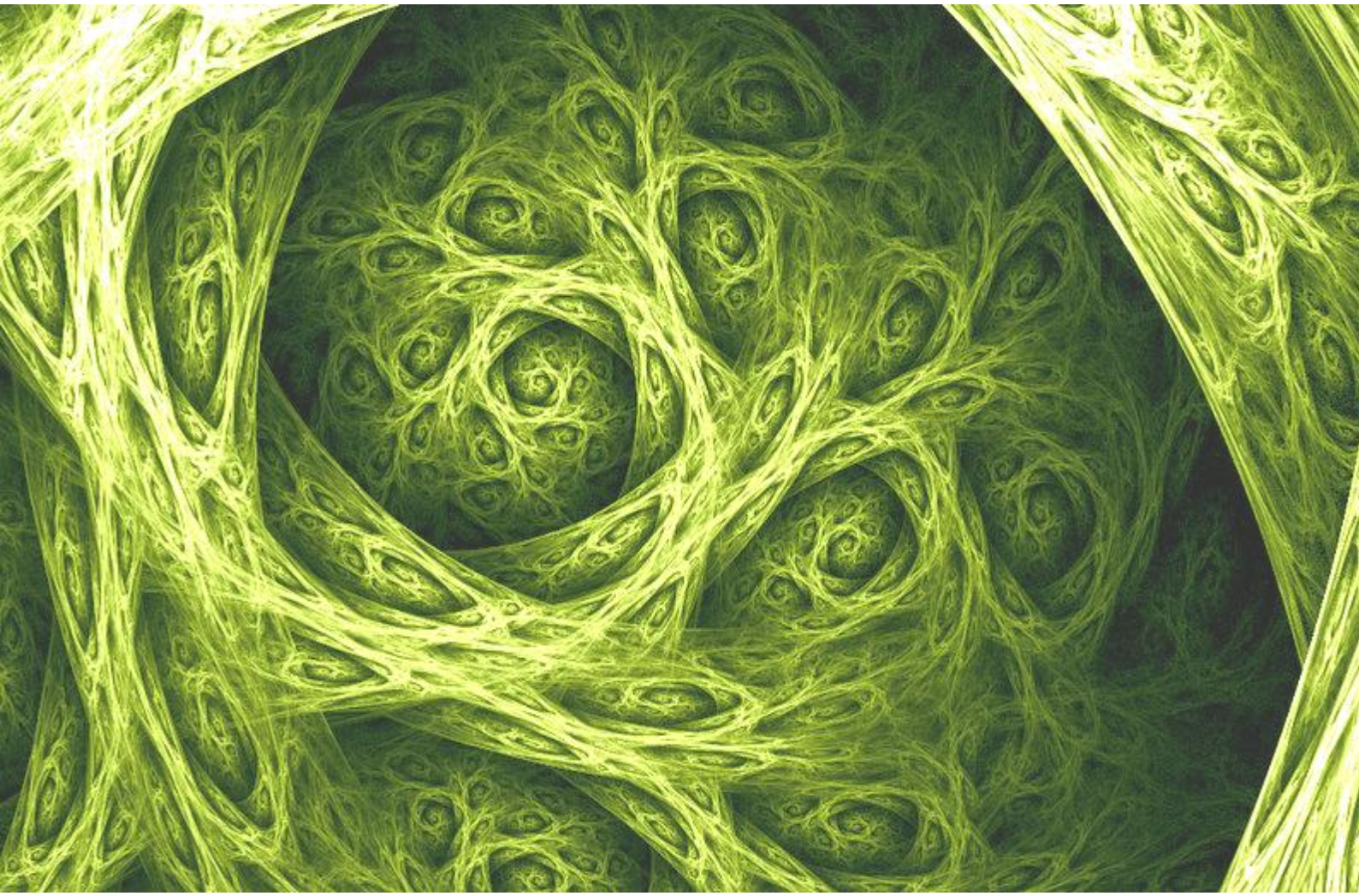
T I E S The Integration of the European Second Generation

Variation in tempo aspects of fertility of second generation migrants in the Netherlands

Explained through dimensions of cultural identification



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Explained through dimensions of cultural identification

MASTER THESIS

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ABSTRACT

The economic boom after World War II caused enormous labour shortage in the industrial sector, which was the important factor in the recruitment of labour migrants to the Netherlands. At the time the labour migration started, the Netherlands experienced an on-going change in demographic trends and behaviour, especially reflected in family formation and child bearing behaviour. Linking migration and fertility it was seen that the postponement of childbearing was not similar for both the native and the migrant population, where migrants were responsible for a disproportionate number of children.

This paper describes the effect of the cultural identity of second generation migrants in the Netherlands on tempo aspects of fertility by comparing three states of assimilation (low preservation, moderate preservation, high preservation). It was expected to find a negative relationship between the extent of preservation and the timing of a first birth and also between the extent of preservation and the time interval between first and second birth; where higher preservation states are related to shorter duration times and time intervals. Analysing tempo aspects of fertility could be done using retrospective survey data, from the TIES-project (The Integration of the European Second Generation).

Resulting from the Kaplan Meier and Cox Regression analyses, the identification and language preservation of second generation migrants affect timing of first birth; a postponement of the first birth is measured when migrants are partial or highly assimilated and have looser ties with the country of origin. The time interval between a first and second birth is also affected by preservation of language-related issues, but shows opposite effect; high preservation relates to shorter time intervals.

Keywords: *Fertility, Migration, Second generation, Cultural Identity, Assimilation*

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1. INTRODUCTION

Post-World War II migration has contributed to the ethnic diversity in many Western European Countries. The economic boom after the Second World War caused enormous labour shortage in the industrial sector, what was the important factor in the recruitment of labour migrants from countries like Turkey, Morocco, former-Yugoslavia, Spain and Italy to Western-European countries (Milewski, 2009). The majority of the recruited, predominantly male, workers originated from rural areas and from countries mostly with fertility levels considerable higher than those in European countries (Garssen and Nicolaas, 2008; Sobotka, 2008; Dubuc and Haskey, 2010; Milewski, 2007). In the Dutch migration history '*the new migration stream*'[1] from Turkey and Morocco entered the country after the bilateral labour migration agreements were signed with Turkey in 1964 (Akgündüz, 2008) and with Morocco in 1969 (Beets et al, 2008). The *guest workers* intended to come to the Netherlands as a temporary solution, therefore most migrants entered the country alone. The oil crisis in 1973, however, hindered the return migration and was the main reason for many migrants to make their stay permanent (Beets et al, 2008). Since then the migration stream from Turkey and Morocco has been dominated by family reunification related moves (Nicolaas et al, 2003). As a consequence of the migration history, the Netherlands has a large foreign-born population, which nowadays compasses about 20 per cent (3.5 million) of the population. 1.9 Million of them is of non-Western origin (Nicolaas et al, 2013). Labour recruitment, family-related moves and low levels of return migration of the Turkish and Moroccan migrants (Hagedoorn et al, 2005) have contributed to a number of over 700,000 inhabitants in the Netherlands originating from Turkey and Morocco; approximately 393,000 Turkish and 363,000 Moroccan migrants in 2012 (Nicolaas et al, 2013).

At the time the labour migration started, the Netherlands experienced an on-going change in demographic trends and behaviour, especially reflected in family formation and child bearing behaviour (Knijn and Rijken, 2003). Linking migration and fertility, it is seen that the increasing age of marriage and the postponement of childbearing are not similar for both the native and the migrant population (Garssen and Nicolaas, 2008). In the Netherlands the fertility rates were much lower, compared to Turkey and Morocco at the time the labour migration started (Beets et al, 2008; Milewski, 2011; Schoenmaeckers et al, 1999). The Netherlands had a *total*

[1] An explanation of the in italic terms can be found in Appendix I 'Conceptualization'.

fertility rate (TFR) of 3.1 children per woman in 1960, while this was 6.1 for Turkey and 7.1 for Morocco in 1960 (World Bank, 2013). This difference affected the fertility levels for the Netherlands, where migrants were responsible for a disproportionate number of children (Garssen and Nicolaas, 2008; Levine, 2004). By the 1980s the total fertility rate for native Dutch women was below replacement level (1.5), whereas the Turkish and Moroccan migrant women with a TFR of 7.1 and 4.8 (Garssen and Nicolaas, 2006) seemed to follow the high fertility patterns as known for rural Turkey and Morocco. Turkish and Moroccan first generation migrants are responsible for their descendants (second generation migrants) with a population size of about 379 thousand nowadays; 191,000 Turks and 188,000 Moroccans (CBS, 2013).

The timing and number of births is an important dimension of family formation and of the demographic composition of a country. International migration is associated with a rapid change in people's environment and therefore also affects demographic behaviour (Coleman, 2006); this is confirmed by the drop in fertility levels for the different migrant groups in the Netherlands. Nowadays the TFR for the Netherlands slightly increases, where we see that the proportion of children of the Turkish and Moroccan migrant groups has largely adjusted to the native level. With a TFR of 1.7 among native women in 2007, the TFR for Turkish migrant women was 1.8 and for Moroccan migrant women it was 2.6 (CBS, 2009). These levels are nowadays under Turkey's and about the Moroccan level (World Bank, 2013). However, the selectivity in migration of mainly low educated, rural communities cannot be ignored and therefore makes a comparison with the origin country somewhat inaccurate.

The descendants of the labour migrants, *the second generation,* are nowadays entering adulthood, a period that is characterized by transitions in the life course (Crul and Heering, 2008; Milewski, 2009). Given the differences in demographic behaviour between the *first generation migrant*s and the native Dutch population it is the particular situation of the second generation migrant group - born in the Netherlands, but having experienced the lifestyle and traditions as characteristic for Turkey or Morocco through their parents - what makes them interesting to study in their potential adaptation to national fertility norms of the receiving country. It is this generation that is exposed to both influences of the host country and the culture of their parents and may adjust to foreign or native norms and values. Also the growing share of young adults with a migration background in the Netherlands – about 30 per cent (CBS, 2007) - increases the importance of these topics.

1.1 OBJECTIVE AND RESEARCH QUESTIONS

Understanding the link between migration and population change is a key challenge in demography (Salt and Clarke, 2002). The effect of migration on the *tempo* and *quantum* aspects of fertility is valuable in projecting the future population and one of the most protracted effects that migrants can have on the receiving destination is their number of children (Coale, 1972). With an increase in the share of second generation migrants that enters the reproductive years, growing attention has been paid to this group, resulting in an enormous increase in the range of studies in Western European countries (e.g. Crul and Heering, 2008; Milewski, 2009; Wilson, 2013; Dubuc, 2012; Huschek, 2011; Valk and Milewski, 2011; Abuladze, 2011). Research hypotheses are mainly derived from frameworks in the majority population, on macro level, using a cross-sectional approach (Kulu and Milewski, 2007; Andersson, 2004). Cross-sectional data analysis represents a study method in which a certain event is studied at one single point in time (Blossfeld and Röhwer, 2002). Previous events and the life course of individuals are neglected, but might influence the results of a study. The introduction of longitudinal datasets and surveys allows for a more micro-perspective approach, using event history techniques what gives a more complete overview of the situation and life course of second generation migrants. Considering international migration from non-Western countries, such as Turkey and Morocco to a Western country as the Netherlands, research has been carried out about the differences in fertility levels between natives and migrants and between different migrant groups. Previous studies have only made comparisons between ethnic groups, countries or generations, relatively little is known about patterns *within* sub-populations. Clearly absent therefore is the examination of differences in characteristics *within* migrant groups, what is necessary in determining the variation in characteristics of people in particular groups.

With an increase in the duration time of migrants in a receiving country or with a next generation, norms and values of migrants converge to the national norms and values of the receiving country (Sobotka, 2008; Bean et al, 2000; Lindstrom and Saucedo, 2002; Alba and Nee, 2003). Long term influences of migration can therefore be better observed through the second generation, since this group is going through a multidimensional acculturation process. Second generation Turkish and Moroccan migrants experienced childhood in their families being socialized with the Islam and at the same time in a society where the constitution, norms and values are based on Christian terms. With the entering of adulthood of this second generation in recent years, this is the right time to study changes and similarities *within* second generation migrant groups. Different than most other literature, this study does not seek to

estimate the differences in tempo of fertility *between* different ethnic (migrant) groups, but attempts to consider differences *within* migrant groups according to their assimilation status. However differences between ethnic groups cannot be ignored, the influence of migrant origin is of lower importance than the extent of *cultural preservation*.

The general objective of this paper is *to study the effect of cultural identity of second generation migrants in the Netherlands on the tempo aspects of their fertility.* This can be examined by classifying second generation migrants into different types of migrants, by means of preservation to the *cultural identity* which is known for the country of origin of their parents. It is assumed that the degree of preservation can serve as predictor for the life course development of the second generation migrants. The general research question that will be answered is as follows: *To what extent do second generation migrants in the Netherlands adhere to the cultural identity of the country of origin and to what extent does this cultural identity influence the tempo aspects of their fertility?*

Research questions

The adaptation hypothesis is a medium-term perspective that is driven by the assumption that with an increase in time and a next generation norms and values of migrants would come closer to the national level. Given that fertility patterns vary between the country of origin and the receiving country, a convergence may be achieved by the second generation (Sobotka, 2008; Milewski, 2009). Therefore the first sub-question is: *To what extent do tempo aspects of fertility differ between second generation migrants and natives?*

Regarding the migration history and – Muslim - religious orientation, Turkey and Morocco share some characteristics, what might also be expressed in norms, values and lifestyle. Based on the low adaptation of Turkish migrants, it was concluded in a study of Surkyn and Reiners (1996) that Turkish migrants have migrated purely for economic reasons, rather than for socio-cultural reasons and the attractiveness of the Western lifestyle what was characteristic for Moroccan migrants. A better explanation for this difference in adaptation between Turkish and Moroccan migrants might be the originally strong national identification for Turkish migrants, whereas most Moroccan migrants are Berber, which is considered in the country of origin as second-class citizens (personal communication, J. Schoorl, 2013). These differences in motives and nationalistic feelings might affect the life course of the second generation migrants and might also affect the amount of preservation within these ethnic groups. Therefore the second sub-question is defined: *To what extent do second generation migrants preserve the culture and traditions of their country of origin?*

In order to achieve the general objective it is of importance to formulate some statements about the different assimilation statuses and its effect on the potential variation in tempo aspects of fertility for second generation migrants in the Netherlands. Following the assimilation hypotheses it is likely that there is a causal relationship between these factors in which high assimilation causes a delay in the timing of childbearing. Whether to tests if this is the case, the third sub-question is: *What is the effect of cultural identity preservation of second generation migrants on the tempo aspect of their fertility?*

1.2 DESCRIPTION OF CHAPTERS

This paper is organized in five chapters. The first chapter gave background information, the objective and the research questions. Chapter two – Theoretical Framework - provides information on the terminology, relevant theories and a literature review. Also the conceptual model is established and hypotheses are formulated. The third chapter is the data and methodology chapter, sampling and data processes are explained and used methods are described. Results will be presented in chapter four, where each paragraph presents the results to one of the research question. The final chapter, chapter five, gives the conclusion, discussion and suggests points for further research.

2. THEORETICAL FRAMEWORK

2.1 TERMINOLOGY

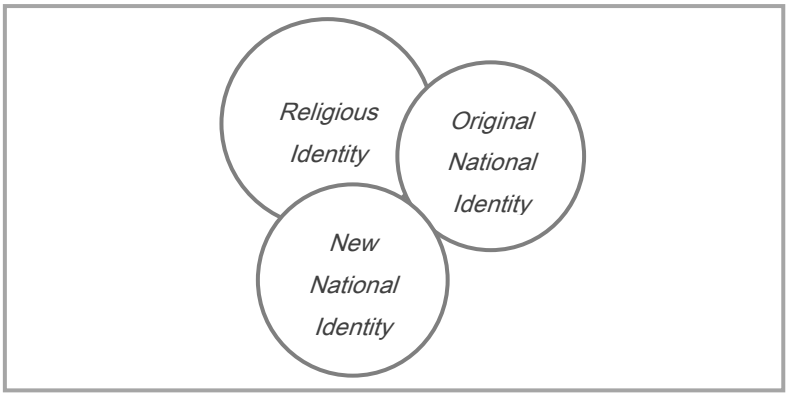
In the definition of the generation of migrants, the birth countries of the parents and of the individual are determining factors. *Natives* have parents which are both born in the country of residence, where also the person itself is born in that country. For migrants, at least one of the parents should be born in a foreign country. Speaking about a *first generation* migrant, this means that the migrant is born in a foreign country (Nicolaas et al, 2013). A distinction can be made in the first generation, based on the timing of migration in their life course. *Generation 1* entered the receiving country after finishing most years of the reproductive years, whereas *generation 1.5* migrated at the time they were children or young adolescents and were at or before the start of family formation (Alders, 2000). The second generation migrant is born in the Netherlands to parents of whom at least one was born in a foreign country. The ethnicity of the migrant is similar to the country of birth (of the parents) of the migrants. When both parents are born in different countries, the country of birth of the mother is leading. There is a difference between Western and non-Western migrants; Western migrants are originating from a country within Europe (excluding Turkey), North-America or Oceania, whereas non-Western migrants have a country of origin in Africa, Latin-America or Asia or Turkey (Nicolaas et al, 2013).

Identity and Culture

Based on the Triple Identity Theory (Rahnema, 2006) the recruited – predominantly Muslim - migrants and their descendants have at least three interacting identities. Figure 1 shows the religious identity, original national identity and the new national identity. Whereas the *national identity* (also described as: *ethnic identity*) refers to 'the degree to which a member defines him or herself by the same attributes that he or she believes defines the nation' (Dutton et al, 1994), the *religious identity* refers to the attachment to a global (Muslim) community, in which a set of doctrines and lifestyles are shared, also described as a framework of religious related culture, traditions and customs (Jacobson, 1997). Although this model seems to be more applicable to the first generation migrants, it shows the different identities on which the identity of second generation migrants is based. The extent in which the different identities influence the actual identity is dependent on the different sects and schools, ethnic and national grouping and finally on the receiving country. The triple identity theory shows the

interaction between identities formed by different cultures, wherefore culture seems the important factor in the search of an own identity. *Culture* is defined as a learned system of social constructed values, beliefs and meanings that are more or less shared by individual members of a social group, transmitted through languages or other symbolic systems from past generations or formed by individuals themselves (Avruch, 1998; D'Andrade, 1981). The communication between one and another has a better chance of succeeding if both actors share the same cultural and social knowledge (Cohen, 1991).

Figure 1 Triple Identity Theory (Rahnema, 2006)



Cultural identity

Regarding the meaning of culture and identity, cultural identity can be defined as a process of a sense of continuity and security, what is attributed to the community as imagined. The commitment, security and sharedness that individuals feel according to norms and values expresses the extent in which individuals identity is predominantly in the direction of the receiving country or in the direction of the country of origin of their parents. Measuring the extent in which cultural identity leans in a certain direction can be measured through five dimensions; Identification, Contact with country of origin, (Social) Media, Language and Religion and Religiosity.

2.2 ASSIMILATION HYPOTHESES

Numerous migrant fertility hypotheses exist in the current literature which can be grouped in three categories. The first category contains the hypotheses that focus on first generation migrants and the timing of migration. The second category of hypotheses considers the fertility of later generations. The last one includes more general hypotheses and explanations (Wilson, 2013). Relevant to this study is the second category of hypotheses, especially those which focus on adaptation and socialisation effects. Both adaptation and socialisation predict convergence in fertility levels of the second generations towards the national average. Strong cultural preservation predicts opposite effect. Most common used theory in migrant fertility research is the *assimilation hypothesis* (Sobotka, 2008; Wilson, 2013). Assimilation can be seen as a process in which minority groups as a consequence of integration will be completely or partial absorbed by the culture of the receiving country. This implies a strong identification to the main culture of the receiving country, and weakened ties to the culture of origin (Stark and Dorn, 2012) Quantum and tempo aspects of fertility are interpreted as affected by the extent of assimilation of migrants. However the classical assimilation theory originates from the theoretical successful movement of immigrant groups in the American middle class (Warner and Srole, 1945), this concept seems less applicable to the new Post-World War II migration stream in Western Europe (Bean et al, 2000; Lindstrom and Saucedo, 2002; Alba and Nee, 2003). More applicable to this particular 'new' migration group is the concept in which migrants both assimilate to the cultural norms of the receiving country, as well preserve norms and values of the country of origin: *segmented assimilation* (Andersson, 2004; Milewski, 2007; Andersson and Scott, 2007; Lindstrom and Saucedo, 2002). This concept of assimilation is important in the extent in which migrants converge to the (demographic and socio-economic) characteristics of the receiving country. In a context in which the cultural background of migrants greatly differ from that of the receiving country, as for Turkish and Moroccan migrants, the second generation migrants are more likely to show patterns of segmented assimilation (Scott and Stanfors, 2011). The social integration of individual migrants into e.g. the cultural traits, labour market or intermarriage with native Dutch is affected by the social education (*socialization*), where dominant values, norms and behaviour present in life will predict the behaviour that will be adapted (Milewski, 2011; Fleischmann and Phalet, 2011). Therefore socialization is of importance in the extent of assimilation, what might increase the similarities to individuals belonging to the native population.

Individual assimilation affects the pattern of the structure of a society. By an increase in similarities in education, occupation and income opportunities, and similarities in religiosity and cultural traits, social inequalities within a society will decrease (Esser, 2004) and demographic trends will become closer. However, assimilation can precede unequal among different dimensions. When migrants successfully achieve to assimilate culturally (*cultural assimilation*), this does not automatically mean that socioeconomic success (*structural assimilation*) is guaranteed (Scott and Stanfors, 2011). The assimilation of migrants is determined by the social and cultural context of the receiving country, where differences in assimilation processes between members belonging to similar ethnic groups, might explain dissimilarities in demographic behaviour.

The assimilation hypothesis is in this study translated to different preservation states, where preservation refers to the protection of norms and values belonging to the culture of the country of origin of the parents of migrants. The preservation state is based on different stages of assimilation. High preservation (no or low assimilation) reflects a situation in which migrants perform certain behaviour or adhere norms and values that highly reflects the situation characteristic for the (Islamic) countries of origin. In case of low preservation the culture, norms and values belonging to the receiving country has become the culture, norms and values for the migrant (high assimilation). When a migrant is in the moderate preservation state, there is a mix between culture, norms and values belonging to the country of origin and belonging to the receiving country (partial assimilation).

2.3 LITERATURE REVIEW

Various studies are conducted on the fertility patterns of migrants, since fertility analysis is an important component of the integration and assimilation of migrants to the receiving country. The fertility patterns of migrant groups have an important influence on the demographic composition of a future population. Much less is written about factors that can affect differences in fertility levels of migrants and absent in previous literature is the effect of the cultural identity on variation in tempo aspects of fertility *within* migrant groups. A short overview of fertility levels of the first generation Turks and Moroccan migrants will be given, followed by the levels known for the second generation, so far. Also, comparable studies about the effect of assimilation on fertility levels of second generation migrants will be described.

First generation migrants

Comparing the total fertility rate of women in the Netherlands, there is a large decrease shown in the total number of children to women born in Turkey and Morocco, moving towards the TFR of the native Dutch women. As previous described the oldest cohorts migrant women, originating from rural areas in Turkey and Morocco followed the patterns known for their country of origin, with a TFR of 7.1 for Moroccan and 4.8 for Turkish migrant women in 1980 (Garssen and Nicolaas, 2006). In the following two decades both migrant groups experienced an enormous drop, with a TFR of 2.5 for Turkish and 3.3 for Moroccan migrant women in 1999 (Fokkema et al, 2008). In order to explain changes in fertility it is also important to look at changes in the life course, cohort fertility rates give than a more complete overview. Research of Alders (2000) and Schoorl (1989) show a decrease in the c*ohort fertility rate* per cohort. The first generation migrants spent a large part of marriage and reproductive years in the country of origin and are nowadays of older ages compared to generation 1.5 (Schoorl, 1989). It is also very likely that most first generation migrant women moved to the Netherlands as a result of family reunification with their Turkish or Moroccan husband. Migrants belonging to generation 1.5 are of younger ages, mostly higher educated and more often originating from urban areas in comparison to generation 1. These differences in socio-cultural and demographic characteristics and the more time to adapt to the receiving country are reflected in the number of children per woman (Schoorl, 1989). Comparing generation 1 and generation 1.5, the TFR decreased with .45 comparing women with duration of stay of zero to four years and women with duration of stay of 10 years or more, for Moroccan women the TFR decreased with .16. In all probability the increased chances of labour participation, higher educational levels and a longer time for adaptation are important determinants in the decreased TFRs (Schoorl, 1989). This also might be the explanatory factor in the large decrease in cohort fertility.

(Voluntary) childlessness is besides previous factors important and affects the total fertility rates of the different ethnic groups. Comparing women born between 1945 and 1949 4.4 and 5.7 per cent of the women born in Turkey and Morocco respectively where childless, compared to 12.5 per cent among women born in the Netherlands. This has increased to 11.9 and 21.1 per cent for the Turkish and Moroccan migrant groups and 55.8 per cent for the native Dutch group for birth cohort of 1965-1969 (Alders, 2000). Important to take into account is that this study was conducted in 1999, where the youngest cohort was only 29 at the time of the observation. A decrease in this percentage is therefore very likely; however it still shows the large differences in (voluntary) childlessness between migrants and natives. This

also affects the total fertility rate per group, since a percentage without children will press the mean of all women enormously. Remarkable in previous numbers is on the one hand a divergence in the differences in voluntary childlessness, but on the other hand a convergence in the TFR between migrants and natives. This suggest that the differences in TFR which still can be found in previous research might not be caused by an actual lower number of children for migrant mothers compared to Dutch mothers, but a higher number of childless native women what causes an overall lower TFR for the natives compared to migrants.

Second generation migrants

Compared to the range of studies on the first generation migrants, much less attention is paid to the fertility patterns of the second generation migrants, so far. The second generation consists of a relatively young population. Entering adulthood, labour market and the start of family formation of the second generation migrants nowadays increases the interest in these groups and with that increases the number of conducted studies. Previous studies in America and Australia (Kahn, 1988; Stephen and Bean, 1992; Khoo et. al., 2002) show fertility levels of second-generation migrants between those of the first generation and the native population. This has also been the expected trend for the Netherlands (Garssen and Nicolaas, 2008), however previous studies on Western European receiving countries showed contrasting findings. Whereas research of Alders (2000) shows dropped fertility levels of second generation migrants of Turkish and Moroccan origin in the Netherlands between the level of the first generation and that of the native Dutch population. Milewski (2007) and Garssen and Nicolaas (2008) found fertility levels which are close to the level of native Dutch women. It is difficult to reflect on total fertility rates of the second generation migrants, since this is still a small and young group. However, it is expected that on average both Turkish and Moroccan second generation migrant families will have two to three children, whereas also the native families with children count mostly two or three children, it is also expected to find gap in the total fertility rate. This gap can be explained, as also described for the first generation, by the increase in voluntary childlessness among native Dutch adults, what presses the average number of children per woman enormously (Alders, 2000).

The effect of assimilation on fertility

Very few studies are accomplished about the effects of assimilation or socialization on fertility levels for the 'new migration stream' and their descendants. Only a few comparable studies are found. Two studies conducted in the United Kingdom (Dubuc, 2012; Wilson 2013), one in Germany (Stichnoth and Yeter, 2013) and one in Estonia (Abuladze, 2011), all confirm the convergence in fertility levels by generation, where adaptation of migrants to fertility norms of

the receiving country and the strong influence through socialization are stressed to be the important factors in the reduction of migrant family size. Remarkable in the United Kingdom is the faster convergence in fertility levels to the national level for migrants from high-fertility countries, compared to those originating from countries with lower fertility levels. Stichnoth and Yeter (2013) show the significant impact of fertility levels of the origin country and the fertility levels of the receiving country; first generation migrants show to be closest to the level of the origin country, where fertility levels of the second generation is much closer to, however still higher than, the level of the receiving country. This confirms the idea that culture is transmitted through parents, but that the second generation is also influenced by fertility norms of the receiving country.

Studies of Milewski (2010; 2011) about the transition of Turks migrant women to a first, second or third birth show that for second generation Turks marriage is the predictor for the transition to a first birth, where on average the first child is born half a year after marriage. Another influencing factor on tempo and quantum aspects of fertility is the partner's country of birth (Wilson, 2013). First generation migrant women are more likely to converge to the native level if their partner is native himself. This also might be true for the second generation. Interesting in the literature about the adaptation to the native fertility levels; according to completed fertility levels male migrants maintain the gap between migrants and natives, whereas women converge to the native level (Wilson, 2013). However in this study there is no specification about the reasons, it might be declared by – as is known among the second generation Turks and Moroccan migrants in the Netherlands – in average higher educated migrant women compared to migrant men (Crul and Heering, 2008).

The study of Abuladze (2011) focuses on first birth and the time interval between first and second birth. In this study long-term effects of migration on fertility have been tested by comparing first and second generation migrants to the receiving country and country of origin. Also, this shows for the first generation migrants duration times until a first birth as between the duration time known for the receiving country and the country of origin, whereas the second generation migrants moved towards the trends known for the receiving country. The transition to a second birth shows some interesting outcomes. Where trends of the first generation are still between the receiving and origin country, the second generation resemble here more to the first generation, rather than to the trends of the receiving country (Abuladze, 2011).

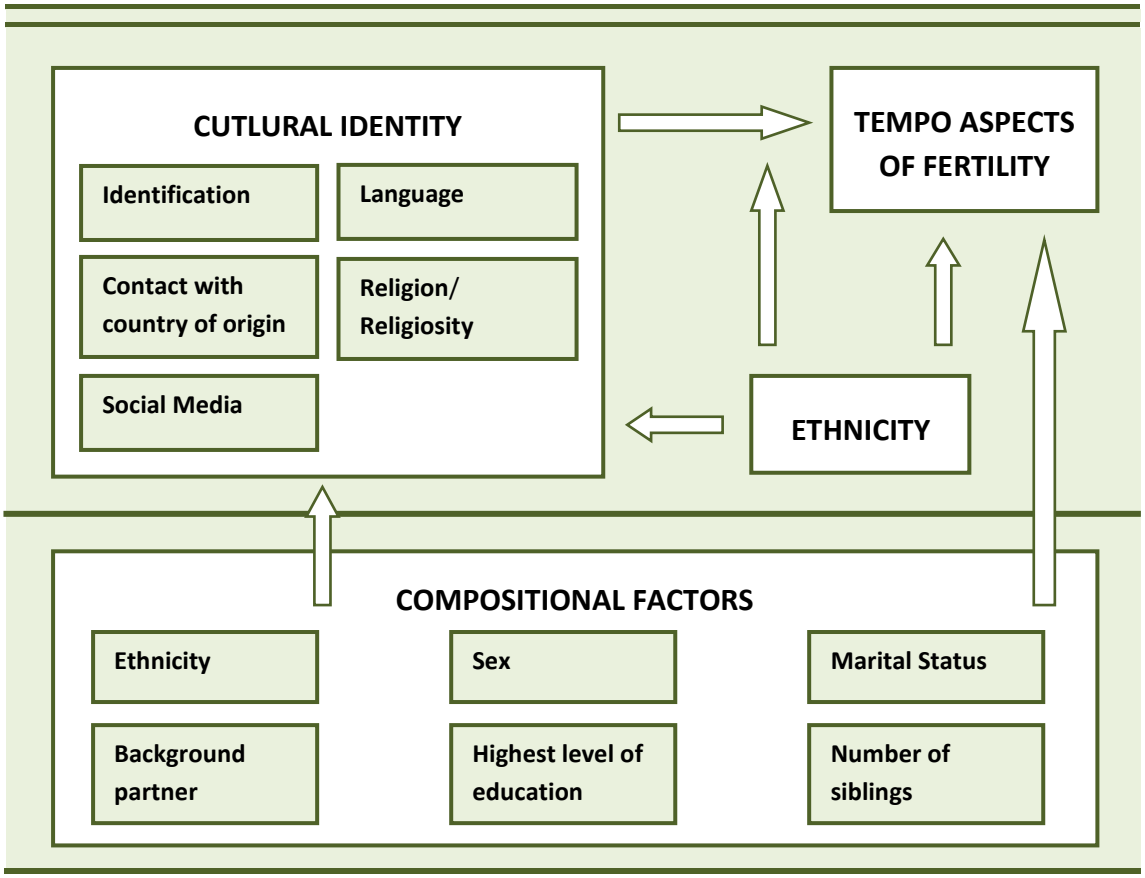
Cultural identity of second generation migrants

Regarding to the cultural identity of the second generation migrants, in the literature can be found that several important aspects have to be taken into account. First of all the identification of migrants with subpopulation is important in the formation of their own identity. The identity of migrants is based on their identification with subgroups within the population where they feel attached to, since individuals are searching for and want to belong to a group which represents their needs, norms and values (Dijk en Kippenburg, 2007). Also, the spoken en written language are symbols that connect individuals to a certain cultural group (D'Andrade, 1981) and knowledge of the language of the receiving country as a positive effect on acculturation (Chriswick and Miller, 1995; Dustmann and Fabbri, 2003; Bleakley and chin, 2004). Language is not fixed in a contemporary social environment and therefore migrants can choose to adhere to the language of the country of origin or to take over the language belonging to the receiving country. Strong links with the ethnic community and the home country hinder the assimilation of a new culture (Stark and Dorn, 2012). Determining the cultural identity of migrants can be partly done through measuring the extent in which social media contributes to adherences to the country of origin, but also the extent of contact with the country of origin of the parents is of importance. A strong reflection of the Muslim religion in migrant families in non-Muslim receiving countries is mostly a sign of weak adaptation and assimilation (Mayer and Rihahn, 1999). Therefore components of religion and religiosity are of high importance in the formation of the cultural identity of migrants.

2.4 CONCEPTUAL MODEL

Figure 2 elaborates the overall conceptual framework of the present study which is based on the different dimensions measuring cultural identity, the different ethnicities and the outcome variable: fertility. It is assumed that cultural identity explains the inequalities in fertility within ethnic minority groups, where the preservation of the cultural identity is expected to differ between Turkish and Moroccans second generation migrants. This preservation towards the cultural background of the country of origin of the parents is seen as core in the cultural identity of the second generation migrants. Also a direct effect between the ethnicity of the migrant and the tempo aspects of fertility is expected, since also differences in the TFR can be found in previous studies. Besides the direct effect, an interaction effect between ethnicity and the cultural identity is expected since differences in measured TFR between Turkish and Moroccan second migrants are found in previous studies, but also differences in the attachment to the own culture is apparent from previous studies. The main chain in this study is the effect of cultural identity of second generation migrants on tempo aspects of their fertility.

Figure 2 Conceptual Model



2.5 HYPOTHESES: HIGH VS. LOW PRESERVATION

Possible convergence to national level

However international migration is associated with a rapid change in demographic behaviour and there is a converge in fertility levels, many previous named studies still found a gap in the total fertility rate between the (first and second generation) migrants and the national standard. Therefore, hypothesizing the similarities and differences in tempo aspects of fertility between second generation non-Western migrants and natives, it is expected to find differences in the tempo aspects of fertility, where migrant groups will make the transition to a first birth, but also a following second birth, earlier compared to natives. Taking into account the nationalistic feelings and the possibly higher preservation of the identity of the country of origin of the parents for Turks migrants, compared to Moroccan migrants it is expected that duration times until a first birth and also the time interval between a fist and second birth of Turkish second generation migrants are shortest, followed by Moroccan second generation migrants. Where natives still have the longest duration times; they will have their first birth at later ages and have longer time intervals between first and second birth.

Preservation of cultural and traditions

Differences in the consideration to migrate and in the nationalistic feelings for the Turkish compared to the Moroccan first generation migrants, lead to the expectation that this difference will be reflected in the extent in which second generation migrants will preserve the culture and traditions of the country of origin of the parents. Migrants from Turkish origin originally came for economic motives and intended to stay temporary, where Moroccan migrants were more oriented towards the Dutch lifestyle and the temporary intention was questionable, moreover; Turks have a much stronger national identity, compared to the mainly Berber migrants from Morocco. Therefore it is expected that Turkish second generation migrants preserve the culture and traditions of the country of origin more compared to the Moroccan second generation migrants. In other words, Turks second generation migrants have assimilated less compared to the Moroccan second generation migrants.

Assimilation effects on fertility aspects

To understand the impact of cultural identity on fertility patterns of second generation migrants in the Netherlands, the third assumption is that the cultural identity is influenced by the assimilation to norms and values of the receiving country and the extent of preservation of the cultural norms and values of the country of origin of the parents. As stated before, a widely held perception is that strong ties with the country of origin hinder the identification with the

culture of the receiving country and therefore hinders assimilation (Stark and Dorn, 2012). Since the first generation migrated from countries with high fertility levels and earlier childbearing to the Netherlands with lower fertility levels and later childbearing, there is a negative relation expected between the preservation of the cultural identity and the age of first childbearing. In other words; higher assimilation leads to a postponement in childbearing and a longer time interval between first and second birth compared to low assimilated – high preservation – migrants.

Summarized the hypotheses are as follows:

1. Turkish second generation migrants have the shortest duration time until they receive a first birth and also the shortest time interval between first and second birth, followed by the Moroccan second generation migrants. Natives have the longest duration time until first birth and also the longest time interval between first and second birth.

2. Turkish second generation migrants preserve the culture and traditions of the country of origin more compared to the Moroccan second generation migrants.

3. Lower preservation of the norms and values of the country of origin of the parents leads to postponement in childbearing and a longer time interval between the first and second birth compared to moderate and high preservation of the norms and values.

3. DATA AND METHODOLOGY

3.1 DATA

To test the hypotheses, the Dutch data from "The Integration of the European Second Generation-Survey" (TIES) will be used, conducted in 2006-07. TIES survey focuses on the second generation of Turkish, Moroccan and former Yugoslavian migrants in 15 different cities in eight European Countries (Austria, Belgium, France, Germany, the Netherlands, Spain, Sweden and Switzerland). The survey produces an overview of the position of the second generation in Europe in topics of integration, economic, social and educational situation; identity. Also, TIES gives insight in social relations and religion. The data for this study includes respondents of Turks (n=486), Moroccans (n=473) and Dutch (n=512) origin, in the two biggest cities of the Netherlands: Amsterdam and Rotterdam.

As described by Groenewold (2008) in "Sample design, survey implementation and evaluation", a chapter in the report conducted by Crul and Heering (2008), the sampling frame for TIES could be conducted through the municipal population register (GBA), where according to *de jure* population registering only citizens with a legal residence are included. In compiling an objective sample frame, selection is avoided by taking into account that all respondents were sampled in the same context. An important factor was the neighbourhood, in all elements there must be a non-zero chance of selectivity, therefore only neighbourhoods which have members of all three ethnicities were selected. This method of sampling has resulted in exclusion of thirteen, low populated, industrial neighbourhoods (2 in Amsterdam; 11 in Rotterdam[2]), with a total of 104 inhabitants in Amsterdam and 523 in Rotterdam. The TIES population is living divided over 90 neighbourhoods in Amsterdam and 77 in Rotterdam, which are specified in appendix II. The data conducted through the TIES-survey results in a statistically representative sample of over 99.5 per cent of all citizens for Amsterdam and Rotterdam. In the selection of respondents in Amsterdam an age range between 15 and 44 was taken, where this was from 18 to 35 for Rotterdam (Groenewold, 2008).

[2] Excluded neighbourhoods are: Amsterdam: Spieringhorn, Bedrijventerrein Sloterdijk; Rotterdam: Noord Kethel, Kralingse Bos, Rijnpoort, Spaanse polder, Eemhaven, Waalhaven-Zuid, Botlek, Europoort, Maasvlakte, Bedrijvenemp. RNW, Rivium.

Response rates

Response rates in bigger cities in the Netherlands are overall lower than in other parts of the Netherlands (Groenewold, 2008), in addition, response rates are considerably lower among non-western migrants compared to western migrants or native Dutch (Schmeets and van der Bie, 2005). The overall response rate is 31.1 per cent for Amsterdam and 29.2 per cent for Rotterdam (30.2% for Turkish, 25.0% for Moroccan and 37.3% for native Dutch). Conforming to the literature, in both cities the response rate was higher among natives, compared to Turkish and Moroccan second generation migrants. A combination of factors contributed to the low response rate; the target population is young and mobile, in some neighbourhoods large-scale apartment buildings where not easy to access and also, other migrant surveys were conducted around the same period. Women appeared to be more likely to be at home than men, what resulted in a slightly higher number of women (n=767) than men (n=738). From all respondents included in the sample, most are native Dutch women (n=262) and least are Turkish men (n=242) (Groenewold, 2008).

Notifications and ethical considerations

The TIES dataset included 34 respondents which were born in Turkey or Morocco, these respondents do not meet the official description of being second generation migrant and are therefore excluded from the analyses. 19 respondents have reported that they have children who live elsewhere than in the household, this is only a little amount no further data on these children is available, therefore also these respondents are excluded from the analyses. In 56 cases questions about the household composition have been asked reasoning from the perspective of the household members to the respondent, rather than from the respondent to the household members. Therefore parents where seen as descendants of the respondents, rather than as parents. In case household member two and/or three are over 18 years older than the respondents, but where registered as being descendants, these variables are recoded, these household members are not taken into account as being a descendant.

This study is based on the analysis of secondary data, gathered in order to realize an international comparison between the European second generation migrants. Permission for usage of the data conducted for the Netherlands was obtained from the Netherlands Interdisciplinary Demographic Institute (NIDI), one of the implementing parties. However personal data is included in the dataset, all participant identifiers are excluded, wherefore information is not traceable to individual people. Also, no effort is made to identify respondents or their household members. Information captured in this study is only published on group level to ensure the exclusion of individual traceable information.

3.2 MEASURED VARIABLES

Dependent variable

The analyses of this study focus on two aspects of fertility; timing and spacing. Since most of the respondents are not yet at the end of their reproductive career, the total fertility rate cannot be measured. The *timing* of fertility stands for the transition into a first birth, where *spacing* means the duration time from first until second birth. Although fertility is most commonly used in analysing reproductive behaviour of females and the capability of producing offspring, in this study also males are taken into account. This study is analysing differences in parenthood for both men and women in observance of the extent migrants preserve the cultural identity belonging to the country of origin of the parents. Nevertheless, the term fertility instead of parenthood is used in this study, since parenthood assumes a more pedagogical approach on parenting, rather than just having (potential) children.

Covariates

This study focuses on the cultural identity of second generation migrants in the Netherlands, what can be explained by the extent in which migrants preserve the religion, traditions and norms of the country of origin. Therefore, cultural identity will be measured through the extent of preservation; high preservation, moderate preservation and low preservation. The variable includes information on the identification with different cultural groups, language, (social) media, contact with the country of origin of the parents, and religion and religiosity. Categories will be merged until three categories remain: High preservation, moderate preservation and low preservation. In case of dichotomous variables two categories will be used, since there is no more information available: high preservation or low preservation. As described previous; high preservation refers to a situation in which the migrants highly perform certain behaviour or adhere norms and values that is highly comparable to the situation in the country of origin at the time their parents were recruited to the Netherlands. In other words; there has been no or low assimilation to the norms and values of the receiving country. A moderate preservation symbolises a mix between culture, norms and values belonging to the country of origin at the time the parents of the second generation migrants were recruited to the Netherlands and the culture, norms and values and known for the current situation in the receiving country. This stage is equivalent to partial assimilation. The stage of low preservation is a stage of high assimilation in which the culture, norms and values of the receiving country has become the culture, norms and values of the migrants. The coding of the three categories causes an expected higher share of the sample population in the

moderate preservation group. On every variable the migrants can be low preservative (0), moderate preservative (1) or high preservative (2). The cultural identity code per dimensions is based on the average score on all variables in this dimension, rounded to whole numbers 0, 1 and 2. This classification causes a higher probability for all migrants to be moderate preservative, compared to low or high preservative. However this method might be seen as detrimental, in this way only separation occurs in extreme cases (low or high preservation) with an average score lower than 0.49 or higher than 1.50. Significant results only provoke in extreme cases, what is an extra method to enlarge the likelihood that significant differences in tempo aspects of fertility through cultural identity really can be found in the population for the Netherlands as a whole. The detailed underpinning of the included variables and their frequencies can be found in appendix III: Justification variables cultural identity.

Control variables

It is expected to find differences within migrants groups in the timing of a first birth and the time interval between first and second birth, when measuring the cultural identity of the second generation migrants in the Netherlands. But inequality within an ethnic group might also be explained through ethnic pluralisation and ethnic stratification, where pluralisation refers mostly to lifestyle, stratification is about socio-demographic characteristics, such as education, income and occupation (Esser, 2004). Since these ethnic stratification factors will have their effect on fertility outcomes it is important to control for these variables. It is common that the duration time for men is in average two years longer, compared to women, since men also start marriage, a large predictor for having a first child in average two years later than women (Knijn & Rijken, 2003). Also, no equal division of Turks and Moroccan migrants over the different preservation groups is expected, since - as previous described - Turks seem to be more nationalistic and might therefore preserve the culture of origin more. Educational level is one of the predictors in the duration time until first birth and also in the quantum aspects of fertility (Kreyenfeld, 2002) therefore it is important to make a distinction. Marriage is seen as a large predictor in the transition to a first birth, but also the ethnical background of the partner might play an important role. Usage of the TIES dataset allows us to control for these five compositional characteristics of the respondents.

3.3 METHODS

Analysing tempo aspects of fertility of second generation migrants, using retrospective survey data, can be done through event-history analyses. An advantage of the retrospective data is the coverage of a longer time-span (Mulder and Wagner, 1998). The analyses are divided into two parts; descriptive and explanatory. The descriptive analyses will be conducted using the Kaplan Meier survival estimates, a descriptive method to explore the distribution of time to event for different groups in a sample. Analysing fertility, it is important to look at the transition to a first birth; this will be done through transition rates and estimated median survival ages. In order to further understand the timing choices also the appearance of the second birth is important, where will be looked at differences in the time interval between first and second birth. Important to note is the expectation of a high number of right-truncated censored observations. Since most respondents did not yet end their reproductive years, there is chance of a high number of censored cases that are characterized by a partial observation of the duration data (Yamaguchi, 1991). Cox regressions will be used during the explanatory analyses in which the hypotheses will be tested. The analyses focus on the migrant, where in most cases the comparison group will be excluded. The duration time until the occurrence of an event can be expressed in person-years, based on the age of the respondent and the age of their children.

Risk period

It might be seen as a logic step to take marriage as the start of being at risk of a first birth; however because of the introduction of stricter legalisation towards the immigration of spouses from countries as Turkey and Morocco, the minimum age of marriage increased from 18 to 21. Also the income requirements increased (Nicolaas et al, 2013). In many cases these policy issues did not cause absence, but a delay in marriage and childbearing (Hooghiemtra, 2003). A delay in marriage might cause similar rates towards the timing of first birth compared with results of before postponement of marriage; however the ages of first birth might be increased. These reasons were leading in the discussion of choosing the start of the reproductive career as a starting point, rather than marriage. Therefore individuals will enter the period of being at risk of a first birth from age 15, what will be expressed as time T_0. As soon the event will take place, the duration time until first birth or the time interval between first and second birth be determined. Since the data of TIES does not include respondents who are above age 36, the only way of being censored in this dataset is by the time of the interview the event did not take place. For the spacing between a first and second birth, the period of

being at risk is the period from a first birth until the occurrence of a second birth. Also in this case censoring happens by not having an event at the time of the interview.

3.4 CHARACTERISTICS SURVEY POPULATION

As described before, the dataset of TIES includes three target groups: Turkish second generation migrants, Moroccan second generation migrants and a comparison group, which contains native Dutch. Taking the whole research sample together, 1471 respondents are included in the age range of 17 until 36 years old, with a mean age of 25.22 (SD=4.79). On average the natives are of higher age (M=27.53; SD=4.78), compared to the Turks (M=24.64; SD=4.36) and Moroccans (M=23.33; SD=4.18). As seen with the response rates in section 3.1, slightly more women than men are included in the survey (Turks: 232 male, 254 female; Moroccans: 232 male, 241 female; Comparison group: 250 male, 262 female).

Partner choice

At the time of the interview a total of 356 persons were married, 280 of them belong to the migrant group; 52.8 per cent Turks and 25.8 per cent Moroccan. Patterns in partner choice seem to be similar for Turkish and Moroccan migrants: about two third of the second generation migrants has a partner who is originating from the first generation of the same ethnic descent group, unfortunately this dataset does not allow for testing how many of these first generation partners are marriage migrants, and how many already lived in the Netherlands. The other part of the migrants with a partner is mostly divided over a native Dutch partner or a partner of the second generation of their own descent ethnic group. Dutch respondents have predominantly Dutch partners, only 15 per cent has a migrant partner, which is in all cases a first generation partner from another ethnic group than Turkish or Moroccan. It is remarkable that there is almost no respondent with a partner from another ethnic descent group than their own or than native Dutch.

Parity

Parity specific information per target group show that a total of 21.4 per cent of the respondents can be categorized as parous, to which in total 507 babies are born. About half (47.4%) of the babies are born to Turkish migrants, whether the other two groups received about one quarter each of all babies born (27.4% Moroccans, 25.2% natives). Most of the parous respondents (n=190) have received only one child at the time of the interview, of which most of the first children are born to respondents in the age category 20 to 25 (39.0%) and 26 to 30 (34.6%). Since the respondents are not yet at the end of their reproductive career, and

men also are taken into account, nothing can be said about the total fertility rate. However, the average of children per respondent can be measured. Taken into account the parous respondents, Turkish respondents have 1.47 children per respondent, where Moroccans have 1.60 and the comparison group has 1.41 children per respondent, so far. It is very likely that this number will increase in the upcoming years. Table 1 presents numbers per target group, what allows comparing the share of respondents in each group. Ignoring the small number of multiparous respondents, the table cautious indicates that Turks start childbearing youngest and also have the highest number of children, while Moroccans have a smaller time interval between first and second birth. This data suggest that while the age of respondents increases, the proportion of children born might be higher for Moroccans than for Turks.

Marriage

Regarding the 315 respondents who have had a first birth most were married (73.7%). Most often married at the time of a first birth are the Turkish second generation migrants (84.2%), followed by the Moroccans (79.5%). For the natives about half is married at the time of a first birth. It is more likely that often natives do not marry, rather than that they are much more often single parent at the time of a first birth compared to Turks or Moroccan second generation migrants.

Religion

The majority of the second generation migrants - 88.4 per cent of the Turkish and 91.9 per cent of the Moroccan – is raised according to a religion, of which almost all currently still have a religion (87.9 Turkish and 89.2% Moroccan). In almost all cases it is about an Islamic religion (96.9%; 98.4%). Just ten respondents belonging to the Turkish target group (3.2%) and two respondents belonging to the Moroccan target group (1.7%) who have a religion, are not member of the Islam, but Christianity, Jewish or another religion, they are excluded from the analyses. 52 Turkish and 44 Moroccan respondents have said not to be religious; since most of them have been raised according to the Muslim religion, these 96 respondents are taken into account in the analysis.

Table 1 Parity specific information

	Total n (%)	Turkish n (%)	Moroccan n (%)	Native Dutch n (%)
Survey Population	1 471 (100)	486 (33.0)	473 (32.2)	512 (34.8)
Parity, binary				
Nulliparous	1 156 (78.6)	334 (68.7)	400 (84.6)	422 (82.4)
Parous	315 (21.4)	152 (31.3)	73 (15.4)	90 (17.6)
Marital status at first child				
Married	232 (73.7)	128 (84.2)	58 (79.5)	46 (51.1)
Not married	83 (26.3)	24 (15.8)	15 (20.5)	44 (48.9)
Parity, categorized				
0	1 156 (78.6)	334 (68.7)	400 (84.6)	422 (82.4)
1	190 (12.9)	88 (18.1)	43 (9.1)	59 (11.5)
2	97 (6.6)	53 (10.9)	18 (3.8)	26 (5.1)
3+	28 (1.9)	11 (2.2)	12 (2.5)	5 (1.0)
Age at first birth				
<20	41 (13.0)	22 (14.5)	9 (12.3)	10 (11.1)
20- 25	123 (39.0)	79 (52.0)	32 (43.8)	12 (13.3)
26-30	109 (34.6)	44 (28.9)	25 (34.2)	40 (44.4)
31-35	39 (12.4)	6 (3.9)	6 (8.2)	27 (30.0)
<35	3 (.6)	1 (.7)	1 (1.4)	1 (1.1)
Spacing between first and second birth (years)				
<1	1 (.8)	1 (1.6)	0 (.0)	0 (.0)
1	20 (16.0)	6 (9.4)	9 (30.0)	4 (12.9)
2	27 (21.6)	12 (18.8)	8 (26.7)	7 (22.6)
3	28 (22.4)	15 (23.4)	5 (16.7)	8 (25.8)
4	20 (16.0)	10 (15.6)	5 (16.7)	5 (16.1)
5+	27 (21.6)	17 (26.6)	3 (10.0)	6 (19.4)

Education

Following the division in educational levels as compiled by the education standard format (Standaard Onderwijsindeling: CBS, 2003), most of the respondents' highest level of education completed is middle education, what consist mostly of Middle Vocational Education (MBO). On average natives are highest educated, with 50 per cent completing high education and only 15 per cent completing low education. The Turkish and Moroccan groups show similar trends in highest completed educational levels. Most finished middle education (46.9% Turkish and 46.4% Moroccan), followed by low education (40.0%; 40.2% respectively). Only 13 per cent finished high education. A detailed specification of the different educational levels and the division into the three levels is presented in appendix V.

4. RESULTS

A set of analyses is conducted in order to test differences in the timing of the transition to first birth and the time interval between first and second birth in the life course of second generation migrants in the Netherlands. Outcomes are presented by means of Radar diagrams, survival functions by age and hazard ratios (HR). Results will be shown according to the study aims. The first aim was to analyse whether timing and spacing differ for second generation Turks, second generation Moroccans and the native population. Secondly, analyses about the differences and similarities in the extent of preservation on the five dimensions of preservation and the overall cultural identity of second generation Turks and Moroccans will be conducted. The last study aim is to analyse the effect of cultural identity on the tempo aspect of fertility of second generation migrants in the Netherlands, which is based on the extent of preservation.

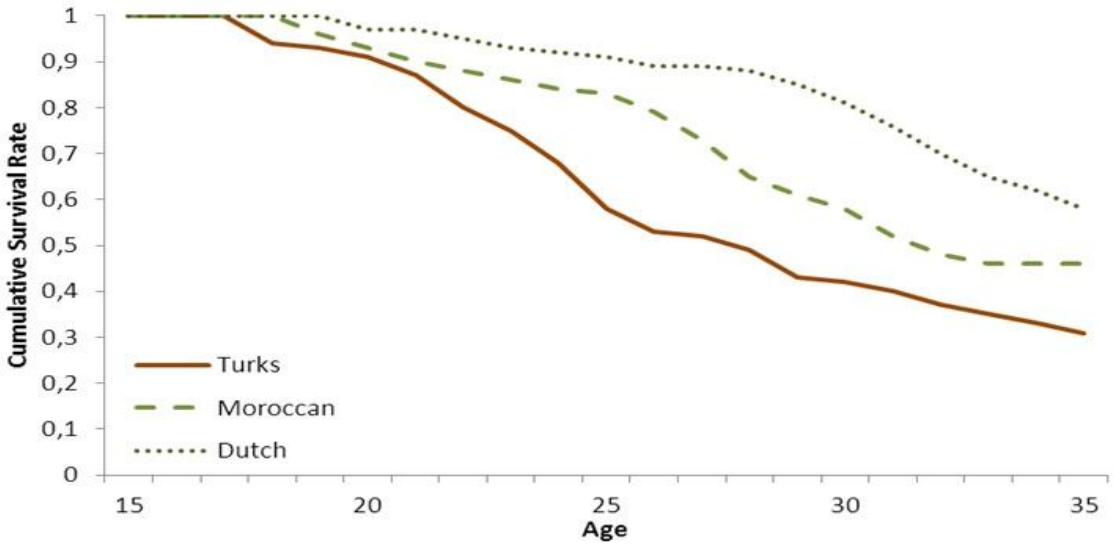
4.1 FERTILITY OF MIGRANTS VS. NATIVE POPULATION

Timing of first birth

In order to test whether there are differences in the timing of a first birth and in the time interval between first and second birth between Turks, Moroccans and natives, there will be exclusively looked at the effect of ethnicity on the duration time and the time interval. The possible effect of the cultural identity is excluded, but will be described in section 4.4. The descriptive model resulting from the Kaplan Meier survival analyses describes the rate of the transition into parenthood per ethnic group by showing the estimated median age of the transition to a first birth. The overall median age of the transition to a first birth for all ethnic groups combined is 31.24 (SE=.26), where the duration time to first birth for Turks and Moroccans is shorter, with an estimated age of 28.47 (SE=.38) for Turkish and 30.66 (SE=.43) for Moroccan second generation migrants. The estimated average age for natives shows an expected longer duration time, with the age of 33.24 (SE=.27). These estimated ages include both the subjects that had the event and the number of subjects that remain at risk after the study was completed. Excluding the ones remaining at risk will bias the values, however the average age of an event for the subjects who did receive a first child at the time of the interview can be shown. These values indicate an overall median age of the transition to a first birth of 24.46 (SE=.24). This age is considerably lower for the Turkish (M=23.15; SD=.28) and

Moroccan (M=23.97; SE=.47) migrants, where natives make their transition to a first birth at later age; median age is 27.03 (SE=.03).

Figure 3 Survival Function by ethnicity



The timing of the transition to a first birth is presented by means of the survival function by age, as shown in Figure 3, where every line represents one ethnic group. The survival functions reflect the duration time of the separated groups from age 15 (start of the reproductive years) until first birth and shows again the longer duration times expected for natives, compared to migrants. The log-rank test (p<.001; Chi=117.739) suggests that these differences are significant, what is confirmed by the results of the event history analyses.

The Cox regression shows significant differences in the timing of the transition to a first birth per ethnic group (p<.01) as displayed in table 2. This table consist of 2 models in which the univariate model presents the hazard ratios for all variables independently, followed by the multivariate model which shows the main effect and includes all control variables. The first block of the univariate model (ethnicity) shows that Turkish second generation migrants have the highest probability (292% higher) to make the transition to a first birth compared to natives, also the second generation Moroccans show a higher probability (106%) compared to natives.

Table 2 First birth timing

	Univariate Model			Multivariate Model		
	B	**Wald**	**HR**	**B**	**Wald**	**HR**
Ethnicity						
Turks	1.367	97.962	3.924***	.540	6.328	1.716**
Moroccan	.724	19.892	2.063***	.146	.397	1.158
Dutch	0	99.297	1***	0	10.500	1**
	Chi = 101.882 p < .001					
Sex						
Male	0		1	0		1
Female	.847	48.671	2.333***	.872	46.525	2.392***
Marital Status						
Married	0		1	0		1
Not married	-2.001	243.153	.135***	-.838	21.585	.433***
Background partner						
Dutch	0	253.264	0***	0	1.931	1
1st generation same ethnicity	1.173	72.150	3.232***	.166	.538	1.180
1st generation other ethnicity	.135	.258	1.144	.194	.518	1.214
2nd generation same ethnicity	.940	15.727	2.559***	.039	.017	1.040
2nd generation other ethnicity	1.081	10.425	2.948***	.428	1.347	1.534
Highest level of education						
Low	0	103.341	1***	0	67.617	1***
Middle	-.622	24.316	.537***	-.589	20.010	.555***
High	-1.623	101.371	.197***	-1.460	66.011	.232***
Siblings						
None	0	46.218	1***	0	1.812	1***
1 or 2	.908	3.961	2.480**	.602	1.720	1.826
3 or more	1.627	12.860	5.091***	.623	1.800	1.865
						x^2 = 92.675 p <.001
						-2LL = 3501.179 df = 11

* Significance level p = < .10

** Significance level p = < .05

*** Significance level p = < .01

To understand how timing differs for every single control variable, the univariate model shows the outcome per control variable, measured independently. Overall can be stated that every control variable independently does matter in the timing of first birth. With a hazard ratio for female 2.3 times as high as that of men, female are of higher risk to make the transition to first birth. Marriage causes an increase of 86.5 per cent in the risk of first birth. Regarding the ethnic background of the partner, having a first generation partner with the same ethnic background as the migrant shows the highest probability to make the transition (223.2% higher), also having a second generation partner either with the same or a different ethnic background causes an increase in the hazard ratio compared to natives (HR=2.6 and HR=2.9 times that of natives respectively). Being higher educated shows a decrease in the probability to make the transition to first birth of 46.3 per cent comparing the middle educated to the low educated and 80.3 per cent compared high educated to the low educated. Also having siblings shows a higher risk of first birth. The hazard ratio when having one or two siblings is 2.5 times

that of not having siblings and 5.1 times higher comparing having 3 or more siblings to not having siblings.

Including the compositional variables to the main effect of ethnicity significantly improves the model fit (x^2=121.017; *p*=.001).This multivariate model still shows the highest probability for Turkish second generation migrants to a first birth (HR=1.716) compared to natives. However the hazard ratio for Moroccan second generation migrants is 1.2 times that of natives, this difference in probabilities between Moroccans and natives did not appear to be significant (*p>.10*). The inclusion of the compositional factors decreases the much higher hazard ratios when testing ethnicity independently. Especially gender, marital status and educational level influence the timing of a first birth, rather than the ethnicity of a person. However the inclusion of all control variables together slightly changes the outcome. Nevertheless the probability for women to make the transition to first birth is (139.2%) higher, compared to men and also marriage increases the probability of first birth (56.7% higher). As in the univariate model, also the multivariate model shows a positive relation between educational level and the duration time until a first birth, where an increase in educational level also increases the duration times. The middle educated population has a duration time 1.4 times longer and the high educated population has a 1.8 times longer duration time compared to the low educated population.

Other than expected, partner's background of migrants is not of high importance in the timing of the transition to parenthood. However having a partner with a migration background still shows an increase in hazard ratios. Compared to having a native partner, these differences are not significant anymore (*p*>.10). This also applies to the number of siblings. The variables as a whole show to have an effect, but comparing having siblings (1 or 2; 3 or more) with not having siblings the increase in hazard ratios appear not be significant (*p*>.10).

Second birth timing

Another aspect of tempo of fertility measured in this study is the second birth timing, where the time interval between first and second birth is leading in measuring the duration time. In these analyses only 315 respondents could be included, since only the respondents who experienced a first birth can be at risk of having a second birth. About half of the respondents at risk are Turks (48.3%), Moroccan and Dutch respondents at risk share the second half (23.2%; 28.6%). The actual number of respondents who experienced this event is considerably lower; 128 respondents made the transition to second birth. The share of respondents per ethnic group who received a second child is much more equally divided than the division of the

different ethnic backgrounds in the population at risk: 43.3 per cent of the Turks and 41.1 per cent of the Moroccans had a second birth, for the natives this rate is 35.6 per cent. On average an interval of 6.5 (SE=.53) years is found between first and second birth with a minimum of 0 and a maximum of 17 years. Only the Turks have a longer average duration time (7.0; SE=.74), than the overall estimation of the average duration time. The time interval between first and second birth is smallest for Moroccans (3.9; SE=.34), the average estimated duration time for natives is 5.2 years (SE=.48). However the descriptive statistics suggest in first case significant differences in the spacing between a first and second child between the three groups (Log Rank=.047; x^2=6.119), the explanatory model does not reflect this suggestion.

Table 3 Second birth timing

	Univariate model			Multivariate model		
	B	**Wald**	**HR**	**B**	**Wald**	**HR**
Ethnicity						
Turks	.164	.564	1.849	1.026	6.427	1.558
Moroccan	.328	1.628	1.389	.651	2.303	1.322
Dutch	0	4.698	1*	0	7.635	1
Control variables						
Sex						
Male	0		1	0		1
Female	.184	.828	1.202	.125	.328	1.133
Marital Status						
Married	0		1	0		1
Not married	-.520	5.421	.594	-.374	1.213	.688
Background partner						
Dutch	0	11.268	1**	0	6.841	.233
1st generation same ethnicity	.460	4.156	1.585**	.865	3.723	2.374
1st generation other ethnicity	.284	.445	1.328	.449	.972	1.567
2nd generation same ethnicity	.300	.498	1.741	.167	.078	1.181
2nd generation other ethnicity	.147	.047	1.863	.324	.231	1.382
Highest level of education						
Low	0	1.453	1	0	2.292	1
Middle	.171	.773	1.187	.224	1.272	1.251
High	.296	1.135	1.344	.391	1.735	1.478
Siblings						
None	0	3.089	1	0	1.749	1
1 or 2	.136	.052	1.873	.224	1.272	1.251
3 or more	.200	.116	1.222	.391	1.735	1.478
						x^2 = 21.208 p = .031
	x^2 = 4.427 p =.109					-2LL = 1159.093 df = 11

* Significance level p = < .10

** Significance level p = < .05

*** Significance level p = < .01

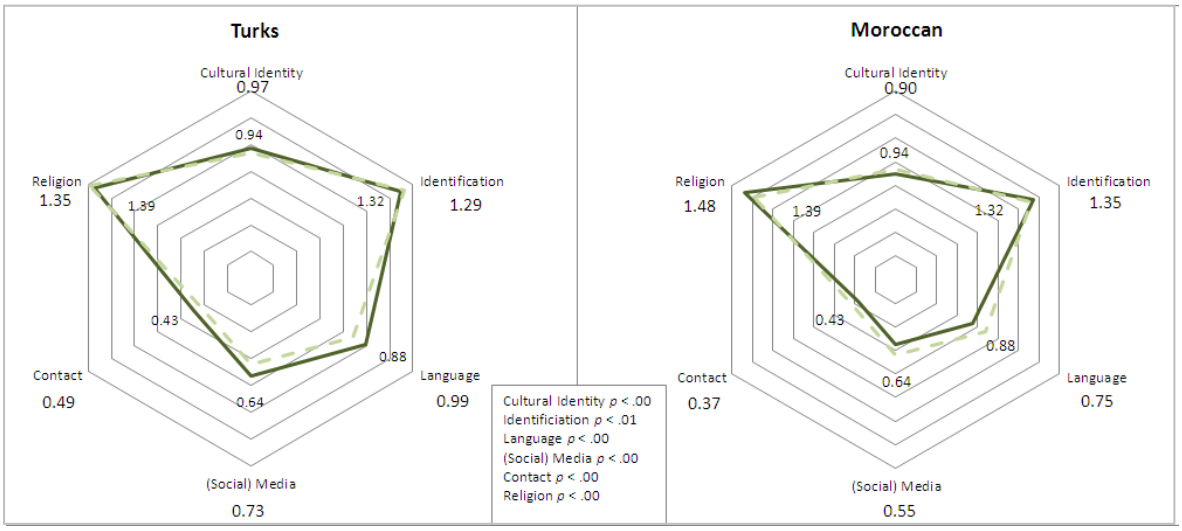
Table 3 shows the same structure as table 2; model 1 gives the univariate model in which the main effect and all control variables are measured independently. This model is followed by the multivariate model, showing the influence of the control variables on the main effect (ethnicity). The univariate model shows that the variable ethnicity as a whole has a significant effect. However Turks have a hazard ratio of 1.8 and Moroccans 1.4 times that of natives, these differences are not significant. Having a first generation partner with the same ethnic background increases the probability of making the transition to a second birth with 58.5 per cent, compared to the ones having a native partner. All other compositional factors do not have a significant effect on second birth timing. The inclusion of the control variables to the main effect (ethnicity) in the multivariate model show that neither ethnicity, nor one of the compositional factors affect the timing of the transition to a second birth.

However the hypotheses part (Section 2.5) described the association between international migration and a rapid change in demographic trends, the total fertility rates of Turks and Moroccans are still not equal to the rate known for natives. Besides, the strong national identity and the purely economic migration motives of Turks, different from the minority position of Berbers and the more socio-cultural motives of Moroccans, evoked the expectation of duration times to first birth and time interval between first and second birth being longest for natives, followed by Moroccans and are shortest for the Turkish second generation migrants. The previous outcomes about the transition to a first birth show the rejection of the null-hypothesis and the conformation to the drawn hypothesis; the steepest slopes and shortest duration times are found for the Turkish second generation migrants, followed by the Moroccan second generation migrants. Of all three groups natives make the transition to parenthood latest. The expected significant differences in the time interval between a first and second birth for the three ethnic groups is not confirmed by previous analyses.

4.2 CULTURAL IDENTITY COMPARED

In this section the second hypothesis is tested: whether Turkish second generation migrants will preserve the culture of the country of origin more than second generation Moroccan migrants. The extent of preservation is measured through the five sub-dimensions of preservation which together build up the overall cultural identity of migrants. This chapter only includes analyses for the Turkish and Moroccan group. Figure 4 presents the average score per dimension for Turks and Moroccans separately, with a dashed line to indicate the average score for Turks and Moroccans combined.

Figure 4 Average cultural identity per ethnic group, per dimension



The values of the different dimensions and the cultural identity as shown in figure 4 reflect the preservation state per dimension on a three-point scale. Values close to zero reflect a situation in which culture, norms and values of the receiving country have become the predominant culture, norms and values for the migrant. Values in the direction of 2 tell that migrants perform behaviour or adhere to norms and values that highly reflect the characteristics for the origin country. Values around 1 represent a mix between culture, norms and values belonging to the receiving country and the origin country.

The overall cultural identity for both ethnic groups combined gives the average value of .94. This is in average higher for Turkish (0.97), than for Moroccan (.90) second generation migrants (p<.001; SD=.02). In which way these two groups show similarities or differences in the extent of preservation of the culture belonging to the origin country can be found in the different sub-dimensions.

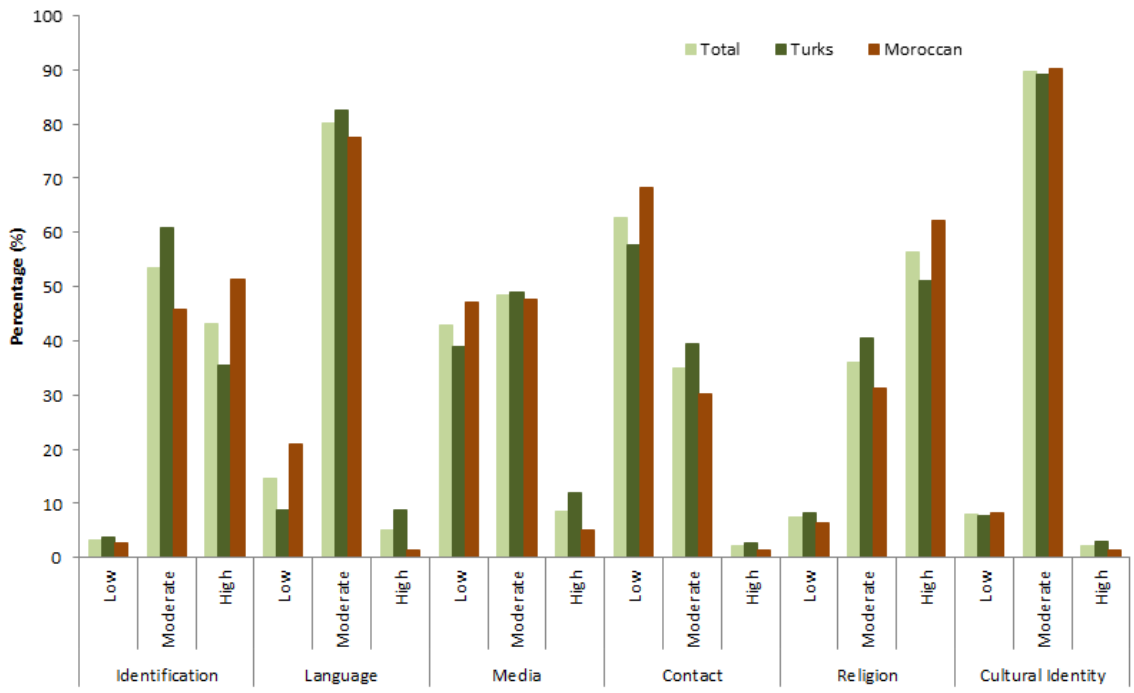
The two dimensions which both Turks and Moroccans mostly preserve are 'Identification' and 'Religion'. However the strong national identity among Turks and the majority of Moroccans with a Berber background, seen as second class citizenship, suggests higher preservation of identification with origin country, culture and traditions for Turks, compared to Moroccans. An actual comparison shows opposite results; Moroccans score in average 1.35, in comparison to 1.29 for Turkish (p=0.01; SD=.03). The fact that 9 out of 10 migrants still have a religion and nearly everybody practices the Islam is reflected. About one third of all migrants highly preserve their Muslim religion and religious traditions. However, the preservation is significantly stronger among Moroccan (1.48), compared to Turkish (1.35) second generation migrants (p<.001; SD=.03). Nearly all Moroccan migrants fast most of the time or always during the Ramadan, whereas this is the case for only three-quarter for the Turkish migrants. Also, the extent of migrants who do their daily prayers most of the time or always is more than twice as high for Moroccan migrants (63.5%) than for Turkish migrants (27.8%). Religious expressions as covering the head is 1.5 times more oftenly practised or wished by Moroccan than by Turkish migrants.

Language, (social) media and contact with the origin country seem for both groups of less importance, however for all dimensions more important for Turks than for Moroccans. The dimension 'Language' reflects that the Moroccan second generation classifies themselves to have a better knowledge of the Dutch language and they communicate more often with family members and friends in Dutch compared to the Turkish second generation migrants. Second generation migrants have a better understanding of language as known for the country of origin. The average language preservation for Turks is 0.99, compared to 0.75 for Moroccans (p<.001; SD=.03).

Contact with the country of origin and (social) media are the two dimensions to which least value is attached by both migrant groups. Not many migrants still have contacts in the country of origin, or intent to build up a life in the country of origin. Also, (social) media is not often used to practise cultural expressions or to connect with the country of origin. However for both groups the preservation to these two dimensions is low, with an average preservation score of 0.73 for (social) media and 0.49 for contact for the Turks and an average preservation score of 0.55 for (social) media and 0.37 for contact for the Moroccans. This shows that more Turks than Moroccans attach value to these dimensions (p<.001 SD=.02; p=.03; SD=.03).

The second hypothesis suggested that Turkish second generation migrants preserve the culture and traditions of the origin country more compared to the Moroccan second generation migrants; the different motives for migration and the weaker national identity for Moroccans than for Turks indicate lower assimilation among Turks than Moroccans. Previous results partly support this hypothesis, and in total the null hypothesis can be rejected: there is a significant difference in the extent of preservation on all dimensions of cultural identity between Turks and Moroccan second generation migrants. The direction of the difference is not always the same, for 'Identification' and 'Religion' preservation is higher for Moroccans, for all other dimensions it is higher for Turks. The overall cultural identity – resulting from the five dimensions – is highest for Turkish second generation migrants, therefore it can be concluded that Turkish second generation migrants have a higher preservation of the culture known for the country of origin, compared to the Moroccan second generation. Figure 5 displays the share of migrants by preservation group, for every dimension separated.

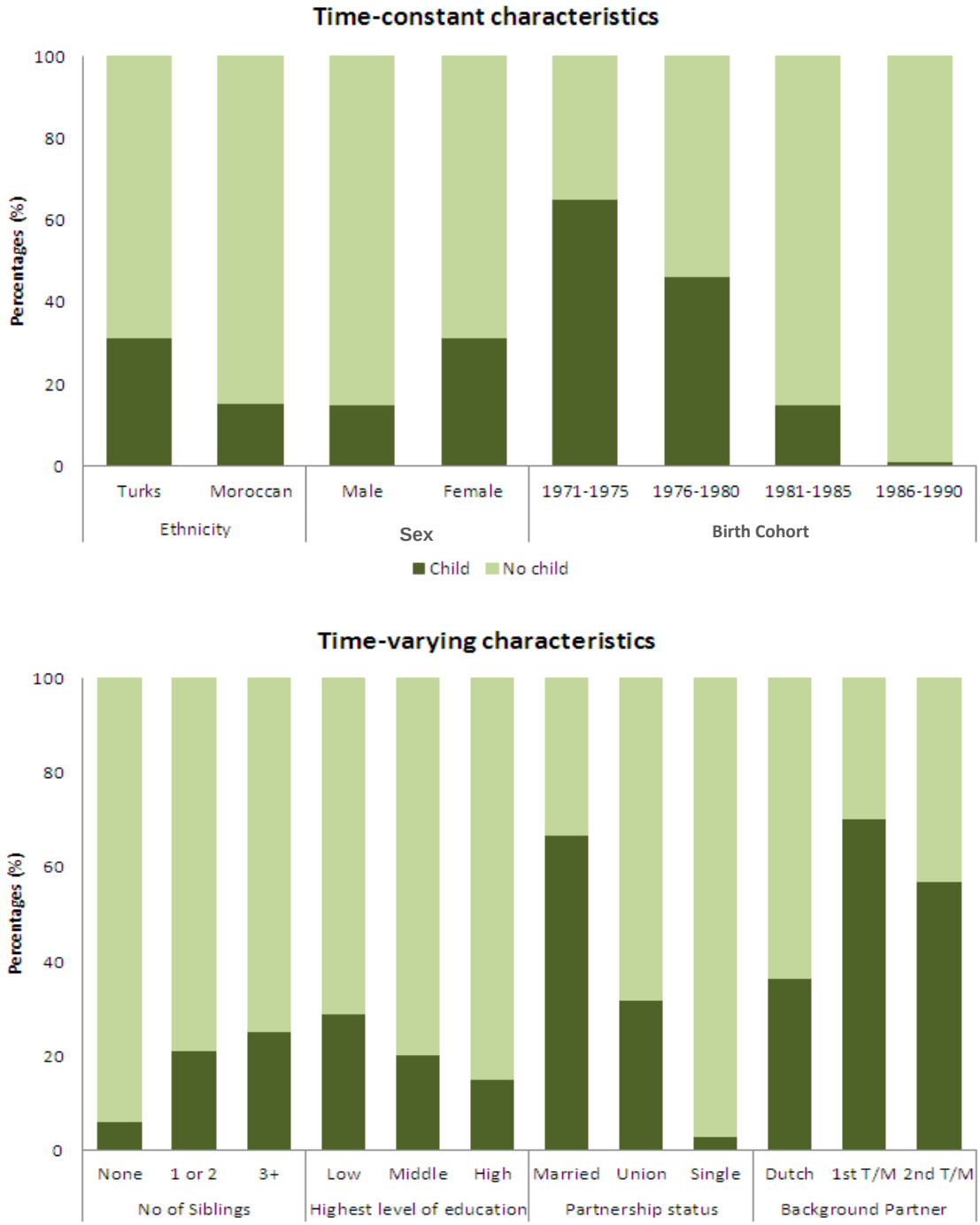
Figure 5 Migrants classified per dimension



4.3 CHARACTERICTS CHILD VS. CHILDLESS GROUP

Prior to the analyses of the effect of the cultural identity on tempo aspects of fertility of second generation migrant in the Netherlands, characteristics of the groups with and without children will be compared, in order to understand the results to follow. Figure 6 displays two types of characteristics; time-constant and time-varying. Both grouped characteristics show considerable, however not all surprising, differences.

Figure 6 - Characteristics child vs. childless group



Considering the higher hazard rate of Turks compared to Moroccans and the young age of the second generation migrants so far, it is in line with the expectation that more children are born to Turkish migrants, rather than to Moroccan migrants. Over one-third of the Turkish second generation migrants received a first birth so far, where this is less than one-fifth for the Moroccans. The slightly younger average age of Moroccans might play an important role here, since an increase in age will be followed by an increase in the share of Moroccans with at least one child. For sex exactly the same numbers are given; one third of the women and less than one-fifth of the men received a first child. Also here the young age of the population is of importance, since in average men are of higher age when they start family formation and having children. With an older population this difference might disappear. Regarding the birth cohorts, the share of the population that has at least one child decreases per cohort, where two-third of the oldest cohort received a first child, this is only half in cohort 1976-1980 and only 15 per cent and 1 per cent for the two youngest cohorts (1981-1985 and 1986-1990 respectively). However these numbers might converge over the years, it is not likely that the younger birth cohorts reach the same share of the population with a child, since there is an increase in the voluntary childlessness.

The time varying characteristics show also outcomes that are in line with the expectations; the number of siblings seem to affect the timing of the transition to a first birth, since a positive relation is shown between the number of siblings and the share of the population with at least one child. Only 6.2 per cent of the respondents without siblings received a first child, where this is 21 per cent for the ones with one or two siblings. When there are three or more siblings, over a quarter of the respondents made already the transition to parenthood. Also educational level seems to have a predicting effect on the timing of a first birth, where the share of the respondents with a first child is highest among the low educated group (29.0%) and lowest among the high educated group (15.1%). As shown in the literature review, marriage can be seen as the predicting factor for a change in the life course, this connects with the results in figure 6; where overall less than a quarter received a first child, for the ones who are married this is 66.7 per cent. From the ones in union formation 31.8 per cent received a first child. The lowest number can be found among the singles: 2.9 per cent. These numbers show a much higher share of natives with a child who are not married, compared to migrant couples with a child; it seems that among natives a change is put in motion. Childbearing often happens in case of union formation, rather than marriage. For migrants union formation only leads to childbearing in less than 10 per cent of the cases.

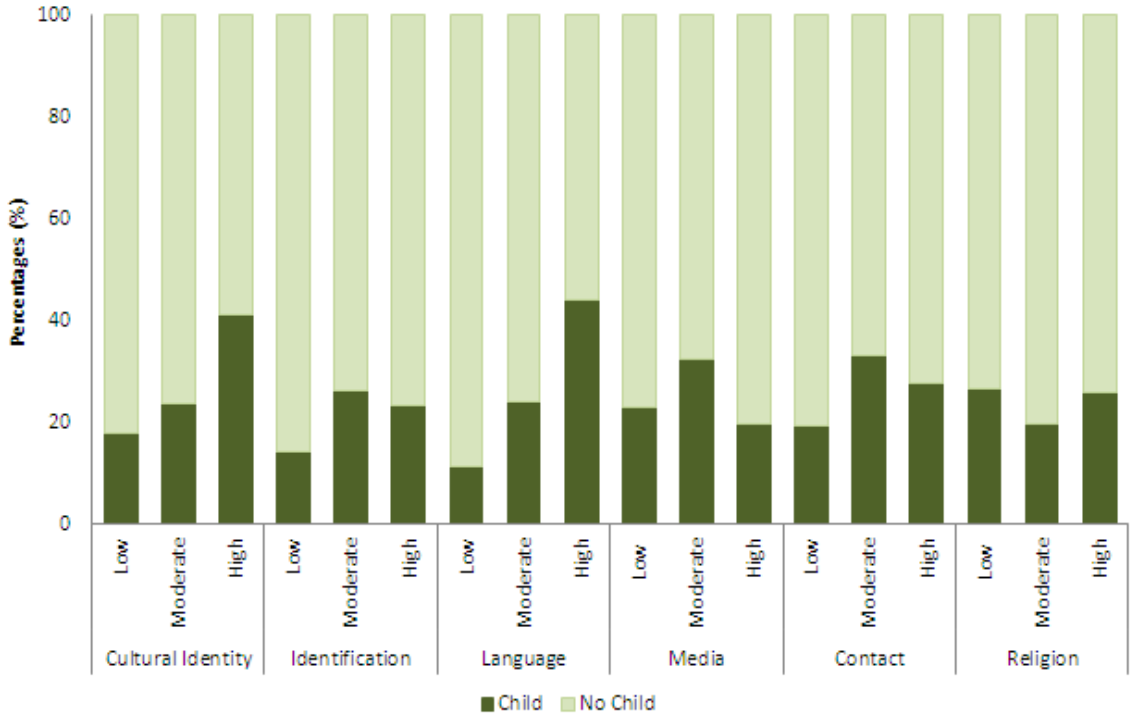
Partnering with a first generation migrant of the own ethnicity makes it more likely to make the transition to a first birth; over 70 per cent received a first child. This is about half when partnering with a second generation migrant of the same ethnic group and only 36.5 per cent when the migrants partner is native Dutch. This suggests a convergence to the national level for second generation migrants, which only holds when the partner is also a second generation migrant or of another ethnic group. Partnering with a first generation migrant holds the more conservative numbers known for the first generation migrants.

4.4 EFFECT OF CULTUARL IDENTITY ON TEMPO OF FERTILITY

The third aim of this study is to measure the effect of cultural identity preservation of second generation migrants on tempo aspects of fertility. It is expected that migrants belonging to the high preservation groups will have a shorter duration times until a first birth, and also a shorter time interval between first and second birth compared to the low preservation migrants. In order to compare the variation in tempo aspects of fertility *within* migrant groups, analyses focus on the 5 building blocks (dimensions) and on the overall cultural identity through which the extent of preservation is measured. As in previous section, only Turks and Moroccans are included in the analyses.

Due to the young second generation migrant population in the Netherlands and the expectation that high preservation migrants start childbearing earlier, it is expected that the share of the Turkish and Moroccan second generation migrants that has a child is highest in the high preservation group and lowest in the low preservation group. The descriptive statistics, as shown in figure 7, present the percentages of migrants with a child by preservation group and by dimension. Looking at the overall cultural identity of migrants it shows indeed that the share of migrants in the high preservation group have had the most (41.0%) and the share of migrants in the low preservation group have had the least (17.9%) transitions to first birth, 23.7 per cent of the moderate preservation group has experienced the event.

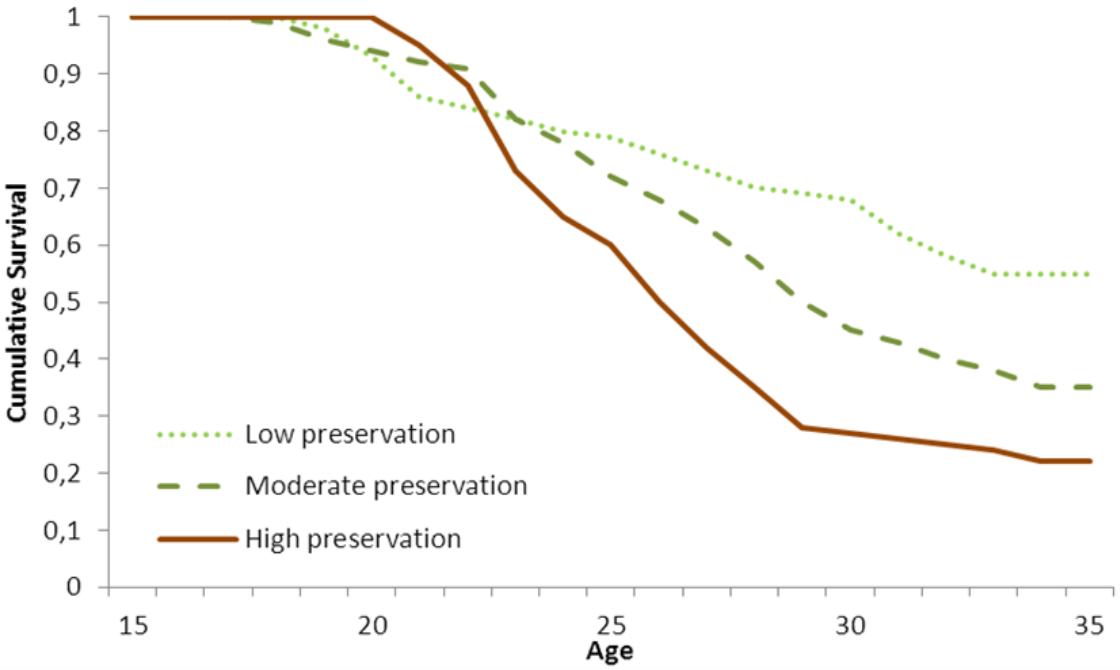
Figure 7 Share of respondents with and without first child by preservation group



Also the dimension 'Language' clearly shows this trend with 44.0 per cent in the high preservation group and only 11.4 per cent in the low preservation group, in the moderate preservation group this is 23.9 per cent. All other dimension do not have similar trends, mainly most events occurred to the moderate group and least to the low preservation group, with the exception of the dimension 'Religion'.

Regarding the Kaplan Meier survival estimates the timing aspects of fertility are estimated, in which virtually for all dimensions a negative connection appears between timing of a first birth and the extent of preservation. Measuring the overall cultural identity of migrants, figure 8 shows the steepest slope, the shortest duration time, for the high preservation migrants. The longest duration time appears for the low preservation migrants. The median survival ratio for the high preservation group is age 26.3. The moderate preservation migrants do reach the median survival rate at much later age; 30.2 years. For the low preservation migrants no median survival ratio can be calculated, since less than half of the group experiences the event. The log-rank test shows that the differences in the duration time for the preservation groups cannot be subscribed to coincidence only (log-rank=17.570; *p*=.001).

Figure 8 – Survival function cultural identity migrants



Measuring the five dimensions of cultural identity separately, the negative relation between the extent of preservation and the timing of first birth seems strongest for the dimension 'Language ', where the estimated median age at the time of the event for the low preservation group is 32.1 and 26.7 for the high preservation group, the overall estimated median age within this dimension is 29.1 (log-rank=40.788; p<.001). This dimension is followed by the dimension 'Contact' which has the highest estimated median age for the low preservation group at 30.1, where 25.7 is the lowest for the high preservation group (log-rank = 8.142; p = .043). Least variation in the duration time until a first birth appears in the dimension '(Social) media'. The low preservation group has an estimated median age of 30.0, compared to 29.2 for the high preservation group (log-rank=8.510; p=.037) The survival functions, displayed in figure 9, draw the steepest slope, which means the shortest duration time, for the high preservation migrants, where the duration time until a first birth is longest for the low preservation group.

Figure 9 - Survival Function by dimension

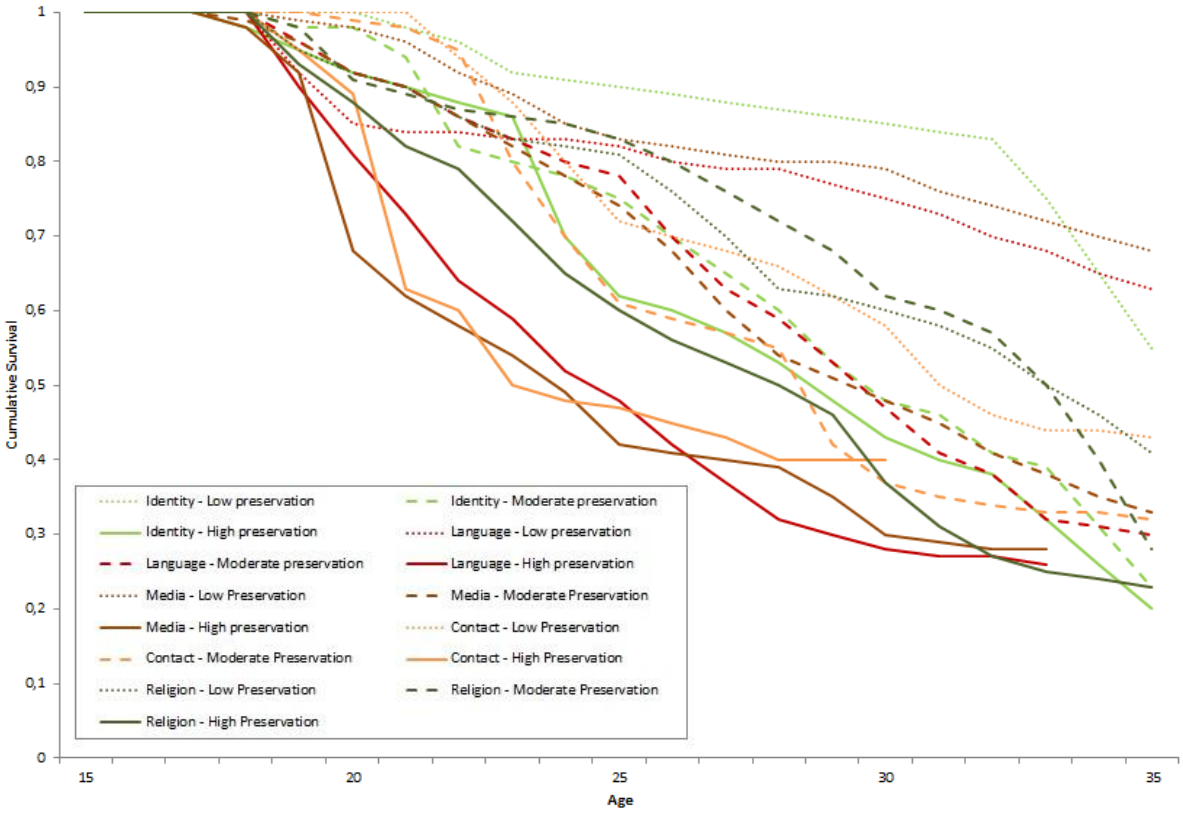
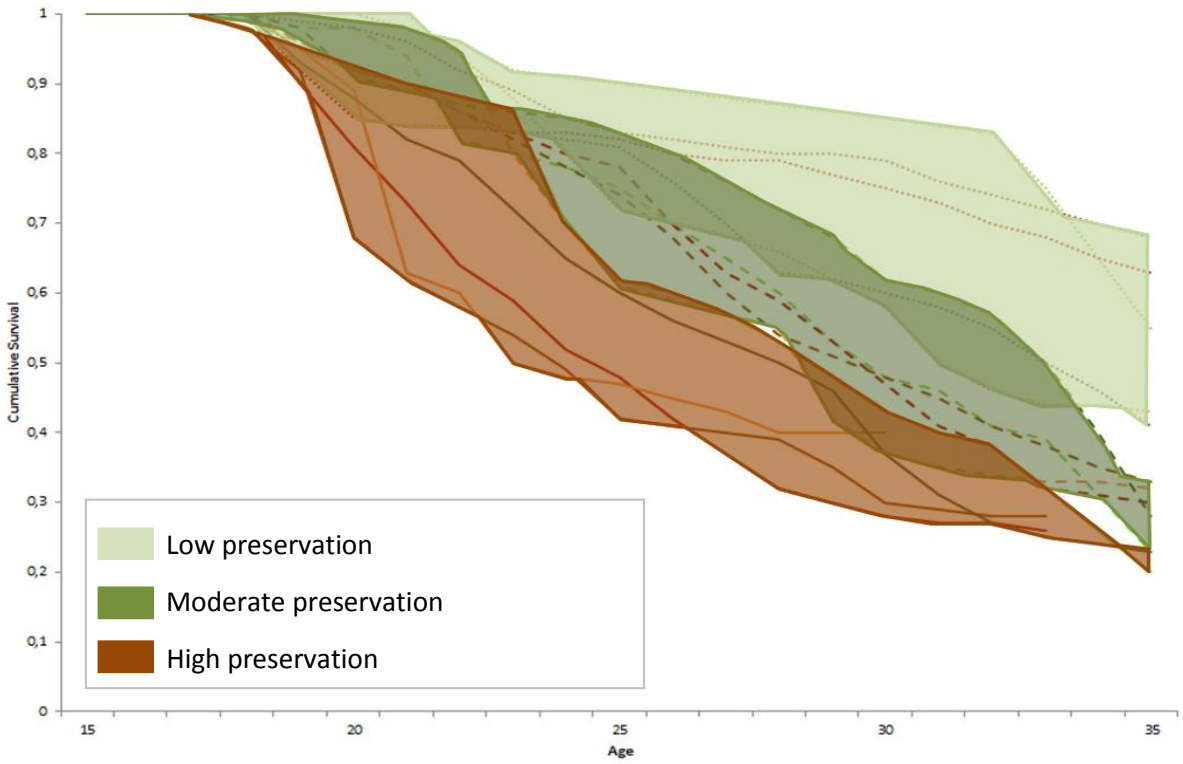


Figure 10 – Survival Function preservation groups compared



The survival functions for each dimension are presented in figure 9, which gives an overview of the timing of first birth. The expected high number of right-truncated censored cases due to the young population and the high number of childless respondents at the time the interview took place is apparent in this figure. Especially in the low preservation groups migrants do not always reach a median survival rate. The overall picture shows the steepest slopes, shortest duration times, for the high preservation migrants and most flattened slopes, longest duration times, for the low preservation migrants. Most first births did occur to the high identification preservation group, where least first births can be attributed to the low language preservation migrants. The duration time of low identification preservation migrants indicates a postponement in childbearing, since this function is least steep in the first 20 years of the reproductive ages. After age 33 the slopes of the low identification preservation migrants suggest a catch up, where the highest hazard ratios are estimated. Figure 10 clearly shows the share of survival functions per preservation group. The distribution of the different areas reflects the range of possible survival curves per preservation group.

Explanatory models for the transition to a first birth

In order to test the hypothesis whether less assimilated (high preservation) migrants make the transition to first birth earlier, in comparison to the high assimilated migrants, explanatory Cox regression models are used. Results are given in table 4. Since the cultural identity is the product of the 5 sub-dimension on which preservation is measured, table 4 consists of two parts: model A and B. Model A is set up in order to test all five dimensions of cultural identity, whereas model B gives the values for the overall cultural identity of second generation migrants. Besides, the first models (model 1A and 1B) test the hypothesis on basis of the dimensions only. The second models (model 2A and 2B) include possible influencing compositional variables; sex, ethnicity, marital status, background of the partner, highest level of education finished with a diploma and the number of siblings. In the last model interactions between ethnicity and the different dimensions of cultural identity are added.

Considering the different dimensions which build up the cultural identity of migrants, model 1A shows that especially lower preservation in the 'Language' dimension is related to a postponement of childbearing, as expressed in the hazard ratio. The hazard ratio for those with a moderate language preservation is 1.9 times higher compared to the ones with a low preservation to the language known for the country of origin of their parents (p=.004). Comparing the high and low language preservation group, it is shown that the high preservation group is 3.4 times more likely to make the transition to a first birth, than the low preservation group (p<.001). The dimension 'Religion' as a whole appears to be significant (p=.008). However the hazard ratio is 1.8 times higher for the moderate migrants and 1.4 times higher for the high preservation migrants compared to the low religion preservation migrants, these differences do not appear to be significant differences. Model 1B presents significant differences in the risk of childbearing between low, moderate and high preservation for the overall cultural identity of second generation migrants. With a 69.4 per cent (p=.021) and a 195.1 per cent (p<.001) higher likelihood to have a first birth for the moderate and high cultural identity preservation migrants respectively compared to the low cultural identity preservation migrants, a postponement of childbearing among the low and moderate preservation group is measured.

Table 4 Cox regression of the transition to a first birth

	Model 1A			Model 1B			Model 2A			Model 2B			Model 3A			Model 3B		
	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR
Identification																		
Low	0	1.794	1				0	4.358	1*				0	5.135	1			
Moderate	.387	.750	1.472				.813	3.097	2.255*				1.145	3.099	3.143*			
High	.296	.423	1.344				.763	2.642	2.146*				1.146	3.027	3.146*			
Language																		
Low	0	23.601	1***				0	9.993	1**				0	10.816	1**			
Moderate	.622	7.212	1.862***				.593	4.827	1.553**				.855	4.330	1.425**			
High	1	20.526	3.397***				.162	.279	1.850				.324	.548	1.724			
(Social) Media																		
Low	0	3.282	1				0	5.379	1				0	3.953	1			
Moderate	.154	.617	1.166				.115	.326	1.122				.009	.002	1.009			
High	.385	.616	.680				.489	2.434	1.613				.546	2.483	1.579			
Contact																		
Low	0	3.169	1				0	2.427	1				0	2.922	1			
Moderate	.371	2.696	1.449				.294	1.547	1.341				.334	1.382	1.397			
High	.396	.760	1.487				.439	.827	1.551				.448	.815	1.565			
Religion																		
Low	0	10.993	1**				0	4.814	1				0	4.352	1			
Moderate	.227	.558	1.797				.250	.641	1.779				.133	.111	1.875			
High	.309	1.166	1.362				.027	.009	1.028				.216	1.295	1.242			
Cultural Identity																		
Low				0	14.913	1***				0	1	1				0	1.251	1
Moderate				.527	5.490	1.694**				.064	0.75	1.935				.054	0.031	1.948
High				1.082	13.654	2.951***				.067	.047	.935				.194	.279	1.214
Control variables																		
Sex																		
Male							0		1	0		1	0		1	0		1
Female							.875	29.092	2.398***	.794	25.605	2.212***	910	29.975	2.484***	.793	25.586	2.210***
Ethnicity																		
Turks							0		1	0		1	0		1	0		1
Moroccan							-.502	7.782	.606***	-.354	5.196	.702	-.545	.297	1.725	-.256	.351	.774
Marital Status																		
Married							0		1	0		1	0		1	0		1
Not Married							-.672	5.302	.511**	-.703	6.271	.495**	-.617	4.339	.540**	-.665	5.470	.514**

	Model 1a			Model 1b			Model 2a			Model 2b			Model 3a			Model 3b		
	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR	B	Wald	HR
Background Partner																		
Dutch							0	29.054	1***	0	25.913	1***	0	28.749	1***	0	26.880	1***
1st generation same ethnicity							.187	.463	1.205	.228	.728	1.256	0.269	0.905	1.309	.237	.778	1.268
1st generation other ethnicity							.591	1.665	1.805	.461	1.054	1.586	0.624	1.837	1.866	.449	.993	1.567
2nd generation same ethnicity							.026	.006	1.026	.168	.268	1.183	0.129	0.136	1.138	.191	.342	1.210
2nd generation other ethnicity							.443	1.114	1.557	.534	1.677	1.705	0.462	1.119	1.587	.533	1.673	1.705
Highest education																		
Low							0	28.645	1***	0	29.570	1***	0	27.305	1***	0	30.618	1***
Middle							-.394	6.344	.675**	-.455	9.281	.634***	-.415	6.6	.661**	-.450	8.957	.638***
High							-1.414	27.477	.243***	-1.335	26.830	.263***	-1.390	26.044	.249***	-1.370	28.021	.254***
Siblings																		
0							0	1.005	1	0	1.066	1	0	1.16	0.56	0	1.131	1
1-2							1.005	.958	2.732	1.053	1.064	2.865	1.107	1.098	3.025	1.085	1.131	2.961
3+							1.020	1.003	2.774	1.04	1.003	2.828	1.128	1.155	3.09	1.062	1.099	2.893
Interaction effects																		
Ethnicity*Low Identification													0	1.563	1			
Ethnicity*Moderate Identification													.824	.772	.439			
Ethnicity* High Identification													1.024	1.163	.359			
Ethnicity*Low Language													0	3.113	1			
Ethnicity*Moderate Language													.656	1.488	1.926			
Ethnicity*High Language													.118	0.03	1.126			
Ethnicity*Low (Social) Media													0	1.593	1			
Ethnicity*Moderate (Social) Media													.639	1.503	1.894			
Ethnicity*High (Social) Media													.041	.002	.960			
Ethnicity*Low Contact													0	.424	1			
Ethnicity*Moderate Contact													.102	.032	1.107			
Ethnicity*High Contact													8.571	.003	.000			
Ethnicity*Low Religion													0	1.628	1			
Ethnicity*Moderate Religion													.633	.812	.531			
Ethnicity*High Religion													.798	1.604	.450			
Ethnicity*Low Cultural Identity																0	3.768	.288
Ethnicity*Moderate Cultural Identity																.034	.005	1.034
Ethnicity*High Cultural Identity																1.267	2.612	.282
	x^2 = 55.475 p <.001			*x^2= 14.573 p = .002*			*x^2 = 256.837 p <.001*			*x^2 = 275.677 p< .001*			*x^2 = 8.090 p=.920*			*x^2 = 4.666 p=.198*		
	-2LL = 2508.834 df = 15			*-2LL = 2549.736 df = 3*			*-2LL = 2251.997 df = 12*			*-2LL = 2274.058 df = 12*			*-2LL = 2243.907 df = 15*			*-2LL = 2236.264 df = 31*		

*Significance level = p <.1 **Significance level = p < .05 *** Significance level = p < .01

With the inclusion of the compositional factors the model fit with respect to the first model increases (model 2A: x^2=256.837, p<.001; model 2B: x^2=275.667, p<.001). Model 2A shows that the significant differences in tempo aspects of fertility remain for the dimension 'Language', however only when comparing the moderate preservation migrants with the low preservation migrants; significant higher probability of 55.3 appears (p=.028). In this model also 'Identification' appears to affect the duration time until a first birth. With a 125.5 per cent (p=.078) higher probability for the moderate preservation migrants and a 114.6 per cent (p=.095) higher probability for the high preservation migrants compared to the low preservation migrants, the moderate preservation identification migrants are of highest risk and have the shortest duration time until a first birth. The significant differences for the cultural identity, as measured in model 1B, totally disappear after the inclusion of control variables in model 2B.

Both models 2A and 2B show significant changes in the likelihood to make the transition to a first birth for most compositional factors. The probability for women to make this transition is 139.8 per cent (p=.005) higher in model 2A and 121.2 per cent higher (p<.001) in model 2B. Also being married (Model 2A: HR=.511 and p=.021; Model 2B: HR=.495 and p=.012) and lower levels of education (Model 2A: HR moderate=.675, p=.012 and HR high=.243, p<.001; Model 2B HR moderate=.634, p=.002 and HR high=.263, p<.001) increases the probability to experience the event. Regarding the background of the partner, the variable as a whole appears to be significant in model 2A and 2B, but taking into account the different categories, the hazard ratios do not significantly in- or decrease. Only model 2A shows the significant difference in the probability to make the transition to a first birth between Turkish and Moroccan second generation migrants. Moroccans have a 39.4 per cent higher chance to make the transition in comparison to the Turks.

Concerning the interaction effects, the model shows that the inclusion of them does not significantly improve previous models 2A and 2B (model 3A: x^2=8.090, p=.920; model 3B x^2=4.666, p=.198). Therefore not much value is attached to these results. Also, the outcome of both models does not show a material change in the outcome for the cultural identity (dimensions) and the effect of the compositional factors. Based on significance only some of the variables in model 3A change; where no change on significance level is measured for model 3B. None of the interaction effects appears to be significant, what shows that the interaction between ethnicity and preservation is less strong than previous measured effects.

Interval between first and second birth

To achieve further understanding of timing choices besides the transition to a first birth also the time interval between a first and second birth is taken into account. The young age of the second generation migrants is not beneficial in the comparison of different preservation groups, since after the inclusion of respondents at risk – who have at least one child – only 225 cases remain. With this low number of cases it is still possible to measure the effects of cultural identity on the time interval between first and second birth and also including compositional factors, however it does not allow for analyses about the interaction effects between ethnicity and the dimensions of the cultural identity, since the cases per cell are too little.

Regarding the estimated duration time given by the descriptive statistics, the impression is that for every dimension the duration time from first to second birth is shortest for the low preservation migrants, followed by moderate preservation migrants, longest duration times are found for the high preservation migrants. Although the outcome for the moderate and high preservation groups vary much more over the different dimensions, compared to the low preservation group. Taking the log-rank test into account, it suggests that differences in the time interval between first and second birth only can be subscribed to coincidence. Only for the 'Language' dimension a significant result is shown (log-rank=7.182; p =.03).

The explanatory statistics, using the cox regression, are displayed in table 5. The columns are divided in the same way as described for table 4, where model 1 only gives the dependent variables divided in part A, the five dimensions and part B, the cultural identity. The second model includes the compositional factors, where again A measures the five dimensions and B measures the overall cultural identity. The outcomes in table 5 confirm the significant differences in the 'Language' dimension with the shortest time interval for the high language preservation migrants: .53 times that of the low language preservation migrants (p=.092). The moderate language preservation migrants have a hazard ratio which is 0.32 times that of the low language preservation migrants (p=.004). However the overall cultural identity also shows a shorter time interval for the moderate and high preservation group compared to the low preservation group, this is not measured to be a significant difference (model 1A: x^2=24.082 p=.064; model 2B: x^2=3.588 p=.309).

The inclusion of the compositional factors significantly improve previous models (model 2A: x^2=27,401 *p*=.007; model 2B: x^2=26,539 *p*=.009). The shorter time intervals for the moderate and high language preservation group with respect to the low language preservation group remain, however this difference is only significant comparing the moderate and low preservation group (HR = 0.391; *p* = .035). With the inclusion of the composition factors, also the overall cultural identity appears to be significant if comparing the moderate to the low preservation group, where the moderate cultural identity preservation group has a shorter time interval between first and second birth (HR=.515; *p*=.083) than the low preservation group. Both models 2A and 2B show a remarkable effect of the background of the partner on the time interval between a first and second birth, where in both models the duration time between first and second birth is shortest when having a native partner. In model 2A migrants who are partnering with a second generation migrant with another background than the migrant has him- or herself causes the longest duration time (HR=6.910; *p*=.046). Having a first generation migrant of the same ethnic group as a partner increases the probability to make the transition to a second birth 6.8 times (*p*=.013), compared to a native partner. However, regarding model 2B the significant difference in timing of a second birth when having a second generation partner compared to a native partner disappears, having a first generation migrant partner still causes a longer duration time than when having a native partner; for a migrant with a first generation migrant partner of the same background the hazard is 5.4 times higher (*p*=.024) compared to migrants with a native partner, and 4.9 times higher (*p*=.087) for migrants with a first generation migrant partner of another background.

Table 5 Cox regression of the time interval between first and second birth

	Model 1A			Model 1B			Model 2A			Model 2B		
	B	**Wald**	**HR**	**B**	**Wald**	**HR**	**B**	**Wald**	**HR**	**B**	**Wald**	**HR**
Identification												
Low	0	.452	1				0	1.453	1			
Moderate	-.209	.085	.881				-.845	1.196	.429			
High	-.068	.009	.934				-.695	.764	.499			
Language												
Low	0	11.994	1***				0	11.780	1***			
Moderate	-1.138	8.078	.321***				-.939	4.440	.391**			
High	-.642	2.164	.526*				-.120	.057	.887			
(Social Media)												
Low	0	2.652	1				0	5.637	1			
Moderate	-.340	1.207	.712				-.518	2.322	.596			
High	-.727	2.007	.484				-1.223	4.432	.294			
Contact												
Low	0	2.799	1				0	1.700	1			
Moderate	.176	.189	1.192				.025	.003	1.025			
High	-.535	.497	.585				-.866	1.258	.421			
Religion												
Low	0	3.191	1				0	.037	1			
Moderate	.599	1.013	1.820				.116	.034	1.123			
High	.893	1.013	1.820				.070	.016	1.072			
Cultural Identity												
Low				0	4.049	1				0	5249	1
Moderate				-.179	.292	.836				-.663	3.011	.515*
High				-.110	.067	.896				-.745	2.054	.475
Control variables												
Sex												
Male							0		1	0		1
Female							-.116	.173	.891	.005	.000	1.005
Ethnicity												
Turks							0		1	0		1
Moroccan							.190	.455	1.210	.309	1.471	1.361
Marital Status												
Married							0		1	0		1
Not Married							.665	1.587	1.945	.615	1.454	1.849
Background Partner												
Dutch							0	14.443	1**	0	13.105	1**
1st generation same ethnicity							1.922	6.140	6.833**	1.692	5.068	5.430**
1st generation other ethnicity							1.426	2.526	4.162*	1.456	2.922	4.287*
2nd generation same ethnicity							1.073	1.549	2.925	.808	.935	2.243
2nd generation other ethnicity							1.933	3.975	6.910*	1.237	1.721	3.447
Highest education												
Low							0	2.683	1	0	.055	1
Middle							.220	.990	1.246	.027	.013	1.027
High							.531	2.437	1.700	.084	.029	1.920
Siblings												
None							0	1.540	1	0	.763	1
1 or 2							.114	.026	1.892	5.324	.004	205.209
3+							.207	.084	1.230	5.599	.005	270.234
	x^2 = 24.082; p = .064			x^2 = 3.588; p = .309			x2 = 27.401; p = .007			x^2 = 26.539; p = .009		
	-2LL = 798.699 df = 15			-2LL = 819.193 df = 3			-2LL 771,298 df=12			-2LL = 792,653 df = 12		

* Significance level = p < .10 ** Significance level p < .05 *** Significance level = p < .01

Preservation status affects tempo aspect fertility

Based on assimilation hypotheses; when migrants assimilate to the cultural norms of the receiving country also the demographic characteristics converge to the national level. Strong ties to and high preservation of the culture belonging to the origin country hinders the assimilation process. Previous results showed that, when measuring the duration time until a first birth, especially preservation of language and identity related issues have an effect on the transition to first birth. When migrants still strongly identify themselves to the country and culture of origin, or when they mainly use or feel capability towards the language of the country of origin, the first birth occurs earlier, compared to migrants with less strong preservation on these dimensions. Also, language plays an important role in the time interval between a first and second birth, where shorter time intervals are measured for the high language preservation migrants.

Reverting to the defined hypothesis that lower preservation leads to a postponement of childbearing and longer time intervals between first and second birth compared to moderate and high preservation of norms and values of the origin country; previous results show for both the first birth and the time interval between a first and second birth a difference on some dimensions of cultural identity, therefore the null-hypotheses can be rejected. Dimensions of cultural identity do have a certain effect, however for the time interval between first and second birth the effect is opposes of the expected trend.

Assimilated migrants vs. native Dutch

Considering the assimilation hypothesis base line is the adaptation to the native level, both in attitudes as in measurable behavioural outcomes. Section 4.1 showed the duration time for both the migrant groups as for natives. Hypothetically can be stated that the hazard ratio of low preservation – highly assimilated – migrants should be closer to the rates known for natives than to the hazard ratio for the high preservation – low assimilated – migrants. Regarding the transition to a first birth, the estimated average median age was 33.2 for natives, comparing this with migrants, the low preservation migrants show the most comparable estimated median ages, where the high preservation migrants have the least comparable estimated median ages in the transition to a first birth. These numbers shown in table 6 clearly indicate a converge of the low preservation migrants to the native level, whereas the high preservation migrants make the transition to a first birth still much earlier. Concluded can be stated that however there is still a gap between migrants and natives in tempo aspects of fertility, a positive relation between assimilation and the converge of migrants to the native level is stressed.

Table 6 Estimated median ages compared

	Natives	Low preservation	Moderate preservation	High preservation
	33.2			
Identification		-	30.3	29.5
Language		32.1	29.9	26.7
(Social) Media		30.0	28.4	29.2
Contact		30.1	28.2	25.7
Religion		33.6	33.6	28.5
Cultural Identity		-	30.2	26.3

5. CONCLUSIONS AND DISCUSSION

The general objective of this paper was to study the effect of the cultural identity of second generation migrants in the Netherlands on the tempo aspects of their fertility. Based on several variables originating from different modules deployed in the TIES dataset, 5 dimensions – identification, language, contact with country of origin, (social) media and religion/religiosity - were designed in order to measure the overall cultural identity of second generation migrants, originating from Turkey and Morocco. Tempo aspects of fertility have been measured through the transition to first birth and the time interval between first and second birth. Hypotheses about variation in cultural preservation are based on assimilation processes focussing on changes in later generations. The overall expectation of this study was that high preservation – low assimilation – of the culture belonging to the country of origin is a predictor for shorter duration times and higher hazard rates in the transition to first birth and also in the time interval between first and second birth. Where previous studies focused on the differences in fertility behaviour between countries or ethnic groups (e.g. Crul and Heering, 2008; Milewski, 2009; Dubuc, 2012; Huschek, 2011; Valk and Milewski, 2011), the purpose of this study is to consider differences in the tempo aspect of fertility *within* migrant groups according to their assimilation status. Therefore the influence of migrant origin is of lower importance than the extent of cultural preservation.

At first, this study measured potential differences in the timing of a first birth and the time interval between first and second birth between different ethnic groups, where it was expected that Turkish second generation migrants would have shortest duration times, followed by Moroccan second generation migrants. Longest duration times where expected to be found among natives. The results confirm this hypothesis, wherefore the null-hypothesis has been rejected. Secondly, there is looked at the extent of preservation on the different dimensions of the cultural identity for Turkish and Moroccan second generation migrants. Hypothetically was stated that Turks would stronger preserve the cultural identity belonging to the country of origin of the parents, compared to Moroccans. This expectation is partly true, where for Turks the extent of preservation is higher for the dimensions ‘Language’, ‘(Social) Media’ and ‘Contact’. The dimensions ‘Identification’ and ‘Religion’, however, are stronger preserved by the Moroccan migrants. The overall cultural identity preservation is, indeed, stronger for Turks than for Moroccans.

The third research question tested the effect of cultural identity preservation of second generation migrants on tempo aspects of fertility, where it was expected that lower preservation of the norms and values of the country of origin of the parents would lead to postponement in childbearing and also longer time intervals between first and second birth, compared to moderate and high preservation of these norms and values. The preservation of the ethnic descent language and high identification with the ethnic descent country did appear to be the important affecting factors in the duration time until a transition to first birth, where higher preservation is connected to shorter duration times and low preservation is connected to a postponement of childbearing. Also, for the time interval between first and second birth language seems to affect the duration time, where a negative relation is measured; the higher the preservation the shorter the time interval. Bringing this outcome back to the used assimilation hypotheses, this study found that structured assimilation is of high importance for migrant groups on the timing of the first birth. Also, cultural assimilation, especially through language and identification, is negatively related to the hazard ratios, whereas the cultural assimilation increases, the hazard ratios for the timing of a first birth decreases. For the time interval between first and second birth this result is opposite; with an increase in assimilation (on the language dimension), also the time interval between a first and second birth increases. These results also show a higher probability of converging to national levels of fertility when, especially, lower preservation of language-related issues is measured. Focussing on language in integration courses might therefore be the important factor in a change in attitudes and norms towards tempo aspects of childbearing.

The results show that the hazard rate of the transition to first birth is strongly connected to both time-constant as time-varying characteristics of a migrant. Due to the small number of children born to the second generation migrants so far, the sample of this dataset did not allow to split the dataset to consider differences between ethnicity and sex. The model as designed in this study allows for level differences in timing between males and females, but assumes that the effect of all other variables is similar for both sexes. The same accounts for the ethnicity of the migrants. Especially the difference between men and women is notably. In contrast with existing literature (Wilson, 2013), for this study it is likely that tempo differences in fertility can be described to migrant women, rather than men. Running the tests separately, without compositional factors or interaction effects, significant differences in the timing of first birth among female migrants are found for all dimensions, except ‘Contact’. For male migrants, however, significant differences are only found in the dimension ‘Religion’. In nearly all cases a positive relation is found between the extent of preservation and the probability of having the

transition to first birth, with the exception of the relation between the moderate 'Media' and 'Religion' preservation female migrants, compared to the low preservation migrants of these dimensions. For the two migrant groups it is much less clear which group causes the differences in tempo aspects of fertility. Observing the cultural identity preservation per dimension (section 4.2) it is likely that both migrant groups contribute to the effect. However this is much more based on speculation, compared to the gender differences. Since studying fertility among the second generation migrants of Turkish and Moroccan origin in the Netherlands through the TIES-data ends up in very small sample sizes, this might be solved by using another dataset and including generation 1.5 migrants. However the effect of growing up between two different countries and experiencing childhood in the receiving country will be lost.

It is important to mention that in this study assimilation status is measured through attitudes and subjective feelings of respondents, whereas in most studies assimilation is connected to the duration that migrants have spent in the receiving country. It is very likely that this different approach is also responsible for differences in outcomes.

In this study the start of the reproductive years is taken as T_0, rather than the start of marriage what is in most cases a good predictor for the start of childbearing. The consideration for T_0 was mainly dominated by two biases that might occur when taking time of first marriage. First, marriage might be very complicated in migrant families, especially when the partner will enter the country for family formation reasons. To meet the requirements for the entry of the partner and for the completion of compulsory integration courses time is needed. A consequence of these political regulations will lead to postponement of marriage, also for traditional and low assimilated families. Secondly, in the TIES questionnaire there is no information about the intention of marriage. Therefore it is not possible to overcome the problems regarding the political regulations. These two stumbling blocks led to the decision to take age as baseline in the timing of children. It is likely that if time of marriage would have been chosen for T_0 differences between ethnic groups and between high and low preservation of identity would have been much smaller.

This study shows – through a much higher proportion of partnering with natives among high assimilated migrants – the effect of a native partner on progress in assimilation. Comparing results of different generations and testing a potential stronger effect if both parents are from the same country of origin would be a better approach, so that stronger statements could be made about the strength of cultural transmission and the effect of partnering on assimilation.

Considering the dimension 'Contact with the country of origin', it is important to note the time-constant character in which contact is measured. Questions about the current situation are taken into account, what might have caused reverse causation in case significant results appeared. Since historical information is not taken into account it is not clear if contact with the country caused the specific timing of a first birth or that having a child causes more or less contact with the country of origin. This could be overcome when time-varying variables were taken into account, in which it is clear if there has been contact also during childhood and adolescent period.

In considering only the two biggest cities of the Netherlands a bias in the target group might occur. This bias is most likely for the native target group. While most migrants have spent their lives in these cities, natives often made through national migration for educational reasons. It is likely that a bias consists in the educational level, while natives move to cities to take part in high levels of education. This also might cause a higher average age among natives.

To construct the cultural identity of migrants it was chosen to divide migrants into three categories; 0 (low preservation), 1 (moderate preservation) and 2 (high preservation). To indicate the extent in which migrant preserve the culture of origin there is made use of a rounding method, therefore it is likely that most of the migrants will end up in the moderate preservation group, since this reaches all scores between 0.5 and 1.49. Migrants only end up in the low or high preservation group in extreme cases, with a score lower than 0.5 or higher than 1.49, which automatically means that significant differences only appear in extreme cases. It would have been possible to use another construction to create a more equal division of the migrants over the three groups. Assumed is that with another construction findings from this study will be even stronger and likely more significant differences could be found.

Suggestion for further research

Connecting first birth and the time interval between a first and second birth a remarkable outcome is measured in previous results. Postponement in childbearing is present among more assimilated migrants, but at the same time the shortest time intervals between a first and second birth can be found when migrants are partnering with natives. Taking into account the assimilation hypotheses based on time, where is assumed that every 0.5-generation migrant is more assimilated than previous generation (Wilson, 2013), these results suggests that none of the preservation groups have the one-child model as preference. Only, high assimilated migrants start childbearing later, but imply a certain catch up effect what

expectantly will results in comparable numbers in the total children per family. Further research should be conducted to confirm or reject this hypothesis.

When comparing the low with the moderate and high preservation group, characteristics of the low preservation migrants appear to be much closer to native levels. Focussing on partnering, the number of siblings and educational level; high and partial assimilated migrants are higher educated and are more often partnering with natives. Also, they have much less siblings compared to low assimilated migrants. These outcomes makes it plausible to indicate that – however the majority of the migrants does not have a partner - the background of the partner is of high importance in the assimilation process of migrants. Also other control variables, such as educational level seem to progress the movement towards assimilation. The number of children born to the parents – first generation – might affect the assimilation status of the second generation migrants as well. Further research on these topics might give a better and more complete picture of the effect of previous named – in this study – control factors on the assimilation state of (non-western) migrants in receiving Western countries.

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APPENDIX I – CONCEPTUALIZATION

Assimilation	The process in which minority groups as a consequence of integration will be completely or partial absorbed by the culture of the receiving country. This implies a strong identification to the main culture in the receiving country, and weakened ties to the culture of origin (Stark and Dorn, 2012).
Cultural assimilation	The process of integration into the culture, norms and values belonging to the receiving country (Scott and Stanfors, 2011)
Cultural Identity	A process of sense of continuity and security, what is attributed to the community as imagined. The commitment, security and sharedness that individuals feel according to norms and values expresses the extent in which individuals identity is predominantly in the direction of the receiving country or in the direction of the country of origin of their parents.
Culture	A learned system of social constructed values, beliefs and meanings that are more or less shared by individuals members of a social group, transmitted through languages or other symbolic systems from past generations or formed by individuals themselves (Avrach, 1998; D'Andrade, 1981)
First Generation Migrant	People who have been born abroad and of which at least one of the parents have been born abroad (CBS, 2013)
Generation 1	First generation migrant of older ages, which have spent all of a large part of marriage and reproductive years in the country of origin (Alders, 2000)
Generation 1.5	First generation migrant who migrated mostly in their adolescent years or at the start of marriage (Alders, 2000)
Guest workers	Migrants that came to Europe as recruited labour migrants
High preservation	Migrants perform certain behaviour or adhere norms and values that highly reflect the characteristics for the (Islamic) country of origin of the parents (no or low assimilation)

Low preservation	Culture, norms and values of the receiving country has become the culture, norms and values for the migrant (high assimilation)
Moderate preservation	Mix between culture, norms and values belonging to the country for origin and belonging to the receiving country (partial assimilation)
National identity	The degree to which a member defines him or herself by the same attributes that he or she believes defines the nation (Dutton et al, 1994)
New migration stream	Labour migrants who came to Europe after World War II, basically as a result of labour shortage in the industrial sector
Preservation (cultural)	The extent in which migrant preserve culture, norms and values belonging to the country of origin (of the parents) and the ones belonging to the receiving country
Cohort Fertility Rate	The number of children actually born to women of a specific cohort until the end of their childbearing years (Stichnoth and Yeter, 2013)
Religious identity	The attachment to a global community, in which a set of doctrines and lifestyles are shared, also described as a framework of religious related culture, traditions and customs (Jacobson, 1997)
Second Generation Migrant	People who have been born in the Netherlands and of which at least one of the parents was born abroad (CBS, 2013)
Segmented assimilation	A concept in which migrants both assimilate to the cultural norms of the receiving country, as well preserve norms and values of the country of origin (Andersson, 2004; Milewski, 2007; Andersson and Scott, 2007; Lindstrom and Saucedo, 2002)
Socialization	The social integration of individual migrants into e.g. the cultural traits, labour market or intermarriage with native Dutch is affected by the social education, where dominant values, norms and behaviour present in life will predict the behaviour that will be adapted (Milewski, 2011; Fleischmann and Phalet, 2011)
Spacing of fertility	Duration time from first until second birth
Structural assimilation	The assimilation to the socioeconomic successes of the receiving country (Scott and Stanfors, 2011)
Tempo aspects of fertility	Fertility related aspects that focus on the timing of birth

Timing of fertility	Transition into a first birth
TIES-project	The Integration of the European Second Generation; Survey conducted in 2006-07, focuses on the second generation of Turkish, Moroccan and former Yugoslavian migrants in 15 different cities in eight European Countries (Austria, Belgium, France, Germany, the Netherlands, Spain, Sweden and Switzerland)
Total Fertility Rate (TFR)	The number of children that would be born to a woman if she were to live to the end of her childbearing years and, at each age, had a probability of giving birth that is equal to the current age-specific fertility rates (WHO, 2013)
Quantum aspects of fertility	Fertility related aspects that focus on the number of children born

APPENDIX II – INCLUDED NEIGHBOURHOODS BY CITY

(Groenwold, 2008)

Amsterdam	Inhabitants	Rotterdam	Inhabitants
Burgwallen-Oude Zijde	3750	Stadsdriehoek	12060
Burgwallen-Nieuwe Zijde	4150	Oude Westen	9500
Grachtengordel-West	8010	Cool	4210
Grachtengordel-Zuid	4150	C.S. Kwartier	970
Nieuwemarkt en Lastage	8510	Kop van Zuid	1050
Haarlemmerbuurt	7360	Nieuwe Werk	1660
Jordaan	18680	Dijkzigt	640
De Weteringschans	6880	Delfshaven	6280
Weesperbuurt en Plantage	7230	Bospolder	6890
Oostelijke Eilanden en Kadijken	12740	Tussendijken	6290
Westelijk havengebied	250	Spangen	9520
Houthavens	1800	Nieuwe Westen	18600
Spaarndammer- en Zeeheldenbuurt	10060	Middelland	11050
Staatsliedenbuurt	12090	Oud-Mathenesse	6400
Centrale Markt	2620	Witte Dorp	580
Frederik Hendrikbuurt	7780	Schiemond	4290
Da Costabuurt	4340	Kleinpolder	7290
Kinkerbuurt	5030	Schieveen	420
Van Lennepbuurt	6640	Zestienhoven	880
Helmersbuurt	6790	Overschie	6700
Overtoomse Sluis	7000	Landzicht	400
Vondelbuurt	1680	Agniesebuurt	4080
Indische Buurt West	11920	Provensierswijk	4420
Indische Buurt Oost	10300	Bergpolder	7450
Oostelijk Havengebied	17820	Blijdorp	9300
Zeeburgereiland en Nieuwe Diep	570	Liskwartier	7340
IJburg West	7540	Oude Noorden	16600
IJburg Zuid	530	Blijdorpse Polder	100
Landlust	17750	Schiebroek	15160
Erasmuspark	5070	Hillegersberg-Zuid	7620
De Kolenkit	7100	Hillegersberg-Noord	7040
De Krommert	11970	Terberge	3470
Van Galenbuurt	5410	Molenlaankwartier	7560
Hoofdweg en omgeving	10030	Rubroek	7820

Westindische buurt	6350	Nieuw-Crooswijk	2770
Volewijck	9570	Oud-Crooswijk	7820
IJplein en Vogelbuurt	8340	Kralingen-West	15370
Tuindorp Nieuwendam	3450	Kralingen-Oost	6690
Tuindorp Buiksloot	1850	De Esch	4350
Nieuwendammerdijk en Buiksloterdijk	1720	Struisenburg	440
Tuindorp Oostzaan	9860	Kop van Zuid-Entrepot	7640
Oostzanerwerf	8690	Vreewijk	13950
Kadoelen	2890	Bloemhof	13180
Nieuwendam-Noord	13020	Hillesluis	10660
Buikslotermeer	11580	Katendrecht	3660
Banne Buiksloot	13140	Afrikaanderwijk	9300
Buiksloterham	620	Feijenoord	7420
Nieuwendammerham	140	Noordereiland	3280
Waterland	2000	Oud-IJsselmonde	5790
Slotermeer-Noordoost	9150	Lombardijen	13110
Slotermeer-Zuidwest	15680	Groot-IJsselmonde	26960
Geuzenveld	14130	Beverwaard	12140
Eendracht	2320	Pernis	4740
Lutkemeer en Ookmeer	900	‘s-Gravenland	8520
Osdorp-Oost	14130	Kralingsee Veer	1710
Osdrop-Midden	11240	Prinsenland	10160
De Punt	5230	Het Lage Land	9630
Middelveldsche Akerpolder en Sloten	15000	Ommoord	24260
Slotervaart	16490	Zevenkamp	16980
Overtoomse Veld	9800	Oosterflank	10630
Westlandgracht	4570	Nesselande	7340
Sloten- en Riekerpolder	13300	Tarwewijk	10800
Amstel III en Bullewijk	100	Carnisse	9960
Bijlmer-Centrum	20490	Zuidwijk	12160
Bijlmer-Oost	23840	Oud-Charlois	12590
Nellestein	2760	Wielewaal	960
Holendrecht en Reigersbos	18400	Zuidplein	880
Gein	11820	Pendrecht	11890
Driemond	1490	Zuiderpark	1250
Weesperzijde	4550	Heijplaat	1610
Oosterparkbuurt	10210	Hoogvliet-Noord	13260

Dapperbuurt	8120	Hoogvliet-Zuid	21640
Transvaalbuurt	9330	Strand en Duin	1150
Frankendeel	9530	Dorp	8180
Middenmeer	12140	Nieuw-Mathenesse	20
Betondorp	3060	Waalhaven	10
De Omval	2110		
Oude Pijp	13690		
Nieuwe Pijp	11290		
Dimantbuurt	8130		
Hoofddorppleinbuurt	10440		
Schinkelbuurt	3720		
Willemspark	5220		
Museumkwartier	11180		
Stadionbuurt	10110		
Apollobuurt	8060		
Duivelseiland	130		
Scheldebuurt	13300		
IJselbuurt	5110		
Rijnbuurt	8570		
Station-Zuid WTC en omgeving	1160		
Buitenveldert-West	11890		
Buitenveldert-Oost	7130		

APPENDIX III – JUSTIFICATION VARIABLES CULTURAL IDENTITY

Many variables originating from different modules of the TIES-survey are merged in order to measure cultural identity. To make a distinction between different cultural identity groups, the possible answer categories are divided into three subgroups: High preservation, moderate preservation and low preservation. High preservation refers to a situation in which the migrants highly perform certain behaviour or adhere to norms and values that is highly comparable to the situation of the country of origin at the time their parents were recruited to the Netherlands. In other words; there has been no or low assimilation to the norms and values of the receiving country. A moderate preservation symbolises a mix between culture, norms and values belonging to the country of origin at the time the parents of the second generation migrants were recruited to the Netherlands and the culture, norms and values known for the current situation in the receiving country. This stage is equivalent to partial assimilation. The stage of low preservation is a stage of high assimilation in which the culture, norms and values of the receiving country has become the culture, norms and values of the migrants. Based on literature review and frequencies compared between migrant target groups and the comparison group in the TIES-survey a division within existing categories can be made. Categories will be merged until for every variable only three categories remain; high preservation (coded as 2), moderate preservation (coded as 1) and low preservation (coded as 0). Dichotomous variables will be coded either as 0 or as 2. The outcome of all selected variables can be added and divided by the number of selected variables. In this way every respondent will get a score between 0 and 2, which will categorize the respondents in one of the three cultural identity groups.

Identification with different cultural groups

The identification with certain groups is part of the instinctive need to belong to something. For the second generation migrants in the Netherlands there are different cultural groups to which they might feel attached. According to the social identity theory (Tajfel, 1978) the belongingness to a group partial determines the appreciation of the self of individuals. Individuals are searching for a group and want to belong to a group which represents their needs, norms and values (Dijk and Kippenburg, 2007). Therefore, the extent to which second generation migrants feel citizen of the survey country, Moroccan or Turkish, Kurd or Berber and Muslim or Christian gives an indication of their needs, norms and values. Regarding to

previous section a very strong or strong feeling of being citizen of a survey country can be coded as low preservation, where not strongly/not weakly and weakly feelings of being citizen of the survey country can be coded as moderate preservation and very weakly, not at all and not applicable will be coded as 2; high preservation. The reverse is applied to the extent to which people feel Moroccan or Turkish and Kurd or Berber (Very strongly and strongly = 2; not strongly, not weakly and weakly = 1; very weakly; not at all and not applicable = 0). In case of the extent that respondents feel to be Muslim, very strong and strong for feeling will be coded as 2 (high preservation), whereas people feel very strongly or strongly Muslim this will be coded as 0 (low preservation).

IDENTIFICATION*	**Turkish**	**Moroccan**	**CI coding**
	N (%)	**N (%)**	
To what extent do you feel citizen of survey country			
Very strongly	33 (8.1)	55 (13.8)	0
Strongly	124 (30.5)	119 (30.2)	0
Not strongly, not weakly	152 (37.3)	146 (37.1)	1
Weakly	57 (14.0)	40 (10.2)	1
Very weakly	15 (3.7)	20 (5.1)	2
Not at all	22 (5.4)	14 (3.6)	2
Not applicable	4 (1.0)	0 (.0)	
To what extent do you feel Moroccan/Turk			
Very strongly	182 (44.3)	145 (37.8)	2
Strongly	138 (33.6)	153 (39.8)	2
Not strongly, not weakly	68 (16.5)	63 (16.4)	1
Weakly	11 (2.7)	11 (2.9)	1
Very weakly	3 (0.7)	8 (2.1)	0
Not at all	9 (2.2)	2 (.5)	0
Not applicable	0 (.0)	2 (.5)	
To what extent do you feel Kurd/Berber			
Very strongly	11 (2.9)	80 (21.6)	2
Strongly	18 (4.7)	76 (20.5)	2
Not strongly, not weakly	26 (6.9)	48 (13.0)	1
Weakly	16 (4.2)	17 (4.6	1
Very weakly	21 (5.5)	24 (6.5)	0
Not at all	104 (27.4)	39 (10.5)	0
Not applicable	103 (27.3)	44 (11.9)	
To what extent do you feel Muslim			
Very strongly	204 (50.9)	205 (52.2)	2
Strongly	111 (27.7)	118 (30.0)	2
Not strongly, not weakly	47 (11.7)	43 (10.9)	1
Weakly	14 (1.5)	7 (1.8)	1
Very weakly	15 (1.5)	10 (2.5)	0
Not at all	10 (2.5)	8 (2.0)	0
Not applicable	1 (.2)	2 (.5)	

* Percentages attributed to each category are based on the proportion within each target group

Language

Language is one of the domains in which cultural differences are expressed. The spoken and written languages are symbols that, as described by D'Andrade (1981), connect individuals to a certain cultural group. The sharedness increases when the same language is spoken. The language used by the second generation migrants is important in their bounding with both their relatives as the receiving country (Brubaker, 2012). But language also can be described as '*deeply taken for granted and embodied identifications*'. What assumes that, although all Turkish and Moroccan second generation migrants have been taught to speak, write and understand the language of the receiving country, it is important to take the language in which they are raised into account. This will have an effect on the quality of the language. Language seems to function as a phenomenon which can be joined in time (Anderson, 1991); what means that language is not fixed in a contemporary social environment. Although mostly measured among first generation migrants in labour market position, research also shows the positive effect of language knowledge on acculturation (Chiswick and Miller, 1995; Dustmann and Fabbri, 2003; Bleakley and Chin, 2004). For these reasons it is important to take the language in which migrants are raised, the language they understand, and the knowledge of writing and reading different languages, to measure the extent of preservation and with that their cultural identity. For languages in which migrants are raised and the understanding of languages, most variables consist only of two categories: not mentioned and mentioned or yes and no. There is chosen to merge the different variables for language raised and the understanding of a language into three options: Only Dutch (0), Dutch and at least one other language (1), At least one other language (2).

LANGUAGE*	**Turkish**	**Moroccan**	**CI coding**
	N (%)	**N (%)**	
In which language(s) are you raised			
Dutch	11 (2.7)	38 (9.6)	0
Dutch and at least 1 ethnic group language	306 (73.7)	283 (71.6)	1
Ethnic group language	98 (23.6)	74 (18.7)	2
Which language(s) do you understand			
No ethnic group language	381 (90.3)	158 (39.9)	0
At least one ethnic group language	41 (9.7)	238 (60.1)	2
How well do you speak survey country (SC) language			
Bad	0 (.0)	1 (.3)	2
Not so good	1 (.2)	0 (.0)	2
Moderate	11 (2.6)	4 (1.0)	1
Good	95 (22.4)	62 (15.8)	1
Very good	124 (29.2)	101 (25.8)	0
Excellent	194 (45.6)	224 (57.1)	0
How well do you read SC language			
Bad	1 (.2)	1 (.3)	2
Not so good	4 (.9)	0 (.0)	2
Moderate	7 (1.6)	1 (.3)	1
Good	71 (16.7)	63 (16.1)	1
Very good	117 (27.5)	76 (19.4)	0

Excellent	225 (52.9)	251 (64.0)	0
How well do you write SC language			
Bad	3 (.7)	1 (.3)	2
Not so good	4 (.9)	1 (.3)	2
Moderate	16 (3.8)	6 (1.5)	1
Good	95 (22.4)	71 (18.1)	1
Very good	110 (25.9)	95 (24.2)	0
Excellent	197 (46.4)	218 (55.6)	0
How well do you speak ethnic group language			
Bad	6 (1.4)	17 (4.4)	0
Not so good	17 (4.0)	20 (5.2)	0
Moderate	54 (12.7)	65 (16.8)	1
Good	143 (33.7()	143 (6.9)	1
Very good	118 (27.8)	66 (17.0)	2
Excellent	86 (20.3)	77 (19.8)	2
How well do you read ethnic group language			
Bad	16 (3.8)	128 (33.0)	0
Not so good	28 (6.6)	57 (14.7)	0
Moderate	70 (16.5)	80 (20.6)	1
Good	122 (28.8)	71 (18.3)	1
Very good	94 (22.2)	26 (6.7)	2
Excellent	94 (22.2)	26 (6.7)	2
How well do you write ethnic group language			
Bad	22 (5.2)	144 (37.1)	0
Not so good	38 (9.0)	67 (17.3)	0
Moderate	62 (14.6)	86 (22.2)	1
Good	124 (29.2)	46 (11.9)	1
Very good	95 (22.4)	25 (6.4)	2
Excellent	83 (19.6)	20 (5.2)	2
Which language do you speak with your mother			
Mostly survey country (SC) language	32 (7.8)	52 (13.5)	0
More SC language than ethnic group language	38 (9.3)	55 (14.3)	0
More ethnic group language than SC language	119 (29.0)	124 (32.2)	2
Mostly ethnic group language	218 (53.2)	148 (38.5)	2
Other language than these two	3 (.7)	5 (1.3)	-
Which language do you speak with your father			
Mostly survey country (SC) language	24 (6.1)	54 (15.0)	0
More SC language than ethnic group language	40 (10.2)	61 (17.0)	0
More ethnic group language than SC language	118 (30.0)	120 (33.4)	2
Mostly ethnic group language	202 (51.4)	117 (32.6)	2
Other language than these two	9 (2.3)	7 (1.9)	-
Which language do you speak with you friends			
Mostly survey country (SC) language	141 (33.7)	268 (68.7)	0
More SC language than ethnic group language	142 (34.0)	99 (25.4)	0
More ethnic group language than SC language	103 (24.6)	15 (3.8)	2
Mostly ethnic group language	30 (7.2)	7 (1.8)	2
Other language than these two	2 (.5)	1 (.3)	-
Which language do you speak with your brothers/sisters			
Mostly survey country (SC) language	121 (29.4)	254 (66.7)	0
More SC language than ethnic group language	141 (34.2)	96 (25.2)	0
More ethnic group language than SC language	109 (26.5)	19 (5.0)	2
Mostly ethnic group language	40 (9.7)	11 (2.9)	2
Other language than these two	1 (.2)	1 (.3)	-
Which language do you speak with your partner			
Mostly survey country (SC) language	47 (19.3)	62 (47.0)	0
More SC language than ethnic group language	55 (22.6)	28 (21.2)	0
More ethnic group language than SC language	76 (31.3)	18 (14.4)	2
Mostly ethnic group language	63 (25.9)	22 (16.7)	2
Other language than these two	2 (.8)	1 (.8)	-

* Percentages attributed to each category are based on the proportion within each target group

(Social) Media

It is assumed that strong links with the ethnic community and the home country hinder the assimilation of a new culture (Stark and Dorn, 2012). Modern communication and media can hinder the assimilation or can be even seen as the cause for non-assimilation. Watching TV-stations of the ethnic group country does not contribute to assimilation and therefore is seen as high preservation of the culture of the ethnic group country. Also using the internet for information about the ethnic group country can be seen as high assimilation (2), where not using the internet for information about the ethnic group country is coded as low assimilation (0). 'Only ethnic group country stations' and 'Mostly ethnic group country stations' are coded as 2: high preservation, 'Only' and 'mostly survey country speaking stations' are coded as low preservation (0), whereas 'As much survey country language as ethnic group country stations' is coded as moderate preservation (1). Knowing that hardly anybody with a religion has another religion than one of the Islamic streams, there is assumed that using the internet for religious reasons means use of internet for Islamic religion. Therefore 'Yes' is coded as high preservation and 'No' is coded as low preservation.

(SOCIAL) MEDIA*	**Turkish** N (%)	**Moroccan** N (%)	**CI coding**
What kind of TV-stations do you watch			
Only Survey Country (SC) speaking stations	62 (15.1)	143 (36.2)	0
Mostly SC language stations	94 (22.9)	286 (47.1)	0
Only ethnic group country stations	16 (3.9)	2 (.4)	2
Mostly ethnic group country stations	65 (15.8)	7 (1.5)	2
As much SC language as ethnic group language	169 (41.1)	81 (17.1)	1
Mostly other language speaking stations	5 (1.2)	1 (.2)	-
Use of internet for religion matters			
Yes	106 (27.7)	142 (38.2)	2
No	277 (72.3)	230 (61.8)	0
Use of internet for info on country of origin of parents			
Yes	196 (51.7)	153 (42.9)	2
No	183 (48.3)	204 (57.1)	0

* Percentages attributed to each category are based on the proportion within each target group

Contact with home country

The possible intention to go and live in the country of origin of the parents can be seen as a reflection of the ties migrants have with those who are left behind. If a second generation migrant still feels strongly connected and has strong ties with the family left behind in the country of origin of the parents, they might consider to move and to live or to invest in the country of origin of the parents. Considerations about emigration are assumed to affect the assimilation process (Stark and Dorn, 2012). Therefore also, it is assumed that migrants live according to the culture belonging to the country of origin of the parents. Regarding to the assimilation theory and the assumption that assimilation will be weak when migrants intent to go and live in the country of origin of the parents, answer categories 'Likely' or 'Certainty' will be coded as high preservation (2), where 'Possibly' is coded as moderate and 'Certainty not' as low preservation. Not knowing if there is the intention to go and live in country of origin of the parents is coded as moderate, since this answer does neither tell that migrants will move away, nor that they will stay in the receiving country.

CONTACT ETHNIC DESCENT COUNTRY*	**Turkish**	**Moroccan**	**CI coding**
	N (%)	**N (%)**	
Did you remit money in the past 5 years to country of origin of parents			
Yes	127 (30.0)	97 (24.9)	2
No	297 (70.0)	193 (75.1)	0
Did you invest money in business or real estate in the past 5 years in the country of origin of parents			
Yes	18 (4.3)	19 (4.9)	2
No	405 (95.7)	372 (95.1)	0
Do you intent to go and live in the country of origin of parents			
Certainly not	182 (43.0)	221 (56.7)	0
Possible	93 (22.0)	91 (23.3)	1
Likely	35 (8.3)	22 (5.6)	2
Certainly	55 (13.0)	13 (3.3)	2
Does not know	58 (13.7)	43 (11.0)	1

* Percentages attributed to each category are based on the proportion within each target group

Religion/Religiosity

As language, also religion is one of the domains in which cultural differences are expressed. Although the combination of religion and language in a study is rare (Brubaker, 2012), by measuring the effect of cultural identity it is important to consider both factors. A strong reflection of the Muslim religion appears to have a positive effect on the number of children, what indicates a lower level of structural assimilation (Mayer and Riphahn, 1999). Therefore maintaining Muslim religious habits are seen as less assimilated.

Since virtually all respondents that are raised or currently have a religion mentioned to have a Muslim religion (96.6% for Turks; 98.4% for Moroccans), the questions about which religion are removed. An inclusion of these questions will only higher the average score, without any meaning can be subscribed to this variable. The very few respondents that have another religion than a Muslim religion are excluded from the test (2.3% Turks; 1.4% Moroccan), since such a small number does not allow for any comparison. Therefore everybody that is raised according to a religion and currently has a religion is coded as high preservation (2), where not raised or no current religion is coded as low preservation (0). For the variables with more categories: when a respondent answers 'never' to a question about religious habits, it is coded as 0 (low preservation. 'Occasionally' and 'depends on the situation' are coded as moderate preservation (1) and 'most of the time' and 'always' are seen as low assimilated, high preservation (2). A (total) agreement to the question is also coded as high preservation (2), where a neither agree nor disagree is seen as moderate preservation (1) and (totally) disagreement as low preservation (0).

RELIGION*	**Turkish**	**Moroccan**	**CI coding**
	N (%)	**N (%)**	
Where you raised according to a religion			
Yes	380 (88.4)	375 (91.9)	2
No	50 (11.6)	33 (8.1)	0
Do you currently have a religion			
Yes	378 (87.9)	365 (89.2)	2
No	52 (12.1)	44 (10.8)	0
How often did you fast during the last Ramadan			
Never	50 (13.7)	6 (1.7)	0
Occasionally	20 (5.5)	8 (2.2)	1
Depends on the situation	25 (6.9)	11 (3.1)	1
Most of the time	36 (9.9)	13 (3.6)	2
Always	233 (64.0)	321 (89.4)	2
How often do you eat halal food			
Never	8 (2.2)	5 (1.4)	0
Occasionally	30 (8.3)	20 (5.6)	1
Depends on the situation	33 (9.1)	27 (7.6)	1
Most of the time	81 (22.3)	58 (16.2)	2
Always	211 (58.1)	247 (69.2)	2
How often do you do your daily prayers			
Never	85 (42.1)	46 (27.5)	0
Only on religious holidays	31 (15.3)	14 (8.4)	1
Only on Friday	30 (14.9)	1 (.6)	1
Daily	30 (14.9)	23 (13.8)	2
Five or more times a day	26 (12.9)	83 (49.7)	2
How often do you visit mosque			
Never	99 (26.2)	117 (32.1)	0
Seldom	99 (26.2)	96 (26.3)	1
Only on religious holidays	85 (22.5)	61 (16.7)	1
Once or twice a month	48 (12.7)	36 (9.9)	2
Weakly or more frequently	47 (12.4)	55 (15.1)	2
Being a Muslim is an important part of myself			
Totally agree	177 (47.3)	199 (55.4)	2
Agree	135 (36.1)	133 (37.0)	2

Neither agree nor disagree	40 (10.7)	17 (4.7)	1
Disagree	13 (3.5)	8 (2.2)	0
Totally disagree	9 (2.4)	2 (.6)	0
I see myself as a really Muslim			
Totally agree	92 (24.7)	115 (32.4)	2
Agree	135 (36.3)	139 (39.2)	2
Neither agree nor disagree	105 (28.2)	84 (23.7)	1
Disagree	34 (9.1)	12 (3.4)	0
Totally disagree	6 (1.6)	5 (1.4)	0
In many aspects I am like other Muslims			
Totally agree	46 (12.4)	64 (17.9)	2
Agree	156 (42.0)	168 (46.9)	2
Neither agree nor disagree	107 (28.8)	91 (25.4)	1
Disagree	45 (12.1)	30 (8.4)	0
Totally disagree	17 (4.6)	5 (1.4)	0
When somebody says something bad about my religion I feel personally hurt			
Totally agree	108 (29.0)	90 (25.2)	2
Agree	137 (36.7)	133 (37.3)	2
Neither agree nor disagree	57 (15.3)	68 (19.0)	1
Disagree	56 (15.0)	48 (13.4)	0
Totally disagree	15 (4.0)	18 (5.0)	0
Are you wearing a headscarf outside the house			
Yes	73 (36.7)	80 (42.3)	2
No	126 (63.3)	109 (57.7)	0
Did your wife or partner wear a headscarf outside the house			
Yes	0 (.0)	3 (33.3)	2
No	2 (100)	6 (66.7)	0
If you would have a partner, would you want her to wear a headscarf outside the house			
Yes	31 (36.0)	68 (54.8)	2
No	55 (64.0)	45.2)	0

* Percentages attributed to each category are based on the proportion within each target group

APPENDIX IV – DESCRIPTION SURVEY POPULATION

	Total	Turks	Moroccan	Native Dutch
Demographic Characteristics				
Target Group (N (%))	1471 (100)	486 (33.0)	473 (32.2)	512 (34.8)
City (N (%))				
Amsterdam	722 (49.1)	232 (15.8)	231 (15.7)	259 (17.6)
Rotterdam	749 (50.9)	254 (17.3)	242 (16.5)	253 (17.2)
Sex (N (%))				
Male	714 (48.5)	232 (15.8)	232 (15.8)	250 (17.0)
Female	757 (51.5)	254 (17.3)	241 (16.4)	262 (17.8)
Age (M (SD))	25.22 (4.79)	24.64 (4.36)	23.33 (4.18)	27.53 (4.78)
Age group (N (%))				
18-19	194 (13.2)	57 (3.9)	108 (7.3)	29 (2.0)
20-24	521 (35.4)	196 (13.3)	200 (13.6)	125 (8.5)
25-29	433 (29.4)	160 (10.9)	116 (7.9)	157 (10.7)
30+	323 (22.0)	73 (5.0)	49 (3.3)	201 (13.7)
Number of siblings (N (%))				
0	63 (4.3)	8 (0.5)	8 (0.5)	47 (3.2)
1	353 (24.0)	79 (5.4)	20 (1.4)	254 (17.3)
2	315 (21.4)	145 (9.9)	44 (3.0)	126 (8.6)
3+	740 (50.4)	254 (17.2)	401 (30.0)	85 (5.8)
Marriage (N (%))				
Married	356 (24.2)	188 (12.8)	92 (6.3)	76 (5.2)
Not-Married	1115 (75.8)	298 (20.3)	381 (25.9)	436 (29.6)
Background partner (N (%))				
Turks	111 (22.7)	111 (22.7)	0 (0.0)	0 (0.0)
Moroccan	46 (8.9)	0 (0.0)	46 (8.9)	0 (0.0)
Dutch	352 (68.3)	95 (18.4)	56 (10.9)	201 (39.0)
Educational level (N (%))				
Low educated	456 (31.3)	191 (13.1)	188 (12.9)	77 (5.3)
Middle educated	618 (42.4)	224 (15.4)	217 (14.9)	177 (12.2)
High educated	382 (26.2)	(63 (4.3)	63 (.3)	256 (17.6)
Reproductive behaviour				
Parity, binary (N (%))				
Nulliparous	1 156 (78.6)	334 (22.7)	400 (27.2)	422 (28.7)
Parous	315 (21.4)	152 (6.1)	73 (4.9)	90 (10.2)
Parity, categorized (N (%))				
0	1 156 (78.6)	334 (22.7)	400 (27.2)	422 (28.7)
1	190 (12.9)	88 (6.0)	43 (2.9)	59 (4.0)
2	97 (6.6)	53 (3.6)	18 (1.2)	26 (1.8)
3+	28 (1.9)	11 (.8)	12 (,.8)	5 (.3)
Age at first birth (N (%)				
<20	41 (13.0)	22 (7.0)	9 (2.9)	10 (3.2)
20-25	123 (39.0)	79 (25.1)	32 (10.2)	12 (3.8)
26-30	109 (34.6)	44 (14.0)	25 (7.9)	40 (12.7)
31-35	39 (12.4)	6 (1.9)	6 (1.9)	27 (8.6)
<35	3 (1.0)	1 (.3)	1 (.3)	1 (.3)

	Total	Turks	Moroccan	Native Dutch
Average age first birth (M (SD))				
Total	24.38 (4.24)	23.26 (3.47)	23.85 (4.03)	27.03 (4.49)
Male	26.09 (3.8)	24.72 (3.3)	27.38 (3.8)	27.93 (3.7)
Female	23.71 (4.2)	22.31 (3.3)	23.02 (3.6)	26.61 (4.8)
Spacing between first and second birth (years) (N (%))				
<1	1 (.8)	1 (.8)	0 (.0)	0 (.0)
1	20 (16.3)	6 (4.9)	9 (7.3)	4 (4.1)
2	27 (22.0)	12 (9.8)	8 (6.5)	7 (5.7)
3	28 (22.8)	15 (12.2)	5 (4.1)	8 (6.5)
4	20 (16.3)	10 (8.1)	5 (4.1)	5 (4.1)
5+	27 (22.0)	17 (14.6)	3 (2.4)	6 (4.9)

APPENDIX V – DESCRIPTION EDUCATIONAL LEVEL

ACCORDING TO THE STANDARD EDUCATIONAL DIVISON 2003 (CBS, 2003)

1. **Highest level of education finished with a diploma: Low**

Low educated

- Primary education
- Lower general secondary education (VMBO)
- Secondary vocational education, level 1 (MBO- niveau 1)
- The first three years of Higher general secondary education (onderbouw Havo)
- The first four years of preparatory scientific education (onderbouw Vwo)

2. **Highest level of education finished with a diploma: middle**

Middle educated

- Last 2 years of higher general secondary education (bovenbouw Havo)
- Last 2 years of preparatory scientific education (bovenbouw Vwo)
- Basic Vocational education (Mbo – niveau 2)
- Vocational training (Mbo – niveau 3)
- Middle and specialist training (Mbo – niveau 4)
- Propaedeutic higher professional education (Propedeuse Hbo)
- Propaedeutic Scientific Education (Propedeuse Wo)

3. **Highest level of education finished with a diploma: high**

High educated

- Bachelor and Masters Higher professional education (Hbo bachelor, master)
- Bachelor, masters, PhDs, Doctorate Scientific Education (Wo bachelor, masters, post-doctoraal, doctoraat)

APPENDIX VI – MUNICIPALITY LEVEL VARIABLES

The TIES-survey is in the Netherlands conducted in the two biggest cities; Amsterdam and Rotterdam. To sketch the municipality conditions of both cities a short overview is given about the composition of the population and the number some main demographic characteristics.

	Amsterdam		Rotterdam	
	2006	**2007**	**2006**	**2007**
Number of Inhabitants	743,079	742,884	588,697	584,058
Males inhabitants	366,128	365,705	288,275	285,800
Female inhabitants	376,951	377,179	300,422	298,258
Native inhabitants	383,081	382,100	321,655	317,409
Native male inhabitants	158,858	185,545	156,083	154,284
Native female inhabitants	197,223	196,555	165,572	163,125
Moroccan inhabitants	65,462	66,256	36,685	37,159
Moroccan male inhabitants	34,156	34,393	18,918	19,128
Moroccan female inhabitants	31,306	31,863	17,767	18,031
Turkish inhabitants	38,339	38,556	45,173	45,461
Turkish male inhabitants	20,009	20,030	23,075	23,185
Turkish female inhabitants	18,330	18,526	22,098	22,279
Number of life births	10,260	10,504	7,262	7,262
Number of deaths	5,727	5,586	5,820	5,747
Number of employed people	516,300		402,200	
Average net income	13,900		12,500	
Number of welfare benefits receivers	38,090	35,690	36,270	34,430
Number of unemployment benefits receivers	13,120	10,100	9,860	7,370

university of groningen