# Master Thesis

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# Differences in socioeconomic status across ethnic groups in The Netherlands

*A theoretical and empirical comparative analysis beyond the discrimination of ethnic groups*


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## Abstract

The overall steady net-immigration in the Netherlands started in the beginning of the 1960s onwards. This surplus was created due to a flow of large numbers of so called "guest-workers", mainly from Turkey and Morocco as well because of the inheritance of immigrants owing to the colonial past from Suriname and the Netherlands Antilles. The socioeconomic status (SES) of these immigrants in the Netherlands is emblematic, in 2010 more than 12.5 percent of the immigrant population is unemployed compared to the 4.5 percent among Dutch indigenous.

This thesis examines the differences in SES across immigrants beyond discrimination. Whereas SES has been treated as a multidimensional concept that consists of four dimensions, that is, education, occupational status, income and over-education. Using large-scale cross-sectional datasets, it appears that human capital plays a dominant role in immigrants' SES, in particular destination-specific human capital (i.e., post-migration education).

Therefore several hypotheses have been derived from the mechanisms of the Immigrant Human Capital Investment model (IHCI) to understand immigrants' investment in post-migration education. The regression analyses exemplify that the investment in post-migration are stronger among immigrants that are staying for a longer duration in the host-country, are being married post-migration, arrive at a younger age, have a higher level in pre-migration education and are from (former) colonies.

However, it appears that immigrants with a high educational background do not, as a rule of thumb, have a high SES according to the other dimensions (i.e., occupational status and income), this is, among others, due to the higher incidence of over-education among immigrants. The results of the binary logistic regression shows that the over-education phenomena seems to be caused by the imperfect transferability of skills from the country of origin to the host-country. To what extent over-education is explaining the differences in SES across immigrants and in comparison to Dutch indigenous does not only rest on the wage penalty at a particular moment in time, but more on how long that moment will endure. Hence further research is required.

Over and above the results presented in this thesis, our analyses are providing some evidence for a plausible role of discrimination towards these ethnic groups and their socioeconomic status.

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## Introduction

All over western Europe, the enigma of immigrants' position in the European labour market are currently at the centre of the political debate. This because of the rapid increase in popularity of right-wing parties (i.e., anti-immigration) as well the looming performance of its adherents, as a consequence anti-immigrant reactions and xenophobia gain momentum.

In November 2010 the Eurobarmeter conducted a survey in Europe and compared with the beginning of 2010 considerably more people listed immigration as their top-concern. In the Netherlands, a country were a lot of immigrants have been arrived for centuries, probably more than in any other country in northwestern-Europe[1], the perceiving of immigration as top-concern, went within the six months from 10 percent to 17 percent.[2] The socioeconomic status of immigrants in the Netherlands is emblematic, in 2010 more than 12.5 percent of the immigrant population is unemployed compared to the 4.5 percent among Dutch indigenous.[3]

This difference is a rational for research among group differences in socioeconomic status (hereafter SES) within one country, as measured by educational level, occupational status and income. This type of research used to be limited to the comparison of blacks and whites.[4] Consequently, much of our thinking concerning group differences in education, occupational attainment and earnings is prone to the black-white pattern.[5] From this point of view "racial discrimination" – whether past or present – is usually alleged as the main cause of ethnic inequalities. However, various studies gave rise to a variety of other explanations in order to identify differences in SES across ethnic groups (Borjas, 1994; Chiswick, 1978; Duleep and Regrets, 2002; Dagevos et al., 2007; De Koning et al., 2008; Friedberg, 2000; Kanas, Van Tubergen, 2009; Van Ours and Veenman, 2002; Veenman, 2003).

These studies have given different explanations than discrimination for the ethnic inequality. For example, they argue that ethnic inequality is present because a lot of immigrants come from developing countries and thus are more frequently less skilled than the indigenous population. Another reason these authors have given is that immigrants cannot fully depend on their skills as the indigenous population does, because of the imperfect transferability of their skills (Chiswick, 1978; Friedberg, 2000; Duleep and Regrets, 2002).

[1] Lucassen, J. and Penninx, R. (1997), p.19.
[2] Eurobarmeter, (2011), p. 21.
[3] CBS, (2011), p. 5.
[4] First – anno 1950 – it started with the comparison of white and non-white, however blacks were representing 90% of the non-white group, hence they were easily to define.
[5] Chiswick, B.,R., and Chiswick, C., U., (1984). p. 51-52.

Apart from the elucidations that are mainly focused on human capital, it is argued that social- and cultural capital also play a significant role in the differences in SES across immigrants (Aguilera, 2003; De Koning et al., 2008; Kanas and Van Tubergen, 2009; Veenman, 2003). It has been argued that immigrants have more social ties with members of their ethnic group, who have less knowledge of the labour market and therefore have limited information concerning job opportunities (Kanas and van Tubergen, 2009; Veenman 2003). Regarding cultural capital, the differences in norms and values could lead to difficulties in climbing the social ladder and perhaps even led to segregation in the host-country (De Koning et al., 2008; Uunk, 2003).

In addition to the differences in SES across immigrants, recent studies (Battu and Sloane, 2004; Chiswick and Miller, 2009; Green, Kler and Leeves, 2007, Sanromá et al., 2008) have dealt with the issue of imperfect transferability of origin-human capital from the perspective of "over-education". It has been argued that immigrants are forced to accept jobs that require a lower qualification than that obtained in the country of origin, hence making them "over-educated". The main results of these "new studies" are categorized by Sanromá et al. (2008) under three empirical regularities. First, the incidence of over-education among immigrants is greater than among the indigenous population. Second, immigrants are facing a higher wage penalty associated with over-education. Finally, these studies have demonstrated that immigrant workers succeed in closing the initial gap in over-education compared to the indigenous population the longer they stay in the host-country, that is, assimilation occurs in over-education.

The contribution of this thesis to the existing and new literature is fivefold. At first, all studies that are focused on examining the SES of immigrants, are generally assessing SES based on one dimension (i.e., education, occupation or income). Contrary to these studies, we investigate all three dimensions of the class and status domains of Webers' view in one study together.[6] For the reason that we believe that being successful in one dimension (i.e., education) is not a guarantee to succeed in the other dimensions (i.e., occupation and income).

Second, even though researchers suggest it is imperative to clearly distinguish between immigrants' human capital obtained in the country of origin and in the host-country (Chiswick, 1978; Friedberg, 2000; Zeng and Xie, 2004), only a small amount have

[6] Weber (1946) is considered as the sociological theorist that is most associated with this outlook (see, Bollen et al., (2001), p. 160).

investigated these differences empirically.[7] In our analyses, we make use of direct measures on the educational attainment in the country of origin and the host-country, and the measures on work experience in the country of origin and host-country are also considered as quite direct.

Third, former studies did not spend much attention on the possible interaction between human- and social capital. In our study we examine both human- and social capital simultaneously, we investigate whether the effects are direct or indirect. For example, Friedberg (2000) states that the destiny-specific human capital (i.e., host-country) is more imperative than origin-specific human capital. However, is it that attending supplementary education in the Netherlands, directly lead the immigrant to an enhanced socioeconomic status, or is it that immigrants first acquire more native contacts, who will support or push them in a higher occupational status and hence acquire a better socioeconomic status?

Fourth, this thesis is the first in the Netherlands that is looking for an explanation for the lower SES of immigrants compared to the indigenous population from the perspective of "over-education".[8]

Finally, as the title of this thesis proposes, the examination of the differences is beyond discrimination. Hence, in contrast to studies that are focused on discrimination, the roll of discrimination is in this thesis interpreted as the unexplained residual and as a result not overestimated.[9]

In this thesis, we will examine the differences in SES along four dimensions (i.e., education, occupation, income and over-education) across ethnic groups in The Netherlands, beyond discrimination, to raise awareness about their potential and skills (i.e., different forms of capital), hence the focus will be on the individual level. This leads us to our first research question:

**Research Question 1:** Are there any differences across immigrants (groups) in their socioeconomic status? If so, which characteristics are explaining these differences?

[7] The reason behind this lack of empirical examination is mainly due to the omission of direct measures of human capital acquired in the country of origin and the host-country in widely used datasets (e.g., census of the United States). As has been stated by Chiswick and Miller (1994), such indirect measurements may lead to a substantial bias in the results and interpretation.
[8] Leuven, E., and Oosterbeek, H., (2011), p. 18.
[9] Altintas et al., (2009), p. 85; Veenman, J., (2010), p. 1809.

After examining which characteristics are explaining the differences in immigrants' income and occupation, we will look at the first dimension of Webers' class and status domains (i.e., education), and examine the determinants of immigrants' investment in post-migration education. This provides us with the following research question:

**Research Question 2:** Which characteristics and determinants triggers an immigrant to invest in post-migration education?

Based on Webers' view, we at this point would have a comprehensive understanding of the differences in SES across immigrants in the Netherlands. For example, an immigrant with a high educational attainment is most likely to engage in a high occupation and to have high earnings. However, we argue that Webers' view of the class and status domains is not a complete framework in order to thoroughly understand the differences in SES across immigrants. For the reason that some immigrants with a high educational attainment may have a low occupation in contrast to others with an equivalent educational background. In the literature this incidence is called "over-education". Therefore we formulated the two following research questions regarding the "fourth dimension":

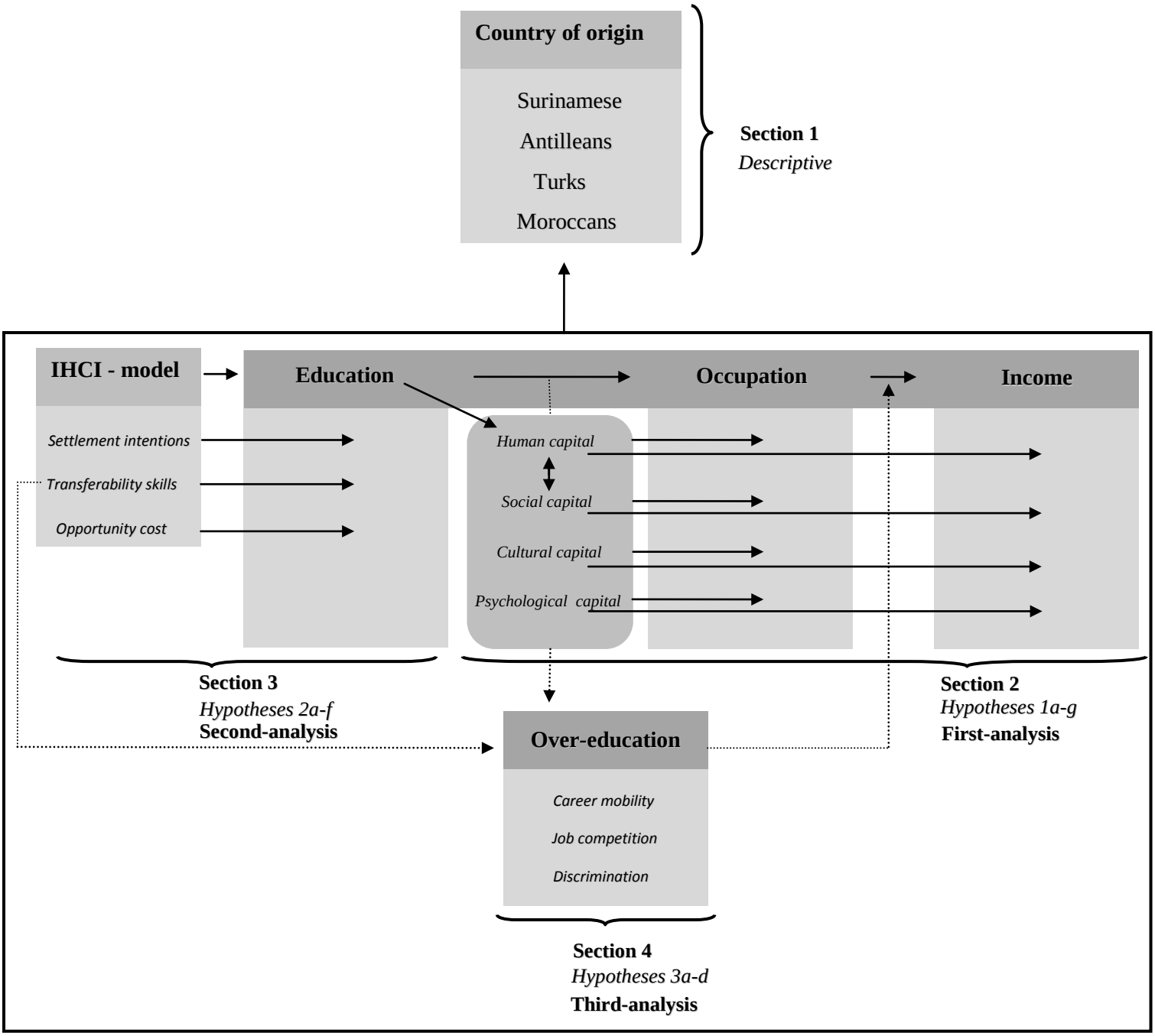
**Research Question 3a:** What causes someone and more specifically immigrants to be over-educated?

**Research Question 3b:** To what extent does over-education explains the lower socioeconomic status of immigrants compared to the indigenous population?

This thesis consists of two parts, whereas in **Part I** section 1-4 are discussed, **Part II** contains section 5-8. The thesis has been organized as depicted in figure 1. In **Part I**, there has been developed a theoretical framework, based on a review of relevant academic literature. **Section 1**, gives a decent background in the immigration of the Netherlands and describes the historical background of the four largest ethnic groups (i.e., Surinamese, Antilleans, Turks and Moroccans) in the Netherlands. **Section 2**, discusses several forms of capital, that is, human-, cultural-, social-, and psychological capital (*Hypotheses 1a-1g*). The investment in post-migration education is discussed by means of the IHCI-model in **section 3** (*Hypotheses 2a-2g*). In **section 4**, the notion of assimilation will be addressed as well the higher incidence of over-education among these ethnic groups, both as an elucidation of the lower socioeconomic status compared to the indigenous population (*Hypotheses 3a-3d*). Subsequently in **Part II** of this thesis, **section 5** is focused on the research design and

describes the variables and datasets that have been used in the analyses. **Section 6**, presents the methodology and empirical results. The limitations and the potential further research, which arise from this study, are discussed in **section 7**. Finally, an in depth discussion of our results, conclusions and the policy implications of this thesis are discussed in **section 8**.

**Figure 1.** **Outline of the Research Paper**

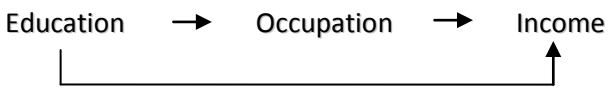


# I. Theory and hypotheses

In the literature, there exist a widespread quantity of concepts regarding socioeconomic status (SES), yet there is no cohesive theory on the meaning of it. Whereas some define SES as a unitary concept, others may deem it consists of different components. Though, researchers often conceptualize SES as the position of individuals, households or other aggregates on one or more dimensions of stratification.[10] In general, these dimensions consist of aspects that members of society regard as salient, typically these dimensions include education, occupation and income.

In this thesis, SES is treated as a multidimensional concept. It has been argued that Weber, a sociological theorist, is most often associated with this point of view.[11] Therefore, throughout this thesis, we follow Webers' view of class and status domains as depicted in figure 2.

**Figure 2.** **Webers' class and status domains**[12]




The intention of this thesis – as the title suggests – is to examine differences across ethnic groups in the Netherlands. Therefore, **section 1** (i.e., descriptive section) emphasizes the immigration history in the Netherlands, as well the migration motives and socioeconomic status of the four largest ethnic groups.

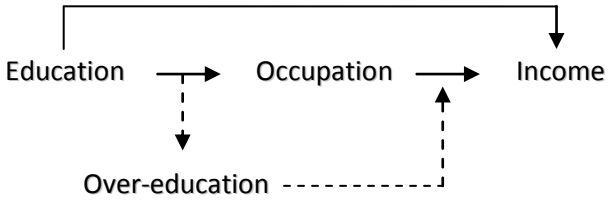
In order to discern immigrants in their income and occupational status (i.e., SES), **section 2** concerns a detailed review of individual related capital, that is, human-, social-, cultural- and psychological capital. Thus we basically zoom in at "what they know, what they are, who they know and who they are".

In **section 3**, we examine the socioeconomic status of the four ethnic groups in Dutch society by their investment in post-migration education and the transferability of skills attained in the country of origin. For the reason that education is an imperative determinant for an individuals' socioeconomic status (see *Figure 2*).

[10] Bollen, K., Jennifer, L., and Stecklov, G., (2001), p. 157
[11] Bollen, K., Jennifer, L., and Stecklov, G., (2001), p. 160
[12] Liberatos, P., Link B.G., and Kelsey, J.L. (1998), p.89.

Finally, in **section 4**, the notion of assimilation will be addressed as well the higher incidence of over-education among these ethnic groups, both as an elucidation of the lower socioeconomic status compared to the indigenous population (see *Figure 3*).

**Figure 3.** **SES-framework - The four dimensions**



# 1. A brief history of immigration

In the very beginning of the post-war era, the immigration to the Netherlands is seen as an inheritance of the colonial past. Immigrants that are from (former) colonies, (i.e., the West Indies[13]), typically labeled as (post-) colonial immigrants, hence suggesting homogeneity among this type of immigrant. However, Van Amersfoort and Van Niekerk (2006) stated that in reality there are many differences in the migration experiences of those immigrants which are historically linked to the Dutch colonial past.[14]

In addition to these (post-) colonial immigrants there is also the immigration of Mediterranean groups, that is, the Turks and Moroccans. They have come to the Netherlands as labour migrants[15], since the 1960s and early 1970s, typically labeled as "guest workers".

In this descriptive section we give a decent background in the immigration of the Netherlands. We describe the historical background of the four largest ethnic groups in the Netherlands, more specifically we elaborate on their migration motives and their socioeconomic status in the society. By describing their background, we are able to observe the differences in the socioeconomic status among these four ethnic groups. Finally, in section 1.5 we summarize our findings on the socioeconomic status of the four ethnic groups and relate it to the literature on ethnic hierarchy in Dutch society in section 1.6.

## 1.1 Why the Netherlands?

The Netherlands is considered as a rather young immigrant country[16], although it has a long history (1550-1800) in immigration, the public memory and policy starting points are subjugated by a later period (1800-1960).[17] Penninx (2005) emphasizes that during the post-war period the central idea always has been – and still is – that the Netherlands is not and should not be an immigration country.[18] The reason behind this belief is that the Netherlands faced many difficulties to regulate the migration successful. This is mainly due to the conflicting intentions of a welfare state, on the one hand, the Netherlands attempts to keep immigrants away but, on the other hand, they seek to ensure full civil rights for those immigrants which are settled in the country.[19]

[13] Suriname and the Netherlands Antilles.
[14] Van Amersfoort, H., and Van Niekerk, M. (2006), p. 324.
[15] By using this label we do not pretend to know their motivation, but only describe migrants who enter the Netherlands with a work permit that enables them to enter the Dutch labour market (legally).
[16] Van Ours, J., and Veenman, J. (2001), p. 740.
[17] Penninx, R. (2005), p. 37.
[18] Penninx, R. (2005), p. 37.; See also "Regeringsnota, *Buitenlandse Werknemers, 1970*".
[19] Van Amersfoort, H., and Penninx, R., (1994), p.133.

Lucassen and Penninx (1997) postulate that the Netherlands has been such an attractive immigration land due to the relative[20] great prosperity as well as religious and political tolerance in comparison to the surrounding countries.[21] The statement that the Netherlands has traditionally been relatively tolerant is initiated by Desiderius Erasmus of Rotterdam. He emphasized the need for rationality and for mutual tolerance.[22] Erasmus wished to cleanse the church and society of selfishness, cruelty, hypocrisy, pride and ignorance – and replace them with tolerance, honesty, wisdom, service and love.[23]

On the other hand, Zimmerman (1995) states that immigration is followed by a common European sequence, of post-war and post-colonial restructuring and the recruitment of unskilled guest workers.[24] In the Netherlands, decolonization refers to Indonesia (1949) and Surinam (1975). After the decolonization of Surinam there were two large immigration flows (compare *Figure A1.1,* Appendix A1, p. 123) in 1975 and between 1979-1980. The positive expectations people had ex-post concerning the decolonization of Surinam were not confirmed ex-ante. Consequently, the immigration did not led to the economic integration as the Dutch government had anticipated.

The rather negative and unpredicted results from the history of decolonization[25] should be taking into consideration for future decolonization. The first requisite is to recognize the sequence of developments in which preceding decolonization took place, and what we can learn from this in the future.[26] Evidently, the Netherlands Antilles have learned from the history of decolonization. Presumably they have recognized that countries that maintain their connection with the former mother country are better off than their fully independent counterparts.[27]

The overall steady net-immigration in the Netherlands started in the beginning of the 1960s (see *Figure A1.2,* Appendix A1, p. 123). During the post-war period the Dutch economy was prosperous, this led to a high demand for workers for unskilled jobs, as a result in the 1960s this led to labour shortages.[28] The immigration surplus was created due to a flow of large numbers of so called "guest-workers" (compare *Figure A1.3,* Appendix A1 p.124). Most of

[20] By "relative" is meant that it was often in great contrast to the regions from which the newcomers came.
[21] Lucassen, J., and Penninx, R., (1997), p.19.
[22] Parekkadan, B., and Stevens, J., P., (2005), p. 38.
[23] Greer, T., G., and Lewis, G., (2005), p. 343.
[24] Zimmerman, K.F., (1995), p. 46-47.
[25] During the decolonisation of Indonesia (1949) there were also conflicts with the Molucans.
[26] Oostindie, G., (2000), p. 144.
[27] Rosemarijn, H., and Oostindie, G., (1989), p.30-31, 35.
[28] Hartog, J., and Vriend, N., (1990), p. 379.

these workers were from Mediterranean origin, they were actively recruited or came spontaneously from countries like Italy (1960), Spain (1961), Portugal (1963), Turkey (1964), Greece (1966), Morocco (1969) and Yugoslavia (1970).[29] In 1970 the number of 235,000 immigrants was reached.[30]

**Table 1. Population and population growth (2010)**

| | Number of persons | Share of population (per 1000 inhabitans) | Increase since 1 January 2000 | | Share of second generation | Average age |
|---|---|---|---|---|---|---|
| | *x 1,000* | *per 1,000 inhabitants* | *x 1000* | *%* | *%* | *Years* |
| **Total** | 16,575 | 1,000 | 711 | 4 | 10,0 | 39,6 |
| **Natives** | 13,215 | 797,3 | 127 | 1 | | 40,9 |
| **Western immigrants** | 1,501 | 90,6 | 135 | 10 | 57,1 | 41,5 |
| *Poland* | 77 | 4,7 | 48 | 164 | 25,5 | 31,4 |
| *Romanians* | 14 | 0,9 | 9 | 162 | 23,8 | 29,3 |
| *Bulgarians* | 15 | 0,9 | 13 | 593 | 11,3 | 28,7 |
| *Other Western* | 1,395 | 84,2 | 65 | 5 | 59,7 | 42,4 |
| **Non-Western immigrants** | 1,858 | 112,1 | 450 | 32 | 43,2 | 29,3 |
| Turks | 384 | 23,2 | 75 | 24 | 48,9 | 29,1 |
| Moroccans | 349 | 21,1 | 87 | 33 | 52,1 | 27,1 |
| Surinamese | 342 | 20,7 | 40 | 13 | 45,9 | 33,7 |
| Antilleans (incl. Aruba) | 138 | 8,4 | 31 | 29 | 41,4 | 29,4 |
| Afghans | 39 | 2,3 | 17 | 80 | 19,7 | 27,1 |
| Iraqis | 52 | 3,1 | 19 | 56 | 21,5 | 28,4 |
| Iranians | 32 | 1,9 | 9 | 38 | 20,4 | 33,0 |
| Somalians | 27 | 1,6 | -2 | -6 | 26,7 | 23,7 |
| Other non-Western | 495 | 29,9 | 174 | 54 | 37,7 | 27,7 |

Source: CBS, Jaarraport integratie 2010[31]

Eventually, Surinamese, Antilleans, Turks and Moroccans became the largest ethnic minority groups in the Netherlands and these groups are steadily increasing due to a combination of a constant rate of immigration and a rather high birth rate compared to other groups.[32] Table 1 illustrates the distribution of the population and the population growth in 2000 and 2010.

During this period the number of Turks and Moroccans has increased by respectively 24% and 33%, whereas the Surinamese and Antilleans increased respectively 13 percent and 29 percent. In 2010, the Netherlands had a total of 3,360,000 inhabitants or 20,27 percent of the total population who are born abroad or who had at least one parent who was born abroad.[33] [34]

[29] Hartog, J., and Zorlu, A., (2001), p. 5.; Bruquetas, Callejo, A., et al. (2006), p.5.
[30] Penninx, R., Schoorl, J., and Van Praag, C., (1993), p. 17.
[31] Erratum: 2011
[32] Hartog, J., and Zorlu, A., (2001), p. 6.
[33] This definition is used since 1992 and is applied to the ethnic background of the indigenous population because the identification of an immigrant is increasingly undermined by assimilation/integration (see *section 4*).
[34] However, a large stack of immigrants, about 41,5% comes from other-western countries, such as Germany.

The largest ethnic minority group (compare *Table 1*) are the Turks (384,000), followed by Moroccans (349,000), Surinamese (342,000) and Antilleans and Arubans (138,000).

In the 1990s, Dutch policy makers proposed to maintain a restrictive immigration policy which had led to a decline and a relative stabilization in the flow of Turkish, Moroccan and Surinamese immigrants but the overall immigration flow did not decrease.[35] The decline at these specific groups emphasizes that the restrictive policy had a thorough impact on immigration flows that were initiated by means of family formation and reunification.

Moreover, immigration flows were increasingly dominated by political refugees and asylum seekers in the nineties. They came from countries such as Somalia, former Yugoslavia, Iran and Iraq.[36] In the 1990s we experienced the so-called "asylum crisis", the peak (53,000 applications) was in 1993, briefly after Germany had changed its soft asylum policies.[37] Furthermore, in contrary with the 1960s, during the 1990s the foreign workers that were migrating to the Netherlands were highly educated.[38]

Until the Netherlands had changed its asylum granting regime in 2000, they have been among the top receiving asylum countries in Europe.[39] Throughout the 2000s the labour migration to the Netherlands reflected the demands of the domestic labour market.[40] As the main employment sector is focused on providing services, the demand was mainly for high-skilled immigrants. Therefore the Dutch government had reduced its rules for immigration regarding high-skilled foreigners in 2004.[41] As a consequence migrants with a poor education are less often employed than Dutch indigenous, whereas migrants with a higher degree are employed more often, although still less than Dutch indigenous with the same educational level.[42]

Before elaborating in more detail the socioeconomic statuses of the four largest ethnic groups in Dutch society – Surinamese, Antilleans, Turks and Moroccans – we will have a brief look at the migration history, their main motives for migration and their socioeconomic status in the Dutch society. In the impending subsections we differentiate between post-war immigration minorities resulting from colonial immigration (Surinamese and Antilleans) and labour immigration (Turks and Moroccans).

[35] Hartog, J., and Zorlu, A., (2001), p. 6.
[36] Ilies, M., and Van der Leun J., (2008), p.6.
[37] Penninx, R., (2005), p. 41-42.
[38] Nicolaas, H., and Sprangers, A., (2002), p.15
[39] Ilies, M., and Van der Leun J., (2008), p.6.
[40] These immigrants came from highly industrialized countries such as USA, Japan and the EEA.
[41] IND, (2004).
[42] Grünnel, M., and Van den Berge, T., (2003), p.3.

## 1.2 The Surinamese: Dutch citizens as immigrants

In contrast of the ferocious fight Indonesia had to withstand for an autonomy (1949), there was an astonishingly small force for independence in the Dutch Caribbean. However, the Netherlands had the need to decolonize the Dutch Caribbean and it followed that in 1954, they eventually proclaimed the Charter of the Kingdom (Het Statuut).[43] They contracted that the Netherlands, the Netherlands Antilles and Surinam are three independent states and together form "the Kingdom of the Netherlands". As a result, from 1954 onwards, all residents of the three member-states were proclaimed as Dutch citizens. In contradiction to the Netherlands Antilles, Surinam gained her independence in 1975, after the decolonization, the migration pattern from Surinam and the Netherlands Antilles had changed drastically (compare *Figure A1.1,* Appendix A1, p. 123).

### *1.2.1 The migration*

During the nineteenth century, the most important motive for the Surinamese to migrate to the Netherlands, was to attain a Dutch diploma, which in essence became a prerequisite for middle-class people that wanted a position in the administration.[44] Throughout this period the migration mostly concerned the Creole elite[45], they had send their children for schooling.[46] Eventually, the standard motive for migration to the Netherlands became "studying", whatever the reason was for migration, people would say that they came for schooling.

During the 1970s – still before the decolonization – the migration flows endured a radical transformation, when progressively more Surinamese left for the Netherlands.[47] The migration flows now consisted of more immigrants with a lower-class background, and were no longer exclusively Creole descent.[48] The main motivation of migration during this period was the presence of high uncertainty of the immigration policy after the decolonization of Surinam. Most Surinamese were afraid of losing their Dutch nationality and thus losing the possibility of entering the Netherlands without restraints.[49] On the other hand, Eldering (1997) states that in the years preceding the independence of Surinam, Hindustanis decided to migrate to the Netherlands out for fear of domination by the African Surinamese.[50] This

[43] Rosemarijn, H., and Oostindie, G., (1989), p.5-6.;Van Amersfoort, H., and Van Niekerk, M., (2006), p. 333.
[44] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 334.
[45] The term *"Creole"* originally refers to Europeans born in the colony. In Surinam this term had a specific meaning, it referred to people of African or mixed African and European descent (Van Lier, 1971, p.2).
[46] Perlmann, J., and Vermeulen, H., (2000), p. 188.
[47] Trappenburg, M., J., (2003), p. 2-3.
[48] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 335.
[49] Entzinger, H., B., (1975), p. 328.
[50] Eldering, L. (1997), p.333.

development gradually led to a migration flow of the ethnic composition of the Surinamese population as a whole.

### *1.2.2 Integration and socioeconomic status of the Surinamese in the Netherlands*

The Surinamese migrants had an unlucky start in the Dutch society with their time of arrival. The two migration peaks (compare *Figure A1.1,* Appendix A1, p. 123) were parallel with the two oil crises which had a vicious impact on the economy, as a result this led to an economic recession and growing unemployment. The poor economic conditions at this period evidently stagnated the integration of the Surinamese newcomers. The unemployment rate increased to an outstanding level in general, but especially for the Surinamese.[51] This was not only attributable to the economic condition or to the high frequency of Surinamese newcomers. The main reason was due to the composition of the most recent migration flows, which consisted primarily of immigrants with a lower-class background, just in a period when the Dutch labour market did not require low-skilled workers.[52] Consequently, many Surinamese migrants came to depend on social benefits, obviously this incident was not contributing favorably to the attitude of the Dutch towards the Surinamese. The high unemployment of Surinamese was often associated with drugs, violence and crime.[53] Therefore throughout the 1980s many Surinamese encountered complexities in their integration process into Dutch society. On the other hand, they also often encountered discrimination and racism, which also was not conducive for their integration.[54]

One of the advantages of Surinamese migrants was that they were a colony and therefore had an equivalent national education system as in the Netherlands, hence they also had been educated in the Dutch language. Therefore, despite of the factual difference in education among the earlier migrants and the lower-class immigrants of the 1970s, the Surinamese commonly arrived in the Netherlands with a certain knowledge of the Dutch language, society and culture. At the moment approximately 40 percent of the whole Surinamese population lives in the Netherlands, a total of 342,000 (compare *Table* 1).

## 1.3 The Netherlands Antilles

The Netherlands Antilles is, in contrast to Suriname, still an autonomous part of "the Kingdom of the Netherlands". This is a very imperative factor for the migration flows from

[51] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 336.
[52] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 336.
[53] Van Niekerk, M., (2000), p.70.
[54] Bogers, T., and Maussen, M., (2010), p.19.

the Antilles to the Netherlands. However, recently (2010) the Netherlands Antilles[55] has ceased to exist[56] with a change of the five islands' constitutional status.[57] At this time two new autonomous countries, St. Maarten and Curaçao, were born in the Kingdom of the Netherlands, both joining Aruba, which gained the "Status Aparte" in 1986.[58]

The islands with less inhabitants, Bonaire, St. Eustatius and Saba, are at present having city status within the Netherlands. These modifications were accepted by a majority of voters in referendums held in the last years. Curacao, Bonaire, St. Maarten and Saba decided to leave the confederation, whereas St. Eustatius supported the status quo.[59] None of the islands voted for autonomy, presumably this is a sequence of the former progress of independence in Surinam.[60]

### *1.3.1 The migration*

The Antillean society is considerably reflecting its colonial history. Van Amersfoort and Van Niekerk (2006) stated that „the residents mainly consist of the descendents of white Protestant and Jewish colonial elites, the black-lower classes – descendants of African slaves; and an in-between layer of coloured people of mixed ancestry".[61]

Until well into the twentieth century, Antilleans who came to the Netherlands were generally children of the Curaçaon elite who came to study, followed later by those of the mixed and black middle class.[62] Thus far, the migration history of the Netherlands Antilles is in principal somewhat similar to that of Surinam. However, a rather important event in the Netherlands Antilles' history, that is different from Surinam, was the settlement of the oil industries in Aruba and Curaçao around 1920.[63] This brought economic prosperity and opportunities for vast employment. Furthermore, it changed the direction of the migration flows, the oil manufactures were not only withholding citizens from emigrating, but even pulled workforce from somewhere else in the Caribbean. However, due to the oil crises the employment

[55] The Netherlands Antilles consists of two islands groups. The Windward Islands – Saba, St. Eustatius and St. Martin (half of which is French) – are located to the east of Puerto Rico. The other islands group, the Leeward Islands, includes Curaçao, Aruba and Bonaire, and is situated near the coast of Venezuela. The two islands have little in common besides their shared colonial history and Dutch domination from the seventeenth century onwards.
[56] Throughout this thesis we still refer to the Netherlands Antilles.
[57] http://www.rijksoverheid.nl/onderwerpen/caribische-deel-van-het-koninkrijk
Date visited: 24-05-2011
[58] Rosemarijn, H., and Oostindie, G., (1989), p.3.
[59] http://www.thecaribbeancamera.com/news/3161-antilles-gone
[60] Oostindie, G., (2000), p. 194.
[61] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 337.
[62] Maduro, E., (1986), p.165.
[63] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 337.

opportunities in the oil industry declined considerably. In the mid-1980s, this even led to the withdrawal of the oil companies, obviously this had an huge impact on the economic condition of the Netherlands Antilles. As a consequence of the rising unemployment, the emigration increased again. From the 1960s onwards, progressively more lower-class Antilleans, a lot of them poorly educated and unskilled, decided to migrate to the Netherlands. The peak of their migration was in the eighties (compare *Figure A1.1,* Appendix A1, p. 123).

Whereas the Dutch society barely noticed the presence of the earlier immigration of students and workers from the Netherlands Antilles, the presence of the later Antilleans[64] became more visible, in particular in the 1990s.[65] The arrival of young, unskilled and unemployed Antilleans became a large quandary in the Netherlands. These youngsters were not prepared for a career in the Netherlands, and therefore some of them got involved in criminal activities.[66]

### *1.3.2 Integration and socioeconomic status of the Antilleans in the Netherlands*

Until the 1980s, the perception of the Dutch society towards Antilleans was reasonably positive. According to Van Amersfoort and Van Niekerk (2006), this was mainly due to their relatively high socioeconomic status, their small numbers, and their relatively smooth integration in the Dutch society.[67] However, Van Hulst (2000) emphasizes that during the eighties the unemployment under the Antilleans was the least favorably in comparison with other population groups.[68] The increase in unemployment among Antilleans was the greatest, and the decrease after the economic boom in 1988 the lowest.[69] On the other hand, Van Hulst (2000) states that „at practically almost all educational levels, they had the highest functions as well as the highest average net monthly income after the Dutch".[70] However, the overall picture was still unfavorable in comparison with other groups. Because of the large differences in this group, the Antillean population was divided into two groups, which were basically equal in size.[71] These differences were so large that the employed – especially those in higher functions – did better than their counterparts in other immigrant groups. Whereas an equally large group of poor Antilleans did worse. These poor Antilleans, that are typically young males and unemployed, have particularly a negative public image in the Netherlands.

[64] Described by Amesz et al. as the "the other Antilleans".
[65] Van Hulst, H., (1997), p. 1; Van San, M., (1998), p. 15; Schrils, J.M.R., (2002), p. 93.
[66] Van San, M., (1998), pp. 1-282.
[67] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 339.
[68] Van Hulst, H., (2000), p.102.
[69] Roelandt, T., J., A., and Veenman, J., (1990), p. 51; Veenman, J., (1994), p.74-76.
[70] Van Hulst, H., (2000), p.102.
[71] Van Hulst, H., (2000), p.102.

In line with this reasoning, Van Amersfoort and Van Niekerk (2006) state „that the Antillean elite and middle-class immigrants are hardly recognized as immigrants by the general public, the young lower-class black males are the centre of attention and hold the political spotlight".[72]

## 1.4 Turks and Moroccans as guest workers

During the post-war era Mediterranean labour immigrants, or "guest-workers" as they were called, were recruited "temporally" to fuel the economic boom. Dutch policy makers had strongly the idea that the recruitment of these immigrants was and had to be only a temporally phenomenon.[73] The main function of guest workers was that they could be used as a buffer for economical fluctuations.[74] Hence, the guest workers were cyclically determined. However, the 1970s contradicted this view, after the first oil crisis (1973) the recruitment policy halted but the immigration from the countries continued, particularly from Turkey and Morocco.[75]

### 1.4.1 The migration

The immigration continued at first throughout the 1970s by means of family reunion and later in the 1980s and 1990s in the form of family formation.[76] This illustrates that the character of the Mediterranean migration flow had changed drastically in 20 years; "from temporary, single, male guest workers in the early 1960s to foreign families residing more or less permanently in the Netherlands".[77] Therefore the total number of Turks and Moroccans increased from less than 100 in 1960, via approximately 75,000 in 1972 to almost 250,000 in 1981 (compare *Figure A1.3,* Appendix A1, p. 124).[78] This development basically suggested the permanent structure of their residence in the Netherlands. Consequently, immigration changed from a cyclically determination to something more structural, and therefore the analysis of the socioeconomic status of Turkish and Moroccan immigrants in the Dutch society seems to be valuable.

[72] Van Amersfoort, H., and Van Niekerk, M., (2006), p. 340.
[73] Hartog, J., and Vriend, N., (1989), p. 85
[74] Castles. S., (1986), p.765.
[75] Hartog, J., and Vriend, N., (1989), p. 84; Penninx, R., (2004), p. 90.
[76] Van Amersfoort, H., and Penninx, R., (1994), p.135.; Penninx, R., and Vermeulen, H., (2000), p. 6-7.
[77] Bonjour (2008) emphasizes that most literature on migration are misspecified when it concerns policy implications related to family reunions. She criticizes many migration authors, under which the view of Van Amersfoort and Penninx (1994), since they stated that the restrictions or limiting of family reunions is argued to be a new phenomena which only started to play a role after 1973. Whereas Bonjour found in her research that family migration already was a salient policy issue during the mid-1950s and 1960s. Bonjour, S. (2008), p. 102-103.
[78] Hartog, J., and Vriend, N., (1990), p. 379.

The oil crises of the 1970s had led to a meticulous reorganization of the Dutch economy. Whereas at first the industrial sector was booming and even in need of additional labour force, the impact of the economic crisis annihilated the industrial sector. On the other hand, the service sector expanded. Due to this shift in the economy many labour immigrants that previously worked in the industry faced several difficulties, since as Vermeulen and Penninx (2000) state „they did not meet the requirements needed to work in the service sector, like communicative skills and being able to speak fluent Dutch".[79] Consequently, when the employment in 1983 improved, the unemployment among immigrant groups still remained high.[80]

Most of the Moroccan migrants came from the rural Rif, where it became a standard way of living that men first would work somewhere else for a period of time and later return to their families.[81] However, in the Netherlands it did not turn out this way, the "guest workers" from Morocco, but also from Turkey, did not return to their country of origin, but instead became permanent inhabitants.

### *1.4.2 Integration and socioeconomic status of Moroccans and Turks in the Netherlands*

In 2010 there were 384,000 Turks in the Netherlands (compare *Table* 1). Turks in the Netherlands from a tight-knit community, in which traditional norms and values are dominating, therefore they are strongly committed to their ethnic identity.[82] However, it has been argued that those immigrants who hold on fully to their ethnic identity and not accepting the norms and values of the host country will face many problems with the assimilation in their new society.[83] Thus the devotion to traditional values forms an obstacle for Turkish youngsters to entirely participate in Dutch society and to climb the social ladder. Therefore it is very unlikely that the relatively low socioeconomic status of most first generation Turks will change. However, Turks possess over a wide network of ethnic organizations, and the attendance of Turks at local elections is relatively high.[84] Ozdil (2011) describes this as the segregation of the Turks in the Netherlands. Ergo in January 2011 a manifest was published that pressured the Turkish youngsters to focus on the principles of the Netherlands rather than to follow and keep on the principles of the Turkish community in Dutch society.[85]

[79] Penninx, R., and Vermeulen, H., (2000), p. 10-11.
[80] Penninx, R., and Vermeulen, H., (2000), p. 12-14.
[81] Nelissen, C., and Buijs, F., J., (2000), p. 178.
[82] Bogers, T., and Maussen, M., (2010), p.20.
[83] Uunk, W., (2003), p.199.
[84] Böcker, A., (2000), p.173-174.
[85] Ozdil, Z., (2011).

Additionally, a topic in line of this segregation and which has quite some attention in discussions related to Turks in the Netherlands is the so called "honour related violence".[86]

Regarding the Moroccan immigrants, in 2010 there were 349,000 Moroccans in the Netherlands (compare *Table* 1). The role of young Moroccan males is often used in the debates of assimilation in the Netherlands, more than any other ethnic minority. The assimilation of these young Moroccan males is often perceived as problematic by the Dutch society, partly due to frequent negative reports on Morrocans' deviant behavior.[87] This eventually has led to blindness in the Netherlands towards the behavioral patterns among Moroccans that are settled in the Netherlands.[88] Albeit the perception towards Moroccans is considered worse than that of the Turkish immigrants, nonetheless, at present they are often both classified under the category of "Muslims".[89]

### 1.5 The socioeconomic status

The socioeconomic status among the four main ethnic groups are characterized by strong differences, just as their migration history as elaborated previously. Immigrants from (former) colonies – The Surinamese and Antilleans – often speak the Dutch language and are more familiar with the Dutch society and culture before they arrive. However, apart from the fact that the Surinamese and Antilleans both share a colonial history, there are still some differences present among these (former) colonial immigrants.

Regardless of the unambiguous fact that there is still a gap between the Surinamese and the Dutch residents in socioeconomic terms, according to Bogers and Maussen (2010) "Surinamese find themselves in an upward trend of the social mobility".[90] In contrast to other ethnic groups in the Netherlands, the Surinamese are less reliant upon low-skilled labour, as a result they are considered less vulnerable.[91]

Regarding the Antilleans in Dutch society there is not much room for sanguinity. The unemployment among Antilleans is three times higher than among the Dutch.[92] Moreover there is a huge differential among Antilleans, one side has obtained a relatively high

[86] Korteweg, A., C., (2005), p. 7-8.
[87] Bogers, T., and Maussen, M., (2010), p.21.
[88] Nelissen, C., and Buijs, F., J., (2000), p. 192.
[89] Bogers, T., and Maussen, M., (2010), p.21.
[90] Bogers, T., and Maussen, M., (2010), p.20.
[91] Van Niekerk, M., (2000), p. 90
[92] Bogers, T., and Maussen, M., (2010), p.20.

socioeconomic position, whereas others have a relatively low level of socioeconomic ranking and participate relatively a lot in criminality.[93]

Labour immigrants that arrived as guest workers also differ in their socioeconomic status, as has been previously elaborated. They share their historical background as guest workers, but the assimilation process separates them from each other. The immigrants in the Netherlands came in different periods and for various reasons. Those from the (former) colonies emigrated mainly for educational and political reasons, whereas those from Mediterranean countries did so mainly for economic reasons.

### 1.6 Hierarchy of ethnic groups

In addition to these background differences, which partially helping us to understand the differences among the four ethnic groups and their socioeconomic status. The differences are also subject of how members of the majority group, that is the indigenous population, are reacting to members of minority groups. Research has revealed that the majority group in general shares a social preference hierarchy regarding the minority groups.[94] Hagendoorn and Pepels (2003) argue that „this ethnic hierarchy comprises a differential acceptance or rejection of ethnic out-groups".[95] In another study, Hagendoorn and Hraba (1989) have measured the ethnic hierarchy in Dutch society by means of social distance towards minorities and revealed that the rejection of out-groups can be elucidated by "the degree of ethnocentrism and prejudice that characterizes individuals, whereas the differential of acceptance or rejection of out-groups is independent of prejudice". It appears that other factors than discrimination are explaining the differential positions assigned to ethnic groups in the hierarchy, as a result – as the title of this thesis proposes – we will look beyond discrimination.

Moreover, Berry and Kalin (1979) stated that the differential in positions in a multicultural society can be explained by the "perceived differences" between the ethnic groups and the indigenous population.[96] Hagendoorn and Hraba (1989) concluded that the ethnic hierarchy in Dutch society is reflecting a miscellaneous effect, on the one hand we have the perceived socioeconomic status, for example the generally lower class position of minorities, whereas on the other hand the perceived cultural differences, such as religion, language and habits.

[93] Van Hulst, H., (2000), p.106, 119.
[94] Berry, J., and Kalin, R., (1979); Hagendoorn, L., and Habra, J., (1989); Hagendoorn et al., (1989); Hagendoorn, L., (1995); Hagendoorn, L., and Pepels, J., (2003); Verkuyten, M., and Thijs, J., (2010).
[95] Hagendoorn, L., and Pepels, J., (2003), p. 42.
[96] Berry, J., and Kalin, R., (1979), p.108.

The studies mentioned are proposing various possible determinants of the differential socioeconomic status of ethnic groups allocated in the ethnic hierarchy held by the indigenous population. In the Dutch ethnic hierarchy, the European immigrants acquire the first place, followed by members of (former) colonial groups, that is respectively the Surinamese and Antilleans, and at last members of Islamic groups, respectively Turks and Moroccans.[97] This ethnic hierarchy is measured by the degree of the social distance of the out-groups and to which they are alleged as threatening the national identity.[98] Hence suggesting that individuals of Turkish and Moroccan origin are perceived more negatively than those with a Surinamese and Antillean background, because the former are alleged as more antagonistic and less assimilated in Dutch society.

[97] Verkuyten, M., and Thijs, J., (2010), p.469.
[98] Hagendoorn, L., (1995), p.207.

## 2. The accumulation of immigrants' capital

As pointed out in section 1 "*A brief history of immigration*", the settlement and integration history of the four ethnic groups in the Netherlands vary in some aspects. Chiswick (1988) emphasized that the differences between the indigenous population and immigrants in the US could not easily be explained by appealing to discrimination against minorities. For the reason that some minorities that experienced discrimination have high levels of education, occupational status and income (i.e., socioeconomic status). Although this observation does not mean that discrimination in access to schooling and in the labour market has not played any role, it entails that other factors, operating separately or interacting with discrimination, are also relevant and appear to be the dominant explanation.

Therefore this section will explore immigrants' capital accumulation and some of its various theories, a context necessary in leading up to the presentation and examination of the differences in socioeconomic status among the four ethnic groups on the individual level. Section 2.1 and his subsections elaborate on the "neo-capital theories", to be exact, human-, cultural-, social- and as we will argue psychological capital.

### 2.1 The Neo-Capital Theories

The development and modifications over the decades of capital theory can be referred to as the "neo-capital theories".[99] The dominant interpretations in this thesis of the neo-capital theories and which are most related to the socioeconomic status of the ethnic groups encompass human-, cultural-, social- and as we will argue psychological capital.[100]

In sum, according to Lin (1999) "neo-capital theories" are emphasizing the interaction „…of individual actions and structural positions in the capitalization process".[101] Whereas each specific theory is related more to actions or structural positions, it is acknowledged by Lin (2001) that it is this interaction, „…or choice actions within structural constraints, that accounts for the capitalization process".[102]

Whereas the adherents of the "traditional view" normally believed in capital accumulation via "physical capital", the impending subsections will show that it is not the only type of capital that can be accumulated. As a result, we define "capital accumulation" as; a certain

[99] Lin, N., (1999), p. 29.
[100] Apart from these theories mentioned, in particular human capital, other theories that link educational credentials with socioeconomic status exist as well (e.g., screening and signaling theory, queuing theory, etc.). However, these are considered beyond the scope of this thesis.
[101] Lin, N. (2001), p. 19.
[102] Lin, N. (2001), p. 19.

supply/stock of something (e.g., experiences, skills, social ties, etc.) in which an individual/institution can invest, with the outcome that the production capacity accumulates, which has an expected return on the market (re-production). Ergo, the gaining of skills or experience – both via education and on-the-job-training – is also a form of capital accumulation. In Table 2, we give an overview of the theories and theorists that have been used in the impeding subsections.

**Table 2. Several Neo-Capital Theories and Theorists**

| | **The Neo-Capital Theories** | | | |
|---|---|---|---|---|
| | **Human capital** | **Cultural capital** | **Social capital** | **Psychological capital** |
| Theorist | Becker | Bourdieu | Lin | Seligman |
| Definition | The set of skills which an individual acquires on the job, through education and experience, which increases his value on the market. | Reproduction of dominant symbols and meanings (norms and values). | Investment in social relations with expected returns in the marketplace. | A mental state in which we are engaged (absorbed in flow). |
| Accumulation by means of … | Accumulation through investment in knowledge and (technical) skills. | Accumulation by means of pedagogic actions and nurturing by the dominant culture. | Accumulation by means of investment in social relations. | Accumulation via investment in mental states (such as, confidence and resilience). |
| **Section** | **2.1.1 / 2.1.4** | **2.1.2** | **2.1.3 /2.1.4** | **2.1.5** |

### *2.1.1 Human Capital*

The human capital theory as described by Becker (1964/1975) is a form of capital accumulation by means of investment in experience and skills (compare *Table 2*). Basically what the human capital theory is intending to emphasize concerning the differences among individuals, is that education is correlated with income (see *Figure 2*). Education increases the skills and experience of an individual, and skills and experience subsequently increases the productivity of an individual, and a higher productivity is rewarded with higher earnings (Becker 1964 ; Mincer 1974). Furthermore, it also suggests a specific rationale for the

positive correlation between age and earnings.[103] Older people earn more compared to younger people because they have more on the job experience (higher productivity, higher earnings).[104] However, ample empirical research have exemplified that there is a curvilinear relation between age and income. For example, at some point an older person may be more experienced, but he may also be less physically capable and therefore may be less productive compared to someone that is younger. On-the-job training can result in "general human capital" (skills that are considered to be transferable to other workplaces) or "specific human capital" (skills that are considered not to be transferable).[105] Finally, there is also the parental role which takes place at home, there is abundant evidence that the education of parents has an effect on the human capital of the child (for example, Borjas, 1994; Chiswick, 1988 and Gang and Zimmerman, 1999).

Regarding the central focus of this thesis – that is to reveal the differences in the socioeconomic status among the four ethnic groups – the human capital theory has been used to explain various issues related to immigrants (Borjas, 1994) and their socioeconomic status. That is, (over-) education (Sanromá et al., 2008), occupational status (Raijman and Semyonov, 1995) and income (Chiswick, 1978).[106] They represent the three dimensions of Webers' view (compare *Figure 2*).

We could argue that the human capital theory contributes to this study in the way that it seeks to explain differentials in socioeconomic statuses (i.e., occupational status and earnings) as a consequence of a divergence in individuals' human capital stocks that is determining an individuals' marginal productivity. Becker (1975) stated that „…the human capital of a person is the sum of the amount inherited and that acquired through investments; moreover, the amount invested is partly determined by the inheritance".[107] Consequently according the human capital theory, the more skilled and talented an individual, the better his

[103] Strober, M., H., (1990), p. 214.
[104] Strober, M., H., (1990), p. 214 – 215.
[105] When it concerns on-the-job training, it is most likely that the company is the party that will invest, or at least participates in the process of the investment. In case of the "specific on the job training", the company most likely expects returns (productivity of the worker increases in the company). In case of the "general human capital", there could be an agreement that the company still partially invests (they share the costs). For the reason that due to an increase in general human capital other work-settings (companies) could benefit from the new learned skills as well. Meaning that via competition the current company has to increase the workers' salary to keep him in the company in order to be able to benefit from the increased productivity. The company knows this forehand, therefore the so called "Nash equilibrium" is that they share the cost of the investment.
[106] Section 3 of this thesis addresses the issue of human capital and over-education in more detail.
[107] Becker, G., S., (1975), p.7.

socioeconomic status. In empirical research, human capital is consistently measured by means of education, health condition and work experience.

**Hypothesis 1a:** Human capital has a positive effect on the socioeconomic status (occupation and earnings) of an immigrant.

However, regarding immigrants, it has been argued that human capital obtained in the country of origin is not always perfectly transferable (see *section 3*) to the host-country (Chiswick, 1978; Friedberg, 2000). Therefore, apart from Beckers' theory of human capital (1964/1975), some skills and knowledge are considered to be specific to a certain context, better known as "destination-specific human capital".[108] For example, Friedberg (2000) emphasizes that the origin-specific human capital of the immigrant is of less value when he is not familiar with the language of the host-country.[109] Though, he further argues that attending school in the host-country can lead to higher returns for immigrants than for natives, since by learning the language proficiency he may be able to transfer his origin-specific human capital.[110] Chiswick and Miller (1995) empirically showed that immigrants who are more familiar with the official language of the host-country and therefore are better in speaking the language are more likely to have a job and acquire a higher income than those that are less common with the host language.

If we look more closer at the case of the Netherlands, subsequently an important issue to emphasize is that of the existence of a relation between the ethnic origin (colonies) and the degree of transferability of human capital (see *section 3*). In view of the fact that Suriname and the Netherlands Antilles are a (former) colony (see *section 1*) and therefore had been educated in the official language of the host-country, it could be argued that the educational attainment and work experience in these colonies are of more value than comparable credentials obtained in Turkey and Morocco.

**Hypothesis 1b:** The return to origin-country specific human capital of Caribbean immigrants is higher than that of Mediterranean immigrants.

**Hypothesis 1c:** Mediterranean immigrants have a higher return on destination-specific human capital than Caribbean immigrants.

[108] This is in part attributable to the differences in cultural background. This is more comprehensively discussed in section "*2.1.2 Cultural capital*".
[109] Friedberg, R., M., (2000), p. 226.
[110] Friedberg, R., M., (2000), p. 227.

Although, the theory of human capital is able to provide insight about the relationship between education, occupational status and earnings (i.e., socioeconomic status), and the nature of differentials among individuals on the labour market. It loses explanatory power if trying to be "the only game in town".

### *2.1.2 Cultural capital*

Unlike the human capital theory, not all the "neo-capital theories" consider the process of acquiring capital as a self-interest principle (i.e., workers' free will).[111] In the early 1960s, Bourdieu, a French sociologist, developed the notion of "cultural capital" sequentially to deal with the empirical problem that "economic capital" is not adequate to clarify the divergences in education of children with a different social background.[112] The conceptualization of cultural capital is widespread, as a result there is no cohesive definition. In this thesis we follow Bourdieu (2002), which defines culture as a system of "symbolism and meaning", conceivably better known as norms and values.[113] These norms and values are acquired by education, experience and at home (i.e., parental influence), hence the accumulation of capital is equivalent to the human capital theory. Individuals (when looking at classes), and ethnicities in particular, have a different cultural background and therefore obtain a different socioeconomic position in society according to their formerly acquired intellectual tools and cultural habits.[114] Given that these cultural habits (i.e., norms and values) vary across ethnic groups and the dominant population[115], presumably this could lead to difficulties in climbing the social ladder and perhaps even led to segregation in the host-country.[116]

**Hypothesis 1d:** Immigrants that have norms and values that are more comparable to that of the dominant culture in the host-country acquire a higher occupational status and earnings than those that with less comparable values.

Cultural capital has been sustained by the dominant class in society via pedagogic actions (e.g., education), this incorporates the dominant values (i.e., symbols and meanings) of a culture in the next generation, consequently it is reproducing the dominant values of the culture. From an economic perspective, this leads to a reduction in the transaction costs, due to similarity in language and norms and values. Nevertheless, individuals are not consciously aware of the infliction and therefore takes the inflicted culture as their own, this is the

[111] Bourdieu, P., (1986), p. 47.
[112] Bourdieu, P., and Passeron, J., C., (1979), p. 8.
[113] Jenkins, R., (2002), p. 104
[114] Bourdieu, P., and Passeron, J., C., (1979), p. 14.
[115] The dominant population refers to the indigenous population.
[116] Uunk, W., (2003), p.199.

"misrecognition" of cultural capital.[117] Bourdieu further argued that regardless of the fact that individuals gain cultural capital at home and school[118] by means of being exposed to cultural habits, it is predisposed to be misrecognized as "talent", consequently it is believed to be embodied[119] in exceptional individuals.[120] The misrecognition of cultural capital has been supported by the school systems that are transforming cultural capital into "pedagogic" cultural capital, it is therefore inclined as an individual achievement. Among others, Lareau (2003) demonstrated that the socioeconomic status of parents does matter for the success of their children. He showed that parents with a higher education (middle-class) have more conversations with their children than parents with a lower education background (working-class or poor parents). As a consequence, the vocabulary of the children with higher educated parents (middle-class) is often more enhanced and as a result they do better at tests, such as "measuring verbal skills". However, the mass interprets these differences in test scores as a form of some "natural talent" or "individual effort". This elucidation of cultural capital and class division is in part attributable to why the second generation of the ethnic groups in the Netherlands are still lacking behind the comparable indigenous population (Van Ours and Veenman, 2001).

### *2.1.3 Social capital*

Within the last few decades, significant attention was given to the role of social capital and the opportunities in life (among others, Bourdieu, 1986; Lin, 1999; Portes, 1998; Putnam, 2001). Lin (2001) defines social capital as an „…investment in social relations with expected returns in the marketplace".[121] As a result, at the relational level, social capital has some resemblance with human capital, namely that it is assumed that an individual can make investments and is able to capture the expected returns (i.e., capital accumulation). Nevertheless, the human capital theory is too simplistic in the complex world we live in nowadays. It is simply wrong to suggest that each individual will rise to the level justified by his or her obtained human capital and that there is competition based only on those skills. As stated by Loury (1977), „…it is the social context within which individuals maturation occurs strongly conditions what otherwise equally competent individuals can achieve. This implies that absolute equality of opportunity, (…) is an ideal that cannot be achieved".[122] Although

[117] Bourdieu, P., (1998), p.116.
[118] This imposes that cultural capital has a social origin.
[119] This is one of the three forms Bourdieu (1986) distinguishes, that is the (1) embodied-, (2) objectified- and the (3) institutionalized form. For an overview see Lareau and Weininger, (2007).
[120] Lareau, A., and Weininger, E., B., (2007), p. 2.
[121] Lin, N., (2001), p.19.
[122] Loury, G., C., (1977), p. 176.

there is no cohesive definition of social capital, literature generally agrees that "social capital has a role in contributing to the production of desired socioeconomic outcomes".[123]

Furthermore, it has been thoroughly argued that the value of someone's social network is depending on three main assumptions, that is, (i) the number of people in his network, (ii) people their willingness to help, (iii) the resources available for support and change.[124] As a result, the better these three assumptions are represented, the better the socioeconomic status in society (De Graaf and Flap, 1988).

**Hypothesis 1e:** Immigrants who have more social contacts (both, natives and ethnicities) have a higher occupational status and earnings than those who have fewer social contacts.

In academic literature, the concept of social capital has been used as a predictor in the fields of, "among others, school attrition and academic performance, childrens' intellectual development, sources of employment and occupational attainment, juvenile delinquency and its prevention, and immigrant and ethnic enterprise".[125] Furthermore, the concept of social capital has been used on different aggregate levels. For example, politicians like Fukuyama and Putnam have used the concept of social capital on a high aggregate level (Fukuyama, 1996; Putnam, 1994). From their macro-perspective, they state that countries or regions vary in the degree in which civilians are prepared and able to (voluntary) organize political, economical and altruistic purposes. They postulate that a community with a flourishing and organized civil society are characterized by a high level of social capital (e.g., The Dutch polder model). Putnam (1997), defines social capital as „…features of social life – networks, norms and trust – that facilitate cooperation and coordination for mutual benefit".[126] Whereas a high level of trust[127] facilitates the transactions in the economy, hence a high level of trust is reducing the cost of transactions made in the economy.

In context of minorities, the theory of social capital has been used to explain, among others, ethnic inequality in education, unemployment, occupational status and earnings (Veenman, 2003; De Koning et al., 2008). Apart from the significant findings that are accomplished by these studies, they have spent little attention to the possible interaction between human and social capital (see *section 2.1.4*).

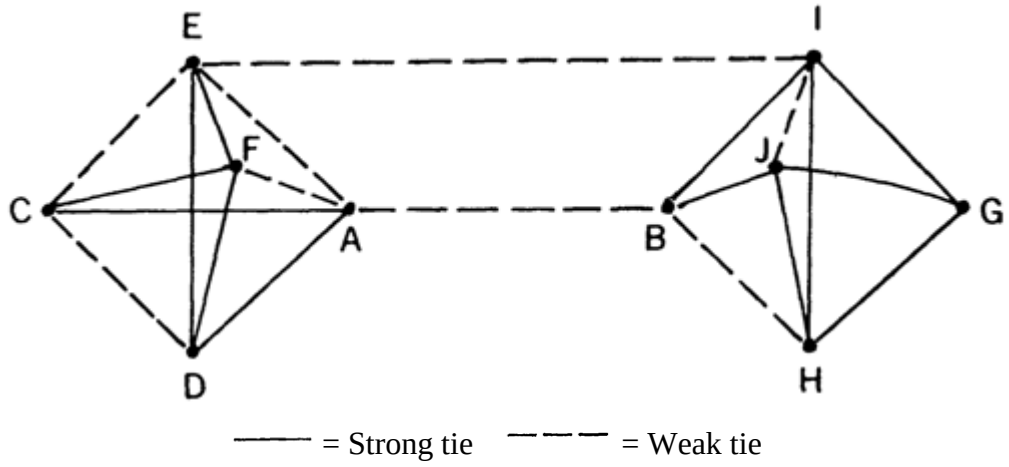
[123] Falk, I., and Kilpatrick, S., (2000), p. 89.
[124] De Graaf., N., D., and Flap, H., D., (1988), p.453.
[125] Portes, A., (1998), p.9
[126] Putnam, R., D., (1997), p. 31.
[127] Trust is the willingness to permit the decisions of others to influence someone's welfare. Levels of trust determine the degree to which someone is willing to extend credit or rely on the advice and actions of others.

Regarding *Hypothesis 1e*, from the perspective of a minority one could argue that a social connection to a native is of more value than that of another ethnicity, hence rejecting the equality of value. Presumably, the information is unequally distributed on the labour market across natives and ethnicities. In addition to this statement, it has been argued by Kanas and Van Tubergen (2009) that „…natives are better informed about specific job openings, they know better how to find jobs (…) than do immigrants".[128] The reason behind their argument is that natives are for a longer period exposed to the host-country labour market than immigrants, and therefore possess over superior information.

**Hypothesis 1f:** Immigrants who have more contacts with Dutch acquire a higher occupational status and earnings than those who have more contacts with ethnicities.

In a similar vein, Granovetter (1973) postulates that in a social network the "weak ties" are of importance to gain new information and knowledge (i.e., better occupational status).[129] These weak ties provide new relations, since they are able to create bridges to new contacts (see *Figure 4*).[130] The concept of a "bridge" is initiated by Harary et al. (1965), they defined a bridge as a line in a network which provides the only path between two points.[131] For example, the bridge between A and B in Figure 4 is the only path under which information can be acquired from a contact of A to a contact of B, and as a consequence from any person indirectly connected to A and to indirectly connected to B. This makes the presence of weak ties so important.

**Figure 4. The Strenght of Weak Ties**[132]




[128] Kanas, A., and Van Tubergen, F., (2009), p. 899.
[129] Granovetter, M., S., (1973), p. 1370-1371.
[130] Not all weak ties are automatically bridges. However, what is important, is that all bridges are weak ties.
[131] Harary, F., Norman, R., Z., and Cartwright, D., (1965), p. 198.
[132] Granovetter, M., S., (1973), p. 1365.

In harmony with the theory of Granovetter (1973) and the strength of weak ties, we could think of "exogamous marriage". There is abundant research on the economic benefits from marriage in general. In Beckers' "A Theory of Marriage", he postulates that there are numerous potential gains (e.g., beneficial joint production and fostering children) from marriage that are most resourcefully exploited once persons marry with people of comparable traits.[133] Such characteristics are mostly related to someone's human capital (i.e., education, intelligence and health). Previous research on ethnic intermarriage has been done predominantly in the United States (among others, Alba and Golden, 1986; Anderson and Saenz, 1994; Chiswick and Houseworth, 2008; Qian and Lichter, 2007).

In the Netherlands studies on ethnic intermarriage are mainly descriptive (Esveldt and Schoorl, 1998; Hondius, 2001). However, Kalmijn en Van Tubergen (2006) and Van Ours and Veenman (2010), in addition managed to do a widespread empirical study. In this study we refer to the strength of weak ties, and the general factor that exogamous marriage leads to new ties.

**Hypothesis 1g:** Immigrants who are married with a Dutch partner obtain a higher occupational status and have higher earnings than those married to the same group (endogamous marriage) or other ethnic group.

#### *2.1.3.1 Negative social capital*

The previous literature mentioned regarding social capital is strongly emphasizing the positive consequences that it bears. Portes (1998) states that „…without a doubt this has to do with the sociological bias to see good emerging out of sociability, bad things are more commonly associated with the behavior of the perception from the homo economicus".[134] It is of importance to emphasize the somewhat negative side of social capital for two main reasons. First, to avoid the misrecognition of social networks as something divine. Second, to look seriously at the concept instead of moralizing statements.

Recent studies have identified at least four negative consequences of social capital, that is, exclusion of outsiders, excess claims on group members, restrictions on individual freedoms, and downward leveling norms.[135]

[133] Becker, G., S., (1974), p. 320.
[134] Portes, A., (1998), p.15.
[135] Unfortunately this is beyond the scope of this thesis, therefore we recommend Portes (1998) for a comprehensive overview.

### *2.1.4 The interaction between Human and Social capital*

As has been stated before, former studies did not spend much attention on the possible interaction between human- and social capital. In this thesis we attempt to unravel this relation between human- and social capital, as far as possible.

Friedberg (2000) states that the destiny-specific human capital (i.e., host-country) is more imperative than origin-specific human capital. However, we could ask ourselves whether attending supplementary education in the Netherlands, would directly lead the immigrant to an enhanced socioeconomic status, or is it that immigrants first acquire more native contacts, who will support or push them in a higher occupational status and hence acquire a better socioeconomic status? More specifically, are the qualifications leading them to a higher occupational status, or are the Dutch friends they make along the process obtaining this qualification, helping them in a higher occupational status? Immigrants who are studying and working in the host-country not only gain a better position through the accumulation of their human capital, but also have the opportunity to meet more natives in their work and school.

Furthermore, Coleman (1988) emphasized one effect of social capital, that is, its effect on the creation of human capital in the next generation.[136] Meaning that social capital has an indirect or spurious effect.[137] It could be the case that immigrants who have more contacts, in particular with the indigenous population (i.e., natives), are more strongly improving their language, do better at school and work than immigrants with less native ties. Thus social capital is accumulating human capital.

Another form, is that it could be possible that those immigrants with more human capital simply possess over more social capital. This entails that those with more knowledge and technical skills have a larger network, particularly consisting of natives, but that social capital has no direct effect on immigrants' socioeconomic status (i.e., occupational status and income).

At last, in case we find a direct effect of social capital on immigrants' income or occupational status (i.e., SES), this subsequently entails that the network of an immigrant has an effect that is not related anymore to the role of immigrants' own characteristics but goes beyond that.

[136] Coleman, J., S., (1988), p. S109.
[137] Note that in this thesis, we cannot differentiate between indirect and spurious effects, since we do not have longitudinal data.

### *2.1.5 Psychological capital*

With the prevailing and increased recognition of human resources as an instrument of competitive advantage at different aggregate levels, human-, cultural- and social capital are being exposed both to practice and academic literature. Whereas, until very recently, "psychological capital" has been ignored in both practice and academic literature. Nevertheless, we argue that "psychological capital" also could be considered as a "neo-capital theory" as aforementioned.[138] By psychological capital we are referring to four states – confidence, hope, optimism and resilience.[139]

We argue that "who you are" is just as imperative as "what you know", "what you are" and "who you know" (see *Figure 5).* In the image of human-, cultural- and social capital, an individual could also invest in psychological capital. However, contrasting some of the previous capital theories, there is not much monetary cost involved due to the fact it is related with mental states. Psychological capital is defined by Seligman (2002) as a mental state in which we are engaged (i.e., absorbed in flow), which could be considered as an investment, „…we are building psychological capital for our future".[140]

Psychological capital is an important measurement and is most likely adding explanatory power to the previous forms of capital. It is straightforward that psychological factors are influencing someone's performance, ability and therefore his socioeconomic status. However, as stated by Gelderblom et al. (2007), there are potential causalities between all forms of capital.[141]

**Figure 5. The Neo-Capital theories**[142]

| **Human capital** | | **Cultural capital** | | **Social capital** | | **Psychological capital** |
|---|---|---|---|---|---|---|
| *What you know* | | *What you are* | | *Who you know* | | *Who you are* |
| | | | | | | |

[138] Unfortunately we are unable to measure "psychological capital" due to limitations in our dataset. We therefore recommend to the results of the qualitative study on this issue by De Koning et al. (2008).
[139] See Luthans et. al (2004) for a comprehensive overview of the four states and the measurements.
[140] Seligman, M., E., P., (2002), p.116.
[141] Gelderblom, A., et al. (2007), p. 10.
[142] Adapted version of Luthans et. al (2004), p. 46, fig. 1.

# 3. Post-migration investments in education

As we have seen in the previous section, human capital plays an imperative role in the economic performance of an individual, consequently his socioeconomic status. Therefore post-migration investments in human capital (i.e., education) – predominantly language – play a crucial role for immigrants economic performance and socioeconomic status. Whereas on the other hand, as has been previous stated in "*The Accumulation of immigrants' capital*", we have to take into consideration the imperfect transferability of immigrants' human capital acquired in the country of origin (Chiswick, 1978; Friedberg, 2000).

Empirical results have exemplified that the economic performance of immigrants is positively influenced when they speak the official language (Chiswick and Miller, 1995) and by educational attainment in the host-country (Friedberg, 2000; Zeng and Xie, 2004). Even though it is acknowledged that investments in human capital (i.e., education and language) are very important for immigrants, only a few studies have examined when this incidence occurs and why (i.e., the causes).[143] By examining the causes of post-migration investments in human capital (i.e., education), we could better understand the differences in the socioeconomic status across ethnic groups in the Netherlands.

In section 3.1 we will make use of the Immigrant Human Capital Investment (IHCI) model, developed by Duleep and Regrets (2002), in order to better understand the underlying disparities across ethnic groups and their socioeconomic status. In the subsequent subsections we will derive several hypotheses based on the three mechanisms – intentions of settlement in the host-country, transferability of skills and opportunity cost – which are alleged to be central to this model.

## 3.1 Immigrant Human Capital Investment model

In order to be able to understand the determinants of post-migration investments in education, we build on the Immigrant Human Capital Investment (IHCI) model (1), developed by Duleep and Regrets (2002).

$$\max \{w\tau_{M1}H_s(1-\theta) + w\rho\left[\tau_{M2}H_s + \gamma f\left(H_s, \tau_{p1}, \theta\right)\right]\} \qquad \textbf{(1)}$$

The model consists of two periods of human capital investments. In the above equation $w$, represents the rate of return on the market for a unit of human capital, $H_s$ is the initial supply

[143] Exceptions are a study conducted on immigrants in Australia (Chiswick and Miller, 1998), a study conducted in the United States (Borjas, 1982), Van Tubergen and Van de Werfhorst (2007) in the Netherlands, Basilio and Bauer (2010) in Germany, they all have contributed to the literature of post-migration investments in education.

of human capital in the country of origin. However, as it concerns the human capital in the country of origin it may not be fully valued in the host-country due to differences in for example the educational system. Therefore it is necessary to introduce $\tau_{M1}$ and $\tau_{M2}$, both denote the amount of origin-human capital valued in the labour market of the host-country, respectively in the first and second period,[144] $\theta$ is the proportion of initial human-capital market value forgone as a consequence of investment, $\rho$ denotes the probability of staying in the host-country, $\tau_{p1}$ is a transferability parameter for "new" human capital in the host-country. The production function of human capital is denoted $\gamma f(H_s, \tau_{p1}, \theta)$, where $f$ is a positive function of $H_s, \tau_{p1}, \theta$ and of $\gamma$, were $\gamma$ denotes a human-capital productivity coefficient that may vary across individuals.[145] The optimal decision for human capital investment, $\theta^*$, maximizes total earnings of the two periods.[146]

$$\max_{\theta} \; w\tau_{M1}H_s(1-\theta) + w\rho\left[\tau_{M2}H_s + \gamma f(H_s, \tau_{p1}, \theta)\right] \qquad \textbf{(2)}$$

In the impeding subsections we will derive several hypotheses based on the three mechanisms – intentions of settlement in the host-country, transferability of skills and opportunity cost – which are alleged to be central to this model. However, we do not intend to investigate the mechanisms directly – as has been done by Duleep and Regrets (2002) – we will evaluate the model and the empirical characteristic indirectly by using determinants, such as ethnic origin and origin-human capital (i.e., education).

### *3.1.1 Intentions of settlement in the host-country*

A rather important element in model (1) – related to the immigrants' intentions of settlement in the host-country – is $\rho$, incorporating the probability of settling in the host-country. It has been argued by Duleep and Regrets (1999), that an immigrant that has less intention to stay in the host country has less incentives to invest in destination-specific human capital skills, because an immigrant that will leave again has no need of increasing his skills in the second period ($\tau_{M2}$) in the host-country.[147] However, for those immigrants that intend to settle permanently in the host-country, it is attractive to invest in destination-specific education, for the reason that the time-period in which they could use their acquired educational credentials

[144] As has been stated by Duleep and Regrets (2002:3), the introduction of these parameters formalize the discussion of international transferability of origin-human capital skills put forth by Chiswick (1978), as we have seen in section 2 "*The Accumulation of immigrants' capital*".
[145] Duleep, H., O., and Regrets, M., C., (2002), p. 2-3.
[146] Duleep, H., O., and Regrets, M., C., (1999), p. 186.
[147] Duleep, H., O., and Regrets, M., C., (1999), p. 189.

is longer. Moreover, looking at the impact of time on settlement, it is likely to assume that the longer an immigrant stays in the host-country, the more connected he will be due to new friendships and possible career opportunities in an organization.

**Hypothesis 2a:** The longer immigrants stay at the host-country the more likely it is they will invest in post-migration education.

Another way to examine the role of the immigrants' intention of settlement in the host-country is by looking at the occurrence of having a partner and children. Hence, we postulate that immigrants who married after the migration and have children in the host-country are more connected to the host-country than immigrants that are single, married before migration or have no children in the host-country.

**Hypothesis 2b:** Immigrants that are married post-migration will invest more in destination-specific education than migrants who are single or married before migration.

**Hypothesis 2c:** Immigrants that have children in the host-country will invest more in destination-specific education than immigrants who do not have children in the host-country.

Furthermore, when linking the "life cycle of earnings" to human capital investments at a time profile (i.e., age), we find in the literature that people mostly make investments in themselves when they are young.[148] For the reason that their opportunity cost are lower than that of people that are older, and, they have a longer period to receive returns on their investment. In addition Veenman and Van Ours (2005) stated that immigrants who arrive at younger ages tend to congregate more rapidly to native educational attainment than adolescent or adult immigrants.[149] Regarding to the immigrants, we assume that young immigrants are spending a longer period at the host-country than older immigrants.

**Hypothesis 2d:** Younger immigrants invest more in destination-specific education than older immigrants.

### *3.1.2 Transferability of skills*

Another imperative mechanism in the IHCI model is initiated by Chiswick (1978), that is, the imperfect transferability of the origin-human capital from the immigrant towards the host-country. This factor is denoted by $\tau_{M1}$ and $\tau_{M2}$, the proportion of origin-human capital valued in the labour market of the host-country, respectively in the first and second period. In the model of Duleep and Regrets (2002), they also have incorporated $\tau_{p1}$, which is a transferability parameter in the production for "new" human capital in the host-country. These

[148] Ben-Porath, Y., (1967), p. 352.
[149] Veenman, J., and Van Ours , J., C., (2005), p.2.

elements together demonstrate that the initial supply of human capital (origin-human capital) from an immigrant is imperfectly transferred to the host-country ($\tau_{M1}$) and to the production of "new" human capital ($\tau_{p1}$) in the host-country (destination-specific human capital).

In the human capital theory from Becker (1975) and a lot of its followers, former investments in education do increase the opportunity cost. However, when it concerns immigrants this statement with ample empirical evidence does not seem to hold. For example, Van Tubergen and Van de Werfhorst (2006) state that immigrants that are initially lower educated are investing less in education in the host-country than immigrants with a higher education.[150] In the IHCI model we find support for this reasoning. When $\tau_{M1} < 1$, subsequently the opportunity cost for investing in additional human capital in the host-country for immigrants is lower than that for natives with comparable human capital. Whereas, among immigrants that have acquired a comparable supply of human capital, the opportunity cost differs between those with high market transferability ${\tau_M}^{HT}$ against low labour market transferability ${\tau_M}^{LT}$, as a result $wH_s\ ({\tau_M}^{HT} - {\tau_M}^{LT})$. Although low-skill-transferability immigrants face lower opportunity cost than high-skill-transferability immigrants, this does not directly mean that they will invest more. Lower opportunity cost are related to a lower degree of labour market transferability and therefore receive less return on the investment, due to less human capital is transferring to the production of "new" human capital ($\tau_p$). However, in the IHCI model it is assumed by Duleep and Regrets (2002) that when $\tau_M < 1$, $\tau_M$ is always less than $\tau_p$, in other words, origin-human capital is more valuable in learning than earning, and this differences increases as labour market skill transferability falls.[151] [152] Furthermore, origin-human capital that is not valued in the host-country, is still useful by obtaining "new" human capital in the host-country.[153]

Regarding the Netherlands, we hypothesized (*Hypothesis 1b*) in section 2, that immigrants from the Caribbean would have a higher return on their origin-human capital than Mediterranean immigrants, because of the similarity in the educational system with the Dutch for the Caribbean immigrants. However, based on the above elaboration we could argue that due to the lower transferability among Mediterranean immigrants, they face lower opportunity

[150] Van Tubergen, F., and Van de Werfhorst, H., G., (2006), p.1.
[151] Duleep, H., O., and Regrets, M., C., (2002), p. 3-4.
[152] We reasonably could assume that $\tau_{M1} < 1$ counts for all immigrants.
[153] One of their arguments (Duleep and Regrets, 2002) is that previously learned work and study habits may greatly facilitate the learning of destination-country skills. For a comprehensive overview see Duleep, H., O., and Regrets, M., C., (2002), p. 4-5.

cost and therefore are more likely to invest in destination-specific human capital. This postulation pursues Chiswick's (1978) theory of the transferability of immigrants' skills.

**Hypothesis 2e:** Mediterranean immigrants are more likely to invest in education in the host-country than Caribbean immigrants.

### *3.1.3 Opportunity cost*

The third mechanism is the role of opportunity cost, a formerly ignored element in this aspect is the impact of macro-level conditions at arrival, as has been stated by Van Tubergen and Van de Werfhorst (2007).[154] Chiswick et al. (1997) have also paid attention on macro-economic circumstances, however this was more related to the "economic assimilation" (see *section 4*) of immigrants, and not so much related to immigrants' education. In general, if we examine the impact of macro-level conditions on the immigrants' education, we could better understand their educational choices and, subsequently better comprehend the differentials in the socioeconomic status across ethnic groups. By using clustered cross-sectional survey data and including the national unemployment rate in the year of migration (i.e., cohorts), Van Tubergen and Van der Werfhorst (2007) showed that, regarding immigrants, in a period of favorable macro-economic circumstances the opportunity costs are higher and consequently they are less likely to invest in education.[155] Videlicet, they showed that immigrants who arrived at a period when the economic situation could be described poorly, were more likely to complete an education in the host-country than at a time when the economy was booming. However, they also stated that the impact of the macro-economic situation varied across ethnic groups.

In a rather similar vein, we expect that the rate of unemployment varies across ethnic groups (see *section 1)*. We argue that ethnic groups that are considered to be more vulnerable and are facing more difficulties in finding a job, have lower opportunity cost. However, the macro-economic impact of unemployment will also affect them stronger than immigrant groups that could find more easily a job in the labour market of the host-country.

**Hypothesis 2f:** Mediterranean immigrants are expected to be more strongly affected by the unemployment rate than Caribbean immigrants.

[154] Van Tubergen, F., and Van de Werfhorst, H., G., (2007), p.866.
[155] Van Tubergen, F., and Van de Werfhorst, H., G., (2007), p.894.

# 4. Assimilation and the incidence of over-education

In the preceding sections we already mentioned the existing of imperfect transferability of immigrants' human capital attained in the country of origin (Chiswick, 1978; Friedberg, 2000). This phenomena could explain the low levels of assimilation of the immigrants in the host-country and the gap in earnings (i.e., socioeconomic status) among immigrants and the indigenous population. Recent studies (Battu and Sloane, 2004; Chiswick and Miller, 2009; Green, Kler and Leeves, 2007, Sanromá et al., 2008) have dealt with the issue of imperfect transferability of origin-human capital from the perspective of "over-education". This thesis is the first in the Netherlands that is looking for an explanation for the lower remuneration (i.e., socioeconomic status) of immigrants from the perspective of "over-education" (compare *Figure 3*).[156]

Regarding the settlement intentions (see *section 3.1.1)* of immigrants we made several hypotheses concerning their investments in human capital in the host-country. All the postulations are pointed in the direction that the longer immigrants stay in the host-country, the more they invest in destination-specific human capital and the smaller the wage gap becomes[157] – this incident is called "assimilation"[158] in the literature – due to the new acquired knowledge and skills that are suited to the labour market of the host-country.[159]

In section 4.1 we first will address the notion of assimilation, whereas we will seek an explanation for the different assimilation rates among the United States and Europe (i.e., the Netherlands). Furthermore, we elaborate on the relation of assimilation with the Immigrant Human Capital Investment model (IHCI) from section 3.

In section 4.2 we will go more in depth on the second mechanism (i.e., skill transferability) of the IHCI model, were we will contribute to new literature by addressing the notion of "over-education" among minorities[160] and its relation with the imperfect transferability of human capital, ethnic segregation and discrimination.

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[156] Leuven, E., and Oosterbeek, H., (2011), p. 18.

[157] The wage gap here mentioned is the one between the indigenous population and immigrants. These investments are of course also attributable to the skill transferability (*section 3.1.2*) and the opportunity cost (*section 3.1.3)*.

[158] Izquierdo, M., et al., (2009), p. 2.

[159] Although most European researchers speak about "integration" instead of "assimilation", which is preferred by the American researchers, there is only a minor difference (see Vermeulen, H., 2010) and researchers on both sides of the Atlantic are agreeing in the basics. In this study we are focused on the basics, hence assimilation and integration have the same meaning.

[160] First- and second generation.

## 4.1 Assimilation

The literature examining this subject empirically are extensive allocated across countries, whereas the majority is related to the United States. Chiswick (1978) analyzed assimilation for the first time and stated that male immigrants in the United States initially earned 10 percent less than comparable indigenous people.[161] However, attributable to the persistence and ambition (i.e., self-selection) of the immigrants enabled them to close the wage gap after an average of 13 years in the United States and after 20 years even 6 percent higher.[162] However, Borjas disagreed with Chiswick.[163] Borjas (1994) argued that Chiswick was relying on a cross-sectional research design and generalized from an exceptional set of incidents, that is, the arrival of highly skilled Asian immigrants during the 1950s and 1960s, when the US economy was flourishing.[164] [165]

The results from Chiswick (1978) are also confirmed for other countries with a tradition of immigration. In the case of the Netherlands, Dagevos and Gijsberts (2007) have demonstrated that the second generation has a much higher educational attainment than the first generation, in particular among the Mediterranean immigrants.[166] However, there still is a gap in earnings and educational attainment among the second generation and the indigenous population.[167] These results are basically demonstrating a lower rate of assimilation in the Netherlands compared to the United States. A potential elucidation could be the differences in self-selection (Borjas, 1988; Chiswick, 1999) among immigrants, that is, these host-countries vary in their "offers" of economic opportunities and also vary in the in their immigration policies. In addition, Chiswick (2000) argues that „the favorable selectivity for labour market success of migrants would be less intense among those for whom other motives are important in their migration decision, such as tied movers, refugees, and those who move for ideological reasons".[168]

[161] Chiswick, B., R., (1978), p. 919.
[162] Chiswick, B., R., (1978), p. 919.
[163] There is a continuous conflict between Chiswick and Borjas on this matter. Incongruously they both seem to be right, each for a portion of the immigrant population. The critics regarding the vulnerability Borjas had given on the study of Chiswick was also present in his study. Borjas pooled the census data to construct cohorts, as a result he was unable to study the changes in earnings from the same workers while they acquired destiny-specific human capital in the United States. The lack of a longitudinal study is a well recognized problem in this field of study. The most imperative aspect we could learn from the conflict between Borjas and Chiswick is that you cannot generalize, hence the outcome varies for each ethnic group and country.
[164] Hirschman, C., et al., (1999), p.153.
[165] Kaneta, K., (1999), p.54.
[166] Dagevos, J., and Gijsberts, M., (2007), p. 76.
[167] Dagevos, J., and Gijsberts, M., (2007), p. 74.
[168] Chiswick, B., R., (2000), p. 1.

On the other hand, we could look at this issue from a more aggregate level point of view, subsequently these host-countries compete for high skilled immigrants.[169] Due to protection of the home-based labourers in most of the European countries and ergo shutting out immigrants, the effort basically backfired and attracted low-skilled immigrants that work for rock-bottom wages.[170] The EurActiv (2010) stated that „85 percent of unskilled labour migration goes to the EU and 5 percent to the US, only 5 percent of skilled labour lands in the EU – whereas the US alone absorb the lion's share of engineers, technicians and ICT specialists, 55 percent of the total highly-skilled mobile workforce".[171] Two plausible reasons for why the United States absorbs most of these high-skilled immigrants could be because of the better opportunities (i.e., Green card versus Blue card) for these immigrants.[172] Second, the higher the level of educational attainment of immigrants, the better their English language proficiency, and thus are more likely to migrate to an English-speaking country.[173]

Studies in other countries also confirm the lower remuneration of origin-human capital and the existence of the assimilation process, however the rate is varying across each country and ethnic group (Chiswick and Miller, 1995, for Australia; Baker and Benjamin, 1994, for Canada; Constant and Massey, 2003, and Basilo and Bauer, 2010, for Germany; Friedberg, 2000, for Israel; Kanas and Van Tubergen, 2009, for the Netherlands; Longva and Raaum, 2003, for Norway; Sanromá et al., 2008, for Spain; Chiswick and Miller, 2009, for the United States).

Without a direct reiteration of that what has been aforementioned, there are two findings from this type of literature that are worth mentioning. First, the degree of transferability of origin-human capital is depending on the characteristics from the country where the immigrants are from. For example, we could assume that the quality of education is varying significantly across countries. Therefore immigrants from developed countries are more likely to acquire a higher return and consequently may have a higher transferability of their education followed in the country of origin than immigrants from developing countries because education is in general of lower quality in the latter.[174] Friedberg (2000) stated that „the more similar the

[169] The EU with the blue-card and the US with the green-card.
[170] Angrist, J., D., and Kugler, A., D., (2003), p. F303, F328.
[171] EurActiv - An EU "Blue Card" for high-skilled immigrants? (2010)
[172] EurActiv - An EU "Blue Card" for high-skilled immigrants? (2010)
[173] In section 2, we have mentioned that Chiswick and Miller (1995) empirically showed that immigrants who are more familiar with the official language of the host-country and therefore are better in speaking the language are more likely to have a job and acquire a higher income than those that are less common with the host language.
[174] Duleep, H., O., and Regrets, M., C., (1997), p. 193.

origin and destination countries are in terms of their levels of economic development, industrial and occupational structures, institutional settings, and so forth, the more likely it is that education and work experience received in the origin country will be highly valued in the destination labour market".[175] Thus, the greater the divergence in language, culture and economic development, the lower the transferability of the origin-human capital becomes and the greater the initial inequality on the labour market of the host-country with the indigenous population. Second, we find a relation between literature on assimilation and the transferability of origin-human capital (*Hypothesis 2e*). The lower the degree of transferability and the greater the initial divergence, the faster the process of assimilation, because they have strong incentives to invest in destiny-specific human capital (see *section 3.1.2*).[176]

Only a few recent studies (Battu and Sloane, 2004; Chiswick and Miller, 2009; Green, Kler and Leeves, 2007; Sanromá et al., 2008) have dealt with the issue of imperfect transferability of origin-human capital from the perspective of "over-education". This study is the first in the Netherlands that is looking for an explanation for the lower remuneration of immigrants from the perspective of "over-education".[177] Budría and Moro-Egido (2008) defined over-education as „a situation in which an individual possesses a higher level of education than that which is required for the job".[178]

### 4.2 Over-education

The notion of this "new literature" is that due to the imperfect transferability of origin-human capital, immigrants are forced to accept jobs that require a lower qualification than that obtained in the country of origin, hence making them over-educated. The main results of these "new studies" are categorized by Sanromá et al. (2008) under three empirical regularities. First, the incidence of over-education among immigrants is greater than among the indigenous population. Second, immigrants are facing a higher wage penalty associated with over-education.[179] Finally, these studies have demonstrated that immigrant workers succeed in closing the initial gap in over-education compared to the indigenous population the longer they stay in the host-country, that is, assimilation occurs in over-education.[180]

[175] Friedberg, R., M., (2000), p. 225-226.
[176] Duleep, H., O., and Regrets, M., C., (1997), p. 194-195.
[177] Leuven, E., and Oosterbeek, H., (2011), p. 18.
[178] Budria, S., and Moro-Egido, A., I., (2008), p. 330.
[179] For each surplus year of over-education, immigrants receive a higher wage penalty than the indigenous population.
[180] We also have seen that assimilation closes the gap in wages between immigrants and the indigenous population.

In addition to these general findings, Chiswick and Miller (2009) find that an immigrant is more likely to be over-educated in the United States (i.e., host-country), the more years of work experience the immigrant has in the country of origin. This finding indicates that next to education followed abroad also work experience acquired in the country of origin is affected by the imperfect transferability of human capital (see *section 4.2.1*). In another study, Chiswick and Miller (2008) have measured that the "educational mismatch" is elucidating nearly 66% of the gap in return on human capital among the immigrants and indigenous population.

Leuven and Oosterbeek (2011) have given a plausible reason why these studies on over-education are so limited. They argue that due to possible differences in the national education systems there are problems of comparability between the indigenous population and immigrants.[181] This is a limitation we cannot neglect, however we could overcome this by investigating the incidence of over-education among the first and second generation and the indigenous population, and focus on the education followed in the host-country.[182]

### *4.2.1 Career mobility theory*

Apart from these studies, that are specifically aiming on the incidence of over-education regarding immigrants, there is also literature that seeks for a more general reasonable explanation of this phenomena.[183] For example, Galor and Sicherman (1990) claim in their theory of "career mobility" that the penalty in wages for overeducated workers is compensated by better promotion prospects.[184] Therefore, „individuals may choose an entry level in which the direct returns to schooling are lower than those in other feasible entry levels if the effect of schooling on the probability of promotion is higher in this firm".[185] The theory of career mobility concerns both the supply and demand side of the labour market and over-education is considered as a rational choice for both sides, employees and employers. Reasonably, researchers in the field of over-education are somewhat intrigued by the career mobility theory that is initiated by Galor and Sicherman (1990).

**Hypothesis 3a:** The incidence of over-education is more likely to be prevalent among individuals that are expecting to be promoted.

[181] Leuven, E., and Oosterbeek, H., (2011), p. 18.
[182] The number of observations of the second generation in our dataset is too small for a comparison analysis with only the second generation and the indigenous population.
[183] Over-education can occur both through "educational mismatch" or "occupational mismatch".
[184] Galor, O., and Sicherman, N., (1990), p. 169.
[185] Galor, O., and Sicherman, N., (1990), p. 177.

The theory of career mobility predicts that workers may consciously enter to a certain occupation that is lower than their educational qualifications, in order to acquire the necessary skills – by means of on-the-job training – that will facilitate them to obtain a more rapid career development in the future.[186]

However, Büchel and Mertens (2000) state that the theory of career mobility is not a complete elucidation for over-education, given that it does not offer a plausible reason for the contradictory and similarly event of "under-education". They argue that „the lack of theoretical explanations for the observed career mobility of undereducated workers is most likely due to somewhat more difficult rationalization of what under-education actually means. How is it possible that workers hold jobs for which they are not formally qualified?".[187] Hartog (2000) endeavors to answer this question and describes the event of under-education to those individuals that have above-average abilities. These individuals have achieved – in contrast to the expectations associated to their (relatively low) educational qualifications – a rather unusual successful career up to the point of time when their educational mismatch was detected.

In the model of career mobility, over-education is mainly seen as a short-term phenomena, an occupational mismatch that is only accounting the first stage of a working career. A point of view that is consistent with the ample empirical evidence across different countries, indicating that age and work experience are negatively correlated with the odds of being over-educated.

### *4.2.2 Incidence of over-education across minorities*

In the impeding subsections we elaborate on three separate but linked reasons why minorities[188] are more likely to be over-educated than comparable natives. Whereas the "skill transferability" in section 4.2.2.1 obviously only concerns the first generation.

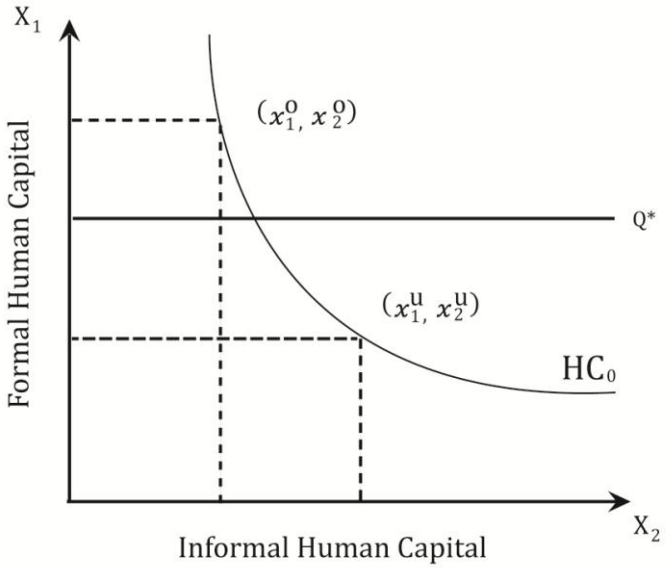
#### *4.2.2.1 Skill transferability*

A way to explain over-education is by decomposing human capital accumulation into formal- and informal human capital (McGuinness, 2006).[189] Becker (1975) argues that on-the-job training is directly substitutable with education, hence more of the latter could compensate for

[186] McGuiness, S., and Wooden, M., (2009), p. 266.
[187] Büchel, F., and Mertens, A., (2000), p. 1.
[188] First- and second generation.
[189] Formal capital is defined as education and informal capital as on-the-job training.

a shortage in the other.[190] In case there is an abundance of formal human capital but there has not been accounted for a potential lack in informal human capital, subsequently these workers are seemingly "over-educated". On the other hand, an under-educated worker could have an abundance of overlooked skills. Figure 6 illustrates graphically the trade-off between formal- and informal human capital, it shows different combinations of workers' education and on-the-job training with a similar productivity, relative to the average qualification (Q*).

**Figure 6. Human capital trade-off[191]**




There is an arbitrarily amount of possibilities ($X_1$, $X_2$), which are all related to the same level of "total human capital". The notion of human capital trade-off is that total human capital is attained by various combinations of $X_1$ and $X_2$. Whereas we find that a worker with $(x_{1,}^{o}\ x_{2,}^{o})$ is over-educated and accordingly underpaid if not controlled for the lack of informal human capital, we find the opposite in the case of $(x_{1,}^{u}\ x_{2,}^{u})$. McGuinness (2006) states that these results are the consequence of observing a workers' stock of human capital only by $X_1$, hence the apparent lower earnings are attributable to an omitted variables problem.[192]

In order to permeate the notion of human capital trade-off to the context of the imperfect transferability of the immigrants' origin-human capital (see *section 3.1.2*), we argue that the total human capital of an immigrant in the host-country always will be lower than that of a

[190] The first empirical framework that was able to test the human capital theory (Becker, 1964) was developed by Mincer (1974). His framework is based on an earnings regression centered around "years of schooling", and ergo less formal measures, such as on-the-job training, are ignored.
[191] Adapted version of McGuiness, S., (2006), p. 390, fig. 1.
[192] McGuiness, S., (2006), p. 390.

comparable native. The reason for this is that the total human capital of an immigrant in the host-country is diminishing by the transferability parameters $\tau_1$ and $\tau_2$, which are denoting the degree of transferability of formal- and informal human capital respectively. A way to illustrate this in an equation:[193]

$$f(\tau_1, X_1, \tau_2, X_2) = f\tau(X_1, X_2) < f(X_1, X_2) \; \forall \; (X_1, X_2) \; if \; \tau_1 = \tau_2 \; and \; \tau \in (0,1) \qquad \textbf{(3)}$$

**Hypothesis 3b:** The more education an immigrant has followed abroad, the higher the odds that the immigrant will be over-educated.

#### *4.2.2.2 Ethnic segregation*

In addition to the human capital theory, economists also argue that an individuals' productivity and consequently his earnings are depending on his occupation (compare *Figure 2*). The "Job Competition Model" (Thurow, 1975) is a competing framework to the career mobility theory (see *section 4.2.1*), in which the characteristics of an occupation are the only factor determining earnings.

It may be that immigrants are more geographically restricted than comparable natives and thus compete in a smaller pool of occupations and ergo, according to the Job Competition Model, may have to accept a lower occupation. There is abundant research on the ethnic segregation and concentration of immigrants in the United States, whereas for European cities these studies are scarce.[194] Musterd (2005) states that the lack of these studies in European countries is possibly due to the relatively low levels of ethnic segregation and the small number of mono-ethnic areas.[195]

In case of the Netherlands there has been a number of studies on ethnic segregation and concentration among the four largest ethnic groups (Bolt and Van Kempen, 2003; Musterd, 2005; Musterd and De Vos, 2006; among others).[196] An imperative theory to understand why ethnic groups are segregated or concentrated is the "spatial assimilation theory" from

[193] See *section 3* for a comprehensive elucidation of the equation. In addition, there is no literature that distinguishes between work-experience or education attained in the country of origin and the degree of transferability. Ergo, for plainness we here assume they are the same. However, in case there is a difference in the degree of transferability among formal- and informal origin-human capital, subsequently this does not affect the outcome that immigrants are more likely to be over-educated than comparable natives, for the reason that $\tau < 1$ always holds due to imperfect transferability.

[194] Mulder C., H., and Zorlu, A., (2007), p.2.

[195] Musterd, S., (2005), p.332.

[196] According Musterd and De Vos (2006) segregation occurs when the spatial distribution of a specific population in a larger area (e.g. a city) differs from the distribution of the total population. Whereas concentration occurs when a specific population group is overrepresented in a smaller area (e.g. a district or neighborhood) in comparison to other areas.

Crowder et al. (2005). According to this theory immigrants often end up in the same neighborhoods or areas due to, among others, having problems with speaking the official language of the host-country and therefore are holding on to family, co-ethnics and cultural ties.[197] [198] Based on this theory we would expect that ethnic groups which are more familiar with the official language of the host-country and therefore are better in speaking the language and/or have a small cultural distance from the indigenous population would be less likely segregated. According to Mulder and Zorlu (2010), Caribbean immigrants are better at speaking the Dutch language and have a smaller cultural distance with the indigenous population compared to Mediterranean immigrants, because of their colonial background (see *section 1*), and therefore are more likely to assimilate spatially.[199] [200]

In section 4.1 we briefly discussed the assimilation process among the four ethnic groups in the Netherlands. The results from Dagevos and Gijsberts (2007) demonstrated that the second generation is better educated than the first generation, which would lead to a better socioeconomic status in the labour market. The spatial assimilation theory postulates that a diminishing disparity in the socioeconomic status between an immigrant group and the indigenous population is expected to lead to a smaller spatial distance between these groups.[201] However, Latten and Zorlu (2009) have investigated the process of spatial assimilation in the Netherlands and concluded that there is no indication of spatial assimilation among second-generation non-western immigrants.[202] However, in another study, Mulder and Zorlu (2010) state that „there is some modest evidence of a spatial diffusion of Surinamese and Antilleans. Turkish and Moroccan migrants, in contrast, tend to move to neighborhoods with larger concentrations of nonwestern immigrants".[203]

**Hypothesis 3c:** The second generation Caribbean is less likely to be over-educated than Caribbean immigrants (i.e., first-generation.)

[197] See Mulder, C., H., and Zorlu, A., (2010) for a comprehensive overview of the "spatial assimilation theory" regarding the Netherlands.
[198] Mulder and Zorlu (2008) also argue that the lower socioeconomic status of the ethnic population compared to the indigenous population is attributable to the segregation of these ethnic groups (i.e., lower house prices). However, it has been argued by Musterd (2005) that the socioeconomic position of individual household and housing market conditions can explain only a fraction of ethnic segregation.
Mulder, C., H.,and Zorlu, A., (2008), p. 43.
[199] Mulder, C., H., and Zorlu, A., (2010), p. 5.
[200] Intuitively, one could imagine that there is some overlap between the "spatial assimilation theory" and the neo-capital theories mentioned in section 2 (i.e., predominantly cultural- and social capital).
[201] Mulder, C., H., and Zorlu, A., (2010), p.2.
[202] Latten, J., and Zorlu, A., (2009), p. 1918.
[203] Mulder, C., H., and Zorlu, A., (2010), p.2.

#### *4.2.2.3 Discrimination*

In all the preceding sections of this thesis, we have looked for an explanation of the differences in SES across immigrants and additionally to the inferior SES of ethnic groups compared to the indigenous population, whereas until thus far we did not refer to discrimination. We have examined factors that explain the gap among these groups beyond discrimination, because we stated that differences in the socioeconomic status could not easily be explained by appealing to discrimination. Chiswick (1988) demonstrated that some minorities that experienced discrimination have high levels of education, occupational status and income (i.e., socioeconomic status). In addition, Veenman (2010) states that „discrimination is usually not directly observable as it is a form of behavior that is generally condemned and is often illegal. There is therefore a considerable chance that the behavior is concealed".[204] Nevertheless, as the curtain almost drops we cannot ignore the presence of plain labour market discrimination among these ethnic groups in this thesis, which evidently is negatively affecting their socioeconomic status. However, in contrast to studies that are focused on discrimination, the roll of discrimination is in this thesis interpreted as the unexplained residual and as a result not overestimated.[205]

From the late 1970s onwards there has been abundant research on the incidence of labour market discrimination among ethnic groups in the Netherlands (Bovenkerk, 1977; Reubsaet and Kropman, 1985; Bouw and Nelissen, 1988; Niesing and Veenman, 1990; Veenman and Verburg, 1992; Van Beek, 1993; Bovenkerk et al., 1995; Veenman, 1995; Dagevos et al., 1996; Olde Monnikhof and Buis, 2001; Kruisbergen and Veld, 2002). While different methods are used, the results are unambiguously: there is discrimination based on ethnic origin in the Dutch labour market. A common definition of discrimination is the bad treatment of individuals or groups on criteria that does not concern the situation (Bovenkerk, 1977).

Though more recent studies are tending to show more ambiguous results (Berkhout et al., 2006; Van Tubergen et al., 2007a; Altintas et al. 2009).[206] For example, in the study of Altintas et al. (2009), they examine whether discrimination exists towards higher educated immigrants (i.e., Moroccans and Chinese) and use the Dutch as a reference group. They concluded that there was no sign of discrimination in the selection process. However they add to this conclusion that their research design is probably underestimating the incidence of discrimination due to a lack of final selection, where the discrimination still could find

[204] Veenman, J., (2010), p. 1807.
[205] Altintas et al., (2009), p. 85; Veenman, J., (2010), p. 1809.
[206] For a thoroughly overview on discrimination in the Netherlands we are recommending Veenman (2010).

place.[207] Ergo, the different results are attributable to different methods that have been used to examine discrimination, whereas discrimination – due to his complexity[208] – is also difficult to measure.[209]

Regarding the phenomena of over-education, the incidence of this may also be more common among ethnic minorities due to labour market discrimination.[210] In case the act of discrimination leads to rejection or a diminishing of the merits of minorities, then evidently, the incidence should be more prevailing among minorities. Therefore discrimination is a factor that should be considered as an implication of over-education and can arguably be anticipated to be more common among minorities that have a larger cultural distance compared to the indigenous population.

A reasonable way of thinking about the impact of discrimination on over-education of immigrants (i.e., first generation), is to perceive it as a supplementary capricious obstacle to the transferability of origin-human capital. This could be demonstrated in the IHCI-model (Duleep and Regrets, 2002) of section 3, by introducing a coefficient for ethnic discrimination that decreases the transferability parameter ($\tau$). The implication of this new coefficient in the IHCI-model of Duleep and Regrets (2002), would be that two immigrants with a similar degree of transferability and level of origin-human capital, however one of them is discriminated, subsequently the level of origin-human capital of the discriminated immigrant will be alleged as lower by the employer in the host-country. A way to illustrate this rather simplified according to equation 3, whereas $\tau_d$ denotes the transferability with the discrimination coefficient, is as follows:[211]

$$f\tau_d(X_1, X_2) < f\tau(X_1, X_2) \ where\ \tau_d < \tau\ and\ \tau_d, \tau \in (0,1) \qquad \textbf{(4)}$$

[207] They have used two methods, namely paired testing and an additional resume analysis (i.e., placing of identical resumes on a vacancy website).
[208] E.g., discrimination could lead to "cumulative discrimination". This means that due to a previous experience with discrimination, the victim is responding to this discrimination and is adjusting his behavior towards it, such as less investments in education. This would lead to an underestimation of the actual level of discrimination in the labour market. Therefore, we could argue that discrimination is often too complex for a model.
[209] Veenman, J., (2010), p. 1819.
[210] Sloane, P., J., (2002), p. 28-30.
[211] As previously mentioned in section 3, in this thesis we are focused on investigating the determinants. Therefore an exact and thoroughly empirical analysis to test if equations 3 and 4 and statements hold to the underlying theories is outside the scope of this thesis. The motivation of the partial models is to illustrate potential problems with that what theory suggests and what is possible to examine. Consequently, by illustrating the partial models, we hope to contribute to future research on this issue.

Some of the above mentioned reasons for a higher incidence of over-education among minorities are overlapping or complementary, but all are relevant theories to justify the higher incidence. In addition to that what has been elaborate previously, all the theories are pointed in the direction that (former-) colonial minorities are less likely to be over-educated than Mediterranean minorities.

**Hypothesis 3d:** Caribbean immigrants are less likely to be over-educated than Mediterranean immigrants.

# II. Empirical examination

In **Part I** (i.e., **section 1-4**) of this thesis, a theoretical framework has been proposed for the understanding of the differences in SES across immigrants in the Netherlands. Whereas in **Part II** of this thesis an empirical examination has been carried out to statistically analyze the derived hypotheses from the first part.

In **Part II** of this thesis, **section 5** is focused on the research design and describes the variables and datasets that have been used in the analyses. **Section 6**, presents the methodology and empirical results. The limitations and the potential further research, which arise from this study, are discussed in **section 7**. Finally, a discussion of our results, conclusions and the policy implications of this thesis are discussed in **section 8**.

In order to test our hypotheses, we have divided the analysis into three parts and make use of two different datasets (i.e., SPVA-02 and SIM-06). In the **first analysis** (see *Table 3, p. 55*), the effect of the neo-capital theories as has been discussed in section 2 will be empirically examined, that is, human capital (*hypotheses 1a-c)*, cultural capital (*hypothesis 1d*) and social capital (*hypotheses 1e-g*), on both immigrants' income per hour and occupational level (for an overview of these hypotheses see Appendix C1, *Table C1.1*).

In the **second analysis** (see *Table 3, p. 55*), we investigate the first dimension of Webers' class and status domains, that is education (see *section 3*). Here we empirically test the effect of settlement intentions in the host country (*hypotheses 2a-d*), skill transferability (*hypothesis 2e*) and the opportunity costs (*hypothesis 1f*) on the investment in post-migration education (for an overview of these hypotheses see Appendix C1, *Table C1.2*).

Finally, in the **third analysis** (see *Table 3, p. 55*), we aim to examine determinants that could be used as an elucidation for someone to be over-educated (*hypotheses 3a-d*), with the main focus on immigrants (for an overview of these hypotheses see Appendix C1, *Table C1.3*).

# 5. Data and Research Design

Data for the analyses were taken from two large scale cross-sectional surveys in the Netherlands with the focal point on the socioeconomic position of ethnic minorities.[212] The dataset, to examine the income, the occupational status and education (i.e., first- and second analysis), concerns data that are drawn from the nationwide "Social Position and Use of Public Utilities by Migrants" Survey (SPVA) performed in the year 2002.[213] The survey contains a large sample of immigrants (5,769), and has been translated into the minority language by the use of bilingual interviewers. The key function of the survey is to achieve information on the socioeconomic status of the four largest immigrant groups in the Netherlands (Turks, Moroccans, Surinamese and Antilleans).[214] Due to the fact that there exist a high degree of spatial concentration among these groups (see *section 4.1*), the survey exists of arbitrary samples of the target groups within the 13 largest Dutch cities, resulting in a representative sample of the target groups' total population.[215] One of the major advantages by using this dataset, is that it contains direct measures of both destination-specific and origin human capital.

The **first analysis** (i.e., income and occupational status) is limited to the foreign-born population that migrated to the Netherlands, that are active in the labour market and that are between the age of 15 and 64. In the **second analysis** (i.e., education) we limit the analysis also to the foreign-born population that migrated to the Netherlands, between the ages of 15 and 64, but in contrast to the first analysis, we incorporate both those are active and non-active in the labour market.[216]

The **third analysis** (i.e., over-education) examines the incidence of over-education among minorities[217] in the Netherlands, here we make use of the other dataset in this study, that is, "Survey of Integration", which has been carried out in the year 2006. This dataset could be seen as the successor of the series of SPVA. However, there are some fundamental differences between these datasets, SIM-06 is a nationwide sample instead of the 13 cities in

[212] In this study there are three different but linked analyses. The first analysis consists of the income and the occupational status. The second analysis aims at the educational attainment of immigrants. Whereas the third analysis is focusing on the incidence of over-education across ethnic minorities (see *Table 3)*.
[213] The survey SPVA-2002 has been conducted by the Institute for Sociological and Economic Research (ISEO) of the Erasmus University in Rotterdam.
[214] Groeneveld, S., and Weijers-Martens, Y., (2005), p. 7-8.
[215] Groeneveld, S., and Weijers-Martens, Y., (2005), p. 9.
[216] The age-range is derived from the directives that are used by the CBS.
[217] First- and second generation.

the SPVA-series and all the questions asked are the same for every person.[218] In addition to the evident fact that this dataset is more up to date than SPVA-02, there are other major advantages by using SIM-06 for our purpose. First, it contains Dutch natives that could be used as a reference category and second the survey includes a subjective measurement on over-education (see *section 5.1*).

**Table 3. Overview of the analyses**

| **First analysis** | **Second analysis** | **Third analysis †** |
|---|---|---|
| Income and occupational level | Education | Over-education |
| *Hypotheses 1a-1g* | *Hypotheses 2a-2f* | *Hypotheses 3a-3d* |
| Dataset SPVA-02 | Dataset SPVA-02 | Dataset SIM-06 |

† In contrast to the other analyses, this analysis contains an examination of both the first- and second generation.

The structure of this section is build on four subsections. Section 5.1 gives an explanation of the four dependent variables from the three analyses that have been used (see *Table 3*). Subsequently, in the impending subsections a comprehensive description of the independent and control variables of the three analyses are given.

## 5.1 Dependent variables

*Income*

The data provides several measurements of income, such as the household income, monthly income and several income categories. However, in our analysis we are focused on the individual level and a monthly income or categories are from an explanatory point of view not sufficient for our needs.[219] We therefore controlled for the number of hours worked per week and calculated the income per hour. By taking the logarithm of the income per hour as our dependent variable the model shows a better fit. This dependent variable can be characterized as a continuous variable and therefore will be carried out in an OLS regression.

*Occupational status*

To test the second dimension of Webers' view of class and status domains, we examine the occupational status of the immigrants. Occupational status is measured in terms of the International Standard Classification of Occupations (ISCO-88). The ISCO-88 measures an

[218] Dagevos et al., (2007a), p. 8.
[219] For the reason that someone with a high income per month could work a lot of hours to reach this, obviously this is not the same for someone who could work less and obtain the same income per month.

occupation into a defined set of groups according to the task and responsibilities undertaken by the occupation.[220] The following categories are distinguished: (1) elementary occupation, (2) low occupation, (3) medium occupation and (4) high/tertiary occupation.[221] We treat occupational status as a continuous variable and have performed an OLS regression.

*Education*

By using SPVA-02 we are able to rely on a detailed examination of the first dimension of Webers' view of class and status domains, that is, education. In this second part of the analysis (compare *Table 3*) we study whether immigrants have attended education in the host-country (i.e., the Netherlands), and, if so, whether they successfully completed their education (i.e., achieved a diploma). The first dependent variable has the outcomes (0) no education followed in the Netherlands, (1) education followed in the Netherlands but not completed, and (2) education followed in the Netherlands and completed. In contrast to the previous dependent variable, we also present the results of an additional analysis in which we clearly distinct in the degree of education followed in the country of origin and the Netherlands. This in order to compare our previous results and to see whether the results are sensitive to previous classification. Therefore, the second dependent variable has the outcomes (0) no education followed in the Netherlands or only primary education, (1) followed an education in the Netherlands similar to an education followed in the country of origin but higher than primary education, (2) followed an education in the Netherlands that is one degree higher than the education followed in the country of origin and (3) followed an education in the Netherlands that is two degrees higher than the education followed in the country of origin.[222] For both dependent variables we have carried out an ordinal logistic regression, because both are discrete variables with an ordinal ranking.

*Over-education*

The literature has broadly speaking four ways of defining educational-mismatches[223], these four are classified into three procedures: the objective method, the subjective method and the statistical method (mode or mean).[224] In principal, the preference of one method or another is prone to the availability of statistical information rather than theoretical considerations.[225] In

[220] Elias, P., (1997), p. 6-7.
[221] Due to a low amount of observations in the "tertiary occupation", we have combined "High" and "Tertiary".
[222] Education is categorized by four categories, that is: primary, lower secondary, higher secondary and tertiary.
[223] Groot, W., and Maassen van Brink., H., (2000), p. 150.
[224] Verhaest and Omey (2004) and Sanromá et al. (2005) provide more details regarding these procedures.
[225] Sanromá et al. (2008), p. 9.

our case, the data in SIM-06 makes it possible to use of the "Direct Self-Assessment" (DSA). This is a subjective method of measuring over-education by asking the respondents whether they are over-, under- or properly educated for the job.[226] One of the main advantages of obtaining information through self-assessment is that it is the source contiguous to the actual situation of the occupation, therefore taking into account all specific conditions.[227] We have carried out a binary logistic regression, whereas we used the DSA variable as our dependent variable.[228]

In the impeding sections both the independent as well the control variables will be discussed and explained for each analysis separately.

## 5.2 First analysis

For an overview of the explanatory variables used for the first analysis see *Table B1.1* (Appendix B1, pp. 125-126).[229]

*Human Capital*

A proxy of human capital is derived by the use of several determinants based on the preceding theoretical sections discussed in Part I of this thesis. In empirical research, human capital is consistently measured by means of education, work experience and health condition. In our study, we have used a variable measuring the educational attainment both in the country of origin and the Netherlands. Respondents were asked about their highest educational attainment in the country of origin and the Netherlands. In order to make it possible to compare between educational attainment in the host-country and the country of origin, we have build four classes: (1) primary, (2) lower secondary, (3) higher secondary and (4) tertiary. We treat both variables as district variables with an ordinal ranking. Moreover, we want to gain insight in the effect of learning new skills through the firm (i.e., on-the-job training). Respondents were asked whether they have had a training in the firm or not. We included a dichotomous variable, whereas not having a training is the reference category.

[226] Verhaest, S., Omey, E., (2004), p. 3.

[227] This advantage holds if we assume that the worker in question is in the best situation to evaluate which credentials are required for the job he or she performs. If this is not the case, subsequently there is room for a validity problem.

[228] We have chosen for this specific model, due to a low frequency of observations (<55) in the category of under-education. Which is not unexpected based on the theory from section 4.2.1, whereas we defined under-education as those individuals that have "above-average abilities". Throughout this thesis and other papers (e.g., Van Ours and Veenman, 2001; Dagevos et al., 2007), we have seen that immigrants as well as the second generation are still behind in their abilities compared to the indigenous population. Moreover, in this thesis we are mainly focused on finding an explanation of the incidence of over-education instead of under-education.

[229] The models for both dependent variables are similar, with the exception of the independent variable occupation-level in the model with the logarithm of income per hour.

Furthermore, regarding the preceding theoretical sections, we have seen that there is ample evidence that the education of parents has an effect on the human capital of the child (e.g., Borjas, 1994; Chiswick, 1988 and Gang and Zimmerman, 1999). We therefore included dichotomous variables indicating parents' educational level. The following dichotomous variables have been included: education parents – lower secondary, education parents – higher secondary and education parents – tertiary, whereas the reference category is that parents have followed only a primary education.

The SPVA-02 survey contains a direct measurement of the work experience in the Netherlands, whereas the work experience in the country of origin is less direct. Respondents were asked to report the years of work experience in the Netherlands. No such question is asked concerning the years of work experience in the country of origin. In order to be able to measure the work experience in the country of origin indirect, we have used information on the age at migration and the total years of schooling abroad. The potential work experience is then given by: age at migration – years of schooling – 6. We correct for six years, for the reason that Van Ours and Veenman (2001) have calculated that the decisive age limit for significant drawbacks from migration in the Netherlands is six years.[230] Moreover, based on previous studies that have found some evidence for curvilinear associations, we included a quadratic condition for work experience.

Finally, respondents were asked to report their health condition. The answers that respondents could give were: (1) very bad, (2) bad, (3) neutral, (4) good, and (5) excellent. Due to low observations in the categories (1), (2), (4) and (5) we have grouped (1) and (2) together, as well as (4) and (5). We have included a dichotomous variable indicating that the respondents health was either good or excellent, whereas a bad or neutral health is used as the reference category.[231]

*Social Capital*

In the analysis we have included also several proxies of social capital. First, we have united two questions that determine the immigrants' contact with the indigenous population. In the survey respondents were asked how often they are visited by Dutch friends or neighbours and how often they relate with Dutch in their leisure. Both questions had equivalent possible

[230] Van Ours, J., C., and Veenman, J., (2001), p. 743.
[231] Only a small portion, less than 90 observations, of the respondents in this analysis have reported that their health was (very) bad. This is not unexpected, for the reason that in this analysis we are focused on the immigrants that are active on the labour market.

answers: (1) never, (2) sometimes, and (3) often. We found that the answers to these questions are highly correlated (Spearmans $\rho$ = .706; p = .000), as a result we have united the two questions by sum the scores of both questions and divided them by two.

Next to a measure of the frequency of contacts immigrants have with the indigenous population, we also included a variable on ethnic intermarriage that denotes the strength of weak ties (Granovetter, 1973). The variable is constructed into three categories: (1) single (2) married to an ethnic partner, (3) married to a Dutch partner. We use (1) as the reference category and include two dichotomous variables.

Moreover, respondents were asked to report whether they are a member of an association and those individuals that are a member were asked if the association is mainly consisting of ethnic or Dutch members. Based on these questions we have build a variable with three classes; (1) no membership, (2) member of a predominantly ethnic association, and (3) member of a predominantly Dutch association. In our analysis we have used (1) as the reference category and included two dichotomous variables in the analysis.

*Cultural Capital*

De Koning et al. (2008) postulate that the modernity of symbols and meanings (i.e. norms and values) could serve as an indicator of cultural capital.[232] We assume that the Dutch are the most modern in their way of perceiving symbols and meanings, and we therefore assume that being modern is most comparable to the Dutch culture. In the survey respondents were asked several statements about the role of the wife, openness about sex, living with parents until marriage, the composition of the family and respect towards parents. For each of the statements the respondent could give an answer from a scale of 1-5 whether they agree with the statement or not. Whereas (5) denotes someone to be modern and (1) evidently the opposite. We have constructed a point-scale system, we have added up the scores of the eight statements and divided them by five.

***Control variables – First analysis***

Apart from the explanatory variables, we also included several control variables. For an overview we recommend *Table B1.1* in Appendix B1.

[232] De Koning et al., (2008), p. 11.

*Language proficiency*

Since one reasonably could expect that Dutch language deficiency could impede access to the Dutch labour market, obstruct upward labour mobility (i.e., job level) and restrain earnings. It is therefore likely to assume that the immigrants' remuneration and their job level given their educational attainment and skills, is correlated to their Dutch language proficiency. To control for this, respondents were asked whether they experience complications with speaking the Dutch language. The respondents could choose one of the following answers; (1) always problems with speaking Dutch, (2) sometimes problems with speaking Dutch, (3) never problems with speaking Dutch.

*Gender*

Abundant research have exemplified that gender plays a significant role in the distribution of remuneration and career opportunities. As a result, we have controlled for this effect by including a dichotomous variable, whereas the value 1 denotes a male and the value 0 a female.

*Age*

There is ample empirical evidence that age is positively correlated with both income and job level. In addition, research also showed that age has a curvilinear relation with an individuals' income and job level, thus next to age we also incorporated a quadratic function of age in the analysis. The reason behind including the age and age-squared terms, is that it may capture an immigrants' experience, his physical aptitude, the character of his job, the development of his life, and so forth.

Furthermore, since we are examining the income and job level of immigrants in the Netherlands, the age at immigration also plays an imperative roll in our analysis. Schaafsma and Sweetman (2001) have thoroughly examined the effect of age at immigration and immigrants' earnings. They have given various reasons why one would suspect that age at immigration plays an imperative roll on immigrants' earnings and job level, either directly or indirectly. For example, an indirect effect of age at immigration could be that the older someone chooses to immigrate, the more likely it is that he attained education in the country of origin. It could be that this education is not (recognized as) commensurate to education in the host country and therefore yield a lower return and job level. A similar mechanism may be the case for labour market experience. In addition, Schaafsma and Sweetman (2001) state that

„older immigrants may also be less able to adjust to the linguistic and cultural challenges associated with entering a new country, and this may make it difficult for them to generate earnings commensurate with their formal educational and occupational skills".[233] The examples given propose that the earnings of an immigrant decline as age at immigration rises.

*Unemployment*

In our analysis we also controlled for the number of times an individual has been unemployed in the Netherlands. According to Morin and Kochar (2010) there are several negative effects of someone that has been unemployed in the past on his income and job level. Some effects they describe are mentally related, for example, given someone's job level, it may be that unemployment could lead to losing self-respect and therefore, among others, affect their ability to achieve their career goals. Another reason they give, which is more related to the job level, is that workers who found a job after being unemployed, usually are settling for a job that is worse than the one they lost.

*More responsibility within a firm*

The control variable "number of persons to whom leads" controls for a higher responsibility within the firm and the leading capabilities of an individual. It is assumed that this might have a positive influence on both the income and job level of an individual.

*Motivation of immigration*

Motivation is an essential variable when examining career related issues, such as income and job level. Therefore, in our analysis we control for the motivation of immigration. We included dichotomous variables, indicating that an individual immigrated due to family reasons, work or due to study, whereas the reference category is all other reasons.

*Sector*

There is abundant empirical evidence that the distribution of remuneration and job levels are varying across sectors in the labour market. Therefore, we control for this effect by including dichotomous variables that are representing the following sectors; agricultural, industry, construction, trade, transport, business services, government and the healthcare sector, whereas the cultural sector has been used as the reference category.

[233] Schaafsma, J., and Sweetman, A., (2001), p. 1067.

## 5.3 Second analysis

For an overview of the explanatory variables used for the second analysis see *Table B1.2* (Appendix B1, p. 127).

*Settlement Intentions*

Age at migration and years since migration are included in the analysis and are measured in years. Because in preceding studies there has been found some evidence for curvilinear associations, we incorporate quadratic conditions for both age at migration and length of stay (i.e., years since migration).

Furthermore, a measurement for having children has been included in the analysis. Respondents were asked how many children they have, the answers in the analysis vary between 0-12 (compare *Table B1.2* in Appendix B1, p. 127). In addition to the number of children, we also incorporated a more direct measurement on the settlement intentions of an immigrant, that is, respondents were asked to report how many children are living with them in the Netherlands. We have constructed a dichotomous variable, where the value 1 is given in case respondents have answered to have children living with them in the Netherlands and the value 0 in case respondents have answered not having children living with them in the Netherlands.

Finally, we also included a variable on marriage that indicates whether an immigrant is married to a Dutch partner. Respondents were asked whether they are single, married to a Dutch partner or married to an ethnic partner. We incorporated a dichotomous variable in the analysis, indicating that the respondent is married with a Dutch partner, whereas single and married to an ethnic partner are used as the reference category.

*Skill Transferability*

Regarding the skill transferability, we have incorporated a variable indicating the country of origin of the respondents, that is, Turkey, Morocco, Suriname and the Netherlands Antilles. Next to a measure of the ethnic groups separately, we also carried out models in which we have grouped both the Mediterranean immigrants and the Caribbean immigrants. In these models, where we have grouped the ethnicities, we additionally added an interaction effect between country of origin and the years of education followed abroad.

*Opportunity Cost*

In order to take into account the opportunity cost of the immigrants for investments in education, we have included a variable indicating the number of times unemployed. The respondents were asked how many times they were unemployed in the Netherlands, the answers vary between 0-9 (compare *Table B1.2* in Appendix B1, p. 127). In addition we have added an interaction effect between the dichotomous variable country of origin, where Caribbean immigrants receive the value 1 and Mediterranean immigrants the value 0, and the number of times someone has been unemployed in the Netherlands.

***Control variables – Second analysis***

Apart from the explanatory variables, we also included several control variables. For an overview we recommend *Table B1.2* in Appendix B1.

*Gender*

There are several reasons to assume why there may be an effect of gender on the investment in education of immigrants. One of these reasons can be derived from the Mincer model (1978) that assumes that females are more likely to be "tied movers", for the reason they prove to be more discontinuous regarding their labour market participation and evidently this leads to lower returns on their investments. Mincer (1978) further argued that „net family gain rather than personal gain motivates migration of households".[234] More specifically, the Mincer model suggests that the husband is a better breadwinner and has a higher probability of making a career and therefore gain more return on their investments in education in contrast to (married) females.

*Health condition*

According to Behrman (1996), health condition is strongly associated with the educational attainment. However, he also states that „associations do not necessarily indicate causality; estimates generally are likely to be biased in one direction or the other. Therefore the evidence is more nuanced and qualified than often has been recognized, but may still support the conclusion that health may have considerable effects on the educational attainment".[235] Perhaps a more intuitive observation is that poor health conditions lead to worse performances and hence less investments in education. Based on these elucidations we control for health

[234] Mincer, J., (1978), p. 750.
[235] Behrman, J., (1996), p. 23.

condition and have incorporated two dichotomous variables in the analysis, indicating a self-assessment of a good health condition and a bad health condition, whereas neutral is used as the reference category.

*Motivation of immigration*

The control variables "study", "work" and "family" control for the motivation of immigration, whereas the reference category is all other reasons. It may be recognized, for example, that an immigrant that immigrates due to study reasons will invest more than an immigrant that migrates for other reasons.

## 5.4 Third analysis

For an overview of the explanatory variables used for the third analysis see *Table B1.3* (Appendix B1, pp. 128-129).

*Career mobility*

To operationalize the career mobility theory, two measurements are included in the analysis. First, we look at the probability of getting a promotion, here respondents were asked if they have opportunities for a promotion within their current occupation and firm. We included a dichotomous variable, whereas the value 1 denotes someone that has an opportunity for getting a promotion in the firm and the value 0 in case he or she believes otherwise. Second, we incorporated a variable that indicates the selection of receiving on-the-job training within a firm, in order to acquire the necessary skills for the promotion. The variable is dichotomous, the value 1 is given in case respondents answered that they have followed or are following a training and the value 0 refers to those individuals that have answered not having a training in their current occupation and firm.

*Human capital*

A proxy for human capital has been derived from both education and work experience, whereas there has been made a distinction between the first- and second generation. In the analysis for the first generation, we have taken into account the number of years education followed in the country of origin, highest education attained (with diploma), the potential work experience in the country of origin and the years of work experience in the Netherlands. Respondents were asked to report the years of work experience in the Netherlands. Similar to SPVA-02, no such question is asked in SIM-06 concerning the years of work experience in the country of origin. Yet again, in order to be able to measure the work experience in the

country of origin indirect, we have used information on the age at migration and the total years of schooling abroad. The potential work experience is subsequently given by: age at migration – years at schooling – 6.

*Country of origin*

We have included a variable indicating the country of origin of the respondents. Respondents were asked where they were born, they could choose between the Netherlands, Turkey, Morocco, Suriname and the Netherlands Antilles. Whereas we have grouped both the Mediterranean immigrants and the Caribbean immigrants.

***Control variables – Third analysis***

Apart from the explanatory variables, we also included several control variables. For an overview we recommend *Table B1.3* in Appendix B1.

*Age*

In the analysis we have included a dichotomous variable that controls for the age of the immigrants. Respondents were asked how old they are, the answers in the analysis are varying from 15 to the age of 64. The dichotomous variable denotes respondents between the age of 15 and 40, whereas the age 41-64 is the reference category.

*Gender*

There is abundant research that exemplifies that there is a male – female gap. Various theories are used to elucidate why men earn more than woman. One of these theories is initiated by Frank (1978), he suggests that married woman are limited in their geographic mobility. His theory, "differential over-qualification" is based on the Mincer model (1978) that suggest that woman more frequently are "tied movers". Given that the man usually is the primary wage earner, the job search of the wife may endure setbacks and hence they may accept a job for which they are "over-educated".

*Discrimination*

Apart from the elucidations that have been given in section 4, the higher incidence of over-education may also be a sign of plain labour market discrimination. Therefore, we control for discrimination in our analysis by including a self-assessment variable on discrimination. Respondents were asked whether they have been discriminated and could answer; (1) often, (2) sometimes or (3) never. We have included two dichotomous variables indicating often and

never, whereas "sometimes" is the reference category. However, we must note that a self-assessment variable for discrimination brings some problems with it concerning the validity. For example, does the respondent knows there is discrimination? He or she might believe that discrimination occurs when this is not the case, and conversely, he or she considers that there is no discrimination while in fact it is.

*Social capital*

Different network theories of social capital, such as Mouw (2003), state that individuals with a rich network are in the advantage of finding the right job (i.e., compared to their education) because of the information they gain through their social ties. Given that natives have superior information in the Dutch labour market (see *section 2.1.3*), it is reasonable to assume that immigrants that are frequently in contact with natives are less likely to be over-educated. For this reason, we control for someone's social capital by including a variable which we have constructed based on two questions, that is, how often they relate to Dutch friends or neighbours and a similar question how often they relate to Dutch friends. Both questions had equivalent possible answers; (1) never / less than once a year, (2) a couple of times per year, (3) every month, (4) every week, (5) every day. We have united the two questions by sum the scores of both questions and divided them by two.

*Cultural capital*

The control variable "connectedness to country of origin" controls for the cultural distance between the indigenous population. We have included two dichotomous variables, one indicating someone is more connected to the country of origin, whereas the other specifies someone that is more connected to the Netherlands. The reference category is if an individual reported that he or she is equally connected to the country of origin and the Netherlands.

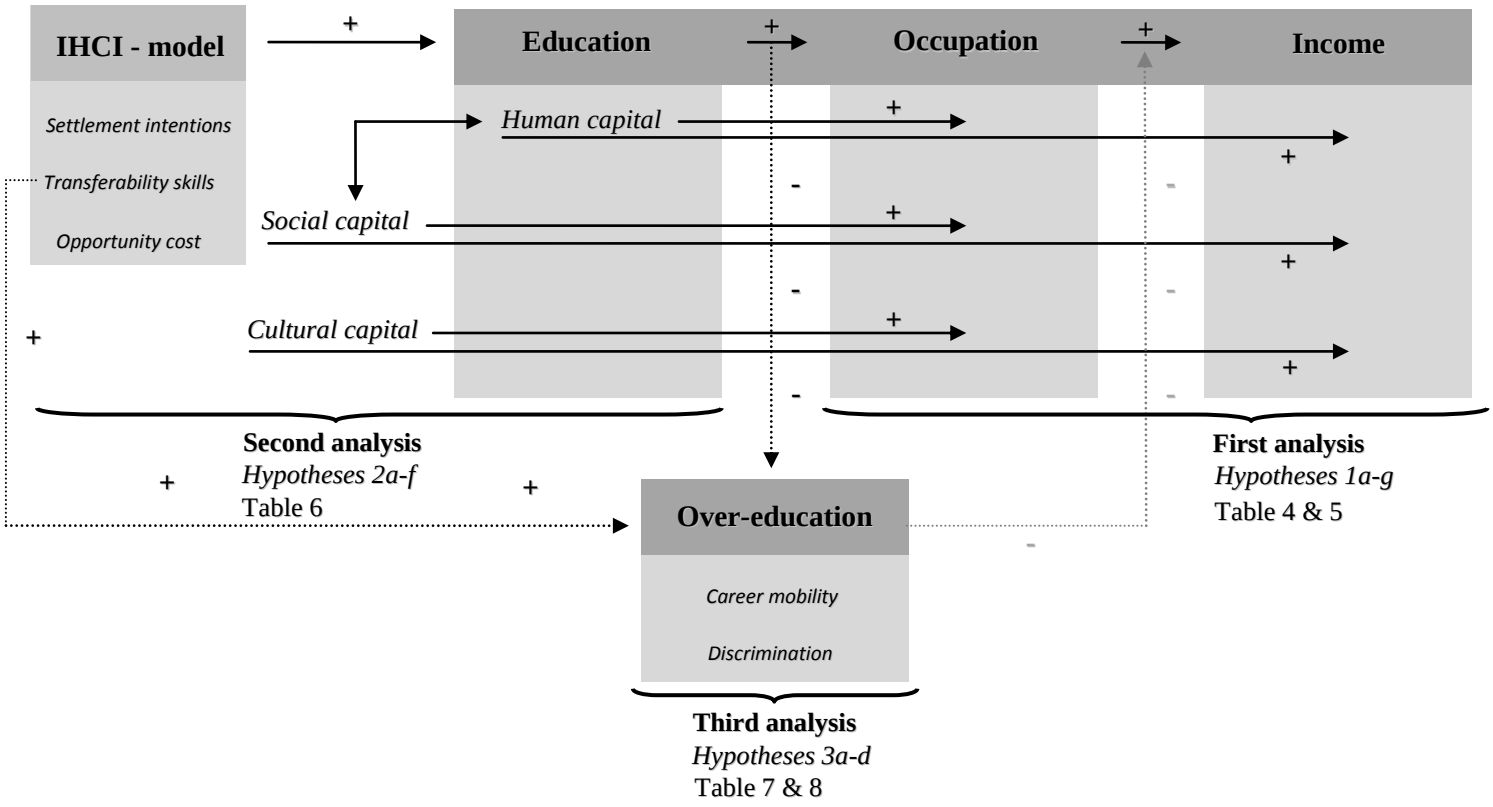
*Generation*

In order to distinguish between the first- and second generation we have included a dichotomous variable that denotes the first generation.

# 6. Methodology and Results

In this section a description of the methodology that has been used in order to come to the results are given. Furthermore, in section 6.2 and the impeding subsections we interpret the results of the three analyses (compare *Table 3*) and link them to our hypotheses. Below, in figure 7, we present the outline of the analyses and the expected associations.[236] The grey (light) arrow depicts what is assumed by the literature and the dark arrows illustrate what will be examined in the impeding subsections.

**Figure 7. Framework of the analyses**




## 6.1 Methodology

We used multivariate regression techniques in the first analysis to examine the theoretical considerations (see *section 2.1.4*) that we have made regarding social- and human capital. We also used multivariate regression techniques in our second analysis (i.e., education) as a robustness test, in order to compare the results and to observe whether the results are sensitive to the classification of our dependent variables. We carried out an ordinary least squares (OLS) regression for both the analysis of (logarithm) income per hour and occupational status, whereas for the investment in education (i.e., second analysis), we performed an

[236] For a comprehensive descriptive overview of the formulated hypotheses throughout this thesis see Appendix C1; *Table C1.1*, *Table C1.2* and *Table C1.3*.

ordinary logistic regression. Given that immigrants' income and occupational status in the first analysis was estimated for only those who were active on the labour market (i.e., employed), we controlled for potential sample selection bias in our model by applying the Heckman two-step procedure (Heckman, 1979). The equation of labour market participation is likely to have a correlated error term ($\varepsilon_1$) with the error term ($\varepsilon_2$) of the equations on income and occupational status because various ignored determinants may affect both outcomes (e.g., ambition and motivation). The results (see Appendix C2, *Table C2.1*, pp. 131-133) exemplified that there is no indication of such selection bias in our analyses. In our third analysis, in which we examine the incidence of over-education, we used multivariate regression techniques and carried out both a binary logistic regression.

Moreover, in order to verify our results we have examined if high correlations exists between our independent variables, since high correlation will lead to biased results. A way to examine this is by using the linear regression model (OLS) which determines multicollinearity (i.e., we treated all our outcome variables as continuous). According to Kutner et al., (2004), the variance inflation factor (VIF) should be removed if larger than 7.5. All the variables are within this range. In addition, we have tested our sample with Spearman and Pearson correlation. The outcomes indicated that there is no strong correlation (< 0,6) between the independent variables in the three analyses.[237]

In conclusion, all of our results remain unchanged regarding the above robustness tests.

## 6.2 Results

In order to test our hypotheses, we first will empirically examine in section 6.2.1 the effect of the neo-capital theories discussed in section 2, that is, human capital (*hypotheses 1a-c)*, cultural capital (*hypothesis 1d*) and social capital (*hypotheses 1e-g*), on both immigrants' income per hour and occupational level (see Appendix C1, *Table C1.1*).

In section 6.2.2 we investigate the first dimension of Webers' class and status domains, that is education (see *section 3*). Here we empirically test the effect of settlement intentions in the host country (*hypotheses 2a-d*), skill transferability (*hypothesis 2e*) and the opportunity costs (*hypothesis 2f*) on the investment in post-migration education see (Appendix C1, *Table C1.2*).

[237] All the correlation and multicollinearity tables are available on request from the author.

Finally, in section 6.2.3 we aim to examine determinants that could be used as an elucidation for someone to be over-educated, with the main focus on immigrants. In this section we test *hypotheses 3a-d* (Appendix C1, *Table C1.3*).

### *6.2.1 Results of the first analysis*

We first discuss the results of the multivariate analyses of the logarithm of income per hour and occupational status. Table 4 presents the results of the ordinary least squares (OLS) regression of the logarithm of income per hour and Table 5 the results occupational status. Both analyses only include those immigrants' that are active in the labour market (i.e., employed), we therefore tested for the selectivity bias in both analyses. The Heckman two-step procedure for sample selection bias exemplified that for both analyses there was no selection bias (see Appendix C2, *Table C2.1*) among immigrants that are active in the labour market (i.e., employed) in contrast with those who are non-active in the labour market (i.e., unemployed and looking for a job).

In both Table 4 and Table 5, Model I consists only of proxies of human- and cultural capital, Model II contains only measures of social- and cultural capital, in Model III we included interactions between several human capital variables and the country of origin and controlled for cultural capital, finally Model IV includes human-, social- and cultural capital all together.

In order to examine the different effects of social- and human capital (see *section 2.1.4*), we compare the coefficients of Model I ($\beta_{yx}$) and Model II ($\beta_{yz}$) to that of Model IV($\beta_{yxz}$). More specifically, we attempt to investigate whether the effects of the proxies of human (social) capital endure when we take social (human) capital into consideration. The comparison and evaluation of the coefficients has been done by the method of Clogg et al., (1995).[238]

[238] The method here used by Clogg, Petkova and Haritou (hereafter CPH) is somewhat related to several large-sample tests for "model misspecification", one of the most accepted tests in this field is initiated by Hausman (1978). However, the test proposed by CPH (1995) is different from the Hausman test in several ways. They propose a set of methods for testing whether the change in a regression coefficient (or set of coefficients) is statistically significant. The most imperative difference between the CPH methods and Hausman, is that the Hausman test assumes that the restricted model ($H_R$) is true, whereas the CPH method assumes otherwise, that is, they assume the full model ($H_F$) to be true. In our case, it would make more sense to assume that statistical interferences should be conditional on the full model($H_F$), because this is consistent with all research in the field of our study (non-experimental). Moreover, if we would consider the restricted model ($H_R$) as correct, the probability of a bias in our results, due to an omitted variable problem, is very likely to occur.

**Table 4. OLS regression – (logarithm) income per hour**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| *Human capital* | | | | | | | | |
| Occupational status | 0.071*** | 0.013 | | | 0.068*** | 0.013 | 0.075*** | 0.014 |
| Educational attainment NL | 0.058*** | 0.011 | | | 0.051*** | 0.019 | 0.052*** | 0.012 |
| Educational attainment abroad | 0.023* | 0.014 | | | 0.015 | 0.017 | 0.025* | 0.015 |
| Work experience NL / 10 | 0.062*** | 0.019 | | | 0.071*** | 0.024 | 0.059*** | 0.021 |
| Potential work experience abroad / 10 | -0.009 | 0.032 | | | 0.004 | 0.039 | 0.007 | 0.035 |
| On the job training | 0.026 | 0.020 | | | 0.027 | 0.020 | 0.014 | 0.022 |
| Good health condition | 0.040* | 0.022 | | | 0.038* | 0.022 | 0.060** | 0.024 |
| Parents lower secondary education | -0.023 | 0.028 | | | -0.035 | 0.028 | 0.006 | 0.032 |
| Parents higher secondary education | 0.008 | 0.035 | | | -0.004 | 0.035 | 0.017 | 0.039 |
| Parents tertiary education | 0.080** | 0.037 | | | 0.064* | 0.037 | 0.102** | 0.043 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | -0.002 | 0.074 | | |
| Caribbean * Educational attainment NL | | | | | 0.008 | 0.021 | | |
| Caribbean * Educational attainment abroad | | | | | 0.025 | 0.020 | | |
| Caribbean * Work experience NL | | | | | -0.014 | 0.023 | | |
| Caribbean * Potential work experience abroad | | | | | -0.027 | 0.032 | | |
| *Social capital* | | | | | | | | |
| Contact Dutch | | | 0.035** | 0.017 | | | 0.017 | 0.205 |
| *Social ties (ref. "single")* | | | | | | | | |
| Married to an ethnic partner | | | 0.077*** | 0.026 | | | 0.079*** | 0.029 |
| Married to a Dutch partner | | | 0.073** | 0.034 | | | 0.079** | 0.038 |
| *Membership association (ref. "no membership")* | | | | | | | | |
| Predominantly ethnic members | | | 0.036 | 0.026 | | | -0.017 | 0.027 |
| Predominantly Dutch members | | | 0.069*** | 0.027 | | | 0.050 | 0.038 |
| *Cultural capital* | | | | | | | | |
| Scale modern conceptions | 0.007 | 0.018 | 0.061*** | 0.017 | 0.007 | 0.018 | 0.001 | 0.020 |
| *Connectedness (ref. "equally connected")* | | | | | | | | |
| More connected to country of origin | 0.022 | 0.021 | 0.010 | 0.022 | 0.019 | 0.021 | 0.005 | 0.024 |
| More connected to the Netherlands | 0.048 | 0.033 | 0.057* | 0.032 | 0.045 | 0.033 | 0.038 | 0.036 |
| *Control variables* | | | | | | | | |
| Language proficiency | 0.037** | 0.018 | 0.082*** | 0.018 | 0.040** | 0.018 | 0.031 | 0.020 |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | -0.006 | 0.032 | -0.012 | 0.030 | | | 0.000 | 0.033 |
| Surinamese | 0.030 | 0.033 | 0.015 | 0.032 | | | 0.021 | 0.036 |
| Antillean | -0.017 | 0.038 | -0.001 | 0.036 | | | -0.044 | 0.042 |
| Age/10 | 0.220*** | 0.089 | 0.258 | 0.084 | 0.207** | 0.092 | 0.214** | 0.094 |
| Age/10-squared | -0.027*** | 0.011 | -0.025 | 0.010 | -0.025** | 0.011 | -0.026** | 0.011 |
| *Gender (ref. "female")* | | | | | | | | |
| Male | 0.055** | 0.024 | 0.051** | 0.025 | 0.060** | 0.024 | 0.029 | 0.028 |
| Age at migration | 0.000 | 0.003 | -0.004*** | 0.001 | 0.000 | 0.003 | 0.000 | 0.004 |
| Number of persons to whom leads | 0.003*** | 0.001 | 0.004*** | 0.001 | 0.004*** | 0.001 | 0.003** | 0.001 |
| Number of times unemployed in the NL | -0.009* | 0.005 | -0.017*** | 0.005 | -0.009* | 0.005 | -0.009 | 0.006 |

--- Table 4 **OLS regression – (logarithm) income per hour** (continued) ---

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.012 | 0.026 | 0.046* | 0.025 | 0.014 | 0.026 | 0.021 | 0.028 |
| Study | 0.057* | 0.030 | 0.117*** | 0.029 | 0.033 | 0.030 | 0.078** | 0.034 |
| Work | 0.015 | 0.031 | 0.016 | 0.030 | -0.006 | 0.031 | 0.032 | 0.033 |
| *Sector (ref. "Cultural")* | | | | | | | | |
| Agriculture | 0.113* | 0.060 | 0.155*** | 0.060 | 0.116* | 0.061 | 0.098 | 0.064 |
| Industry | 0.112** | 0.049 | 0.128*** | 0.050 | 0.111** | 0.049 | 0.110** | 0.053 |
| Construction | 0.044 | 0.061 | 0.067 | 0.062 | 0.040 | 0.061 | 0.050 | 0.066 |
| Trade | 0.073 | 0.053 | 0.074 | 0.053 | 0.073 | 0.053 | 0.067 | 0.058 |
| Transport | 0.177*** | 0.057 | 0.156*** | 0.058 | 0.181*** | 0.057 | 0.181*** | 0.061 |
| Business services | 0.138*** | 0.050 | 0.138*** | 0.052 | 0.137*** | 0.050 | 0123** | 0.055 |
| Government | 0.166*** | 0.050 | 0.240*** | 0.052 | 0.169*** | 0.050 | 0.153*** | 0.056 |
| Healthcare | 0.098** | 0.050 | 0.122** | 0.054 | 0.108** | 0.050 | 0.080 | 0.058 |
| (Constant) | 0.995*** | 0.195 | 0.911*** | 0.187 | 1.028*** | 0.197 | 0.956 | .206 |
| Number of observations | 797 | | 960 | | 797 | | 655 | |
| $R^2$ | 0.378 | | 0.266 | | 0.379 | | 0.405 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

**Table 5. OLS regression – Occupational status**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| *Human capital* | | | | | | | | |
| Educational attainment NL | 0.292*** | 0.029 | | | 0.403*** | 0.050 | 0.280*** | 0.033 |
| Educational attainment abroad | 0.192*** | 0.036 | | | 0.146*** | 0.045 | 0.176*** | 0.040 |
| Work experience NL / 10 | 0.068 | 0.052 | | | 0.155** | 0.065 | 0.048 | 0.060 |
| Potential work experience abroad / 10 | -0.129 | 0.085 | | | -0.134 | 0.104 | -0.135 | 0.096 |
| On the job training | 0.106** | 0.054 | | | 0.089* | 0.054 | 0.120** | 0.060 |
| Good health condition | 0.015 | 0.059 | | | 0.032 | 0.059 | -0.001 | 0.068 |
| Parents lower secondary education | 0.029 | 0.078 | | | 0.038 | 0.076 | 0.100 | 0.091 |
| Parents higher secondary education | 0.084 | 0.097 | | | 0.087 | 0.096 | 0.117 | 0.110 |
| Parents tertiary education | 0.228** | 0.101 | | | 0.266*** | 0.101 | 0.264** | 0.119 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | 0.549*** | 0.203 | | |
| Caribbean * Educational attainment NL | | | | | -0.147*** | 0.057 | | |
| Caribbean * Educational attainment abroad | | | | | 0.095** | 0.044 | | |
| Caribbean * Work experience NL | | | | | -0.152** | 0.062 | | |
| Caribbean * Potential work experience abroad | | | | | -0.015 | 0.086 | | |
| *Social capital* | | | | | | | | |
| Contact Dutch | | | 0.141*** | 0.047 | | | 0.071 | 0.054 |
| *Social ties (ref. "single")* | | | | | | | | |
| Married to an ethnic partner | | | -0.019 | 0.069 | | | -0.089 | 0.081 |
| Married to a Dutch partner | | | -0.063 | 0.092 | | | -0.158 | 0.109 |
| *Membership association (ref. "no membership")* | | | | | | | | |
| Predominantly ethnic members | | | 0.252*** | 0.074 | | | 0.073 | 0.086 |
| Predominantly Dutch members | | | 0.262*** | 0.070 | | | 0.146* | 0.077 |
| *Cultural capital* | | | | | | | | |
| Scale modern conceptions | 0.197*** | 0.048 | 0.285*** | 0.046 | 0.211*** | 0.048 | 0.182*** | 0.054 |
| *Connectedness (ref. "equally connected")* | | | | | | | | |
| More connected to country of origin | -0.002 | 0.058 | -0.005 | 0.060 | -0.008 | 0.058 | 0.004 | 0.067 |
| More connected to the Netherlands | 0.091 | 0.091 | 0.053 | 0.088 | 0.138 | 0.091 | 0.126 | 0.102 |
| *Control variables* | | | | | | | | |
| Language proficiency | 0.030 | 0.049 | 0.150*** | 0.048 | 0.006 | 0.048 | -0.001 | 0.055 |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | 0.125 | 0.087 | 0.006 | 0.078 | | | 0.136 | 0.093 |
| Surinamese | 0.271*** | 0.089 | 0.155* | 0.088 | | | 0.285*** | 0.101 |
| Antillean | 0.412*** | 0.102 | 0.298*** | 0.097 | | | 0.341*** | 0.118 |
| Age/10 | -0.058 | 0.245 | 0.055 | 0.228 | -0.145 | 0.250 | 0.112 | 0.265 |
| Age/10-squared | 0.001 | 0.029 | -0.005 | 0.027 | 0.011 | 0.030 | -0.019 | 0.031 |
| *Gender (ref. "female")* | | | | | | | | |
| Male | 0.091 | 0.067 | 0.269*** | 0.067 | 0.099 | 0.067 | 0.054 | 0.079 |
| Age at migration | 0.008 | 0.009 | -0.011*** | 0.004 | 0.010 | 0.009 | 0.008 | 0.010 |
| Number of times unemployed in the NL | -0.034** | 0.014 | -0.035*** | 0.014 | -0.029** | 0.014 | -0.033** | 0.016 |

--- Table 5 **OLS regression – Occupational status** (continued) ---

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.056 | 0.070 | 0.078 | 0.068 | 0.062 | 0.070 | 0.054 | 0.078 |
| Study | -0.010 | 0.082 | 0.187** | 0.080 | 0.036 | 0.079 | -0.048 | 0.096 |
| Work | 0.069 | 0.084 | 0.020 | 0.079 | 0.098 | 0.083 | 0.097 | 0.091 |
| *Sector (ref. "Cultural")* | | | | | | | | |
| Agriculture | -0.034 | 0.169 | -0.112 | 0.157 | -0.055 | 0.168 | 0.033 | 0.186 |
| Industry | -0.095 | 0.136 | -0.200 | 0.130 | -0.134 | 0.136 | -0.012 | 0.152 |
| Construction | -0.184 | 0.170 | -0.093 | 0.161 | -0.215 | 0.169 | -0.022 | 0.188 |
| Trade | -0.142 | 0.146 | -0.140 | 0.136 | -0.161 | 0.145 | 0.030 | 0.165 |
| Transport | -0.192 | 0.157 | -0.291* | 0.153 | -0.231 | 0.156 | -0.107 | 0.174 |
| Business services | -0.254* | 0.138 | -0.116 | 0.135 | -0.288** | 0.138 | -0.147 | 0.156 |
| Government | 0.226* | 0.138 | 0.431*** | 0.136 | 0.179 | 0.137 | 0.394*** | 0.156 |
| Healthcare | 0.067 | 0.139 | 0.207 | 0.142 | 0.040 | 0.139 | 0.080 | 0.165 |
| Constant | 0.590 | 0.534 | 0.675 | 0.503 | 0.624 | 0.538 | 0.271 | 0.577 |
| Number of observations | 874 | | 1,128 | | 874 | | 722 | |
| $R^2$ | 0.436 | | 0.285 | | 0.443 | | 0.443 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

For a comprehensive overview of the empirical results of the first analysis we recommend *Table C3.1* in Appendix C3.

*Human capital*

We first look at the role of human capital (*hypotheses 1a-c*), we postulated in *Hypothesis 1a* that human capital has a positive effect on the socioeconomic status (i.e., occupation and earnings) of immigrants. Based on the results presented both in Table 4 and 5, we evidently can confirm this hypothesis. However, if we focus on the results of Model I and Model IV, we tend to find some differences between the (logarithm) income per hour (*Table 4*) and the occupational status (*Table 5*). For example, we find that a good or excellent health condition of immigrants does significantly affect their income per hour, but it has no effect on their occupational status. Immigrants that reported to be in a good or excellent health condition earn 4.1 percent on average $[(e^{\beta\ Good\ health}\ 0.040) = 1.041]$ more per hour than those immigrants that reported to have a neutral or (very) bad health condition, holding all other variables fixed.

If we observe the measurements of origin-human capital, we find in Model I (*Table 4* and *5*) that having educational qualifications abroad has a positive effect on the income per hour of an immigrant and on the odds of a higher occupational status. Whereas the (potential) work

experience abroad has no significant effect on immigrants' income and occupational status.[239] The results for destination-specific human capital are the most persuasive. Based on the results of Model I (*Table 4* and *5*) we find that all the proxies of destination-specific human capital are positive and highly significant. Whereas we find strong support for a positive effect of work experience in the Netherlands on immigrants' income per hour, we do not find this effect for their occupational status.

If we compare origin- and destination-specific human capital by educational attainment, we find that the returns to destination-specific human capital are higher than origin-human capital. In Table 4 *(Model I)* we find that immigrants with a high educational attainment in the Netherlands earn on average 14 percent more per hour than immigrants with an equivalent educational attainment abroad, holding all other variables fixed.[240] Moreover, in Table 5 *(Model I),* we find similar results for the occupational status. Immigrants that have achieved a high educational attainment in the Netherlands score on average 0.400 occupational status points higher than immigrants that have followed an equivalent education abroad, holding other variables constant.

We find different results for immigrants' income per hour (*Table* 4) and their occupational status (*Table* 5) regarding the measure of on the job training. If immigrants have followed a training within the firm, subsequently, given immigrants' occupational status, this has no effect on their income per hour. On the other hand, if we focus on their occupational status (*Table 5*), we do find a significant positive effect. Immigrants that have followed a training within the firm score on average 0.106 occupational status points higher (*Model I*) than those that did not, holding all other variables fixed. Furthermore, we find in Model I, both in Table 4 and 5, that immigrants with parents that have a tertiary educational qualifications, has a positive effect on the income per hour of an immigrant and on the odds of a higher occupational status, in contrast to immigrants with parents that only have primary school. All things considered, we find strong support for *Hypothesis 1a*.

[239] We have to mention here that we cannot state with certainty that work experience abroad does not have an effect on the outcome variables, income per hour and occupational status, since we, due to limitations (see *section 7.1*) in our dataset, have constructed this variable (i.e., pot. work experience = age at migration – years of schooling abroad – 6) and it therefore is not a direct measurement of the work experience abroad.

[240] Both the educational attainment in the Netherlands and abroad are measured on a four point scale, ranging from primary to tertiary. Subsequently, [{($e^{\beta\ High\ education\ NL}$ 0.232) = 1.236) - ($e^{\beta\ High\ education\ abroad}$ 0.092) = 1.096} = 0.14]. We find that there is a significant relation between immigrants who followed a high education abroad and in the Netherlands ($chi^2 = 200.796$, $\rho$ = 0.000). For lower levels of educational attainment, the gap in earnings becomes smaller.

In addition, we hypothesized (*hypothesis 1b)* that the return to origin-country specific human capital of Caribbean immigrants (i.e., Surinamese and Antilleans) is higher than that of Mediterranean immigrants (i.e., Turks and Moroccans). We do not find any support for these interactions on the (logarithm) income per hour (*Table 4*). However, we do find evidence for our hypothesis on the occupational status of immigrants (*Table 5*). Caribbean immigrants score on average 0.380 status points more by attaining a high (i.e., tertiary) level of education in Suriname or the Netherlands Antilles compared to Mediterranean immigrants who have attained an equivalent education in Turkey or Morocco, holding all other variables constant. We further postulated in *Hypothesis 1c*, that Mediterranean immigrants have a higher return on destination-specific human capital than Caribbean immigrants. Evidently, based on what we previous have elaborated, we do not find support for this hypothesis for the income per hour in Model III (*Table 4*). Nevertheless, we do find statistical evidence when we look at the results of the occupational status of immigrants in Model III (*Table 5*). We find that Mediterranean immigrants significantly score on average 0.588 occupational status points higher by completing a high (i.e., tertiary) education in the Netherlands compared to Caribbean immigrants, holding all other variables at a fixed level. In addition to this result, we find a similar result for the work experience in the Netherlands, for every additional year of work experience in the Netherlands, Mediterranean immigrants have higher odds of engaging in a higher occupational status than Caribbean immigrants. Suggesting that the return on total destination-specific human capital (i.e., education and work experience) is higher among Mediterranean immigrants. All things considered, we find strong yet partial (i.e., occupational status) statistical support for both *Hypothesis 1b* and *Hypothesis 1c*.

The positive results that we thus far have presented from Model I and Model III, could be positive due to an omitted variable problem, since we did not included the measurements of social capital in these models. Therefore, it could be that the higher returns to destination-specific human capital compared to origin-human capital simply exist because immigrants who attain education in the Netherlands and participate for a longer period in the Dutch labour market, are more likely to become connected to the indigenous population (i.e., social capital). In order to find out whether this is true we need to focus on the results of Model IV ($H_F$). The results from Model IV (*Table 4* and *5*) show no support for this consideration. All the proxies of human capital stay highly significant, and the difference between destination-specific- and origin-human capital remains untouched..

*Cultural capital*

Regarding cultural capital, we hypothesized (*hypothesis 1d*) that immigrants that have norms and values that are more comparable to that of the dominant culture acquire a higher occupational status and earnings than those with less comparable values. Focusing on the measurements of cultural capital in all Models I-IV (*Table 4* and *5*), we evidently find different results for the income per hour (*Table 4*) and the occupational status (*Table 5*).

The proxies of cultural capital are almost all insignificant if we look at the (logarithm) income per hour (*Table 4*), however, we do observe significant results for Model II. Here we find a rather significant effect of immigrants that are more connected to the Netherlands, are on average earning 5.8% more per hour than immigrants who are equally connected to the country of origin and the Netherlands, holding all other variables fixed. In addition, the results also reveal that immigrants who are considered to be modern, hence comparable to the indigenous population, has a positive effect on the immigrants' income per hour. Nevertheless, both positive effects seem to vanish when we look at Model IV ($H_F$), hence we do not find support for *Hypothesis 1d* on the (logarithm) immigrants' income per hour.

If we observe the measurements of cultural capital from the perspective of occupational status (*Table 5*), we find in all Models I-IV highly significant results for the scale of modern conceptions. This variable is measured on a five point scale, ranging from not modern to very modern. In model IV (*Table 5*) we find that immigrants that are considered as modern, hence comparable to the indigenous population, score on average 0.910 occupational status points higher than those who are not modern at all. All things considered, we find strong yet partial (i.e., occupational status) support for *Hypothesis 1d*.

*Social capital*

Concerning the measurements of social capital, we have hypothesized (*hypothesis 1e*) that immigrants who have more social contacts (both, natives and ethnicities) have a higher occupational status and earnings than those who have fewer social contacts. We investigate this hypothesis by looking at the degree of the united variable we have constructed (see *section 5.2.1*), that indicates how often immigrants' relate to Dutch friends or neighbours and how often they relate to Dutch in their leisure. Furthermore, we examine this hypothesis by looking at the membership of associations both consisting of predominantly Dutch or ethnicities. In case *Hypothesis 1e* is true, one would expect to find that immigrants' who often

have contact with Dutch and are a member of an organization, are better economically incorporated than those who have not.

If we look at Model II, we find that having contact with Dutch has both a significant positive effect on immigrants' income per hour (*Table 4*) and their occupational status (*Table 5*). Immigrants' who often have contact with Dutch earn 11.1 percent on average $[(e^{\beta\ contact\ Dutch\ 0.035 * 3}) = 1.111]$ more per hour than immigrants that never have contact with Dutch friends and neighbours, holding all variables fixed. In addition to this result, we find in Model II (*Table 5*) that immigrants that often have contact with Dutch score on average 0.423 occupational status points higher than those immigrants who do not have contact with Dutch, holding all other variables at a constant rate.

Moreover, we also find evidence in Model II (*Table 4* and *5*) for immigrants that are a member of an association, they significantly earn more per hour and are more likely to engage in a higher occupational status compared to immigrants who are not a member of an association. All things considered, when we focus on the results of Model II (i.e., without controlling for human capital), we do find support for *Hypothesis 1e*.

We further distinguished between the value of social contacts (i.e., the strength of weak ties) in both *Hypothesis 1f* and *Hypothesis 1g*. We postulated (*hypothesis 1f)*, that immigrants who have more contacts with Dutch acquire a higher occupational status and earnings than those who have more contact with ethnicities, and (*hypothesis 1g*) that immigrants who are married with a Dutch partner obtain a higher occupational status and have higher earnings than those married to the same group (i.e., endogamous marriage) or other ethnic group. In order to examine these hypotheses, we have made a distinction in our analysis regarding a membership that exists predominantly of Dutch members or predominantly of ethnic members in comparison to immigrants that are not a member, and similar to those who are married to a Dutch partner or ethnic partner compared to immigrants who are single.

When first looking at *Hypothesis 1f*, being a member of an association that predominantly exists of ethnic members has no significant effect on the (logarithm) income per hour (*Model II*). Although the difference is not significant, we do find a larger estimate for being a member that predominantly consists of Dutch members. Regarding the occupational status of immigrants, we find that being a member of an association that predominantly exist of Dutch members significantly score on average 0.100 occupational status points higher than

immigrants who are a member of an association that predominantly consist of ethnic members.

Regarding *Hypothesis 1g*, we find that being married to a Dutch partner or ethnic partner does not have an effect on the immigrants' occupational status (*Table 5*). However, we do find a positive effect on immigrants income per hour (*Table 4*). Although, the difference between being married to a Dutch or ethnic partner is rather small (*Model II*).

Given that Model II is the restricted model ($H_R$), we have to examine if above effects for social capital hold if we control for human capital (*Model IV*). In Table 4 and 5, given immigrants' human capital, the effect of having contacts with Dutch vanish for both immigrants' income per hour and their occupational status. This basically is suggesting that immigrants with a high amount of human capital have more contacts with Dutch, however, having such contacts does not have a direct effect on immigrants' income per hour and on the odds of higher occupational status. Moreover, we do find a rather weak significant positive effect on immigrants' occupational status (*Table 5*), for immigrants who are a member of an association that predominantly consist of Dutch, whereas we do not find such evidence for the income per hour (*Table 4*). Although the effect is weak, this is suggesting that there is some evidence of having contact with Dutch has a direct effect on immigrants' occupational status. Moreover, we find a direct effect of marriage on immigrants' income per hour (*Table 4*), but do not find this effect for their occupational status. This suggests that the effect of being married is not directly linked with social capital, but is more likely to be linked to the traditional notion of male breadwinner (i.e., household specialization theory).[241]

***Summary - First analysis***

In summary, our findings are structured along the three types of capital. First, concerning human capital it is found that immigrants with a high amount of human capital are more likely to have a higher income per hour, are engaged in the higher occupations and there is a significant difference between Caribbean and Mediterranean immigrants (*hypothesis 1a-c* confirmed). Second, regarding cultural capital, evidence has been found that being modern in conceptions (i.e., cultural capital) positively affects the occupational status of immigrants (*hypothesis 1d* confirmed). Third, based on our results there is no support that social capital directly affects immigrants' income per hour and their occupational status (*hypothesis 1e*-g

[241] The household specialization theory also gives a plausible explanation why we find insignificant results for "gender" in our analyses (see Chun and Lee, 2001).

disconfirmed). However, we did find a small significant positive effect of being a member of an association on immigrants' occupational status. Hence, we could argue that social capital has an indirect effect on immigrants' income per hour. As complex as the relation between human- and social capital may be, these results suggest that total human capital (i.e., general-, destination-specific- and origin-human capital) directly affects immigrants' income per hour and their occupational status, and appear not to be the outcome of immigrants' higher social capital (see Appendix C3, *Table C3.1*).

### *6.2.2 Results of the second analysis*

Regarding the second analysis, the results are also presented in a multivariate setting (*Table 6*). In Model I we have a rather basic outcome variable, that is, whether immigrants have made educational investments in the host-country, and if so, completed with a diploma or not (hereafter *investedu1*). We examine the effects of settlement intentions, skill transferability and opportunity cost and we further have controlled for several aspects (see *section 5.2.2*). In Model II we present the results of an additional analysis in which we clearly distinct in the degree of education followed in the country of origin and the Netherlands. The outcome variable (hereafter *investedu2*) for Model II has a range from (0) no education to (3) followed an education in the Netherlands that is two degrees higher than that in the country of origin (see *section 5.1*).[242] In Model II we examine the same measurements as in Model I, by means of *investedu2*, we observe whether the results from Model I (*investedu1*) are sensitive to the classification we have constructed. In model III (*investedu1*) and Model IV (*investedu2)* we included interaction effects. For a comprehensive overview of the empirical results of the second analysis we recommend *Table C3.2* in Appendix C3.

*Settlement Intentions*

We first look at the measurements of settlement intentions (*hypotheses 2a-d)* in Table 6, we hypothesized (*hypothesis 2a*) that the longer immigrants stay at the host-country the more likely it is they will invest in post-migration education. We examine this hypothesis by looking at the measurement of years since migration and its quadratic term, and we find for both outcome variables (*Model I* and *Model II*) significant results. There is a positive effect of a longer duration in the host-country and the investment in post-migration education of immigrants. Consequently, when focusing at Model I (*investedu1*), the longer the duration of immigrants in the host-country, the more likely they will complete a post-migration education

[242] Education is categorized by four categories, that is: primary, lower secondary, higher secondary and tertiary.

(i.e., achieve a diploma). Whereas in Model II (*investedu2*), this indicates that immigrants which are settled for a longer time in the host-country, are more likely to invest in their educational development. In addition, we also find evidence for a curvilinear relationship between the duration and educational investments in the host-country. All in all, we find strong support for *Hypothesis 2a*.

**Table 6. Ordinary logistic regression – Educational investments in the host-country**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| Investedu1=0 | -2.095*** | 0.679 | | | -2.893*** | 0.671 | | |
| Investedu1=1 | -1.197* | 0.676 | | | -2.007*** | 0.667 | | |
| Investedu2=0 | | | 0.678 | 0.611 | | | -0.073 | 0.608 |
| Investedu2=1 | | | 1.896*** | 0.613 | | | 1.137** | 0.608 |
| Investedu2=2 | | | 3.848*** | 0.622 | | | 3.080*** | 0.618 |
| *Settlement Intentions* | | | | | | | | |
| Age at migration | -0.269*** | 0.047 | -0.220*** | 0.042 | -0.293*** | 0.047 | -0.231*** | 0.042 |
| Age at migration – squared † | 0.004*** | 0.001 | 0.003*** | 0.001 | 0.004*** | 0.001 | 0.003*** | 0.001 |
| Years since migration | 0.107*** | 0.032 | 0.141*** | 0.030 | 0.095*** | 0.031 | 0.118*** | 0.029 |
| Years since migration – squared †† | -0.002*** | 0.001 | -0.002*** | 0.001 | -0.002*** | 0.001 | -0.002*** | 0.001 |
| Number of children | -0.136** | 0.067 | -0.232*** | 0.062 | -0.112* | 0.067 | -0.199*** | 0.063 |
| Children in the NL (*ref. "no children in the NL")* | 0.014 | 0.213 | 0.164 | 0.193 | -0.068 | 0.210 | 0.120 | 0.192 |
| Married to Dutch *(ref. "single and ethnic partner")* | 0.163 | 0.194 | 0.326* | 0.173 | 0.201 | 0.190 | 0.365** | 0.168 |
| *Skill Transferability* | | | | | | | | |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | 1.019*** | 0.204 | 0.863*** | 0.202 | | | | |
| Surinamese | 1.551*** | 0.208 | 1.610*** | 0.198 | | | | |
| Antillean | 1.714*** | 0.241 | 1.879*** | 0.232 | | | | |
| Number of years education abroad | 0.013 | 0.019 | 0.041** | 0.018 | 0.038 | 0.026 | 0.058** | 0.026 |
| *Opportunity Cost* | | | | | | | | |
| Number of times unemployed in the NL | -0.083** | 0.040 | -0.113*** | 0.042 | -0.193*** | 0.061 | -0.297*** | 0.087 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | 1.204*** | 0.368 | 1.227*** | 0.323 |
| Caribbean * years of education abroad | | | | | -0.023 | 0.033 | -0.014 | 0.030 |
| Caribbean * number of times unemployed in the NL | | | | | 0.241*** | 0.084 | 0.285*** | 0.101 |
| *Control variables* | | | | | | | | |
| *Gender (ref. "female")* | | | | | | | | |
| Male | 0.030 | 0.167 | 0.114 | 0.152 | 0.027 | 0.166 | 0.109 | 0.152 |
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.290 | 0.179 | 0.498*** | 0.171 | 0.168 | 0.176 | 0.410** | 0.170 |
| Study | 0.988*** | 0.223 | 0.896*** | 0.193 | 1.031*** | 0.220 | 0.980*** | 0.189 |
| Work | -0.617*** | 0.223 | -0.623*** | 0.224 | -0.665*** | 0.218 | -0.585*** | 0.220 |
| *Health condition (ref. "neutral")* | | | | | | | | |
| Good health condition | 0.212 | 0.177 | 0.682*** | 0.174 | 0.214 | 0.176 | 0.679*** | 0.173 |
| Bad health condition | -0.337 | 0.260 | -0.063 | 0.268 | -0.403 | 0.258 | -0.088 | 0.267 |
| Number of observations | 1033 | | 1427 | | 1033 | | 1427 | |
| *Pseudo* $R^2$ (Nagelkerke) | 0.393 | | 0.387 | | 0.381 | | 0.382 | |
| Log-likelihood | 1,654 | | 2,082 | | 1,670 | | 2,092 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

† **Model I:** 34, **Model II**: 37, **Model III**: 37, **Model IV**: 39.

†† **Model I:** 27, **Model II**: 35, **Model III**: 24, **Model IV**: 30.

We further hypothesized (*hypothesis 2b*) that immigrants that are married post-migration will invest more in destination-specific education than migrants who are single or married before migration and (*hypothesis 2c*) immigrants that have children in the host-country will invest more in destination-specific education than immigrants who do not have children in the host-country. We operationalized (*hypothesis 2b*) by looking at immigrants that are married to Dutch, since we could assume that this type of marriage is more likely to occur post-migration. We find different results regarding our outcome variables (*investedu1* and *investedu2*). The results show there is no significant effect of being married to a Dutch partner and the completion of post-migration education. However, we do find significant results for Model II and Model IV (*investedu2).* Immigrants that are married to a Dutch partner have higher odds of enhancing their educational development (compared to their education followed abroad) in contrast to immigrants that are single or married to an ethnic partner. Consequently, we do find support for *Hypothesis 2b* based on Model II and Model IV. Whereas we do not find any support for *Hypothesis 2c*, there is no effect of having children living in the Netherlands and the outcome variables. However, the measurement of having children is significant and turns out to have a negative effect on the investment in post-migration education. Probably, this is due to the fact that more children would increase the costs of the household and therefore pushes the immigrant to work rather than go to school.

Regarding the mechanism on settlement intentions, we finally hypothesized (*hypothesis 2d*) that younger immigrants invest more in destination-specific education than older immigrants. We examine this hypothesis by looking at the age at immigration and its quadratic term. Based on the results presented in Table 6, we do find evidence for this hypothesis. We find a negative relation between the age at immigration and the outcome variables, hence this indicates that the investment in post-migration education decreases with the age of immigration.

*Skill Transferability*

In line with the mechanism on skill transferability, concerning the country of origin, we predicted based on the IHCI-model (*hypothesis 2e*) that Mediterranean immigrants are more likely to invest in education in the host-country than Caribbean immigrants. However, the results in Table 6 (*Model I-IV*) are exemplifying the opposite of our expectation, since it are the Caribbean immigrants (i.e., Surinamese and Antilleans) that are more likely to invest in post-migration education, rather than Mediterranean immigrants (i.e., Turks and Moroccans),

even after controlling for their motivation of immigration (see *section 1*). As a result, we do not find support for *Hypothesis 2e*.

*Opportunity Cost*

Regarding the third mechanism of the IHCI-model, that is opportunity cost, we hypothesized (*hypothesis 2f*) that Mediterranean immigrants are expected to be more strongly affected by the unemployment rate than Caribbean immigrants. If we look at the model, in table 6, with the interaction effects (*Model III* and *Model IV*), we find similar results for both our outcome variables. In case unemployed strikes both at Caribbean and Mediterranean immigrants, the odds of completing post-migration education (*Model III*) for Caribbean immigrants increases for each additional year of unemployment in the Netherlands in comparison to Mediterranean immigrants. Whereas we even find a stronger effect in case of the other outcome variable (*investedu2*) and his classification. As a result, we find that the unemployment rate stronger affects Mediterranean immigrants than Caribbean immigrants due to the lower returns on their unemployment.

***Summary - Second analysis***

In sum, regarding the settlement intentions of immigrants, we find that staying for a longer duration in the host-country, being married post-migration and a younger age at migration does positively affect the odds of investing in post-migration education (*Hypothesis 2a-b* and *Hypothesis 2d* confirmed). Whereas, we do not find evidence for having children living in the Netherlands on the odds of investing in post-migration education (*Hypothesis 2c* disconfirmed). Concerning the second mechanism, skill transferability, we do not find support that Mediterranean immigrants are more likely to invest in post-migration education than Caribbean immigrants (*Hypothesis 2e* disconfirmed). Finally, regarding the mechanism of the opportunity cost, we find that Mediterranean immigrants are more strongly affected the unemployment rate than Caribbean immigrants (*Hypothesis 2f* confirmed).

All things considered, we do find different empirical results regarding our outcome variables (*investedu1* and *investedu2*), suggesting that there is some selectivity in the classification of the outcome variables. More specifically, it is suggesting that the more selective the outcome (i.e., separating in degrees of education, *investedu2*), the stronger the relation and therefore evidence for the mechanisms in the IHCI-model, in particular to the skill transferability. Based on the classification of the outcome variables this is not unexpected, since the second

classification (*investedu2*) has a stronger relationship with pre- and post-migration investments in education (see Appendix C3, *Table C3.2*).

### *6.2.3 Results of the third analysis*

In the third analysis, we at first present some preliminary results (i.e., descriptive statistics) of our analysis in table 7. In this table we exemplify the variation in the incidence of over-education across population subgroups and generations. Whereas, in table 8 binary logit models are carried out in a multivariate setting to verify our preliminary results and to test our hypotheses as depicted previously in section 4. In all three models (*Table 8*), the outcome variable takes the value 1 for those who reported to be over-educated, whereas, the outcome variable takes the value 0 in case respondents have reported to be properly- or under-educated.

For a better understanding of the outcomes of our models in table 8, we have calculated the average marginal effects (Denny, 2009). These average marginal effects indicate the average increase or decrease in the specific variable in the probability of being over-educated. Furthermore, to be able to assess the effect of the average marginal effects, we have included the average predicted probability of being over-educated for each model.

We examine the effects of career mobility, human capital and the country of origin and we further have controlled for several aspects (see *section 5.2.3*). In Model I, we are only focused on the four largest groups of immigrants (i.e., first generation) in the Netherlands. On the other hand, in Model II, we examine the incidence of over-education for the first- and second generation, and Dutch natives. Finally, in Model III, we are focused on both the first- and second generation of the four largest ethnic groups in the Netherlands.

*Preliminary results*

Table 7 exemplifies how the incidence of over-education differs across population subgroups in the Netherlands. This table presents the proportions of a population subgroup being over-, properly-, or under-educated for the occupation in which they are active. Moreover, we separated between the first- and second generation. In general, we find that 13.4 percent of the employed persons in our sample (i.e., SIM-06) are classified as over-educated, on the other hand, 6.8 percent have qualified themselves as under-educated.

**Table 7. Incidence of over-, properly- and under-education across population subgroups[243]**

| *Country of origin* | | *Direct Self Assessment (DSA)* | | |
|---|---|---|---|---|
| | | 1st generation | 2nd generation | **Total** |
| **Dutch** | Over-educated | N/A | N/A | 7.9 % |
| | Properly-educated | N/A | N/A | 85.6 % |
| | Under-educated | N/A | N/A | 6.5 % |
| | **Number of observations** | | | **431** |
| **Mediterranean** | Over-educated | 15.6 % | 17.7 % | 16.0 % |
| | Properly-educated | 75.0 % | 71.4 % | 74.3 % |
| | Under-educated | 9.5 % | 10.9 % | 9.8 % |
| | **Number of observations** | **591** | **147** | **738** |
| **Caribbean** | Over-educated | 13.2 % | 16.0 % | 13.9 % |
| | Properly-educated | 82.6 % | 77.9 % | 81.5 % |
| | Under-educated | 4.1 % | 6.1 % | 4.6 % |
| | **Number of observations** | **702** | **213** | **915** |

Furthermore, we find that for both Mediterranean and Caribbean immigrants the incidence of over-education is about twice as higher than for Dutch. As a result, we have, to some extent, preliminary evidence to support the higher incidence of over-education among immigrants. Apart from these results, we also find that the incidence of over-education is higher among immigrants with a non-Dutch speaking background (i.e., Mediterranean immigrants). Regarding the first- and second generation (given the insignificant results for the second generation), we find a higher incidence of over-education among the second generation. Most likely, this is due to the differences in the age-cohorts among the first- and second generation. (i.e., the mean of the age for the first generation is 39,70, whereas for the second generation this is 27,19).

[243] The results presented for the first generation in *table 7* are significantly different from zero. However, the results regarding the second generation are not significantly different from zero.

**Table 8. Binary logistic regression – Over-education**

| | Model I | | Model II | | Model III | |
|---|---|---|---|---|---|---|
| Predicted probability † | 0.143 | | 0.134 | | 0.148 | |
| *Career Mobility* | | | | | | |
| Promotion (*ref. "no promotion expectations")* | -0.063*** | 0.022 | -0.053*** | 0.016 | -0.056*** | 0.019 |
| On-the-job-training (*ref. "no on-the-job-training")* | -0.049*** | 0.021 | -0.065*** | 0.016 | -0.068*** | 0.019 |
| *Human Capital* | | | | | | |
| *Education (ref. "highest education - tertiary")* | | | | | | |
| Highest education – primary | -0.117*** | 0.035 | -0.111*** | 0.026 | -0.105*** | 0.031 |
| Highest education – lower secondary | -0.030 | 0.030 | -0.037* | 0.022 | -0.022 | 0.027 |
| Highest education – higher secondary | -0.024 | 0.028 | -0.011 | 0.020 | 0.003 | 0.025 |
| Years of education abroad | 0.008*** | 0.002 | 0.006*** | 0.001 | 0.008*** | 0.002 |
| Work experience NL | -0.001 | 0.002 | -0.001 | 0.001 | -0.001 | 0.001 |
| *Country of Origin* | | | | | | |
| Mediterranean (versus Caribbean) | 0.054** | 0.024 | | | 0.038** | 0.017 |
| Caribbean immigrants (*ref. "Dutch")* | | | 0.021 | 0.026 | | |
| Mediterranean immigrants (*ref. "Dutch")* | | | 0.046* | 0.026 | | |
| *Control variables* | | | | | | |
| *Gender (ref. "female")* | | | | | | |
| Male | 0.010 | 0.021 | 0.010 | 0.015 | 0.018 | 0.018 |
| *Motivation of migration (ref. "other")* | | | | | | |
| Family | 0.018 | 0.029 | | | | |
| Study | -0.060 | 0.043 | | | | |
| Work | 0.033 | 0.033 | | | | |
| Number of times unemployed in the NL | 0.004 | 0.007 | 0.012** | 0.006 | 0.014** | 0.006 |
| Age group 15-40 *(ref. "age group 41-64")* | 0.012 | 0.026 | 0.039** | 0.019 | 0.035 | 0.023 |
| Years since migration | -0.002 | 0.002 | | | | |
| *Discrimination (ref. "sometimes")* | | | | | | |
| Often discriminated | 0.004 | 0.036 | | | 0.018 | 0.033 |
| Never discriminated | -0.009 | 0.022 | | | 0.011 | 0.020 |
| Social Capital | -0.010 | 0.009 | | | -0.014* | 0.008 |
| *Cultural capital (ref. "equally connected")* | | | | | | |
| More connected to country of origin | 0.027 | 0.027 | | | 0.031 | 0.023 |
| More connected to the Netherlands | 0.003 | 0.023 | | | 0.012 | 0.021 |
| Nice work environment | -0.041* | 0.024 | -0.044** | 0.017 | -0.030 | 0.021 |
| Fixed job *(ref. "temporally job")* | -0.076*** | 0.025 | -0.058*** | 0.018 | -0.062*** | 0.022 |
| First generation | | | | | -0.035 | 0.028 |
| Number of observations | 1183 | | 1949 | | 1438 | |
| *Pseudo* $R^2$ | 0.108 | | 0.093 | | 0.093 | |
| Log-likelihood | -421 | | -673 | | -529 | |

*** denotes significance at 1%; ** at 5%; * at 10%.
Average marginal effects are displayed, together with their standard errors.
† The predicted probability of being over-educated is the average across all respondents in the regression sample.

For a comprehensive overview of the empirical results of the third analysis we recommend *Table C3.3* in Appendix C3.

*Career Mobility*

At first, we look at the theoretical consideration of the career mobility (*hypothesis 3a*). We hypothesized that the incidence of over-education is more likely to be prevalent among individuals that are expecting to be promoted. The positive marginal effect of the age-group 15-45 (*Model* II) with the age-group 46-64 as reference category, provides some evidence to support the career mobility theory. However, this effect appears to vanish when we look only at the first generation or the first- and second generation together (*Model I* and *III*).

More conspicuously, is that the marginal effects of expecting to be promoted in Model I-III (*Table 8*) are all negative. To be more precise, for example in Model I, whereas the predicted probability of being over-educated equals 0.143, immigrants that are expecting to be promoted significantly decrease their probability of being over-educated by 6.3 percentage points relative to those that are not expecting to be promoted. This result clearly does not support the theory of career mobility.

Given that it was argued in section 4.2.1, that the theory of career mobility predicts that workers may consciously enter to a particular occupation that is lower than their educational qualifications, in order to acquire the necessary skills through on the job training. It is imperative to focus on the proxy of on the job training as well. We find a similar pattern as described above, the marginal effects of on the job training are significantly negative in all models.

These results suggests that individuals that have qualified themselves as over-educated probably have worse career prospects than those properly- and under-educated. All things considered, we do not find support for *hypothesis 3a*.

*Human Capital*

Regarding human capital, we find in Model I-III that respondents that have reported primary education as their highest educational attainment are significantly decreasing their probability of being over-educated by 11.1 percentage points (i.e., Model II) relative to immigrants that have reported a tertiary education as their highest educational attainment.

Concerning immigrants origin-human capital (i.e., education), we hypothesized (*hypothesis 3b*) that, the more education an immigrant has followed abroad, the higher the odds that the immigrant will be over-educated. In order to examine this hypothesis we need to focus on model I (*Table 8*), years of education followed abroad. We find that immigrants who have followed an education abroad has a positive effect on being over-educated, given that each additional year of education followed abroad significantly increases the probability of over-educated by 0.80 percentage points. As a result, we find strong support for *hypothesis 3b*.

*Country of Origin*

In this part we make a distinction between the country of origin. We attempt to reveal the higher incidence among immigrants compared to the indigenous population and across immigrant groups. We hypothesized (*hypothesis 3c*) that the second generation Caribbean is less likely to be over-educated than the Caribbean immigrants (i.e., first generation). Based on the preliminary results, we have exemplified in table 7 that the incidence of over-education is higher among the second generation, however, these results turned out to be insignificant. As a consequence, we cannot support or reject *hypothesis 3c*.

We further hypothesized (*hypothesis 3d*) that Caribbean immigrants are less likely to be over-educated than Mediterranean immigrants. If we first look at Model I (*Table 8*), in comparison to an average predicted probability of being over-educated of 0.143, we find an unambiguous observation that Mediterranean immigrants significantly increases their probability of being over-educated by 5.4 percentage points in contrast to the Caribbean immigrants. Hence, we find evidence for *hypothesis 3d*. If we look at Model II (*Table 8*), hence look at the first- and second generation in comparison to Dutch natives. We find that, given their education followed abroad, the average marginal effect for Mediterranean immigrants indicates a higher probability of being over-educated compared to Dutch natives. More specifically, we find that having a Mediterranean background increases the probability of being over-educated by 4.6 percentage points compared to the Dutch natives.[244] In Model III, when we only look at the first- and second generation, we find that having a Mediterranean background increases the probability of being over-educated by 3.8 percentage points in contrast to the Caribbean immigrants. All things considered, we find strong support for *hypothesis 3d*.

[244] When we controlled for the education followed abroad, the effect for having a Caribbean background became insignificant, whereas the effect for having a Mediterranean strongly reduced. This is suggesting that the education followed abroad contributes to an explanation of the higher incidence among ethnic groups compared to Dutch indigenous.

***Summary - Third analysis***

In sum, regarding the career mobility theory, we find a negative probability of expecting to be promoted and having followed a training in the firm on being over-educated (*hypothesis 3a* disconfirmed). Furthermore, we find that immigrants for each additional year education followed abroad have a higher probability of being over-educated (*hypothesis 3b* confirmed). We did not find significant results concerning the differences of the incidence of being over-educated between the first- and second generation (*hypothesis 3c* not supported). Finally, regarding the country of origin, we find strong evidence for the education followed abroad as an elucidation of the higher incidence of over-education among minorities in comparison to the Dutch natives. In addition, we also find a higher incidence of over-education among Mediterranean in contrast to Caribbean immigrants (*hypothesis 3d* confirmed).

# 7. Limitations and Further Research

In this section the limitations and the potential further research, which arise from this study, are discussed. First, in section 7.1 general limitations that concern all analyses are discussed, followed by specific limitations regarding the datasets and analyses in section 7.1.1 and 7.1.2. Finally, several possibilities regarding further research are bestowed in section 7.2.

## 7.1 Limitations

The analyses that are performed in this thesis have some limitations. The most persuasive limitation, that accounts all three analyses, is that both datasets (i.e., SPVA-02 and SIM-06) have a cross-sectional design. This makes it practically impossible to study causalities among variables. For example, albeit it is hypothesized that social ties to Dutch natives are likely to increase the occupational status of immigrants, it could be that the mechanism is altered, such that a higher occupational status of immigrants increases their connections to Dutch natives. As a result, the effects of human-, social- and cultural capital presented in this thesis could be overestimated. In addition to the cross sectional design of our dataset, we have used the method of Clog et al., (1995) in the first analysis (i.e., income and occupational status) to unravel the relationship between human- and social capital, however, it is unambiguous that this method is not as precise and informative when using longitudinal data. As a result, we are not able to accurately pinpoint the direction of the (spurious) effects between human- and social capital. Another limitation in line with the cross-sectional design concerns the third analysis (i.e., over-education). For the reason that we do not follow individuals over time (i.e., longitudinal data), we are not able to examine if the incidence of over-education is a short or long during incident among immigrants.

Apart from these universal limitations in this thesis, there are also some specific limitations related to the datasets and analyses. These are discussed in section 7.1.1. and 7.1.2.

### *7.1.1 First- and second analysis (SPVA-02)*

Next to the cross sectional design, another issue is the non-response rate in SPVA-02. The non-response rate for Antilleans is 49 percent and this rate is equivalent for Turks and Moroccans, whereas a non-response rate of 56 percent considers the Surinamese.[245]

These rates are rather high when compared to surveys in other countries, however, they become less abrupt when compared to previous waves of SPVA.[246] According to Van Ours

[245] Groeneveld and Weijers –Martens, (2003), p. 15.
[246] Groeneveld and Weijers –Martens, (2003), p. 15.

and Veenman (2001), these rates are as well comparable to other surveys in the Netherlands.[247] Moreover, special procedures were taken to include respondents that are lower educated and less well-integrated culturally and economically.[248] Another drawback concerns the first analysis, namely, the unavailability of measures regarding psychological capital in the dataset. A final limitation regarding this specific dataset is that it does not include Dutch respondents (i.e., reference group), leading us to focus exclusively on the immigration population.

### *7.1.2 Third analysis (SIM-06)*

Overall, the non-response rate in SIM-06 has been diminished in comparison with SPVA-02, in particular among Turks (40 percent) followed by Dutch (45 percent), Antilleans (46 percent), Moroccans (50 percent) and Surinamese (54 percent).[249] The improvement of the response may be in part attributable to the fact that SIM-06 is a nationwide sample instead of the 13 cities in the SPVA-series. Though, if we distinguish between the first- and second generation in SIM-06, higher non-response rates are found among the second generation, in particular among Turks and Moroccans, as well as much lower absolute observations yet relatively equally distributed.[250] It is self-evident that the smaller sample sizes, regarding the second generation, are jeopardizing the statistically representation in our third analysis.

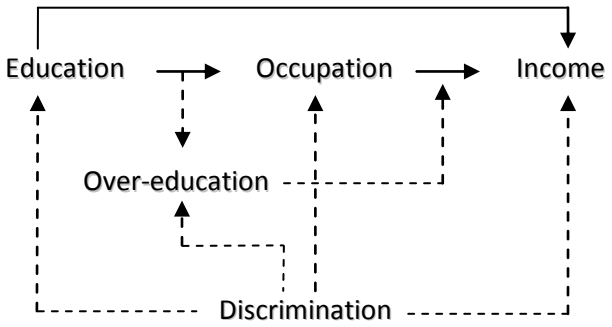
Another issue concerning the limitations is that there has been used a restricted (i.e., locked) version of SIM-06.[251] Therefore many variables have been modified by the CBS according to strict rules of personal security (i.e., privacy), leading to decisive limitations in our analysis. For example, we were not able to control for the income due to these modifications. In addition to these modifications, several variables are excluded from the dataset, such as occupational status. Because of this omission, we were unable to perform the statistical method (mean and mode) to measure over-education and justify our results of the DSA-method. Finally, no information on the region and sector of immigrants were available, as a consequence, making it impossible to examine the degree in which segregation (i.e., Job Competition model) contributes to the elucidation of the higher incidence of over-education among minorities.

[247] Van Ours and Veenman, (2001), p. 7.
[248] Groeneveld and Weijers –Martens, (2003), p. 11.
[249] Dagevos et al., (2007), p. 23
[250] Dagevos et al., (2007), p. 41.
[251] This is attributable to high levels of personal/privacy security, authorization as well as the access to necessarily funds.

## 7.2 Further Research

In general, further research could follow two central pathways, namely, a descriptive and explanatory path. Whereas the first (i.e., descriptive), best could aim at filling in the gaps in information on the socioeconomic status (e.g., collection of data) according to our framework (see *Figure 9*) of Surinamese, Antilleans, Turks, Moroccans and other feasible migrant groups. The explanatory research in this field could examine determinants of SES to gain insight in the underlying differences among the first- and second generation in comparison to the indigenous population. Idyllically, further research in this field would without doubt significantly benefit from the availability of longitudinal data or at least an improvement in accessibility for researchers and equivalence of datasets, such that pooling of datasets becomes an option to overcome some of the limitations by using a cross sectional design (see *section 7.1*).

**Figure 9.** **Framework of immigrants' SES**




Regarding our data limitations (see *section 7.1*), further research could entail gaining insight into immigrants' psychological capital and understand the role of this type of capital in their position in the labour market (i.e., SES). Adding this type of information most likely enhances the quality of studies that aim to examine differences in SES. More difficult to address for further research is to exactly pinpoint the relationships among the determinants explaining immigrants' SES. Given that it is very likely that all the neo-capital theories, here discussed in section 2, have potential causalities, yet all seem to be relevant to some degree. This makes it very complicated to build a study design that isolates some specific determinants. Regarding the study design, further research in this field that treats SES as a unitary concept should preferably focus on the income per hour, in order to avoid drawing mistaken conclusions (see *Figure 9*).[252]

[252] In our study we exemplified that a high education not necessarily involves a high occupation and hence income (i.e., over-education). Moreover, discrimination is an incidence that is likely to happen in each dimension, therefore, by looking at the final dimension the odds of an overestimation of the results is

In this thesis the Immigrant Human Capital Investment (IHCI) model (Duleep and Regrets, 1999, 2002) has been proposed in relation to examine the first dimension of Webers' view (i.e., education). Further research could decompose human capital accumulation into formal-human capital (i.e., education) and informal-human capital (i.e., on the job training) and examine whether there is a difference in the degree of transferability between them. The new literature on over-education would definitely benefit from such an examination, given that the current prevalence of over-education simply could be due to a lack of work experience (see *section 4.2.2.1*). More complicated would be to introduce a discrimination parameter to the IHCI-model, yet it would give a better insight in the differentials in the degree of transferability.

Regarding the higher incidence of over-education among immigrants, due to our cross-sectional design we are unable to exactly pinpoint whether over-education among minorities (i.e., first- and second generation) is something temporarily or more permanent, consequently further research could examine this. Moreover, further research also could examine to what extent "educational mismatch" contributes to the understanding of the higher incidence among immigrants. According to Veenman (2003) and Kanas and Van Tubergen (2009) the Dutch indigenous are better informed about the Dutch educational system and the job requirements in the labour market than minorities. Consequently, minorities could make wrong educational choices for the occupation they esteem, as a result making them over-educated.

Finally, given that the center of this research is predominantly focused on the Netherlands and its fairly heterogeneous ethnic groups, it is self-evident that the results here presented are not equivalent to studies that are or will be performed in other countries. This basically suggests that differences in (aggregate) conditions, policy, culture and opportunities of one country strongly affects immigrants' self-selection and position in the labour market (i.e., SES). Consequently, further research could examine the SES of immigrants from the same origin in rather different yet comparable countries (e.g., Turks in the Netherlands versus Turks in Germany). Results from such research could provide a better insight in the immigrants' self-selection (i.e., what type of immigrants are attracted by the current conditions, policies, etc.) and the effect a country has on their SES.

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diminished. Though, by treating SES as a unitary concept, much information for understanding the complete picture goes lost (i.e., the knowledge in the preceding dimensions).

# 8. Discussion and Conclusion

In this final section the results are summarized and interpreted in section 8.1 and the impeding subsections followed by the overall conclusions of this study in section 8.2. In addition to the conclusions drawn, there will be a presentation of recommendations for policy makers in section 8.3.

## 8.1 Discussion

The main objective in this section is to provide an interpretation in appropriate depth of the previous results linked to the hypotheses. The discussions are separated in three subsections according to the analysis. For an overview of the results from the analyses see Appendix E1.

### *8.1.1 First analysis*

Regarding the first analysis (see Appendix E1, *Table E1.1* and *Table E1.2*), several conclusions can be drawn from our study regarding immigrants' income per hour and their occupational status (i.e., SES). First, our results exemplified that human capital positively affects immigrants' income per hour and occupational status. Though, more persuasive, is the differential in return between origin- and destination-specific human capital. Our results (compare *Table E1.1* and *Table E1.2*) showed that the returns to origin-human capital are inferior to destination-specific human capital. Therefore, immigrants that have attained education in the Netherlands as well have been exposed to the Dutch labour market and gained work experience, are more likely to engage in the higher occupations and have a higher income per hour than immigrants with an equivalent education abroad and, in all probability, work experience abroad. In a similar vein, our results showed that the returns to origin-human capital are higher among Caribbean immigrants than Mediterranean immigrants. This can be explained by the large resemblance in the educational system of those with a Caribbean background, due to their strong ties as a (former) colony of the Netherlands (see *section 1*). Therefore, the educational qualifications of Caribbean immigrants in their country of origin are better recognized and valued by employers in the Netherlands than that of Mediterranean immigrants.

Second, we find that cultural capital plays a role when disentangling the SES of immigrants. Our results (compare *Table E1.1* and *Table E1.2*) provide evidence that being modern in conceptions (i.e., conceptions that are equivalent to Dutch indigenous) positively affects the occupational status of immigrants. We did not find such a direct effect for immigrants' income per hour, however, given that occupational status has a positive significant effect on

the income, we could argue there is an indirect effect of cultural capital on immigrants' income per hour.

Third, in our study the effect of immigrants' social capital is much less unambiguous. In case we do not control for immigrants' human capital, we find that immigrants who have much contact with natives are more likely to have higher occupations and earnings. Moreover, there is some evidence (see *Table E1.1* and *Table E1.2*) that the value of contacts with natives yields to higher returns than when immigrants have contacts with other or equal ethnicities. Nevertheless, almost all of these effects vanish when human capital is taken into account. Subsequently we only find a weak significant result for being a member of an association that predominantly consists of Dutch on immigrants' occupational status. Hence immigrants who are a member of an association that predominantly consists of Dutch are more likely to engage in higher occupations than immigrants who are not a member of an association. Such a direct effect is not found on immigrants' income per hour, however, we could argue that there exist an indirect effect of social capital through the occupational status. Finally, we find that being married to an ethnic or Dutch partner positively affects immigrants' income per hour compared to those that are single, however, we do not find such evidence on their occupational status. As has been stated before, this suggests that being married is not directly linked with social capital, but is more likely to be linked with the household specialization theory (Becker, 1991). Moreover, there is evidence for this consideration in our analysis (see *Table E1.1*). In Model I-III (*Table E1.1*) we find that males significantly have a higher income per hour than females, however in Model IV this effect disappears. Chun and Li (2001) state that „married men have greater opportunities to specialize in the labour market activities when their wives specialize in home production".[253] As a result, the marriage wage premium reflects a productivity gap between married and single men, and an income differential between males and females.

### *8.1.2 Second analysis*

The second analysis (see *Table E1.3)* relies on the Immigrant Human Capital Investment (IHCI) model proposed by Duleep and Regrets (1999, 2002). This in order to examine the determinants that are influencing immigrants' investment in post-migration education as well to provide a better insight in the differences across the SES of immigrants in the Netherlands. Despite previous studies, our study does not provide a direct examination of their model, however, we have derived several hypotheses from the three main mechanisms that are

[253] Chun and Li, (2001), p. 307.

alleged to be central in their model, that is, intentions of settlement in the host-country, transferability of skills and the opportunity cost (see *section 3*).

Pertaining to the mechanism of immigrants' intention of settlement in the host-country. This is considered to be an imperative mechanism when examining the differences in immigrants' post-migration education investments in the Netherlands. It may be self-evident that less-permanent immigrants will have less incentives to invest in destination-specific human capital and therefore have a lower SES compared with immigrants that have the intention to permanently settle in the Netherlands. Since emigrating immigrants have no need to obtain host-country skills to increase $\tau_{M2}$ and even in the hypothetical case that when $\tau_{M1}$= 1 there is less reason to invest (see *section 3*).[254] Our results (compare *Table E1.3)* showed that staying for a longer duration in the host-country, being married post-migration and a younger age at migration, all positively affect the odds of investing in post-migration education in the Netherlands. Whereas we do not find evidence for having children living in the Netherlands on the odds of investing in post-migration education. However, we do find a significant negative effect (compare *Table E1.3*) for having children on immigrants' investment in post-migration education. A plausible elucidation for this effect is that having children increases the cost of the household and therefore pushes immigrants in the labour market to gain earnings.

Another finding from our results (*Table E1.3*) is that the odds of investing in post-migration education increases for each additional year of pre-migration schooling. This finding is confirming the results of Chiswick and Miller (1994), Van Tubergen and Van de Werfhorst (2006) and Banerjee and Verma (2009). This result is suggesting that pre-migration education acts as a complement to post-migration education, rather than as a substitute.[255] This could be because high skilled immigrants may place greater value on formal education than less educated immigrants.

Regarding the mechanism of the opportunity cost of the IHCI-model. We find that in case unemployed strikes (i.e., low opportunity cost) both at Caribbean and Mediterranean immigrants, the odds of completing as well the investment in post-migration education for Caribbean immigrants increases for each additional year of unemployment in the Netherlands

[254] We endeavor to exemplify the mechanism of settlement intentions ($\rho$) on immigrants' investment in post-migration education. However, one reasonably could assume that $\tau_{M1} < 1$ accounts to all immigrants.
[255] Similar results are found in the *First analysis*. Immigrants that followed a high education abroad, are more likely to attain a high education in the Netherlands.

in comparison to Mediterranean immigrants. As a result, we find that the unemployment rate stronger affects Mediterranean immigrants than Caribbean immigrants due to the lower returns on their unemployment. Consequently, they are more vulnerable to unemployment.

However, despite our previous findings, the results concerning the mechanism of transferability of skills requires a more in depth discussion. To start this discussion it is compulsory, for a better understanding, to briefly recapitulate (see *section 3*) and moderately expand the theory. According to the IHCI-model (Duleep and Regrets, 1999, 2002), this mechanism suggests that a low degree of transferability in skills of origin-human capital results in lower opportunity cost $w(1-\tau)$ to invest in post-migration education in comparison to immigrants with high transferable skills. However, these lower opportunity cost will be canceled out by the higher production cost of human capital.[256] Though, the return to investment in post-migration education will be greater for immigrants with a low degree in transferability of skills in comparison to immigrants with high transferable skills because of the "immigrant-specific" component of the return on their investment (see footnote 256). According to Duleep and Regrets (1999) all investments in destination-specific human capital will increase the value of origin-human capital in the labour-market of the host-country ($\tau_{M2}$).[257] All in all, a priori there seems to be strong theoretical evidence that immigrants with a low degree of transferability of skills are more likely to invest in post-migration education than immigrants with high transferable skills. However, unlike the expectations from the IHCI-model, our results exemplify that immigrants with a Caribbean background (i.e., Surinamese and Antilleans) are making more investments in post-migration education than Mediterranean immigrants (i.e., Turks and Moroccans). This result is not expected based on two grounds; (i) as a (former) colony of the Netherlands most of the Caribbean immigrants speak the Dutch language before they arrive, and (ii) the educational system of immigrants with a Caribbean background is more equivalent to the Netherlands. Therefore the skills of Caribbean immigrants have a higher degree in transferability of skills to the Netherlands than Mediterranean immigrants.

[256] Duleep and Regrets (1999) distinguish in two components regarding the return on immigrants' investment in post-migration education. The first component is the "normal return" $w\frac{\delta\gamma f(H_1,\theta)}{\delta\theta}$, and the "immigration specific return" $w\frac{\delta\tau}{\delta\theta}$, which contains the increased value of origin-human capital that increases earnings in the second period, separately from the "normal return".

[257] Duleep, H., O., and Regrets, M., C.,, (1999), p. 187.

One potential elucidation for the higher investment pattern in post-migration education among Caribbean versus Mediterranean immigrants considers the assurance in their settlement intentions ($\rho$). Caribbean immigrants had strong intentions to permanently settle in the Netherlands and were more certain this would endure given their rights to the Dutch citizenship as a colony of the Kingdom of the Netherlands (see *section 1*). On the other hand, Mediterranean immigrants were typically labeled as "guest workers" and this could have affected their investment decisions. Though, this elucidation becomes less plausible when we consider that it were the Dutch policy makers that had the "idea" that the recruitment of these immigrants was temporally (see *section 1*). Moreover, the intentions of Mediterranean immigrants for permanent settlement are conceivably stronger given that they came from poorer areas.

A more likely elucidation for the higher investment pattern among Caribbean (i.e., Surinamese and Antilleans) versus Mediterranean (i.e., Turks and Moroccans) immigrants in the Netherlands is that next to the lower degree in transferability of skills ($\tau_M$), Mediterranean immigrants may also additionally suffer from a lower skill transferability for the production of new education in the host-country ($\tau_p$). As have been stated before in section 3, Duleep and Regrets (2002) suggested that when $\tau_M < 1$, $\tau_M$ is always less than $\tau_p$, in other words, origin-human capital is more valuable in learning than earning, and this differences increases as labour market skill transferability falls. Furthermore, origin-human capital that is not valued in the host-country, is still useful by obtaining "new" human capital in the host-country. They referred to the aid of learning new skills, natural productivity (i.e., hard to detect and to evaluate by potential employers, yet, useful in learning) and also the resemblance and common elements between old and new skills aid in learning, these all are examples that support the production of new human capital but is rather difficult to transfer from one country to another.[258] Nevertheless, drifting away from the theory suggested by Duleep and Regrets (1999, 2002), it could also be the case that $\tau_M > \tau_p$, namely, one reasonably could assume that the skill requirements for following an education are higher than that what is required in the labour market. It is unambiguous that in order to have a good performance at school in the host-country, immigrants need to have sufficient control of the official language in the host-country as well having the proper educational attainments to alleviate their educational transition. However, in contrast to Caribbean immigrants, the majority of the Mediterranean immigrants did not have knowledge of the Dutch language and culture when

[258] Duleep, H., O., and Regrets, M., C., (2002), p. 4.

they arrived (see *section 1*), therefore due to this lack they did not fit properly in the Dutch educational system. Whereas, on the other hand, the skills of Mediterranean immigrants were almost effortlessly transferred to, for example, the industry sector, for which the requirements of the command of the Dutch language and educational attainments were much lower.

Regarding the abovementioned arguments from a theoretically point of view, the ICHI-model needs to distinguish between skills that are required in the labour market and the educational system. More imperative, the model should take into account that in some situations the imperfect transferability of origin-human skills could withhold the investments in post-migration education.

Another reason that could explain the unexpected low investments in post-migration education of Mediterranean immigrants in the Netherlands according to the IHCI-model, is that Duleep and Regrets (1999, 2002) did not make any assumptions about immigrant selectivity (Chiswick, 1999) in their model.[259] Moreover, their model is predominately based on empirical studies that are performed in the United States. In section 4.1 we have showed that high skilled immigrants, due to their high educational attainments, have more knowledge of the English language and therefore are more likely to settle in a country were the official language is English (i.e., immigrant selectivity).[260] On the other hand, it may also be more difficult for low skilled immigrants to survive due to the tougher conditions (e.g., insurance policies) and the aim on individuality in the society of the United states, whereas this aspect could make it the promising land for immigrants with high skills and self-reliance (i.e., those who can rely on their own capabilities). Whereas the Netherlands is deemed to be a more collective society in which the weak are being supported by the government (i.e., immigrant selectivity). This essentially suggests that differences in (aggregate) conditions, policy, culture and opportunities of one country strongly affects immigrants' self-selection and therefore the position in the labour market (i.e., SES). Further research on this issue is required (see *section 7.2*).

[259] Duleep, H., O., and Regrets, M., C., (1999), p. 188.
[260] The self-selection (or immigrant selectivity) of immigrants captures that fact, that immigrants might have very different characteristics depending on the host country they decide to live in and their country of origin. Hence, immigrants that decide to leave in the United States are most likely different from immigrants living in the Netherlands.

### *8.1.3 Third analysis*

Despite the limitations mentioned earlier (see *section 7.1.2*), several conclusions still can be drawn from our third analysis (see *Table E1.4*). First, we find a negative probability of expecting to be promoted and having followed a training in the firm on being over-educated. This suggests that individuals that have qualified themselves (i.e., DSA-method) as over-educated probably have worse career prospects than those properly- and under-educated. Evidently, these results are not supporting the career mobility theory proposed by Sicherman and Galor (1990). Since if it were true that over-educated workers are waiting to be promoted, it would be more likely that they received the training necessarily to accomplish the promotion. Nevertheless, our results show that over-educated workers have less opportunities, given that they are more likely to be excluded from the selection of on the job training than properly- and under-educated workers. These findings are essentially suggesting that over-education is not something temporarily but more permanent. Consequently, as both theoretically and intuitively appealing, the career mobility theory does not explain the incidence of over-education. Moreover, these results also provide some evidence to reject the suggestion that new entrants in the labour market are over-educated because of a lack of (work) experience (i.e., occupational-specific human capital) and that they by means of on the job training are more likely to engage in the well-matched occupations.

Nonetheless, despite these results, we find that the incidence of over-education is higher among individuals of the age between 15-45 in comparison to the age-group of 46-64, unlike previous findings, this provides some evidence that the incidence of over-education is something temporarily. However, this effect appears to vanish when we only focus on the first generation or the first- and second generation together. Another result from our analysis that supports the notion that over-education is something temporarily, is that we find strong evidence for each model (compare *Table E1.4*), that individuals with a temporary occupation are more likely to be over-educated than those with a fixed occupation. A plausible explanation for this could be explained by the fact that searching for an occupation is not costless, hence some workers may "temporarily" accept occupations for which they are overqualified. As time passes, it can be expected that these individuals are leaving such jobs for better matched occupations. Due to our reliance on cross-sectional data means that based on these results we are unable to exactly pinpoint whether over-education among immigrants is something temporally or more permanent, further research is required (see *section 7.2*).

Second, regarding the higher incidence among immigrants. Our results (compare *Table E1.4*) show that for each additional year immigrants followed an education abroad the probability of being over-educated increases. Without controlling for this effect in Model II (see *Table E1.4*), the country of origin measures are highly significant, however, including the education followed abroad, we only find a weak significant effect among Mediterranean immigrants. A plausible explanation for this result can be found in the previous analyses. We concluded that the education followed abroad is a complement rather than a substitute to education in the host-country. Moreover, Mediterranean immigrants are less likely to invest in post-migration education and therefore are more likely to be over-educated than Caribbean immigrants as well Dutch indigenous. All in all, based on our results the higher incidence of over-education seems to be caused by the imperfect transferability of skills from the country of origin to the host-country as well the lack of sufficient command of the Dutch language and culture by the Mediterranean immigrants.

We at first concluded that over-educated workers have worse career prospects than those that are properly- or under-educated. These worse career prospects seem to be explained by the imperfect transferability of skills from the country of origin to the host-country. However, the imperfect transferability of skills may also be more common among these immigrants due to plain labour market discrimination. The act of discrimination could lead to rejection or a diminishing of the merits of immigrants. Therefore discrimination is a factor that should be considered as an implication of over-education and can arguably be anticipated to be more common among immigrants that have a larger cultural distance compared to the indigenous population (i.e., Mediterranean immigrants).

Regarding discrimination, we have included self-assessment measures in our analysis, however, the results show that the effect of these measures are insignificant. One advantage of obtaining information about discrimination through self-assessment is that it is the source contiguous to the actual situation to observe discriminated behaviour, thus taking into account all specific conditions. However, this argument holds if we assume that the immigrant is in the best situation to evaluate whether he has been discriminated or not. If he is not capable in doing this objectively, subsequently there is room for a validity problem. In the literature this incidence is called the “denial of discrimination”, this incidence occurs when immigrants indicate that their group for example more often is discriminated than themselves. In order to control for this validity problem, we have carried out an additional regression with a general measure of discrimination (see Appendix D1, *Table D1.1*). The results provide some evidence

that immigrants who answered that their group never is discriminated are less likely to be over-educated than immigrants that answered that their group occasionally is discriminated.

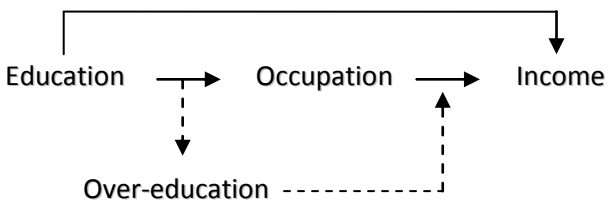
Apart from the elucidations given in this thesis regarding the higher incidence of over-education among immigrants, there is room for other reasons. For example, the higher incidence of over-education among immigrants is the "educational mismatch". According to Veenman (2003) and Kanas and Van Tubergen (2009) the Dutch indigenous are better informed about the Dutch educational system and the job requirements in the labour market than minorities. Consequently, minorities could make wrong educational choices for the occupation they esteem, as a result making them over-educated. Our results provide some evidence that this consideration could be valid. In Model III (*Table E1.4*) we find that minorities (i.e., first- and second generation) who have contacts with Dutch indigenous are less likely to be over-educated.

## 8.2 Conclusion

This thesis addresses four separate but intrinsically linked questions: (1) Are there any differences across immigrants (groups) in their socioeconomic status? If so, which characteristics are explaining these differences?; (2) Which characteristics and determinants triggers an immigrant to invest in post-migration education?; (3a) What causes someone and more specifically immigrants to be over-educated?; and (3b) To what extent does over-education explains the lower socioeconomic status of immigrants compared to the indigenous population?

In our study we analyzed the socioeconomic status of the four main ethnic groups, that is, Surinamese, Antilleans, Turks and Moroccans in the Netherlands. Whereas socioeconomic status has been treated as a multidimensional concept, here we follow Webers' view. However, we have expanded his view by including another dimension, namely, the incidence of over-education. As a result, in this thesis the socioeconomic status of immigrants in the Netherlands has been analyzed as depicted in figure 10.

**Figure 10.** **SES-framework - The four dimensions**



This study initially started with an analysis of individual related capital (i.e., human-, cultural- and social capital) that affect both immigrants' occupational status and their income per hour (i.e., first analysis). The conclusion regarding these three forms of individual related capital that have been examined is threefold.

First, this analysis exemplified that the returns to destination-specific human capital are higher than that of origin-human capital. As a result, immigrants that have attained education in the Netherlands as well have been exposed to the Dutch labour market and gained work experience, are more likely to engage in the higher occupations and have a higher income per hour than immigrants with an equivalent education abroad and, in all probability, work experience abroad. In a similar vein, the results showed that the returns to origin-human capital are higher among Caribbean immigrants than Mediterranean immigrants. This can be explained by the large resemblance in the educational system of those with a Caribbean background, due to their strong ties as a (former) colony of the Netherlands. Therefore, the educational qualifications of Caribbean immigrants in their country of origin are better recognized and valued by employers in the Netherlands than that of Mediterranean immigrants.

Second, the analysis revealed that cultural capital plays a role when disentangling the SES of immigrants. The results provide evidence that being modern in conceptions (i.e., conceptions that are equivalent to Dutch indigenous) positively affects the occupational status of immigrants. Such a direct effect has not been found for immigrants' income per hour, however, given that occupational status has a positive significant effect on the income, there is some evidence for an indirect effect of cultural capital on immigrants' income per hour.

Third, the results regarding social capital are much less unambiguous. Apart from a small direct positive effect of being a member of an association that predominantly consists of Dutch on immigrants' occupational status, there are no direct effects of social capital on immigrants' SES. The results of this analysis could entail that social capital is accumulating human capital (Coleman, 1988). This is suggesting that immigrants who have more contacts, in particular with the indigenous population, are more strongly improving their language, do better at school and work than immigrants with less native ties. Following this justification, social capital has an indirect effect on immigrants' SES. Though, on the other hand, the results of this analysis could also indicate a spurious effect of social capital on immigrants' SES. Given that it is more likely that immigrants with a high level of destination-specific

human capital are a member of an association that predominantly consists of Dutch and more often connect with Dutch indigenous. Due to the reliance on cross-sectional data (i.e., SPVA-02), we are unable to exactly pinpoint this effect, hence further research is required.

**In conclusion to the first analysis, evaluating the contributions of human-, cultural-, and social capital in our study, it is plausible to conclude that immigrants' human capital is substantially the most imperative factor when considering differences across immigrants' SES, and especially destination-specific human capital. However, it loses explanatory power if trying to be "the only game in town".**

The finding of the rather dominant role of destination-specific human capital regarding immigrants' SES nourishes the importance of the second analysis that concerns the first dimension of Webers' view, namely, education. This analysis examined the determinants that are influencing the participation in post-migration education among both Caribbean (i.e., Surinamese and Antilleans) and Mediterranean immigrants (i.e., Turks and Moroccans). The study showed that immigrants that are staying for a longer duration in the host-country and being married post-migration are more likely to invest in post-migration education. Moreover, it is found that immigrants age at migration is negatively related to the investment in post-migration education. This result can be explained because of the lower opportunity cost that enhances the incentives for immigrants to invest in post-migration education as well the longer period to gain returns on their investment. Another reason could be that the younger immigrants the education in the Netherlands find more attainable than their older counterparts. Another finding from this analysis is that the odds of investing in post-migration education increases for each additional year of pre-migration schooling. This finding is confirming the results of Chiswick and Miller (1994), Van Tubergen and Van de Werfhorst (2006) and Banerjee and Verma (2009). This result is suggesting that pre-migration education acts as a complement to post-migration education, rather than as a substitute. This could be because high skilled immigrants may place greater value on formal education than less educated immigrants.

Regarding the different investment pattern in post-migration education among Caribbean versus Mediterenan immigrants, unexpected results were found concerning the expectations of the IHCI-model (Duleep and Regrets, 1999, 2002). The results exemplified that immigrants with a Caribbean background (i.e., Surinamese and Antilleans) are making more investments in post-migration education than Mediterranean immigrants (i.e., Turks and Moroccans). This

result is not expected based on two grounds; (i) as a (former) colony of the Netherlands most of the Caribbean immigrants speak the Dutch language before they arrive, and (ii) the educational system of immigrants with a Caribbean background is more equivalent to the Netherlands. Therefore the skills of Caribbean immigrants have a higher degree in transferability of skills to the Netherlands than Mediterranean immigrants. This result indicates that in order to have a good performance at school in the host-country, immigrants need to have sufficient control of the official language in the host-country as well having the proper educational attainments to alleviate their educational transition. Nevertheless, unlike the Caribbean immigrants, the majority of the Mediterranean immigrants did not have knowledge of the Dutch language and culture when they arrived, therefore due to this lack they did not fit properly in the Dutch educational system.

**Concluding, immigrants in the Netherlands enhance their SES in the Dutch labour market when they attain educational qualifications in the Netherlands. In line with the findings of previous analysis, the benefits of such destination-specific human capital are to some extent related to an improvement of immigrants' social ties with indigenous population, but to a large extent to their enhanced productivity and transferability of origin-human capital.**

With respect to the "fourth dimension" (i.e., over-education), we only find a significant effect that the incidence of over-education is higher among Mediterranean immigrants. A plausible explanation for this result can be found in the conclusions of the previous analyses. There we concluded that the education followed abroad is a complement rather than a substitute to education in the host-country. Moreover, Mediterranean immigrants are less likely to invest in post-migration education and therefore are more likely to be over-educated than Caribbean immigrants as well as Dutch indigenous. All in all, based on our results the higher incidence of over-education seems to be caused by the imperfect transferability of skills from the country of origin to the host-country as well the lack of sufficient command of the Dutch language and culture by the Mediterranean immigrants.

This study also found that over-educated workers have worse career prospects than those that are properly- or under-educated. These worse career prospects seem to be explained by the imperfect transferability of skills from the country of origin to the host-country. However, the imperfect transferability of skills may also be more common among these immigrants due to plain labour market discrimination. The act of discrimination could lead to rejection or a

diminishing of the merits of immigrants. Therefore discrimination is a factor that should be considered as an implication of over-education and can arguably be anticipated to be more common among immigrants that have a larger cultural distance compared to the indigenous population (i.e., Mediterranean immigrants).

**Concluding, over-education among immigrants seems to be caused by the imperfect transferability of skills from the country of origin to the host-country. The prevalence of imperfect transferability could be due to, among others, differences in the educational system and labour market of the host-country or simply reflect plain labour market discrimination**. **To what extent over-education is explaining the differences in SES across immigrants and in comparison to Dutch indigenous does not only rest on the wage penalty at a particular moment in time, but more on how long that moment will endure. Hence further research is required.**

Coming to the overall conclusion of this study, our empirical examination supports the view that destiny-specific human capital is the most imperative factor in immigrants' SES and helps them to assimilate. This conclusion leads us to the first dimension of Webers' view (i.e., education) and indicates that most of the differences in immigrants' SES, reasonably are determined in this dimension. It follows that in the impeding dimensions, that is, occupational status and income there is the possibility of a diminishing in the merits of immigrants by means of the incidence of over-education or discrimination, which increases the gap in their SES.

Our study is beyond the discrimination of ethnic groups, however, our empirical results are providing evidence for a plausible role of discrimination. In all the analyses performed in this thesis the ethnic variables were significant, with the exception of immigrants' income per hour. Nevertheless, there is evidence for an indirect effect through immigrants' occupational status on their income. These results suggest that apart from the variables we have controlled for (mainly individual related capital / capabilities), there is still room for other explanations that could enhance the insight in the differences among immigrants. Therefore in this field of study, further research cannot neglect the role of discrimination on immigrants' SES (see *Figure 9*).

## 8.3 Policy implications

In order to provide relevant and effective policy recommendations, it first is compulsory to understand the policy implications that arise from this study as well as what has been done by policy makers previously and its impact.

From our study, the most evident policy implications are related to educational policies and policies that are aimed at language proficiency. More specifically, our study showed that in order to have a good performance at school in the host-country, immigrants need to have sufficient control of the official language in the host-country as well having the proper educational attainments to alleviate their educational transition. However, a most likely role of some institutional barriers are withholding the use of immigrants' origin-human capital (i.e., pre-migration education) in pursuing both education and properly matched occupations in the Netherlands, in particular among Mediterranean immigrants. In order to prevent that these type of immigrants become a marginalized group in Dutch society, they must be enabled to attain knowledge of basic qualifications. In order to accomplish this, policy could offer adjusted forms of education that are aimed to provide the necessarily knowledge of the Dutch language as well to connect the knowledge that immigrants have acquired in the country of origin. Moreover, the integration courses given in the countries of origin, should no longer only be focused on the Dutch language and culture, but should also pay more attention on the transition issues in education.

Regarding the undertaken policy measures, until recently the Dutch government heavily subsidized language and citizenship courses (€276 million in 2003).[261] Initially the courses in citizenship were not considered mandatory. However, later these courses did became mandatory, however, failing this exam did not have any consequences.[262] Whereas more recently, immigrants that are not considered as European citizens are restricted on passing the exam prior to the access of the Netherlands. On the other hand, current inhabited immigrants only are enabled for social benefits if they completed the exam with satisfactory grades.[263] The execution and implementation of these courses were recently undertaken by the local governments.[264] However, The Court of Audit (Algemene Rekenkamer) was not enchanted by the effort of these local governments (i.e., decentralization) regarding the outcome from this

[261] Hartog, J., (2011), p. 215.
[262] Hartog, J., (2011), p. 215.
[263] Hartog, J., (2011), p. 215.
[264] This is one the two policy shifts that is described by SER (2007). Namely decentralization, this implies that local authorities and institutions are playing a more imperative role for both education and labour market policies (SER, p. 29).

policy in 2000. The unpleasantness regarding this year was due to the lack of information both on the spending and effectiveness of these policies, as well as the high rates concerning drop-outs and absence of the participants. Despite the extra procedures that were taken in 2003, the effect was very small and lead to a minor enrichment of the skills from the participants.[265]

Based on the outcomes from previous policy measures the best advice on top of our earlier policy recommendations regarding this study is that no new policy should be realized without an appropriate plan to evaluate its effect. Furthermore, the intervention of policy makers should be leaded by "evidence-based policy" rather than by "presumption-based policy". Given that presumption-based policy interventions in this field are most likely to be ineffective. Therefore research attempts to exactly pinpoint the causal relations and its effects. In order to be capable in providing such information, proper data collection is required. This leads us to the final recommendation of this thesis. The government should collect data across Europe in an equivalent framework for several countries with a longitudinal design. This type of investment requires time, but eventually will yield to several benefits. For example, the collection of such data across Europe will enable researchers to examine the effects of different institutions as well to obtain a better insight in the self-selection of immigrant groups (see *section 7.2*).

It actually is somewhat peculiar that, with the great numbers of expenses on these policies and on the other hand the increasing demand for information on the socioeconomic status of minorities in Dutch society, that such an insignificant share of expenditure is not admitted for the proper collection of data. As has been stated by Hartog (2011) „if 1 percent (or even 0.5 percent) of every budget for policy intervention were set aside for data collection, we would be able to know so much more".[266]

[265] Hartog, J., (2011), p. 215.
[266] Hartog, J., (2011), p. 220.

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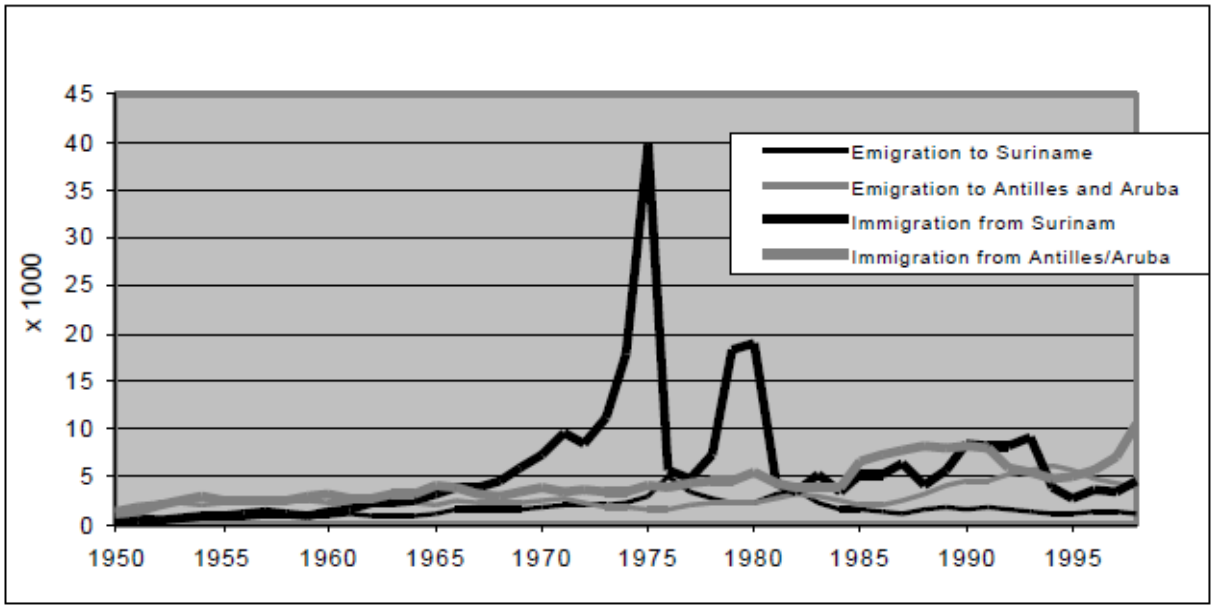
# Appendices

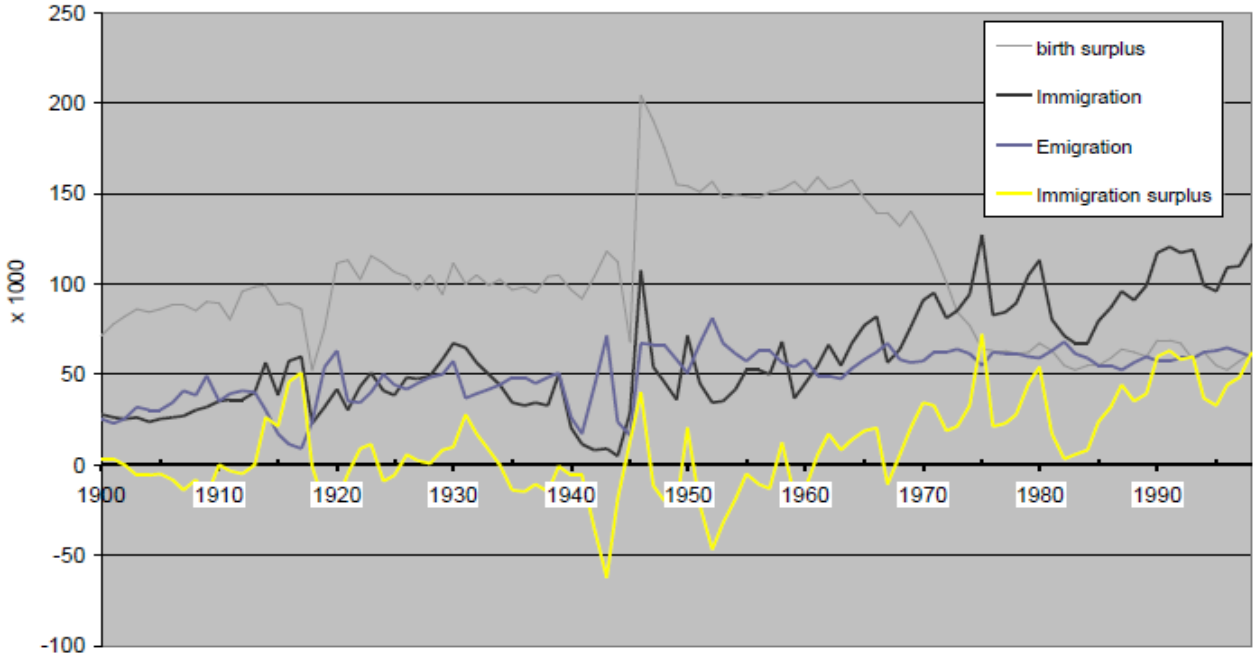
## Appendix A1

**Figure A1.1 Migration from/to Surinam, Netherlands Antilles and Aruba**



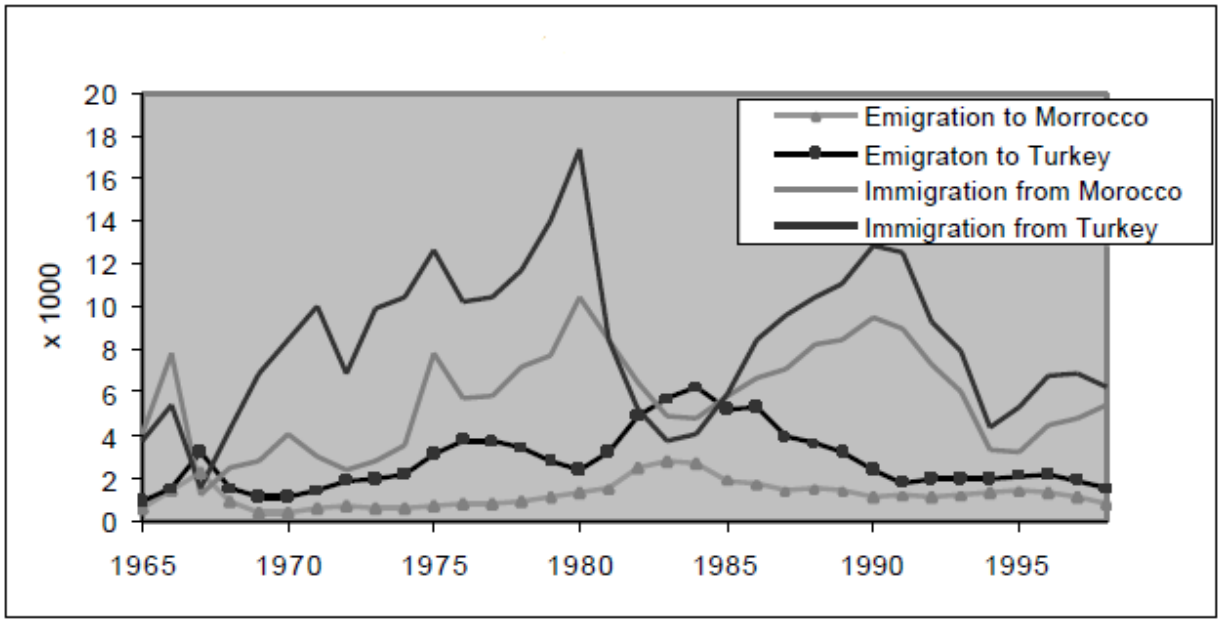

The Netherlands Antilles including Aruba from 1986 onwards.
Source: CBS StatLine (2011)

**Figure A1.2 Migration from/to the Netherlands, 1900-1998**




Source: CBS StatLine (2011)

**Figure A1.3 Migration from/to Turkey and Morocco**




Source: CBS StatLine (2011)

## Appendix B1

**Table B1.1 Descriptive statistics for the first analysis**

| | Range | Description |
|---|---|---|
| **Dependent variables** | | |
| Income per hour (log.) | 0.07 - 3.83 | Logarithm of income p/h |
| Job level (4) | 1/4 | (Elementary, low, medium, high) |
| | | |
| ***Human capital*** | | |
| Job level (4) | 1/4 | Job level (4) |
| Education in the Netherlands | 1/4 | (primary, lower secondary, higher secondary, tertiary) |
| Education country of origin | 1/4 | (primary, lower secondary, higher secondary, tertiary) |
| Work exp. in the Netherlands / 10 | 0.10 - 4.20 | |
| Work exp. in the Netherlands – squared / 10 | 0 – 17.64 | |
| Pot. work exp. country of origin / 10 | 0- 4.7 | |
| Pot. work exp. country of origin - squared / 10 | 0 - 22.09 | |
| On the job training (yes) | 1/0 | |
| On the job training (no) * | 1/0 | Reference category |
| Health – Good | 1/0 | |
| Health – Neutral * | 1/0 | Reference category |
| Health – Bad * | 1/0 | Reference category |
| Education parents – primary * | 1/0 | Reference category |
| Education parents – lower secondary | 1/0 | |
| Education parents – higher secondary | 1/0 | |
| Education parents – tertiary | 1/0 | |
| | | |
| Caribbean (versus Mediterranean) | 1/0 | (Surinamese + Antillean) = 1 (Turk + Moroccan) = 0 |
| Caribbean * Education in the Netherlands | | Interaction |
| Caribbean * Education country of origin | | Interaction |
| Caribbean * Work exp. in the Netherlands | | Interaction |
| Caribbean * Work exp. in the Netherlands - squared | | Interaction |
| Caribbean * Pot. work exp. country of origin | | Interaction |
| Caribbean * Pot. work exp. country of origin - squared | | Interaction |
| | | |
| ***Social capital*** | | |
| Contact natives (Dutch) | 1/3 | Never, sometimes, often |
| *Social ties (partner)* | | |
| Single * | 1/0 | Reference category |
| Married to an ethnic partner | 1/0 | |
| Married to a Dutch partner | 1/0 | |
| *Membership association* | | |
| Not a member * | 1/0 | Reference category |
| Predominantly ethnic members | 1/0 | |
| Predominantly Dutch members | 1/0 | |
| | | |
| ***Cultural capital*** | | |
| Scale modern conceptions | 1/5 | |

--- Table B1.1 **Descriptive statistics for the first analysis** (continued) ---

| | | |
|---|---|---|
| Connectedness to country of origin | 1/0 | |
| Equally connected to NL and country of origin * | 1/0 | Reference category |
| Connectedness to the Netherlands | 1/0 | |
| | | |
| ***Control variables*** | | |
| Language proficiency | 1/3 | Often, sometimes, never. |
| *Origin* | | |
| Turk * | 1/0 | Reference category |
| Moroccan | 1/0 | |
| Surinamese | 1/0 | |
| Antillean | 1/0 | |
| Age/10 | 1.5 - 6.4 | |
| Age/10-squared | 2.25 – 42.25 | |
| *Gender* | | |
| Male | 1/0 | |
| Female * | 1/0 | Reference category |
| Age at migration | 6 - 57 | |
| Number of persons to whom leads | 0 - 403 | |
| Number of times unemployed in the NL | 0 - 9 | |
| *Motivation migration* | | |
| Other * | 1/0 | Reference category |
| Work | 1/0 | |
| Study | 1/0 | |
| Family | 1/0 | |
| *Sector* | | |
| Agriculture | 1/0 | |
| Industry | 1/0 | |
| Construction | 1/0 | |
| Trade | 1/0 | |
| Transport | 1/0 | |
| Business services | 1/0 | |
| Government | 1/0 | |
| Healthcare | 1/0 | |
| Cultural * | 1/0 | Reference category |

* reference category

**Table B1.2 Descriptive statistics for the second analysis**

| | Range | Description |
|---|---|---|
| **Dependent variables** | | |
| Investment education host-country | 0-3 | |
| Investment education host-country 1 | 0-2 | |
| | | |
| **Settlement intentions** | | |
| Age at migration | 6 - 57 | |
| Age at migration - squared | 36 - 3249 | |
| Years since migration | 0 - 53 | Number of years since migration |
| Years since migration - squared | 0 - 2809 | |
| Number of children | 0 - 12 | |
| Children in the Netherlands | 1/0 | Reference category is having no children and children abroad |
| Married to Dutch partner | 1/0 | |
| Married to an ethnic partner * | 1/0 | Reference category |
| Single * | 1/0 | Reference category |
| | | |
| **Skill transferability** | | |
| Turk * | 1/0 | Reference category |
| Moroccan | 1/0 | |
| Antillean | 1/0 | |
| Surinamese | 1/0 | |
| Caribbean (versus Mediterranean) | 1/0 | (Surinamese + Antillean) = 1 (Turk + Moroccan) = 0 |
| Caribbean * years of education abroad | | Interaction |
| Years of education abroad | 1 - 23 | |
| | | |
| **Opportunity cost** | | |
| Caribbean * number of times unemployed in NL | | Interaction |
| Number of times unemployed in the NL | 0 - 9 | |
| | | |
| ***Control variables*** | | |
| *Gender* | | |
| Male | 1/0 | |
| Female * | 1/0 | Reference category |
| *Health condition* | | |
| Health condition – Good | 1/0 | |
| Health condition – Neutral * | 1/0 | Reference category |
| Health condition – Bad | 1/0 | |
| *Motivation migration* | | |
| Other * | 1/0 | Reference category |
| Work | 1/0 | |
| Study | 1/0 | |
| Family | 1/0 | |

* reference category

**Table B1.3 Descriptive statistics for the third analysis**

| | Range | Description |
|---|---|---|
| **Dependent variable** | | |
| Over-education | 1/0 | DSA-method |
| | | |
| **Career Mobility** | | |
| Promotion expectations (yes) | 1/0 | |
| Promotion expectations (no) * | 1/0 | Reference category |
| On-the-job-training (yes) | 1/0 | |
| On-the-job-training (no) * | 1/0 | Reference category |
| | | |
| *Human Capital* | | |
| Highest education – primary | 1/0 | |
| Highest education – lower secondary | 1/0 | |
| Highest education – higher secondary | 1/0 | |
| Highest education – tertiary * | 1/0 | Reference category |
| Years of education abroad | 0 - 25 | |
| Work experience NL (years) | 0.08 – 10.33 | |
| | | |
| *Country of Origin* | | Reference category |
| Mediterranean (versus Caribbean) | 1/0 | (Surinamese + Antillean) = 0 (Turk + Moroccan) = 1 |
| Caribbean immigrants (*ref. "Dutch")* | 1/0 | (Surinamese + Antillean) |
| Mediterranean immigrants (*ref. "Dutch")* | 1/0 | (Turk + Moroccan) |
| | | |
| *Control variables* | | Interaction |
| *Gender (ref. "female")* | | |
| Male | 1/0 | |
| Female * | 1/0 | Reference category |
| *Motivation of migration (ref. "other")* | | |
| Family | 1/0 | |
| Study | 1/0 | |
| Work | 1/0 | |
| Other * | 1/0 | Reference category |
| Number of times unemployed in the NL | 0 - 10 | |
| Age group 15-40 | 1/0 | |
| Age group 41-64 * | 1/0 | Reference category |
| Years since migration | 0 - 59 | |
| Often discriminated | 1/0 | |
| Sometimes discriminated * | 1/0 | Reference category |
| Never discriminated | 1/0 | |
| Social Capital | 1-5 | Reference category |
| More connected to country of origin | 1/0 | |
| Equally connected * | 1/0 | Reference category |
| More connected to the Netherlands | 1/0 | |
| Nice work environment (yes) | 1/0 | |
| Nice work environment (no) * | 1/0 | Reference category |
| Fixed job | 1/0 | |
| Temporally job * | 1/0 | Reference category |

--- Table B1.3 **Descriptive statistics for the third analysis** (continued) ---

| | | |
|---|---|---|
| First generation | 1/0 | |
| Second generation * | 1/0 | Reference category |

* reference category

## Appendix C1

**Table C1.1 Summary of the research hypotheses (*First analysis)***

| *Hypothesis* | *Predicted variable* |
|---|---|
| **1a** *Human capital has a positive effect on the socioeconomic status (occupation and earnings) of an immigrant.* | **Human capital** |
| **1b** *The return on origin-country specific human capital of Caribbean immigrants is higher than that of Mediterranean immigrants.* | |
| **1c** *Mediterranean immigrants have a higher return on destination-specific human capital than Caribbean immigrants.* | |
| **1d** *Immigrants that have norms and values that are more comparable to that of the dominant culture the host-country acquire a higher occupational status and earnings than those that with less comparable values.* | **Cultural capital** |
| **1e** *Immigrants who have more social contacts (both, natives and ethnicities) have a higher occupational status and earnings than those who have fewer social contacts.* | **Social capital** |
| **1f** *Immigrants who have more contacts with Dutch acquire a higher occupational status and earnings than those who have more contacts with ethnicities.* | |
| **1g** *Immigrants who are married with a Dutch partner obtain a higher occupational status and have higher earnings than those married to the same group (endogamous marriage) or other ethnic group.* | |

* Dependent variables: (Logarithm) income per hour and occupational level (4 categories).

**Table C1.2 Summary of the research hypotheses (*Second analysis)***

| *Hypothesis* | *Predicted variable* |
|---|---|
| **2a** *The longer immigrants stay at the host-country the more likely they will invest in post-migration education.* | **Settlement intentions** |
| **2b** *Immigrants that are married post-migration will invest more in destination-specific education than migrants who are single or married before migration.* | |
| **2c** *Immigrants that have children in the host-country will invest more in destination-specific education than immigrants who do not have children in the host-country.* | |
| **2d** *Younger immigrants invest more in destination-specific education than older immigrants.* | |
| **2e** *Mediterranean immigrants are more likely to invest in education in the host-country than Caribbean immigrants.* | **Transferability skills** |
| **2f** *Mediterranean immigrants are expected to be more strongly affected by the unemployment rate than Caribbean immigrants.* | **Opportunity cost** |

* Dependent variables: *Investedu1*(3 categories) and *investedu2*(4 categories).

**Table C1.3 Summary of the research hypotheses (*Third analysis)***

| *Hypothesis* | *Predicted variable* |
|---|---|
| | **Career mobility** |
| **3a** *The incidence of over-education is more likely to be prevalent among individuals that are expecting to be promoted.* | |
| **3b** *The more education an immigrant has followed abroad, the higher the odds that the immigrant will be over-educated.* | **Human capital** |
| **3c** *The second generation Caribbean is less likely to be over-educated than Caribbean immigrants (i.e., first-generation.)* | **Country of origin** |
| **3d** *Caribbean immigrants are less likely to be over-educated than Mediterranean immigrants.* | |

* Dependent variable: Over-education 1/0 (DSA-method).

## Appendix C2

**Table C2.1 Heckman selection model - first analysis**
***Model I = Income per hour; Model II = occupational level***

| | Model I | | Model II | |
|---|---|---|---|---|
| *Human capital* | | | | |
| Occupational status | 0.079*** | 0.014 | | |
| Educational attainment NL | 0.061*** | 0.015 | 0.350*** | 0.037 |
| Educational attainment abroad | 0.024** | 0.011 | 0.200*** | 0.033 |
| Work experience NL / 10 | 0.059*** | 0.021 | -0.024 | 0.061 |
| Potential work experience abroad / 10 | 0.002 | 0.022 | -0.061 | 0.060 |
| On the job training | 0.014 | 0.022 | 0.119** | 0.060 |
| Good health condition | 0.079*** | 0.024 | 0.057 | 0.074 |
| Parents low education | 0.006 | 0.032 | 0.100 | 0.091 |
| Parents medium education | 0.017 | 0.039 | 0.117 | 0.110 |
| Parents high education | 0.102** | 0.043 | 0.264** | 0.119 |
| *Social capital* | | | | |
| Contact Dutch | 0.028 | 0.021 | 0.086 | 0.056 |
| *Social ties (ref. "single")* | | | | |
| Married to an ethnic partner | 0.079*** | 0.029 | -0.089 | 0.081 |
| Married to a Dutch partner | 0.079** | 0.038 | -0.158 | 0.109 |
| *Membership association (ref. "no membership")* | | | | |
| Predominantly ethnic members | -0.022 | 0.031 | 0.112 | 0.091 |
| Predominantly Dutch members | 0.050 | 0.038 | 0.123* | 0.078 |

--- Table C2.1 **Heckman selection model – First analysis** (continued) ---

| | | | | |
|---|---|---|---|---|
| *Cultural capital* | | | | |
| Scale modern conceptions | -0.003 | 0.021 | 0.183*** | 0.058 |
| *Connectedness (ref. "equally connected")* | | | | |
| More connected to country of origin | -0.030 | 0.024 | 0.039 | 0.069 |
| More connected to the Netherlands | 0.013 | 0.037 | -0.046 | 0.107 |
| *Control variables* | | | | |
| Language proficiency | 0.016 | 0.020 | -0.000 | 0.058 |
| *Country of origin (ref. "Turk")* | | | | |
| Moroccan | 0.001 | 0.032 | 0.144 | 0.093 |
| Surinamese | -0.011 | 0.035 | 0.372*** | 0.101 |
| Antillean | -0.041 | 0.040 | 0.331*** | 0.116 |
| Age/10 | 0.338*** | 0.096 | 0.254 | 0.279 |
| Age/10-squared | -0.040*** | 0.012 | -0.029 | 0.034 |
| *Gender (ref. "female")* | | | | |
| Male | 0.011 | 0.032 | 0.122 | 0.088 |
| Age at migration | 0.001 | 0.004 | 0.008 | 0.010 |
| Number of times unemployed in the NL | -0.009 | 0.006 | -0.038** | 0.018 |
| *Motivation of migration (ref. "other")* | | | | |
| Family | -0.069 | 0.027 | 0.097 | 0.080 |
| Study | 0.065* | 0.035 | -0.032 | 0.103 |
| Work | 0.002 | 0.032 | 0.032** | 0.094 |
| *Sector (ref. "Cultural")* | | | | |
| Agriculture | 0.144** | 0.065 | -0.178 | 0.192 |
| Industry | 0.147*** | 0.052 | -0.165 | 0.155 |
| Construction | 0.061 | 0.063 | -0.131 | 0.187 |
| Trade | 0.080 | 0.057 | 0.143 | 0.168 |
| Transport | 0.203*** | 0.060 | -0.249 | 0.176 |
| Business services | 0128** | 0.055 | -0.450*** | 0.162 |
| Government | 0.162*** | 0.054 | 0.233*** | 0.156 |
| Healthcare | 0.106* | 0.058 | -0.116 | 0.170 |
| (Constant) | 0.856*** | .223 | 0.247 | 0.629 |
| *Heckman (select)* | | | | |
| Educational attainment NL | 0.311*** | 0.053 | 0.250*** | 0.553 |
| Age of partner | -0.015*** | 0.006 | -0.005 | 0.006 |
| Bad health condition | -1.170*** | 0.130 | -1.274*** | 0.127 |
| Years since migration | -0.007 | 0.007 | -0.148*** | 0.007 |
| Educational attainment abroad | 0.044 | 0.050 | 0.111** | 0.051 |
| Number of times unemployed in the NL | -0.062*** | 0.023 | -0.056*** | 0.024 |
| *Discrimination (ref. "sometimes")* | | | | |
| Often discriminated | -0.106 | 0.190 | -0.140 | 0.120 |
| Never discriminated | 0.049 | 0.093 | -0.107 | 0.095 |
| *Motivation of migration (ref. "other")* | | | | |
| Family | 0.065 | 0.102 | -0.146 | 0.115 |
| Study | -0.250 | 0.141 | -0.436*** | 0.152 |

--- Table C2.1 **Heckman selection model – First analysis** (continued) ---

| | | | | |
|---|---|---|---|---|
| Work | -0.401*** | 0.124 | -0.313*** | 0.127 |
| Number of children | 0.002 | 0.031 | -0.017 | 0.031 |
| Constant | -0.223 | 0.337 | -0.005 | 0.346 |
| Number of observations | 645 | | 1409 | |
| *Rho* | -0.171 | | 0.238 | |
| *Sigma* | 0.237 | | 0.741 | |
| *Lambda* | -0.041 | | 0.176 | |
| **Model I:** LR test of indep. Eqns. (rho = 0): chi2(**1**) = **0.43** Prob > chi2 = **0.5137** | | | | |
| **Model II:** LR test of indep. Eqns. (rho = 0): chi2(**1**) = **1.37** Prob > chi2 = **0.2413** | | | | |

# Appendix C3

**Table C3.1 Empirical evidence (*First analysis)***

| *Dependent variables*: (Logarithm) Income per hour and occupational status (4 categories) | Dependent variable | Empirical result | Hypothesis (not) supported / rejected |
|---|---|---|---|
| ***Human capital*** | | | |
| **1a** *Human capital has a positive effect on the socioeconomic status (occupation and earnings) of an immigrant.* | Income per hour | + | H1a supported |
| | Occupational status | + | H1a supported |
| **1b** *The return on origin-country specific human capital of Caribbean immigrants is higher than that of Mediterranean immigrants.* | Income per hour | 0 | H1b not supported |
| | Occupational status | + | H1b supported |
| **1c** *Mediterranean immigrants have a higher return on destination-specific human capital than Caribbean immigrants.* | Income per hour | 0 | H1c not supported |
| | Occupational status | + | H1c supported |
| ***Cultural capital*** | | | |
| **1d** *Immigrants that have norms and values that are more comparable to that of the dominant culture in the host-country acquire a higher occupational status and earnings than those that with less comparable values.* | Income per hour | 0 | H1d not supported |
| | Occupational status | + | H1d supported |
| ***Social capital*** | | | |
| **1e** *Immigrants who have more social contacts (both, natives and ethnicities) have a higher occupational status and earnings than those who have fewer social contacts.* | Income per hour | 0 | H1e not supported |
| | Occupational status | 0 | H1e not supported |
| **1f** *Immigrants who have more contacts with Dutch acquire a higher occupational status and earnings than those who have more contacts with ethnicities.* | Income per hour | 0 | H1f not supported |
| | Occupational status | 0 | H1f not supported |
| **1g** *Immigrants who are married with a Dutch partner obtain a higher occupational status and have higher earnings than those married to the same group (endogamous marriage) or other ethnic group.* | Income per hour | + | H1g supported |
| | Occupational status | 0 | H1g not supported |

**+ means:** the odds/likelihood of having a high income per hour or occupational status increases as the corresponding variable increases in value.

**0 means**: the odds/likelihood of having a high income per hour or occupational status is not significantly ($\alpha < 0,05$) affected by an increase or decrease of the corresponding variable.

**Table C3.2 Empirical evidence (*Second analysis)***

| *Dependent variables*: (Logarithm) Income per hour and occupational status (4 categories) | Dependent variable | Empirical result | Hypothesis (not) supported / rejected |
|---|---|---|---|
| ***Settlement intentions*** | | | |
| **2a** *The longer immigrants stay at the host-country the more likely they will invest in post-migration education.* | *Investedu1* | + | H2a supported |
| | *Investedu2* | + | H2a supported |
| **2b** *Immigrants that are married post-migration will invest more in destination-specific education than migrants who are single or married before migration.* | *Investedu1* | 0 | H2b not supported |
| | *Investedu2* | + | H2b supported |
| **2c** *Immigrants that have children in the host-country will invest more in destination-specific education than immigrants who do not have children in the host-country.* | *Investedu1* | 0 | H2c not supported |
| | *Investedu2* | 0 | H2c not supported |
| **2d** *Younger immigrants invest more in destination-specific education than older immigrants.* | *Investedu1* | + | H2d supported |
| | *Investedu2* | + | H2d supported |
| ***Transferability skills*** | | | |
| **2d** *Mediterranean immigrants are more likely to invest in education in the host-country than Caribbean immigrants.* | *Investedu1* | + | H2d supported |
| | *Investedu2* | + | H2d supported |
| ***Opportunity cost*** | | | |
| **2f** *Mediterranean immigrants are expected to be more strongly affected by the unemployment rate than Caribbean immigrants.* | *Investedu1* | + | H2f supported |
| | *Investedu2* | + | H2f supported |

**+ means**: the odds/likelihood of investing in post-migration education increases as the corresponding variable increases in value.
**0 means**: the odds/likelihood of investing in post-migration education is not significantly ($\alpha < 0,05$) affected by an increase or decrease of the corresponding variable.
**- means**: the odds/likelihood of investing in post-migration education decreases as the corresponding variable increases in value.

**Table C3.1 Empirical evidence (*Third analysis)***

| *Dependent variables*: (Logarithm) Income per hour and occupational status (4 categories) | Dependent variable | Empirical result | Hypothesis (not) supported / rejected |
|---|---|---|---|
| ***Career mobility*** | | | |
| **3a** *The incidence of over-education is more likely to be prevalent among individuals that are expecting to be promoted.* | *DSA* | - | H3a rejected |
| ***Human capital*** | | | |
| **3b** *The more education an immigrant has followed abroad, the higher the odds that the immigrant will be over-educated.* | *DSA* | + | H3b supported |
| ***Country of origin*** | | | |
| **3c** *The second generation Caribbean is less likely to be over-educated than Caribbean immigrants (i.e., first-generation.)* | *DSA* | 0 | H3c not supported |
| **3d** *Caribbean immigrants are less likely to be over-educated than Mediterranean immigrants.* | *DSA* | + | H3d supported |

**+ means**: the odds/likelihood of investing in post-migration education increases as the corresponding variable increases in value.
**0 means**: the odds/likelihood of investing in post-migration education is not significantly ($\alpha < 0,05$) affected by an increase or decrease of the corresponding variable.
**- means**: the odds/likelihood of investing in post-migration education decreases as the corresponding variable increases in value.

## Appendix D1

**Table D1.1 Binary logistic regression – Over-education (**group discrimination**)**

| | Model I | | Model II | |
|---|---|---|---|---|
| Predicted probability † | 0.141 | | 0.147 | |
| *Career Mobility* | | | | |
| Promotion (*ref. "no promotion expectations")* | -0.062*** | 0.022 | -0.059*** | 0.020 |
| On-the-job-training (*ref. "no on-the-job-training")* | -0.056*** | 0.021 | -0.067*** | 0.020 |
| *Human Capital* | | | | |
| *Education (ref. "highest education - tertiary")* | | | | |
| Highest education – primary | -0.134*** | 0.035 | -0.098*** | 0.032 |
| Highest education – lower secondary | -0.052* | 0.030 | -0.029 | 0.028 |
| Highest education – higher secondary | -0.037 | 0.028 | -0.003 | 0.026 |
| Years of education abroad | 0.008*** | 0.004 | 0.009*** | 0.002 |
| Work experience NL | -0.001 | 0.002 | -0.001 | 0.001 |
| *Country of Origin* | | | | |
| Mediterranean (versus Caribbean) | 0.056** | 0.025 | 0.038* | 0.021 |
| *Control variables* | | | | |
| *Gender (ref. "female")* | | | | |
| Male | 0.012 | 0.021 | 0.018 | 0.019 |
| *Motivation of migration (ref. "other")* | | | | |
| Family | 0.004 | 0.029 | | |
| Study | -0.078* | 0.044 | | |
| Work | 0.023 | 0.033 | | |
| Number of times unemployed in the NL | 0.004*** | 0.007 | 0.013** | 0.006 |
| Age group 15-40 *(ref. "age group 41-64")* | 0.020 | 0.026 | 0.032 | 0.024 |
| Years since migration | -0.002 | 0.002 | | |
| *Discrimination (ref. "sometimes")* | | | | |
| **[Ethnic group] often discriminated** | -0.022 | 0.023 | -0.014 | 0.021 |
| **[Ethnic group] never discriminated** | -0.044* | 0.026 | -0.058** | 0.025 |
| Social Capital | -0.010 | 0.009 | -0.012* | 0.008 |
| *Cultural capital (ref. "equally connected")* | | | | |
| More connected to country of origin | 0.007 | 0.028 | 0.017 | 0.024 |
| More connected to the Netherlands | -0.002 | 0.023 | 0.013 | 0.021 |
| Nice work environment | -0.039* | 0.024 | -0.024 | 0.022 |
| Fixed job *(ref. "temporally job")* | -0.070*** | 0.021 | -0.060*** | 0.022 |
| First generation | | | -0.035 | 0.029 |
| Number of observations | 1163 | | 1399 | |
| *Pseudo* $R^2$ | 0.115 | | 0.096 | |
| Log-likelihood | -414 | | -512 | |

*** denotes significance at 1%; ** at 5%; * at 10%.
Average marginal effects are displayed, together with their standard errors.
† The predicted probability of being over-educated is the average across all respondents in the regression sample.

## Appendix E1

**Table E1.1 OLS regression – (logarithm) income per hour**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| *Human capital* | | | | | | | | |
| Occupational status | 0.071*** | 0.013 | | | 0.068*** | 0.013 | 0.075*** | 0.014 |
| Educational attainment NL | 0.058*** | 0.011 | | | 0.051*** | 0.019 | 0.052*** | 0.012 |
| Educational attainment abroad | 0.023* | 0.014 | | | 0.015 | 0.017 | 0.025* | 0.015 |
| Work experience NL / 10 | 0.062*** | 0.019 | | | 0.071*** | 0.024 | 0.059*** | 0.021 |
| Potential work experience abroad / 10 | -0.009 | 0.032 | | | 0.004 | 0.039 | 0.007 | 0.035 |
| On the job training | 0.026 | 0.020 | | | 0.027 | 0.020 | 0.014 | 0.022 |
| Good health condition | 0.040* | 0.022 | | | 0.038* | 0.022 | 0.060** | 0.024 |
| Parents low education | -0.023 | 0.028 | | | -0.035 | 0.028 | 0.006 | 0.032 |
| Parents medium education | 0.008 | 0.035 | | | -0.004 | 0.035 | 0.017 | 0.039 |
| Parents high education | 0.080** | 0.037 | | | 0.064* | 0.037 | 0.102** | 0.043 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | -0.002 | 0.074 | | |
| Caribbean * Educational attainment NL | | | | | 0.008 | 0.021 | | |
| Caribbean * Educational attainment abroad | | | | | 0.025 | 0.020 | | |
| Caribbean * Work experience NL | | | | | -0.014 | 0.023 | | |
| Caribbean * Potential work experience abroad | | | | | -0.027 | 0.032 | | |
| *Social capital* | | | | | | | | |
| Contact Dutch | | | 0.035** | 0.017 | | | 0.017 | 0.205 |
| *Social ties (ref. "single")* | | | | | | | | |
| Married to an ethnic partner | | | 0.077*** | 0.026 | | | 0.079*** | 0.029 |
| Married to a Dutch partner | | | 0.073** | 0.034 | | | 0.079** | 0.038 |
| *Membership association (ref. "no membership")* | | | | | | | | |
| Predominantly ethnic members | | | 0.036 | 0.026 | | | -0.017 | 0.027 |
| Predominantly Dutch members | | | 0.069*** | 0.027 | | | 0.050 | 0.038 |
| *Cultural capital* | | | | | | | | |
| Scale modern conceptions | 0.007 | 0.018 | 0.061*** | 0.017 | 0.007 | 0.018 | 0.001 | 0.020 |
| *Connectedness (ref. "equally connected")* | | | | | | | | |
| More connected to country of origin | 0.022 | 0.021 | 0.010 | 0.022 | 0.019 | 0.021 | 0.005 | 0.024 |
| More connected to the Netherlands | 0.048 | 0.033 | 0.057* | 0.032 | 0.045 | 0.033 | 0.038 | 0.036 |
| *Control variables* | | | | | | | | |
| Language proficiency | 0.037** | 0.018 | 0.082*** | 0.018 | 0.040** | 0.018 | 0.031 | 0.020 |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | -0.006 | 0.032 | -0.012 | 0.030 | | | 0.000 | 0.033 |
| Surinamese | 0.030 | 0.033 | 0.015 | 0.032 | | | 0.021 | 0.036 |
| Antillean | -0.017 | 0.038 | -0.001 | 0.036 | | | -0.044 | 0.042 |
| Age/10 | 0.220*** | 0.089 | 0.258 | 0.084 | 0.207** | 0.092 | 0.214** | 0.094 |
| Age/10-squared | -0.027*** | 0.011 | -0.025 | 0.010 | -0.025** | 0.011 | -0.026** | 0.011 |
| *Gender (ref. "female")* | | | | | | | | |

--- Table E1.1 **OLS regression – (logarithm) income per hour** (continued) ---

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Male | 0.055** | 0.024 | 0.051** | 0.025 | 0.060** | 0.024 | 0.029 | 0.028 |
| Age at migration | 0.000 | 0.003 | -0.004*** | 0.001 | 0.000 | 0.003 | 0.000 | 0.004 |
| Number of persons to whom leads | 0.003*** | 0.001 | 0.004*** | 0.001 | 0.004*** | 0.001 | 0.003** | 0.001 |
| Number of times unemployed in the NL | -0.009* | 0.005 | -0.017*** | 0.005 | -0.009* | 0.005 | -0.009 | 0.006 |
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.012 | 0.026 | 0.046* | 0.025 | 0.014 | 0.026 | 0.021 | 0.028 |
| Study | 0.057* | 0.030 | 0.117*** | 0.029 | 0.033 | 0.030 | 0.078** | 0.034 |
| Work | 0.015 | 0.031 | 0.016 | 0.030 | -0.006 | 0.031 | 0.032 | 0.033 |
| *Sector (ref. "Cultural")* | | | | | | | | |
| Agriculture | 0.113* | 0.060 | 0.155*** | 0.060 | 0.116* | 0.061 | 0.098 | 0.064 |
| Industry | 0.112** | 0.049 | 0.128*** | 0.050 | 0.111** | 0.049 | 0.110** | 0.053 |
| Construction | 0.044 | 0.061 | 0.067 | 0.062 | 0.040 | 0.061 | 0.050 | 0.066 |
| Trade | 0.073 | 0.053 | 0.074 | 0.053 | 0.073 | 0.053 | 0.067 | 0.058 |
| Transport | 0.177*** | 0.057 | 0.156*** | 0.058 | 0.181*** | 0.057 | 0.181*** | 0.061 |
| Business services | 0.138*** | 0.050 | 0.138*** | 0.052 | 0.137*** | 0.050 | 0123** | 0.055 |
| Government | 0.166*** | 0.050 | 0.240*** | 0.052 | 0.169*** | 0.050 | 0.153*** | 0.056 |
| Healthcare | 0.098** | 0.050 | 0.122** | 0.054 | 0.108** | 0.050 | 0.080 | 0.058 |
| (Constant) | 0.995*** | 0.195 | 0.911*** | 0.187 | 1.028*** | 0.197 | 0.956 | .206 |
| Number of observations | 797 | | 960 | | 797 | | 655 | |
| $R^2$ | 0.378 | | 0.266 | | 0.379 | | 0.405 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

**Table E1.2 OLS regression – Occupational status**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| *Human capital* | | | | | | | | |
| Educational attainment NL | 0.292*** | 0.029 | | | 0.403*** | 0.050 | 0.280*** | 0.033 |
| Educational attainment abroad | 0.192*** | 0.036 | | | 0.146*** | 0.045 | 0.176*** | 0.040 |
| Work experience NL / 10 | 0.068 | 0.052 | | | 0.155** | 0.065 | 0.048 | 0.060 |
| Potential work experience abroad / 10 | -0.129 | 0.085 | | | -0.134 | 0.104 | -0.135 | 0.096 |
| On the job training | 0.106** | 0.054 | | | 0.089* | 0.054 | 0.120** | 0.060 |
| Good health condition | 0.015 | 0.059 | | | 0.032 | 0.059 | -0.001 | 0.068 |
| Parents low education | 0.029 | 0.078 | | | 0.038 | 0.076 | 0.100 | 0.091 |
| Parents medium education | 0.084 | 0.097 | | | 0.087 | 0.096 | 0.117 | 0.110 |
| Parents high education | 0.228** | 0.101 | | | 0.266*** | 0.101 | 0.264** | 0.119 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | 0.549*** | 0.203 | | |
| Caribbean * Educational attainment NL | | | | | -0.147*** | 0.057 | | |
| Caribbean * Educational attainment abroad | | | | | 0.095** | 0.044 | | |
| Caribbean * Work experience NL | | | | | -0.152** | 0.062 | | |
| Caribbean * Potential work experience abroad | | | | | -0.015 | 0.086 | | |
| *Social capital* | | | | | | | | |
| Contact Dutch | | | 0.141*** | 0.047 | | | 0.071 | 0.054 |
| *Social ties (ref. "single")* | | | | | | | | |
| Married to an ethnic partner | | | -0.019 | 0.069 | | | -0.089 | 0.081 |
| Married to a Dutch partner | | | -0.063 | 0.092 | | | -0.158 | 0.109 |
| *Membership association (ref. "no membership")* | | | | | | | | |
| Predominantly ethnic members | | | 0.252*** | 0.074 | | | 0.073 | 0.086 |
| Predominantly Dutch members | | | 0.262*** | 0.070 | | | 0.146* | 0.077 |
| *Cultural capital* | | | | | | | | |
| Scale modern conceptions | 0.197*** | 0.048 | 0.285*** | 0.046 | 0.211*** | 0.048 | 0.182*** | 0.054 |
| *Connectedness (ref. "equally connected")* | | | | | | | | |
| More connected to country of origin | -0.002 | 0.058 | -0.005 | 0.060 | -0.008 | 0.058 | 0.004 | 0.067 |
| More connected to the Netherlands | 0.091 | 0.091 | 0.053 | 0.088 | 0.138 | 0.091 | 0.126 | 0.102 |
| *Control variables* | | | | | | | | |
| Language proficiency | 0.030 | 0.049 | 0.150*** | 0.048 | 0.006 | 0.048 | -0.001 | 0.055 |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | 0.125 | 0.087 | 0.006 | 0.078 | | | 0.136 | 0.093 |
| Surinamese | 0.271*** | 0.089 | 0.155* | 0.088 | | | 0.285*** | 0.101 |
| Antillean | 0.412*** | 0.102 | 0.298*** | 0.097 | | | 0.341*** | 0.118 |
| Age/10 | -0.058 | 0.245 | 0.055 | 0.228 | -0.145 | 0.250 | 0.112 | 0.265 |
| Age/10-squared | 0.001 | 0.029 | -0.005 | 0.027 | 0.011 | 0.030 | -0.019 | 0.031 |
| *Gender (ref. "female")* | | | | | | | | |
| Male | 0.091 | 0.067 | 0.269*** | 0.067 | 0.099 | 0.067 | 0.054 | 0.079 |
| Age at migration | 0.008 | 0.009 | -0.011*** | 0.004 | 0.010 | 0.009 | 0.008 | 0.010 |
| Number of times unemployed in the NL | -0.034** | 0.014 | -0.035*** | 0.014 | -0.029** | 0.014 | -0.033** | 0.016 |

--- Table E1.2 **OLS regression – Occupational status** (continued) ---

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.056 | 0.070 | 0.078 | 0.068 | 0.062 | 0.070 | 0.054 | 0.078 |
| Study | -0.010 | 0.082 | 0.187** | 0.080 | 0.036 | 0.079 | -0.048 | 0.096 |
| Work | 0.069 | 0.084 | 0.020 | 0.079 | 0.098 | 0.083 | 0.097 | 0.091 |
| *Sector (ref. "Cultural")* | | | | | | | | |
| Agriculture | -0.034 | 0.169 | -0.112 | 0.157 | -0.055 | 0.168 | 0.033 | 0.186 |
| Industry | -0.095 | 0.136 | -0.200 | 0.130 | -0.134 | 0.136 | -0.012 | 0.152 |
| Construction | -0.184 | 0.170 | -0.093 | 0.161 | -0.215 | 0.169 | -0.022 | 0.188 |
| Trade | -0.142 | 0.146 | -0.140 | 0.136 | -0.161 | 0.145 | 0.030 | 0.165 |
| Transport | -0.192 | 0.157 | -0.291* | 0.153 | -0.231 | 0.156 | -0.107 | 0.174 |
| Business services | -0.254* | 0.138 | -0.116 | 0.135 | -0.288** | 0.138 | -0.147 | 0.156 |
| Government | 0.226* | 0.138 | 0.431*** | 0.136 | 0.179 | 0.137 | 0.394*** | 0.156 |
| Healthcare | 0.067 | 0.139 | 0.207 | 0.142 | 0.040 | 0.139 | 0.080 | 0.165 |
| Constant | 0.590 | 0.534 | 0.675 | 0.503 | 0.624 | 0.538 | 0.271 | 0.577 |
| Number of observations | 874 | | 1,128 | | 874 | | 722 | |
| $R^2$ | 0.436 | | 0.285 | | 0.443 | | 0.443 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

**Table E1.3 Ordinary logistic regression – Educational investments in the host-country**

| | Model I | | Model II | | Model III | | Model IV | |
|---|---|---|---|---|---|---|---|---|
| Investedu1=0 | -2.095*** | 0.679 | | | -2.893*** | 0.671 | | |
| Investedu1=1 | -1.197* | 0.676 | | | -2.007*** | 0.667 | | |
| Investedu2=0 | | | 0.678 | 0.611 | | | -0.073 | 0.608 |
| Investedu2=1 | | | 1.896*** | 0.613 | | | 1.137** | 0.608 |
| Investedu2=2 | | | 3.848*** | 0.622 | | | 3.080*** | 0.618 |
| *Settlement Intentions* | | | | | | | | |
| Age at migration | -0.269*** | 0.047 | -0.220*** | 0.042 | -0.293*** | 0.047 | -0.231*** | 0.042 |
| Age at migration – squared † | 0.004*** | 0.001 | 0.003*** | 0.001 | 0.004*** | 0.001 | 0.003*** | 0.001 |
| Years since migration | 0.107*** | 0.032 | 0.141*** | 0.030 | 0.095*** | 0.031 | 0.118*** | 0.029 |
| Years since migration – squared †† | -0.002*** | 0.001 | -0.002*** | 0.001 | -0.002*** | 0.001 | -0.002*** | 0.001 |
| Number of children | -0.136** | 0.067 | -0.232*** | 0.062 | -0.112* | 0.067 | -0.199*** | 0.063 |
| Children in the NL (*ref. "no children in the NL")* | 0.014 | 0.213 | 0.164 | 0.193 | -0.068 | 0.210 | 0.120 | 0.192 |
| Married to Dutch *(ref. "single and ethnic partner")* | 0.163 | 0.194 | 0.326* | 0.173 | 0.201 | 0.190 | 0.365** | 0.168 |
| *Skill Transferability* | | | | | | | | |
| *Country of origin (ref. "Turk")* | | | | | | | | |
| Moroccan | 1.019*** | 0.204 | 0.863*** | 0.202 | | | | |
| Surinamese | 1.551*** | 0.208 | 1.610*** | 0.198 | | | | |
| Antillean | 1.714*** | 0.241 | 1.879*** | 0.232 | | | | |
| Number of years education abroad | 0.013 | 0.019 | 0.041** | 0.018 | 0.038 | 0.026 | 0.058** | 0.026 |
| *Opportunity Cost* | | | | | | | | |
| Number of times unemployed in the NL | -0.083** | 0.040 | -0.113*** | 0.042 | -0.193*** | 0.061 | -0.297*** | 0.087 |
| *Interactions* | | | | | | | | |
| Caribbean (versus Mediterranean) | | | | | 1.204*** | 0.368 | 1.227*** | 0.323 |
| Caribbean * years of education abroad | | | | | -0.023 | 0.033 | -0.014 | 0.030 |
| Caribbean * number of times unemployed in the NL | | | | | 0.241*** | 0.084 | 0.285*** | 0.101 |
| *Control variables* | | | | | | | | |
| *Gender (ref. "female")* | | | | | | | | |
| Male | 0.030 | 0.167 | 0.114 | 0.152 | 0.027 | 0.166 | 0.109 | 0.152 |
| *Motivation of migration (ref. "other")* | | | | | | | | |
| Family | 0.290 | 0.179 | 0.498*** | 0.171 | 0.168 | 0.176 | 0.410** | 0.170 |
| Study | 0.988*** | 0.223 | 0.896*** | 0.193 | 1.031*** | 0.220 | 0.980*** | 0.189 |
| Work | -0.617*** | 0.223 | -0.623*** | 0.224 | -0.665*** | 0.218 | -0.585*** | 0.220 |
| *Health condition (ref. "neutral")* | | | | | | | | |
| Good health condition | 0.212 | 0.177 | 0.682*** | 0.174 | 0.214 | 0.176 | 0.679*** | 0.173 |
| Bad health condition | -0.337 | 0.260 | -0.063 | 0.268 | -0.403 | 0.258 | -0.088 | 0.267 |
| Number of observations | 1033 | | 1427 | | 1033 | | 1427 | |
| *Pseudo* $R^2$ (Nagelkerke) | 0.393 | | 0.387 | | 0.381 | | 0.382 | |
| Log-likelihood | 1,654 | | 2,082 | | 1,670 | | 2,092 | |

*** denotes significance at 1%; ** at 5%; * at 10%.

† **Model I:** 34, **Model II**: 37, **Model III**: 37, **Model IV**: 39.

†† **Model I:** 27, **Model II**: 35, **Model III**: 24, **Model IV**: 30.

**Table E1.4 Binary logistic regression – Over-education**

| | Model I | | Model II | | Model III | |
|---|---|---|---|---|---|---|
| Predicted probability † | 0.143 | | 0.134 | | 0.148 | |
| *Career Mobility* | | | | | | |
| Promotion (*ref. "no promotion expectations")* | -0.063*** | 0.022 | -0.053*** | 0.016 | -0.056*** | 0.019 |
| On-the-job-training (*ref. "no on-the-job-training")* | -0.049*** | 0.021 | -0.065*** | 0.016 | -0.068*** | 0.019 |
| *Human Capital* | | | | | | |
| *Education (ref. "highest education - tertiary")* | | | | | | |
| Highest education – primary | -0.117*** | 0.035 | -0.111*** | 0.026 | -0.105*** | 0.031 |
| Highest education – lower secondary | -0.030 | 0.030 | -0.037* | 0.022 | -0.022 | 0.027 |
| Highest education – higher secondary | -0.024 | 0.028 | -0.011 | 0.020 | 0.003 | 0.025 |
| Years of education abroad | 0.008*** | 0.002 | 0.006*** | 0.001 | 0.008*** | 0.002 |
| Work experience NL | -0.001 | 0.002 | -0.001 | 0.001 | -0.001 | 0.001 |
| *Country of Origin* | | | | | | |
| Mediterranean (versus Caribbean) | 0.054** | 0.024 | | | 0.038** | 0.017 |
| Caribbean immigrants (*ref. "Dutch")* | | | 0.021 | 0.026 | | |
| Mediterranean immigrants (*ref. "Dutch")* | | | 0.046* | 0.026 | | |
| *Control variables* | | | | | | |
| *Gender (ref. "female")* | | | | | | |
| Male | 0.010 | 0.021 | 0.010 | 0.015 | 0.018 | 0.018 |
| *Motivation of migration (ref. "other")* | | | | | | |
| Family | 0.018 | 0.029 | | | | |
| Study | -0.060 | 0.043 | | | | |
| Work | 0.033 | 0.033 | | | | |
| Number of times unemployed in the NL | 0.004 | 0.007 | 0.012** | 0.006 | 0.014** | 0.006 |
| Age group 15-40 *(ref. "age group 41-64")* | 0.012 | 0.026 | 0.039** | 0.019 | 0.035 | 0.023 |
| Years since migration | -0.002 | 0.002 | | | | |
| *Discrimination (ref. "sometimes")* | | | | | | |
| Often discriminated | 0.004 | 0.036 | | | 0.018 | 0.033 |
| Never discriminated | -0.009 | 0.022 | | | 0.011 | 0.020 |
| Social Capital | -0.010 | 0.009 | | | -0.014* | 0.008 |
| *Cultural capital (ref. "equally connected")* | | | | | | |
| More connected to country of origin | 0.027 | 0.027 | | | 0.031 | 0.023 |
| More connected to the Netherlands | 0.003 | 0.023 | | | 0.012 | 0.021 |
| Nice work environment | -0.041* | 0.024 | -0.044** | 0.017 | -0.030 | 0.021 |
| Fixed job *(ref. "temporally job")* | -0.076*** | 0.025 | -0.058*** | 0.018 | -0.062*** | 0.022 |
| First generation | | | | | -0.035 | 0.028 |
| Number of observations | 1183 | | 1949 | | 1438 | |
| *Pseudo* $R^2$ | 0.108 | | 0.093 | | 0.093 | |
| Log-likelihood | -421 | | -673 | | -529 | |

*** denotes significance at 1%; ** at 5%; * at 10%.
Average marginal effects are displayed, together with their standard errors.
† The predicted probability of being over-educated is the average across all respondents in the regression sample.