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Ethnic Differences in Female Labour Force Participation in the Netherlands: Adding Gender Role Attitudes and Religiosity to the Explanation

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Abstract

Female labour force participation varies greatly between different ethnic groups, but previous research on human capital and household conditions has not been able to fully explain these differences. Using large-scale representative survey data of four ethnic minority groups and the Dutch majority in the Netherlands, we add gender role attitudes and religiosity to the explanatory model. The results of heterogeneous choice models and interval regressions show that the predicted negative effects of traditional gender role attitudes and of religiosity contribute to the explanation of ethnic differences in female labour force participation, in addition to human capital and household conditions. These factors moreover partly explain differences between Dutch, Turkish, Moroccan, Surinamese, and Antillean women.

Introduction

Despite increasing labour force participation (LFP) of women in the Netherlands over the past decades, female participation rates differ strongly across the largest ethnic groups. While 64–68 per cent of the Surinamese, Antillean, and native Dutch women are participating in the labour market, only 43 per cent of the Moroccan and 47 per cent of Turkish women are economically active (CBS Statline, 2013). For ethnic minority women, non-participation not only threatens their economic independence, it also jeopardizes their social and cultural integration into the host society (e.g. Houston *et al.*, 2005).

Female LFP has conventionally been explained at the micro-level by human capital factors and household conditions (Van der Lippe and Van Dijk, 2002). Human capital theory argues for a positive relation between educational attainment and LFP (Becker, 1975, 1981; Adsera and Chiswick, 2007). Theories that focus on household conditions emphasize the negative effect of the presence of children and partnership for women, arguing that children and partnerships push women to shift their time allocation from their career to domestic responsibilities (Corrigall and Konrad, 2007).

However, previous research in the Netherlands showed that Turkish and Moroccan women are less active in the labour market than Dutch, Surinamese, or Antillean women, even after controlling for educational level, the number of children, and partnership (Bevelander and Groeneveld, 2006, 2010).

Possible additional explanations for ethnic differences in female LFP relate to cultural values and norms and highlight gender role attitudes and religiosity (Reimers, 1985). Immigrant religion, and particularly Islam since '9/11', has received increasing research

attention (cf. Alba, 2005), and while questions of gender equality figure prominently in debates about the integration of Muslim minorities (Voas and Fleischmann, 2012), the role of religiosity for the LFP of ethnic minority women is not well understood. There is indeed some evidence indicating that Turkish Muslims are more religious and endorse traditional gender roles more often than native Germans (Diehl *et al*., 2009), but whether this contributes to explaining the ethnic gap in female LFP remains unclear.

Due to data limitations, previous research has not considered cultural factors together with human capital characteristics and household conditions to explain ethnic differences in female LFP. By bringing together conventional explanations of female LFP with gender role attitudes and religiosity, this study aims to increase the explanatory power of previous models, which were not able to account for all ethnic differences in female LFP. Furthermore, our integrative model allows testing hypotheses about the direct and indirect relations of religiosity and gender role attitudes with female LFP. With these advantages in mind, the current study addresses the question whether female LFP still differs across ethnic groups in the Netherlands once we have taken into account gender role attitudes and strength of religiosity in addition to human capital and household conditions.

Theory and Hypotheses

We first formulate hypotheses about the role of human capital and household conditions as most researched predictors of female LFP on the micro level, and continue with traditional gender role attitudes and religiosity as additional predictors to explain ethnic differences in women's participation. Next, we provide background information about the four main ethnic minority groups in the Netherlands and the Dutch institutional context.

Conventional Explanations of Ethnic Differences in Female LFP: Human Capital Factors and Household Conditions

Human capital theory is the most common perspective to explain individual labour market behaviour (Becker 1975, 1981). Its main assumption is that individuals make a rational cost-benefit analysis to decide whether they should participate in the labour market. A major factor in this individual analysis is education (Becker, 1975). Individuals who invested in education expect to profit from this investment later in life. Higher educational attainment leads to more and better job opportunities and therefore also to higher opportunity costs for non-participation (Becker, 1981). Hence, highly educated individuals are more likely to participate in the labour market than lower educated.

Human capital theory has also been applied to explain ethnic differences in female LFP by arguing that the average levels of human capital are lower in some ethnic minority groups than in others (Adsera and Chiswick, 2007). Ample empirical evidence attests to the positive role of education, but also other human capital factors, such as work experience and host-country language proficiency, for immigrant women's LFP (Bevelander and Groeneveld, 2010). We therefore hypothesize that higher education and Dutch language skills are positively related to female LFP.

Another explanation for female LFP relates to household conditions (Van der Lippe and Van Dijk, 2002). Two main factors have been identified as crucial in this field: partnership and the number of children in the household. Household specialization theory claims that after entering into a relationship and particularly after childbirth, women are more likely than men to focus on domestic rather than paid labour (Becker, 1981). Childrearing is traditionally considered a female responsibility and therefore, many women quit paid labour after giving birth to their first child (Van der Lippe and Van Dijk, 2002). The impact of household conditions and human capital on female LFP are highly interrelated. Women with low ambitions on the labour market and high family commitment may invest less in their education and have, due to low opportunity costs, higher incentives to stay at home after childbirth (Corrigall and Konrad, 2007).

Although it has been argued that partnership status and the presence of children have become less influential recently (Hakim, 2000), Bevelander and Groeneveld (2010) found that having a partner increases women's probability of having a 'small' job with one to eleven working hours per week, but decreases the likelihood of being employed full-time, indicating the prevalence of female responsibility for domestic work in the Netherlands. For children, findings indicate no significant relation in a few studies (e.g. Dale *et al*., 2006 for the UK), but a clear negative association between children in the household and female LFP in most other studies (e.g. Bevelander and Groeneveld, 2006, 2010 in the Netherlands; Fleischmann and Höhne, 2013 in Germany). We therefore hypothesize that women's LFP will be lower if they live in a partnership and when there are children in the household.

Adding Cultural Explanations: Gender Role Attitudes and Religiosity

Hakim's (2000) preference theory claims that the individualization of society in general and the emancipation

of women in particular have led to a more important role of individual attitudes for the life-style choices of women. Attitudes towards gender roles thus should be an important predictor of female LFP, and they can have both direct and indirect influences (Reimers, 1985). Directly, these attitudes influence the prioritization of time between domestic and paid work for women with equal human capital resources and family structures. Indirectly, they might affect female LFP by encouraging women to have more children or decreasing their educational attainment (Presser, 1994), both negatively influencing labour market opportunities and ensuing opportunity costs of non-participation. Empirical evidence, including a longitudinal study (Corrigall and Konrad, 2007), suggests that egalitarian gender role attitudes positively influence women's employment (e.g. Cassidy and Warren, 1996). Therefore, we hypothesize that a stronger endorsement of traditional gender role attitudes is negatively related to female LFP.

Moreover, religion figures prominently in discussions about the cultural determinants of labour market behaviour (Lehrer, 1995). Early research showed a negative association between the level of religiosity and LFP among immigrants in the Netherlands (Van Tubergen, 2007; Phalet, Gijsberts and Hagendoorn, 2008), but more recent work tends to find no or a weakening association (Fleischmann and Phalet, 2012; Maliepaard *et al*., 2012). The homogeneous gender composition of religious elites and the gender hierarchy often embedded within the norms of all major world religions suggest that religiosity fosters a worldview promoting traditional gender role attitudes and a traditionally gendered division of domestic and paid work (Brinkerhoff and MacKie, 1985). In recent years, Islam in particular has been portrayed as being a major hurdle for the development of egalitarian gender role attitudes (Inglehart and Norris, 2003), but empirical evidence suggests that religiosity matters regardless of religious affiliation (Read, 2002). A negative relation between religiosity and egalitarian gender role attitudes has been found among both Muslim Turks and Christian natives in Germany (Diehl *et al*., 2009). This relation seems to be more complex for second-generation immigrant Muslims, with less strong negative correlations among men and non-significant associations among women (Scheible and Fleischmann, 2013). However, because our analysis is mainly concerned with the first generation, we still expect a stronger endorsement of traditional gender role attitudes among more religious people.

Hence, we hypothesize that religiosity is negatively associated with female LFP, and that this relationship is explained by more traditional gender role attitudes.

The Dutch Context: Immigrant Groups and the Welfare State

Our empirical analyses are based on the four largest ethnic minority groups in the Netherlands, namely the guest worker immigrants from Turkey and Moroccan and the post-colonial immigrants from Suriname and the Netherlands Antilles.

Turkish and Moroccan immigrants arrived from the beginning of the 1960s onwards, in the context of the economic boom in the Netherlands. The peak of this immigration was reached in the early 1970s before the state stopped admitting labour immigrants in 1973. Since then, a large part of the immigration from Turkey and Morocco is due to family reunification and marriage migration (Loozen *et al*., 2011). In 2006, about 364,000 Turks and 323,000 Moroccans lived in the Netherlands, of whom 48 per cent are women (CBS Statline, 2006). Mass migration movements from the Antilles and Suriname to the Netherlands occurred in the same period as the guestworker migration and it continued throughout the 1980s until the Dutch government installed visa requirements restricting immigration from the former colonies. However, due to family reunification and marriage migration the Surinamese and Antillean population in the Netherlands continued to grow. In 2006, 332,000 Surinamese and 130,000 Antilleans lived in the Netherlands of whom 52 and 50 per cent, respectively, are women (CBS Statline, 2006).

Surinamese and Antillean women have higher LFP rates than Turkish or Moroccan women and similar rates compared to native Dutch women (CBS Statline, 2013). We expect these differences to be partly explained by ethnic differences in human capital and household conditions. More than 40 per cent of the Turkish and Moroccan women have primary school as highest level of education, while this is only the case for 7 per cent of the Dutch majority women. Moreover, only 10 per cent of the Turkish and 14 per cent of the Moroccan women complete tertiary education while 27 per cent of the native Dutch women do so. Surinamese and Antillean women score lower than majority Dutch women with 15 per cent having completed maximally primary school (Gijsberts and Iedema, 2011). Regarding household conditions, Turks and Moroccans have more children, particularly in the first generation (on average, 2.0 children and 2.8 children, respectively), than native Dutch, Surinamese, and Antillean women (about 1.8 children). For Surinamese and Antillean women, partnership is most distinctive. Only about 40 per cent of the Surinamese and 37 per cent of the Antillean women, but 56 per cent of the native Dutch and Moroccan women and 59 per cent of Turkish women live together

with a partner (Loozen *et al.*, 2011). Finally, Turkish and Moroccan minorities are characterized by high levels of religiosity, unlike the less religious Surinamese and Antilleans and the largely secularized majority population (van Tubergen, 2007).

The Dutch institutional context forms the backdrop of the current study. The Dutch welfare state is often characterized as a hybrid model consisting equally of conservative, social-democratic as well as recently introduced liberal elements (Van Hooren and Becker, 2012). Because it encourages part-time and flexible employment of mothers, the 1.5 breadwinner model, with the husband in full-time and the wife in part-time employment, is the most favored arrangement in Dutch families (Lewis *et al.*, 2008). In fact, the relatively high LFP rate of native Dutch women is mostly due to the high share of part-time employment. Childcare facilities have only become widespread in the past two decades. But costs for public childcare are relatively high and parents have to advance the payments before getting reimbursed by the state. In 2004, about 25 per cent of all children <3 years and 7 per cent of children between 4 and 12 years were in formal day care (van der Kemp and Kloosterman, 2005). Low-income and immigrant families may be particularly reluctant to make use of childcare because they may have less knowledge about the refund system and less trust in receiving the reimbursement (OECD, 2008). Although we know from previous research that macro level factors such as the welfare state substantially influence women's LFP (Mandel and Semyonov, 2006), we cannot test any hypothesis about its role for explaining ethnic differences given that our analysis focuses only on the Netherlands.

Data and Methods

Data

We use the Survey Integration of Minorities (SIM) (Dagevos *et al.*, 2007) to test our theoretical expectations. Data collection for this survey was conducted by Sociaal en Cultureel Planbureau [the Netherlands Institute for Social Research] (SCP) from March to December 2006. In addition to information about household conditions and labour market behaviour, this survey contains measures of gender role attitudes and religiosity among large and representative samples of the four largest ethnic minority groups (Turks, Moroccans, Surinamese, and Antilleans) as well as a comparison group of native Dutch. The data were collected in a two-step sampling procedure, based on the population register of all municipalities in the Netherlands (see Dagevos *et al.*, 2007, for a full technical report). In line with official Dutch statistics, ethnicity is assessed based on the country of birth of the respondent and his/her parents. A respondent is defined as ethnic minority, if he/she or at least one of his/her parents is born outside the Netherlands.

Response rates were 60 per cent among the Turkish participants, 50 per cent among the Moroccans, 46 per cent among the Surinamese, 54 per cent among the Antilleans and 55 per cent among the native Dutch. Face-to-face interviews were conducted by bilingual interviewers. For our purpose, we limit the total sample to women between the age of 16 and 64 years and we exclude respondents in full-time education or pre-retirement and disabled respondents. The remaining sample contains 1771 respondents (360 Turkish, 377 Moroccan, 375 Surinamese, 328 Antillean and 331 native Dutch women).

Measures

Dependent variables

We analyse two operationalizations of female LFP. First, a binary variable indicates whether the respondent is participating in the labour market (1) or not (0). Following the definition of the Centraal Bureau voor de Statistiek [Dutch Statistical Office] (CBS) applied in the scientific use file of the SIM 2006 dataset, LFP implies being employed for more than 12 h a week at the time of the survey or unemployed, but available and actively looking for employment of more than 12 h weekly. We use female LFP instead of employment as main labour market outcome because LFP is nearly completely subject to women's decision. Active women may be unemployed due to many factors outside of their control (e.g. economic crisis).

Second, for methodological robustness (cf. infra), we analyse the number of hours worked per week. This is a categorical variable with five values, ranging from no work (0), via <11 h (1), 12–19 h (2), 20–34 h (3), to ≥35 h (4). Inactive and unemployed respondents are mostly assigned to the category 'no work', but some of them have a small job of up to 11 h per week ($n = 50$).[1]

Independent variables

The highest educational degree attained by the respondents is measured on the basis of the Dutch education system. We distinguish between primary education (the reference group), lower secondary vocational, upper secondary and tertiary.[2]

The survey asks respondents about their difficulties in (i) having a conversation, (ii) reading newspapers,

letters, or flyers, and (iii) writing in the Dutch language. Answers were given on a three-point scale with 1 'Yes, great difficulties', 2 'Yes, some', and 3 'No difficulties'. A principal component analysis shows loadings higher or equal to 0.91 for all three items and the latent factor explains 86 per cent of the items' variance; therefore, a scale is constructed with the mean of the three items to measure Dutch language skills. Because native Dutch respondents did not answer these questions, they were recoded to 3 (no difficulties).

A dichotomous variable is constructed that indicates whether the respondent lives together with her partner/husband (1) or not (0).

The count variable number of children living at home has a range from zero to eight or more. To reduce potential bias through outliers (about 2 per cent of the sample indicated having five or more children at home), we group respondents with four or more children into one category.

Five items in the dataset cover gender roles attitudes: 'Women should have the responsibility for the household', 'Men should have the responsibility for finances', 'For men it is more important than for women to earn their own income', 'Decisions about large investments should be made by men', 'A woman should stop working when she has children'. Respondents expressed their agreement on a scale from 1 'strongly agree' to 5 'strongly disagree'. The items were recoded so that higher values represent more traditional attitudes. A factor analysis of these five items with maximum likelihood extraction and oblimin rotation suggests a one-factor solution, with factor loadings from 0.51 to 0.76 and a Cronbach's alpha of 0.75. The mean is used to assess traditional gender role attitudes.

Religiosity is assessed with the mean of three items indicating importance of religion: 'My belief is an important part of myself'; 'It hurts if someone talks badly about my belief'; and 'No one should doubt my belief'. Respondents indicated on a five-point scale whether they strongly agree (1) or strongly disagree (5). The items were recoded so that higher values imply stronger religiosity. Principal component analysis reveals factor loadings from 0.60 to 0.84 and a reliability test yields a Cronbach's alpha of 0.73. Respondents who indicated to be non-religious did not answer these questions and were recoded as 0. A dummy variable indicating non-religious respondents was included.[3]

Controls

We control for perceived ethnic discrimination as immigrant women might withdraw from the labour market if they expect to be discriminated against by Dutch employers. Perceived discrimination in the Netherlands was measured on a scale from 1 'never' to 5 'very often'. Native Dutch respondents, who did not answer this question, are coded as 1.

We also include self-reported health status. Respondent were asked to evaluate their overall health on a scale ranging, after recoding, from 1 'very bad' to 5 'very good'. To control assimilation into Dutch culture, we include years since migration. Because the Dutch majority and second-generation immigrants have missing values on this variable, we constructed a categorical variable based on the continuous measure grouping the years since migrations into '<5 years', '6–10 years', '11–20 years' and '>20 years', using the Dutch majority and second-generation immigrants as reference category. Finally, we include age in years.

Method

Due to the dichotomous character of the dependent variable LFP and the interest of this research in a comparison of coefficients across groups and models, our analysis has to account for the scaling problem (cf. Mood, 2010). It is likely that more and different factors influence LFP of ethnic minorities compared to native Dutch women. Therefore, differences in the residual variance across ethnic groups are potential sources of scaling bias in our analysis. For instance, the expectations of family or group norms might be more relevant for labour market decisions of immigrants, especially Turkish and Moroccan women, than for native Dutch. Furthermore, including mediating variables possibly changes the relative unobserved heterogeneity of the analysed ethnic groups to different extents (Karlson *et al.*, 2012), for instance, if individual attitudes are more relevant in the LFP decision making process for some ethnic groups.

Instead of more conventionally used logistic or probit regression, we therefore use heterogeneous choice models to estimate the regression coefficients for LFP, while testing and controlling for unobserved heterogeneity across groups. Heterogeneous choice models specify next to the regression equation the (potential) determinants of unobserved heterogeneity.[4] This additional equation allows the scaling factor to vary systematically across cases and adjusts the scaling of the regression coefficients accordingly, thus allowing the comparison of coefficients across groups in the sample (Williams, 2009). We use ethnicity as predictor in the variance equation and thus control for ethnic variation in unobserved heterogeneity.

To model 'hours worked per week', we use interval-censored regression (with the intreg-command in stata, Stata Corp, 2011) as we know only the interval in which the observations fall and not the exact numbers of hours worked. Two outcome variables are required for the intreg command: one defining the lower limit of the interval and one defining the upper limit. The estimated coefficients of an interval regression can be interpreted in the same way as in linear regression models with a continuous variable (Stata Corp, 2011). Like heterogeneous choice models, the intreg-command allows to model the residual variance. The main purpose of this second analysis is to test the robustness of our conclusions that will be based on two theoretically similar concepts, yet estimated with two different analytical techniques. We use hours worked per week, because coefficients in regressions with a continuous dependent variable are less affected by the scaling problem (Mood, 2010).

We first describe ethnic differences in the dependent and independent variables as well as correlations. Our modelling strategy is the same for heterogeneous choice models of LFP and interval regressions to analyse number of hours worked per week. The first model includes only ethnicity, the control variables, human capital factors and household conditions. Religiosity is added in the second model. The third and final model adds gender role attitudes. To make coefficients comparable across groups within the same model, we estimate the variance separately for each ethnic group in each model, thus taking into account that unobserved heterogeneity might differ across groups.

Results

Descriptive findings

Z-tests and t-tests are conducted to compare ethnic differences in the variables' proportions and means. Furthermore, we calculate Pearson's r between educational level, the number of children at home, gender role attitudes and religiosity. Differences and correlations are only specified in the text if P(two-sided) <0.01. A full correlation table that also presents results separately by ethnicity is included in the online supplement.

In line with population statistics, Table 1 shows that LFP differs strongly between the ethnic groups in our sample. Turkish and Moroccan women are less active on the labour market than native Dutch women, while Surinamese and Antillean women show higher LFP. The latter is mainly due to the higher share of full-time employment among Surinamese and Antillean women compared to native Dutch because part-time employment rates are similar among women from the former colonies and native Dutch women.

The independent variables also differ across ethnic groups. About half of the Turkish and Moroccan women in the sample have completed maximally primary education and less than 10 per cent attained a tertiary degree. Of the native Dutch women, one third has tertiary education and only 8 per cent have maximally primary education.

Furthermore, native Dutch women have on average the lowest number of children at home. Moroccan women live in households with about twice as many children, but also Turkish, Surinamese, and Antillean women have more children at home than native Dutch. Antillean and Surinamese are less often living together with a partner or spouse than women from the other ethnic groups. As expected, Turkish and Moroccan women hold more traditional gender role attitudes than native Dutch. Also, the latter are less religious than women from all four minority groups.

Religiosity and traditional gender role attitudes are positively correlated ($r=0.36$). Education is negatively correlated with religiosity ($r=-0.31$) as well as traditional gender role attitudes ($r=-0.47$). The number of children at home is positively correlated with traditional gender role attitudes ($r=0.17$) and religiosity ($r=0.20$). Correlations differ between the ethnic groups but do never substantially surpass the mentioned correlations in the full sample, indicating that these variables share some variance without raising concerns about collinearity.

Explanatory analysis

Table 2 presents the results of the heterogeneous choice models of LFP and the interval regression of hours worked per week. The upper panel presents the regression coefficients for LFP and the hours worked per week and the lower panel shows the variance estimates. The results are similar for both outcomes. A model including only the control variables, not depicted in Table 2, finds that Moroccan women are participating significantly less and Antillean women significantly more than native Dutch women. Furthermore, Turkish women work about 20 h and Moroccan women about 30 h less per week than native Dutch women after accounting for the control variables. Model 1 shows that education and Dutch language skills are positively associated with LFP and hours worked per week. This confirms the crucial role of human capital for the explanation of female LFP. The number of children at home is negatively associated

Table 1. Range, mean/proportion (M), standard deviation (SD) and missing values (MV) of the variables ($n = 1722$)[a]

Variable	Range	All groups			Native Dutch ($n = 323$)		Turkish ($n = 359$)		Moroccan ($n = 359$)		Surinamese ($n = 368$)		Antilleans ($n = 313$)	
		M	SD	MV (per cent)	M	SD	M	SD	M	SD	M	SD	M	SD
Labour force participation	0/1	0.65			0.74		0.49		0.40		0.83		0.81	
Hours worked/week	0–4													
No work	0	0.40			0.25		0.55		0.65		0.23		0.31	
<12 h/week	1	0.03			0.05		0.04		0.01		0.02		0.02	
12–19 h/week	2	0.08			0.13		0.07		0.04		0.07		0.08	
20–34 h/week	3	0.27			0.38		0.16		0.18		0.35		0.32	
≥35 h/week	4	0.22			0.18		0.18		0.12		0.33		0.27	
Human capital														
Education	1–4			0.79										
Primary	1	0.31			0.08		0.52		0.51		0.20		0.21	
Secondary vocational	2	0.25			0.33		0.23		0.20		0.25		0.27	
Upper secondary	3	0.29			0.29		0.20		0.21		0.37		0.36	
Tertiary	4	0.15			0.30		0.05		0.08		0.18		0.16	
Dutch language skills	1–3	2.49	0.71		3.0	0.00	2.02	0.76	2.2	0.34	2.91		2.85	0.37
Household condition														
Number of children at home	0–4	1.40	1.22		0.98	1.11	1.63	1.15	1.8	1.38	1.22	1.06	1.31	1.19
Living with a partner/spouse	0/1	0.67		1.24	0.78		0.81		0.79		0.56		0.41	
Traditional gender role attitudes	1–5	2.31	0.85	0.06	1.94	0.68	2.69	0.85	2.59	0.95	2.07	0.73	2.20	0.71
Religiosity	0–5	2.95	1.75	0.34	1.54	1.70	4.00	1.19	4.03	1.08	2.40	1.65	2.61	1.61
Non-religious	0/1	0.21			0.51		0.05		0.03		0.27		0.23	
Control variables														
Years since migration	0–5													
Native-born/second generation	0	0.32					0.18		0.14		0.20		0.16	
0–5 years	1	0.05					0.06		0.07		0.04		0.07	
6–10 years	2	0.07					0.09		0.08		0.04		0.15	
11–20 years	3	0.20					0.29		0.28		0.16		0.29	
20–30 years	4	0.22					0.25		0.36		0.23		0.21	
>30 years	5	0.14					0.13		0.07		0.33		0.12	
Age	16–64	39.52	11.27		43.37	11.72	37.14	10.77	36.69	11.00	40.51	10.43	40.36	11.21
Ethnic discrimination	1–5	1.81	1.03	0.51	1.00	0.00	2.17	1.03	1.91	1.08	1.87	0.99	2.04	1.11
Overall health	1–5	3.80	0.81		4.01	0.59	3.55	0.88	3.70	0.90	3.90	0.78	3.89	0.73

Source: Survey Integratie of Minderheden 2006, descriptives based on unweighted data
Note: [a]In total 49 respondents are excluded from the analyses due to missing data.

with LFP and hours worked per week and living with a partner is negatively related with LFP, but not with the hours worked. This suggests that the presence of a partner is more relevant for the decision whether to work than for the amount of work. Hence, our household conditions hypotheses find partial support.

Moreover, in Model 1 differences in LFP between Turks, Moroccans and native Dutch are fully explained just as differences in the number of hours worked between Turkish, Surinamese, Antillean, and native Dutch women. What remains unexplained is the higher LFP of Surinamese and Antillean and the lower numbers of hours worked of Moroccan women compared to native Dutch.

Model 2 additionally considers the respondent's religiosity. We find a marginally significant relation between religiosity and LFP ($P < 0.01$) and a positive though relatively weak association with the number of hours worked. The ethnicity coefficients for LFP of Surinamese and Antillean and number of hours worked of Moroccan women remain significant. After adding gender role attitudes in Model 3, the relation between religiosity and hours worked per week becomes insignificant and the religiosity coefficient for LFP decreases substantially. Applying the Sobel test, a commonly used t-test specialized in mediations, confirms that the mediation is significant for LFP ($z = -10.74$; $P < 0.001$) and for hours worked per week ($z = -4.22$, $P < 0.001$).

Table 2. Heterogeneous choice models (DV: Labour force participation) and Interval regressions (DV: Number of hours worked per week)

Covariate	Model 1				Model 2				Model 3			
	LFP		h/week		LFP		h/week		LFP		h/week	
Ethnicity												
Native Dutch (Ref.)												
Turkish	0.61	(0.50)	−4.65	(4.43)	0.84	(0.49)	−3.31	(4.51)	0.73	(0.43)	−2.53	(4.41)
Moroccan	−0.31	(0.38)	−16.40***	(4.31)	−0.07	(0.38)	−15.00***	(4.40)	−0.19	(0.36)	−15.4***	(4.35)
Surinamese	1.60*	(0.77)	2.14	(3.51)	1.86*	(0.82)	2.51	(3.52)	1.51*	(0.66)	2.00	(3.48)
Antillean	1.35*	(0.61)	−1.44	(3.74)	1.5*	(0.59)	−1.13	(3.74)	1.26*	(0.52)	−1.14	(3.68)
Human capital												
Education												
Primary (Ref.)												
Secondary vocational	0.65**	(0.24)	8.10***	(2.42)	0.66**	(0.24)	8.04***	(2.42)	0.53*	(0.21)	7.17**	(2.39)
Upper secondary	1.11***	(0.25)	16.50***	(2.46)	1.11***	(0.25)	16.40***	(2.45)	0.80***	(0.21)	13.10***	(2.46)
Tertiary	1.56***	(0.27)	25.80***	(2.72)	1.57***	(0.27)	25.6***	(2.72)	1.1***	(0.24)	20.30***	(2.77)
Dutch language skills	1.05***	(0.31)	15.40***	(2.34)	1.03***	(0.31)	15.4***	(2.34)	0.88***	(0.25)	14.40***	(2.31)
Household condition												
Number of children at home	−0.20***	(0.06)	−4.60***	(0.69)	−0.19***	(0.06)	−4.52***	(0.69)	−0.18**	(0.06)	−4.45***	(0.68)
Living with a partner/spouse	−0.36*	(0.17)	−1.13	(1.73)	−0.36*	(0.17)	−1.17	(1.72)	−0.33*	(0.16)	−0.64	(1.70)
Religiosity					−0.14	(0.08)	−2.04*	(0.99)	−0.03	(0.08)	−0.82	(0.10)
Non-religious (dummy)					−0.17	(0.31)	−5.42	(3.60)	0.10	(0.30)	−2.41	(3.58)
Traditional gender role attitudes									−0.59***	(0.11)	−7.15***	(1.14)
Control variables												
Years since migration												
Native-born/second generation (Ref.)												
0–5 years	−0.70	(0.47)	−5.75	(5.04)	−0.69	(0.47)	−5.31	(5.04)	−0.46	(0.42)	−4.04	(4.98)
6–10 years	−.53	(0.41)	1.23	(4.29)	−0.51	(0.41)	1.87	(4.3)	−0.32	(0.36)	3.84	(4.24)
11–20 years	0.20	(0.31)	9.63**	(3.31)	0.23	(0.32)	10.1**	(3.3)	0.37	(0.29)	11.81***	(3.29)
20–30 years	0.71*	(0.32)	12.70***	(3.31)	0.71*	(0.32)	12.90***	(3.31)	0.75*	(0.30)	13.90***	(3.27)
>30 years	0.52	(0.36)	10.90**	(3.59)	0.49	(0.36)	10.90**	(3.59)	0.57	(0.34)	11.31**	(3.55)
Age	0.04***	(0.01)	−0.46***	(0.08)	−0.04***	(0.01)	−0.44***	(0.08)	−0.03***	(0.01)	−0.44***	(0.08)
Ethnic discrimination	−0.02	(0.08)	0.28	(0.93)	−0.02	(0.08)	0.36	(0.94)	−0.02	(0.08)	0.32	(0.92)
Overall health	0.46***	(0.11)	4.19***	(1.1)	0.47***	(0.11)	4.17***	(1.1)	0.40***	(0.10)	3.65***	(1.09)
Constant	−3.01**	(1.16)	−34.7***	(8.95)	−2.9*	(1.18)	−33.9***	(8.95)	−0.99	(0.87)	−11.25	(9.77)
Residual variance (ln(sigma))												
Native Dutch (Ref.)												
Turkish	0.86***	(0.24)	0.76***	(0.09)	0.85***	(0.23)	0.76***	(0.10)	0.72***	(0.21)	0.74***	(0.10)
Moroccan	0.63**	(0.22)	0.62***	(0.10)	0.61**	(0.21)	0.62***	(0.10)	0.55**	(0.19)	0.63***	(0.10)
Surinamese	0.93***	(0.27)	0.43***	(0.09)	1.01***	(0.27)	0.44***	(0.08)	0.89***	(0.24)	0.45***	(0.09)
Antillean	0.71**	(0.24)	0.48***	(0.09)	0.73**	(0.24)	0.48***	(0.09)	0.62**	(0.22)	0.47***	(0.09)
Constant			2.89***	(0.06)			2.89***	(0.06)			2.87***	(0.06)

Note: $^{*}P < 0.05$, $^{**}P < 0.01$, $^{***}P < 0.001$ (two-sided), Standard errors are in parentheses. The coefficients in the upper panel are regression coefficients and the coefficients in the lower panel present the variance estimates, i.e. the estimate of the differences in heterogeneity between ethnic groups and the native Dutch reference group.

We can therefore confirm our expectations that more religious women work less because they hold more traditional gender role attitudes.

Traditional gender role attitudes are negatively associated with LFP and hours worked per week and these relations are highly significant, even after including human capital, household composition and religiosity. Hence, we can confirm our hypothesis that women with more traditional gender role attitudes are participating less in the labour market. However, ethnic differences in LFP and hours worked per week do not decrease substantially from Models 1 to 3 and the ethnicity coefficients remain significant. Surinamese and Antillean women participate more often in the labour market than native Dutch women even after accounting for human capital, household conditions, religiosity, and gender role attitudes. Ethnic differences in the hours worked per week are fully explained in the final model except for Moroccan women, who still work 15 hours less than native Dutch. One reason for this finding might be that the dependent variable does not distinguish between inactive and unemployed women. An additional model, which excludes inactive respondents from the analysis, showed no ethnic differences (not even for Moroccan women) in the hours worked per week, suggesting that the low Moroccan participation rate is indeed mainly responsible for the gap between Moroccans and native Dutch women in model 3.[5] However, the question remains why only Moroccans have a substantially lower LFP.[6]

Finally, the residual variance of all models is higher for the immigrant groups than for the native Dutch women. A likelihood ratio test, which compares Model 5 against the same model without the variance equation shows that specifying ethnicity as determinant for the residual variance significantly improves the model fit (LFP: $\text{Chi}^2(4) = 16.35$; $P = 0.003$; hours worked: $\chi^2(4) = 65.77$; $P < 0.001$). This suggests that more than for native Dutch women, the LFP of the immigrant groups is influenced by factors not included in the estimated model.[7]

Conclusion and Discussion

The main objective of this study was to test whether female LFP in the Netherlands still differs between ethnic groups after taking into account gender role attitudes and religiosity, in addition to human capital and household conditions as more commonly studied explanations. We focused on compositional differences between the ethnic groups in these explanatory variables and tested our hypotheses with two dependent variables: LFP and the number of hours worked per week. Despite different analytical approaches due to the coding of the variables, both analyses came to similar results, indicating that our substantive findings are robust to the precise definition and estimation of female LFP.

Our findings confirm previous results about the role of human capital and household conditions (Read, 2004; Bevelander and Groeneveld, 2010). Additional analyses show that the associations of living with a partner and having children at home with female LFP differ across ethnicities. The negative relation of children in the household with LFP is stronger for Moroccan women than for women from other ethnic groups. Moreover, living with a partner decreases the LFP of native Dutch and Moroccan women, while it increases the participation of Turkish and Antillean women. One explanation for this finding could be differential gender role expectations in women's social networks. For instance, Read (2004) showed that Arab-American women in intra-ethnic marriages are less likely to participate in the labour market compared to women in inter-ethnic marriages. Research on the role of social norms in women's social network for the labour market integration of immigrant women is scarce. Future research should study the influence of the partner's gender role attitudes to fill this gap in the literature.

The key finding of this study is that gender role attitudes matter for female LFP, in addition to human capital and household conditions. Thus, women with more traditional gender role attitudes are less active in the labour market even after taking human capital and household conditions into account. These attitudes, moreover, seem to be equally relevant for female LFP in different ethnic groups. Researchers examining female labour market behaviour would therefore do well to incorporate preferences of women in their models instead of assuming values from ethnic background or religious affiliation. We found a weak relation of religiosity and the hours worked per week that can be explained by the more traditional gender role attitudes of more religious women. Previous studies that found a direct link between religiosity and labour market outcomes of women implicitly assumed a mediation through gender role attitudes, but, to our knowledge, never tested it. Our study provides empirical evidence for the mediating role of gender role attitudes in the relation between religiosity and female LFP.

However, our present analyses are dominated by the foreign-born, and results may differ for the second-generation. Previous studies showed that Islamic religiosity is unrelated to LFP and its association with gender role attitudes is also weaker, particularly among

local-born women (Fleischmann and Phalet, 2012; Scheible and Fleischmann, 2013). In fact, our models consistently show higher LFP even for first-generation immigrant women that live in the Netherlands for more than ten years compared to native Dutch women. As data-sets including larger numbers of second-generation immigrants become available, future research should more closely examine the relation between religiosity, gender role attitudes and LFP for the second and higher generations.

It also needs to be emphasized that our analysis only finds weak evidence for a direct association between religiosity and female LFP, despite a sample consisting mainly of first-generation immigrants. This suggests that claims about a central role of religion for women's participation in the labour market are probably exaggerated (Inglehard and Norris, 2003), at least with respect to immigrants in the Netherlands.

Finally, and importantly, we aimed to explain ethnic differences in female LFP. Our analysis was more complete than previous studies because we added gender role attitudes and religiosity to conventional models. While the results show that ethnic differences in human capital explain the largest part of the ethnic differences in female LFP, we could also observe a lowering of the ethnicity coefficients after adding religiosity and gender role attitudes. Yet, even with our extended model, some ethnic differences remained – we find Moroccan women to work less hours and Surinamese and Antillean women to participate more often in the labour market than native Dutch after including these measures. How can we explain these results?

Some of the remaining ethnic differences may be due to the lack of work experience in our tested model, an indicator of human capital unfortunately not included in our dataset. Especially Surinamese and Antillean women may have already gained more experience in the labour market than women from other groups before migrating to the Netherlands and may therefore be more likely to participate after migration as well.

The additional analyses suggest other explanations for the remaining ethnic differences. Moroccan women seem to be more constrained in their LFP by children in the household than women from the other ethnic groups, suggesting that the external social pressure to focus on childrearing, e.g. through expectations of family members, is relatively high for Moroccan women. Moreover, living with a partner seems to be negatively associated with LFP for native Dutch women but not for Antillean women. In the Caribbean countries, women often take the decisions in the household and the responsibility for providing income, as men are often absent or not contributing to the household income (De Valk, 2008). Therefore, Antillean women might be active in the labour market regardless of household conditions.

In any case, it seems that household conditions, and living with a partner in particular, have ethnically differential effects on women and deserve greater attention in future studies. More generally, these results should provoke researchers to question whether explanations for the LFP of majority women in Western countries have the same validity for women with different cultural backgrounds. Our finding that the residual variance in the full model, in which we account for most of the commonly used explanations for female LFP, is still higher for ethnic minority women than for native Dutch women is in line with this suspicion.

One of the limitations of our study is that the overlap of ethnicity and religion in our data inhibits an examination of the role of religious affiliation. Because this is a major discussion point in public and academic debate, more studies with a cross-religious cross-ethnic research design (e.g. Heath and Martin, 2013) would be highly interesting.

Finally, given our cross-sectional data, we cannot be certain about the causal relation between gender role attitudes and labour market outcomes. A longitudinal study by Corrigall and Konrad (2007), though, has shown that gender role attitudes of women at an early age influence future career paths, which supports the direction of causality implied in our models. Nevertheless, more longitudinal research is needed to examine whether this holds true for women from different ethnic groups over the life course. To conclude, this study has shown that gender role attitudes and religiosity are important for female LFP, and contribute to explaining why female LFP differs across ethnic groups. These findings call for a systematic incorporation of gender role attitudes in future research on female LFP. Because we could not explain ethnic differences entirely despite our extension of previous models, future research should focus on differential effects of household conditions on women from different ethnic groups.

Notes

1 Table 1 shows that 35 per cent of the sample is inactive and 8 per cent is unemployed.

2 The exact Dutch categories used in the dataset are 1 'max. BAO(=basisonderwijs)', 2 'VBO(=voorbereidend beroepsonderwijs)/MAVO(=middelbaar algemeen voortgezet onderwijs)', 3 'MBO(=middelbaar beroepsonderwijs)/HAVO(=hoger algemeen voortgezet onderwijs)/VWO(=voorbereidend

wetenschappelijk onderwijs)', and 4 'HBO(=hoger beroepsonderwijs)/WO(=wetenschappelijk onderwijs)'. BAO refers to primary education and entails 6 years of schooling; VBO/MAVO is comparable to lower secondary education and goes usually from age 12 to 16. Upper secondary education is conducted in MBO/HAVO/VWO, which students leave around the age of 18. Finally, HBO/WO is tertiary education and usually completed around the age of 22.

3 Dummies for religious affiliation (Islam, Christianity) could not be included due to overlap with ethnicity.

4 Heterogeneous choice models can be estimated in Stata with the hetprob-command, or in SPSS with the PLUM-command

5 This additional analysis is included in the online supplement.

6 To further scrutinize the remaining ethnic differences in LFP, we tested interactions between household conditions and ethnicity. We find that the relations between living with a partner and children at home and LFP vary across ethnic groups. Antillean and Turkish women are positively affected in their LFP by living with a partner, while native Dutch and Moroccan women are negatively affected and Surinamese are unaffected. Furthermore, the negative effect of children at home is much larger for Moroccan than for women from the other ethnic groups (results available upon request).

7 To check whether the theoretical variables have differing impacts on the dependent variables across ethnic groups, we also calculated models with an interaction effect between traditional gender role attitudes and ethnicity (results available upon request). However, the interaction coefficients were not significant, suggesting that the added variables affect the different ethnic groups in the same way. This increases the comparability of coefficients between models.

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Supplementary Data

Supplementary data are available at *ESR* online.

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