Survival Strategies and educational outcome of second generation migrants in the Netherlands.

Abstract

The educational integration of second generation migrants is a focus point of the Dutch government because attaining an educational degree is paramount for achieving success in an advanced information society as is the case for the Netherlands. The thesis examines the effect that the application of a survival strategy has on educational results of second generation migrants of Turkish and Moroccan descent. The application of a survival strategy is part of the human ecology theory by Ogbu that states that minorities react in different ways to the educational system that is in place in the host society. Ogbu argues that when the educational systems in place are perceived to be or are discriminatory towards minorities, the minorities will tend to apply an oppositional approach towards integrating in the educational system. Second generation migrants applying an oppositional approach, contrary to an instrumental approach, will look outside the educational systems in place to achieve success and will invest less in formal education and therefor reach lower educational results. The application of survival strategies are linked to educational results in quantitative statistical models taking into account control variables and inheritance factors that have been proven in previous research to influence a person's educational results. The models do not show enough evidence to conclude that there is a clear link between survival strategy and educational results and further research into the conceptualization of survival strategy into measurable variables is needed.

Keywords: Theory of human ecology; Education; Survival strategy; Second generation migrants; Educational integration; Country of origin; Discrimination;

Michiel Mollema, s1903322, Michielcm@gmail.com, Rijksuniversiteit Groningen

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Chapter 1: Introduction

1.1 Background

The increasingly polarizing debate in the Netherlands and other European countries about the integration, or lack thereof, of first and second generation immigrants especially from non-western nations has changed people's views on migration and integration. This debate has started in the late 90's and early 2000 in many European countries and has manifested itself by fueling new political and societal movements aimed at reducing migration and adding measures to help, and sometimes force, the immigrants to adjust to national norms and habits (Cuperus, 2005). The shift from supporting diversity and multiculturalism towards a more assimilative approach focused on integration and adaptation of the host societies' norms and practices is especially important in the educational systems in place. Because an important component of integrating into a new society is taking part in education due to the fact that it's one of the most influential factors for learning the language, acculturating to new norms and values and achieving employment later in life (Aslund, Bohlmark & Skans, 2009) (Chiswick, & DebBurman, 2004). This is especially the case in Western European countries such as the Netherlands where education is vital for achieving success on the labor market. Many of the countries in the developing world still depend significantly on manufacturing industries while the Netherlands have developed into an information society. Previous research into factors influencing educational attainment and results have been focused on the educational background of the parents (Ours and Veenman, 2001) or the age at migration (Aslund et al. 2009). Although many studies have confirmed the strong influence of parent's education or age at migration on the child's educational results there are also other issues that potentially could contribute positively or negatively to educational integration of second generation non-western migrants (Ours and Veenman, 2001).

It is important to relate the differences between the attitudes of migrant groups towards integration in the host society to educational results. The assumption that complete assimilation is necessary to achieve comparable or even better educational results than the non-migrant population has been disproven by many ethnic migrant populations such as Chinese Americans (Ogbu, 1987). Chinese Americans are known to organize many organizations and stores that cater to certain cultural specific tastes and as a result from this often have a strong ethnically organized community, but at the same time perform well in education. Therefore more detailed research is needed to explore the contribution of the adopted attitude towards integration to educational results of second generation migrants in the Netherlands.

1.2 History of Migration in Western Europe

Migration flows throughout Europe since the start of civilization have often been the cause or consequence of important events in the historical development of European countries. Although the reasons for migrating haven't changed much throughout the centuries, it being conflict, oppression or economic benefits, but the role that the central state or government plays in this has changed significantly, especially since the Second World War. Almost all Western European countries have seen a significant influx of migrants from non-western countries, the first and second generation non-western migrants currently make up 11,7% of the population of the Netherlands (see table 1). The first wave of migrants, since the Second World War, in the late 1940's and 1950's were mostly from the former colonies such as Indonesia for the Netherlands, Algeria for France, Congo for Belgium, etc. (Jennissen, 2011). The second wave of migration happened in the 1960's and 1970's, and consisted of labor migrants predominantly from Turkey and Morocco. The majority of these migrants were doing low-paying jobs such as factory work and were expected to return to the country of origin (Van Ours & Veenman, 2001). The 1980's and early 1990's a new migration trend became visible in the Netherlands that consisted of family members and spouses of the labor migrants who migrated in the 1960's and 1970's. The children of these labor migrants, whom have been born in the Netherlands and have at least one parent from Turkey or Morocco, are the main subject of this thesis. During the 1990's the migration patterns in Western Europe diversified and relatively smaller flows from many different countries took place. The majority of these migrants were political or conflict related and came from countries such as Afghanistan, Iraq, Somalia and the newly formed countries from the Former Republic of Yugoslavia (Jennissen, 2011), (CBS, 2013).

Table 1. First and second generation migrants in the Netherlands 2014

Country/region	Number of first generation migrants	Number of second generation migrants
Non-Western	1,000,160	901,853
Turkey	194,759	201,655
Morocco	168,320	206,676
Surinam	180,863	167,428
Netherlands Antilles	82,148	64,707
Remaining non-Western	496,641	261,387

Source: CBS, 2014

1.3 Objective & Research Questions

Ogbu argues, in the 1987 article on human ecology theory in relation to educational integration of migrants, that the success of educational integration is significantly dependent on the attitude towards the educational system of the host society of the second generation migrant. Ogbu differentiates migrants in terms of oppositional or instrumental approach towards education and the host society in general. The oppositional approach is characterized by a disposition of migrants to behave according to the cultural beliefs of the region of origin. Ogbu characterizes Chinese Americans as an example of this category due to the fact that many second generation Chinese Americans still speak Chinese at home and within the ethnic community and use many different shops and organizations that cater specifically to the Chinese cultural needs in terms of food, music and recreation. The instrumental approach is the opposite of this and is characterized by assimilative approach which is focused on learning the host countries language, taking part in community organizations with no specific ethnic background and in general to be open to the benefits of adapting to the host society. The objective of this thesis is to test the hypothesis of Ogbu (1987) that an instrumental approach is more successful for educational success of second generation migrants than an oppositional approach. The assumption that attitude towards integration or survival strategy can be objectified or measured and help predict educational attainment and results in a reductionist manner points to the significant influence of the positivist paradigm on this research. One could also argue that the attitude toward integration is not culturally or ethnically bound but is a consequence of the accessibility of society and its organizations to migrants.

The main research questions are:

- To what extent does the choice for a survival strategy towards integrating in the host society influence educational performances of second generation immigrants in the Netherlands

Sub questions

- What is the difference between an oppositional and an instrumental survival strategy for second generation immigrants in relation to educational integration in the host society?
- Is the influence of the survival strategy on educational attainment different for separate ethnic groups?

1.4 Structure

In the following chapter, the theoretical framework, the predominant theories on educational integration between minority and native student performance will be described. The conceptual model is also part of the theoretic framework and describes all important concepts related to the theories used and the conceptualization of independent and dependent variables. Also hypotheses that will be used and tested throughout this thesis is part of this chapter. In chapter three the data and methods used in this thesis will be described in detail, starting with a detailed description of the TIES dataset and the modifications performed on it in order to get the necessary models. Chapter four contains the statistical models and analysis and interpretation of the results. Chapter five concludes and summarizes the thesis as a whole and will provide ideas for future research and discussions.

Chapter 2: Theoretical framework

Introduction

Describing and predicting differences in educational results between native and migrant populations has been a popular subject for theorizing and model building since the Second World War. A large number of scholars have tried to throw a light on educational integration from a wide array of perspectives such as the institutional settings of the host- or country of origin, cultural differences between host and migrant populations, return on investment of human capital in terms of education, motivation to migrate in relation to survival strategies and innumerable more. In this chapter the main theories on educational integration of migrants will be explained and the relevant theories are related to the research question posed trough the conceptual model. The variables used to measure the sets of indicators such as inheritance factors, control variables, educational results and survival strategy indicators are explained in more detail in paragraph 2.4. The last section of this chapter the hypotheses derived from previous literature are outlined and the assumed results related to the theories used.

2.1 Literature review

The integration of first and second generation migrants into a society is a long lasting process, especially for migrants from a country which is culturally diverse from the host country, this is visible especially in education where first and second generation non-western migrants still have a significantly lower level of educational attainment than the native population in most OECD countries (Liebig, 2009). The gap between non-western migrants and native populations in terms of educational results is continuously closing in in many societies but these vary significantly between migrant groups of different origins in the United States of America (Carter & Segura, 1979) but also in Western-European countries (Crul et al. 2012). A good example of the variation between second generation non-western migrants of different origins in the Netherlands is that between migrants of Chinese origin compared to those of Moroccan, Turkish and Surinam descent. The proportion of second generation migrants of Chinese descent studying for a master degree or higher is over to 30% compared to 6% to 12% for Turkish, Moroccan or Surinam second generation migrants and 20% of the native Dutch population (Linder et al. 2012). There are also significant differences between second generation migrants of Turkish and Moroccan descent, although both migrant groups improve fast there is still a difference and Turks still perform slightly worse in education than Moroccans according to CBS annually report on integration from 2012.

An important theory connected to explaining differences in educational results is the cultural ecology theory by John Ogbu (1987). While the study on human ecology can tell us much about human adaptation, the cultural aspect of adaptation must be examined trough cultural ecology. John Ogbu (1987, p. 122) defines cultural ecology as *'the study of institutionalized patterns of behavior interdependent with features of the environment.'* The theory on cultural ecology by Ogbu is focused on minority student performance and goes further than the assimilative approach. Which uses sociocultural adaptation as main predictor of minority school performance. The cultural ecology theory is concerned with describing the systems, e.g. Schools/universities, and how these systems treat minorities and how minorities react to the institutions and systems in place through community forces. The theory explains the differences between the performance of native inhabitants of a country and minorities, in this case second generation migrants, at school (Ogbu, 1987). An important distinction in the theory on cultural ecology is made in terms of motive to migrate to a host country. According to Ogbu the motivation to migrate influences the survival strategy a migrant will use in the educational system in the host country. Immigrants might be forced to migrate due to political instability, to seek economic prosperity or to form a family with somebody from another country. However, these factors are often interconnected and are therefore difficult to assess. In the case non-western second generation migrants, migrants whom have been born in the host country but with at least one parent who is not, the motivation to migrate is not that of the child but of the parent(s) who decide(s) to migrate. It is therefore important to note that the objective of this research is not to clarify why a second generation migrant choses a specific survival strategy but what the influence of either one of the survival strategies is on educational results.

The choice for a certain survival strategy by second generation migrants can have a significant effect on educational results (Ogbu and Simons, 1998). According to the theory of cultural ecology theory there are two main survival strategies, the instrumental approach to host society and its systems and the oppositional approach. Persons applying the oppositional survival strategy are more prone to stick to cultural beliefs and practices used by the population of origin and thus having more difficulties adjusting to and functioning in the system in the host country. The instrumental survival strategy is a more assimilative approach and is characterized by adaptation to the host society and its practices. This strategy is regarded by Ogbu and Somons (1998) as more successful for educational integration with the native population.

A more specific theory about the adaptation of migrants to a host society is the cultural discontinuity theory (Carter and Segura, 1979). These authors have a sociological and anthropological background and go into detail about the cultural, language and social interactional conflicts that migrants have to deal with while managing the differences between the home and school situations. Sue and Sue (2003) argue that the main reason for cultural discontinuity is ethnocentric mono-culturalism. Sue and Sue describe ethnocentric mono-culturalism as the dominance of the cultural

heritage of one group in a society trough institutions, policies and structures. The migrant therefore is forced to adapt its cultural, linguistic and interactional norms to those predominant in the host country. This is visible in the educational system where second generation migrants often have trouble using their cultural value-based learning preferences and practices. Whether or not a second generation migrant tends more towards integration can vary significantly between different ethnicities. The largest group of second generation migrants in the Netherlands are people from Turkish descent for example (see Table 1). Due to locational clustering of this group, specific neighborhoods of large cities (Jennissen 2011), it could be the case that migrants are less motivated to participate in community activities and organizations dominated by the native population. Independent from what causes the difference in integration between Turks and Moroccans Huijnk and Dagevos (2012) clearly state that second generation migrants from Turkish descent integrate slower than those of Moroccan descent. In the theory of cultural discontinuity theory (Carter and Segura, 1979) the main focus is on age of migration and the presumption that educational attainment increases with time spent in the new country (Chiswick and Debburman, 2003). This thesis is concerned with explaining variation of educational results between migrant groups born in the host country and who have gone through the educational career in the host country and thus age spent in the host society of the second generation migrants is not applicable. However, age at migration of parents is an important predictor of educational results of the children according to Aslund et al (2009) and will be part of the analysis.

There are several important economically based approaches towards explaining differences in educational attainment, for example the theory of investment in human capital proposed by Schultz (1961) and the theory on costs and returns of migration by Sjaastad (1962). Schultz theory is based on the premise that individuals invest in human capital (in this case education) in order to maximize their net wealth. The need for investment in more education by those of foreign descent is lowered by the lack of return on investment in education. If a migrant is less likely to turn his education into a higher wage when employed this may create unequal opportunities in the labor market and thus causes discrimination (Becker, 1964). It can be argued that (perception of) labor market discrimination by second generation migrants can cause an *´us versus them'* situation in which migrants feel neglected by the host society and reject the host society and applying a more oppositional survival strategy. Discrimination can also have the opposite effect according to Ogbu and Simons (1998) due to the fact that second generation migrants perceive discrimination of the labor market and other areas as a reason to assimilate even further into the host society. Migrants often view the possibility to study in a country with a high quality and affordable education system, compared to the country of origin, as a great opportunity and strong reason to have chosen to migrate. Certain groups of migrants therefore accept discrimination as something inevitable or something that can be countered by adjusting to the host society (Ogbu and Simons, 1998). The theory on costs and returns of migration by Sjaastad (1962) is related to the theory of investment in human capital proposed by Schultz (1961) and also

looks at migration from an economic point of view but from a much broader perspective. The investments in migration, Sjaastad argues, are not only for the migrant but also for the society as a whole. He also takes into account non-financial investments and transition costs.

2.2 Theories used

The most important concepts mentioned in the research and sub questions is educational achievement and its relation to survival strategies. How these concepts can be defined and which factors are characteristic of a migrant for either the usage of an oppositional or an instrumental survival strategy is the central theme of this section. There is a lively debate about what factors are important to stimulate integration of second generation migrants of non-western decent in Europe and how they are related to the applicability of survival strategies. But it is important to stress that the objective of this thesis is to explain the link between survival strategy and educational results, not specifically why migrants choose a certain survival strategy.

The outcome variable educational results can be divided in two variables, educational attainment and highest degree earned. Educational attainment is defined by Van Ours and Veenman (2001) as the number of years spent in education. These authors conclude that educational attainment is closely related to a better labor market position and higher wages. Many studies have been done in the EU and USA showing the influence that the age at migration of a migrant and also the age at migration of the parents has on the performance in school according Aslund et al (2009) and Schaafsma and Sweetman (2001). These authors measured a significant effect on educational attainment, labor market integration and wages. In order to take into account differences in educational systems between the countries studied educational attainment is combined with highest degree earned.

In the same research the authors also measured a significant effect of age at migration on children of migrants pointing at the fact that some factors determining educational results are partly inherited or transferred through the parents. The most important inherited factor influencing the educational results of second generation migrants is the educational results of the parents. According to Van Ours and Veenman (2001) 75 % of the difference in educational results between second generation immigrants from non-western descent is due to inherited factors such as level of education of parents and age at migration of parents (Aslund et al. 2009). Haveman and Wolfe (1995) also links educational results of second generation immigrants with educational level of the parents. Haveman and Wolfe, however, give a broader description of educational level and define it as *human capital of parents*. These authors also make a difference between the levels of education of both parents and conclude that the mother has a more closely related connection than the father. It is important to note here that age at migration and educational level of the parents are important factors influencing

education of the child but are already proven by many different authors and are added to the models as a second group of control variables next to country of origin, gender and city of residence. These inheritance factors are not a central part of this study. The data these authors present points to a clear connection between those factors but because the effects have been already proven by several authors they function as control variables. The statistical models are used to prove the effect of survival strategy indicators on educational results, as described in the cultural ecology theory, taking into account the effect of inheritance factors.

The theory of investment in human capital proposed by Schultz (1961) and the theory on costs and returns of migration by Sjaastad (1962) will not be specifically used to link educational results to the survival strategies used by second generation migrants in terms of actual investments. But if a student does not have equal opportunities in education due to discrimination he or she is more likely to apply an oppositional approach and look for opportunities outside the educational system.

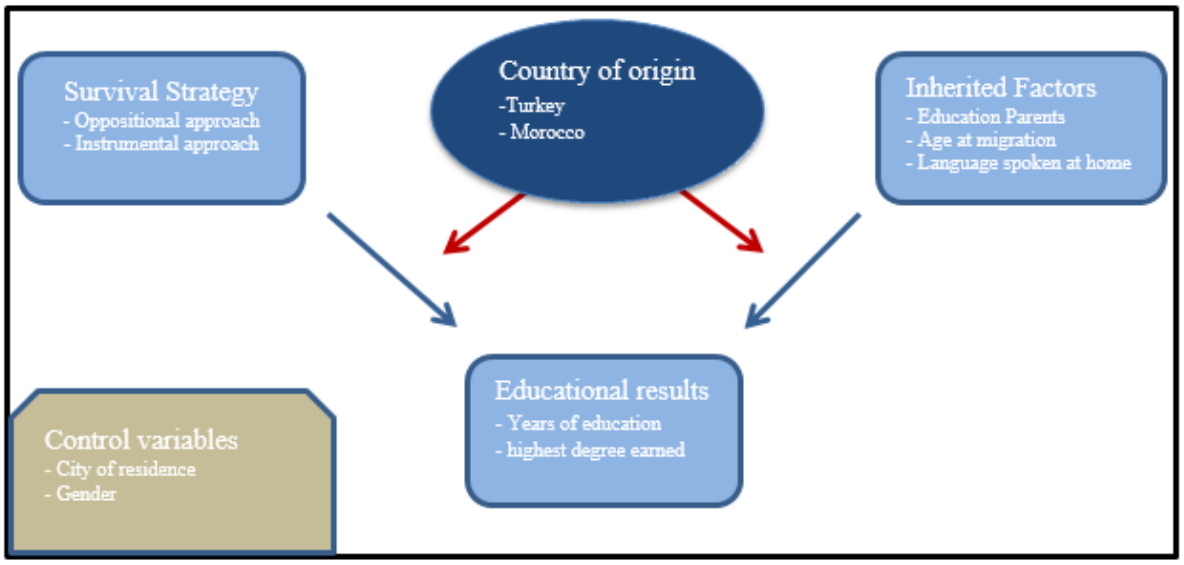
2.3 Conceptual model

The conceptual model is in part based on the Cultural discontinuity theory by Ogbu (1987). Ogbu argued that the educational system in the Netherlands is discriminatory towards immigrants because of the instrumental, relational and symbolic/expressional community forces that shape the educational system in place. The native population is obviously better adjusted to these community forces due to the lifelong experiences, cultural similarities and parents, friends or family who can help if necessary. For migrants, however, these community forces can cause barriers to fully and successfully take part in the educational system. In order to overcome these barriers migrants will have to develop an educational strategy, this is where the conceptual model starts. The barriers in place will not be assessed directly but through indicators that characterize the application of a certain survival strategy. As mentioned in the previous chapter inheritance factors, which have been already proven to effect educational results, are also included in the models in order to a more complete model. Control variables, gender and city of residence, and ethnicity are included separately in the models due to the fact that educational results are expected to differ between migrants of Turkish and Moroccan descent. While variation in educational results between males and females or respondents from Amsterdam and Rotterdam are expected to be minimal. The groups of variables included in the statistical models are explained in more detail in chapter 2.4.

The indicators of survival strategy are interrelated with the indicators of inheritance factors and therefore the indicators of both groups are expected to be correlated with each other. For example: a second generation migrant with parents who received a university education, which has been proven to positively affect educational results (Ours and Veenman, 2001), is expected to be more prone to apply an instrumental approach to the educational system. This is in accordance with the hypothesis stated by Ogbu (1987) that an instrumental survival strategy yields higher educational results in the host society. After this step the first sub question can be answered:

- *What is the difference between an oppositional and an instrumental survival strategy for second generation immigrants in relation to educational integration in the host society?*

Model 1. Conceptual model



The second step in the conceptual model is to assess the influence of survival strategies educational results and explore whether the effect of survival strategy differs for second generation migrants of different ethnic background. Certain reactions to the educational systems in place in terms of survival strategy indicators might differ between second generation migrants of Turkish and Moroccan descent. At the end of this process the following sub question will be answered:

- *What is the difference between an oppositional and an instrumental survival strategy for second generation immigrants in relation to educational integration in the host society?*

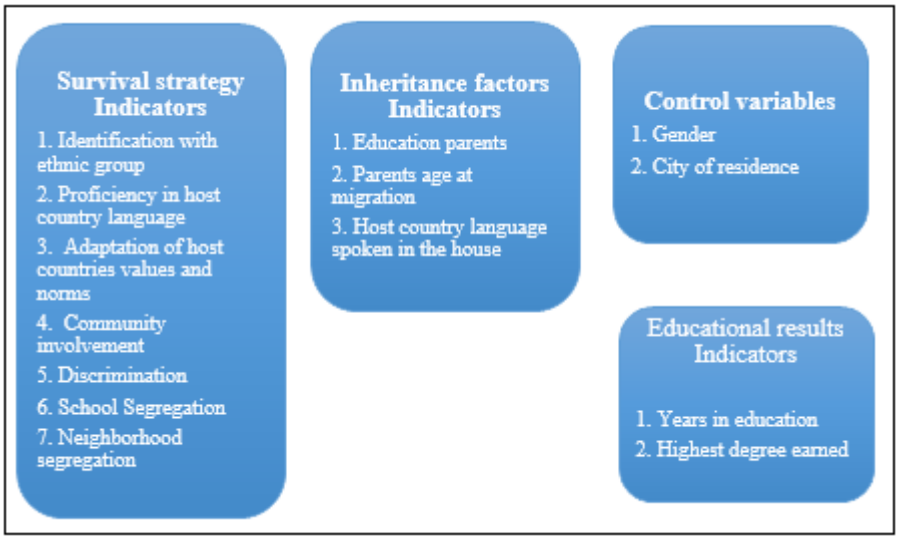
Differences between Turkish and Moroccan second generation migrants in terms of the relationships between educational result and survival strategy could point to diversity between reactions different groups of migrants have towards the Dutch educational system in place. If, let's say migrants of Moroccan descent, are more prone to apply an oppositional approach. The government institutions responsible for minimizing the difference in educational results between minorities and the native population can use this to develop ethnicity specific programs to resolve these differences. The current government has made educational and labor market integration one of the spearheads of government policy in 2013 (Ministry of social affairs and employment (2013).

For all models the educational results will be measured in two ways, through highest degree earned and years in education. Looking at both educational results helps validating the data and compare results. Finally trough analyses of variance the strength of each model can be assessed and also the relative strength of each category of indicators that are added through the two steps described.

2.4 Variables used

The indicators used in model two are based on Van Ours and Veenman (2001) and Ogbu (1987). The first step in the conceptual model is to identify the application of a certain survival strategy by the second generation migrant in accordance with the indicators defined in the indicator used model. The survival strategy indicators can be divided into two categories: System in place, and Community forces. The category system in place denotes those indicators that describe whether or not the second generation migrants feels he or she has equal opportunity in the educational system or that it is discriminatory. High scores on indicators such as experienced discrimination, School segregation and Neighborhood segregation are indications that a person is applying an oppositional approach. The second category is Community forces, which refer to the reaction towards the potentially discriminatory institutional system in place. If the system is discriminatory second generation migrants will tend to apply an oppositional approach which is indicated by a strong Identification within ethnic group, lower Dutch language skills, lower adaptation to Host country norms and a high score on Community involvement (within ethnic group). The inheritance factor indicators consists of three variables: education parents, parent's age at migration and whether a person spoke Dutch in the home situation. The control variables are gender and City of residence and educational results are assessed trough highest degree earned and years in education.

Model 2. Indicators used in Conceptual model



2.5 Hypotheses

In this section the hypotheses that are connected to the relationships between survival strategy, inherited factors, country of origin and educational results are explained in more detail.

- *The application of an instrumental approach towards education positively influences educational results.*

This is the fundamental hypothesis derived from the work of Ogbu (1987). If a second generation migrant feels he or she has equal opportunity in the host country and the institutions in place are not discriminatory there is no need to apply an oppositional approach and try to achieve success in one's professional career trough alternative routes.

- *The application of an oppositional approach negatively influences educational results.*

Becker (1964) argues that perceived or actual discrimination of second generation migrants in a broad sense, e.g. labor market, education, institutions, etc. stimulates the migrants to apply an oppositional survival strategy because they feel better protected in the ethnic community of origin in order to find alternative ways to further their career. The society in general, however, demands that a migrant should follow formal education and achieve a degree without which it is more difficult to find a job.

- *Having parents who migrated at a lower age positively influence educational results.*
- *Speaking Dutch language at home positively influence educational results.*
- *Having high educated parents positively influence educational results*

The interconnectedness of inherited factors and educational results is based on the premise that parents education, age at migration and language spoken at home are strong already proven indicators of a migrants own educational results as was discussed earlier in the theoretical model (Ogbu, 1987 and Ours and Veenman, 2001).

- *Second generation migrants from Moroccan descent perform better in education than migrants from Turkish descent.*

Due to differences between the two countries in terms of social and economic development, gender equality and educational systems in place initially it was expected that second generation migrants from Turkey score higher on education than Moroccans. This difference can be characterized by the score on the Human Development index publicized by the UN, Turkey scores 0.742 and Morocco 0.591 (UN, 2014). However, recent reports describing the differences between second generation migrants from Turkish and Moroccan descent surprisingly showed that the Moroccans perform better in education according to the annual integration report by CBS (2012a) and the Integration map (2012b) which measures education of second generation migrants in the Netherlands.

- *Second generation migrants from Turkish descent are more prone to apply an Oppositional approach towards education.*

As mentioned in the theoretical model according to Huijnk & Dagevos (2012) Turkish second generation migrants integrate slower into Dutch society than Moroccans. This is visible by the fact that Turkish migrants tend to organize more trough ethnic oriented community organization, more often keep the parents religion and marry persons from own ethnic background.

Chapter 3: Data and methods

3.2 Data

The objective of the thesis is to gain a micro level understanding of the influence of the application of a survival strategy on educational attainment and results and therefore a quantitative method of research will be used in which empirical secondary data from a large scale survey: the TIES project, is the main source of information. The first part of this chapter, the section on data, the dataset provided by TIES will be assessed in terms of data quality and limitations. This will be followed by a detailed description of the variables introduced in the conceptual model. The variables are divided into four categories:

1. Variables of selection and quality of interview
2. Survival strategy indicators
3. Inherited factors
4. Educational result indicators

The first category, Variables of interest, are concerned with data quality and will be used to assess the TIES dataset. Issues concerned with the spread of the data, missing cases, coding and non-response will also be explained per variable category. The second part of this chapter is concerned with the methodology of answering the research questions and proving or disproving the hypotheses. Also the statistical procedures chosen to assess the hypothetical relationships are described.

3.2.1 Quality TIES Data set

The data that will be used to assess the effect of certain survival strategies is provided by The Integration of European Second Generation or TIES project (http://www.tiesproject.eu/) (TIES, 2008). This is a large international research done in 15 cities spread over 8 countries in Europe and collected data of over 10.000 respondents. The countries where the data was collected are: Austria, Belgium, France, Germany, Netherlands, Spain, Sweden and Switzerland. The objective of the TIES project was to gather statistically representative information on issues concerned with integration, in a broad perspective, of second generation migrants from Turkey, Morocco and the Former Republic of Yugoslavia. The TIES project is funded by The Swiss Stiftung Bevölkerung, German Volkswagenstiftung, European Science Foundation (ESF) and The Netherlands Organization for Scientific Research (NWO). The data collection has been coordinated by the Institute of Migration and Ethnic Studies (IMES) at the University of Amsterdam, the Dutch Interdisciplinary Demographic Institute (NIDI) and The French Institute National d'Etudes Demographiques (INED). The data collection in each country is executed by local partners and universities working together with the

TIES project which is NIDI for the Netherlands. The first preparations of the TIES project started in 2003, the survey was executed in 2007 leading to the first results at the end of 2007. For the current research only data from the Netherlands was used.

The applied methodology of the TIES project in terms of sampling was probability sampling. Probability sampling is described by Partfitt (2005) as a technique in which each member of the population that is studied, in the case of the Netherlands second generation migrants from Turkey, Morocco and a reference group, has a known chance to be selected into the sample. Probability sampling provides the opportunity to infer conclusions about the population from a limited sample size, however, the quality of the sample that is collected by the TIES project is heavily dependent on the sampling frame chosen. The sampling frame used for the Netherlands is based on the municipal population registers in Amsterdam and Rotterdam, the information used from these registers as a sampling frame is age, sex, birthplace and parental birthplace. The aim of the TIES project in the Netherlands was to interview 1500 respondents, 500 second generation Moroccans and 500 second generation Turkish immigrants and 500 members of a comparison group, table 2 shows that this has been more or less accurately achieved. There is a maximum of 1.8% point difference between the three target groups (see table 2). Due to the fact that the majority of the variables related to survival strategy are not applicable to the comparison group only the data on respondents from Turkish or Moroccan descent is used for this research.

Table 2. Sampling in the Netherlands

Group	Frequency	Amsterdam	Rotterdam	Response rate
Turk	500	237	263	29.9%
Moroccan	493	242	251	25.9%
Comparison	512	259	253	40.1%
Total	1505	738	767	31.1%

In order to deal with non-response errors, which are relatively high in comparable studies done about migrants (Stoop, 2005) and also in this sample, 271 additional records were sampled. The choice of neighborhoods to draw samples from was selected trough the systematic selection method. This means that each neighborhood in Amsterdam and Rotterdam could be sampled multiple times depending on the size of each group of interest. Differences in non-response rates between groups of interests and neighborhoods played an important role in selecting sample design weights.

The survey used in the TIES project contains a number of questions that are aimed at assessing the quality and specifics of the individual survey performed by the interviewer (see table 3.). The first two indicators, country of origin and target group, are present to check whether the right respondents, that are the basis of this thesis, are selected. The variable finished school slightly decreases the sample

by 4.7% (see Appendix Table 4) due to the fact that not all respondents went through the entire educational career yet. The fourth indicator, Questionnaire version, shows that the TIES project was a dynamic process that constantly updates and improves its methods but this also means that not all respondents received the same questionnaire but also the same form of interview (see Appendix Table 5). These last two issues are unavoidable in a large dynamic data collection program as that of TIES. The form of the interview, for example taking the interview from a website compared to a complete personal approach, raises data quality issues but again is unavoidable because of potentially even larger non-response.

Table 3. Variables of selection and quality of interview

Indicator	Variable in dataset	Modification needed
Country of origin	R3	None
Target group	IRS4	Identify comparison group
Finished school	Fedu	Delete not finished
Questionnaire version	QVERSION_NL	Check for non-response
Quality of cooperation of respondent	EV5	None
Method of interviewing	INTMETHOD_NL	None
How well did the respondent understand the questions	EV6	None

3.2.2 Survival strategy Indicators

The indicators selected to identify whether a second generation migrant applies an oppositional or instrumental survival strategy are displayed in Table 6. An extended version of the table 6 can be found in the appendix table 7, in this model information about recodes, missing cases and collapsed categories can be found. The instrumental approach is more than an indication that the respondents are assimilating into the Dutch society but whether he or she has trust in the host country system and institutions and feels confident that investing time and money in education is useful to get higher up in the host society. Perception of and/or actual discrimination are the prime indicators of used survival strategy.

Table 6. Survival strategy indicators

Variable used in Model	Description/question asked	Response categories (% of cases)
1. Identification with ethnic group.	To what extent do you feel Moroccan or Turk?	1 Very strong (41.5) 2 Strong (36.8) 3 Not strong/weak (16.2) 4 Weak/not at all (5.5)
2. Dutch language proficiency.	How well do you speak the language of survey country?	1 Very good or excellent (79.1) 2 Moderate or good (20.9)
3. Adaptation host country norms.	People of immigrant origin should mostly live according to their own culture outside the home?	1 Totally agree (11.6) 2 Agree (31.1) 3 Not agree/disagree (33.9) 4 Disagree 19.6) 5 Totally disagree (3.8)
4. Community involvement within ethnic group.	Do you participate in community organizations aimed at your own ethnic group? (Sport team, student union, religious organizations, etc.)	1 Yes (38.5) 2 No (61.5)
5. Perceived discrimination.	Have you ever experienced hostility or unfair treatment towards you because of your origin/background?	1 Yes (46.5) 2 No (53.5)
6. Ethnic neighborhood Segregation.	How would you describe the neighborhood you are currently living in	1 75% - 100% (11.0) 3 50% (25.8) 4 25% (47.9) 5 None (15.4)
7. School segregation, primary and secondary school combined.	How many children of immigrant origin were there at this primary school? How many children of immigrant origin were there at this secondary school?	1 Almost all (14.4) 2 75% (33.4) 3 50% (34.4) 4 25% (13.9) 5 None (4.0)

The first variable, identification with ethnic group, shows that the vast majority of both the Turkish and the Moroccan respondents feel very strongly or strongly related to the ethnic group they came from. This is slightly higher for Turkish compared to the Moroccans. The second variable, how well the respondents speak Dutch, had to be recoded due to the fact that almost no respondents judged their Dutch to be moderate or lower.

The adaptation of host countries norms is judged trough variable J7c which measures whether or not a respondent agrees to the statement: *'People of immigrant origin should mostly live according to their own culture outside the home'*. Although this question was also asked to the members of the comparison group only the Turks and Moroccans will be taken into account. The largest category for both groups of respondents is neither agree nor disagree although there is a significant group who agree or disagree with this statement. Perceived discrimination was initially intended to be measured in categories of frequency but due to the high number of missing cases in G8b_NL the less informative binary variable G8a_NL must be used.

The neighborhood segregation variable shows that the Turkish and Moroccan respondents live in neighborhoods with comparable ethnic concentration, but taking into account the overall size of the Turkish community compared with that of the Moroccan community the Turkish second generation migrants are relatively higher concentrated. The same effect can be seen from the variable school segregation although this is less strong for secondary schools compared to primary schools. Variable NewS7 measures the average concentration of migrants on primary and secondary school for each respondent. From the Pearson Chi-square test done between both original variables B5 for primary education (value 2805.693 sig 0.00) and B39 for secondary education (value 2975.270 sig 0.00) and the average of both NewS7 shows a strong correlation between being a student on more segregated primary school and secondary school, see appendix for the Pearson Chi-square tables and graphs visualizing the correlation. The number of missing values is generally between 11% and 18% for the Turkish and Moroccan respondents. The variable school segregation has between 1% and 5% missing cases.

3.2.3 Inherited factors

In order to compare the survival strategies used of different groups it is vital to assess other factors influencing educational attainment and results which are country or culturally specific (see Table 12). Literature on this subject has proven that parents education, age at migration, and language skills have a profound effect on the educational results of children. This is in line with the explanatory nature of this research project due to the fact that the independent variable, survival strategy used, is known but its effects on educational attainment and results are being explored, see appendix 3 for an extended version.

Table 12. Inherited factors indicators

Variable used in Model	Description/question asked	Response categories (% of cases)
1. Education Parents	What is the highest degree earned by your father/mother?	0 None or doesn't know (23.4) 1 Primary or Koran School (33.9) 2 Lower secondary (20.4) 3 Middle Vocational (12.8) 4 Higher vocational (Master or bachelor (9.6)
2. Age at migration parents	How old was your Mother/father when he/she moved to the Netherlands?	1 Under 18 (21.5) 2 18 – 20 (17.6) 3 20 – 23 (22.7) 4 23 – 26 (17.4) 5 26 and older (20.8)
3. Language spoken in house	What language did you speak at home?	0 Other (21.3) 1 Dutch (78.7)

The variable education parents have been categorized according to the same division as highest degree earned, the coding does slightly differ due to the fact that Koran school and None is added, both groups are large enough to be included although Koran school only applies to the respondents of Moroccan decent. The groups range from 0 no school to 7 higher vocational (acad) which is university level. From table 13 we can clearly see that mothers have a lower education, especially for the respondents of Moroccan descent, and that the parents of Turkish second generation migrants have a higher education compared to Moroccan second generation migrants. Persons who didn't know their parents education have been added to the lowest category of no education.

Table 13. Education parents

Education	Turk	Moroccan
None or doesn't know	72	160
Primary school or Koran school	188	148
Lower secondary	124	78
Middle vocational	66	61
Higher vocational (Ma and Ba)	50	45

Age at migration of parents has been combined into an average of both parents for most cases due to the fact that 114 respondents don't know the age at migration of the father and 100 not of the mother and the fact that some parents of respondents did not marry somebody from the country of origin and have only one migrant parent. When looking at Table 14 its clear to see can see that women migrate at a younger age for both groups while Moroccans were on average one to two years older at migration. The percentage of missing cases is about 6% higher for Turks than Moroccans. The variable Language spoken in the house displays whether or not a respondent spoke Dutch at home or not. In total 14.6% is missing and of both groups roughly 20% do not speak Dutch at home.

Table 14. Average age of migration parents

	Turk	Moroccan
Father	21.73	23.49
Mother	20.55	21.66

3.2.4 Educational results indicators

Educational integration is an important and well documented topic in the scientific world and many authors have done research into this field. The two most commonly used factors to describe educational integration are that of number of years spent in education or highest degree earned (Van Ours & Veenman, 2001) (Haveman & Wolfe, 1995). The highest degree earned will be compared in combination with educational attainment in years due to differences between educational systems that are in place (see appendix table 9 for the extended table). Both educational results indicators will be used separately as independent variable in the model.

Table 12. Educational results indicators

Variable used in Model (variable name)	Description/question asked	Response categories (% of cases)
1. Years of education (NewE1)	How many years have you spent in Primary school? How many years have you spent in edu career 2? How many years have you spent in edu career 3? How many years have you spent in edu career 4?	Ratio (100)
2. Highest degree earned (NewE2)	What is the highest degree you have achieved?	1 Primary and special edu (7.2) 2 Lower secondary (20.7) 3 Apprenticeship (8.3) 4 Higher secondary (non-acad) (28.4) 5 Higher secondary (acad) (5.8) 6 Tertiary (29.7)

The Spearnans rank coefficient shows a strong positive correlation between the two educational results indicators as is expected (see table 15) which are highly significant. Graph 3 displays the positive correlation between years in education and highest degree earned.

Graph 3. Correlation between educational results indicators

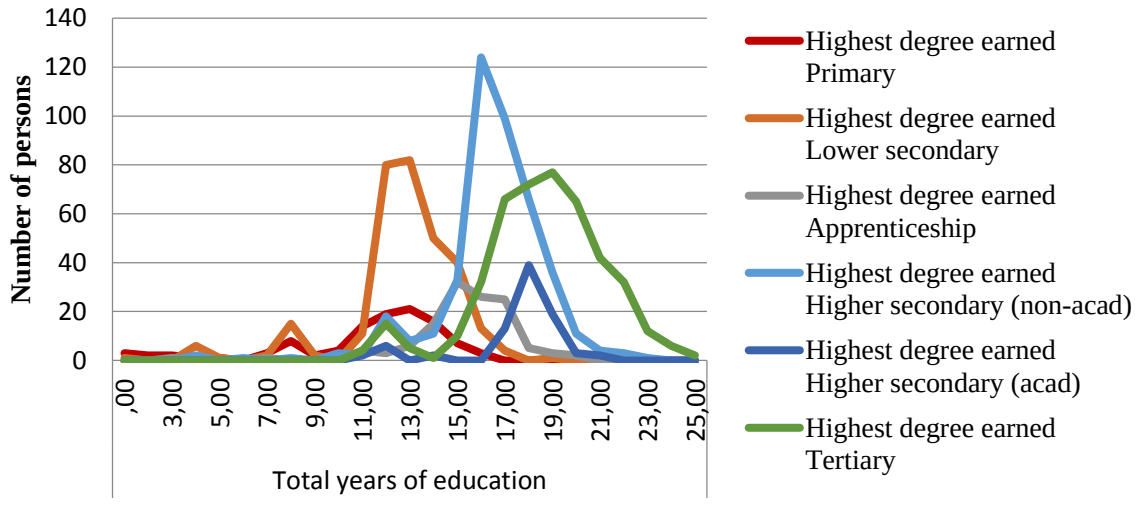


Table 15. Correlation between Years of education and highest degree earned

Variable	Spearman rank Coefficient	Sig
Total years of education	1.000	0.000
Highest degree earned	0.736	0.000

The counts for some categories of the variable highest degree earned are very low and in order to ensure the reliability of the model some categories will have to be collapsed (see Table 17). Due to the fact that not all categories were in the right order in the expanded variable B32_NL the order has been changed to an ordinal scale in B32_NL_EDUC. This variable contains almost no missing cases, 1% of total.

Table 17. Categories Highest degree earned

Original Category	Collapsed category	Count Turks (%)	Count Moroccans (%)	Count comparison group (%)	Count total (%)
0. Primary school	1	41 (8.2)	41 (8.3)	10 (2.0)	92 (6.1)
1. Special education	1	8 (1.6)	6 (1.2)	2 (0.4)	16 (1.1)
Primary and special education	**1**				**108 (7.2)**
2. Preparatory vocational education	2	26 (5.2)	16 (3.3)	15 (2.9)	57 (3.8)
3. Middle general preparatory education	2	18 (3.6)	24 (4.9)	8 (1.6)	50 (3.3
4. Preparatory Middle Vocational Education (Basic)	2	22 (4.4)	28 (5.7)	10 (2.0)	60 (4.0)
5. Preparatory Middle Vocational Education (Middle)	2	11 (2.2)	16 (3.3)	6 (1.2)	33 (2.2)
6. Preparatory Middle Vocational Education (Mixed)	2	9 (1.8)	2 (0.4)	2 (0.4)	13 (0.9)
7. Lower sec. general education	2	39 (7.8)	45 (9.1)	11 (2.1)	95 (6.3)
Lower secondary	**2**				**308 (20.7)**
10. Short middle vocational education	3	16 (3.2)	4 (0.8)	4 (0.8)	24 (1.6)
11. One year middle vocational education	3	7 (1.4)	14 (2.8)	9 (1.8)	30 (2.0)
12. Two year middle vocational education	3	28 (5.6)	27 (5.5)	14 (2.7)	69 (4.6)
Apprenticeship	**3**				**123 (8.3)**
8. Higher preparatory general education	4	36 (7.2)	35 (7.1)	24 (4.7)	95 (6.3)
13. Three year middle vocational education	4	30 (6.0)	38 (7.7)	12 (2.3)	80 (5.3)
14. Four year middle vocational education	4	97 (19.4)	82 (16.7)	69 (13.5)	248 (16.5)
Higher secondary (non-acad)	**4**				**423 (28.4)**
9. Preparatory Scientific Education	5	20 (4.0)	23 (4.7)	43 (8.4)	86 (5.7)
Higher secondary (Acad)	**5**				**86 (5.8)**
15. Higher vocational education (first year only)	6	19 (3.8)	21 (4.3)	15 (2.9)	55 (3.7)
16. Higher vocational education	6	42 (8.4)	55 (11.2)	125 (24.4)	222 (14.8)
17. University BA	6	8 (1.6)	6 (1.2)	27 (5.3)	41 (2.7)
18. University MA	6	15 (3.0)	5 (1.0)	101 (19.7)	121 (8.1)
19. PHD	6	0 (0)	0 (0)	3 (0.6)	3 (0.2)
Tertiary	**6**				**442 (29.7)**
98. Does not know	Missing	7 (1.4)	4 (0.8)	2 (0.4)	13 (0.9)
					13 (0.9)
Total					**1503**

The variable years spent in education does not include years spent in kindergarten or pre-school and because children can only enroll in primary school in the Netherlands at the age of four all respondents whom have entered entry into primary school lower than four years old have been changed to four years. A maximum age of completion of primary school has also been added in order to deal with excessively high values and this is 14 for children who entered primary school at the age of four and 15 for children who enter primary school at the age of five because attending school is compulsory in the Netherlands from the age of five. Every respondent who has entered the age of completion of primary education above 14 or 15 has been assigned missing due to the fact that primary school has eight levels and assuming a child can fail a level two times maximum. The assumption about the maximum age of finishing primary school added 17 respondents to the missing category.

A similar calculation has been made for the secondary school educational career. For this variable the assumption is that a respondent can spend a maximum of eight years in this category, six years VWO plus possibly two years extra for having to repeat a year, as a result 21 cases were missing. For the variables indicating the time spent in the third and fourth educational career the maximum number of years spent is dependent on the highest degree earned. In some cases respondents have mentioned in the variable highest degree earned an educational level a degree different than primary or secondary education while forgetting to mention the years it took to complete it. To adjust this inconsistency there is also a minimum number of years per type of education which is added to the total years of education if this was not the case in the dataset, see Table 18. Maximum years spent per highest degree earned for the maximum and minimum number of years per type of education.

Table 18. Maximum years spent per highest degree earned

Highest degree earned	Maximum years spent in education	Minimum	Extra missing cases due to maximum
Primary education	10		17
Secondary education	8		21
Apprenticeship	5	3	4
Higher secondary (non-acad)	6	4	17
Higher secondary (acad)	6	4	1
Tertiary	8	4	25

The average years spent in education does not vary a lot between the two groups, see Table 19 Due to the fact that the original variables do not distinguish between missing entry and no education received it is impossible to determine missing values for total years of education. The total years of education was calculated by adding up the years spent in the first four educational careers. Although the respondents were asked to describe up to seven educational careers the last three educational careers have been left out due to the fact that the vast majority was either missing, meaning that these persons had less than five educational careers , or contained invalid data such as negative duration because the start date was after the end date. The application of minimum and maximum duration for the educational careers did not influence the overall average years spent in education a lot, the average for each group went up between 0.1% and 0.2% and the total average went up 0.1%.

Table 19. Years spent in education

Turks	Moroccans	Average
15.2	15.0	15.1

3.2.5 Country of origin

The country of origin variable is only slightly modified by reducing the categories to Turkish and Moroccan and removing the comparison group. Both groups are almost the same size and there are no missing cases, see appendix 3 for the extended table 10.

Table 20. Country of origin

Variable used in Model (variable name)	Description/question asked	Response categories (% of cases)
1. Country of origin (IRS4)	What is your Ethnicity?	1 Turkish (50.4) 2 Moroccan (49.6)

3.2.6 Control variables

In order to deal with important and unforeseen contextual information that might be of influence on the models that will be presented in the results chapter two control variables are added to each model. The control variables are gender and city of residence. The variable gender is added because generally there are significant differences in the need for and use of education between males and females especially in more conservative and religious societies such as the case for 60's and 70s Morocco and Turkey. City of residence is also taken into account due to potential variation in government attitude and investment of funds meant to deal with educational integration or migration policy in more general terms.

Table 21. Control variables

Variable used in Model (variable name)	Description/question asked	Response categories (% of cases)
1. Gender	What is your gender?	1. Male (49.0) 2. Female (51.0)
2. City of residence	What city do you live?	1. Amsterdam (49.0) 2. Rotterdam (51.0)

3.3 Methods

In order to answer the research questions and describe the relationship between the two indicators of education, highest degree earned and years of education received, and the survival strategy applied while taking into account the potential interaction effects of country of origin ordinal and linear regression is used. It is necessary to use the two different statistical procedures due to the fact that highest degree earned is an ordinal variable and Years in education is a ratio variable, see Table 22. Statistical Models on the next page. In order to include the categorical variables dummy variables have been created. For all dummies the first category is the reference category. In order to achieve uniformity between the outputs of two statistical procedures used, ordinal regression for highest degree earned and linear regression for years in education, the categories have been inverted for the ordinal regression models in order to display values of categories in relation to the same reference categories. For the case of country of origin the second category is the reference category which are respondents of Turkish descent. Checking for interaction effects using linear regression requires a large amount of dummies which makes the final model very large and difficult to interpret. Due to this difficulty only the variables which have shown to have a statistical significant interaction effect on years in education will be included in the interaction model. The individual variables without interaction are all included in the model if they are significant or not.

Chapter 4: Results

4.1 Introduction

In the first part of this chapter the tables displaying the three different models, see table 22, are shown. The first model that will be presented contains control variables, inheritance factors and country of origin explaining the two dependent variables separately. The interaction of country of origin will also be included in order to assess differences between second generation migrants of Turkish and Moroccans descent. The second model is the same as the first model except that survival strategy indicators are included. The third model is the most complete model and is the second model plus interaction of country of origin. The first two models are used to answer the first sub question and assess the relationship between survival strategy indicators and educational results. The difference between model two and three in terms of explained variance will show whether the interaction of country of origin significantly improved the model, which is the focus of sub question two. For each model separately the difference between the two indicators of education, years of education and highest degree earned, are assessed in terms of explained variance but also trough differences in in variable values.

Table 22. Statistical models

Model	Dependent variable	Independent variables	Interaction
1	Years in education/ Highest degree earned	Control variables + Inheritance factors + country of origin	country of origin
2	Years in education/ Highest degree earned	Control variables + Inheritance factors + Survival strategy indicators + country of origin	
3	Years in education/ Highest degree earned	Control variables + Inheritance factors + Survival strategy indicators + country of origin	Country of origin

4.2 Model 1: Control variables inheritance factors and interaction

Model 1.1 and model 1.2 display the statistical relationships between the educational results indicators and control variables, inheritance factors and interaction of country of origin.

Model 1.1 Years in education explained from control variables inheritance factors and interaction of country of origin

Variable	B	Std e	t	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	-0.580	0.256	1.269	0.126
Gender				
0. Male	Ref			
1. Female	-0.277	0.347	-0.798	0.425
City				
0. Amsterdam	Ref			
1. Rotterdam	0.209	0.349	0.599	0.549
Inheritance factors				
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school ***	2.655	0.612	4.340	0.014
2. Lower secondary ***	3.262	0.675	3.832	0.002
3. Middle vocational**	2.748	0.738	3.526	0.019
4. Higher vocational ***	3.239	0.761	4.756	0.000
Age at migration parents				
0. Under 18	Ref			
1. 18 upto 20 **	1.210	0.518	2.335	0.020
2. 20 upto 23	0.515	0.528	0.976	0.329
3. 23 upto 26 ***	1.900	0.573	3.318	0.001
4. 26 and older**	1.218	0.542	2.246	0.025
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	0.357	0.408	0.875	0.382
Interaction terms (Ref = Turkey)	B	Ste	T	P
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school ***	-2.564	0.759	-3.380	0.001
3. Lower secondary ***	-2.748	0.863	-3.183	0.002
4. Middle vocational **	-2.294	0.947	-2.423	0.016
5. Higher vocational *	-1.928	1.015	-1.901	0.058

Model 1.2 Highest degree earned explained from control variables inheritance factors and interaction of country of origin

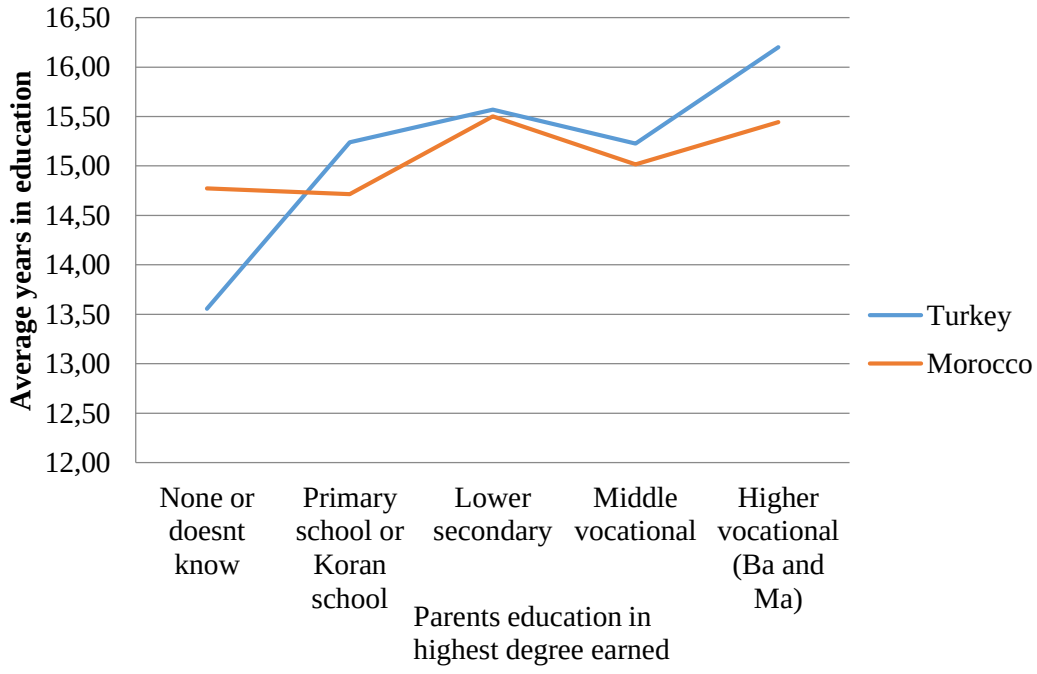
Variable	Estimate	Std e	Wald	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	0.588	0.603	0.952	0.329
Gender				
0. Male	Ref			
1. Female	0.010	0.194	0.002	0.961
City				
0. Amsterdam	Ref			
1. Rotterdam	-0.257	0.196	1.718	0.190
Inheritance factors				
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school ***	0.838	0.354	5.602	0.018
2. Lower secondary ***	1.419	0.390	13.254	0.000
3. Middle vocational**	1.029	0.424	5.899	0.015
4. Higher vocational ***	1.888	0.439	18.489	0.000
Age at migration parents				
0. Under 18	Ref			
1. 18 upto 20 ***	0.818	0.290	7.946	0.005
2. 20 upto 23	0.367	0.297	1.1521	0.217
3. 23 upto 26	0.502	0.318	2.489	0.115
4. 26 and older**	0.747	0.304	6.040	0.014
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	0.206	0.229	0.807	0.369
Interaction terms (Ref Turkey)	Estimate	Std e	Wald	P
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school	-0.357	0.432	0.681	0.409
2. Lower secondary *	-0.931	0.490	3.614	0.057
3. Middle vocational *	-0.490	0.536	3.036	0.078
4. Higher vocational	-0.760	0.574	1.755	0.185

There are no significant effects of the control variables, gender, country of origin and city, on educational results indicators. The inheritance factors however show highly significant relationships between the parent's education, parent's age at migration and the educational results indicators. The effect of parents education only increases slightly between primary or Koran school and Higher

vocational showing that if second generation migrants parent receive any education the average years in education increases by 2.6 years while if a parents have received higher vocational education this average increases to 3.2 years. This effect is similar for highest degree earned, between 0.8 and 1.4 degree higher. For the variable parents age at migration the significant effects are contrary to what the literature suggested in advance. Van Ours and Veenman (2001) argued that when parents migrate at lower age this would have a positive effect on the children's education. Due to the fact that the inheritance factors are not the focus of this research this effect will not be explained in further detail. Whether or not a second generation migrant spoke Dutch in the home situation does give any significant effect.

There is a strong interaction between country of origin and parents education in terms of educational results, especially in model 1.1 with the dependent variable years in education. Taking into account that the reference group is Turkey the models show that parent's education is a stronger indicators for educational results for migrants of Turkish descent compared to those of Moroccan descent. This effect is similar for country of origin and highest degree earned (see graph 4).

Graph 4. Average years in education in per highest degree earned parents



In the theoretical model several hypotheses concerning expected significant effects of gender and ethnicity have been discussed and can be answered from model 1.1 and model 1.2. Due to the lower score of Morocco on the human development index (UN, 2014), this index includes education, it was expected that second generation mmigrants from Moroccan descent would score lower on

educational results. Both models 1.1 and 1.2 do not show any proof of this hypothesis. The same can be said about differences in education between the genders. From the TIES dataset it is clear to see that mothers generally have a significantly lower education level than father, as was displayed in table 13 Chapter 3: Data and methods, compared to fathers. But this effect is not visible for the second generation migrants eventhough in both countries women are still less represented at higher education in Turkey (National Education Statistics, 2013) and Morocco (Haut-Commissariat au Plan du Maroc (2009). Several hypotheses outlined in the theoretical models can be debunked, such as the statement that second generation migrants of Moroccan descent generally perform better in education compared to those of Turkish descent. The difference between the two groups, proven by CBS (2014), is not very large. It could be the case that the sample size of the TIES dataset is not large enough to prove this relationship.

4.3 Model 2: Control variables, inheritance factors and survival strategy

Model 2.1 and model 2.2 display the statistical relationships between the educational results indicators and control variables, inheritance factors and survival strategy without interaction of country of origin

Model 2.1 Years in education explained from control variables, inheritance factors and survival strategy

Variable	B	Std e	t	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	-0.235	0.295	-0.796	0.427
Gender				
0. Male	Ref			
1. Female	0.055	0.279	0.196	0.845
City				
0. Amsterdam	Ref			
1. Rotterdam	0.087	0.276	0.314	0.754
Inheritance factors				
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school	0.661	0.417	1.585	0.114
2. Lower secondary *	0.939	0.476	1.972	0.049
3. Middle vocational	0.545	0.506	1.077	0.282
4. Higher vocational	0.863	0.561	1.538	0.125
Age at migration parents				
0. Under 18	Ref			
1. 18 upto 20 *	0.785	0.445	1.764	0.078
2. 20 upto 23**	0.876	0.420	2.084	0.038
3. 23 upto 26 ***	1.305	0.442	2.952	0.003
4. 26 and older	0.584	0.438	1.332	0.184
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	-0.179	0.340	-0.526	0.599

Model 2.1 (continued)

Model 2.1 Years in education explained from control variables, inheritance factors and survival strategy

Variable	B	Std e	t	P
Survival strategy indicators				
Identification with ethnic group				
0. Very strong	Ref			
1. Strong *	0.575	0.320	1.801	0.072
2. Not strong not weak	0.600	0.409	1.467	0.143
3. Very weak or not at all	0.722	0.659	1.096	0.273
Dutch language proficiency				
0. Very good to excellent	Ref			
1. Moderate or good*	-0.700	0.368	-1.906	0.057
People of immigrant origin should live according to their own culture				
0. Totally agree	Ref			
1. Agree	-0.271	0.471	-0.575	0.566
2. Neither agree or disagree	0.087	0.468	0.186	0.853
3. Dissagree	-0.155	0.526	-0.295	0.768
4. Totally disagree	1.085	0.908	1.194	0.233
Community involvement within ethnic group				
0. Yes	Ref			
1. No	0.028	0.285	0.097	0.923
Perceived discrimination				
0. Yes	Ref			
1. No	0.072	0.277	0.259	0.796
Ethnic neighborhood Segregation				
0. 75 to 100 %	Ref			
1. 50%	0.750	0.531	1.411	0.159
2. 25% **	1.182	0.498	2.374	0.018
3. Almost none ***	2.231	0.587	3.862	0.000
School segregation, primary and secondary school combined				
0. Almost all	Ref			
1. 75%	0.254	0.449	0.567	0.571
2. 50%	0.552	0.442	1.248	0.213
3. 25% *	1.011	0.528	1.916	0.056
4. Almost none	-0.172	0.751	-0.229	0.819

Model 2.2 Highest degree earned explained from control variables, inheritance factors and survival strategy

Variable	Estimate	Ste	Wald	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	0.000	0.173	0.000	0.998
Gender				
0. Male	Ref			
1. Female	0.263	0.163	2.592	0.107
City				
0. Amsterdam	Ref			
1. Rotterdam*	-0.283	0.161	3.068	0.080
Inheritance factors				
Parents education				
1. None or doesn't know	Ref			
2. Primary or Koran school ***	1.214	0.333	13.257	0.000
3. Lower secondary**	0.691	0.299	5.350	0.021
4. Middle vocational***	1.008	0.284	12.619	0.000
5. Higher vocational **	0.538	0.246	5.318	0.021
Age at migration parents				
1. Under 18	Ref			
2. 18 upto 20**	0.573	0.257	1.977	0.026
3. 20 upto 23**	0.624	0.259	5.824	0.016
4. 23 upto 26 **	0.542	0.246	4.871	0.027
5. 26 and older	0.420	0.260	2.599	0.107
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	-0.091	0.199	-0.208	0.648

Model 2.2 (continued)

Model 2.2 Highest degree earned explained from control variables, inheritance factors and survival strategy

Variable	Estimate	Ste	Wald	P
Survival strategy indicators				
Identification with ethnic group				
1. Very strong	Ref			
2. Strong	0.361	0.385	0.880	0.348
3. Not strong not weak	0.512	0.242	0.552	0.476
4. Very weak or not at all	0.112	0.186	0.366	0.545
Dutch language proficiency.				
0. Very good to excellent	Ref			
1. Moderate or good***	-0.709	0.216	10.796	0.001
People of immigrant origin should live according to their own culture				
1. Totally agree	Ref			
2. Agree	0.649	0.538	1.456	0.228
3. Neither agree or disagree	0.106	0.309	0.117	0.732
4. Dissagree	0.170	0.275	0.384	0.535
5. Totally disagree	0.070	0.276	0.064	0.800
Community involvement within ethnic group				
0. Yes	Ref			
1. No	-0.082	0.167	0.241	0.623
Perceived discrimination				
0. Yes	Ref			
1. No	-0.174	0.162	1.155	0.283
Ethnic neighborhood Segregation				
1. 75 to 100 %	Ref			
2. 50%**	0.718	0.340	4.457	0.035
3. 25%	0.215	0.293	0.538	0.463
4. Almost none	-0.120	0.312	0.148	0.700
School segregation, primary and secondary school combined				
1. Almost all	Ref			
2. 75%	0.290	0.440	0.434	0.510
3. 50%	0.351	0.309	1.285	0.257
4. 25%	0.035	0.259	0.019	0.892
5. Almost none	0.005	0.263	0.000	0.984

Age at migration and parent's education are still highly significant indicators for both educational indicators but the effect is slightly lowered due to the inclusion of seven survival strategy indicators. There is a marginally significant difference between the highest degree earned in Amsterdam and Rotterdam. The effect is weak, Second generation migrants from Rotterdam on average have -0.283 of a degree lower education. There are three survival strategy indicators that show at least a marginally significant effect on the educational indicators but only Language proficiency and neighborhood

segregation indicate a clear relationship. The relationship between Dutch language proficiency is quite a bit stronger for highest degree earned but is also marginally significant for years in education. The effect is in the direction as was expected from the theoretic model, speaking moderate or good Dutch decreases highest degree earned by close to a full degree (-0.709) compared to speaking it very good or excellent. The opposite is visible for ethnic neighborhood segregation, it has a stronger relationship with years in education. The effect of neighborhood segregation is as expected from the theoretical model, living in a neighborhood with a lower percentage of inhabitants from a migrants own origin increases the years in education by up to 2.2 years. Overall the survival strategy indicators lack clear linear relationship with educational results even though some variables categories point into the direction as was predicted in the theoretical model. Using the results from the first two models the first sub question can be answered.

- What is the difference between an oppositional and an instrumental survival strategy for second generation immigrants in relation to educational integration in the host society?

All though model 2.1 and 2.2 show a significant relationship between neighborhood segregation and educational results indicators and between Dutch language proficiency and educational results these variables do not show the application of a certain survival strategy on its own accord. The application of a survival strategy is dependent on a range of variables indicating not only forms of discrimination but also community involvement, perception of equal opportunity and adaptation to host country norms. Therefor it is necessary to conclude that there is no clear link between the application of a survival strategy and educational results in the host society even though individual indicators do have a significant relationship with educational results. However, Two of the three inherited factors, parents education and age at migration, show a strong significant effect on educational results validates the dataset due to the fact that this was derived from previous research.

4.4 Model 3: control variables, survival strategy, Inheritance factors and interaction

Model 2.1 and model 2.2 display the statistical relationships between control variables, inheritance factors and survival strategy with interaction of country of origin

Model 3.1 Years in education explained from control variables, inheritance factors and survival strategy including interaction with country of origin

Variable	B	Ste	T	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	0.054	0.069	0.032	0.975
Gender				
0. Male	Ref			
1. Female	0.077	0.284	0.271	0.787
City (Amsterdam)				
0. Amsterdam	Ref			
1. Rotterdam	0.151	0.283	0.532	0.595
Inheritance factors				
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school	0.610	0.423	1.443	0.150
2. Lower secondary *	0.848	0.477	1.779	0.076
3. Middle vocational	0.404	0.511	0.792	0.429
4. Higher vocational	0.783	0.566	1.383	0.167
Age at migration parents				
0. Under 18	Ref			
1. 18 upto 20	0.715	0.448	1.595	0.111
2. 20 upto 23**	0.867	0.429	2.022	0.044
3. 23 upto 26 ***	1.242	0.448	2.772	0.006
4. 26 and older	0.491	0.443	1.110	0.268
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	-0.262	0.344	-0.769	0.443

Model 3.1 (continued)

Model 3.1 Years in education explained from control variables, inheritance factors and survival strategy including interaction with country of origin

Variable	B	Ste	T	P
Survival strategy indicators				
Identification with ethnic group				
0. Very strong	Ref			
1. Strong	0.505	0.440	1.148	0.252
2. Not strong not weak	-0.418	0.562	-0.744	0.457
3. Very weak or not at all	1.183	1.056	1.120	0.263
Dutch language proficiency				
0. Very good to excellent	ref			
1. Moderate or good	-0.624	0.487	-1.282	0.200
People of immigrant origin should live according to their own culture	Ref			
0. Totally agree	-0.694	0.650	-1.067	0.287
1. Agree	0.160	0.637	0.251	0.802
2. Neither agree or disagree	0.542	0.746	0.727	0.468
3. Dissagree	0.387	1.389	0.279	0.781
4. Totally disagree				
Community involvement within ethnic group				
0. Yes	Ref			
1. No	0.051	0.288	0.178	0.859
Perceived discrimination				
0. Yes	0.109	0.277	0.392	0.695
1. No	Ref			
Ethnic neighborhood Segregation				
0. 75 to 100 %	Ref			
1. 50%	0.152	0.830	0.183	0.855
2. 25%	1.162	0.766	1.517	0.130
3. Almost none ***	2.254	0.863	2.611	0.009
School segregation, primary and secondary school combined				
0. Almost all	Ref			
1. 75%	0.637	0.620	1.028	0.305
2. 50%	0.774	0.602	1.285	0.199
3. 25% **	1.605	0.704	2.278	0.023
4. Almost none	-0.601	0.968	-0.621	0.535
Interaction Terms (Ref = Turkey)	Ref			
None				

Model 3.2 Highest degree earned explained from control variables, inheritance factors and survival strategy including interaction with country of origin

Variable	Estimate	Std e	Wald	P
Control variables				
Country of origin				
0. Turkey	Ref			
1. Morocco	1.397	0.851	2.695	0.101
Gender				
0. Male	Ref			
1. Female	0.252	0.168	2.251	0.134
City				
0. Amsterdam	Ref			
1. Rotterdam	-0.238	0.168	2.001	0.157
Inheritance factors				
Parents education				
0. None or doesnt know	Ref			
1. Primary or Koran school ***	1.284	0.341	14.163	0.001
2. Lower secondary **	0.696	0.304	5.251	0.022
3. Middle vocational ***	1.028	0.287	12.854	0.001
4. Higher vocational **	0.614	0.251	5.986	0.014
Age at migration parents				
0. Under 18	Ref			
1. 18 upto 20*	0.500	0.263	3.625	0.057
2. 20 upto 23**	0.613	0.265	5.351	0.021
3. 23 upto 26 **	0.540	0.254	4.525	0.033
4. 26 and older	0.359	0.265	1.833	0.176
Dutch language spoken at home				
0. Other	Ref			
1. Dutch	-0.109	0.203	0.287	0.592

Model 3.2 Highest degree earned explained from control variables, inheritance factors and survival strategy including interaction with country of origin

Variable	Estimate	Std e	Wald	P
Survival strategy indicators				
Identification with ethnic group				
0. Very strong	Ref			
1. Strong	0.505	0.440	1.148	0.252
2. Not strong not weak	-0.418	0.562	-0.744	0.457
3. Very weak or not at all	1.183	1.056	1.120	0.263
Dutch language proficiency				
0. Very good to excellent	Ref			
1. Moderate or good *	-0.513	0.288	3.185	0.074
People of immigrant origin should live according to their own culture				
0. Totally agree	Ref			
1. Agree	0.102	0.816	0.015	0.901
2. Neither agree or disagree	0.539	0.444	1.473	0.225
3. Dissagree	0.266	0.378	0.356	0.551
4. Totally disagree	0.078	0.386	0.041	0.840
Community involvement within ethnic group				
0. Yes	Ref			
1. No	-0.240	0.231	1.080	0.299
Perceived discrimination				
0. Yes	Ref			
1. No	-0.107	0.228	0.221	0.638
Ethnic neighborhood Segregation				
0. 75 to 100 %	Ref			
1. 50%**	1.188	0.518	5.258	0.022
2. 25%	0.487	0.460	1.125	0.289
3. Almost none	-0.174	0.497	0.123	0.726
School segregation, primary and secondary school combined				
0. Almost all	Ref			
2. 75%	0.230	0.571	0.162	0.687
3. 50%	0.816	0.419	3.802	0.051
4. 25% **	0.453	0.357	1.610	0.204
5. Almost none	0.514	0.369	1.943	0.163
Interaction Terms (Ref = Turkey)				
School segregation, primary and secondary school combined				
0. Almost all	Ref			
1. 75%	0.321	0.933	0.118	0.731
2. 50%	-0.916	0.627	2.136	0.144
3. 25% *	-0.887	0.524	2.870	0.090
4. Almost none *	-1.005	0.535	3.530	0.060

Contrary to the previous model 2 this model, model 3, shows more significant variables when using the highest degree earned as dependent variable even though only few categories are significant. Dutch language proficiency still shows a marginally significant positive effect just like in model 2 on highest degree earned but not on years of education. This could have been expected due to the fact that the effect on years of education was only barely significant in model 3 (sig = 0.046). In model 3 several variables show significant effects in one or two categories such as neighborhood and school segregation on highest degree earned, wherein the effect are as expected, less ethnic concentration leads to higher educational results indicators. The school segregation variable displays two marginally significant interacting categories indicating that school segregation has less effect on highest degree earned for migrants of Moroccan descent compared to Turkish descent. In previous models a strong link between parent's educational achievements, age at migration educational results indicators has been proven and the variables still display a strong effect.

Overall stronger significant levels were expected, especially because in earlier models without the control variables both neighborhood segregation and school segregation gave strong significant effect on educational results indicators. This means that the effects measured in earlier models without the control variables are partly present in the control variables even though these do not give any significant effect independently nor in the model including inherited factors. Even though the models display multiple strong significant effects of inheritance factors the effect of survival strategy indicators are only marginally significant and do not show a clear uniform direction as was predicted in the theoretical model. The second sub question is focused at differences between the survival strategy indicators in terms of ethnicity:

- Is the influence of the survival strategy on educational attainment different for separate ethnic groups?

Due to the fact that in model 2.1 and 2.2 the effect of survival strategy indicators has been shown to be only partly significant for neighborhood segregation, school segregation and Dutch language proficiency it is not unsurprising that only school segregation show any marginally significant interaction effect with ethnicity on highest degree earned. The marginally significant effect displayed points to second generation migrants of Moroccan descent benefiting less from receiving education in a non-ethnic concentrated school. The rest of the survival strategy indicators do not vary significantly between second generation migrants of Turkish and Moroccan descent.

4.5 Explained variance

The explained variance, see table 23 and 24 below, increases with the inclusion of each group of categories and is highest for model three as expected. In general the explained variance is slightly higher for highest degree earned even though the models with highest degree earned as dependent variable do not display more significant variables. This can be seen when looking at the explained variance for model two and model three are in both cases higher for highest degree earned the most variables that showed significant effects were in the model explaining years of education. Especially the age at migration of parents and education of parents and the school and neighborhood segregation variables. The differences between the explained variance of model two and three of both educational indicators are only minor while at the same time the significance levels of the variables that showed a highly significant effect are lessened. Even though some of the models show only marginally significant variables, mainly model three, each of the models is highly significant when taking into account the significance levels of the -2 log likelihood and P values. The test for parallel lines is not significant for all three models, indicating that the proportional odds assumption can't be rejected and that all effects of the independent variables are constant.

Table 23. Explained Variance and 2log likelihood per model for highest degree earned

Model (Interaction)	Cox & Snell	Nagelkerke	Mc Fadden	Parallel Lines	-2 Log Likelihood
Model 1	8.1%	8.5%	2.7%	1479.027 (1.000)	1507.415 (0.000)
Model 2	13.7%	14.4%	4.7%	1561.007 (1.000)	1599.122 (0.000)
Model 3	17.6%	18.4%	6.1%	1486.552 (1.000)	1575.703 (0.000)

Table 24. Explained Variance (R Square) and anova per model for Years in education

Model	R square	Regression	p
Model 1	7.4%	580.919	0.000
Model 2	11.9%	659.742	0.000
Model 3	15.4%	855.225	0.000

The models, which have been described on the previous pages, only show marginally significant effects of three out of seven indicators selected in the theoretical model to describe the application of either an oppositional or instrumental approach towards he Dutch educational system. The three variables are neighborhood segregation, school segregation and Dutch language proficiency. There are not enough significant ($p<0.05$) survival strategy indicators in order to conclude that there is a clear link between the educational results of second generation migrants of Moroccan and Turkish descent. Also the explained variances of the end model, which includes all categories of variables, 17.6% (Nagelkerke) for highest degree earned and 15.4% (R square) for years in education, doesn't show a large improvement of the model by adding survival strategy indicators. The main research question can now be answered:

- To what extent does the choice for a survival strategy towards integrating in the host society influence educational performances of second generation immigrants in the Netherlands

The variables chosen to represent the application of an oppositional approach towards the Dutch educational system do not show a uniform relationship with educational results and there is no significant difference between countries of origin. The fact that certain individual factors do have a significant effect on the educational results indicators show that some of the concepts put forward by Ogbu (1987) are related to educational results but not through the steps described in the conceptual model developed for this thesis.

Chapter 5: Conclusion and Discussion

5.1 Conclusion

The objective of this thesis is to test the hypothesis of Ogbu (1987) that applying an instrumental approach towards education is more successful for educational success of second generation migrants than an oppositional approach. Ogbu (1987) argued that the application of an oppositional survival strategy is a reaction of second generation migrants to system in place that are discriminatory. Not receiving equal opportunity in education and society as a whole, or the perception thereof, supposedly pushes the second generation migrants to look for career opportunities outside the formal systems in place and often within a person's ethnic group. This assumption is in line with the theory of investment in human capital developed by Schultz (1961) that states that when a person lacks return on investment, in this case in education, the person will look for alternative channels or routes outside the formal educational system to achieve success. The models that are used to describe the relationship between educational results and survival strategy also include control variables and inheritance factors in order to validate the results and achieve a complete and comprehensive conceptualization of the theory human ecology by Ogbu (1987).

The strong influence of two of the three inheritance factors on both of the educational results indicators, parents education and parents age at migration, have been proven as was expected from previous literature. Having high educated parents improve the chance that a person will reach a higher degree as well. The concept that parents age at migration was expected to correlate with higher educational results for second generation migrants whom have parents who migrated at a younger age was not proven. The relationship between educational results and parents age at migration was proven but in the opposite direction as was expected. The focus of this research is on the educational results of second generation migrants in the Netherlands in relationship to the application of a survival strategy. Therefor the different contextual factors influencing the inheritance factors such as exact region which migrants came from or reasons to migrate have been left out in order to limit the scope of this research.

The control variables do not show any significant differences in educational results in terms of gender or city of residence. Which is somewhat surprising due to the fact that female children in both Morocco and Turkey are a lot less likely to attend any kind of higher education, especially at college or university level (National Education Statistics, 2013), (Haut-Commissariat au Plan du Maroc, 2009). This effect is also displayed when comparing the difference between fathers and mothers education in the TIES dataset. The strong gender inequality in terms of access to education in

Morocco and Turkey are not transferred to the second generation migratants in the Netherlands and show a significant emancipation process of the genders.

The variables constituting the application of an oppositional survival strategy do not show an unambiguous relationship with higher educational results. Only three of the seven survival strategy indicators show a significant effect on educational results. The variables neighborhood and school segregation are shown to be significant related to educational results, living in an almost complete ethnic neighborhood decreases educational results. This is especially visible for years in education, and the same can be said for school segregation. Dutch language proficiency, as is evaluated by the respondent self, is also related to an increase in educational results indicators but the effect decreases between model two and three and is only marginally significant in the last model. The fact that neighborhood segregation, school segregation and Dutch language proficiency show significant effects on the educational results indicators is not enough to conclude that second generation migrants who apply an oppositional approach perform better or worse in education. There are no variables with at least two significant categories that vary amongst ethnicity and is different for second generation migrants of Turkish descent compared to those of Moroccan descent.

The highest degree earned display the most explained variances for each of the three models used in the results chapter. The difference between these two measures of education in terms of survival strategy is not very large, the survival strategy indicators that show a significant effect on education are generally slightly less significant for years in education compared to highest degree earned. The explained variance for the complete model, including the control variables; inheritance factors; survival strategy indicators and country of origin, is 15.4% for years in education and 17.3% (Cox & Snell) for highest degree earned. This indicates that there are variables not included in the model that have a significant effect on educational results and underlines the conclusion that the application of an oppositional survival strategy is not a main predictor of educational results and that there must be other factors, besides inheritance factors, that are better predictors of differences in educational results.

There are several possible explanations for the lack of a statistical significant relationship between survival strategy and educational results. First of all applying an oppositional approach doesn't necessarily have to mean lower educational performances as was proven by migrants of Chinese descent in the Netherlands of whom a higher percentage of persons go to higher education in comparison with the native Dutch population (Linder et al., 2012). The dichotomous nature of Ogbu's theory of human ecology, only two different survival strategies are possible according to the author, might be too simplistic to describe a complicated process such as adjusting to educational systems in place and achieving educational results. Secondly, it is possible that the indicators selected in the theoretical model do not accurately describe the application of the survival strategies and are there for

not measuring the effect that is described in Ogbu's theory. The application of an oppositional survival strategy, according to Ogbu, is a reaction towards discriminatory systems in place. These systems in place are conceptualized through school segregation, neighborhood segregation and experienced discrimination. These factors supposedly determine whether a second generation migrant feels he or she has equal opportunity in the Dutch society.

5.2 Discussion

The effect of survival strategy indicators on educational results is not clear in the models used but this doesn't mean there are no interesting results that can be fuel for future discussions and further research. Even though the inheritance factors, that are part of the models, were included mainly for reasons of validation the highly significant interaction effects with country of origin does raises the question whether or not parents education is more important for migrants of certain ethnic backgrounds. The second generation migrants of Moroccan descent scored comparable on the educational results indicators while the parent's education was significantly lower. The opposite can be said in terms of gender inequality. There is plenty of research showing the unequal representation of female students in higher education in Morocco and Turkey but there is no significant difference between educational results indicators for the genders in the Netherlands showing that the emancipation process of females cached up with the Dutch situation quite rapidly.

Due to the fact that this thesis is based on secondary data that wasn't collected with the aim to gather proof for the relationship between the application of a survival strategy and educational result. Future research, specifically aimed at discriminatory systems in place and the reaction that second generation migrants have towards it, can shed a more detailed light on which factors really constitute an oppositional or instrumental approach if that's the case. These factors could describe discriminatory systems in place in a broader sense such as opinions expressed in the media or other channels of public discourse. Detailed qualitative research can look more in depth into issues that motivate individual second generation migrants to react in a specific manner towards the educational system in place.

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Appendix

1. *School attendence*

The table below shows the number of respondents who were still attending school at the time of the interview and are therefore deleted from the dataset.

Table 4. Respondents still attending school

	Frequency	Proportion
Yes	70	4.7%
No	1434	95.3%
Missing	1	0.10%
Total	1505	100.0%

2. *Method of interviewing*

The table below shows the different methods used during the gathering of the TIES dataset for data from the Netherlands.

Table 5. Method of interviewing

Method	Frequency	Proportion
Full CAPI interviewer-respondent interview	686	45.6%
Partly CAPI interviewer-respondent, partly CAPI respondent in private	80	5.3%
Internet web-page interview by respondent	116	7.8%
Partly CAPI interviewer-respondent, partly written questionnaire in private by respondent	550	36.5%
Full CAPI interviewer-respondent, supplementary sample of Moroccan men	73	4.9%
Total	1505	100.0%

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3. Extended tables of variables used

In this section of the appendix the independent variables used in the models and its collapsed categories are displayed in an extended version including missing cases.

Table 7. Survival strategy indicators Extended

Indicator	Variable in data set	Original categories (Valid %)	New variable	New categories (valid %)	Missing
1. Identification with ethnic group	J1d	1 Very strong (41.5) 2 Strong (36.8) 3 Not strong/weak (16.2) 4 Weak (2.8) 5 Very weak (1.3) 6 Not at all (1.3)	**NewS1**	1 Very strong (41.5) 2 Strong (36.8) 3 Not strong/weak (16.2) 4 Weak/not at all (5.5)	T: 16% M:18.7%
2. Dutch language proficiency	J10a	1 Bad (0.1) 2 Not so good (0.1) 3 Moderate (1.9) 4 Good (19.0) 5 Very Good (28.1) 6 Excellent (50.8)	**NewS2**	1 Very good or excellent (79.1) 2 Moderate or good (20.9)	T:13.2% M:17.0%
3. Adaptation host country norms	J7c	1 Totally agree (11.6) 2 Agree (31.1) 3 Not agree/disagree (33.9) 4 Disagree 19.6) 5 Totally disagree (3.8)		1 Totally agree (11.6) 2 Agree (31.1) 3 Not agree/disagree (33.9) 4 Disagree 19.6) 5 Totally disagree (3.8)	T:13.2% M:11.5%
4. Community involvement (within ethnic group)	G7a until G7p	Ratio between 1 and 10	NewS4a **NewS4**	1 Yes (38.5) 2 No (61.5)	T:29.2% M:34.3%
5. Perceived discrimination	G8a_NL	1 Yes (46.5) 2 No (53.5)		1 Yes (46.5) 2 No (53.5)	T:12.2% M:13.6%
6. Neighborhood Segregation (ethnic)	F7	1 Almost all (3.2) 2 75% (7.8) 3 50% (25.8) 4 25% (47.9) 5 None (15.4)	**NewS6**	1 75% - 100% (11.0) 2 50% (25.8) 3 25% (47.9) 4 None (15.4)	T:15.6% M:15.6%
7. School segregation (primary and secondary school)	B5 (primary)	1 Hardly any (10.7) 2 25% (21.2) 3 50% (27.4) 4 75% (21.9) 5 Almost all (16.7)	NewS7a **NewS7**	1 Almost all (14.4) 2 75% (33.4) 3 50% (34.4) 4 25% (13.9) 5 None (4.0)	T:5.0% M:3.3%
	B39 (secondary)	1 Hardly any (7.3) 2 25% (16.3) 3 50% (34.6) 4 75% (26.9) 5 Almost all (12.3)	NewS7b **NewS7**		

Table 8. Inherited factors indicators Extended

Indicator	Variable in data set	Original categories (valid %)	New variable	New categories (valid %)	Missing
1. Education Parents	E28_NL (father) E36_NL (mother)	1 Primary School (31.1) 2 Lower Vocational(8.5) 3 Middle general (8.3) 4 Middle vocational (9.7) 5 Higher Preparatory scientific edu (2.9) 6 Higher vocational (3.4) 7 University (Ma) (1.8) 9 Koran School (4.1) 10 None (14.3)	NewI1a (father) NewI1b (mother) **NewI1**	0 None or doesn't know (23.4) 1 Primary or Koran School (33.9) 2 Lower secondary (20.4) 3 Middle Vocational (12.8) 4 Higher vocational (Master or bachelor (9.6)	T:0% M:0.2%
2. Age at migration parents	E21a (father) E23a (mother)	Ratio Ratio	NewI2a NewI2b NewI2c **NewI2**	1 Under 18 (21.5) 2 18 – 20 (17.6) 3 20 – 23 (22.7) 4 23 – 26 (17.4) 5 26 and older (20.8)	T:11.6 % M:4.1%
3. Language of survey country spoken in house	J8a_T (Turks) J8a_M (Moroccans)	1 Not mentioned (22.7) 2 Mentioned (77.3) 1 Not mentioned (19.4) 2 Mentioned (80.6))	**NewI3**	0 Other (21.3) 1 Dutch (78.7)	T:13.8 % M:16.4 %

Table 9. Educational results indicators Extended

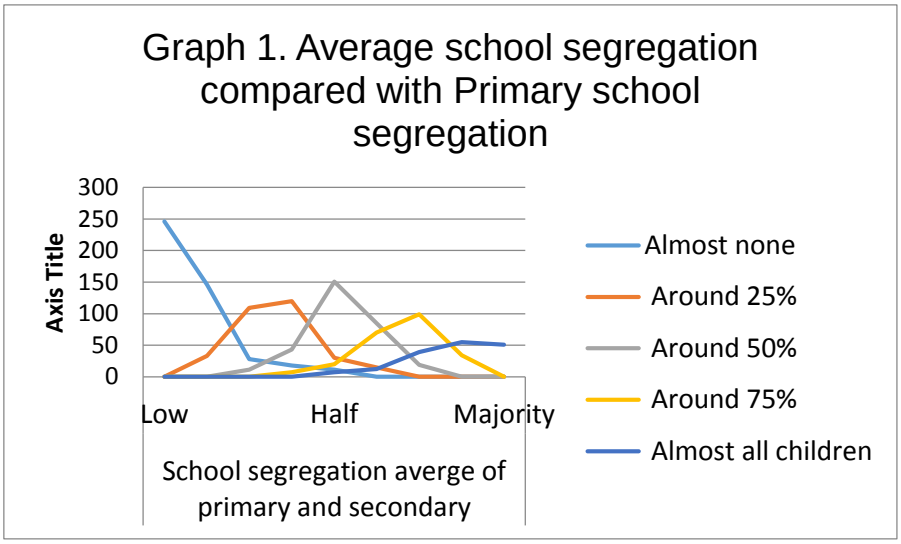
Indicator	Variable in data set	Original categories (valid %)	New variable	New categories (valid %)	Missing
1. Years in education	B1, B9, B15_1, B15_2, B15_3, B15_4, B15_5, B15_6, B15_7	Ratio	NewE1	Ratio (100)	T:0.0% M:0.0%
2. Highest degree earned	B32_NL_EDCR	(For all collapsed categories see Table 16. Categories Highest degree earned)	NewE2	1 Primary and special edu (7.2) 2 Lower secondary (20.7) 3 Apprenticeship (8.3) 4 Higher secondary (non-acad) (28.4) 5 Higher secondary (acad) (5.8) 6 Tertiary (29.7)	T:1.6% M:1.0%

Table 10. Country of origin Extended

Indicator	Variable in data set	Original categories (valid %)	New variable	New categories (valid %)	Missing
1. Country of origin	IRS4	1 Turkish (33.2) 2 Moroccan (32.8) 3 Comparison group (34.0)	IRS4_ Binary	1 Turkish (50.4) 2 Moroccan (49.6)	T:0.0% M:0.0%

School segregation

From graph 1 and graph 2 we can see that the variable Average school segregation is strongly correlated with both primary and secondary school segregation. The legend shows the approximate percentage of children of respondents own ethnic background at school. The table with Pearson Chi-square proofs this correlation (table 1).



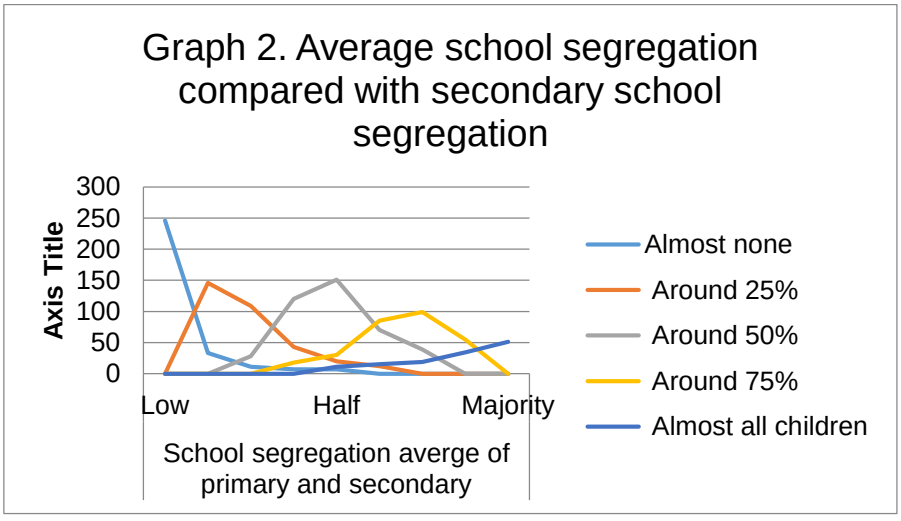


Table 11 Pearson Chi-squares for school segregation

Variable	Chi-square value	Significance
Average school segregation compared with Primary school segregation	2805.693 (32 df)	0.00
Graph 2. Average school segregation compared with secondary school segregation	2975.270 (32 df)	0.00

1. *Educational results indicators*

Graph 3. Correlation between educational results indicators shows the correlation between total years of education received and highest degree earned. Although the differences between persons with the highest degree being primary and secondary is low but in general as the highest degree earned increases so does the total years in education, Pearson Chi-square 148.160 sig< 0.05.

Table 16. Average number of years spent in education per highest degree earned

Primary	Lower secondary	Apprenticeship	Higher secondary (non-acad)	Higher secondary (acad)	Tertiary	Total
11.26	12.75	15.33	16.49	17.53	18.60	15.93