Are Ethnic Minorities Disadvantaged?

The Employment Participation and Occupational Status of Moroccan

and Turkish Second Generation Migrants in the Netherlands *

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Abstract

We use data from the 2009/10 Wave of the *Netherlands Longitudinal Lifecourse Study* to analyze the employment participation and occupational status of Moroccan and Turkish Second Generation Migrants (SGM) in the Netherlands. By considering measures of family background (i.e. parental education, cultural capital) and skills (i.e. linguistic proficiency, numeracy abilities) we provide a more refined analyses of ethnic differences in the labor market than previous studies on SGM. Results show important ethnic differences in how family background and human capital affect labor market outcomes. We find that men's employment participation is unevenly low amongst Moroccan and Turkish SGM, even after controlling for family background, education, and skills. For women, the low levels of employment participation of Moroccan and Turkish SGM are largely explained by family background, whereas linguistic proficiency also reduces substantially their low employment participation, especially amongst Turkish SGM. For occupational status, men from Turkish origins are the only disadvantaged group, yet this is entirely explained by their social origins. Finally, women from Moroccan and Turkish origins are not disadvantaged in their occupational status, and clearly achieve higher occupational positions than their counterparts with Dutch-born parents coming from similar family backgrounds.

Introduction

The study of how 'Second Generation Migrants' (SGM) perform in the labor market is essential to understand ethnic inequalities. Given that SGM are raised and educated in the same country as children with native-born parents, analyzing the labor market outcomes of SGM is critical to understand the equality of opportunities across ethnic groups. Previous studies with data from the United States (Farley & Alba, 2002; Portes & Zhou, 1993), Australia (Maani, 1994), Canada (Boyd & Grieco, 1998), and several Western European countries, like Austria, Britain, Denmark, Germany, Netherlands, Switzerland, or Sweden (Algan et al., 2010; Crul & Vermeulen, 2003; Heath, Rothon, & Kilpi, 2008; Van Tubergen, 2004), generally found that SGM have exceeded the first generation of migrants in the labor market, but also that SGM remain disadvantaged in labor market outcomes, as compared to their counterparts with native-born parents. This latter finding motivates the examination of which factors influence the labor market outcomes of SGM.

To date, however, the literature has not provided a complete picture of which factors affect the labor market outcomes of SGM, despite the growing number of studies in this direction (e.g., Heath et al., 2008; Thomson & Crul, 2007). Previous studies analyzed whether education influences ethnic differences in employment, with studies showing that SGM with a similar education as individuals with native-born parents achieve similar employment outcomes, but others showing a persistence of ethnic inequalities, even after controlling for education (Heath & Cheung, 2007). Yet, scholars very often omitted key variables, like 'family background' (i.e. cultural capital, parental education) and especially 'skills' (i.e. linguistic proficiency, mathematics abilities). Because family background and skills are central predictors of labor market outcomes, and actually differ significantly across ethnic

groups (Heath et al., 2008), considering these two analytical measures seems critical to better understand ethnic differences in labor market outcomes.

In this study, we use representative data from the 2009/10 Wave of the *Netherlands Longitudinal Lifecourse Study* (NELLS) to analyze the employment participation and occupational status of Moroccan and Turkish SGM living in the Netherlands. The NELLS data contain an oversampled subgroup of Moroccan and Turkish SGM. This fact permits us to compare the labor market achievements of Moroccan and Turkish SGM with those of individuals from Dutch origins (e.g., De Graaf et al., 2010a). The NELLS, unlike similar surveys with an oversampled group of SGM, offers rich measures of family background (i.e. parental education, cultural capital socialization) and skills (i.e. linguistic proficiency, mathematics abilities). This allows us to test the important question of how family background, education, and skills affect ethnic stratification in the labor market.

We develop four hypothesis that permit us to offer new insights into how ethnic inequalities operate in the labor market. The *family background hypothesis* states that ethnic differences in the labor market are essentially explained by social origins. By contrast, the human capital approach argues that human capital critically affects ethnic differences in the labor market, including one hypothesis that emphasizes the role of education (*education hypothesis*) and the other arguing that skills explain key ethnic differences in the labor market (*skills hypothesis*). Finally, the *ethnic penalty hypothesis* holds that ethnic minorities suffer a labor market disadvantage, even when their family background, educational level, and skills are equivalent to those of individuals with native-born parents.

We make, at least, two key contributions to the literature. First, we analyze how linguistic proficiency and numeracy skills affect the employment participation and occupational status of Moroccan and Turkish SGM. Linguistic proficiency and numeracy abilities were argued to

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be critical predictors of labor market outcomes, but the way these two variables affect ethnic differences in the labor market remains understudied, especially for SGM (Chiswick, 1991; Chiswick, Lee, & Miller, 1999; Leslie & Lindley, 2001). Second, we study how parental education and cultural capital socialization affect ethnic differences in the labor market. In so doing, we contribute to some related studies (e.g., Heath & Cheung, 2007), which typically did not investigate the effects of family background and education within the same analytical framework. This latter question is highly relevant for the literature, since family background and education have clearly distinct effects on individuals' life chances (Morgan et al., 2006), and there is actually some evidence from Britain showing that the process of intergenerational class inequality varies across ethnic groups (Platt, 2005).

The Dutch context of Moroccan and Turkish SGM provides an interesting framework of study. Moroccan and Turkish SGM were found to be particularly disadvantaged in the Dutch labor market (Crul & Vermeulen, 2003; Tesser & Dronkers, 2007) and, unlike the other major immigrant groups of Antillean and Caribbean origins, were typically not exposed to the Dutch language in their family of origin. This was argued to be important to understand the disadvantage of Moroccan and Turkish SGM in skills (i.e. reading, mathematics) and academic achievements with labor market implications (Van de Werfhorst & Van Tubergen, 2007). The characteristics of these two ethnic groups within this national context thereby provide an interesting case for the international literature on ethnic stratification.

The Dutch Context

The context of Moroccan and Turkish SGM in the Dutch labor market needs a brief presentation, before turning to the theoretical framework. Migration to the Netherlands from Morocco and Turkey started in the 1960s, as for (temporary) employment in low-skilled jobs in the agriculture and industry. These migrant groups had lower levels of education than the

majority Dutch population, were typically not fluent in Dutch language for a long period, and had a strong identification with the Muslim culture (Crul & Doomernik, 2003; Driessen & Smit, 2007; Tesser & Dronkers, 2007). These aspects are clearly relevant to understand the labor market chances of Moroccan and Turkish SGM.

Moroccan and Turkish SGM were found to be significantly disadvantaged in the Dutch labor market. Tesser and Dronkers' (2007) study, based on data from the *Social Position and Facilities Use of Ethnic Minorities* (SPVA) for the period 1988-1998, represents the only study that tried to disentangle with representative data the labor market outcomes of Moroccan and Turkish SGM in the Netherlands. The authors found that 22% of second-generation Turkish men and 29% of second-generation Moroccan men were unemployed, with figures of 32% and 41% for, respectively, second-generation Turkish and Moroccan women. The unemployment rates were much lower for individuals with Dutch-born parents (8% for men; 15% for women). They also found that 38% of men and 31% of women with parents born in the Netherlands worked in professional or managerial occupations, while only 10% of men and 10.5% of women from Turkish ancestries worked in these occupations, with even lower rates for second-generation Turkish men (8%) and women (5%). Tesser and Dronkers (2007) found that that the higher unemployment rates of second-generation Moroccan men and Turkish women were largely explained by their low levels of education, but not in the case of second-generation Moroccan men and Turkish women. The authors also found that Moroccan and Turkish SGM were significantly disadvantaged in the most privileged occupations after controlling for education.

Tesser and Dronkers (2007) provided insights into how Moroccan and Turkish SGM perform in the Dutch labor market. Now, their study has at least two aspects that motivate further research. First, Tesser and Dronkers' (2007) study was based on relatively old data (1988-

1998). This raises the question of whether their findings also apply to the youngest Dutch cohorts, who recently made an important progress in schooling (Crul & Doomernik, 2003). Second, and more important for the international literature, Tesser and Dronkers' (2007) study, as other related studies for other countries, provided insufficient evidence on how family background and human capital affect the labor market outcomes of SGM, one fact that clearly motivates the theoretical and empirical approach of this study.

Theoretical Framework: Family Background, Human Capital, or Ethnic Penalty?

Family Background

Our first theoretical approach focuses on how family background affects ethnic differences in the labor market. The family of origin is a key indicator of individuals' life chances (Morgan et al., 2006). Privileged parents, as compared to disadvantaged parents, have high levels of human capital and material resources to invest in their children's education (Erikson & Jonsson, 1996), and are more likely to engage with their offspring in cultural activities that foster their 'cognitive' abilities (i.e. visiting museums, libraries, reading) and access to the 'status culture' (i.e. opera, dance, classical music) (Bourdieu, 1984; De Graaf, De Graaf, & Kraaykamp, 2000). These socioeconomic differences in family socialization are expected to play a key role in the reproduction of social inequality.

Previous studies on ethnic stratification (Heath et al., 2007; Kalter et al., 2007) argued that SGM are disadvantaged in the labor market because they come from lower socioeconomic origins than individuals with native-born parents. Heath and Cheung (2007) posited that the effect of family background on ethnic differences in the labor market is essentially mediated by education. However, previous studies did not analyze whether family background has a direct effect on ethnic differences in labor market outcomes, or if its effect is, if any, mediated

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by other variables. The study of Platt (2005) with British data suggests that parental occupation has different effects on children's class destinations across ethnic groups. Yet, her study did not include some essential measures of human capital (i.e. linguistic proficiency) or family origins (cultural capital socialization). The effect of family background on the labor market outcomes of SGM might disappear once education is considered in the model, as argued by Heath and Cheung (2007). But family background could have direct effects on ethnic differences in labor market outcomes. Indeed, the material and cultural disadvantage of SGM in their family of origin could reduce their labor market chances, even when they achieved high levels of human capital. The *family background hypothesis* states that social origins have an important independent effect on ethnic inequalities in labor market outcomes, even after controlling for educational qualifications and skills.

Hypothesis 1 – Family Background: Family background explains the labor market outcomes of SGM.

Human Capital

The second theoretical approach of our study deals with human capital. Human capital theory posits that individuals' human capital (i.e. education, personal abilities, and job experience) determines their labor market outcomes (Becker, 1993[1964]). From this theoretical perspective, employers rationally choose the job candidates with the highest levels of human capital (Chiswick, 1991), without following 'normative' or 'ideological' criteria (Heath & Cheung, 2007). Thus, ethnic differences in employment outcomes are argued to be explained by human capital, and not by cultural or ethnic-typed attributes. Human capital can be divided into two key components: 'education' and 'skills'.

The *educational level* is considered a key indicator of individuals' labor market outcomes. Several studies found that SGM achieve similar occupational outcomes than individuals of

native origins with the same levels of education, but other studies suggested that ethnic inequalities in the labor market persist after controlling for education (Heath & Cheung, 2007; Heath et al., 2008; Tesser & Dronkers, 2007). Now, the problem with the existing literature is that scholars treated education as a proxy of very different analytical categories, like family background (i.e. parental education) or skills (i.e. linguistic and numeracy skills). This implies that previous studies on SGM have not analyzed how education influences ethnic differences in labor market outcomes, net of social origins and skills. If education is a central explanatory variable of ethnic differences in the labor market, one should expect that schooling achievement explains ethnic differences in the labor market, after controlling for family background and skills. Thus, the *education hypothesis* holds that ethnic differences in the labor market are directly explained by education.

Hypothesis 2 – Education: Education explains the labor market outcomes of SGM.

The formation of *skills* plays also an important role in the labor market, independent of schooling qualifications (Barone & Van de Werfhorst, 2011). One critical component of skills is *linguistic proficiency*. Several groups of SGM, due to their low exposure to the official country language in their family of origin, might achieve low levels of linguistic performance (Van de Werfhorst & Van Tubergen, 2007). These linguistic differences are partially reduced with education, but might persist when SGM have similar levels of education as individuals of native origins. Previous studies found that linguistic proficiency is positively associated with the labor market integration and earnings of ethnic minorities (Chiswick & Miller, 1999; Leslie & Lindsey, 2001). However, scholars typically focused on first-generation migrants, who suffered a different process of labor market integration than their offspring. Moreover, some studies (e.g., Leslie & Lindley, 2001) treated all native-born persons as 'fluent' in the dominant language of the country, without empirically considering that linguistic proficiency

varies both across and within ethnic groups. In this sense, we take into account variations in linguistic proficiency for all the individuals of our sample.

A second key measure of skills is *numeracy abilities.* Numeracy skills were found to have positive effects on labor market outcomes (Chiswick et al., 2003). However, how numeracy affects ethnic differences in the labor market remains unclear. On the one hand, SGM might have the same numeracy skills as native-born individuals, once family background and education are taken into account. Yet, SGM could accumulate some ethnic-typed difficulties in the school which brought them to achieve lower mathematics or scientific skills, even when they had a similar education than individuals of native origins (i.e. due to their low linguistic abilities to learn mathematics at school, or to teachers' prejudices or low expectations on their scientific abilities). Overall, the *skills hypotheses* holds that any ethnic disadvantage in the labor market that cannot be explained by education or family background is explained by linguistic proficiency and numeracy skills.

Hypothesis 3 – Skills: Skills explain the labor market outcomes of SGM.

Ethnic Penalties

Our last theoretical approach focuses on *ethnic penalties*. Ethnic penalties are defined as those processes in which employers do not value their job candidates by their skills, but on the basis of their ethnic attributes (Heath et al., 2008; Kalter & Kogan, 2006). From this approach, if individuals from ethnic minorities have similar family backgrounds, education, and skills as native-born individuals, any observed disadvantage in their labor market outcomes should be explained by ethnic-typed or racial reasons. As argued by Jonsson (2007), scholars should not confuse ethnic penalties with discrimination, unless they have direct measures of ethnic discrimination. A recent experiment (Blommaert, Van Tubergen, & Coenders, 2013) actually

suggested that ethnic discrimination towards Moroccan and Turkish SGM can play a role in the disadvantage of these groups in the Dutch labor market. Although our data unfortunately do not allow us to observe ethnic discrimination, we can include measures of education, family background, and skills that were not considered in previous studies on ethnic penalties. The *ethnic penalty hypothesis* holds that SGM are disadvantaged in the labor market, even after controlling for family background, education, and skills.

Hypothesis 4. Ethnic Penalty: Family background, education, and skills do not explain any observed disadvantage of SGM in their labor market outcomes.

Methodology

Survey

We use data from the 2009/10 Wave of the *Netherlands Longitudinal Life-course Study* (NELLS) (De Graaf et al., 2010a). The NELLS contains by design an oversampled group of Moroccan and Turkish SGM living in urbanized municipalities, where women are overrepresented among Moroccans and older respondents amongst Moroccans and Turks (De Graaf et al., 2010b). This oversampling allows us to establish a comparison between Moroccan and Turkish SGM and their Dutch native-born counterparts. Other groups of SGM (i.e. Indonesian, Surinamese) cannot be studied, due to their low sample representation. The NELLS, unlike most surveys with similar characteristics, provides rich information on our variables of interest, such as parental education, cultural capital socialization, linguistic proficiency, mathematics skills, education, and occupation.

Sample

The NELLS has a total of 5,312 respondents between the ages of 14 and 49. We limit our sample of analysis to all non-student individuals aged 23-49 (2,138 cases). Dutch individuals

who are aged 23 have typically obtained a Bachelor/Master degree, the highest level of education considered in our analyses (PhD students are considered as employed in the Dutch labor market). Analyses (not shown) using the age of 25 as the sample cut-off point showed the same results as the ones here presented. We excluded from our sample those cases where one parent was Dutch and the other Moroccan or Turkish (33 cases), and the few cases in which one parent came from Morocco and the other from Turkey (8 cases), to establish a clear differentiation between our ethnic groups of study. Complementary analyses (not shown) that considered parents' intermarriage within these three national groups offered similar results to the ones here presented. We additionally dropped 40 cases of individuals without information on family background, education, linguistic proficiency, or numeracy skills. This exclusion of cases, overall, reduced our sample to 2,057 individuals. From this sample we finally dropped 27 cases without information on the current job situation, leaving us with a definitive sample of 2,030 cases (921 men and 1,109 women).

We unfortunately could not differentiate between active and inactive individuals when analyzing employment participation. This is due to the high number of cases that we would have lost if we would have excluded respondents that were inactive at the moment of the interview. This is certainly an empirical limitation, since non-employed individuals who are looking for a job might have distinct employed-related characteristics than non-employed individuals who are not looking for a job. Yet, we still analyze ethnic differences in labor market participation, a critical variable for the literature on ethnic differences in employment. We also use a subsample of employed individuals to study occupational status, which contains a total of 1,802 cases (849 men and 952 women), resulting from dropping 198 cases of unemployed individuals and 31 cases without information on the current job.

Variables

We use two 'dependent variables' One is e*mployment participation*, a dummy measure on whether the respondent had a paid job at the moment of the interview. The other is *occupational status*, a measure based on the 'International Socio-Economic Index' (ISEI) (Ganzenboom, De Graaf, and Treiman, 1992). The ISEI is a continuous occupational-based measure which offers a combined indicator of potential income and human capital. It ranges from 16 (i.e. farm-hands workers) to 90 (i.e. judges). We use the available information in the NELLS data from the 'International Standard Classification of Occupations' (ISCO-88) to construct the ISEI measure (Ganzeboom & Treiman, 1996). We ran analyses (not shown but available upon request) with categorical dependent variables on the likelihood of being in a professional/managerial occupation or working-class occupation. We obtained very similar results to the ones here presented. Yet, we opted for the linear approach, which allows us to report the results in a more straightforward way.

The main 'independent variable' is *ethnic group*, which has three categories: Dutch origins, Moroccan SGM, and Turkish SGM. These three demographic groups are defined on the basis of the country of origin of either one or the two parents of the respondent. We, as mentioned above, exclude from the sample those individuals born from the ethnic intermarriage of any of these three national origins. Parental education contains the *mothers' education* and *fathers' education*, including seven categories: (1) unfinished primary; (2) completed primary; (3) low secondary vocational; (4) upper secondary vocational; (5) upper secondary general; (6) tertiary education; (7) unknown/unclassified (the relatively large number of parents without a classified level of education motivated the inclusion of this last category). Unfortunately, we did not have access to data on parental occupation. We also consider four dummy variables on the respondent's cultural capital when she/he was aged 12-14, in which we differentiated cases with the answer 'sometimes' or 'frequently' from those where the answer is 'never': (1)

attending classical, ballet, and opera events; (2) *attending history/art exhibitions*; (3) *attending theatre plays*; (4) *parent(s)' reading time in everyday life*.

The variable *education* contains five categories: (1) primary or lower secondary; (2) upper secondary vocational; (3) upper secondary academic; (4) tertiary vocational college; (5) university. *Language proficiency* is constructed from respondents' answer of nine questions with different difficulty levels, in which respondents had to choose the most suitable word from five alternative options. *Numeracy skills* was constructed from five questions on logical numerical sequences with different levels of difficulty. Because some questions had very few mistakes, we constructed three categories (low, medium, high) for the two skills variables, based on the distribution of right answers (see Table 3 of the Annexes). Finally, we also use *age*, a continuous measure that serves as a control variable (Table 1 presents a description of variables). The matrix correlation of selected independent variables (see Tables 1 and 2 of Annexes) does not show high levels of statistical multicollinearity. For reasons of space, we do not discuss the results of this matrix correlation.

Empirical Strategy

We apply two statistical techniques: Ordinary Least Squares (OLS) and Binary Logistic (Logit). The Logit models are based on the Karlson-Holm-Breen (KHB) method (Karlson, Holm, & Breen, 2012), which allows us to compare coefficients (or odds) of binary logistic models by subtracting the residuals of the control variables that are subsequently added into the original equation (the uncorrected Logit models offered very similar results to the ones presented with the KHB method). Analysis are ran separately by gender, as in previous studies (Heath & Cheung, 2007), because the contexts that affect individuals' labor market outcomes differ by gender. We correct for the oversampling of some demographic groups. Four empirical models are run for each dependent variable. Model 1 includes ethnic group.

Model 2 adds family background measures (parental education, cultural capital socialization). Model 3 adds the respondents' education. Model 4 adds skill variables (linguistic proficiency, numeracy skills). All the models include age as a control variable.

Findings

Employment Participation

Table 2 presents the KHB Logit models for labor market participation[1]. For men, the empirical analyses show a clear disadvantage of Moroccan and Turkish SGM in their employment participation. In Model 1, we observe very salient negative odds of 1.74 for men who are Moroccan SGM (p-value < 0.001) and 1.48 for men from Turkish origins (p-value < 0.01). Model 2, which contains family background measures, shows an evident reduction in the negative odds for Moroccan SGM (Odds: -1.48; 15% change) and Turkish SGM (Odds: -1.35; 9% change), even if the negative effects of ethnicity remain significant for both ethnic groups (p-value < 0.05). In Model 3, which includes education in the model, we observe that the negative effects of being Moroccan and Turkish SGM become stronger (p-value < 0.01), with a relative increase in the negative odds of 6% for Moroccan SGM (Odds: -1.58) and 13% for Turkish SGM (Odds: -1.53). Model 4 shows a strengthening of the negative odds when skills (especially numeracy) are added into the model, with a 10% change for Moroccan SGM (Odds: -1.74) and 6% for Turkish SGM (Odds: -1.62) (p-values < 0.01), suggesting that men from Moroccan and Turkish origins benefit less from their skills in employment participation than their counterparts with Dutch-born parents.

The KHB Logit models for women's labor market participation are also presented in Table 2. Model 1, consistent with the same model for men, shows that women of Moroccan and

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[1] The statistical models are presented with this sequential/logical order: family of origin, schooling, and skills. We ran basic models (not shown) that included ethnicity and either education or skills. The logic of these results was consistent with the findings presented here.

Turkish origins are unevenly disadvantaged in labor market participation, with respectively odds of -1.30 and -1.15 (p-value < 0.001). Yet, Model 2 shows that the negative effects of ethnicity on women's employment participation completely disappear with family background measures, with a strong reduction in the odds for women of Moroccan origins (Odds: -0.73; 44% change) and Turkish origins (Odds: -0.62; 46% change). Model 3, which adds education in the analyses, presents a slight growth of 5% in the negative odds of labor market participation for second-generation Turkish women (Odds: -0.65), and especially in the negative odds for second-generation Moroccan women, equivalent to 32% (Odds: -0.96; p-value < 0.05). In contrast, Model 4 shows that skills produce a drastic reduction in the negative odds for women from Moroccan and -especially- Turkish ancestries, with changes of respectively 25% (Odds: -0.72) and 51% (Odds: -0.32). In parallel, the strong net positive effects of linguistic proficiency have produce a drastic reduction in the previously observed effects of father's education and education.

In general, Table 2 shows important ethnic differences in employment participation, with different implications for men and women. The results for men's employment participation are consistent with the *ethnic penalty hypothesis* (Hypothesis 4). Indeed, men from Moroccan and Turkish origins are disadvantaged in employment participation, even when family background, and especially education and skills, are included in the empirical model. In contrast, the ethnic disadvantage on women's labor market participation appears to be essentially affected by 'family background' (consistent with Hypothesis 1), but also by differences in 'linguistic proficiency' (consistent with Hypothesis 4).

Occupational Status

Table 3 presents the OLS models for occupational status, measured with the ISEI scores. Model 1 shows that employed men from Turkish ancestries are disadvantaged in their

occupational status (p-value < 0.01), but not men from Moroccan origins, as compared to their counterparts with Dutch-born parents. Model 2, however, shows that parental education, and also having visited museums in mid childhood, suppose a very important increase in the ISEI scores of both second-generation Moroccan men (9 points) and second-generation Turkish men (8 points), with the two coefficients turning into positive, and significant for men from Moroccan origins (p-value < 0.01). Model 3, which adds education into the analyses, shows a relative reduction of 5 and 3 ISEI score points for, respectively, Moroccan and Turkish SGM, with the coefficients for Moroccan SGM turning again into insignificant. Even if education clearly mediates the observed family background effects, social background is more influential than education in explaining the disadvantage of second-generation Turkish men in their occupational status. In Model 4, we observe that skills variables do not alter the effects of education and ethnicity on men's occupational status, even if linguistic proficiency, unlike numeracy skills, has significant positive effects.

The OLS results for women's occupational status are also presented in Table 3. The results for women's occupational status show important similarities, but also differences, with those observed for men's occupational status. In the basic model (Model 1), we appreciate that employed women who are Moroccan and Turkish SGM are not disadvantaged in their occupational status, and actually have (slightly) higher ISEI scores (but insignificant), as compared to their counterparts with Dutch-born parents. In Model 2, family background measures, in particular 'highbrow' cultural capital measures (i.e. having attended classical cultural events and theatre plays in mid childhood), produce an increase in the ISEI scale of 7 points for Moroccan SGM (p-value < 0.01) and 8 points for Turkish SGM (p-value < 0.001). This shows that women from Moroccan and Turkish origins have a higher occupational status than their counterparts from Dutch origins coming from similar family backgrounds. Model 3 presents a relative reduction of 3 ISEI score points in the coefficient of Moroccan SGM and a

decrease in its level of significance (p-value < 0.01) when education is taken into account, without important variations in the coefficient for Turkish SGM. Finally, Model 4 shows that skills do not have any relevant effect on occupational status.

Overall, in Table 3 we find low levels of ethnic inequality in occupational status, except for men from Turkish origins. Yet, the inclusion of family background and human capital measures offer interesting ethnic differences on labor market outcomes. For men, family background explains the low ISEI scores of Turkish SGM, whereas second-generation Moroccan men appear to be advantaged in this regard, as compared to men with Dutch-born parents from similar social backgrounds. In a similar vein, women from ethnic minorities, after controlling for family background measures, have a much higher occupational status than their counterparts with Dutch-born parents. Therefore, family background affects the association between ethnicity and occupational status amongst men and women, in line with the idea of the *family background hypothesis* (Hypothesis 1).

Discussion

The study of how SGM perform in the labor market is central to understand ethnic equality and cohesion. This is especially salient in the current context of increasing levels of ethnic diversity and labor market integration of SGM in Western societies (Heath et al., 2008; Portes & Zhou, 1993). In this study, we used data from the 2009/10 Wave of the *Netherlands Longitudinal Lifecourse Study* (NELLS) to analyze the employment participation and occupational status of Moroccan and Turkish SGM in the Dutch labor market. We believe that our context of study is relevant for the international literature on ethnic inequalities in the labor market. Moroccan and Turkish SGM were found to be disadvantaged in the Dutch schooling system and labor market, identified with a different culture and religion than the Dutch majority population, and raised speaking another language than Dutch at home, unlike

other groups of SGM (i.e. Indonesian or Surinamese) (Crul & Doomernik, 2003; Driessen & Smit, 2007; Tesser & Dronkers, 2007). Such characteristics of Moroccan and Turkish SGM in the Netherlands offer indeed an interesting framework to analyze the factors that can influence and modify the labor market outcomes of ethnic minorities.

We have contributed to the literature by offering new empirical evidence on how family background, education, and skills affect ethnic stratification in the labor market. Although these three dimensions were discussed in the literature (Heath & Cheung, 2007; Jonsson, 2007), previous studies on the labor market outcomes of SGM did not investigate all these three aspects together within the same analytical framework. The NELLS survey (De Graaf et al., 2010a) allowed us to fill this gap by offering information on a range of variables of interest (i.e. parental education, cultural capital background, linguistic proficiency, numeracy skills, and occupation) for an oversampled group of Moroccan and Turkish SGM. We thereby believe that our study sheds new light on the key question of how family background and human capital affect ethnic differences in the labor market.

Our simple regression models (without considering the effects of family background, education, and skills) showed important ethnic differences, whether we looked at employment participation or occupational status. For employment participation, Moroccan and Turkish SGM (men and women) were found to be unevenly disadvantaged. In contrast, for occupational status, we only found significantly low occupational positions for second-generation Turkish men. This is consistent with previous studies (e.g., Heath et al., 2008), which found weaker ethnic inequalities for occupational attainment than for employment participation. However, we found lower levels of disadvantage in occupational status amongst Moroccan and Turkish SGM than Tesser and Dronkers (2007), who used Dutch data from the 1990s, found for occupational class. This might suggest a relative decrease in the

socioeconomic disadvantage of Moroccan and Turkish SGM in the Netherlands. In general, our basic empirical models show an important ethnic polarization in the labor market, with one group of Moroccan and Turkish SGM unevenly disadvantaged in employment participation, but another group of employed Moroccan and Turkish SGM who (with the exception of second-generation Turkish men) achieve occupational positions that are equivalent to the ones of the employees with Dutch-born parents.

Our main objective, however, was to investigate which factors influence and can alter the labor market outcomes of ethnic minorities. We did so by testing four hypotheses. The *family background hypothesis* (Hypothesis 1) posed that the labor market disadvantage of Moroccan and Turkish SGM is mainly explained by family background characteristics. The *education hypothesis* (Hypothesis 2) held that any disadvantage of Moroccan and Turkish SGM in the labor market is mainly due to differences in schooling outcomes. The *skills hypothesis* (Hypothesis 3) stated that ethnic differences in labor market outcomes are mainly explained by skills. Finally, the *ethnic penalty hypothesis* (Hypothesis 4) anticipated that ethnicity is negatively associated with labor market outcomes, even after considering family background, education, and skills in the empirical analyses.

The multivariate statistical findings for employment participation differed significantly by gender. For men, our results for employment participation support the *ethnic penalty hypothesis* (Hypothesis 4). Education, but also skills, did not reduce, but increase, ethnic differences in men's employment participation, whereas family background only partially reduced the disadvantage of second-generation Moroccan and Turkish men. For women, the disadvantage of Moroccan and Turkish SGM in employment participation was largely explained by their family background, consistent with the *family background hypothesis* (Hypothesis 1). Women from ethnic minorities (especially those from Turkish ancestries)

were also relatively advantaged in their labor market participation when they had similar linguistic skills than their counterparts with Dutch-born parents, in line with the *skills hypothesis* (Hypothesis 3). Education, in contrast, was found to strengthen the disadvantage of women from Moroccan backgrounds.

The multivariate statistical results for occupational status also offered relevant, but quite different, variations across ethnic groups. For men, the disadvantage of second-generation Turks in occupational status was found to be explained by social origins, whereas Moroccan SGM were relatively advantaged as compared to their counterparts with Dutch-born parents from similar origins. For women, second-generation Moroccans and Turks were found to obtain much higher occupational positions than their counterparts with Dutch-born parents coming from similar social backgrounds. These findings show, consistent with the *family background hypothesis* (Hypothesis 1), that family origins influence the association between ethnicity and labor market outcomes. Although education captured the effects of family background on occupational status (especially for men), the latter clearly had a more important influence in explaining the relationship between ethnicity and occupational status than the former. This shows a positive selection in occupational attainment for Moroccan and Turkish SGM from specific social backgrounds, and very especially for women.

Our study suggests that the labor market outcomes of SGM need to be framed within their socioeconomic and human capital context, as it was argued in previous cross-national studies (e.g., Heath et al., 2008). Yet, we drew specific attention to skills, unlike previous studies. Skills were found to explain individuals' labor market outcomes, net of education (see Barone & Van de Werfhorst, 2011), but also differences across ethnic groups (see Chiswick & Miller, 1999). Even if numeracy skills had a positive effect on men's labor market participation, second-generation Moroccan and Turks benefited less from their numeracy abilities than their

counterparts with Dutch-born parents. Linguistic proficiency, by contrast, paid off more positively for employment participation amongst Moroccan and -especially- Turkish SGM than for their counterparts with Dutch-born parents. For occupational status, linguistic skills had a positive effect on occupational status, but did not explain any substantial ethnic difference whatsoever. These analyses for skills represent an innovative first attempt to better understand how skills affect the labor market outcomes of SGM in Western societies. Future studies should provide new empirical evidence in this direction, especially in light of the mixed results that we found by ethnicity, gender, and type of labor market indicator.

We have to highlight, at least, two empirical shortcomings. First, and foremost, due to the low number of Moroccan and Turkish SGM in our sample, we had to include both active and inactive population in our analyses on employment participation. We acknowledge that inactivity and unemployment might explain different mechanisms of labor market integration across ethnic groups. Hence, future studies should ideally study how parental education, cultural capital socialization, education, linguistic skills, numeracy skills, or additional variables, explain ethnic differences in the labor market by taking activity status into account. Second, we could not study the causal links between skills and labor market outcomes. It could be the case that individuals' linguistic and numerical skills vary *as a result of* their labor market position, even if one recent study (Chiswick et al., 2003) found no direct effects of labor market experience on literacy and numeracy. Future studies would certainly improve our knowledge on ethnic differences in labor market outcomes by using a longitudinal approach that permits studying individuals' life course transitions.

We believe that our article leaves room for new lines of research trying to disentangle which factors influence ethnic stratification in the labor market. New research is needed to further examine a -hypothesized- gendered ethnic-advantage in the labor market. Moreover, future

studies would not only benefit from having access to the skills variables that we consider (linguistic and numeracy), but other key measures of skills, such as behavioral or social, which might affect ethnic differences in the labor market. Variables of ethnic diversity, which have been recently investigated to measure interethnic relations (e.g., Huijts, Kraaykamp, & Scheepers, 2013), might also allow us to better understand which factors affect the labor market chances of SGM in Western societies. Overall, we hope that the analytical approach and empirical evidence provided in this study made an important contribution to the literature on ethnic differences in the labor market in contemporary societies.

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Table 1. Descriptive Statistics

	Men				Women			
	All sample		Employed		All sample		Employed	
	Mean	*s.d.*	*Mean*	*s.d.*	*Mean*	*s.d.*	*Mean*	*s.d.*
Employment Participation	0.94	0.24	n.a.	n.a.	0.87	0.33	n.a.	n.a.
ISEI	n.a.	n.a.	49.1	16.4	n.a.	n.a.	47.38	15.4
Moroccan SGM	0.06	0.24	0.05	0.22	0.05	0.22	0.04	0.21
Turkish SGM	0.07	0.26	0.06	0.24	0.08	0.28	0.07	0.26
Dutch origins	0.87	0.34	0.89	0.32	0.86	0.34	0.88	0.32
Father's Primary Unfinished	0.05	0.22	0.04	0.21	0.04	0.20	0.03	0.18
Father's Primary Completed	0.14	0.34	0.14	0.34	0.16	0.37	0.15	0.36
Father's Lower Secondary Vocational *(vmbo)*	0.33	0.47	0.34	0.47	0.29	0.45	0.30	0.46
Father's Upper Secondary Vocational *(mbo)*	0.16	0.37	0.16	0.37	0.17	0.38	0.18	0.38
Father's Upper Secondary General *(havo/ vwo)*	0.04	0.19	0.04	0.19	0.03	0.17	0.03	0.17
Father's Tertiary Education *(hbo / wo)*	0.20	0.40	0.21	0.41	0.20	0.40	0.22	0.41
Father's Unknown	0.08	0.28	0.07	0.26	0.10	0.30	0.09	0.29
Mother's Primary Unfinished	0.07	0.26	0.06	0.24	0.07	0.26	0.07	0.25
Mother's Primary Completed	0.16	0.37	0.16	0.37	0.20	0.40	0.19	0.39
Mother's Lower Secondary Vocational *(vmbo)*	0.43	0.49	0.43	0.50	0.40	0.49	0.41	0.49
Mother's Upper Secondary Vocational *(mbo)*	0.14	0.34	0.14	0.35	0.15	0.35	0.15	0.36
Mother's Upper Secondary General *(havo/ vwo)*	0.03	0.18	0.04	0.18	0.03	0.18	0.03	0.18
Mother's Tertiary Education *(hbo / wo)*	0.09	0.28	0.09	0.28	0.08	0.27	0.09	0.28
Mother's Unknown	0.09	0.28	0.08	0.27	0.07	0.25	0.06	0.23
Museum visit *(sometimes or frequent)*	0.49	0.50	0.50	0.50	0.42	0.49	0.44	0.50
Theatre visit *(sometimes or frequent)*	0.31	0.46	0.32	0.47	0.31	0.46	0.33	0.47
Classical concert *(sometimes or frequent)*	0.19	0.39	0.20	0.40	0.16	0.36	0.16	0.37
Parent's reading *(sometimes or frequent)*	0.67	0.47	0.68	0.47	0.64	0.48	0.65	0.48
Primary Education	0.18	0.39	0.16	0.37	0.16	0.37	0.13	0.34
Lower Secondary Vocational *(vmbo)*	0.34	0.47	0.34	0.47	0.36	0.48	0.36	0.48
Upper Secondary General *(mbo)*	0.06	0.24	0.06	0.24	0.09	0.29	0.09	0.28
Tertiary Vocational *(havo/ vwo)*	0.27	0.44	0.28	0.45	0.28	0.45	0.31	0.46
Tertiary Academic *(hbo / wo)*	0.15	0.36	0.16	0.36	0.11	0.32	0.12	0.32
Numeracy *(low)*	0.09	0.29	0.08	0.27	0.15	0.35	0.13	0.34
Numeracy *(intermediate)*	0.21	0.41	0.22	0.41	0.24	0.43	0.23	0.42
Numeracy *(high)*	0.69	0.46	0.70	0.46	0.61	0.49	0.64	0.48
Language *(low)*	0.11	0.31	0.10	0.30	0.11	0.31	0.09	0.28
Language *(intermediate)*	0.33	0.47	0.33	0.47	0.35	0.48	0.35	0.48
Language *(high)*	0.56	0.50	0.58	0.49	0.54	0.50	0.57	0.50
Age	35.21	6.39	35.33	6.37	34.94	6.39	34.90	6.39
N.	921		849		1, 109		952	

Table 2. KHB Logistic Models. Employment Participation by Ethnic Group for Men and Women

	Men											Women										
	M1		M2			M3			M4			M1		M2			M3			M4		
	Odds	s.e.	Odds	s.e.	Diff	Odds	s.e.	Diff	Odds	s.e.	Diff	Odds	s.e.	Odds	s.e.	Diff	Odds	s.e.	Diff	Odds	s.e.	Diff
Ethnicity																						
Moroccan	-1.74***	(0.4)	-1.48*	(0.6)	15	-1.58**	(0.6)	6	-1.74**	(0.6)	10	-1.30***	(0.4)	-0.73	(0.4)	44	-0.96*	(0.5)	32	-0.72	(0.5)	25
Turkish	-1.48**	(0.5)	-1.35*	(0.6)	9	-1.53**	(0.6)	13	-1.62**	(0.6)	6	-1.15***	(0.3)	-0.62	(0.4)	46	-0.65	(0.4)	5	-0.32	(0.4)	51
Father's education																						
Primary completed			0.29	(0.7)		0.34	(0.7)		0.29	(0.7)				0.79	(0.6)		0.88	(0.6)		0.80	(0.6)	
Lower sec. Vocational (vmbo)			0.12	(0.6)		0.15	(0.6)		0.10	(0.6)				1.14*	(0.6)		1.16*	(0.6)		1.11*	(0.6)	
Upper sec. Vocational (mbo)			0.74	(0.7)		0.68	(0.7)		0.59	(0.7)				1.34*	(0.6)		1.31*	(0.6)		1.22	(0.6)	
Upper sec. General (havo/ vwo)			0.97	(1.0)		0.93	(1.0)		0.89	(1.0)				0.64	(0.7)		0.44	(0.7)		0.32	(0.7)	
Tertiary (hbo / wo)			0.86	(0.7)		0.87	(0.8)		0.79	(0.8)				1.41*	(0.6)		1.29*	(0.6)		1.22	(0.6)	
Unknown/Unclassified			-1.20	(0.6)		-1.02	(0.6)		-1.03	(0.6)				0.85	(0.6)		1.00	(0.6)		1.00	(0.6)	
Mother's education																						
Primarycompleted			0.45	(0.6)		0.37	(0.6)		0.27	(0.6)				-0.49	(0.5)		-0.55	(0.5)		-0.46	(0.5)	
Lower sec. vocational (vmbo)			-0.21	(0.6)		-0.37	(0.6)		-0.44	(0.6)				-0.56	(0.5)		-0.65	(0.5)		-0.67	(0.5)	
Upper sec. vocational (mbo)			-0.14	(0.7)		-0.32	(0.7)		-0.35	(0.7)				0.04	(0.6)		-0.16	(0.6)		-0.03	(0.6)	
Upper sec. general (havo/ vwo)			-0.10	(1.0)		-0.28	(1.1)		-0.39	(1.1)				-0.86	(0.8)		-1.17	(0.8)		-1.15	(0.8)	
Tertiary (hbo / wo)			-1.04	(0.7)		-1.18	(0.7)		-1.20	(0.7)				0.28	(0.8)		-0.13	(0.8)		-0.15	(0.8)	
Unknown/Unclassified			0.18	(0.6)		0.05	(0.6)		-0.02	(0.6)				-1.11	(0.6)		-1.03	(0.6)		-0.97	(0.6)	
Cultural capital																						
Museum visit			-0.54	(0.4)		-0.67	(0.4)		-0.68	(0.4)				0.39	(0.3)		0.25	(0.3)		0.23	(0.3)	
Theatre visit			0.02	(0.4)		0.03	(0.4)		0.04	(0.4)				0.25	(0.3)		0.23	(0.3)		0.21	(0.3)	
Classical events			0.79	(0.6)		0.80	(0.6)		0.82	(0.6)				-0.38	(0.4)		-0.39	(0.4)		-0.39	(0.4)	
Parent's reading			0.49	(0.4)		0.37	(0.3)		0.42	(0.3)				-0.04	(0.2)		-0.07	(0.2)		-0.17	(0.2)	
Education																						
Upper sec. vocational (mbo)						1.50***	(0.4)		1.43***	(0.4)							0.83**	(0.3)		0.62*	(0.3)	
Upper sec. general (havo)						0.57	(0.5)		0.55	(0.5)							0.33	(0.4)		-0.03	(0.4)	
Tertiary vocational (hbo)						1.02*	(0.4)		0.99*	(0.4)							1.63***	(0.4)		1.18**	(0.4)	
University (wo)						1.00	(0.7)		1.05	(0.7)							1.26**	(0.5)		0.69	(0.5)	
Numeracy skills																						
Medium									1.31**	(0.5)										-0.13	(0.3)	
High									1.02**	(0.4)										0.17	(0.3)	
Linguistic skills																						
Medium									-0.04	(0.4)										0.79**	(0.3)	
High									-0.32	(0.5)										1.24***	(0.3)	
Pseudo R^2	0.18		0.18			0.18			0.18			0.13		0.13			0.13			0.13		
N	922		922			922			922			1109		1109			1109			1109		

Note: All models control for age / $^*p < 0.05$, $^{**}p < 0.01$, $^{***}p < 0.001$ / The numbers of the Pseudo R^2 refer by default to Model 4.
"Diff" indicates the percentage difference in the odds from one model to the subsequent one (i.e. from Model 2 to Model 3).

Table 3. OLS Models. Occupational Status (ISEI Scores) by Ethnic Group for Men and Women

	Men M1 b	s.e.	M2 b	s.e.	Diff	M3 b	s.e.	Diff	M4 b	s.e.	Diff	Women M1 b	s.e.	M2 b	s.e.	Diff	M3 b	s.e.	Diff	M4 b	s.e.	Diff
Ethnicity																						
Moroccan	-2.08	(2.6)	6.99*	(3.3)	+9.1	2.47	(2.5)	-4.5	2.59	(2.3)	+0.1	1.30	(2.2)	7.99**	(2.5)	+6.7	5.48*	(2.4)	-2.5	6.07*	(2.4)	+0.6
Turkish	-7.02**	(2.3)	1.43	(2.7)	+8.4	-1.87	(2.3)	-3.3	-0.28	(2.4)	+1.6	0.74	(2.3)	8.27***	(2.4)	+7.5	8.16***	(2.2)	-0.1	9.24***	(2.3)	+1.1
Father's education																						
Primary completed			-1.68	(3.1)		-1.46	(2.5)		-1.82	(2.4)				-1.54	(3.8)		-1.52	(3.0)		-1.94	(2.9)	
Lower sec. Vocational (vmbo)			0.08	(3.0)		-0.78	(2.5)		-1.60	(2.3)				0.20	(3.6)		0.28	(2.9)		-0.07	(2.8)	
Upper sec. Vocational (mbo)			2.10	(3.2)		-0.74	(2.7)		-1.27	(2.5)				4.41	(3.7)		3.35	(3.0)		2.95	(3.0)	
Upper sec. General (havo/ vwo)			6.14	(3.7)		2.80	(3.0)		1.95	(2.9)				2.72	(5.1)		-0.66	(4.2)		-1.05	(4.2)	
Tertiary (hbo / wo)			7.73*	(3.2)		0.59	(2.7)		-0.32	(2.5)				5.53	(3.9)		1.67	(3.2)		1.35	(3.1)	
Unknown			1.66	(3.9)		0.81	(3.1)		0.51	(2.9)				0.94	(3.9)		1.54	(3.2)		1.53	(3.1)	
Mother's education																						
Primary completed			3.95	(3.2)		1.80	(2.5)		0.74	(2.3)				2.02	(3.3)		2.48	(2.6)		2.93	(2.5)	
Lower sec. vocational (vmbo)			5.76	(3.1)		3.57	(2.5)		2.42	(2.3)				5.08	(3.2)		4.79	(2.5)		4.84	(2.5)	
Upper sec. vocational (mbo)			9.13**	(3.2)		2.95	(2.6)		1.77	(2.4)				4.73	(3.5)		2.49	(2.9)		3.07	(2.8)	
Upper sec. general (havo/ vwo)			6.24	(3.9)		-1.18	(3.3)		-2.02	(3.2)				7.80	(4.6)		3.72	(3.9)		3.89	(3.9)	
Tertiary (hbo / wo)			10.71**	(3.5)		2.38	(2.9)		1.15	(2.7)				7.16	(3.7)		2.04	(3.0)		2.17	(3.0)	
Unknown			1.55	(3.7)		1.45	(3.0)		1.15	(2.8)				-1.24	(3.7)		-0.60	(3.1)		-0.40	(3.0)	
Cultural capital																						
Museum visit			2.83*	(1.4)		0.80	(1.2)		0.54	(1.2)				1.96	(1.3)		0.93	(1.1)		0.88	(1.1)	
Theatre visit			2.58	(1.5)		0.81	(1.2)		0.77	(1.2)				2.64*	(1.3)		1.82	(1.2)		1.79	(1.2)	
Classical events			0.57	(1.6)		-0.48	(1.4)		-0.33	(1.4)				4.39**	(1.7)		2.95*	(1.4)		2.93*	(1.5)	
Parent's reading			0.70	(1.3)		1.43	(1.1)		1.34	(1.1)				-0.24	(1.2)		-0.45	(1.1)		-0.70	(1.1)	
Education																						
Upper sec. vocational (mbo)						4.82**	(1.6)		4.10**	(1.5)							3.61*	(1.6)		2.91	(1.7)	
Upper sec. general (havo)						8.50**	(2.9)		7.17*	(2.8)							8.88***	(2.0)		7.62***	(2.0)	
Tertiary vocational (hbo)						19.93***	(1.7)		17.85***	(1.8)							15.63***	(1.7)		14.19***	(1.9)	
University (wo)						27.62***	(1.9)		24.91***	(2.0)							22.67***	(2.0)		20.73***	(2.2)	
Numeracy skills																						
Medium									-0.51	(2.1)										0.46	(1.8)	
High									1.89	(2.0)										1.91	(1.7)	
Languistic skills																						
Medium									3.70*	(1.6)										1.82	(2.1)	
High									6.37***	(1.9)										3.13	(2.1)	
Constant	46.32***	(3.6)	29.32***	(5.2)		29.26***	(4.4)		28.53***	(4.6)		51.01***	(3.4)	36.44***	(4.9)		30.08***	(4.4)		28.63***	(4.9)	
Adjusted R²	0.01		0.13			0.40			0.41			0.00		0.11			0.29			0.29		
N	849		849			849			849			952		952			952			952		

Note: All models control for age / *p< 0.05, **p< 0.01, ***p< 0.001 / These models include only employed individuals.

"Diff" indicates the relative difference in the numbers of the coefficients of one model in relation to the subsequent one (i.e. from Model 2 to Model 3)

ANNEXES

Annex Table 1. Bivariate correlations for men

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Moroccan SGM	1																			
2. Turkish SGM		1																		
3. Dutch origins			1																	
4. Father's Primary Unfinished	0.43	0.17	-0.43	1																
5. Father's Tertiary	-0.09	-0.13	0.16		1															
6. Mother's Primary Unfinished	0.41	0.31	-0.53	0.58	-0.12	1														
7. Mother's Tertiary	-0.06	-0.05	0.08	-0.05	0.33		1													
8. Museum visit	-0.19	-0.21	0.29	-0.18	0.31	-0.21	0.2	1												
9. Theatre visit	-0.14	-0.10	0.17	-0.10	0.28	-0.15	0.19	0.43	1											
10. Classical concert visit	-0.11	-0.10	0.15	-0.09	0.33	-0.14	0.24	0.39	0.45	1										
11. Parent's reading	-0.22	-0.23	0.33	-0.19	0.19	-0.30	0.12	0.24	0.19	0.19	1									
12. Primary Education	0.04	0.02	-0.05	0.07	-0.22	0.10	-0.12	-0.26	-0.18	-0.16	-0.18	1								
13. University	-0.05	-0.06	0.08	-0.04	0.28	-0.06	0.18	0.20	0.21	0.26	0.09		1							
14. Numeracy *(low)*	0.00	0.06	-0.04	0.06	-0.07	0.10	-0.03	-0.10	-0.06	-0.03	-0.03	0.17	-0.08	1						
15. Numeracy *(intermediate)*	0.03	0.04	-0.05	0.05	-0.13	0.07	-0.06	-0.09	-0.06	-0.08	-0.05	0.13	-0.18		1					
16. Numeracy *(high)*	-0.02	-0.07	0.07	-0.08	0.16	-0.12	0.07	0.14	0.09	0.09	0.06	-0.22	0.21			1				
17. Language *(low)*	0.15	0.26	-0.31	0.19	-0.14	0.23	-0.09	-0.19	-0.12	-0.08	-0.15	0.23	-0.13	0.25	0.06	-0.21	1			
18. Language *(intermediate)*	0.07	0.05	-0.09	0.04	-0.12	0.06	-0.11	-0.17	-0.14	-0.16	-0.11	0.14	-0.21	0.07	0.14	-0.16		1		
19. Language *(high)*	-0.16	-0.21	0.27	-0.15	0.21	-0.20	0.16	0.28	0.20	0.20	0.19	-0.27	0.28	-0.22	-0.17	0.29			1	
20. Age	-0.22	-0.18	0.29	-0.13	-0.02	-0.10	-0.08	0.08	-0.01	0.05	0.04	0.02	0.02	-0.08	-0.02	0.07	-0.16	-0.13	0.22	1

Note: The highlighted correlations correspond to those at a significance level of $p < 0.01$.

Annex Table 2. Bivariate correlations for women

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Moroccan SGM	1																			
2. Turkish SGM		1																		
3. Dutch origins			1																	
4. Father's Primary Unfinished	0.35	0.15	-0.35	1																
5. Father's Tertiary	-0.09	-0.12	0.15		1															
6.Mother's Primary Unfinished	0.42	0.24	-0.47	0.56	-0.12	1														
7. Mother's Tertiary	-0.02	-0.08	0.08	-0.06	0.38		1													
8. Museum visit	-0.16	-0.15	0.22	-0.15	0.33	-0.19	0.22	1												
9. Theatre visit	-0.10	-0.13	0.17	-0.11	0.28	-0.14	0.15	0.4	1											
10. Classical concert visit	-0.08	-0.09	0.13	-0.08	0.31	-0.10	0.23	0.36	0.4	1										
11. Parent's reading	-0.19	-0.16	0.26	-0.15	0.13	-0.19	0.10	0.23	0.21	0.16	1									
12. Primary Education	-0.04	0.01	0.01	0.03	-0.18	0.05	-0.11	-0.22	-0.16	-0.13	-0.09	1								
13. University	-0.06	-0.03	0.07	-0.06	0.26	-0.05	0.17	0.17	0.15	0.24	0.08		1							
14. Numeracy *(low)*	0.06	0.10	-0.12	0.09	-0.09	0.04	-0.05	-0.12	-0.10	-0.11	-0.10	0.25	-0.12	1						
15. Numeracy *(intermediate)*	0.10	0.04	-0.09	0.05	-0.09	0.03	-0.07	-0.05	-0.01	-0.04	-0.03	0.06	-0.11		1					
16. Numeracy *(high)*	-0.13	-0.1	0.17	-0.11	0.14	-0.06	0.10	0.13	0.09	0.11	0.10	-0.23	0.18			1				
17. Language *(low)*	0.16	0.31	-0.36	0.14	-0.09	0.17	-0.08	-0.17	-0.12	-0.11	-0.23	0.18	-0.12	0.22	0.07	-0.23	1			
18. Language *(intermediate)*	0.00	0.01	-0.01	0.01	-0.15	0.01	-0.12	-0.09	-0.09	-0.12	0.01	0.13	-0.16	0.13	0.07	-0.16		1		
19. Language *(high)*	-0.1	-0.21	0.23	-0.09	0.2	-0.12	0.17	0.19	0.16	0.19	0.14	-0.24	0.24	-0.27	-0.11	0.29			1	
20. Age	-0.22	-0.25	0.35	-0.06	-0.05	-0.10	-0.08	0.00	-0.07	0.05	0.05	0.17	0.00	-0.02	0.00	0.02	-0.19	-0.10	0.22	1

Note: The highlighted correlations correspond to those at a significance level of $p < 0.01$

Annex Table 3. Description of Skills Measures

(a) Linguistic proficiency (in Dutch language):

After every word, there are five options given. Select the definition that best fits the word.

1. Well-off	a. strong	b. rich	c. satisfied	d. together	e. pauper	f. Do not know
Welgesteld	*sterk*	*rijk*	*tevreden*	*samen*	*armlastig*	*weet niet*
2. Pure*	a. milk	b. cloudy	c. stingy	d. pure	e. strange	f. Do not know
Zuiver	*melk*	*troebel*	*gierig*	*puur*	*vreemd*	*weet niet*
3. Industry	a. arm	b. strong	c. zeal	d. rich	e. tired	f. Do not know
Vlijt	*arm*	*sterk*	*ijver*	*rijk*	*vermoeid*	*weet niet*
4. Barely	a. flow	b. medicine	c. fruit	d. hardly	e. neatly	f. Do not know
Amper	*stroom*	*geneesmiddel*	*vrucht*	*nauwelijks*	*netjes*	*weet niet*
5. Scanty*	a. narrow	b. bald	c. cold	d. thin	e. economical	f. Do not know
Karig	*smal*	*kaal*	*koud*	*dun*	*zuinig*	*weet niet*
6. Tiny	a. subtract	b. loss	c. difference	d. mimicry	e. insignificant	f. Do not know
Miniem	*aftrekken*	*verlies*	*verschil*	*mimiek*	*onbeduidend*	*weet niet*
7. Abruptly	a. heavy	b. separately	c. suddenly	d. vain	e. insufficient	f. Do not know
Abrupt	*zwaar*	*apart*	*plotseling*	*vergeefs*	*onvoldoende*	*weet niet*
8. Famous	a. famous	b. worthy	c. known	d. nice	e. polite	f. Do not know
Fameus	*beroemd*	*waardig*	*bekend*	*aardig*	*beleefd*	*weet niet*
9. Bombast	a. disguise	b. peel	c. garnet	d. pomposity	e. tree species	f. Do not know
Bombast	*vermomming*	*schil*	*granaat*	*gezwollenheid*	*boomsort*	*weet niet*

Note: (*) these are in principle the most difficult questions.

Low level = 0-3 correct answers; *Intermediate level* = 4-6 correct answers; *High level* = 7-9 correct answers.

(b) Numeracy skills:

We present to you five numbers in a sequence. What number follows the sequence logically?

1. Series: 0, 1, 3, 6, 10,?	a. 16	b. 15	c. 12	d. 6	e. do not know
2. Series: 1, 1, 2, 3, 5,?	a. 8	b. 7	c. 10	d. 3	e. do not know
3. Series: 21, 20, 18, 15, 11,?	a. 26	b. 17	c. 8	d. 6	e. do not know
4. Series: 1109, 1116, 1123,?	a. 1130	b. 1131	c. 1128	d. 2134	e. do not know
5. Series: 128, 64, 32,?	a. 22	b. 16	c. 8	d. 64	e. do not know

Low level = 0-1 correct answers; *Intermediate level* = 2-3 correct answers; *High level* = 4-5 correct answers.