlands before and after the unexpected announcement of the Independence in February 1974 by the Surinamese Prime Minister Henck Arron (see Section 2). We label those arriving before the announcement as 'economic migrants' and those arriving after the announcement as 'beat-the-ban migrants'. In particular, we investigate whether the

[2] The population of Suriname was a direct legacy of Dutch colonial policies and primarily consisted of Creoles, former slaves from Western Africa, Hindustani, brought from British-India after the abolishment of slavery in 1863, and Javanese, brought from the Dutch East Indian colony since 1890. This had created a country of immigrants structured along ethnic lines (see also Section 2).

[3] In this respect the Surinamese mass migration appears to be comparable with episodes of forced migration in which the decision to migrate is considered to be exogenous (Becker & Ferrara 2019; Hatton 2020).

[4] Ward (2020) includes biological links between fathers and sons. Our study focuses on all family members in three generations of migrants, including mothers and daughters.

announcement of the migration ban changed the characteristics of migrants coming from Suriname to the Netherlands. Second, we study the long-term persistence of inequality by estimating socio-economic outcome gaps between migrants and natives for three consecutive generations separately for economic and beat-the-ban migrants.

In our first set of analyses, we find that beat-the-ban migration is very different from economic migration. After the announcement of the independence the number of migrants peaked at unprecedented levels (see Figure A.1). Moreover, the beat-the-ban migration brought many individuals who were unlikely to migrate voluntarily in the years before as they would probably face relatively high costs and relatively low gains from migration. A typical economic migrant was young, high skilled, and arriving from Paramaribo, the capital of Suriname, in which mostly individuals of Creole ethnicity resided. We find that economic migrants arriving as adults on average have a higher educational attainment than the native Dutch population of the same age and gender, reflecting the positive selection of this group. After the call for Independence, the beat-the-ban migration brought large numbers of low skilled individuals and elderly, complete families, and those from rural areas and belonging to non-Creole groups to the Netherlands. We find even larger differences in the composition of the migration streams when we focus on beat-the-ban migrants arriving just before the ban. As a result, the first generation of beat-the-ban migrants on average was much lower skilled than the native Dutch population. A comparison of our Dutch administrative data with Surinamese Census data shows that beat-the-ban migrants are more representative of the general population in Suriname than economic migrants. In particular, the schooling level of beat-the-ban migrants arriving just before the ban is very similar to the schooling of the general population in Suriname. We conclude that beat-the-ban migrants are more negatively selected on observable characteristics relative to economic migrants, and this negative selection intensifies closer to the migration ban.[5]

The second set of analyses focuses on the economic outcomes of these two groups of migrants over three generations. We find large outcome gaps between beat-the-ban migrants and natives on all socioeconomic outcomes for those who arrived as adults. The outcome gaps for this adult generation appear to be persistent as they are still present forty years after the migrants' arrival in the Netherlands. Economic migrants arriving as adults have better outcomes than beat-the-ban migrants. The difference in outcome gaps with natives between the two

[5] For presentational purposes, in the remainder of this paper, we use the terms negatively and positively selected to indicate the distinct characteristics of beat-the-ban *versus* economic migrants.

groups of migrants is consistent with the more negative selection of beat-the-ban migrants relative to economic migrants. For later generations we find that the pattern of outcomes changes. We find that the more negatively selected group of migrants has a faster catch-up to natives. Children and grandchildren of beat-the-ban migrants perform better than their parents and catch up with natives in terms of socioeconomic outcomes. Where children and grandchildren of beat-the-ban migrants are closing the gap with natives, this is much less so for the offspring of economic migrants. This implies that the more negative selection of the first generation of beat-the-ban migrants relative to economic migrants doesn't turn into persistent equality among next generations.

Our estimates on intergenerational mobility and on the persistence rate of inequality reveal that the social mobility of the migrant groups is lower than the social mobility of natives. This finding holds over the whole parental income distribution and for both off-spring generations. The lower social mobility of migrants compared to natives, which differs from findings on migrants in the US (Abramitzky et al. 2021), doesn't mean that the inequality between migrants and natives is persistent but indicates that the social catch-up of migrants is considerably slower than the social catch-up predicted by a standard intergenerational model on parents and children.

The third set of our empirical analyses aims to understand why the off-spring of beat-the-ban migrants catch-up with natives more than the off-spring of economic migrants. In line with recent studies on the US comparing natives and immigrants (Collins and Zimran 2019; Abramitzky et al. 2021) we investigate whether the first generation of beat-the-ban migrants might have been 'under-placed' in the income distribution. These migrants might have had a more disadvantaged position in Suriname with little opportunities to invest in human capital. The resulting lower incomes in the Netherlands could explain a stronger upward mobility of the next generations. Our findings suggest that indeed the schooling upon arrival and the Income of the first generation of beat-the-ban migrants probably does not reflect their full earnings potential. Many beat-the-ban migrants originate from rural areas in Suriname and had the Hindustani ethnicity who, for historical reasons, had less economic opportunities and were also more restricted in their opportunities to invest in human capital. Time trends show that beat-the-ban migrants already experienced a catch-up in schooling in Suriname prior to the Independence. We also find that their income and returns to schooling in the Netherlands were hampered by their older age at arrival and by arriving together with large numbers of migrants

within a short time span. The next generations of beat-the-ban migrants continue the climb the social ladder in the new country and converge towards natives.

Our paper contributes to various branches of the economic literature on migration, in particular to the literature on self-selection and economic integration of migrants. First, it has long been recognized that migrants are self-selected (e.g. Abramitzky 2012; Borjas 1987, 1991; Sjaastad 1962) and this is likely to be important for their economic outcomes and integration (Borjas 1987, 1991). We contribute to this literature by comparing the persistence of migrant-native outcome gaps for differently selected migrants over multiple generations based on complete family links. As such, our study is, to our knowledge, the first to investigate the link between self-selection and economic integration over multiple generations. Our setting also enables us to study whether initial differences in outcomes between groups of migrants remain constant after arrival in the host country or change over next generations.

Second, we add to the literature that studies economic integration of immigrants in the destination country (e.g. Chiswick 1978; Borjas 1999; Bauer et al. 2005; Kerr and Kerr 2011; Clarke et al. 2019). This literature especially focuses on the evolution of the wage-gap between natives and migrants after arrival in the destination country. Many of these studies focus on the US and on first-generation migrants. More recent studies apply an intergenerational perspective and investigate the social mobility of migrants compared to natives. For example, Abramitzky et al. (2021) find that in the US migrants at the bottom of the parental income distribution experience higher social mobility than natives. Another recent study using a similar approach shows that the convergence of ethnic differentials over three generations is much lower than predicted by a standard intergenerational mobility estimate between parents and children (Ward 2020). Our study adds to this literature by studying the universe of three generations of migrants based on biological family links within a European context.

Third, our study sheds light on the discussion about the pace of social mobility over multiple generations, both across and within the group of immigrants (Solon 2018). On the one hand, Becker and Tomes (1986) expect that 'all the advantages or disadvantages of ancestors tend to disappear in only three generations'. On the other hand, Clark (2014) formulates a law of social mobility with a persistence rate of 0.7 to 0.8. 'The status of the descendants will move toward the mean for the society generation by generation. When the persistence rate is as high as 0.8, this is a slow process, taking many hundreds of years for families who are initially far above or below the mean' (Clark 2014, p.212). Our findings on the persistence of inequality between migrants and natives are consistent with Clark's view. They are also consistent earlier

studies showing that immigrant-native gaps in economic outcomes slowly disappear for descendants of immigrants (e.g. Borjas 1992, 1994, 1995; Ward 2020). In addition, we find that the pace of convergence differs substantially between beat-the-ban migrants and economic migrants.

Finally, our study also contributes to the recent literature on forced migration (Bauer et al. 2013; Becker and Ferrara 2019; Becker et al. 2020; Sarvimäki et al. 2020; Nakamura et al. 2020; Dustmann et al. 2017; Brell et al. 2020). These studies deal with potential selection bias by focusing on individuals who were forced to move because of wars, natural disasters, or political and ethnic conflicts. The beat-the-ban migration wave clearly was not forced migration, but the political background factors also made it very different from 'regular' economic migration in earlier years. Beat-the-ban migrants can probably be located somewhere on the scale between economic and forced migrants as the distinction between these types of migration is not a binary one (Becker & Ferrara 2019).

This paper is organized as follows. Section 2 describes the context of Suriname as a Dutch colony, the process of political independence and the background of the mass migration. In Section 3 we describe our data. The next sections present the empirical results. Section 4 presents the results on the decision to migrate prior to and after the announcement of the Surinamese independence. Section 5 analyzes the persistence of inequality between natives and migrants over multiple generations and shows the results on the intergenerational mobility of migrants and natives. Section 6 seeks to explain the difference in social mobility patterns between economic migrants and beat-the-ban migrants. Finally, Section 7 concludes.

2. Context of the Surinamese mass migration

The Dutch colonial legacy: a nation of immigrants

Suriname, a country in South America, neighboring Guyana, Brazil and French Guyana, has been a Dutch colony since 1667.[6] As the Dutch needed workers for their plantations and the indigenous population was small, they started bringing slaves from Western Africa ('Creoles'). After the abolishment of slavery in 1863, the plantations suffered from labor shortages. This was solved by recruiting new workers from British India ('Hindustani') between 1873 and

[6] Only during the Napoleonic period Suriname was occupied by the British.

1917, and Javanese migrant workers from the Dutch Indies between 1890 and 1940.[7] As a result of these policies a country of immigrants had been created with a clear ethnic segmentation. Each ethnic group had its own race, language, religion and socioeconomic activity. This type of society, which is also found in the British West Indies or in India, has been labeled a plural society (Furnivall 1939; Van Lier 1950). The emancipation of these groups was different, with the Creoles being the first to emancipate, followed by the Hindustani and Javanese. The advantages of the Creoles have been attributed to their earlier connections with the European power and culture (Van Amersfoort 2011). In addition, Dutch educational policies, such as the introduction of compulsory schooling and the use of Dutch language in schools, mostly benefited Creoles who were predominantly living in Paramaribo and other urban areas. The Asian groups had less affinity with Dutch cultures and language, and were more likely to work as small farmers or small retailers and live in non-urban areas (Buddingh 2012, p. 247).

Surinamese immigration until 1974

Due to the colonial ties, there has always been migration from Suriname to the Netherlands. Migrants from Suriname could easily settle in the Netherlands without a visa requirement being in place. The Creole elite were the first to send their children to the Netherlands for completing their education (Tjon A Ten 1987).[8] Many of these migrants did not return because of a lack of economic opportunities in Suriname. The Creole urban middle class also started to migrate after the Second World War due to a decrease in migration costs. The Hindustani and Javanese started to migrate around the early 1970s as it was perceived that the Netherlands offered better education and more opportunities for social mobility (Vezzoli 2015; p.128). The difference in the timing of migration between Creoles and the Asian groups has been linked to socioeconomic advantages and cultural differences (Lamur 1973, Oostindie 2008, Van Amersfoort 2011).

The Surinamese Independence

The Dutch government was concerned about the growing migration from Suriname in the late 1960s and early 1970s. In February 1974 Henck Arron, the leader of the main Creole political party NPS and the Prime Minister of Suriname, unexpectedly announced that Suriname would

[7] They also recruited some Chinese workers from Java and China, but these numbers were small.
[8] The educational system in Suriname was a copy of the school system in the Netherlands, which facilitated the transition for Surinamese elite children to enrol in Dutch schools.

become independent before the end of 1975. The call for Independence by Henck Arron came only very shortly after his appointment as Prime Minister and came very much as a surprise to the entire Surinamese population[9], and could not count on the support of Arron's own party members nor of his coalition partner (Buddingh 2012). For the Dutch government, the news came as a pleasant surprise, as Independence of Suriname would curb the migration to the Netherlands, and they agreed on paying a large sum of aid money to stimulate the economic development of the new Suriname. In addition, they also made two concessions regarding migration. First, all Surinamese who resided in the Netherlands on Independence Day were granted Dutch citizenship. Second, Surinamese could continue to travel freely to the Netherlands until 1980, after which a visa requirement was put in place for people migrating from Suriname.

Migration to the Netherlands after the announcement of the independence

In 1972 Suriname counted approximately 380,000 inhabitants. In the years following Arron's call for independence, roughly a third of the population migrated to the Netherlands fearing that the new Republic of Suriname would not be viable. The largest wave of migration, consisting of nearly 40,000 people, occurred in 1975 just prior to the independence (see Figure A.1). In that year all flights from Suriname were fully booked and additional flights were deployed. Many immigrants appeared to have moved in a hurry without much preparation, reacting upon a general feeling of 'it is now or never', rushing to secure Dutch citizenship before November 1975. The large numbers came as a surprise to the Dutch government who had expected that most Surinamese would have been happy with gaining independence. This caused housing problems and many Surinamese were given shelter in temporary places like military barracks. A large proportion of the new arrivers moved to Amsterdam, where a new neighborhood had just been developed (i.e the 'Bijlmermeer'). Other Surinamese migrants settled in other big cities such as The Hague, Rotterdam and Utrecht.[10] The large wave of Surinamese immigrants demonstrates that the Dutch policies aimed at curbing the immigration flow turned out counterproductive.

[9] During the Surinamese election period this topic had always been discussed as something considered undesirable. As a result, the news in February 1974 was not expected by the Surinamese population.
[10] By 1981, Amsterdam counted approximately 35,000 Surinamese inhabitants. Although the numbers for The Hague (approx. 25,000), Rotterdam (approx. 21,000) and Utrecht (approx. 5,000) are somewhat lower, the Surinamese population in these cities was still relatively large (Tjon-A-Ten 1987, p. 31).

The leading explanation for the 'beat-the-ban rush' points to a combination of political and economic motives (Peach 1968; Reubsaet et al. 1982; Bovenkerk 1983). The political motives are directly related to the plural society of Suriname. 'Fear of political domination by the Creole urban population and of ethnic conflicts compelled people to flee to the Netherlands – people who under normal circumstances would not have taken part in this migration. People with little education or previous contact with Dutch culture, and sometimes already of an advanced age, had become for the first time involved in the migration process' (Van Amersfoort 2011). This especially applied to the Asian groups. These fears were reinforced by the experiences in the neighboring country of (British) Guyana. Many Surinamese were aware of the Guyana Independence which induced tensions between ethnic groups of which many fled towards Suriname. The economic motives consisted of a comparison between the poor and worsening economic conditions in Suriname versus the attractions of a high-income country with a large and generous welfare state. Dutch society offered an alternative with much higher levels of income and schooling, better health conditions, a better quality of public institutions and a large welfare state.

Changes in the composition of the migrant flows

Various contemporary observers have noted dramatic changes in the composition of migration from Suriname during the Independence years. Before the Independence years especially the young urban privileged individuals with a Creole background migrated to the Netherlands. During the Independence years there was a strong increase in the number of Hindustani and Javanese migrants (Chin and Buddingh 1987; Dew 1978). Moreover, migrants now also came from rural areas all over Suriname. Migration no longer primarily originated from the elite and middle classes but it became very much a 'lower class phenomenon' (Van Niekerk 2005) and now included people from all ethnic groups (Vezzoli 2015). In addition, Koot et al (1985) note that during the mass migration many migrants were not well prepared for migration, both financially as culturally: 'The affinity of migrants with Dutch language and culture decreased with every next arriving flight'. During the Independence process it was also more likely that entire families moved. The composition of the migrant flow now consisted much more of a representation of the entire Surinamese population (Tjon A Ten 1987). In Section 5 we empirically analyze the differences in the migration streams before and after the announcement of the Surinamese independence using administrative data of all Surinamese migrants.

Post-independence migration

After 1975 the number of Surinamese immigrants dropped significantly. But the arrangement that there could be free movement of people between Suriname and the Netherlands up till 1980 induced a new wave of 'now or never' migration with a peak around 1980, as many felt that this was the last opportunity to settle in the Netherlands. Over 37,000 Surinamese migrated to the Netherlands in the years 1979-1980 (see Figure A.1). As of 1 June 1980, the Dutch government tried to induce Surinamese migrants to return to Suriname by providing a financial stimulus, including reimbursement of travel costs for the re-migration and a stipend to cover for subsistence costs during the first three months. However, this initiative has not led to a large number of return migration among the Surinamese (Bovenkerk 1983).[11] In this paper we focus on the first and largest migration wave by comparing migrants arriving in the years before and just after the announcement of the Surinamese independence.

3. Data on Surinamese immigrants and Dutch natives

3.1. Data description

For this project we compile data from several large administrative datasets from Statistics Netherlands.[12] Information on Surinamese migrants is obtained from the Migration records (GBAmigratiebus), which include all registered migrants still residing in the Netherlands as of 1995 and all migrants who arrived since 1995. Note that our administrative data start in 1995 and therefore we don't observe individuals that died before 1995 or individuals who remigrated to Suriname (or migrated elsewhere) prior to 1995 and never returned to the Netherlands. However, only few Surinamese actually returned to Suriname; most of them remained in the Netherlands (Bovenkerk 1983). Potential consequences of any selective return migration will be further discussed in Section 3.2. Our baseline sample consists of individuals arriving from Suriname between 1965 and 1975 for whom we also observe the date of migration. We label those arriving before the announcement of the independence in February 1974 as 'economic migrants', and those arriving after the announcement and before the Independence in November

[11] More information on the flow of remigration is provided in section 4.
[12] The data are accessible via a remote-access facility after a confidentiality statement has been signed.

1975 as 'beat-the-ban' migrants. Figure 1 shows the number of Surinamese immigrants by year of arrival in our administrative data. The main patterns in our data, with large peaks in 1974/75 and 1979/80, are very similar to those reported in Figure A.1 based on population counts at the time of arrival.[13]

In a next step we link our sample to other administrative datasets using someone's Random Identification Number (RIN), which is the coded Dutch equivalent of the U.S. Social Security number. This allows us to identify all children and grandchildren of migrants using the Parent-Child Dataset (Kindoudertab) that links individuals to any living parent in one of the municipal records in the Netherlands (in the same household as the child or in a different household) since 1995.

Based on these data we define three generations of migrants, and we construct a dataset for each generation. The first generation consists of Surinamese individuals who arrived in the Netherlands at the age of 18 or above. We call this group the 'adult population', or *Generation 1* (G1). The second group consists of the children of these adults (the child population, or *Generation 2* (G2)). The third group is made up by the children of the child population (the grandchild population, or *Generation 3* (G3)). This way of constructing generations is typical for the literature on intergenerational mobility. However, it differs from the migration literature in which each generation refers to the country of birth, where the arriving generation is born abroad and the next generations are born in the host country. In our approach, the adult generation is born abroad, but the child generation can be born either in Suriname (and migrated as a child to the Netherlands) or in the Netherlands.

To be able to compare Surinamese migrants' outcomes to those of native Dutch, we construct similar samples of native Dutch for each of the three generations of Surinamese. We start by constructing a 'child population' of Native Dutch, who are born in the Netherlands in the same years as those in the Surinamese 'child population', i.e. born between 1948-1975 and hence aged between 0 and 17 in the years 1965-1975.[14] For these individuals, we define their parents and their children, which make up the Native 'adult population' and the Native 'grandchild population', respectively.

For each of the three generations we define a range of socio-economic outcomes. The administrative data allow us to study a variety of measures on the labor market position (labor income, employment status), dependence on social security (unemployment insurance,

[13] The number of observations in Figure 1 is somewhat smaller as some migrants are no longer residing in the Netherlands in 1995 when the administrative records start (e.g. due to mortality or (return) migration).
[14] Note that we select a random 10% sample of the entire Dutch population for ease of computation.

disability insurance, other benefits) and schooling outcomes (educational attainment measured in years of completed schooling[15], high stakes test scores in 6th-grade, age at test in grade 6). For the adult (G1) outcomes we focus on the first years for which outcomes are available (1999-2005). This provides us with the largest sample as in later years many individuals turn older than sixty years and leave the labor market.

Our set of demographic characteristics come from the Municipal Population datasets (GBAPersoontab and GBAHuishoudentab) and include date of birth, marital status, gender, and the identification numbers of other household members. For Surinamese migrants we also have information available about their ethnicity (i.e. Creole, Hindustani, Javanese, Chinese, Marron[16]), their place of birth, their age at migration (which is based on the month and year of arrival in the Netherlands), and their family size at the time of migration.

3.2 Distinguishing between economic migrants and beat-the-ban migrants

In our analysis we use the announcement of the Independence in February 1974 to distinguish between beat-the-ban migrants and economic migrants. Individuals migrating after the announcement were informed about the restriction on the period in which migration was still possible, and this might have changed the size and composition of the migration. For the analysis we distinguish three groups of individuals in our data:

- Economic migrants (Sur_{Ec})
    - Arrival since 1965 and before February 1974 (Announcement of independence);
- Beat-the-ban migrants (Sur_{Ban})
    - Arrival between February 1974 and November 1975 (Independence Suriname);
- Natives
    - 10 % sample of Native Dutch population of the same gender and age.

Although the announcement of the independence was unexpected (see section 2) it seems unlikely that it would induce a clear distinction, e.g. a discontinuity in characteristics, between individuals migrating shortly before or after the announcement. In general, migration takes time to prepare and the decision to move to a country on the other side of the world is probably quite

[15] Note that the education system in Suriname was similar to the Dutch education system. The education data is complete for younger cohorts but comprises only a sample for older cohorts. As a result, we have fewer observations on educational attainment than we have on income related measures (which are available for everyone).

[16] Statistics Netherlands has generated this main ethnic group coding based on information about surnames (CBS 2011).

complicated. As such, it can be expected that economic migrants and beat-the-ban migrants who arrived in the Netherlands in the first months after the announcement will be quite similar. After this initial period the distinction between the two group might become more important, especially when the time to the ban runs out and 'the now or never' feeling becomes more real. Data on the number of monthly migrants also don't show a strong increase just after the announcement of the ban, but these data show a large peak in migration in the months just before the Independence date (see Appendix Figure A.2). Hence, it might be argued that the 'true' Beat-the-ban migrants arrived in the last few months before the independence. In our analysis we will take this issue into account by not only comparing the total groups of migrants, but by also looking at the importance of the time to the ban and by zooming in on migrants who arrived in the final months before the ban.

Table 1 provides summary statistics for our main estimation samples of adults, children and grandchildren, respectively. For the adult population we observe that beat-the-ban migrants are older at the time of their arrival than economic migrants. Moreover, they are less likely to be born in Paramaribo and more often have the Hindustani ethnicity. Beat-the-ban migrants lag behind natives in terms of schooling. Economic migrants have higher educational attainment than natives (and beat-the-ban migrants). The middle columns of Table 1 show the statistics for the children's' generation. The schooling gap between beat-the-ban migrants and natives has reduced from 1.6 to 0.8 years of schooling for this generation. The columns to the right in Table 1 shows summary statistics for grandchildren. For this third generation, we find that Surinamese grandchildren still lag behind natives in educational outcomes. They score 3 to 4 points lower on the nationwide Cito-test in 6^{th} grade, which is approximately 0.3 to 0.4 standard deviations.

Return migration

In our data we cannot directly observe return migration as the administrative data are only available from 1995 onwards (see Section 3.1). This implies that we don't observe individuals who migrated during the mass migration and returned to Suriname prior to 1995 and did not move back to the Netherlands afterwards. If the probability to return to Suriname depends on the economic success and social integration of migrants and their descendants in the Netherlands, return migration might be different for economic migrants relative to beat-the-ban migrants, which could bias our estimates. Fortunately, the available evidence suggests that overall return migration was limited. In the period prior to the independence (i.e. 1967-1971) the annual remigration of all Surinamese in the Netherlands was 4 to 5 percent (Bovenkerk 1973, 1976). The rate of remigration did not increase in the years around independence, and is

only 1.2 percent in 1980 (Bovenkerk 1983). Moreover, almost half of the return migrants returned back to the Netherlands. Appendix B provides more background information on the motives for not returning back to Suriname. In sum, this suggests that our data consisting of Surinamese migrants who were still in the Netherlands as of 1995 comprises the vast majority of Surinamese migrants. Furthermore, Appendix B describes that the demographic composition of return migrants resembles the composition of the inflow of Surinamese in the Netherlands. Hence, any compositional differences in the return migration of economic and beat-the-ban migrants simply reflects compositional differences in either group, which reduces concerns about potential bias from selective return migration.

4. The decision to migrate before and after the announcement of the Independence

In the economic literature migration decisions are typically modeled as a type of human capital investment (Sjaastad 1962, Borjas 2000), where individuals who consider migrating to a new location compare their earnings stream in the current location with the earnings stream in the destination. They are expected to migrate if the discounted stream of earnings in the destination country exceeds that of the origin country by more than the cost of migration, which include the actual transportation costs of the individual and his/her family, as well as the 'psychic costs' – the emotional costs of moving away from family, friends and neighbors. Migrant selection can arise when the costs and benefits of migration differ across potential migrants because the relative return to skill in the sending and destination countries differs. Positive selection refers to incoming migrants with above-average skills, whereas negatively selected migrants are drawn disproportionately from the lower tail of the source country's skill distribution (Borjas 1987).

The empirical evidence on the Borjas model of migrant selection is mixed (Abramitzky et al. 2012). In particular, migrants appear to be selected positively on educational attainment from almost every sending country in the world, even those with very high levels of income inequality (Feliciano 2005; Grogger & Hanson 2011). This might be explained by the costs of migration (Borger 2010) or by borrowing constraints. The selection might be different for migrants who move because of conflict or political reasons. For instance, refugees often do not choose their country of destination or the time they move; economic pull factors in destination countries are weaker and push factors from origin countries are stronger for these migrants (Hatton, 2020). However, a recent study finds that refugees arriving in Europe in 2015 and 2016 were positively selected with respect to human capital (Aksoy and Poutvaara 2021). The case

of negative selection has been documented for migrants who moved from urban areas in Norway to the US during the age of mass migration (Abramitzky et al. 2012).

Changes in the composition of the migrant streams

The unexpected announcement of the Surinamese Independence imposed a time restriction on migration to the Netherlands. Surinamese individuals could only be granted Dutch citizenship if they resided in the Netherlands before the official Independence. In addition, the political and socioeconomic situation in Suriname could change after Independence. These factors are likely to be important for the expected costs and benefits of migration. We investigate whether the announcement of the migration ban changed characteristics of migrants coming from Suriname to the Netherlands.

We start our empirical analysis by comparing migrants who came to the Netherlands with individuals who stayed in Suriname (non-migrants). We use Dutch administrative data on migrants and Surinamese census data on individuals who stayed in Suriname. The Surinamese Census of 2004 and 2012 provides micro data on schooling and ethnicity.[17] We have calculated the means and standard deviations for the population aged 18 or older. Information on place of origin is obtained from the Surinamese Census of 1971-72. Table 2 shows means (and standard deviations) for non-migrants and for the two types of migrants. A comparison of economic migrants and non-migrants reveals a clear pattern of self-selection. Economic migrants are positively selected as they are much better schooled than individuals who stayed in Suriname; the difference is more than 3.5 years of schooling. Economic migrants are also much more likely to have the Creole ethnicity and to originate from Paramaribo. The bottom rows show a very different pattern for the beat-the-ban migration. These migrants are much more similar to the individuals who stayed in Suriname. Remarkably, the statistics for beat-the-ban migrants who moved in the last three months before the ban are very close to those of non-migrants. Hence, beat-the-ban migrants include more negatively selected individuals relative to the positively selected flow of economic migrants.[18] These patterns are consistent with contemporary observations (see Section 2). First, especially high-skilled Creoles from

[17] The data were obtained from IPUMS International through: https://international.ipums.org/international.
[18] Henceforth, we will refer to beat-the-ban migrants as being negatively selected *relative* to the positively selected group of economic migrants. Although beat-the-ban migrants are not particularly negatively selected relative to the original Surinamese population (i.e. the Borjas definition), this definition of negative versus positively selected groups of migrants helps to describe how the distinct characteristics of either group are related to any difference in their long-term outcomes, which is the main focus of this paper.

Paramaribo were involved in economic migration. Second, the composition of the beat-the-ban migration resembles the population in the country of origin more closely than the composition of the economic migration does, and this similarity increases for the migration stream closer to the ban.

Beat-the-ban migrants versus economic migrants

Next, we investigate whether the migration ban induced different types of migrants to move to the Netherlands using administrative data on economic migrants and beat-the-ban migrants. To this aim, we regress characteristics of migrants on a dummy for being labeled as a beat-the-ban migrant or as an economic migrant using the following regression:

$$X_{it}^{G_1} = \alpha_0 + \alpha_1 Sur_{Ban,i} + \alpha_2 Time_{to}Ban_i + \alpha_3 Sur_{Ban,i} * Time_{to}Ban_i + \varepsilon_{it} \quad (1)$$

where $X_{it}^{G_1}$ represents characteristics upon arrival of adult migrants (G1) like schooling, age or family size, and $Time_{to}Ban$ is the timing of arrival before the ban in November 1975 (months before Independence, ranging from -131 to 0). We start by estimating a basic specification of Equation (1) that only includes a dummy for being a beat-the-ban migrant. This specification yields estimates of the difference in means between the two types of migrants which are shown in Panel A of Table 3. Next, we estimate the full model as specified in Equation (1). The estimate of the parameter α_3 learns whether the time trend for a specific characteristic changes after the announcement of the ban. The estimation results are shown in Panel B of Table 3.

We find large differences between the two types of migrants. Beat-the-ban migrants have on average over two years less schooling than economic migrants and this difference increases to 3.4 years for those arriving in the final three months before the ban. The widening of the schooling gap for individuals arriving closer to the migration ban is also shown by the estimate for the interaction effect in Panel B of Table 3. The negative time trend in schooling is much larger after the announcement of the independence. The sample for this analysis is smaller as schooling of migrants is not always measured, in particular for migrants arriving in the 1960s. Column (7) replicates this analysis on a larger sample by using the predicted schooling based on birth district as outcome. This analysis confirms the main pattern that beat-

the-ban migrants have less schooling, and that this is especially the case for those migrants arriving just before the ban. We also find that beat-the-ban migrants are older upon arrival. In particular, a substantial proportion of beat-the-ban migrants is older than 40 years upon arrival. Beat-the-ban migrants also bring larger families and are less often born in Paramaribo. The time trend for these characteristics is stronger after the announcement of the independence. Furthermore, we find a major difference in ethnicity; 54 % of economic migrants has the Creole ethnicity, this reduces to 25 % for beat-the-ban migrants. Again, we observe a stronger time trend after the announcement of the independence.

These findings show that the beat-the-ban migration was different from the economic migration. Before the announcement of the independence migrants were positively selected. The announcement of the Independence (and the migration ban) has triggered a broader stream of migrants originating from more regions and with more ethnicities other than the Creole ethnicity. Importantly, this stream of migrants appears to be less well adapted to the modern Dutch society considering their lower schooling, older ages, larger families, and non-urban background. Consistent with the reports by contemporary observers (see Section 2) we conclude that beat-the-ban migrants are more negatively selected relative to economic migrants and this negative selection intensifies when time to the ban runs out.

5. Long-term assimilation of economic migrants and 'beat-the-ban' migrants

5.1. Outcome gaps between migrant and natives over three generations

In the second part of our empirical analysis, we are interested in the economic integration of successive generations of migrants in the new country and the persistence of inequality between natives and immigrants. The analysis focuses on two questions. First, how large are the outcome gaps between migrants and natives and how much do they change over generations. Second, what is the relationship between the self-selection of migrants and their economic integration in the long term. We estimate outcome gaps between migrants and natives of the same age and gender using regressions like in Bauer et al. (2013) and distinguish between beat-the-ban migrants and economic migrants:

$$Y_{it}^{G} = \beta_0 + \beta_1 Sur_{Ec,i} + \beta_2 Sur_{Ban,i} + f(X_{it}) + \theta_t + \varepsilon_{it} \qquad (2)$$

where Y_{it} is the outcome of interest for individual i of generation G (e.g. adult, child or grandchild) at time t, Sur_{Ec} and Sur_{Ban} denote dummy variables for being an economic or beat-the-ban Surinamese migrant or descendant, X_{it} denotes a vector of demographic control variables (age and gender) and θ_t are dummies for the measurement year. The main parameters to be estimated are β_1 and β_2 which can be interpreted as the outcome gaps with natives for economic migrants and for beat-the-ban migrants, respectively. We estimate these parameters for each subsequent generation. Most outcomes (e.g. wage, employment and social security dependence) are available for multiple years since 1999. We estimate models using as dependent variable the average individual outcome available for each year. Models using yearly individual outcomes which take account of clustering of the error terms at the individual level yield very similar estimation results. Estimates of the migrant-native outcome gaps as specified in Equation (2) are shown in Table 4. These estimates compare the outcomes of migrants with the outcomes of natives of the same age and gender.

Panel A of Table 4 shows that beat-the-ban migrants arriving as adults have relatively poor long-term socioeconomic outcomes, even 40 years after their arrival. They have on average 1.7 years of schooling less than natives and their income rank is 12.5 percentage points lower than natives. Moreover, beat-the-ban migrants are 24 percentage points more likely to rely on social benefits than natives, which is more than double the dependency rate of natives. For individuals arriving in the final three months before the deadline the outcomes are even worse. Their schooling gap with natives is more than three years and their income rank is 12.9 percentage points lower than natives. Their reliance on social benefits is also slightly higher than for the total group of beat-the-ban migrants (24.4 percentage points). Economic migrants have better outcomes than beat-the-ban migrants.[19] These migrants are on average even higher educated than natives and also have a higher employment rate. However, and remarkably considering their schooling level, their income rank is 8.4 percentage points lower than the income rank of natives and, like beat-the-ban migrants, they have a much larger dependence on social security.

The large gaps in long-term socioeconomic outcomes for beat-the-ban migrants are consistent with reports on the economic integration in the first years after the arrival of the migrants (e.g. Koot et al 1985; Tjon A Ten 1987). These reports conclude that many migrants

[19] A similar result has been found in Cortes (2004) who shows that in the U.S. (the first generation of) refugees earn less than economic migrants.

arriving just before the ban were not well prepared for Dutch modern society (see Section 2). Our findings indicate that the major difficulties that migrants encountered in their first years in the Netherlands, with very high unemployment and dependence on social benefits, didn't fade away in the next decades.

Panel B of Table 4 shows estimates of the immigrant-native gap for the next generation, i.e. for the children of the adult migrants. We find that children of beat-the-ban migrants are doing better than their parents on all socioeconomic outcomes and are closing the gaps with natives. The gap in educational attainment has reduced to 1.1 years of education. This reduction is substantial as the Dutch native children from the same age also attained much more education than their parents; they attained 2.8 years of schooling more than their parents. The strong educational performance of the second generation of Surinamese migrants was also noted in Van Heelsum (1997). In addition, children of beat-the-ban migrants reduced the gaps in income rank and dependence on social security benefits respectively to 8.6 and 15 percentage points: a reduction of 33 percent of the parental gaps in these outcomes. For children of beat-the-ban migrants who arrived in the final three months before the ban we find very similar outcomes. These socioeconomic indicators show that children of beat-the-ban migrants still have a substantial disadvantage compared to natives, but relative to their parents their socioeconomic position is clearly closer to the position of natives. As such, children of beat-the-ban migrants experience a pattern of upward social mobility.

This pattern is less clear for children of economic migrants. They no longer have, like their parents had, an advantage in schooling and employment compared to natives. They attained on average 0.5 years less schooling than natives and have the same employment rate as natives. Their income rank slightly improved and their dependence on social security strongly reduced. The latter indicators suggest some upward mobility but the change on all four indicators is smaller and less clear than for children of beat-the-ban migrants.

In Panel C of Table 4 we show the estimates of the outcome gap for the grandchildren of the migrants. For this relatively young generation we use administrative data on outcomes in primary education. At the end of primary education (grade 6) students take a test which, together with the advice of the teacher, determines the assignment to the track level in secondary education[20]. We observe that the outcome gaps with natives are still present for both types of

[20] Hanushek et al. (2021) using Dutch cohorts taking the test in the 1970's and 80's show that score on this tests are strongly associated with enrolment in higher education and in STEM education, and with income and wealth thirty years after the test.

migrants. At the end of primary education their score on a nationwide high stakes standardized test is 0.3 to 0.4 standard deviations lower than the score of natives. We cannot directly compare the differences in human capital between the generations as not all grandchildren have completed their schooling yet. However, estimates based on historical cohorts and on recent cohorts show that an increase in test scores of one standard deviation is associated with an increase in schooling of 1.3 to 1.4 years.[21] These estimates imply that the difference in test scores between migrants and natives is expected to translate into a difference of 0.4 to 0.5 years of schooling in adulthood. Furthermore, migrants are slightly older when taking the test, which is a proxy for the rate of retention. Further evidence on the schooling gap can be derived from the change in migrant-native test score over the time period of our tests scores 2006-2016. We find that the test score gap with natives reduced in this period for economic migrants from 0.38 in 2006 to 0.09 standard deviations in 2016, and for beat-the-ban migrants from 0.53 to 0.19 standard deviations.

These findings on the third generation of migrants show that beat-the-ban migrants have nearly closed the gap with economic migrants. The schooling gap has reduced from 2.4 years in the first generation, to 0.6 years of schooling in the second generation to approximately 0.1 years for the youngest generation. The educational outcomes of beat-the-ban migrants still lag behind those of natives, but the gap is smaller than the migrant-native outcomes gaps of their grandparents and parents. This indicates that the third generation of beat-the-ban migrants is likely to continue the upward social mobility of their parents. The outcome gaps for the third generation of economic migrants are quite similar to the outcome gaps of their parents which implies little upward social mobility for these migrants.

The persistence of inequality in income and schooling

We use the estimates in Table 4 to calculate the persistence rate in inequality in schooling and income between generations for both groups of migrants. For beat-the-ban migrants the inequality in schooling persists with 65 % from the first to the second generation (-1.1/-1.7) and

[21] Based on a linear regression of years of schooling on test scores. For the historical cohorts taking the test in the 1970's and 1980's the association with years of schooling is 1.29 (0.01) (N=62809) (Hanushek et al. 2021). For the first cohorts of students for which test scores are available in the administrative data we find associations with years of schooling of respectively 1.36 (0.01), 1.33 (0.01) and 1.34 (0.00). The sample size is respectively 126,876; 123,726 and 118,747. For these students, who took the test in 2006, 2007 or 2008, we observe completed schooling in 2021. This means that for the cohort taking the test in 2006 we observe schooling at age 27. At that age nearly all students have completed their schooling in the Dutch context.

with 47 % from the second to the third generation (-0.5/-1.1)[22]. The income inequality of this group of migrants persists with 69 % from the first to the second generation (-0.09/-0.13). For the economic migrants we find a stronger persistence. The schooling difference persists with -81 % from the first to the second generation (-0.5/0.7) and with 74 % from the second generation to the third generation (-0.4/-0.5). The income inequality of economic migrants versus natives persists with 85 % between the first and second generation (-0.07/-0.08).

We have also obtained estimates of the persistence rate of inequality based on intergenerational models as in Borjas (1995) and Ward (2020) using the sample of parents and children as in section 5.2. These models regress child outcomes on parental outcomes and a group (ethnic) mean. The sum of the parameters on the parental outcome and the parameter on the group mean captures the persistence of group differences over generations (see Appendix C). The estimates from these models, shown in Table C.1, provide a similar pattern of the persistence of inequality as discussed above. The estimated persistence rate for beat-the-ban migrants varies between 0.5 and 0.7, whereas the persistence rate for economic migrants varies between 0.9 and 1.1. Hence, these analyses confirm that more negatively selected beat-the-ban migrants have a stronger catch-up in social mobility than economic migrants.

5.2 The social mobility of migrants and natives

To gain further insight in the persistence of inequality between migrants and natives we estimate intergenerational mobility models. These models show the social mobility of immigrants and natives conditional on their parental income rank by directly linking outcomes of parents and children. This analysis enables a comparison of the social mobility for different parts of the income distribution whereas the analysis in the previous section focused on a comparison of the means of the different groups. Following Abramitzky et al. (2021) we regress outcomes of children and grandchildren on the outcomes of previous generations, a dummy for being a specific type of Surinamese migrant or descendant (economic migrant or beat-the-ban migrant, respectively), and the interaction of these two variables:

$$Y_i^g = \gamma_0 + \gamma_1 Sur_{type} + \gamma_2 Y_i^{g-1} + \gamma_3 Sur_{type} * Y_i^{g-1} + \varepsilon_i \qquad (3)$$

[22] Test scores have been mapped into years of schooling by using the association between one standard deviation of test scores and 1.4 years of schooling (see also footnote 19).

The slope estimates for natives (γ_2) and migrants (γ_3) measure the association between child outcomes and parental income rank, which is often labeled as the relative mobility. The estimates of the intercepts (γ_0 and γ_1), labeled as absolute mobility, reveal the difference in expected outcomes for natives and migrants whose parents are located at the very bottom of the income distribution. We focus our analysis on intergenerational mobility in income and in education. For estimating the intergenerational mobility in income between parents (G1) and children (G2) we use the first available parental income measure (averaged over the years 2003-2005) and the last available income measure for children (2016). For the next generation, we estimate the association between test scores (G3) and the income rank of their parents (G2) and their grandparents (G1). The rank-rank specifications are done separately for economic and for beat-the-ban migrants.

Table 5 shows the estimation results for the model specified in Equation (3).[23] Panel A presents intergenerational income mobility results which are based on a regression of the income rank of children (G2) measured in 2016 on the income rank of their parents (G1) averaged over the years 2003-2005. Column (1) shows the estimates for economic migrants and natives, the next two columns focus on respectively all beat-the-ban migrants and those arriving in the last three months before the ban.

The first rows in Table 5 show that at the very bottom of the income distribution children of immigrants have a lower expected income rank than children of natives. This difference is considerably larger for children of economic migrants (6.9 percentage points) than for children of beat-the-ban migrants (2.7 to 3.9 percentage points depending on their time of arrival). The next rows show that the income gap between immigrants and natives widens over the income distribution, in particular for beat-the-ban migrants. At the top of the income distribution the expected income rank of children of beat-the-ban migrants is 13.7 percentage points below the expected income rank of children of natives. Hence, these estimates show that the social mobility of children of immigrants is largest at the bottom of the income distribution.[24] This pattern is consistent with the findings for the US (Abramitzky et al. 2021).

[23] A graphical representation of the rank-rank correlations is presented in Figure 2.
[24] These results are in line with intergenerational mobility results of post-WWII Surinamese immigrants as shown in a recent study by Zorlu and van Gent (2020).

Panel B of Table 5 focuses on the next generation. We regress test scores of the youngest generation (G3) on the income rank of their parents (G2). At the bottom of the income distribution the grandchildren of immigrant lag the grandchildren of natives with 0.3 to 0.4 standard deviations of test scores. This difference in test scores reduces over the income distribution towards 0.2 standard deviations at the top of the income distribution. The social mobility pattern of beat-the-ban migrants is very similar to the pattern for economic migrants. Hence, we find that children of the most successful Surinamese parents have the smallest test score gap with native children. This means that for the second generation mobility is highest at the top of the income distribution and not at the bottom of the income distribution.

These estimates for intergenerational mobility models confirm that the economic outcomes of migrants lag behind those of natives, even after controlling for parental income rank. Interestingly, for the first generation we find that especially at the bottom of the income distribution children of beat-the-ban migrants have a higher social mobility than children of economic migrants. For the second generation we no longer find this difference.

The lower social mobility of migrants compared to natives can also be observed in the estimates of the intergenerational models as specified in Borjas (1995) and Ward (2020). As mentioned above, these models include a parental component (parental income) and a group component (the average income of the group) (see Appendix C). The intuition of these models is that migrant child outcomes might not only be determined by parental characteristics but also by the characteristics of their migrant group. For instance, Borjas (1995) suggests that ethnic capital, defined as the quality of ethnic environment in which children are raised, might be important. The estimates in Table C.1 show that for both groups of migrants the group component is important for child outcomes. This means that the persistence of inequality for migrants is considerable stronger than predicted by a standard intergenerational model including a parental component only. The estimates also reveal that the group component is less important for beat-the-ban migrants than for economic migrants.

In sum, we find that the negative selection of beat-the-ban migrants relative to economic migrants is reflected in the outcomes of the first generation. Beat-the-ban migrants arriving as adults have relatively poor outcomes. However, this negative impact of the self-selection of beat-the-ban migrants is not persistent. Children and grandchildren of beat-the-ban migrants experience upward social mobility and are catching up with natives. We don’t find such a pattern for the positively selected group of economic migrants. The outcomes of children and grandchildren converge at a slower pace towards the outcomes of natives.

6. Why do beat-the-ban migrants have a higher social mobility than economic migrants?

Although beat-the-ban migrants include more negatively selected individuals we find that their social mobility is higher than for positively selected economic migrants. This finding is consistent with the hypothesis that outcomes of negatively selected migrants might not reflect their full economic potential. Abramitzky et al. (2021) document that in the US migrants have higher social mobility than natives. Moreover, they provide suggestive evidence that the income of migrant fathers did not fully reflect their abilities thereby giving their children more room to improve. In the third part of our empirical analysis, we investigate whether this hypothesis can also explain the difference in social mobility between the two types of migrants in our context.

Differences at the time of arrival

The special circumstances of the beat-the-ban migration might have lowered the parental incomes in the same way as for refugees. Typically, refugee migrants are less well prepared for the local labor market in terms of human capital, language, and job skills than economic migrants (Brell, Dustmann and Preston 2020). We start our analysis by investigating to which extent the observed differences at the time of arrival between beat-the-ban migrants and economic migrants can explain the difference in parental income between the two types of migrants forty years later. To this aim we regress the parental income rank on a dummy for the type of migrant while controlling for the observed covariates of migrants upon arrival. The estimation results are shown in Table 6.

The baseline difference in income rank between beat-the-ban migrants and economic migrants controlling for age and gender is 5.2 percentage points, as shown in column (1). The next columns investigate to which extent specific covariates can explain this difference in income rank. We find that age at migration is the most important factor in explaining the income difference between the two groups of migrants. Taking account of the older age at arrival of beat-the-ban migrants reduces the difference in income rank to 1.6 percentage points. The difference in schooling seems less important, but it should be noted that schooling has not been measured for all migrants[25]. A potentially important difference is that beat-the-ban migrants arrived during a mass migration and economic migrants arrived in much smaller groups. As a

[25] The model of column (2) includes a dummy for having a missing value on schooling and the mean value of schooling has been imputed for those with a missing value in schooling (see also the note below Table 6).

result, it can be expected that beat-the-ban migrants encounter more problems with entering the Dutch labor market. Column (6) aims to investigate the importance of the number of migrants arriving together by controlling for a quadratic in the monthly number of migrants. The estimate suggests that this reduces the income difference; including other polynomials of the monthly number of migrants yields similar results. Taking all observed differences into account reduces the difference in income rank to 2.0 percentage points (column (7)). Hence, the observed differences in characteristics of migrants upon their arrival can explain the income difference between the two groups of migrants to a large extent. The parental income of beat-the-ban migrants appears to be hampered most by the fact that they arrived at an older age, and because they arrived with many other migrants at the same time.

Differences in educational opportunities

Beat-the-ban migrants who arrived at an older age probably also experienced more restricted educational opportunities than economic migrants as they mainly originate from rural areas and not from the capital city of Paramaribo. Differences in regional background are associated with differences in opportunities to invest in human capital as 'children born in remote and rural communities face disadvantages in achieving comparable levels of human capital as their peers born in urban areas' (World Bank 2018). These inter-regional disparities in opportunities are linked to past policies and historical inequities (Bobba et al. 2021). The supply of (high quality) schools in remote areas in Suriname is more limited than in the capital city, and the distance to the capital city imposes higher costs of schooling. After World-War II the schooling opportunities expanded and many individuals moved from rural areas towards Paramaribo, where more (high quality) schools were available. A comparison of the trend in schooling of the two migrant streams may provide insight in the importance of a lack of opportunities for the difference in schooling upon arrival in the Netherlands.

The data of migrants arriving as adults enable us to observe trends in schooling in Suriname as most of these migrants have completed their schooling in Suriname. Figure 3 shows the level of schooling by year of birth for economic migrants and beat-the-ban migrants. We observe a very different trend in schooling for the two migrant streams. Beat-the-ban migrant start from much lower levels of schooling but the most recent cohorts attain nearly the same levels of schooling as economic migrants. In particular, cohorts of beat-the-ban migrants born after 1945 achieve a strong catch-up in schooling. This strong catch-up is also reflected in

regression estimates of schooling on birth cohort in column (1) of Table 7. The increase in years of schooling by birth cohort is nearly three times larger for beat-the-ban migrants than for economic migrants.

Column (2) in Table 7 investigates to which extent the income ranks of the two migrant streams are associated with their birth cohorts. We observe that income ranks increase with birth cohort and the increase for beat-the-ban migrants is twice as large as the increase of economic migrants. This suggests that the growth and catch-up in schooling of migrants is reflected in their earnings but not fully. The next column estimates the returns to schooling in terms of income ranks for the two migrant streams. The estimates show that the returns to schooling of beat-the-ban migrants are much lower than the returns to schooling for economic migrants. Hence, migrants who decided to leave their country voluntarily in a period without migration ban obtain higher returns to schooling than migrants who decided to leave against the background of major political changes and fears about ethnic conflicts. This is consistent with findings for refugee migrants (Brell, Dustmann and Preston 2020). Earlier studies about the first years after the mass migration also pointed out various difficulties for beat-the-ban migrants resulting from their rushed migration (Koot et al. 1985; Thon A Ten 1987). Consistent with these time trends we find a stronger convergence of income towards natives for Beat-the-ban migrants with parents born before World War II compared to beat-the-ban migrants born after the WWII (a persistence rate of respectively 0.60 and 0.88)[26].

We now turn to the children of economic and beat-the-ban migrants. Columns (4)-(6) in Table 7 show estimates for this generation of migrants. Again, we observe an increase in schooling by cohort and a stronger increase for children of beat-the-ban migrants. Column (5) shows that younger cohorts of beat-the-ban migrants have higher earnings ranks whereas the earnings ranks of economic migrants don't increase with birth cohort. The final column shows that children of beat-the-ban migrants obtain the same or even higher returns to schooling than the children of economic migrants. These findings show that children of beat-the-ban migrants children keep on climbing the social ladder like their parents already did in Suriname.

In sum, the fast catch-up in schooling and the lower returns to schooling both indicate that the schooling and income of the first generation of beat-the-ban migrants probably does not reflect their full earnings potential. Their schooling level is probably hampered by less

[26] The respective persistence rates for economic migrants are 1.07 for those born before World War II and 1.17 for those born after WWII.

opportunities to invest in human capital due to regional factors. Their returns to schooling might be hampered by moving to a new country without sufficient time to prepare well for the new labor market environment and by arriving at an older age. The finding that immigrants whose opportunities in the home country were more restricted than those of other migrants have better intergenerational outcomes in the host country is consistent with findings in other settings (e.g. Cortes 2004; Collins and Zimran 2019).

7. Conclusions and discussion

The economic integration and assimilation of immigrants has always been a highly debated issue, both in the scientific literature as well as in the political arena. Despite the large literature on integration and assimilation of migrants, very little is known as to how economic inequality of migrants persists over time and over multiple generations. Moreover, little is known on the impact of migrant selection on the persistence of migrant-native outcome gaps. This paper exploits a unique historic episode in Dutch migration history combined with unique data containing multigenerational family links to study economic integration of migrants over multiple generations.

Our study first establishes a negative selection of beat-the-ban migrants relative to economic migrants. Beat-the-ban migrants arrive at an older age, have less schooling, and more often originate from remote areas in Suriname with less affinity to the modern Dutch society. We study to which extent this more negative selection leads to a persistence in inequality over multiple generations.

For the first generation of migrants we find clear differences in economic outcomes. Beat-the-ban migrants arriving as adults have relatively poor outcomes. Economic migrants have better socioeconomic outcomes but also lag behind natives. Hence, the more negative selection of beat-the-ban migrants is reflected in the outcomes of the first generation. However, this negative impact of the self-selection of beat-the-ban migrants is not persistent. We find that the off-spring of the more negatively selected beat-the-ban migrants has a faster catch-up to natives than the off-spring of the economic migrants.

The estimated persistence rate of inequality for beat-the-ban migrants versus natives is 0.6 to 0.7. This implies that each generation reduces the outcome gap with natives with approximately one third. For the economic migrants we find a stronger persistence rate of

inequality. These estimates suggest that economic integration is a gradual process which takes multiple generations which is consistent with the recent findings by Ward (2020). It is also consistent with 'Clark's law of social mobility suggesting that integration is a slow process, taking many hundreds of years for families who are initially far above or below the mean' (Clark 2014, p.212). Our findings in the European context differ from the recent results in Abramitzky et al. (2021) showing that children of immigrants in the U.S. have higher rates of upward mobility than children of the native US-born. Instead, in our context we find that children of natives have a higher social mobility than children of immigrants. This difference probably cannot be attributed to a difference in the composition of the migration flows as we find a lower social mobility for both migrant groups in the Dutch context. A difference in the analysis is that our data enable an intergenerational linking based on actual family links following birth records, whereas Abramitzky et al. (2021) have to rely on best-matches (based on surname and birth date).

The stronger convergence of the negatively selected beat-the-ban migrants relative to economic migrants can be explained by the fact that the schooling and income of the first generation of beat-the-ban migrants probably does not reflect their full earnings potential. We find differences in trends in schooling and in returns to schooling which are consistent with this explanation. The schooling level of beat-the-ban migrants might have been hampered by less opportunities to invest in human capital due to regional factors. Their returns to schooling might have been hampered by moving to a new country without sufficient time to prepare well for the new labor market environment and by arriving at an older age.

In sum, our results show that outcomes of migrants converge towards outcomes of natives. However, this convergence is quite slow and takes multiple generations. Differences between groups of migrants – that is, outcomes of beat-the-ban migrants relative to those of economic migrants – disappear relatively quickly. This has implication for migrant selection. Many countries use various programs to select specific types of migrants for Green cards or permanent residency. These migrant selection schemes based on characteristics upon arrival and aimed at improving migrant economic outcomes work well for the first generation of migrants, but they might miss the full potential of migrants who, due to historical circumstances and past policies, experienced a lack of opportunities to invest in human capital.

References

ABS (1972) The Fourth General Population Cencus, Suriname in Figures No. 60.

Abramitzky, R., L.P. Boustan, and K. Eriksson (2012) Europe's tired, poor, huddled masses: Self-selection and economic outcomes in the Age of mass migration, ***American Economic Review***, 102:5, 1832-1856.

Abramitzky, R., L.P. Boustan, and K. Eriksson (2014) A nation of immigrants: Assimilation and economic outcomes in the Age of mass migration, ***Journal of Political Economy***, 122:3, 467-717.

Abramitzky, R. and L. Boustan (2017) Immigration in American Economic History, ***Journal of Economic Literature***, 55 (December), 1311-1345.

Abramitzky, R., L. Boustan and K. Eriksson (2020) Do immigrants assimilate more slowly today than in the past?, ***American Economic Review: Insights***, 2 (March), 125-141.

Abramitzky, R., L.P. Boustan, E. Jacome, and S. Perez (2021) Intergenerational mobility of immigrants in the US over two centuries, ***American Economic Review, 111(2), 580-608***.

Alba, R., A. Lutz, and E. Vesselinov (2001) How Enduring Were the Inequalities among European Immigrant Groups in the United States?, ***Demography,*** 38 (3): 349–56.

Bauer, T., G. Epstein and I. Gang (2005) Enclaves, language, and the location choice of migrants, ***Journal of Population Economics***, 18(4), 649-662.

Bauer, T.K., S. Braun, and M. Kvasnicka (2013) The economic integration of forced migrants: evidence from post-war Germany, ***Economic Journal***, 123 (September), 998-1024.

Becker, Gary S. (1960) ***An economic analysis of fertility***. Demographic and economic change in developed countries. Princeton: Princeton University Press.

Becker, S.O. & A. Ferrara (2019) Consequences of forced migration: A survey of recent findings, ***Labour Economics***, 59, 1-16.

Becker, G.S. & N. Tomes (1986) Human Capital and the Rise and Fall of Families, ***Journal of Labor Economics***, 4 (3), S1-S39.

Becker, S.O., I. Grosfeld, P. Grosjean, N. Voigtlaender and E. Zhuravskaya (2020) Forced Migration and Human Capital: Evidence from Post-WWII Population Transfers, ***American Economic Review***, 110 (May), 1430-1463.

Becker, S.O., L. Mergele and L. Woessmann (2020) The separation and reunification of Germany: Rethinking a natural experiment interpretation of the enduring effects of communism, ***Journal of Economic Perspectives***, 34(2), 143-171.

Bobba, M. Ederer, T., Leon-Ciliotta, G., Nielson, C.A., Nieddu, M. (2021) Teacher Compensation and Structural Inequality: Evidence from Centralized Teacher School Choice in Peru, NBER working paper no. 29068.

Borjas, G.J. (1987) Self-Selection and the Earnings of Immigrants, ***American Economic Review***, 77(4), 531-553

Borjas, G.J. (1991) Immigration and Self-Selection, in ***Immigration, Trade, and the Labor Market***, edited by John M. Abowed and Richard B. Freeman, University of Chicago Press, 1991.

Borjas, G.J. (1992) Ethnic Capital and Intergenerational Mobility, ***Quarterly Journal of Economics***, 107 (1): 123–50.

Borjas, G.J. (1993) The intergenerational mobility of immigrants, ***Journal of Labor Economics***, 11 (1): 113-134.

Borjas, G.J. (1999) The economic analysis of immigration, in ***Handbook of Labor Economics***, vol 3A, O. Ashenfelter and D. Card (eds.), Elsevier, North-Holland.

Borjas, G.J. (2000) ***Economics of migration***, International Encyclopedia of the Social and Behavioral Sciences Section No. 3.4, Article No. 38

Borjas, G.J. (2001) Long-Run Convergence of Ethnic Skill Differentials, Revisited, ***Demography*** 38 (3): 357–61.

Borjas, G.J. (1994) Long-Run Convergence of Ethnic Skill Differentials: The Children and Grandchildren of the Great Immigration, ***Industrial and Labor Relations Review***, 47 (4): 553–73.

Borjas, G.J. (1995) Ethnicity, Neighborhoods, and Human-Capital Externalities, ***American Economic Review***, 85 (3): 365–90.

Bovenkerk, F. (1973) ***Terug naar Suriname? – Over de opnamecapaciteit van de Surinaamse arbeidsmarkt voor Surinaamse retourmigratie uit Nederland***, Amsterdam.

Bovenkerk, F. (1976) ***Wie gaat er terug naar Suriname? Een onderzoek naar de retourmigratie van Surinamers uit Nederland 1972-1973***, Amsterdam.

Bovenkerk, F. (1983) Retourmigratie van Surinamers en Antillianen uit Nederland, in: Ph.J. Muus, R. Penninx e.a., ***Retourmigratie van Mediterranen, Surinamers en Antillianen uit Nederland***, Onderzoek in opdracht van het Ministerie van Sociale Zaken en Werkgelegenheid.

Brell, C., Dustmann, C. and Preston, I. (2020) The labor market integration of refugee migrants in high-income countries, Journal of Economic Perspectives, 34 (1): 94-121.

Bröer, C. (1997) Leven met twee landen – De veranderde sociale positie van Surinaamse remigranten, ***Amsterdams Sociologisch Tijdschrift***, 23 (4), 608-639.

Buddingh, H. (2012) ***De geschiedenis van Suriname***, Uitgeverij Rainbow bv., Amsterdam

Carrington, W.J., E. Detragiache and T. Vishwanath (1996) Migration with endogenous costs, ***American Economic Review***, 86 (4), 909-930.

CBS – The Netherlands Bureau of Statistics (1984) ***Maandstatistiek van de bevolking*** 1984, editie December.

CBS – The Netherlands Bureau of Statistics (2011) De maatschappelijke situatie van Surinaamse bevolkingsgroepen in Nederland, ***Bevolkingstrends***, 4^{e} kwartaal 2011.

Chetty, R., Hendren, N., Jones, M.R., & Porter, S.R. (2020). Race and economic opportunity in the United States: an intergenerational perspective. *The Quarterly Journal of Economics, 135*(2), 711–783.

Chin, H.E. and H. Buddingh (1987) ***Suriname: Politics, Economics and Society***, London and New York, France Pinter.

Chiswick, B. (1978) The effect of Americanization on the earnings of foreign-born men, ***Journal of Political Economy***, 86(5), 897-921.

Clark, G. (2014) The Son Also Rises: Surnames and the History of Social Mobility, Princeton, NJ: Princeton University Press.

Clarke, A., A. Ferrer and M. Skuterud (2019) A comparative analysis of the labor market performance of university-educated immigrants in Australia, Canada, and the United States: Does policy matter?, ***Journal of Labor Economics***, 37 (S2), S443-S490.

Collins, W.J. and A. Zimran (2019) The economic assimilation of Irish Famine migrants to the United States, ***Explorations in Economic History***, 74, 101302.

Dew, E. (1978), ***The difficult flowering of Suriname: ethnicity and politics in a plural society***, The Hague, Martinus Nijhoff.

Dustmann, C., F. Fasani, T. Frattini, L. Minale and U. Schönberg (2017) On the economics and politics of refugee migration, ***Economic Policy***, 32 (91), 497-550.

Feliciano, C**. (**2005) Educational Selectivity in U.S. Immigration: How Do Immigrants Compare to Those Left Behind?, ***Demography*** 42 (1): 131–52.

Grogger, J. and G.H. Hanson (2011) Income maximization and the selection and sorting of international migrants, ***Journal of Development Economics***, 95, 42-57.

Hanushek, E.A., B. Jacobs, G. Schwerdt, R. van der Velden, S. Vermeulen, and S. Wiederhold (2021), The Intergenerational Transmission of Cognitive Skills: An Investigation of the Causal Impact of Families on Student Outcomes, working paper.

Furnivall, J.S. (1939), ***Netherlands India, A study of plural economy***, Cambridge University Press, London.

Kerr, S.P. and W.R. Kerr (2011), ***Economic impact of immigration: a survey***, Harvard Business School, working paper 09-013.

Koot, W., V. Tjon-A-Ten, and P. Uniken Venema (1985), ***Surinaamse Kinderen op School***, Coutinho, Muiderberg.

Lamur, R. (1973), ***The demographic evolution of Suriname 1920-1970: A socio-demographic analysis***. PHD in Social Sciences, University of Amsterdam

Lucassen, L.A.C.J. and J. Lucassen (2011) ***Winnaars en Verliezers. Een nuchtere balans van vijfhonderd jaar immigratie***. Bert Bakker, Amsterdam.

Ministerie van Arbeid (1993), ***Arbeidsmarkt Informatie. Publikatie van de meest relevante informatie van de Arbeidsmarktsituatie in Suriname***, Paramaribo.

Martens, E.P., T. Roelandt and J. Veenman (1992) ***Ethnic minorities in the Netherland*** (Minderheden in Nederland), Erasmus University Rotterdan, Institute for Sociological Economic Research

McKenzie, D. and H. Rapoport (2010) self-selection patterns in Mexico-US migration: The role of migration networks, ***The Review of Economics and Statistics***, 92(4), 811-821.

Nakamura, E., J. Sigurdsson and J. Steinsson (2020), The Gift of Moving: Intergenerational Consequences of a Mobility Shock, ***Review of Economic Studies****, forthcoming.*

Oostindie, G. (2008), Migration and its legacies in the Dutch colonial world, **Dutch Colonialism, Migration and Cultural Heritage, G. Oostindie, Leiden, KITLV Press.**

Peach, C. (1968), ***West Indian Migration to Britain: A Social Geography***, Lomdon, Oxford Press.

Pennix, R. (1979), ***Etnische minderheden***, Staatsuitgheverij, 's-Gravenhage.

Reubsaet, T.J.M., J.R. Kropman and L.M. van Mullier (1982) ***Surinaamse migranten in Nederland***. Nijmegen: ITS.

Sarvimäki, M., R. Uusitalo, M. Jäntti (2020), Habit Formation and the Misallocation of Labor: Evidence from Forced Migrations, working paper

SER (1991), ***Advies remigratie***, Den Haag.

Sjaastad (1962), The Costs and Returns of Human Migration, **Journal of Political Economy,** 70 (5), 80-93.

Tjon a Ten, V. (1987) ***Creoolse en Hindoestaanse kinderen in het Nederlandse lager onderwijs: een studie naar de problemen van Surinaamse kinderen van creoolse en hindoestaanse origine in het Nederlandse lager onderwijs***, PhD Thesis Utrecht University. Utrecht.

Van Amersfoort, H. (2011) How the Dutch government stimulated the unwanted immigration from Suriname, ***DEMIG project paper*** 10, IMI, University of Oxford.

Van Lier, R. (1950), ***Ontwikkeling en karakter van de Westindische maatschappij***, Den Haag, inaugural lecture.

Van Niekerk, M. (2002), ***Premigration legacies and immigrant social mobility, The Afro-Surinamese and Indo-Surinamese in the Netherlands***, Lanham: Lexington Books.

Van Niekerk, M. (2005), ***Suriname Country Study***, A part of the report on Informal Remittance Systems in Africa, Caribbean and Pacific (ACP) countries, P.a.S.C. ESRC Centre on Migration, Oxford, ESRC, Centre on Migration, Policy and Society (COMPAS).

Vezzoli, S. (2015) ***Borders, independence and post-colonial ties: The role of the state in Caribbean migration***, PhD Thesis, Maastricht University, Maastricht.

Ward, Z. (2020), The not-so-hot melting pot: The persistence of outcomes for descendants of the age of mass migration, ***American Economic Journal: Applied Economics***, 12 (4): 73-102.

World Bank (2018), World Development Report 2018 : Learning to Realize Education's Promise, Technical Report, Washington, DC: World Bank 2018.

Zorlu, A. and W. van Gent (2020), Economic Assimilation of the "Third Generation": An Intergenerational Mobility Perspective on Immigration and Integration, ***IZA Discussion Paper Series***, no. 13855, IZA Bonn.

Table 1. Summary statistics of three generations of immigrants arriving in the period 1965-1975 and natives (10 % of population)

	Adults (G1)			**Children (G2)**			**Grandchildren (G3)**		
	Economic	Beat-the-ban	Natives	Economic	Beat-the-ban	Natives	Economic	Beat-the-ban	Natives
Observations	5,937	7,515	452,997	16,058	20,191	606,909	32,211	35,634	1,092,052
Female	63.2	61.5	55.5	52.0	51.1	49.0	49.2	48.7	48.9
	(48.3)	(48.7)	(49.7)	(50.0)	(50.0)	(50.0)	(50.0)	(50.0)	(50.0)
Age in 1999	55.2	53.1	56.7	37.3	33.3	37.6			
	(5.0)	(5.8)	(4.8)	(5.7)	(5.2)	(7.9)			
Age at arrival/ at test	27.2	29.0		9.1	9.2		12.00	12.01	11.95
	(5.0)	(6.1)		(5.2)	(5.1)		(0.47)	(0.48)	(0.46)
Family size at arrival	2.4	3.3		3.3	4.2				
	(1.5)	(1.9)		(1.9)	(2.1)				
Born in Paramaribo	50.6	32.9		73.2	66.7				
(% dummy 1 if yes)	(50.0)	(46.9)		(44.2)	(47.1)				
Creool	52.5	24.6		55.8	24.5				
(% dummy 1 if yes)	(50.0)	(43.1)		(49.7)	(43.0)				
Hindustani	33.1	61.9		30.6	62.5				
(% dummy 1 if yes)	(47.1)	(45.6)		(46.1)	(48.4)				
Schooling	10.1	8.1	9.7	10.9	10.6	11.4			
(years of education)	(3.8)	(4.5)	(3.3)	(3.5)	(3.3)	(3.5)			
Income rank 2003	46.0	39.6	51.9	47.5	43.8	53.4			
(scale 0-100)	(26.3)	(25.7)	(28.8)	(27.9)	(26.3)	(28.3)			
Test score							534.3	533.1	536.9
(500-550)							(9.7)	(9.5)	(8.8)
Social Benefit 1999	51.7	52.6	28.5	33.2	34.0	15.2			
(% dummy 1 if yes)	(50.0)	(49.9)	(45.1)	(47.1)	(47.3)	(35.9)			
Employment 1999	45.3	45.6	38.3	75.8	77.5	79.0			
(% dummy 1 if yes)	(49.8)	(49.8)	(48.6)	(42.8)	(41.8)	(40.7)			

Note: G1-Sample includes all adults up to age 65 in 1999. Standard deviations in brackets. The number of observations reflect the total number of individuals observed in the administrative data. For specific variables, such as schooling, the number of observations is smaller due to missing values.

Table 2 Schooling, ethnicity and place of origin of adult Surinamese non-migrants and migrants to the Netherlands 1965-1975

	Years of Schooling	Creole Ethnicity (%)	From Paramaribo (%)
	(1)	(2)	(3)
Non-migrants in Surinam	6.5	20.9	27.1
	(2.4)	(0.41)	NA
Economic migrants (Arrived since 1965 and before Feb. 1974)	10.0	54.1	48.6
	(3.9)	(49.8)	(50.0)
Beat-the-ban migrants (Arrived between Feb 1974 and Nov 1975)	7.9	25.2	31.6
	(4.7)	(43.4)	(46.5)
Beat-the-ban migrants (Final three months)	6.6	21.9	26.4
	(4.8)	(41.4)	(44.1)

Note: Each column shows the means and standard deviations of the column variable by group of (non-)migrants. The data on non-migrants are obtained from the Surinamese Census. Years of schooling and ethnicity data of non-migrants come from IPUMs microdata based on the Census of 2004 and 2012. The means and standard deviations are calculated for individuals who were 18 years or older in 1974. The data on the place of origin is obtained from the report of the Surinamese Census of 1972. For the migrants from Surinam we use administrative data about individuals who arrived in the Netherlands at age 18 or older. Column (3) is based on data about their place of birth. Statistics on migrants slightly differ from Table 1 due to the age restriction used in Table 1.

Table 3. Regression estimates of differences between economic and beat-the-ban adult migrants 1965-1975

	Years of Schooling	Age at migration	Family size (mother)	Born in Paramaribo	Creole ethnicity	Age having first child	Schooling birth district
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
A. Difference in means							
Beat-the-ban migrants (all)	-2.172	1.445	0.680	-0.172	-0.290	-0.815	-0.986
	(0.267)***	(0.138)***	(0.031)***	(0.007)***	(0.009)***	(0.080)***	(0.027)***
Beat-the-ban migrants (final three months)	-3.410	2.023	0.897	-0.222	-0.322	-0.675	-1.109
	(0.361)***	(0.182)***	(0.041)***	(0.010)***	(0.116)***	(0.107)***	(0.036)***
Constant (= Economic migrants)	10.012	31.645	2.242	0.486	0.541	21.521	8.650
	(0.190)***	(0.101)***	(0.023)***	(0.005)***	(0.007)***	(0.059)***	(0.020)***
B. Difference in time trend							
Beat-the-ban	-1.537	2.161	0.722	-0.172	-0.157	0.45	-0.508
	(0.532)***	(0.277)***	(0.062)***	(0.014)***	(0.018)***	(2.83)***	(0.055)***
Time to ban	-0.030	0.002	0.003	-0.001	-0.003	-0.02	-0.010
	(0.007)***	(0.004)	(0.001)***	(0.000)***	(0.000)***	(9.29)***	(0.001)***
Beat-the-ban * Time to ban	-0.109	0.108	0.027	-0.007	-0.003	0.04	-0.010
	(0.030)***	(0.016)***	(0.004)***	(0.001)***	(0.001)***	(4.13)***	(0.003)***
N	1,029	17,951	11,023	17,909	11,136	11,044	17,951

Note: Each column regresses a migrant characteristic on a dummy for migrating between the announcement date and the Independence date. Column (7) uses the predicted schooling level based on an individual's birth district as dependent variable. The models in the bottom panel also control for time to ban and the interaction of time to ban with the Beat-the-ban dummy as specified in Equation (1). The sample consists of all Surinamese migrants arriving at age 18 or older during 1965-1975. Standard errors in brackets.

***p<.01 **p<.05, *p<.10

Table 4. Immigrant-native outcome gap over three generations

	Years of schooling	Income rank	Social benefit	Employment
A. Adult outcomes (G1)				
Economic migrants	0.653	-0.084	0.242	0.041
	(0.145)***	(0.004)***	(0.006)***	(0.006)***
Beat-the-ban-migrants	-1.703	-0.125	0.238	-0.004
	(0.144)***	(0.003)***	(0.005)***	(0.005)
Observations	58,149	324,635	341,782	341,782
B. Child outcomes (G2)				
Economic migrants	-0.529	-0.071	0.140	0.005
	(0.043)***	(0.004)***	(0.004)***	(0.007)
Beat-the-ban migrants	-1.102	-0.086	0.148	0.004
	(0.035)***	(0.002)***	(0.003)***	(0.005)
Observations	236,473	204,122	208,327	208,327
	Test score	Age at test		
C. Grandchildren (G3)				
Economic migrants	-0.280	0.016		
	(0.015)***	(0.003)***		
Beat-the-ban migrants	-0.367	0.015		
	(0.011)***	(0.003)***		
Observations	237,985	237,985		

Notes: Each panel shows regression estimates of outcomes on a dummy for being a economic or beat-the-ban adult, child or grandchild migrant controlling for (a cubic in) age, gender. Test scores measured in standard deviations. Standard errors in parenthesis. The income rank in panel A is based on income in 2003-2005, like in the intergenerational models. The income rank in panel B is based on all available years.

***p<.01 **p<.05, *p<.10

Table 5. Intergenerational mobility estimates for natives, economic migrants and beat-the-ban migrants

A: G1-G2 mobility		Dependent variable: Income rank of child (G2) in 2016		
		Economic migrants	Beat-the-ban migrants	
		(1)	(2)	(3)
Parental income rank (G1)			All	1-3 months
Intercept (absolute mobility)	Natives	0.439	0.439	0.439
		(0.001)***	(0.001)***	(0.001)***
	Difference Natives - Migrants	-0.069	-0.039	-0.027
		(0.010)***	(0.006)***	(0.010)***
Slope (relative mobility)	Natives	0.229	0.229	0.229
		(0.003)***	(0.003)***	(0.003)***
	Difference Natives - Migrants	-0.012	-0.088	-0.123
		(0.021)	(0.015)***	(0.024)***
Observations		184,879	189,581	184,672
B: G2-G3 mobility		Dependent variable: Test score of grandchild (G3) at age 12		
		Economic migrants	Beat-the-ban migrants	
Child income rank (G2)			All	1-3 months
Intercept (absolute mobility)	Natives	532.412	532.412	532.412
		(0.046)***	(0.046)***	(0.046)***
	Difference Natives - Migrants	-3.204	-3.663	-3.716
		(0.276)***	(0.223)***	(0.355)***
Slope (relative mobility)	Natives	7.890	7.890	7.890
		(0.072)***	(0.072)***	(0.072)***
	Difference Natives - Migrants	1.187	1.247	1.244
		(0.460)***	(0.410)***	(0.663)*
Observations		224,955	227,747	222,731

Note: This tables shows estimates of the slope and intercept from regressions of child outcomes (G2) on parents outcomes (G1) (top panel) or grandchild outcomes (G3) on child outcomes (G2) (bottom panel). Child income rank in 2016 of individuals age 20-50 is regressed on parental income rank 2003-2005. Grandchild test score measured in points (500-550) are regressed on child income rank (G2). ***p<.01 **p<.05, *p<.10

Table 6. Regressions of income rank on being a beat-the-ban migrant with additional controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Beat-the-ban migrants	-0.052	-0.048	-0.016	-0.051	-0.044	-0.044	-0.020
	(0.005)***	(0.005)***	(0.007)***	(0.005)***	(0.005)***	(0.009)***	(0.009)***
Observations	10,643	10,643	10,643	10,642	10,643	10,643	10,642
Controls							
No	X						
Schooling		X					X
Age at migration			X				X
Born in Paramaribo				X			X
Ethnicity					X		X
Number of migrants in month of arrival						X	X

Note: The sample consists of adult migrants only (G1). Each column regresses income rank on a dummy for being a beat-the-ban migrant controlling for (a cubic in) age, gender. Columns (2) to (7) include additional controls as indicated in the bottom panel. Column (2) also include a dummy for having a missing value in schooling and the mean value of schooling has been imputed for those with a missing value in schooling. Column (6) controls for a quadratic of the number of migrants arriving in the same month. The covariates 'age having first child' and 'family size' from Table 3 are not included as the analysis focuses on the total sample of males and females, and not on females only. Standard errors in brackets. ***p<.01 **p<.05, *p<.10

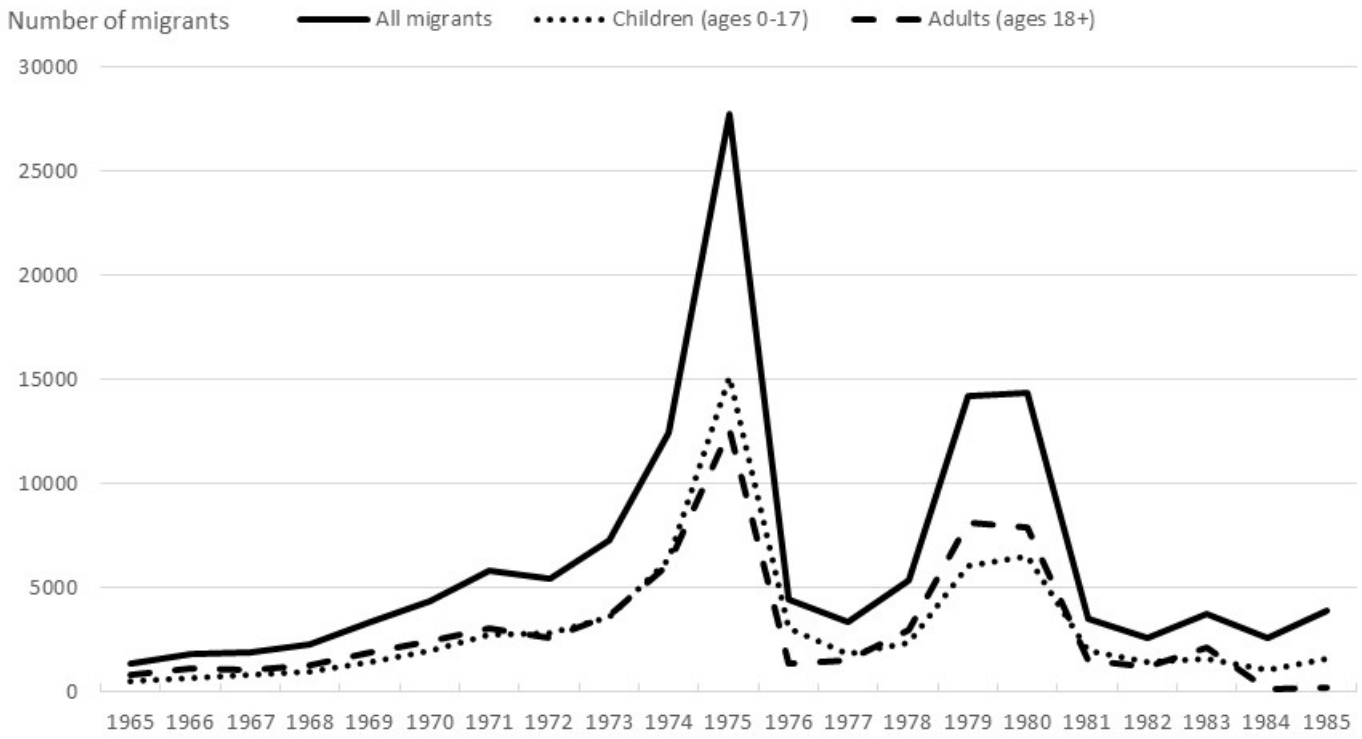
Table 7. Trends in schooling, income rank and returns to schooling for parents and children

	Parents (G1)			Children (G2)		
	Schooling	Income Rank	Income Rank	Schooling	Income Rank	Income Rank
	(1)	(2)	(3)	(4)	(5)	(6)
Year of birth (YoB)	0.097	0.002	0.004	0.080	0.000	-0.002
	(0.032)***	(0.000)***	(0.000)***	(0.009)***	(0.001)	(0.000)***
Beat-the-ban * YoB	0.166	0.002		0.048	0.003	
	(0.044)***	(0.001)***		(0.011)***	(0.001)***	
Schooling (S)			0.026			0.029
			(0.003)***			(0.001)***
Beat-the-ban * S			-0.010			0.004
			(0.004)**			(0.001)***
Observations	734	11,110	11,110	14,418	14,196	14,196

Note: Columns (1), (2), (4) and (5) regress schooling or income rank on year of birth, a dummy for beat-the-ban migrant and the interaction of these two variables. Columns (3) and (5) regress income rank on schooling, a dummy for beat-the-ban migrant and the interaction. Column (3) also includes a dummy for missing values on schooling and missing values in schooling have been imputed with the mean value. ***p<.01 **p<.05, *p<.10

Figures

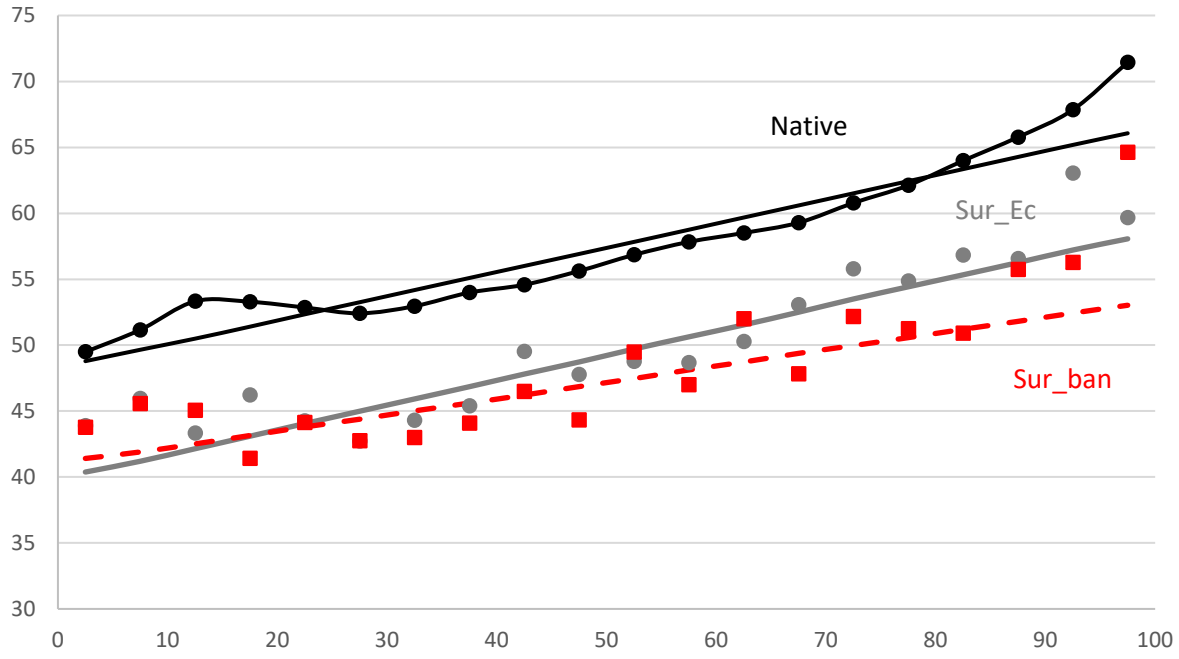
Figure 1.Migration from Suriname to the Netherlands by year of arrival 1965-1985



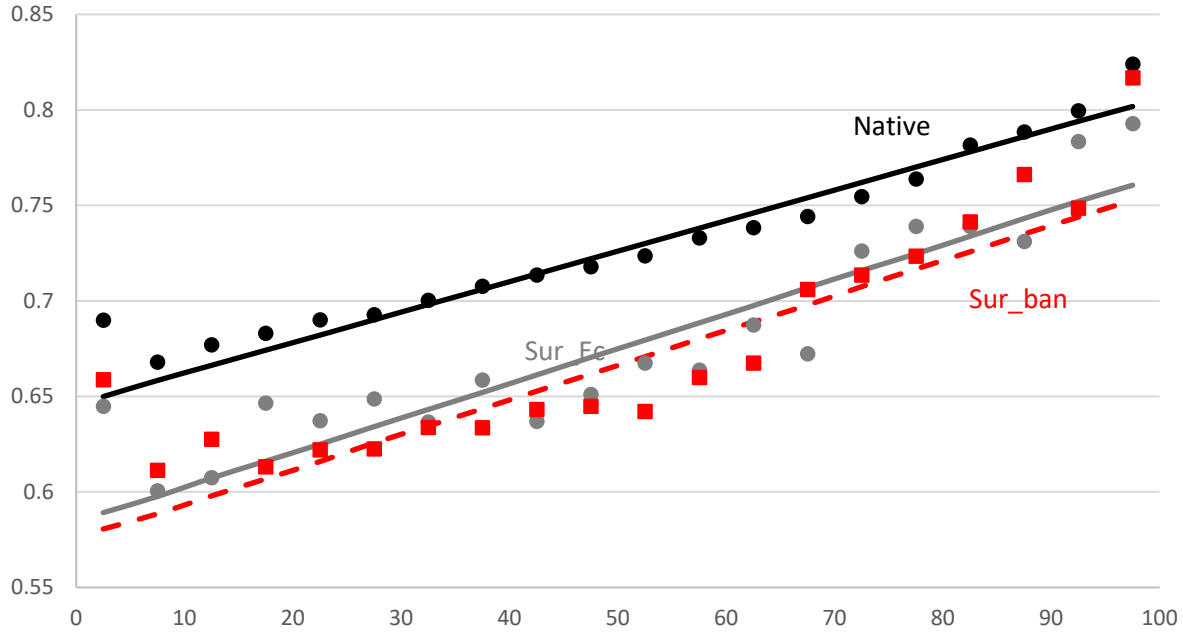
Notes: Based on administrative data from Statistics Netherlands (authors calculations).

Figure 2. Intergenerational mobility

A. Income rank (G1) – income rank (G2)

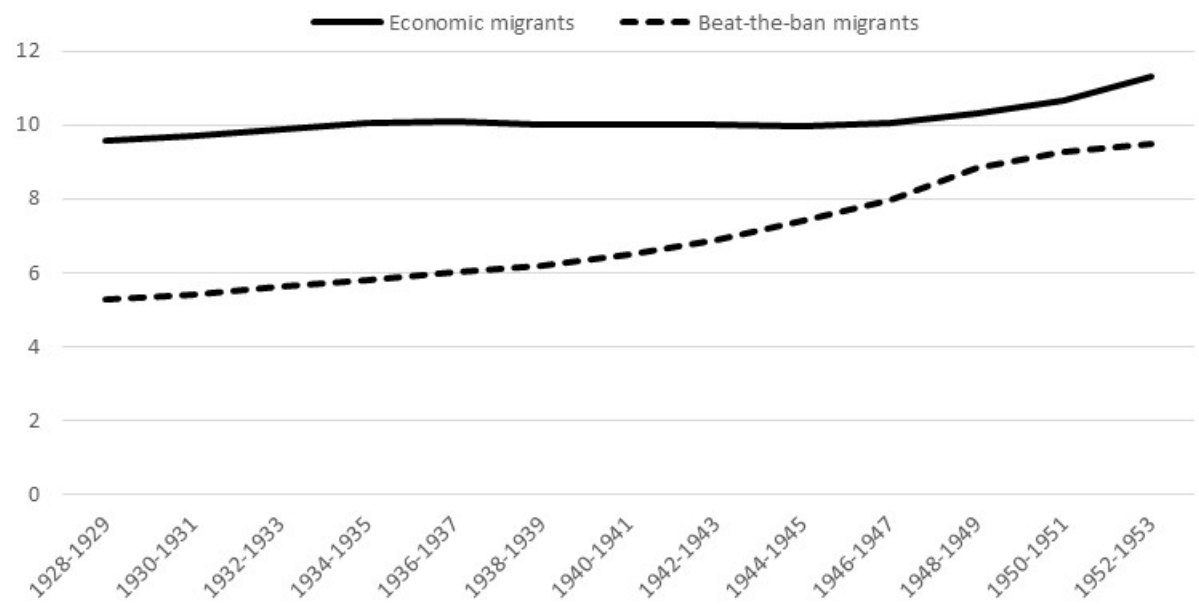


B. Income rank (G2) – Test score (standardized) (G3)



Notes: Income rank (A) and standardized test score (B) (y-axis) by income rank (x-axis).

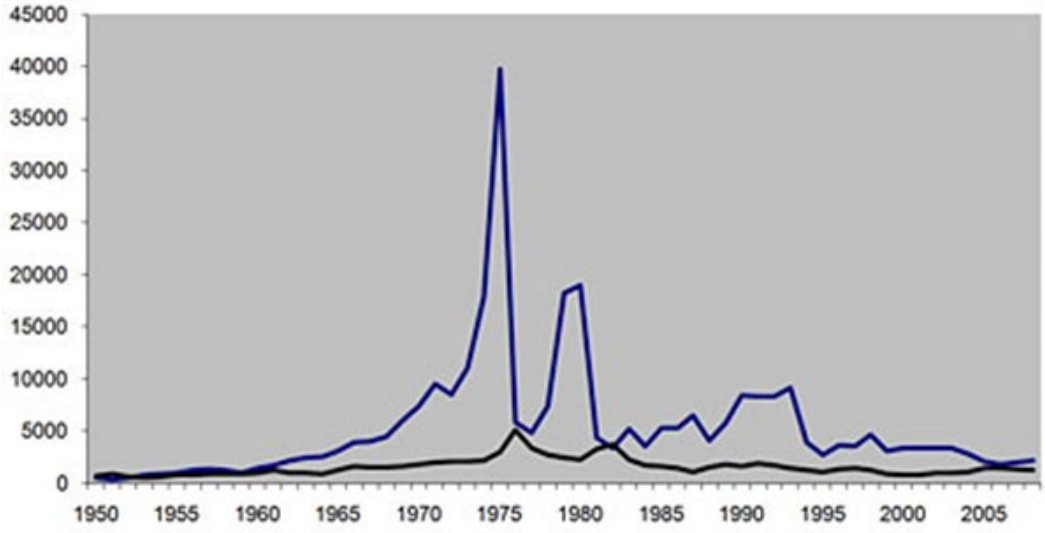
Figure 3. Trends in years of schooling of adult migrants in Suriname



Notes: Average years of schooling (y-axis) by birth cohort (x-axis).

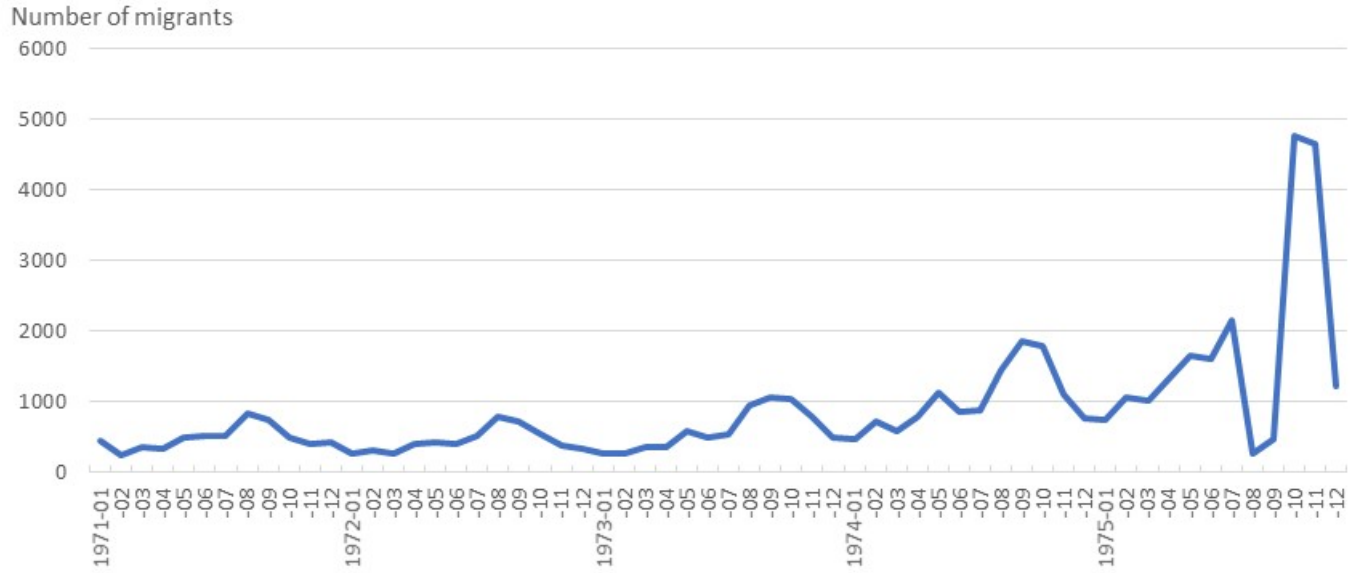
Appendix A: Supplementary Tables and Figures

Figure A.1 Migration from Suriname to the Netherlands since 1950



Notes: Figure obtained from Lucassen & Lucassen (2011)

Figure A.2 Migration from Suriname to the Netherlands in 1971-1975 by month



Notes: Data from Statistics Netherlands

Appendix B: Return migration

I. The size of return migration flows

Various surveys that were held since the independence indicate that about 40-50 percent of all Surinamese in the Netherlands would like to go back to their country of origin (Bovenkerk, 1976; SER, 1991). However, despite this 'remigration ideology' (Bovenkerk, 1976), only few Surinamese returned to Suriname; most of them remain in the Netherlands (Bovenkerk, 1983).[27] In the period 1967-1971 only 1 in every 5 Surinamese immigrants remigrated, which amounts to an annual remigration of 4-5 percent of all Surinamese in the Netherlands (Bovenkerk, 1973, 1976). Although many Surinamese faced problems with finding employment and housing, and experienced discrimination while in the Netherlands, the high level of welfare and social security, as well as the possibilities for further training, are important factors that kept Surinamese migrants in the Netherlands (Bovenkerk, 1976). This pattern of limited return migration remained until the Independence, after which remigration increased. In particular, the years immediately after the peak years display elevated levels of return migration. However, it is only the absolute number of remigrating Surinamese that peaks shortly after independence. As the group of Surinamese in the Netherlands has increased substantially in the period 1975-1980, the remigration *rate* is fairly constant over this period (Bovenkerk, 1983).

The increase in the absolute amount of return migration around 1975-1980 is probably related to the financial arrangements that were in place in the Netherlands in the first years after the independence. These programs aimed to stimulate return migration by providing financial support for those who would go back to Suriname, provided that they could show to be economically independent when back in Suriname. The program would cover the costs of a return flight, as well as for a certain amount of freight to be shipped to Suriname (e.g. furniture). In addition, everyone would receive 1,000 Dutch guilders upon arrival in Suriname. These arrangements were terminated in 1994 as it turned out that about half of the people who benefited from these arrangements returned back to the Netherlands after some years (Bovenkerk 1983). Return migrants temporarily rented out their houses and made arrangements

[27] Bovenkerk (1983) argues that the high willingness to remigrate (as expressed in various surveys) should not be interpreted as a predictor for actual remigration. Rather, it should be seen as a way to express the solidarity people still have with Suriname and Surinamese matters. In addition, by expressing the willingness to return, Surinamese stress the 'temporary' aspect of their migration, which makes it easier to cope with disappointments on various aspects (e.g. difficulties finding work, experiencing discrimination, etc.) following the move.

with their employer about possibilities to resume their job in due course (Bröer, 1997). Hence, remigrants had the opportunity to change their mind and come back to the Netherlands, and many of them did.

Return migration often turned out to be temporary because the position of return migrants in post-Independence Suriname was not very favorable. In the 1960s return migrants would automatically be able to obtain a top position in either a government organization or a business firm (Bovenkerk, 1983), but this changed after the independence. The number of jobs decreased, first in business firms and after 1987 also in government organizations (Ministerie van Arbeid, 1993). At the same time, the labor force grew and unemployment increased, up to 40 percent in the 1980s and 1990s. As a result, return migrants no longer ended up in top positions. Only for those re-migrants in possession of specific training that was not available in Suriname (e.g. economists, specialized nurses), the labor market was still open and offered good employment prospects.

Furthermore, Surinamese who spent time in the Netherlands were stigmatized and considered as being alienated from the Surinamese labor conditions (Bovenkerk, 1973). The Surinamese labor market is relatively small, and not very specialized nor differentiated compared to the Dutch labor market. As the job tasks (and hence requirements) in Suriname were broader, someone with a Dutch education degree was often considered not suitable for the job as his/her training and skills were too specific. Furthermore, return migrants held different attitudes towards the (hierarchical) employer-employee relationship. Where Surinamese would obey their superior, those returning from the Netherlands would not hesitate to openly question their superior leading to conflictuous situations. All of these issues made it difficult for remigrants to feel ‘at home’ once back in Suriname (Bovenkerk, 1983).

Overall, the low proportions of return migrants, combined with the fact that almost half of them returned back to the Netherlands in due course, indicate that our data consisting of Surinamese migrants who were still in the Netherlands as of 1995 comprises the vast majority of Surinamese migrants.

II. The composition of return migration flows

Another relevant aspect of return migration is whether certain individuals were more likely to remigrate than others, and whether patterns in return migration change around the independence.

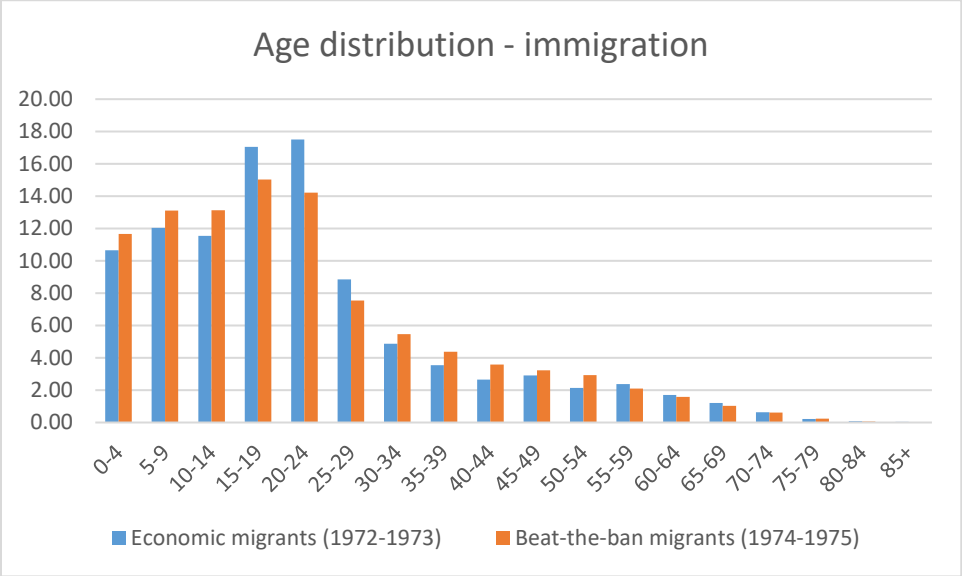
Gender. Remigration flows consist of slightly more males than females (Bovenkerk, 1983; CBS, 1984), but these gender patterns have been fairly stable over time (CBS, 1984).

Ethnicity. With regard to ethnicity, the composition of return migrants had an overrepresentation of Creoles. About 61 percent of all return migrants had a Creole background, whereas the population of Surinamese in the Netherlands consisted only out of 39 percent Creoles (Bovenkerk, 1983). This may be related with the Creole dominated political arena after the independence. Hindustani made up 30 percent of all return migrants, 3.4 percent had a Javanese background, and the final 6 percent consisted out of people with another ethnic background.

Age. Figure B.1. below describes the age distribution in the immigration flows in the years prior to the announcement of Independence (1972-1973), and in the years around Independence (1974-1975). On average, young individuals are more likely to migrate, but the patterns differ across the various periods. Where economic migration (1972-1973) is characterized by a large share of 15-24 year olds who come to the Netherlands to complete their education, we observe that after the call for Independence migration flows consisted out of relatively more young children (aged 0-14) and more adults over age 30.

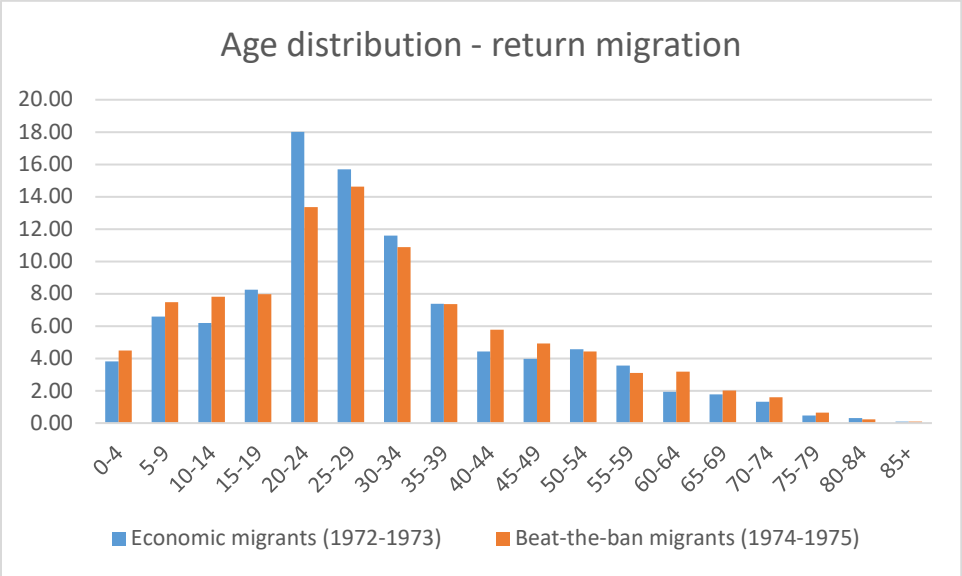
When considering the age profile of return migrants (Figure B.2.), we observe similar age patterns. In pre-announcement years, return migrants were mostly 20-29 year olds who completed their education in the Netherlands. Immediately after the announcement, we find that return migration consists out of relatively more young children and of more adults. Hence, although the age composition of return migrants was different in the years before and after the announcement, these differences merely reflect age differences in the inflow of migrants. This suggests that for a given stock of immigrants, there is no selection in the return probability with regard to age.

Figure B.1.: Age distribution in Surinamese immigration



Source: CBS (1984), Maandstatistiek van de bevolking 1984, editie December.

Figure B.2.: Age distribution in Surinamese return migration



Source: CBS (1984), Maandstatistiek van de bevolking 1984, editie December.

Socio-economic status. Return migrants were relatively low educated. About 36 percent of those who had remigrated by 1981 had completed only primary education; another 32 percent had completed a lower or intermediate vocational degree (Bovenkerk, 1983). Relatedly, over 60 percent of all return migrants was working in a low educated occupation. In addition, being unable to find a job (i.e. unemployed) in the Netherlands seems to be an important driver for returning to Suriname.

In sum, it appears that the demographic composition of return migrants reflects the composition of the stock of Surinamese in the Netherlands. This suggest that our sample of Surinamese migrants who were still in the Netherlands as of 1995 is quite representative to the complete group of Surinamese migrants who arrived in the Netherlands around Independence. In terms of the 'quality' of migrants, return migration is somewhat negatively selected as high educated working immigrants are more likely to remain in the Netherlands. However, many low educated return migrants eventually return back to the Netherlands eventually (Bovenkerk, 1983).

Appendix C: Estimates of the persistence rate of inequality

To obtain further insight in the persistence of inequality between natives and immigrant groups we estimate an additional specification which includes the average income ranks by group as in Borjas (1995) and Ward (2020):

$$Y_i^G = \delta_0 + \delta_1 Y_i^{G-1} + \delta_2 \bar{Y}_i^{G-1} + \varepsilon_i \qquad (4)$$

with $\bar{Y}_i^{G-1}$ is the average parental income rank of natives or migrant groups (beat-the-ban migrants or economic migrants). We label this variable as the group mean which seems in our application more suitable than the label 'ethnic mean' used in Ward (2020). This specification shows to which extend the social mobility of natives differs from the standard intergenerational models which regress child outcomes on parental outcomes. The estimate of the parameter (δ_2) can be interpreted as the impact of the group mean on the expected income rank. If the group mean, conditional on the parental income rank, has a positive association with the expected income rank then the persistence of group differentials is stronger than the persistence between parents and children from a standard intergenerational model. In addition, it enables us to capture the social mobility of immigrants compared to natives in one measure. The sum of the two parameters ($\delta_1 + \delta_2$) measures the persistence of group differences (Borjas 1995; Ward 2020). Group differences persist or increase if this sum equals one or is larger than one. Group differences reduce over generations if this sum is smaller than one. We label this sum as the persistence rate of inequality, as in Clark (2014)[28]. In our application we do not compare differences between immigrant groups only, but we focus on the difference between natives and the two groups of immigrants. Table C.1 shows the estimated effects for natives and economic migrants (columns (1) and (2)), and for natives and beat-the-ban migrants (columns (3) and (4)).

We find a striking difference in the persistence rate on income inequality between economic and beat-the-ban migrants. The group component is much more important for economic migrants than for beat-the-ban migrants. This yields a large difference in the

[28] Borjas (1995) and Ward (2020) use the term mean convergence for the sum of the two parameters. The term persistence rate seems more convenient as an increase in the persistence rate means that inequality is more persistent.

persistence rate of inequality between generations. For economic migrants we find a persistence rate in inequality between the first and second generation larger than one. If we focus on economic migrants who arrived in 1972-1973, hence migrants who arrived in the two years before the announcement of the ban, we find a persistence rate of 0.922 (0.060). A persistence rate of one or more means that the difference between natives and immigrants persists or increases in the next generation. A persistence rate smaller than one means that difference between natives and immigrants declines which implies that incomes of natives and immigrants converge over generations. Hence, our estimates suggest that the inequality between economic migrants and natives is fairly constant from the first to the second generation. However, we find a very different pattern for beat-the-ban migrants. For these migrants the estimated persistence rate is approximately 0.6 to 0.7. This implies that each generation of beat-the-ban migrants reduces inequality with natives at a rate of 0.6 to 0.7. The smaller persistence rate for beat-the-ban migrants cannot be explained by their age at arrival. If children of beat-the-ban migrants arrive at a younger age they might have better outcomes because of more years of exposure to the new country. However, children of economic migrants arrived younger (see Table 1).

Table C.1 Persistence of inequality over multiple generations

	Economic migrants		Beat-the-ban migrants	
	(1)	(2)	(3)	(4)
Child income rank (G2)				
Income rank (G1)	0.231	0.229	0.233	0.227
	(0.003)***	(0.003)***	(0.002)***	(0.003)***
Group mean (G1)		0.891		0.481
		(0.060)***		(0.022)***
Persistence rate (G1)		1.12		0.708
Observations	184,879	184,879	189,581	189,581
Grandchild test score (G3)				
Income rank (G2)	0.159	0.158	0.162	0.159
	(0.001)***	(0.001)***	(0.001)***	(0.001)***
Group mean (G2)		0.711		0.540
		(0.033)***		(0.017)***
Persistence rate (G2)		0.869		0.699
Observations	224,955	224,955	227,747	227,747
Grandparents (G1) and grandchildren (G3)				
Income rank (G1)	0.088	0.087	0.090	0.086
	(0.002)***	(0.002)***	(0.001)***	(0.002)***
Group mean (G1)		0.995		0.537
		(0.048)***		(0.018)***
Persistence rate (G1)		1.082		0.623
Observations	196,549	196,549	199,009	199,009

Note: Estimates are shown of regressions of child outcomes (income rank for G2 aged 20-50, or test score for G3) on parental income rank (G1) and the average income rank of natives or migrants, as specified in Equation (3). The same outcomes are used as in Table 5. ***p<.01 **p<.05, *p<.10